

Supporting Information

Redox Deracemization of Phosphonate-Substituted Dihydropyrimidines

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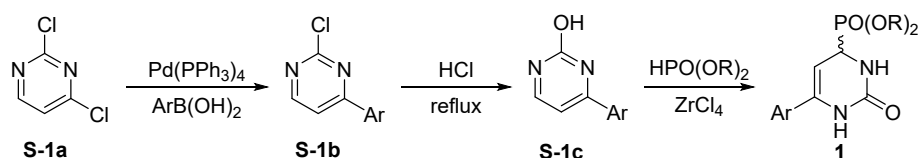
1. General

General: All reactions were carried out under an atmosphere of nitrogen using the standard Schlenk techniques, unless otherwise noted. ^1H NMR and ^{13}C NMR spectra were recorded at room temperature in CDCl_3 on 400 MHz instrument with tetramethylsilane (TMS) as internal standard. Enantiomeric excess was determined by HPLC analysis, using chiral column described below in detail. Optical rotations were measured by polarimeter. Flash column chromatography was performed on silica gel (200-300 mesh). All reactions were monitored by TLC analysis.

Materials: Commercially available reagents were used throughout without further purification. The anhydrous solvents for asymmetric transfer hydrogenation were also purchased without the further purification.

2. General Procedure for Synthesis of 3,4-Dihydropyrimidin-2-one

3,4-Dihydropyrimidin-2-one derivatives **1** can be conveniently prepared according to the known literature procedure with some minor modifications.^{1,2} The compound **1m**, **1l** are known.²

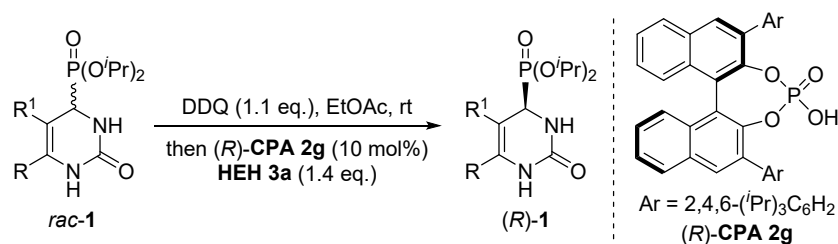


General procedure: A mixture of 2,4-dichloropyrimidine **S-1a** (2.959 g, 20 mmol), the corresponding arylboronic acid (20 mmol), $\text{Pd}(\text{PPh}_3)_4$ (0.231 g, 0.2 mmol) and sodium carbonate (2.119 g, 20 mmol) in acetonitrile (25 mL) and water (25 mL) was stirred at reflux for 8 h, then cooled to ambient temperature, then extracted with ethyl acetate (50 mL \times 3). The combined organic layer was dried over anhydrous sodium sulfate. After filtration, the solvent was removed under the reduced pressure, and the residue was purified by flash chromatography on silica gel to give the corresponding products **S-1b**.

Subsequently, the above **S-1b** (10 mmol) in 38% hydrogen chloride aqueous solution (5.0 mL) was stirred at 100 $^\circ\text{C}$ for 5 h before the mixture was cooled and the pH adjusted to 7 with aqueous sodium hydroxide (1.0 M). The most water was removed under reduced pressure and the residue was extracted with chloroform (30 mL \times 3). The combined organic layer was dried over anhydrous sodium sulfate. After filtration, the solvent was removed under reduced pressure and the crude product purified by flash chromatography on silica gel to give the corresponding products **S-1c**.

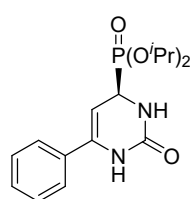
A mixture of 2-hydroxypyrimidine **S-1c** (4 mmol), diisopropyl phosphonate (8 mmol, 2 equiv), and zirconium chloride (0.2 mmol, 5 mol%) in tetrahydrofuran (20 mL) was stirred at room temperature for 24 h. After the reaction was completed (determined by TLC), the solvent was removed under the reduced pressure. The residue was purified by flash chromatography on silica gel using the ethyl acetate/ triethylamine as eluent to give the racemic of 3,4-dihydropyrimidin-2-one derivatives **1**.

3. General Procedure for Redox Deracemization



A racemic of 3,4-Dihydropyrimidin-2-one derivatives **1** (0.10 mmol), DDQ (25 mg, 0.11 mmol, 1.1 equiv) in ethyl acetate (4 mL) was stirred at room temperature for 5 min. After the reaction was completed (determined by TLC), chiral phosphoric acid (*R*)-**2g** (7.5 mg, 0.01 mmol, 10 mol%) and Hantzsch ester **3a** (31.5 mg, 0.14 mmol, 1.4 equiv) was added. The mixture was stirred at room temperature for 24 h. The resulting mixture was concentrated in *vacuo* and further purification was performed by a silica gel column eluted with dichloromethane/methanol to give the optically active products **1**. The enantiomeric excesses were determined by chiral HPLC.

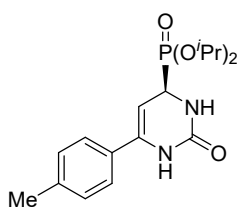
Diisopropyl (*R*)-(2-oxo-6-phenyl-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate (1a): 31 mg, 92% yield, new compound, white solid, mp: 157-158 °C, $R_f = 0.40$ (dichloromethane/ methanol



= 10/1), 96% ee, $[\alpha]_D^{20} = -26.45$ (c 0.31, MeOH), $^1\text{H NMR}$ (400 MHz, CDCl_3) δ 7.47-7.41 (m, 5H), 6.79 (s, 1H), 5.29 (s, 1H), 5.10 (s, 1H), 4.83-4.75 (m, 2H), 4.52-4.49 (m, 1H), 1.38-1.31 (m, 12H). $^{13}\text{C NMR}$ (100 MHz, CDCl_3) δ 153.8, 138.3, 134.1 (d, $J = 3.2$ Hz), 129.3, 128.8, 125.1, 90.7 (d, $J = 9.1$ Hz), 72.2 (d, $J = 7.7$ Hz), 71.8 (d, $J = 7.7$ Hz), 51.8 (d, $J = 160.5$ Hz), 24.3 (d, $J = 3.3$ Hz), 24.1 (d, $J = 3.2$ Hz), 24.1 (d, $J = 4.0$ Hz), 23.9 (d, $J = 5.1$ Hz). $^{31}\text{P NMR}$ (162

MHz, CDCl_3) δ 16.0. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 6.3 min (maj) and 7.2 min. HRMS (ESI) m/z calculated for $\text{C}_{16}\text{H}_{24}\text{N}_2\text{O}_4\text{P}$ $[\text{M}+\text{H}]^+$ 339.1464, found 339.1466.

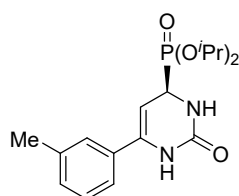
Diisopropyl (*R*)-(2-oxo-6-(*p*-tolyl)-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate (1b): 33 mg, 94% yield, new compound, white solid, mp: 168-169 °C, $R_f = 0.40$ (dichloromethane/ methanol



= 10/1), 94% ee, $[\alpha]_D^{20} = -42.12$ (c 0.33, MeOH). $^1\text{H NMR}$ (400 MHz, CDCl_3) δ 7.64 (s, 1H), 7.35 (d, $J = 8.1$ Hz, 2H), 7.18 (d, $J = 8.1$ Hz, 2H), 5.74 (s, 1H), 5.03-5.02 (m, 1H), 4.78- 4.73 (m, 2H), 4.45-4.42 (m, 1H), 2.35 (s, 3H), 1.35-1.27 (m, 12H). $^{13}\text{C NMR}$ (100 MHz, CDCl_3) δ 154.1, 139.3, 138.3 (d, $J = 10.8$ Hz), 131.2 (d, $J = 3.1$ Hz), 129.5, 125.0 (d, $J = 1.6$ Hz),

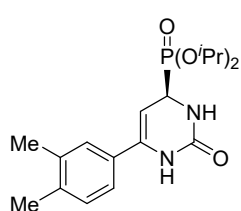
89.8 (d, $J = 9.2$ Hz), 72.2 (d, $J = 7.6$ Hz), 71.7 (d, $J = 7.9$ Hz), 51.7 (d, $J = 160.5$ Hz), 24.3 (d, $J = 3.0$ Hz), 24.1 (d, $J = 3.3$ Hz), 24.1 (d, $J = 1.5$ Hz), 23.9 (d, $J = 5.2$ Hz), 21.3. $^{31}\text{P NMR}$ (162 MHz, CDCl_3) δ 16.2. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 6.9 min (maj) and 7.8 min. HRMS (ESI) m/z calculated for $\text{C}_{17}\text{H}_{26}\text{N}_2\text{O}_4\text{P}$ $[\text{M}+\text{H}]^+$ 353.1626, found 353.1625.

Diisopropyl (*R*)-(2-oxo-6-(*m*-tolyl)-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate (1c): 34



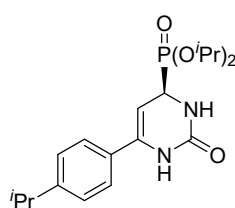
mg, 96% yield, new compound, white solid, mp: 129-130 °C, R_f = 0.40 (dichloromethane/ methanol = 10/1), 92% ee, $[\alpha]_D^{20}$ = -52.43 (c 0.34, MeOH). ^1H NMR (400 MHz, CDCl_3) δ 7.53 (s, 1H), 7.29-7.24 (m, 3H), 7.18 (d, J = 5.9 Hz, 1H), 5.75 (s, 1H), 5.05 (s, 1H), 4.81-4.71 (m, 2H), 4.44 (d, J = 3.9 Hz, 1H), 2.37 (s, 3H), 1.35-1.28 (m, 12H). ^{13}C NMR (100 MHz, CDCl_3) δ 154.0, 138.5, 134.0 (d, J = 3.2 Hz), 130.0 (d, J = 4.2 Hz), 128.7 (d, J = 5.2 Hz), 125.8, 122.2, 90.4 (d, J = 7.8 Hz), 72.2 (d, J = 6.8 Hz), 71.8 (d, J = 7.2 Hz), 51.7 (d, J = 159.7 Hz), 24.3 (d, J = 3.1 Hz), 24.1 (d, J = 3.0 Hz), 24.1 (d, J = 8.5 Hz), 23.9 (d, J = 5.1 Hz), 21.4. ^{31}P NMR (162 MHz, CDCl_3) δ 16.1. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 5.3 min (maj) and 6.3 min. HRMS (ESI) m/z calculated for $\text{C}_{17}\text{H}_{26}\text{N}_2\text{O}_4\text{P}$ $[\text{M}+\text{H}]^+$ 353.1626, found 353.1624.

Diisopropyl (R)-(6-(3,4-dimethylphenyl)-2-oxo-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate (1d): 36 mg, 98% yield, new compound, white solid, mp: 132-133 °C, R_f = 0.40



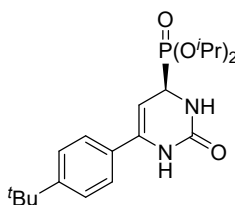
(dichloromethane/methanol = 10/1), 90% ee, $[\alpha]_D^{20}$ = -39.72 (c 0.36, MeOH). ^1H NMR (400 MHz, CDCl_3) δ 7.22 (s, 1H), 7.17 (d, J = 0.8 Hz, 2H), 6.69 (s, 1H), 5.28 (s, 1H), 5.07-5.05 (m, 1H), 4.82-4.73 (m, 2H), 4.51-4.48 (m, 1H), 2.29 (d, J = 2.5 Hz, 6H), 1.38-1.30 (m, 12H). ^{13}C NMR (100 MHz, CDCl_3) δ 154.1, 138.3 (d, J = 10.7 Hz), 138.0, 137.1, 131.5 (d, J = 3.0 Hz), 130.0, 126.2, 122.4, 89.6 (d, J = 9.0 Hz), 72.2 (d, J = 7.6 Hz), 71.7 (d, J = 7.9 Hz), 51.7 (d, J = 160.2 Hz), 24.3 (d, J = 2.9 Hz), 24.1 (d, J = 4.1 Hz), 23.9 (d, J = 5.2 Hz), 19.8, 19.6. ^{31}P NMR (162 MHz, CDCl_3) δ 16.2. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 5.9 min (maj) and 6.9 min. HRMS (ESI) m/z calculated for $\text{C}_{18}\text{H}_{28}\text{N}_2\text{O}_4\text{P}$ $[\text{M}+\text{H}]^+$ 367.1778, found 367.1777.

Diisopropyl (R)-(6-(4-isopropylphenyl)-2-oxo-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate (1e): 35 mg, 92% yield, new compound, white solid, mp: 158-159 °C, R_f = 0.40



(dichloromethane/methanol = 10/1), 94% ee, $[\alpha]_D^{20}$ = -39.43 (c 0.35, MeOH). ^1H NMR (400 MHz, CDCl_3) δ 7.52 (s, 1H), 7.38 (d, J = 8.2 Hz, 2H), 7.24 (d, J = 8.3 Hz, 2H), 5.69 (s, 1H), 5.03 (dd, J = 5.2, 3.4 Hz, 1H), 4.77-4.74 (m, 2H), 4.48-4.46 (m, 1H), 2.94-2.88 (m, 1H), 1.35-1.28 (m, 12H), 1.24 (d, J = 6.9 Hz, 6H). ^{13}C NMR (100 MHz, CDCl_3) δ 154.0, 150.2, 138.2 (d, J = 10.9 Hz), 131.5 (d, J = 3.3 Hz), 126.9, 125.1 (d, J = 1.8 Hz), 89.9 (d, J = 9.1 Hz), 72.1 (d, J = 7.6 Hz), 71.8 (d, J = 7.6 Hz), 51.7 (d, J = 160.4 Hz), 33.9, 24.3 (d, J = 3.0 Hz), 24.2 (d, J = 3.1 Hz), 24.1 (d, J = 4.0 Hz), 23.9 (d, J = 5.2 Hz), 23.8. ^{31}P NMR (162 MHz, CDCl_3) δ 16.2. HPLC: Chiracel OD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 7.1 min (maj) and 7.7 min. HRMS (ESI) m/z calculated for $\text{C}_{19}\text{H}_{30}\text{N}_2\text{O}_4\text{P}$ $[\text{M}+\text{H}]^+$ 381.1934, found 381.1932.

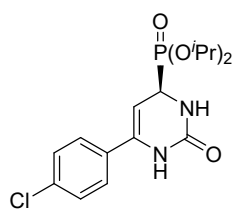
Diisopropyl (R)-(6-(4-(tert-butyl)phenyl)-2-oxo-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate (1f): 37 mg, 94% yield, new compound, white solid, mp: 191-192 °C, R_f = 0.40



(dichloromethane/methanol = 10/1), 95% ee, $[\alpha]^{20}_D = -35.41$ (*c* 0.37, MeOH). ^1H NMR (400 MHz, CDCl_3) δ 7.53 (s, 1H), 7.40 (s, 4H), 5.70 (s, 1H), 5.06-5.04 (m, 1H), 4.81-4.71 (m, 2H), 4.48-4.46 (m, 1H), 1.36-1.28 (m, 21H). ^{13}C NMR (100 MHz, CDCl_3) δ 154.0, 152.4, 138.1 (d, $J = 10.8$ Hz), 131.1, 125.7, 124.8, 90.0 (d, $J = 9.3$ Hz), 72.1 (d, $J = 7.6$ Hz), 71.8 (d, $J = 7.7$ Hz), 51.8 (d, $J = 160.5$ Hz), 34.7, 31.2, 24.3 (d, $J = 3.2$ Hz), 24.2 (d, $J = 3.3$ Hz), 24.1 (d, $J = 4.3$ Hz), 23.9 (d, $J = 5.1$ Hz). ^{31}P NMR (162 MHz, CDCl_3) δ 16.1. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 6.3 min and 7.1 min (maj). HRMS (ESI) m/z calculated for $\text{C}_{20}\text{H}_{32}\text{N}_2\text{O}_4\text{P}$ $[\text{M}+\text{H}]^+$ 395.2093, found 395.2092.

Diisopropyl (R)-(6-(4-chlorophenyl)-2-oxo-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate

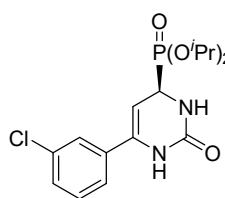
(1g): 35 mg, 94% yield, new compound, white solid, mp: 184-185 °C, $R_f = 0.40$ (dichloromethane/



methanol = 10/1), 95% ee, $[\alpha]^{20}_D = -39.72$ (*c* 0.35, MeOH). ^1H NMR (400 MHz, DMSO-d_6) δ 8.64 (s, 1H), 7.51 (d, $J = 8.6$ Hz, 2H), 7.46-7.44 (m, 2H), 6.95 (s, 1H), 5.00-4.98 (m, 1H), 4.65-4.56 (m, 2H), 4.34-4.30 (m, 1H), 1.30-1.18 (m, 12H). ^{13}C NMR (100 MHz, DMSO-d_6) δ 153.7, 138.0 (d, $J = 9.9$ Hz), 133.8, 133.2 (d, $J = 3.8$ Hz), 129.0, 127.6 (d, $J = 1.4$ Hz), 91.9 (d, $J = 7.7$ Hz), 71.4 (d, $J = 7.6$ Hz), 71.2 (d, $J = 7.6$ Hz), 50.9 (d, $J = 158.5$ Hz), 24.5 (d, $J = 3.0$ Hz), 24.4 (d, $J = 3.5$ Hz), 24.2 (d, $J = 4.7$ Hz), 24.1 (d, $J = 5.0$ Hz). ^{31}P NMR (162 MHz, DMSO-d_6) δ 17.4. HPLC: Chiracel OD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 6.3 min and 7.4 min (maj). HRMS (ESI) m/z calculated for $\text{C}_{16}\text{H}_{23}\text{ClN}_2\text{O}_4\text{P}$ $[\text{M}+\text{H}]^+$ 373.0894, found 373.0893.

Diisopropyl (R)-(6-(3-chlorophenyl)-2-oxo-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate

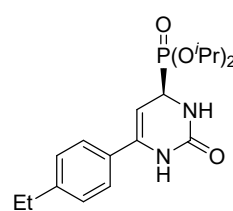
(1h): 36 mg, 97% yield, new compound, white solid, mp: 165-166 °C, $R_f = 0.40$



(dichloromethane/methanol = 10/1), 93% ee, $[\alpha]^{20}_D = -56.39$ (*c* 0.36, MeOH). ^1H NMR (400 MHz, CDCl_3) δ 8.20 (s, 1H), 7.44 (s, 1H), 7.32 (d, $J = 7.2$ Hz, 3H), 5.88 (s, 1H), 5.05 (s, 1H), 4.79 - 4.71 (m, 2H), 4.45-4.43 (m, 1H), 1.34-1.27 (m, 12H). ^{13}C NMR (100 MHz, CDCl_3) δ 154.2, 137.3 (d, $J = 10.8$ Hz), 135.7 (d, $J = 2.9$ Hz), 134.7, 130.0, 129.2, 125.5, 123.4, 91.7 (d, $J = 9.3$ Hz), 72.2 (d, $J = 7.5$ Hz), 72.0 (d, $J = 7.7$ Hz), 51.7 (d, $J = 160.8$ Hz), 24.2 (d, $J = 3.0$ Hz), 24.1 (d, $J = 3.8$ Hz), 24.1 (d, $J = 6.4$ Hz), 23.9 (d, $J = 5.1$ Hz). ^{31}P NMR (162 MHz, CDCl_3) δ 15.9. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 5.7 min (maj) and 7.0 min. HRMS (ESI) m/z calculated for $\text{C}_{16}\text{H}_{23}\text{ClN}_2\text{O}_4\text{P}$ $[\text{M}+\text{H}]^+$ 373.0894, found 373.0891.

Diisopropyl (R)-(6-(4-ethylphenyl)-2-oxo-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate

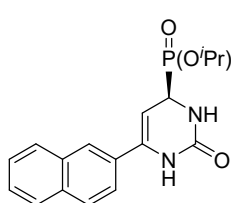
(1i): 34 mg, 93% yield, new compound, white solid, mp: 156-157 °C, $R_f = 0.40$ (dichloromethane/



methanol = 10/1), 81% ee, $[\alpha]^{20}_D = -34.72$ (*c* 0.36, MeOH). ^1H NMR (400 MHz, CDCl_3) δ 7.51 (s, 1H), 7.37 (d, $J = 6.5$ Hz, 2H), 7.21 (d, $J = 6.4$ Hz, 2H), 5.69 (s, 1H), 5.03 (s, 1H), 4.75 (s, 2H), 4.45 (s, 1H), 2.64 (d, $J = 6.7$ Hz, 2H), 1.33-1.23 (m, 15H). ^{13}C NMR (100 MHz, CDCl_3) δ 154.0, 145.6, 138.2 (d, $J = 11.0$ Hz), 131.4, 128.3, 125.0, 89.9 (d, $J = 9.2$ Hz), 72.2 (d, $J = 7.6$ Hz), 71.8 (d, $J = 7.7$ Hz), 51.8 (d, $J = 160.5$ Hz), 34.7, 31.2, 24.3 (d, $J = 3.2$ Hz), 24.2 (d, $J = 3.3$ Hz), 24.1 (d, $J = 4.3$ Hz), 23.9 (d, $J = 5.1$ Hz).

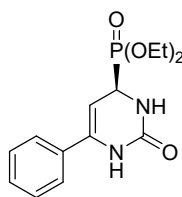
= 7.7 Hz), 71.8 (d, $J = 7.9$ Hz), 51.7 (d, $J = 160.5$ Hz), 28.6, 24.3 (d, $J = 2.8$ Hz), 24.1 (d, $J = 3.8$ Hz), 23.9 (d, $J = 5.2$ Hz), 15.33 (s). ^{31}P NMR (162 MHz, CDCl_3) δ 16.2. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 7.1 min (maj) and 7.7 min. HRMS (ESI) m/z calculated for $\text{C}_{18}\text{H}_{28}\text{N}_2\text{O}_4\text{P}$ $[\text{M}+\text{H}]^+$ 367.1784, found 367.1781.

Diisopropyl (R)-(6-(naphthalen-2-yl)-2-oxo-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate (1j): 30 mg, 77% yield, new compound, white solid, mp: 156-157 °C, $R_f = 0.40$ (dichloromethane/



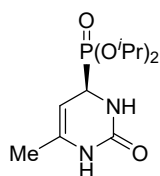
methanol = 10/1), 49% ee, $[\alpha]_D^{20} = -74.58$ (c 0.30, MeOH). ^1H NMR (400 MHz, CDCl_3) δ 8.26-8.23 (m, 1H), 7.85-7.84 (m, 2H), 7.51-7.48 (m, 4H), 6.85 (s, 1H), 5.77 (s, 1H), 4.93-4.91 (m, 1H), 4.83-4.72 (m, 2H), 4.53-4.50 (m, 1H), 1.40-1.33 (m, 12H). ^{13}C NMR (100 MHz, CDCl_3) δ 153.2, 137.2 (d, $J = 10.4$ Hz), 133.7, 132.7 (d, $J = 2.7$ Hz), 130.8 (d, $J = 1.9$ Hz), 129.6, 128.4, 126.6, 126.3, 126.1 (d, $J = 2.9$ Hz), 125.2, 125.1, 94.2 (d, $J = 9.1$ Hz), 72.1 (d, $J = 7.4$ Hz), 71.7 (d, $J = 7.7$ Hz), 51.9 (d, $J = 161.1$ Hz), 24.3 (d, $J = 3.6$ Hz), 24.2, 24.1, 24.0. ^{31}P NMR (162 MHz, CDCl_3) δ 16.3. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 5.9 min (maj) and 7.7 min. HRMS (ESI) m/z calculated for $\text{C}_{20}\text{H}_{26}\text{N}_2\text{O}_4\text{P}$ $[\text{M}+\text{H}]^+$ 389.1624, found 389.1627.

Diethyl (R)-(2-oxo-6-phenyl-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate (1k): 30 mg, 97% yield, new compound, white solid, mp: 157-158 °C, $R_f = 0.40$ (dichloromethane/methanol = 10/1),



90% ee, $[\alpha]_D^{20} = -35.68$ (c 0.30, MeOH). ^1H NMR (400 MHz, CDCl_3) δ 7.91 (s, 1H), 7.52-7.41 (m, 2H), 7.39-7.36 (m, 3H), 6.27 (s, 1H), 5.06 (s, 1H), 4.45-4.42 (m, 1H), 4.20-4.13 (m, 4H), 1.36-1.28 (m, 6H). ^{13}C NMR (100 MHz, CDCl_3) δ 154.5, 138.7 (d, $J = 10.5$ Hz), 133.8 (d, $J = 3.4$ Hz), 129.3, 128.8, 125.2 (d, $J = 1.9$ Hz), 90.4 (d, $J = 8.8$ Hz), 63.6 (d, $J = 7.3$ Hz), 63.0 (d, $J = 7.5$ Hz), 51.0 (d, $J = 158.8$ Hz), 16.6 (d, $J = 5.0$ Hz), 16.5 (d, $J = 5.3$ Hz). ^{31}P NMR (162 MHz, CDCl_3) δ 18.0. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 8.2 min (maj) and 8.9 min. HRMS (ESI) m/z calculated for $\text{C}_{14}\text{H}_{20}\text{N}_2\text{O}_4\text{P}$ $[\text{M}+\text{H}]^+$ 311.1117, found 311.1116.

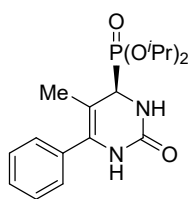
Diisopropyl (R)-(6-methyl-2-oxo-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate (1l): 26 mg, 94% yield, white solid, mp: 122-123 °C, $R_f = 0.40$ (dichloromethane/methanol = 10/1), 5% ee, $[\alpha]_D^{20}$



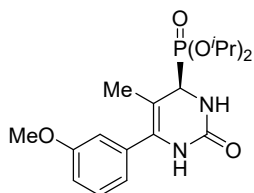
= -4.77 (c 0.26, MeOH). ^1H NMR (400 MHz, CDCl_3) δ 7.40 (s, 1H), 5.24 (s, 1H), 4.79-4.72 (m, 2H), 4.53 (s, 1H), 4.31-4.30 (m, 1H), 1.80 (d, $J = 4.5$ Hz, 3H), 1.35-1.31 (m, 12H). ^{13}C NMR (100 MHz, CDCl_3) δ 154.3, 135.1 (d, $J = 10.3$ Hz), 88.9 (d, $J = 8.4$ Hz), 71.9 (d, $J = 7.7$ Hz), 71.6 (d, $J = 7.8$ Hz), 51.4 (d, $J = 161.2$ Hz), 24.2 (d, $J = 3.4$ Hz), 24.1 (d, $J = 3.6$ Hz), 24.0 (d, $J = 4.6$ Hz), 23.8 (d, $J = 5.1$ Hz), 18.5 (d, $J = 2.5$ Hz). ^{31}P NMR (162 MHz, CDCl_3) δ 16.6. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 5.2 min and 6.6 min (maj). HRMS (ESI) m/z calculated for $\text{C}_{11}\text{H}_{22}\text{N}_2\text{O}_4\text{P}$ $[\text{M}+\text{H}]^+$ 277.1313, found 277.1312.

Diisopropyl (R)-(5-methyl-2-oxo-6-phenyl-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate

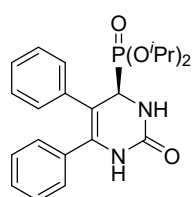
(1m): 33 mg, 94% yield, white solid, mp: 158-159 °C, $R_f = 0.40$ (dichloromethane/methanol = 10/1), 84% ee, $[\alpha]^{20}_D = -18.21$ (c 0.33, MeOH). 1H NMR (400 MHz, $CDCl_3$) δ 7.40-7.31 (m, 5H), 6.50 (s, 1H), 5.53 (s, 1H), 4.81-4.75 (m, 2H), 4.13 (d, $J = 8.1$ Hz, 1H), 1.82 (s, 3H), 1.37-1.34 (m, 12H). ^{13}C NMR (100 MHz, $CDCl_3$) δ 153.8, 134.8 (d, $J = 3.6$ Hz), 133.2 (d, $J = 9.8$ Hz), 128.8, 128.7, 128.4 (d, $J = 2.8$ Hz), 99.2 (d, $J = 6.4$ Hz), 72.1 (d, $J = 7.9$ Hz), 71.5 (d, $J = 7.8$ Hz), 56.3 (d, $J = 155.6$ Hz), 24.4 (d, $J = 3.1$ Hz), 24.2, 24.1, 24.0 (d, $J = 5.0$ Hz), 16.7 (d, $J = 1.5$ Hz). ^{31}P NMR (162 MHz, $CDCl_3$) δ 16.9. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 5.2 min (maj) and 6.4 min. HRMS (ESI) m/z calculated for $C_{17}H_{26}N_2O_4P$ $[M+H]^+$ 353.1654, found 353.1652.



Diisopropyl (R)-(6-(3-methoxyphenyl)-5-methyl-2-oxo-1,2,3,4-tetrahydropyrimidin-4-yl) phosphonate (1n): 37 mg, 97% yield, new compound, white solid, mp: 153-154 °C, $R_f = 0.40$ (dichloromethane/methanol = 10/1), 80% ee, $[\alpha]^{20}_D = -11.62$ (c 0.37, MeOH). 1H NMR (400 MHz, $CDCl_3$) δ 7.33-7.28 (m, 1H), 6.91-6.85 (m, 3H), 6.43 (s, 1H), 5.47 (s, 1H), 4.80-4.75 (m, 2H), 4.12 (d, $J = 8.2$ Hz, 1H), 3.81 (s, 3H), 1.83 (s, 3H), 1.36 (t, $J = 6.2$ Hz, 12H). ^{13}C NMR (100 MHz, $CDCl_3$) δ 159.7, 153.6, 136.1 (d, $J = 3.4$ Hz), 133.0 (d, $J = 10.0$ Hz), 129.8, 120.8 (d, $J = 2.8$ Hz), 114.5, 113.9 (d, $J = 2.8$ Hz), 99.3 (d, $J = 6.4$ Hz), 72.1 (d, $J = 7.9$ Hz), 71.5 (d, $J = 7.7$ Hz), 56.3 (d, $J = 155.6$ Hz), 55.3, 24.4 (d, $J = 3.1$ Hz), 24.2, 24.1, 24.0 (d, $J = 5.0$ Hz), 16.8 (d, $J = 1.4$ Hz). ^{31}P NMR (162 MHz, $CDCl_3$) δ 16.9. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 5.9 min (maj) and 7.8 min. HRMS (ESI) m/z calculated for $C_{18}H_{28}N_2O_5P$ $[M+H]^+$ 383.1727, found 383.1729.



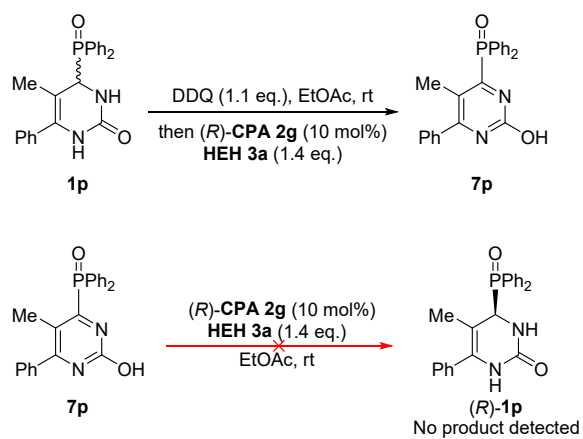
Diisopropyl (R)-(2-oxo-5,6-diphenyl-1,2,3,4-tetrahydropyrimidin-4-yl) phosphonate (1o): 39 mg, 94% yield, new compound, white solid, mp: 188-189 °C, $R_f = 0.40$ (dichloromethane/methanol = 10/1), 88% ee, $[\alpha]^{20}_D = -19.23$ (c 0.39, MeOH). 1H NMR (400 MHz, $CDCl_3$) δ 7.26-7.11 (m, 10H), 6.44 (s, 1H), 5.57 (s, 1H), 4.77-4.71 (m, 1H), 4.70-4.60 (m, 2H), 1.36-1.30 (m, 6H), 1.16-1.10 (m, 6H). ^{13}C NMR (100 MHz, $CDCl_3$) δ 154.2, 137.0 (d, $J = 4.7$ Hz), 135.4, 135.0 (d, $J = 3.4$ Hz), 130.3, 128.6, 128.4, 128.0, 126.7, 118.8, 105.3 (d, $J = 4.0$ Hz), 71.7 (d, $J = 8.0$ Hz), 56.0 (d, $J = 157.5$ Hz), 24.3 (d, $J = 3.1$ Hz), 24.1 (d, $J = 4.4$ Hz), 24.0 (d, $J = 2.8$ Hz), 23.6 (d, $J = 4.9$ Hz). ^{31}P NMR (162 MHz, $CDCl_3$) δ 17.4. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 5.8 min (maj) and 7.6 min. HRMS (ESI) m/z calculated for $C_{22}H_{28}N_2O_4P$ $[M+H]^+$ 415.1783, found 415.1781.



Failed example:

Under standard conditions, the redox deracemization of 4-(diphenylphosphoryl)-5-methyl-6-phenyl-3,4-dihydropyrimidin-2(1H)-one, in which the isopropoxy group is replaced with a phenyl group, the reaction only underwent oxidation, without observation reduction products, the starting

material was recovered.



4. Determination of Absolute Configuration of Products

4.1 Determination of Absolute Configuration of Products **4m**

To determine the absolute configuration of **4m** (93% ee), firstly, **4m** was upgraded to >99% ee by recrystallization with *n*-hexane/ethyl acetate. Then, *n*-hexane was slowly added into the solution of **4m** in ethyl acetate at 50 °C, then the solution was slowly cooled down to room temperature. The crystal was grown from the solution, which is suitable for X-ray diffraction analysis. The structure in **Figure S2** showed that the absolute configuration of **4m** is (*R*). [CCDC 2080219] contains the structure and supplementary crystallographic data for (*R*)-**4m**. These data can be obtained free of charge from the Cambridge Crystallographic Data Centre *via* www.ccdc.cam.ac.uk.

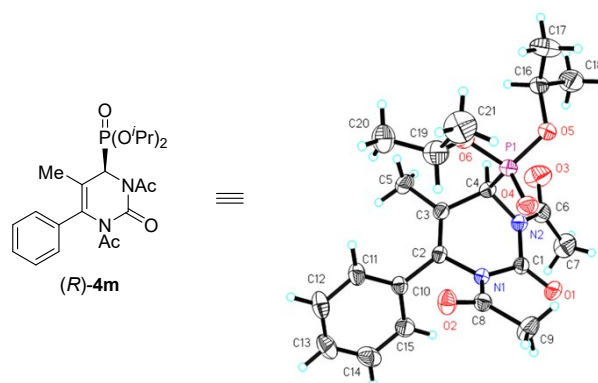


Figure S2. X-ray crystallographic analysis of (*R*)-**4m** [CCDC 2080219]

ORTEP diagram of compound **4m**, thermal ellipsoids are drawn on 30% probability level

Crystal data and structure refinement for **4m**.

Identification code	4m
Empirical formula	C ₂₁ H ₂₉ N ₂ O ₆ P
Formula weight	436.43
Temperature	293(2) K
Wavelength	0.71073 Å
Crystal system	monoclinic
Space group	P 21
Volume	1162.84(4) Å ³
Z	2
Density (calculated)	1.246 Mg/m ³

Absorption coefficient	0.155 mm ⁻¹
F(000)	464
Crystal size	0.200 x 0.160 x 0.130 mm ³
Theta range for data collection	2.832 to 26.000°.
Goodness-of-fit on F ²	1.054
Flack	0.02(3)
Extinction coefficient	0.031(11)

4.2 Determination of Absolute Configuration of Products 4a

A racemic of 3,4-Dihydropyrimidin-2-one derivatives **1a** (1.352 g, 4.0 mmol), DDQ (0.999 g, 4.4 mmol, 1.1 equiv) in ethyl acetate (50 mL) was stirred at room temperature for 10 min. After the reaction was completed (determined by TLC), chiral phosphoric acid (*S*)-**2g** (0.301 g, 0.4 mmol, 10 mol%) and Hantzsch ester **3a** (1.261 g, 5.6 mmol, 1.4 equiv) was added. The mixture was stirred at room temperature for 24 h. The resulting mixture was concentrated in *vacuo* and further purification was performed by a silica gel column eluted with dichloromethane /methanol to give the optically active products (*S*)-**1a** 1.243 g in 92% yield and 96% ee. $[\alpha]_D^{20} = +24.40$ (*c* 1.0, MeOH).

A solution of compound (*S*)-**1a** (1.056 g, 3 mmol) in dichloroethane (60 mL) was added DMAP (36.6 mg, 0.3 mmol), Et₃N (3.036 g, 30 mmol), Ac₂O (3.063g, 30 mmol). The mixture was stirred at room temperature for 10 h. After the reaction was completed (determined by TLC). The resulting mixture was concentrated in *vacuo* and further purification was performed by a silica gel column eluted with hexane/ethyl acetate to give the optically active products (*S*)-**4a** 1.203 g in 92% yield and 92% ee. To determine the absolute configuration of (*S*)-**4a** (96% ee), firstly, (*S*)-**4a** was upgraded to >99% ee by recrystallization with *n*-hexane/ethyl acetate. Then, *n*-hexane was slowly added into the solution of (*S*)-**4a** in ethyl acetate at 50 °C, then the solution was slowly cooled down to room temperature. The crystal was grown from the solution, which is suitable for X-ray diffraction analysis. The structure in **Figure S1** showed that the absolute configuration of **4a** is (*S*). [CCDC 2100898] contains the structure and supplementary crystallographic data for (*S*)-**4a**. These data can be obtained free of charge from the Cambridge Crystallographic Data Centre *via* www.ccdc.cam.ac.uk.

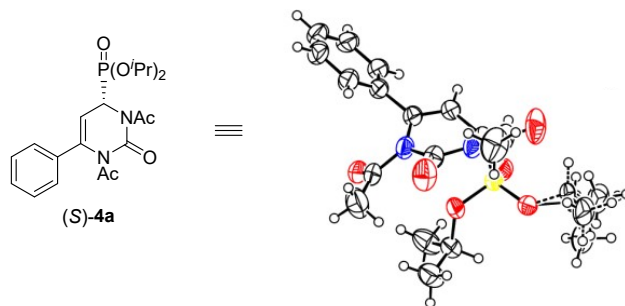


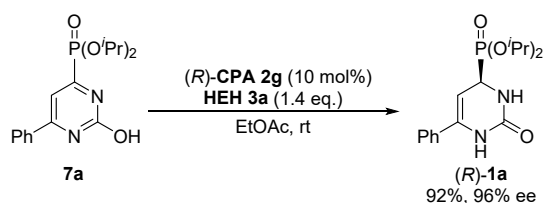
Figure S1. X-ray Crystallographic Analysis of (*S*)-**4a** [CCDC 2100898]

ORTEP diagram of compound **4a**, thermal ellipsoids are drawn on 30% probability level

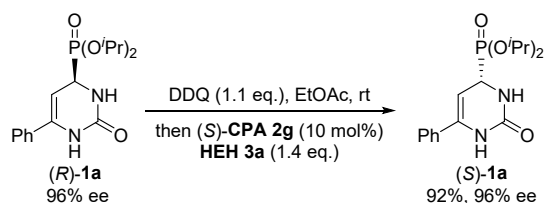
Crystal data and structure refinement for **4a**.

Identification code	4a
Empirical formula	C ₂₀ H ₂₇ N ₂ O ₆ P
Formula weight	422.40
Temperature	190(0) K
Wavelength	1.34139 Å
Crystal system	triclinic
Space group	P 1
Volume	2756.2(4) Å ³
Z	5
Density (calculated)	1.272 Mg/m ³
Absorption coefficient	0.925 mm ⁻¹
F(000)	1120
Crystal size	0.120 x 0.100 x 0.100 mm ³
Goodness-of-fit on F ²	1.040
Flack	0.049(11)

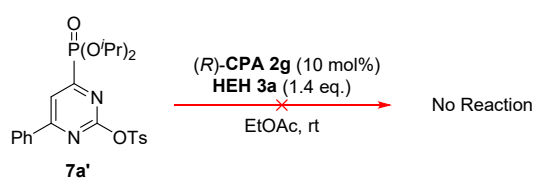
5. Control Experiments



A compound of 2-hydroxypyrimidine **7a** (33.6 mg, 0.10 mmol, 1.0 equiv), chiral phosphoric acid (*R*)-**2g** (7.5 mg, 0.01 mmol, 10 mol%) and Hantzsch ester **3a** (31.5 mg, 0.14 mmol, 1.4 equiv) was added. The mixture was stirred at room temperature for 24 h. The resulting mixture was concentrated in *vacuo* and further purification was performed by a silica gel column chromatography eluted with dichloromethane/methanol to give the optically active product (*R*)-**1a** 31.1 mg in 92% yield and 96% ee. The enantiomeric excess was determined by chiral HPLC.

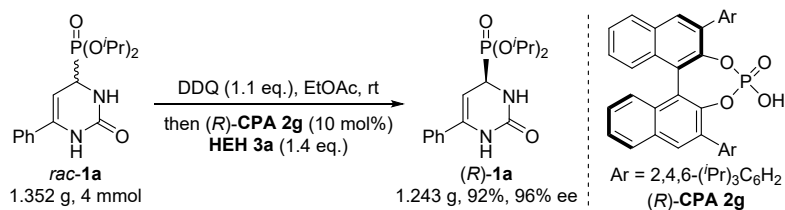


A compound of (*R*)-**1a** (33.8 mg, 0.10 mmol, 1.0 equiv), DDQ (25 mg, 0.11 mmol, 1.1 equiv) in ethyl acetate (4 mL) was stirred at room temperature for 5 min. After the reaction was completed (determined by TLC), chiral phosphoric acid (*S*)-**2g** (7.5 mg, 0.01 mmol, 10 mol%) and Hantzsch ester **3a** (31.5 mg, 0.14 mmol, 1.4 equiv) was added. The mixture was stirred at room temperature for 24 h. The resulting mixture was concentrated in *vacuo* and further purification was performed by a silica gel column chromatography eluted with dichloromethane/methanol to give the optically active product (*S*)-**1a** 31.1 mg in 92% yield and 96% ee. The enantiomeric excess was determined by chiral HPLC.



The 4-(diisopropoxyphosphoryl)-6-phenylpyrimidin-2-yl 4-methylbenzenesulfonate **7a'** (0.10 mmol), chiral phosphoric acid (*R*)-**2g** (7.5 mg, 0.01 mmol, 10 mol%) and Hantzsch ester **3a** (31.5 mg, 0.14 mmol, 1.4 equiv) in ethyl acetate (4 mL) was stirred at room temperature for 24 hrs. The reaction was monitored by TLC. The reaction mixture was concentrated in *vacuo* and then tested the crude residue by ¹HNMR to find that starting material **7a'** remained >95% NMR yield.

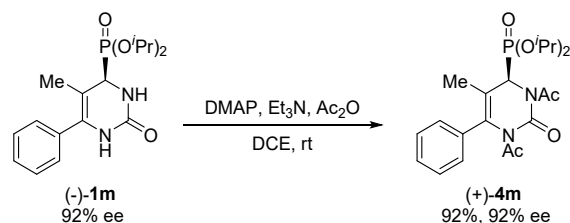
6. Redox Deracemization of 3,4-Dihydropyrimidin-2-ones at Gram Scale



A racemic of 3,4-Dihydropyrimidin-2-one derivatives **1a** (1.352 g, 4.0 mmol, 1.0 equiv), DDQ (0.999 g, 4.4 mmol, 1.1 equiv) in ethyl acetate (50 mL) was stirred at room temperature for 10 min. After the reaction was completed (determined by TLC), chiral phosphoric acid (*R*)-**2g** (0.301 g, 0.4 mmol, 10 mol%) and Hantzsch ester **3a** (1.261 g, 5.6 mmol, 1.4 equiv) was added. The mixture was stirred at room temperature for 24 h. The resulting mixture was concentrated in *vacuo* and further purification was performed by a silica gel column eluted with dichloromethane/methanol to give the optically active products (*R*)-(-)-**1a** 1.243 g in 92% yield and 96% ee. The enantiomeric excesses were determined by chiral HPLC.

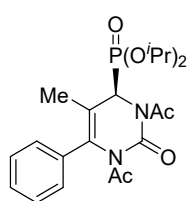
7. Synthesis of the Optically Active Products 5m and 6m

7.1 Synthesis DHPMs Derivative 4m



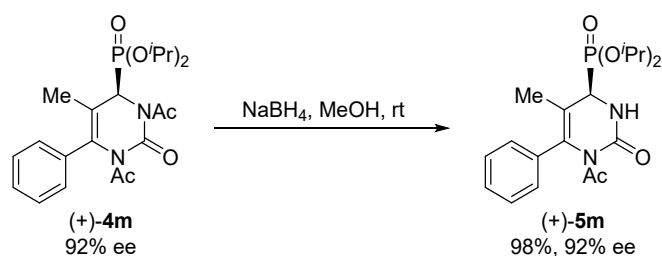
A solution of compound (*R*)-**1m** (0.352 g, 1 mmol) in dichloroethane (20 mL) was added DMAP (12.2 mg, 0.1 mmol), Et₃N (1.012 g, 10 mmol), Ac₂O (1.021 g, 10 mmol). The mixture was stirred at room temperature for 10 h. After the reaction was completed (determined by TLC). The resulting mixture was concentrated in *vacuo* and further purification was performed by a silica gel column eluted with hexane/ethyl acetate to give the optically active products (*R*)-**4m** 0.401 g in 92% yield and 92% ee. The enantiomeric excesses were determined by chiral HPLC.

Diisopropyl (*R*)-(1,3-diacetyl-5-methyl-2-oxo-6-phenyl-1,2,3,4-tetrahydropyrimidin-4-yl) phosphonate (4m): 401 mg, 92% yield, new compound, white solid, mp: 103-104 °C, *R_f* = 0.30



(dichloromethane/methanol = 50/1), 92% ee, $[\alpha]_D^{20} = +36.30$ (*c* 0.98, MeOH). ¹H NMR (400 MHz, DMSO-*d*₆) δ 7.37 (t, *J* = 7.4 Hz, 2H), 7.28 (t, *J* = 8.1 Hz, 3H), 5.26 (d, *J* = 20.0 Hz, 1H), 4.68-4.58 (m, 2H), 2.55 (s, 3H), 2.29 (s, 3H), 1.89 (d, *J* = 2.2 Hz, 3H), 1.30-1.20 (m, 12H). ¹³C NMR (100 MHz, DMSO-*d*₆) δ 170.9 (d, *J* = 1.6 Hz), 169.6 (d, *J* = 2.0 Hz), 153.3, 136.0 (d, *J* = 3.3 Hz), 135.5 (d, *J* = 9.0 Hz), 128.4, 128.2, 127.9, 120.7 (d, *J* = 1.4 Hz), 72.4 (d, *J* = 7.3 Hz), 71.9 (d, *J* = 7.3 Hz), 52.9 (d, *J* = 155.9 Hz), 26.4, 26.1, 24.3 (d, *J* = 3.5 Hz), 24.1 (d, *J* = 4.0 Hz), 23.9 (d, *J* = 3.0 Hz), 23.8 (d, *J* = 2.0 Hz), 18.0 (d, *J* = 4.9 Hz). ³¹P NMR (162 MHz, DMSO-*d*₆) δ 16.7. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 4.1 min (maj) and 4.8 min. HRMS (ESI) *m/z* Calculated for C₂₁H₃₀N₂O₆P [M+H]⁺ 437.1836, found 437.1837.

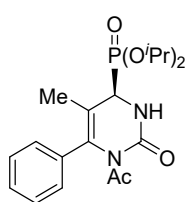
7.2 Synthesis DHPMs Derivative 5m



A solution of compound (*R*)-**4m** (43.6 mg, 0.10 mmol) in methanol (2.0 mL) was added sodium borohydride (15.1 mg, 0.40 mmol). The resulting solution was stirred at room temperature for 0.5 h. After the reaction was completed (determined by TLC). Methanol was removed in *vacuo* and the residue was diluted with water. The aqueous mixture was extracted with dichloromethane (10

mL×3). The combined organic layer was washed twice with brine, dried over anhydrous sodium sulfate, and concentrated under reduced pressure to give viscous oil. The crude product was purified by flash column chromatography using dichloromethane/methanol as eluent to give the desired products (+)-**5m** 38.9 mg in 98% yield and 92% ee.

Diisopropyl (R)-(1-acetyl-5-methyl-2-oxo-6-phenyl-1,2,3,4-tetrahydropyrimidin-4-yl)phosphonate (5m): 38.9 mg, 98% yield, new compound, white solid, mp: 181-182 °C, $R_f = 0.30$



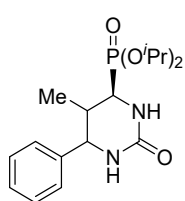
(hexanes/ethyl acetate = 20/1), 92% ee, $[\alpha]_D^{20} = +86.73$ (c 1.74, MeOH). ^1H NMR (400 MHz, DMSO- d_6) δ 8.64 (d, $J = 5.3$ Hz, 1H), 7.34 (t, $J = 7.4$ Hz, 2H), 7.24 (t, $J = 7.2$ Hz, 1H), 7.16 (d, $J = 7.5$ Hz, 2H), 4.67-4.62 (m, 2H), 4.01-3.96 (m, 1H), 2.21 (s, 3H), 1.85 (d, $J = 2.1$ Hz, 3H), 1.32-1.25 (m, 12H). ^{13}C NMR (100 MHz, DMSO- d_6) δ 168.4 (d, $J = 2.4$ Hz), 154.7, 137.1 (d, $J = 3.5$ Hz), 135.7 (d, $J = 9.4$ Hz), 128.3, 128.0 (d, $J = 1.2$ Hz), 127.5, 120.0 (d, $J = 1.2$ Hz), 71.5 (d, $J = 7.4$ Hz), 71.3 (d, $J = 7.5$ Hz), 54.0 (d, $J = 153.6$ Hz), 25.7, 24.2 (d, $J = 3.7$ Hz), 24.1, 24.1 (d, $J = 1.5$ Hz), 24.0 (d, $J = 4.3$ Hz), 17.7 (d, $J = 4.2$ Hz). ^{31}P NMR (162 MHz, DMSO- d_6) δ 18.2. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 90/10, flow = 1.0 mL/min, retention time 16.0 min (maj) and 18.0 min. HRMS (ESI) m/z Calculated for $\text{C}_{19}\text{H}_{28}\text{N}_2\text{O}_5\text{P}$ $[\text{M}+\text{H}]^+$ 395.1729, found 395.1728.

7.3 Synthesis DHPMs Derivative 6m



A mixture of compound (*R*)-**1m** (70.4 mg, 0.20 mmol) in ethyl acetate (5.0 mL) was added Pd/C (47.3 mg, 0.01mmol, 5 mol%) in a Schlenk tube. The Schlenk tube was carefully and quickly vacuum purged before being filled with hydrogen using a hydrogen balloon. The reaction mixture was then stirred at 50 °C until the the reaction was completed (determined by TLC). Ethyl acetate was removed in vacuo and further purification was performed by a silica gel column eluted with dichloromethane /methanol to give the optically active products (+)-**6m** 67.3 mg in 95% yield and 92% ee. The enantiomeric excesses were determined by chiral HPLC.

Diisopropyl ((R)-5-methyl-2-oxo-6-phenylhexahydropyrimidin-4-yl)phosphonate (6m): 67.3 mg, 95% yield, new compound, colorless liquid, $R_f = 0.30$ (methanol/dichloromethane = 20/1),



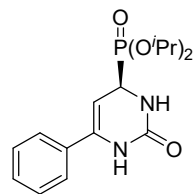
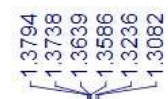
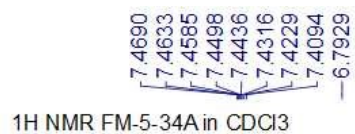
92% ee, $[\alpha]_D^{20} = +73.11$ (c 0.70, MeOH). ^1H NMR (400 MHz, CDCl_3) δ 7.38 (t, $J = 7.3$ Hz, 2H), 7.33-7.26 (m, 3H), 5.27 (s, 1H), 5.00 (d, $J = 7.9$ Hz, 1H), 4.82-4.72 (m, 3H), 4.04 (dd, $J = 14.2, 2.8$ Hz, 1H), 2.42 (d, $J = 3.3$ Hz, 1H), 1.38-1.34 (m, 12H), 0.89 (d, $J = 6.9$ Hz, 2H). ^{13}C NMR (100 MHz, CDCl_3) δ 156.3 (d, $J = 11.9$ Hz), 138.9 (d, $J = 3.7$ Hz), 128.7 (s), 128.0 (s), 126.3 (s), 71.9 (d, $J = 6.8$ Hz), 71.6 (d, $J = 7.5$ Hz), 60.2 (d, $J = 18.8$ Hz), 53.6 (d, $J = 159.1$ Hz), 32.9 (d, $J = 4.4$

Hz), 24.2 (d, $J = 3.6$ Hz), 24.1 (d, $J = 5.0$ Hz), 24.0 (d, $J = 3.6$ Hz), 23.9 (d, $J = 5.7$ Hz), 7.6 (d, $J = 1.9$ Hz). ^{31}P NMR (162 MHz, CDCl_3) δ 18.5. HPLC: Chiracel AD column, 254 nm, 30 °C, *n*-hexane/*i*-propanol = 80/20, flow = 1.0 mL/min, retention time 7.9 min and 10.7 min (maj). HRMS (ESI) m/z Calculated for $\text{C}_{17}\text{H}_{28}\text{N}_2\text{O}_4\text{P}$ $[\text{M}+\text{H}]^+$ 355.1787, found 355.1788.

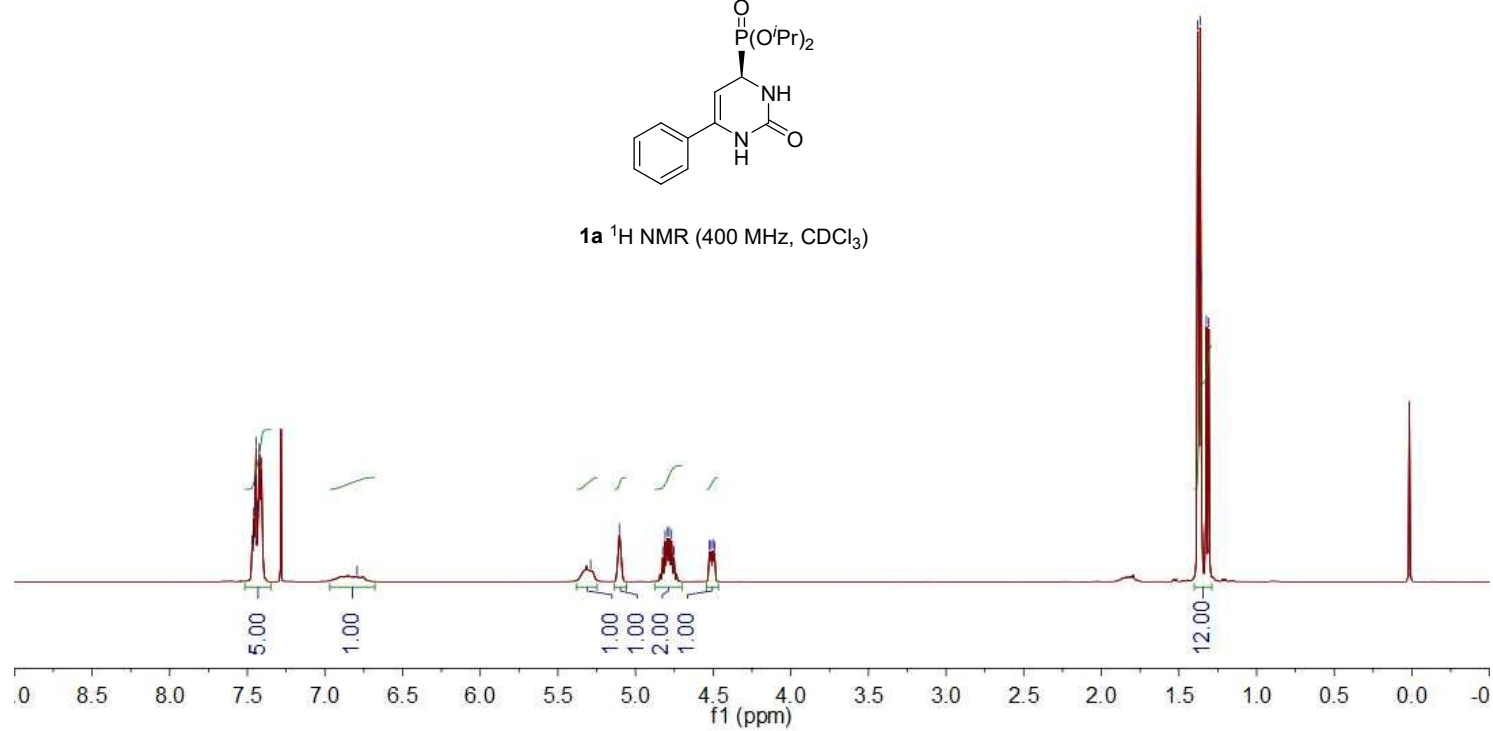
8. References

1. G.-S. Feng, M.-W. Chen, L. Shi and Y.-G. Zhou, *Angew. Chem. Int. Ed.*, 2018, **57**, 5853.
2. K.-R. Li, F.-J. Meng, W.-F. Jiang and L. Shi, *Tetrahedron Lett.* **2021**, *73*, 153149.

9. Copy of NMR, HPLC for Compounds



1a ¹H NMR (400 MHz, CDCl₃)



13C NMR FM-5-34A in CDCl3

153.81

138.32

134.06

134.03

129.29

128.83

125.11

90.75

90.66

72.19

72.12

71.86

71.78

52.58

50.99

24.28

24.24

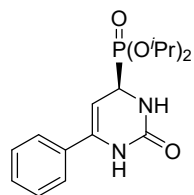
24.13

24.10

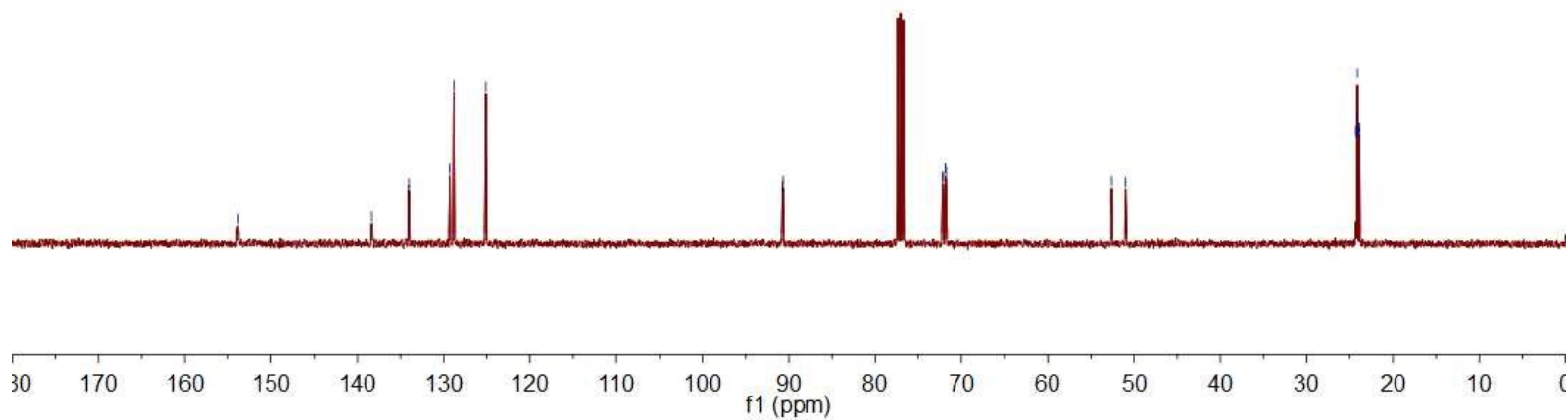
24.06

23.92

23.87

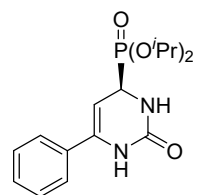


1a ¹³C NMR (100 MHz, CDCl₃)

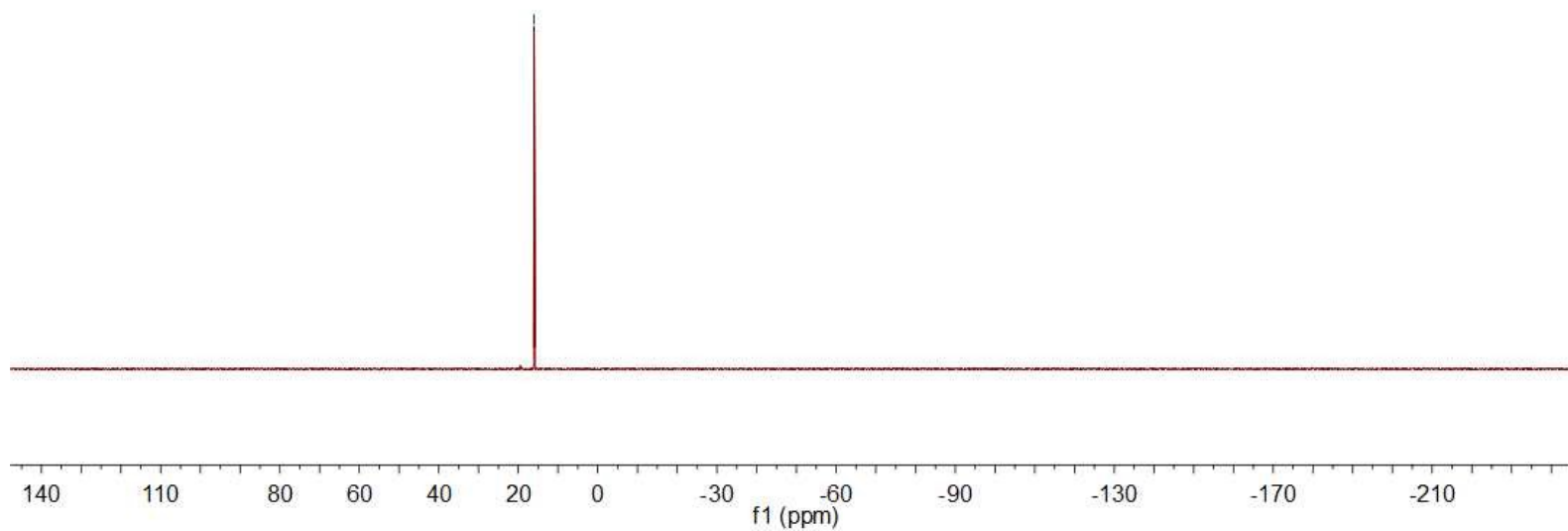


31P NMR FM-5-34A in CDCl3

—16.01



1a ³¹P NMR (162 MHz, CDCl₃)

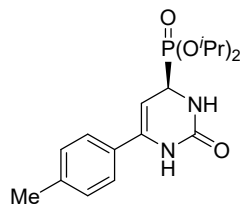


1H NMR FM-5-34B in CDCl3

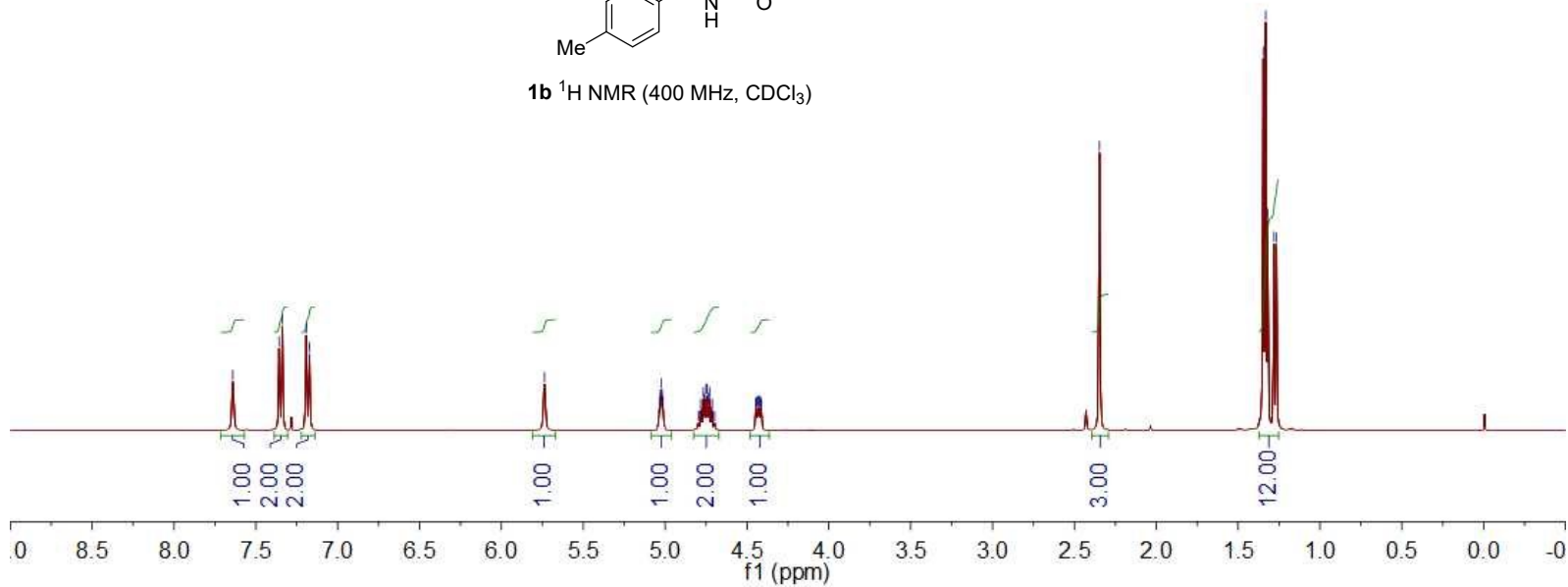
7.6403
7.3578
7.3376
7.1923
7.1721

5.7360
5.0342
5.0279
5.0234
5.0188
5.0126
4.7823
4.7666
4.7605
4.7493
4.7448
4.7336
4.7281
4.4468
4.4427
4.4362
4.4320
4.4258
4.4216
4.4151

1.3469
1.3315
1.3197
1.2811
1.2656



1b ¹H NMR (400 MHz, CDCl₃)



¹³C NMR FM-5-34B in CDCl₃

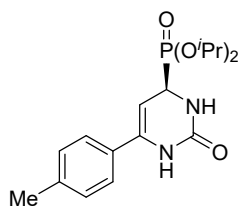
154.08
139.29
138.31
138.20
131.20
131.17
129.46
125.01
124.99

89.86
89.77

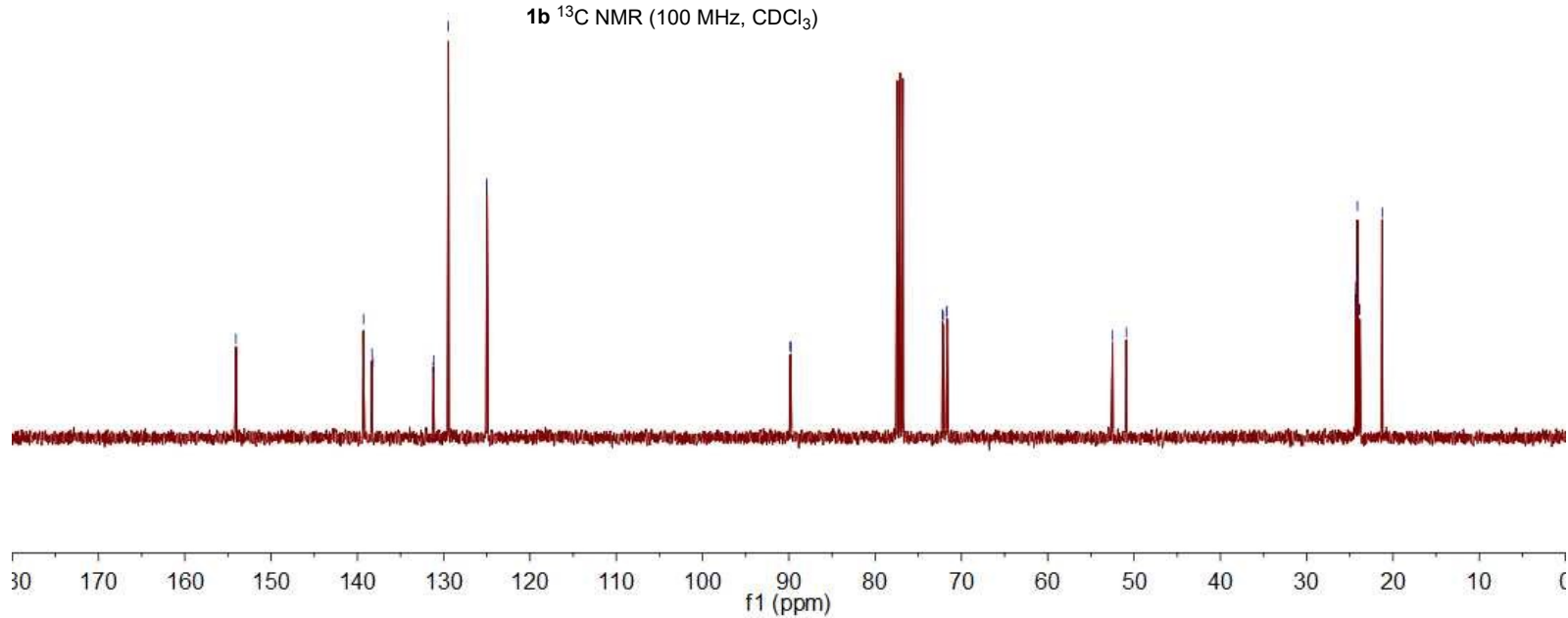
72.19
72.12
71.75
71.67

52.49
50.89

24.31
24.28
24.11
24.08
23.89
23.84
21.25

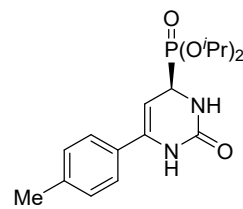


1b ¹³C NMR (100 MHz, CDCl₃)

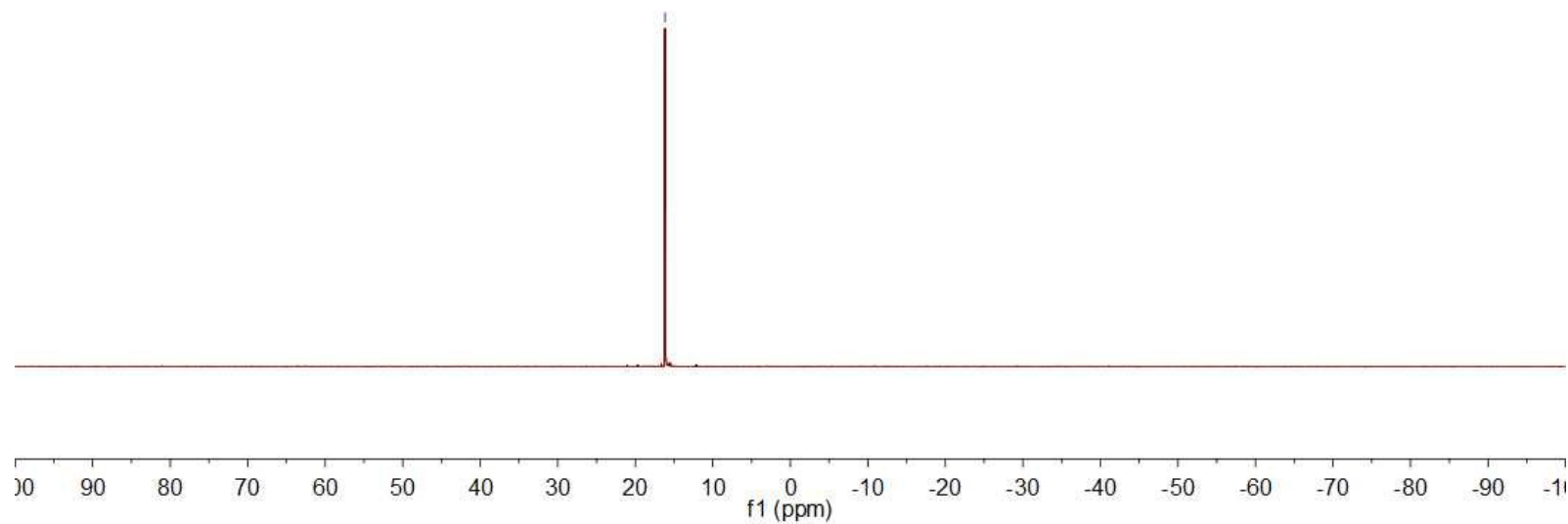


31P NMR FM-5-34B in CDCl3

-16.17



1b ³¹P NMR (162 MHz, CDCl₃)



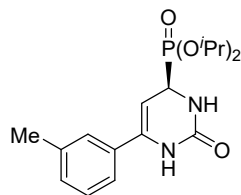
¹H NMR FM-5-34C in CDCl₃

7.5287
7.2907
7.2839
7.2656
7.2537
7.2386
7.1833
7.1686

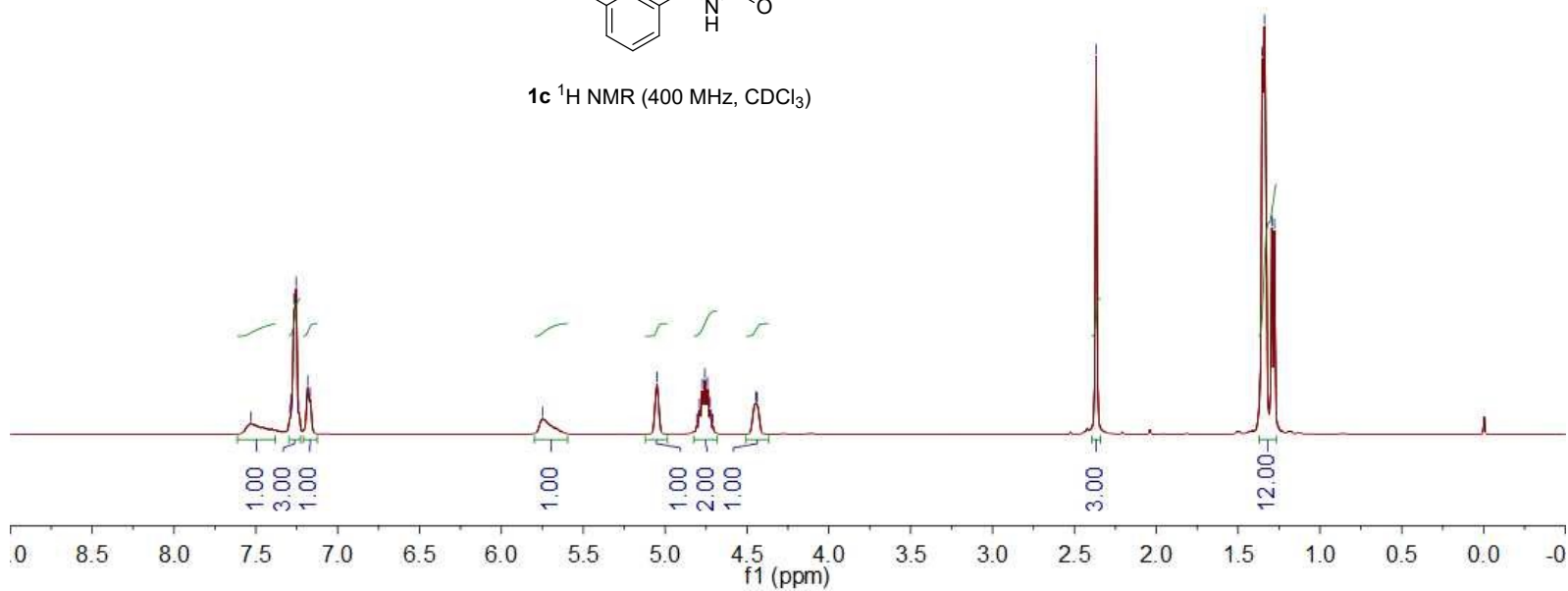
5.7488
5.0489
4.8067
4.7908
4.7736
4.7571
4.7400
4.7240
4.7080
4.4469
4.4372

2.3673

1.3526
1.3391
1.2942
1.2788



1c ¹H NMR (400 MHz, CDCl₃)



13C NMR FM-5-34C in CDCl3

153.99

138.51

133.94

130.02

128.68

125.80

122.18

90.43

90.36

72.18

71.80

52.51

50.92

24.30

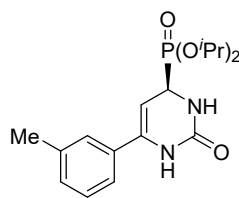
24.27

24.12

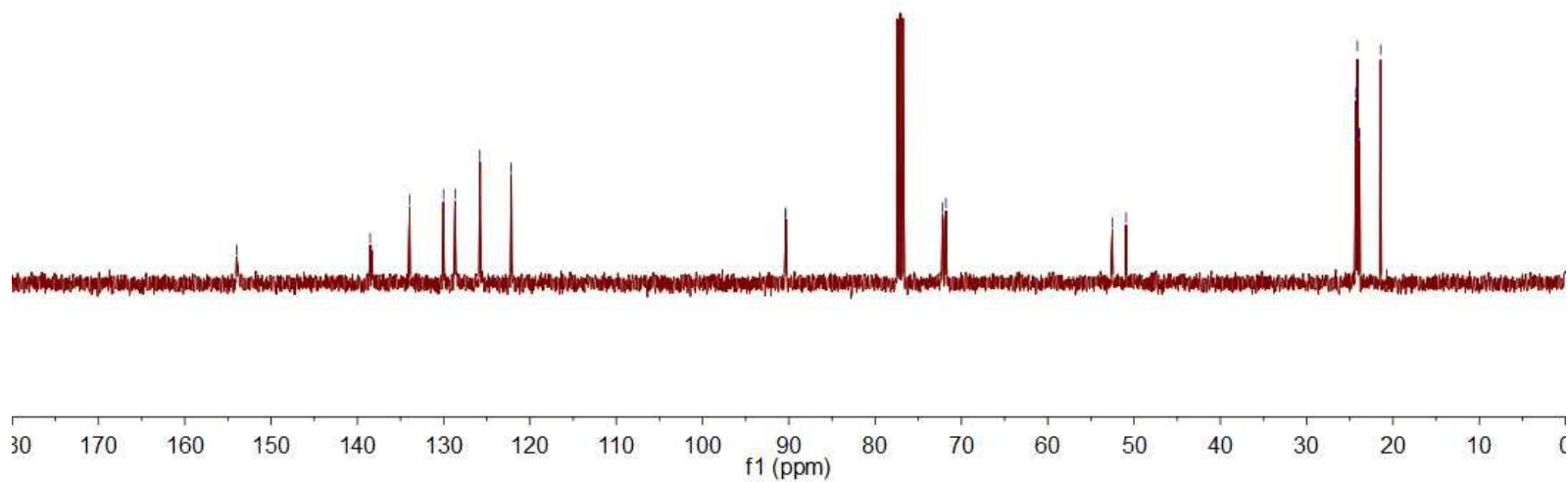
23.92

23.87

21.43

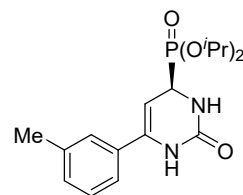


1c ¹³C NMR (100 MHz, CDCl₃)

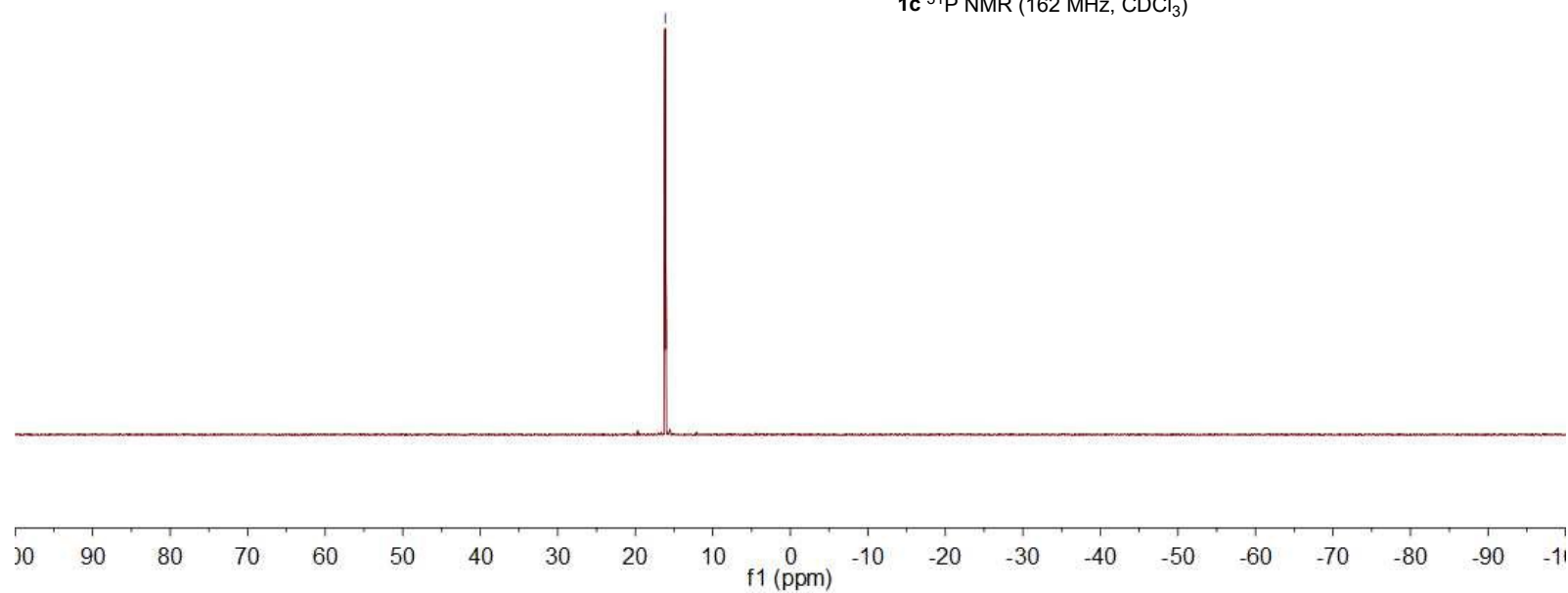


31P NMR FM-5-34C in CDCl3

-16.14

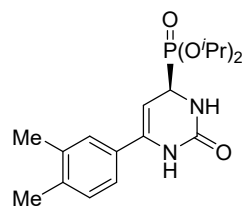


1c ³¹P NMR (162 MHz, CDCl₃)

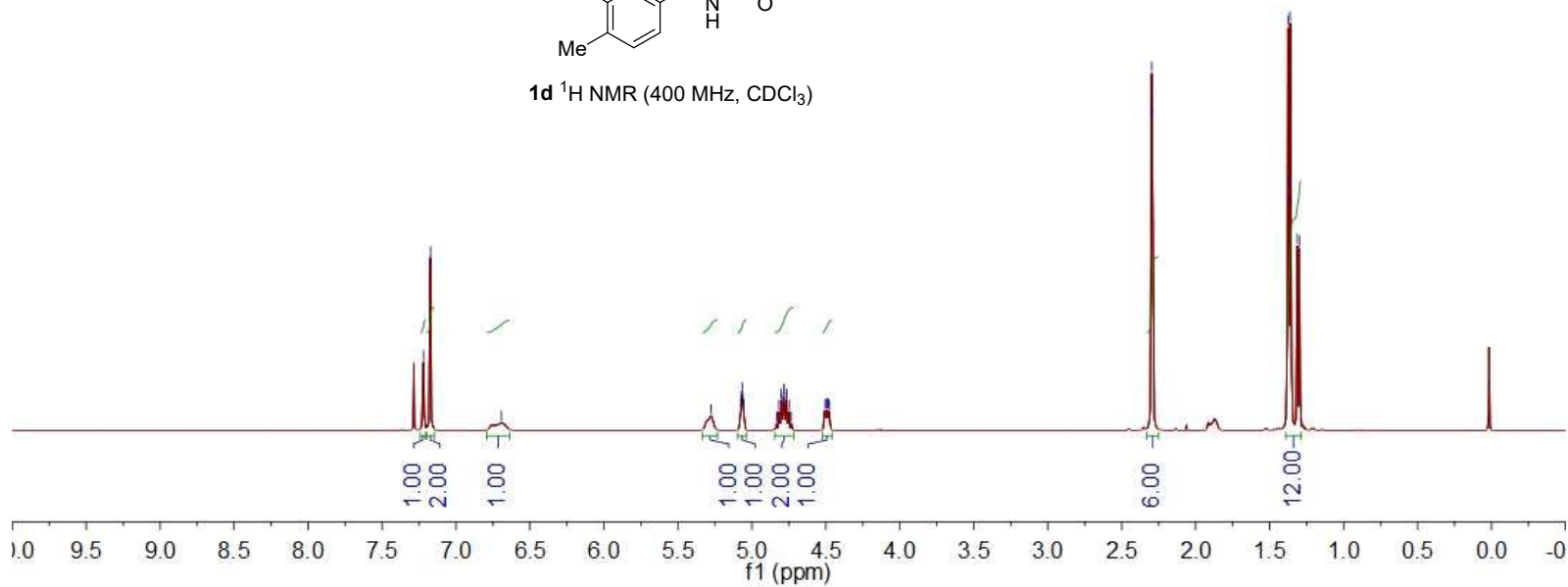


¹H NMR FM-5-34D in CDCl₃

7.2201
7.1741
7.1720
6.6927
5.2763
5.0764
5.0703
5.0657
5.0610
5.0550
4.8333
4.8177
4.8019
4.7970
4.7845
4.7812
4.7686
4.7642
4.7482
4.7326
4.5064
4.4958
4.4877
4.4851
4.4774
2.2973
2.2909
1.3766
1.3704
1.3612
1.3551
1.3134
1.2979

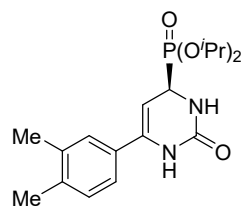


1d ¹H NMR (400 MHz, CDCl₃)

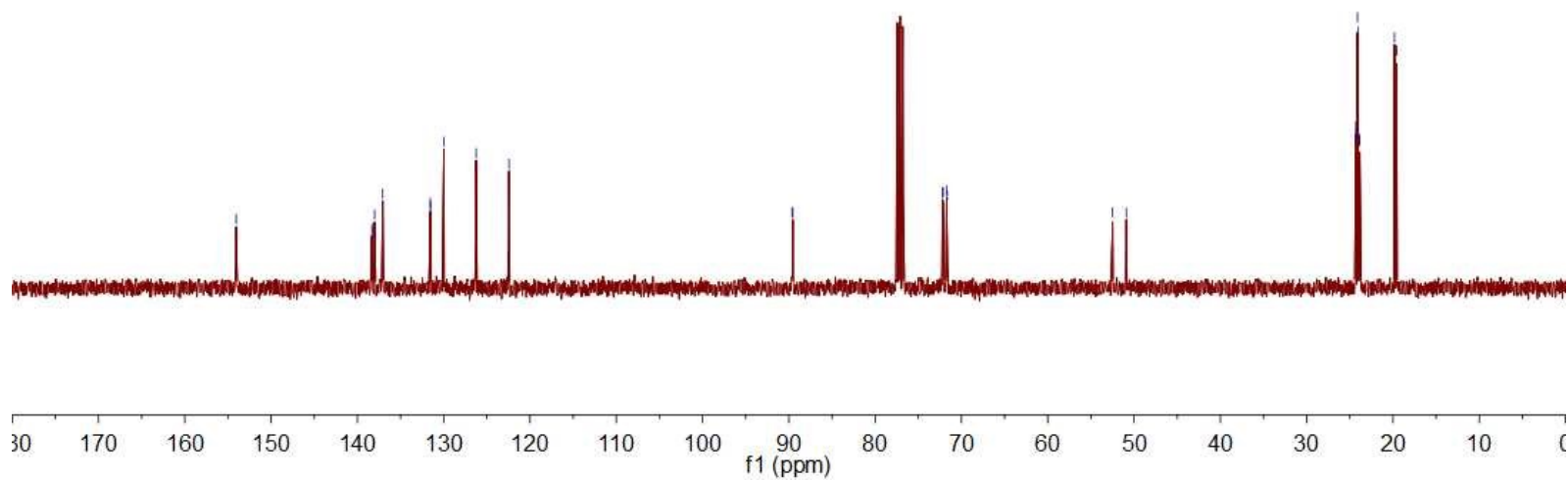


¹³C NMR FM-5-34D in CDCl₃

154.05
 138.31
 138.21
 137.99
 137.06
 131.56
 131.53
 129.98
 126.24
 122.42
 89.63
 89.54
 72.19
 72.12
 71.72
 71.65
 52.48
 50.89
 24.31
 24.28
 24.11
 24.07
 23.90
 23.85
 19.82
 19.57

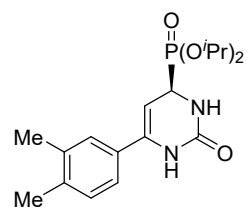


1d ¹³C NMR (100 MHz, CDCl₃)

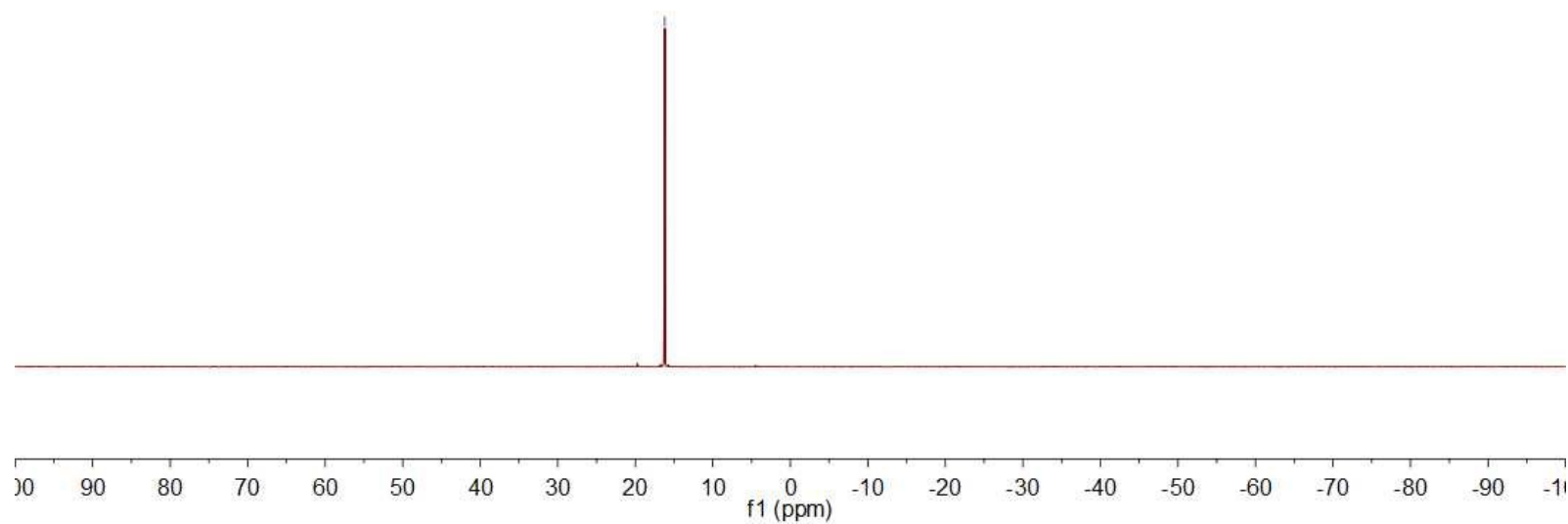


31P NMR FM-5-34D in CDCl3

—16.20



1d ³¹P NMR (162 MHz, CDCl₃)

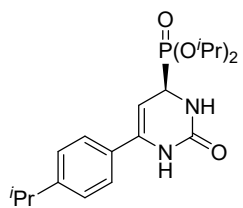


¹H NMR FM-5-34E in CDCl₃

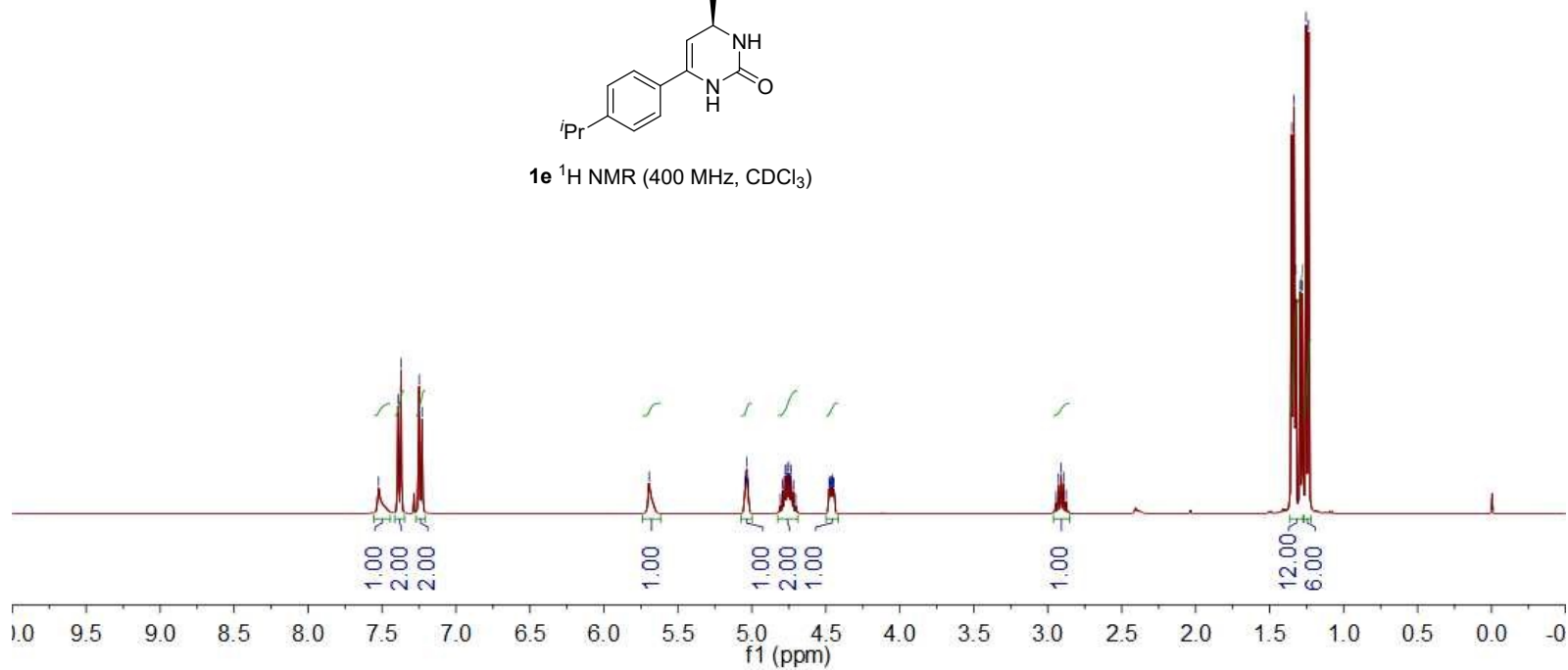
7.5236
7.3925
7.3719
7.2493
7.2286

5.6946
5.0464
5.0358
5.0313
4.7762
4.7666
4.7605
4.7510
4.7441
4.7353
4.4775
4.4669
4.4564
4.4528
2.9276
2.9103
2.8930
2.8758

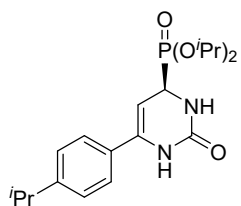
1.3503
1.3352
1.3236
1.2934
1.2779
1.2544
1.2371



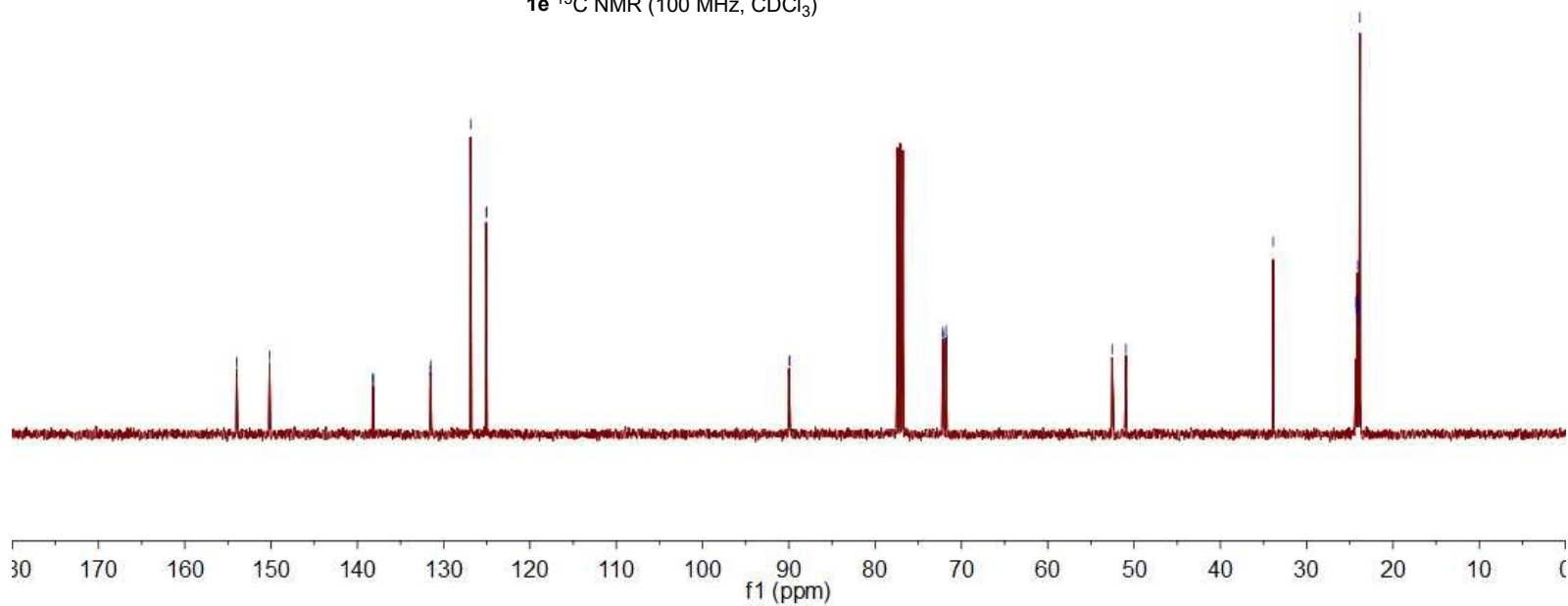
1e ¹H NMR (400 MHz, CDCl₃)



^{13}C NMR FM-5-34E in CDCl_3
 153.99, 150.18, 138.25, 138.14, 131.54, 131.50, 126.87, 125.06, 125.04, 89.97, 89.88, 72.16, 72.09, 71.79, 71.71, 52.54, 50.94, 33.88, 24.29, 24.25, 24.13, 24.10, 24.06, 23.93, 23.88, 23.82

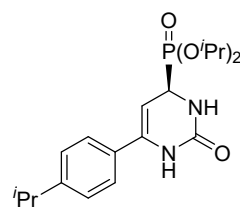


1e ^{13}C NMR (100 MHz, CDCl_3)

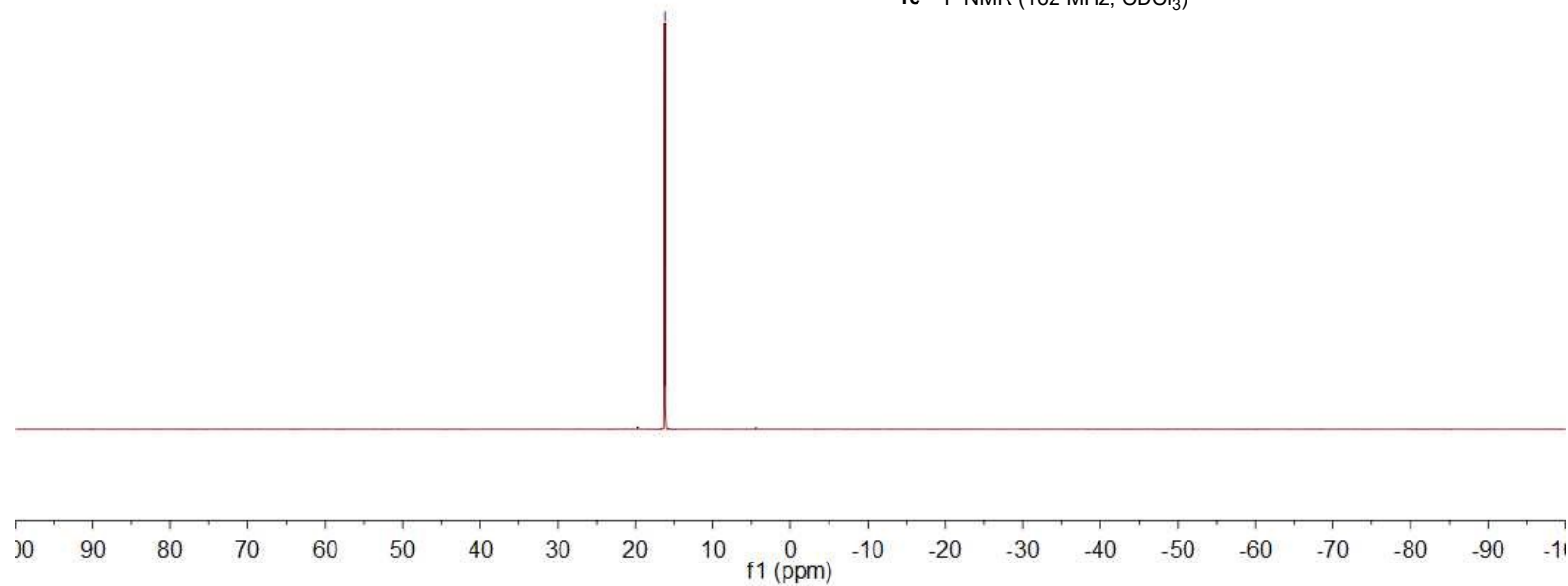


31P NMR FM-5-34E in CDCl3

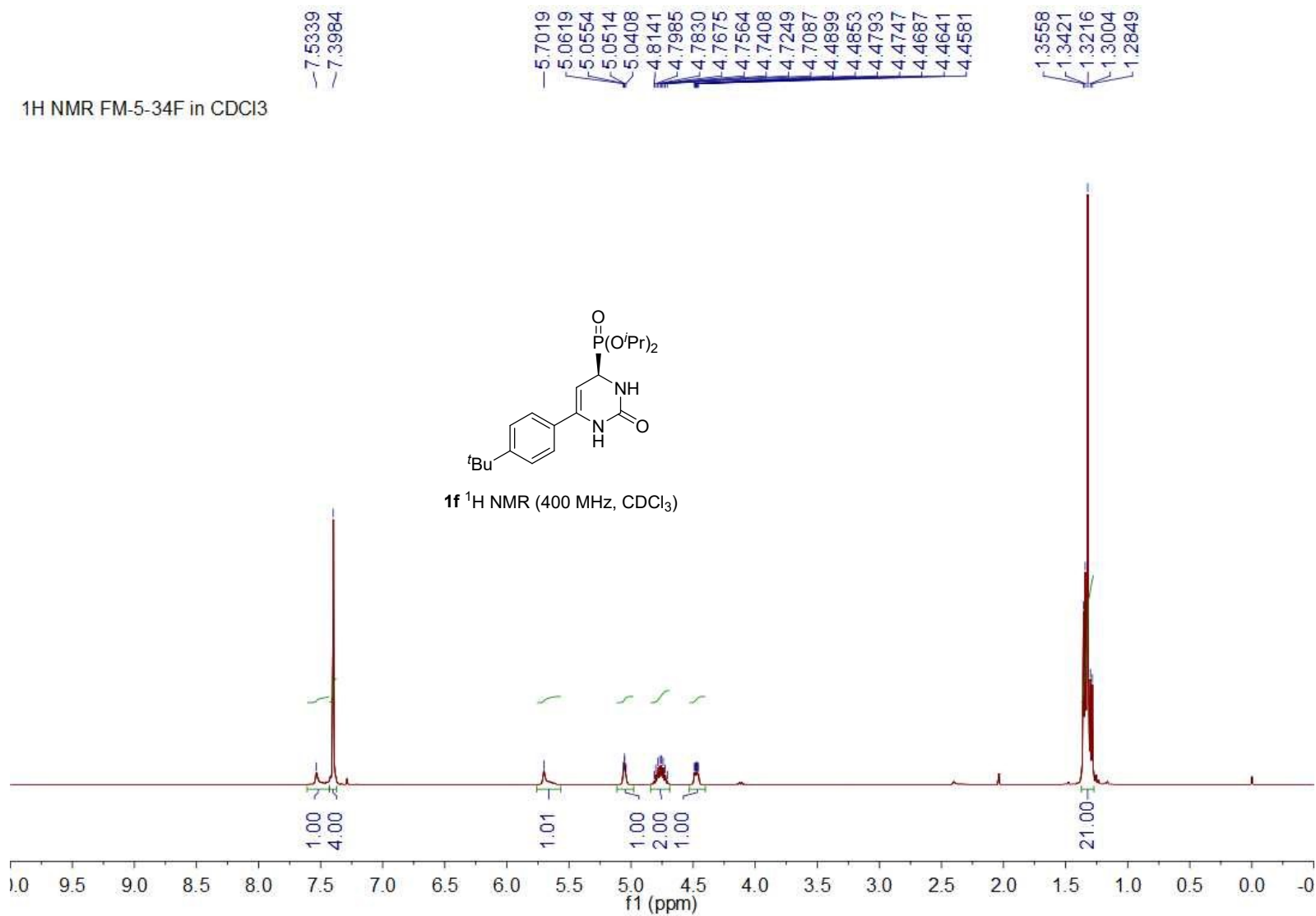
-16.16



1e ³¹P NMR (162 MHz, CDCl₃)

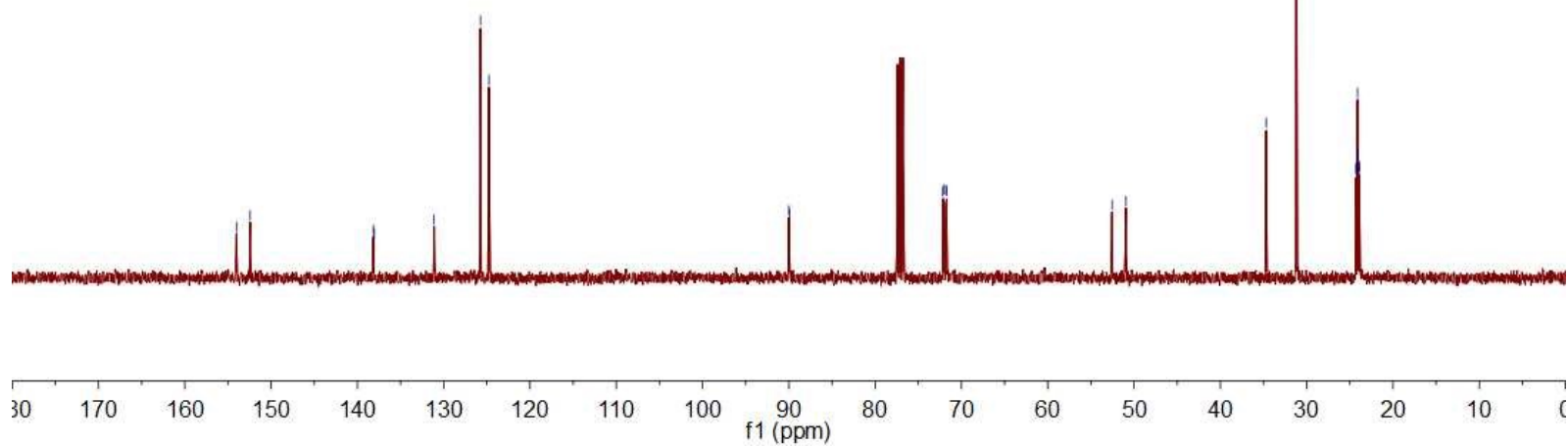
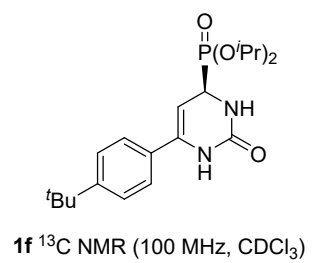


¹H NMR FM-5-34F in CDCl₃



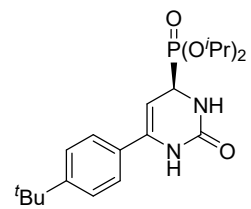
\sim 154.01
 \sim 152.43
 \sim 138.15
 \sim 138.04
 \sim 131.11
 \sim 125.73
 \sim 124.75
 \sim 90.01
 \sim 89.92
 \sim 72.16
 \sim 72.08
 \sim 71.80
 \sim 71.72
 \sim 52.55
 \sim 50.95
 \sim 34.69
 \sim 31.20
 \sim 24.28
 \sim 24.25
 \sim 24.13
 \sim 24.10
 \sim 24.05
 \sim 23.94
 \sim 23.89

^{13}C NMR FM-5-34F in CDCl_3

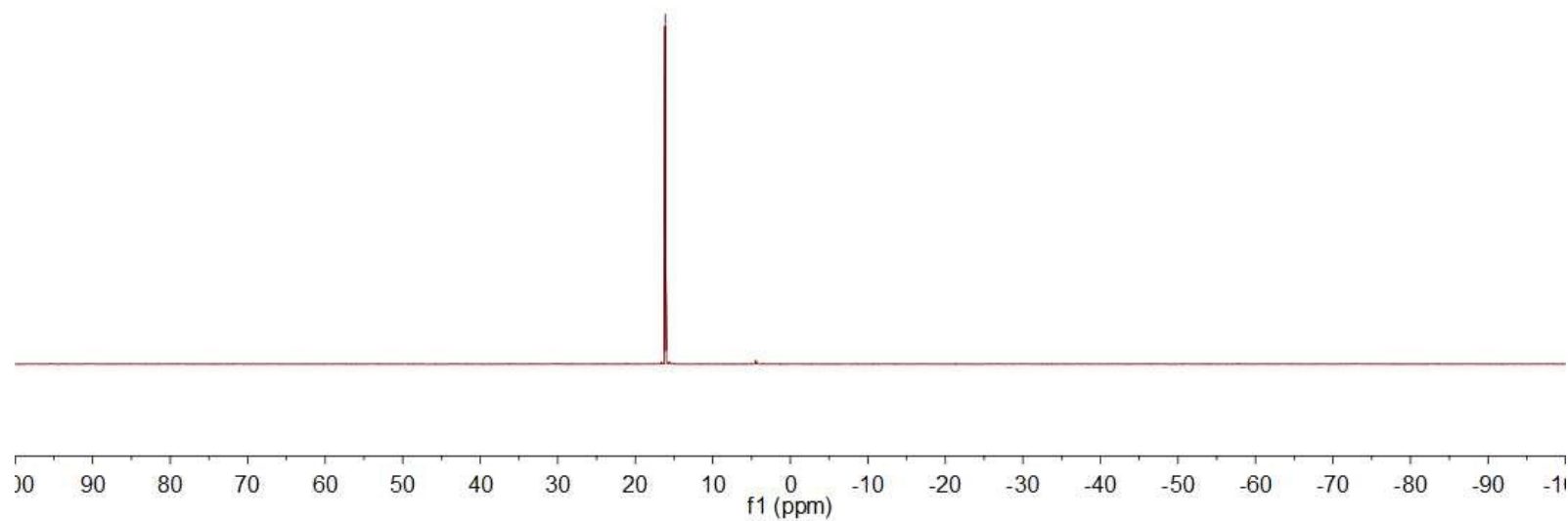


31P NMR FM-5-34F in CDCl3

-16.14



1f ³¹P NMR (162 MHz, CDCl₃)

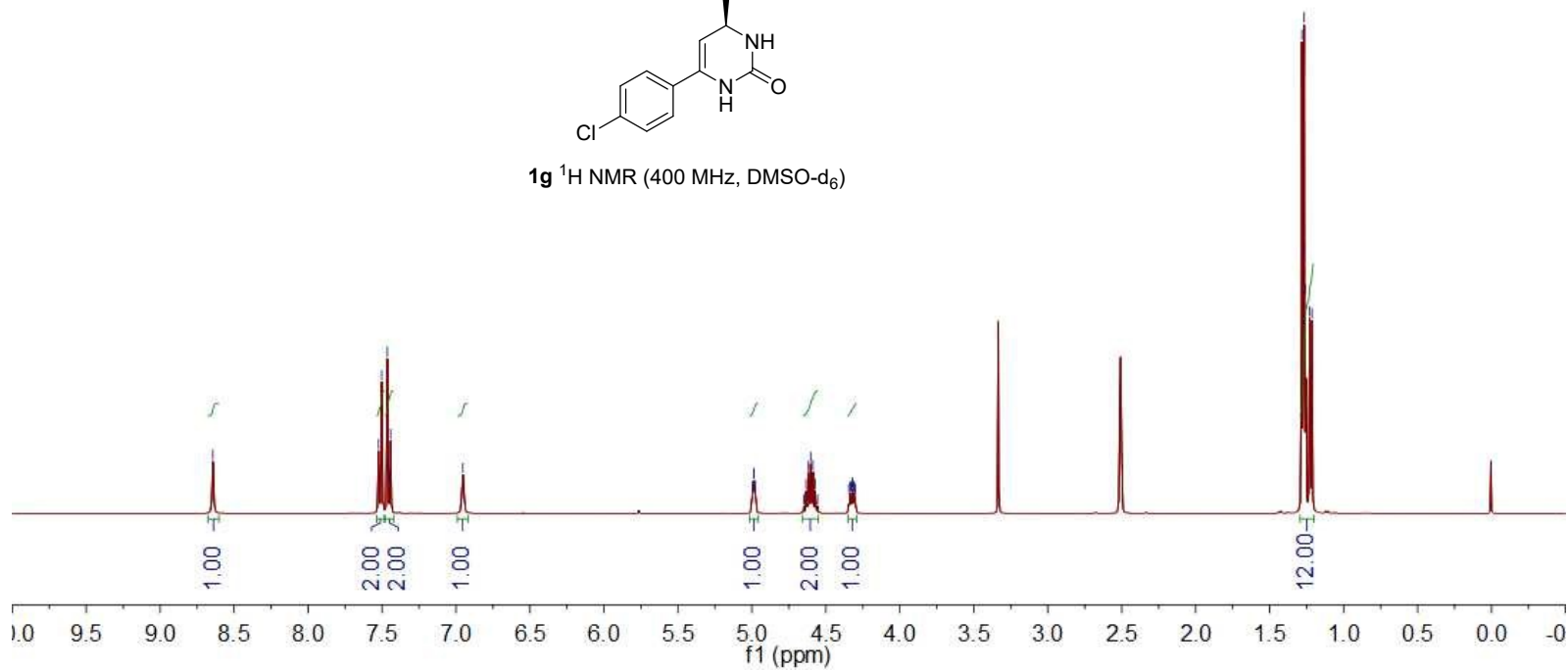
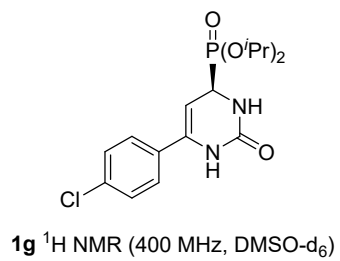


1H NMR FM-5-34G in DMSO

8.6433
7.5235
7.5020
7.4639
7.4589
7.4469
7.4422
6.9539

4.9978
4.9877
4.9852
4.9753
4.6486
4.6332
4.6177
4.6023
4.5869
4.5715
4.5561
4.3434
4.3358
4.3307
4.3226
4.3202
4.3122
4.3071
4.2995

1.2818
1.2718
1.2664
1.2566
1.2297
1.2143



13C NMR FM-5-34G in DMSO

153.65

138.09

138.00

133.77

133.25

133.21

128.95

127.65

127.63

91.91

91.83

71.48

71.41

71.28

71.20

51.73

50.16

24.49

24.46

24.38

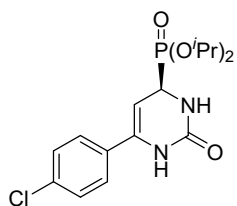
24.34

24.25

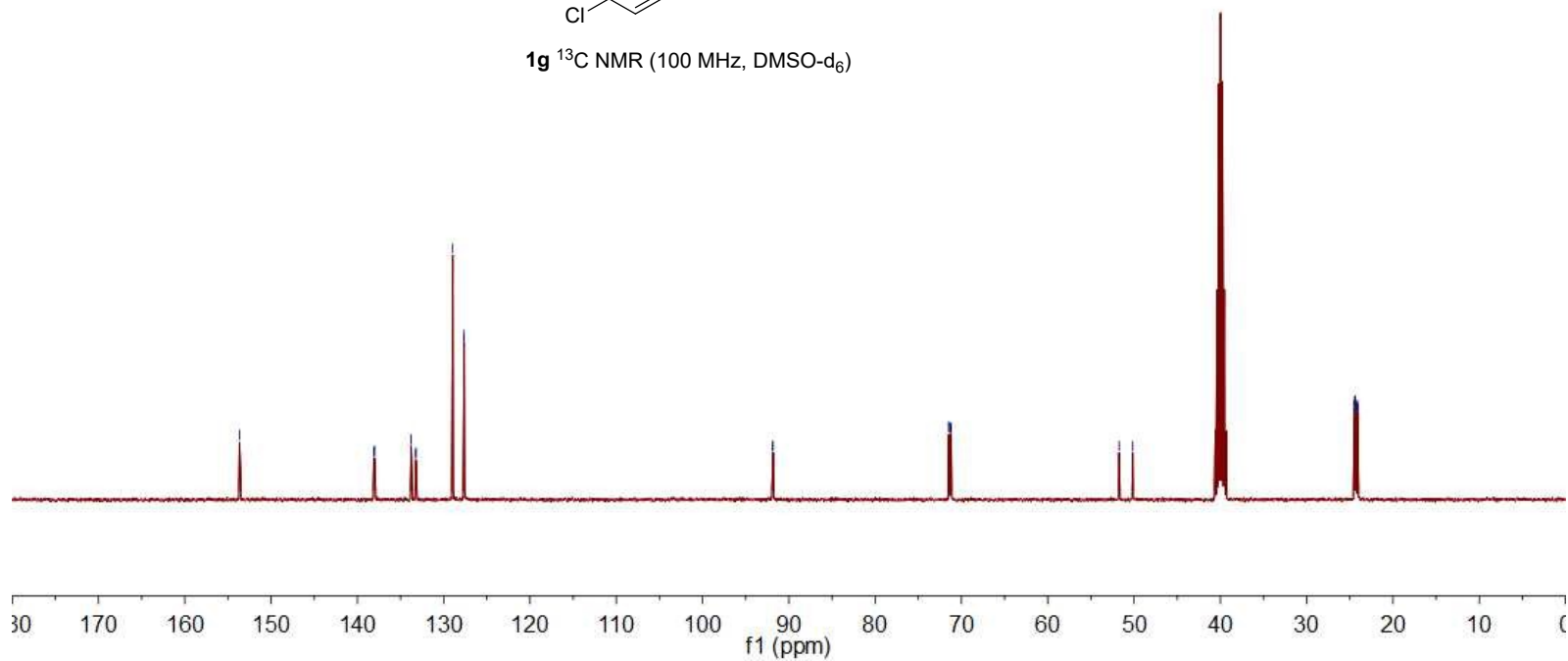
24.21

24.10

24.05

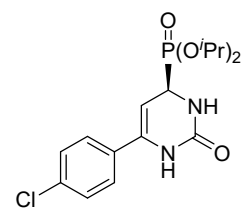


1g ¹³C NMR (100 MHz, DMSO-d₆)

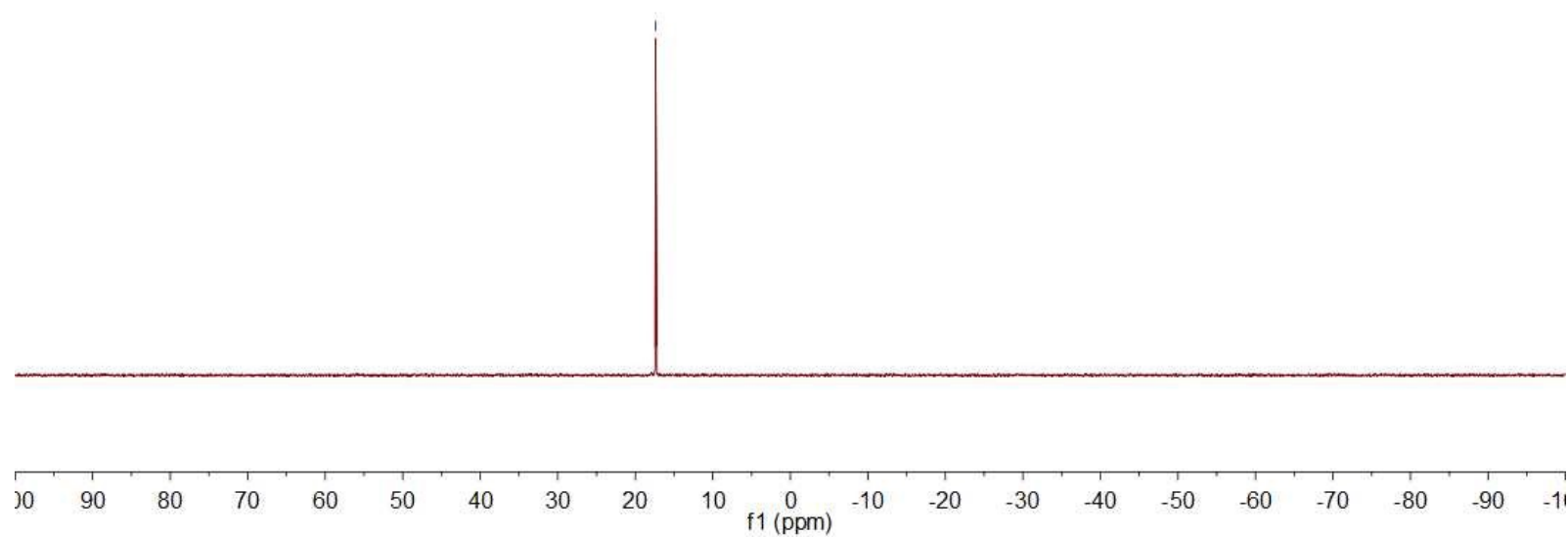


31P NMR FM-5-34G in DMSO

-17.37



1g ³¹P NMR (162 MHz, DMSO-d₆)



1H NMR FM-5-34H in CDCl₃

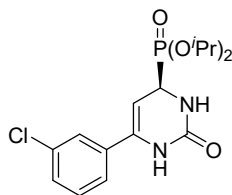
8.1975

7.4427
7.3279
7.3100

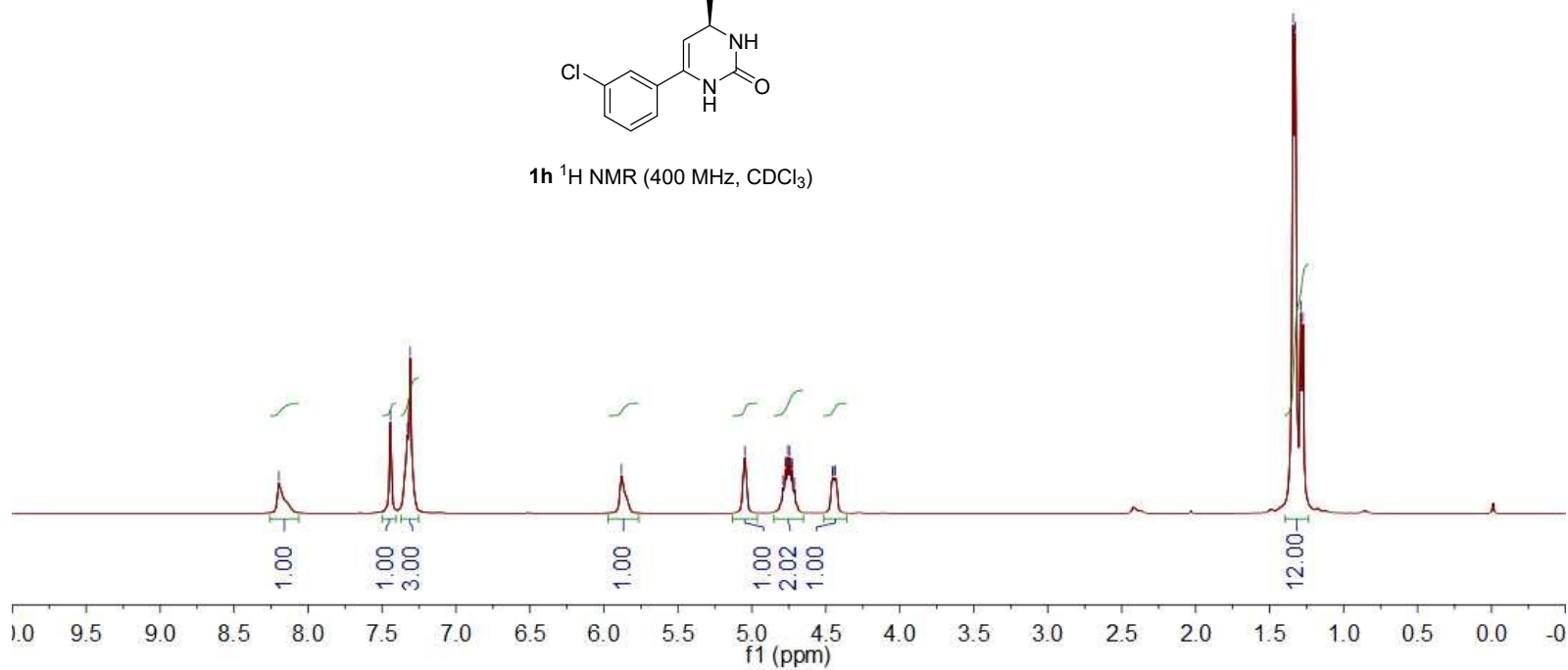
5.8816

5.0479
4.7889
4.7735
4.7581
4.7428
4.7275
4.7122
4.4541
4.4492
4.4363

1.3414
1.3269
1.2898
1.2747



1h ¹H NMR (400 MHz, CDCl₃)



¹³C NMR FM-5-34H in CDCl₃

154.17

137.33

137.23

135.70

134.70

129.96

129.18

125.50

123.36

91.75

91.66

72.18

72.11

72.00

71.93

52.47

50.88

24.24

24.21

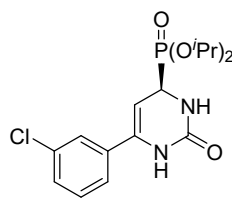
24.13

24.10

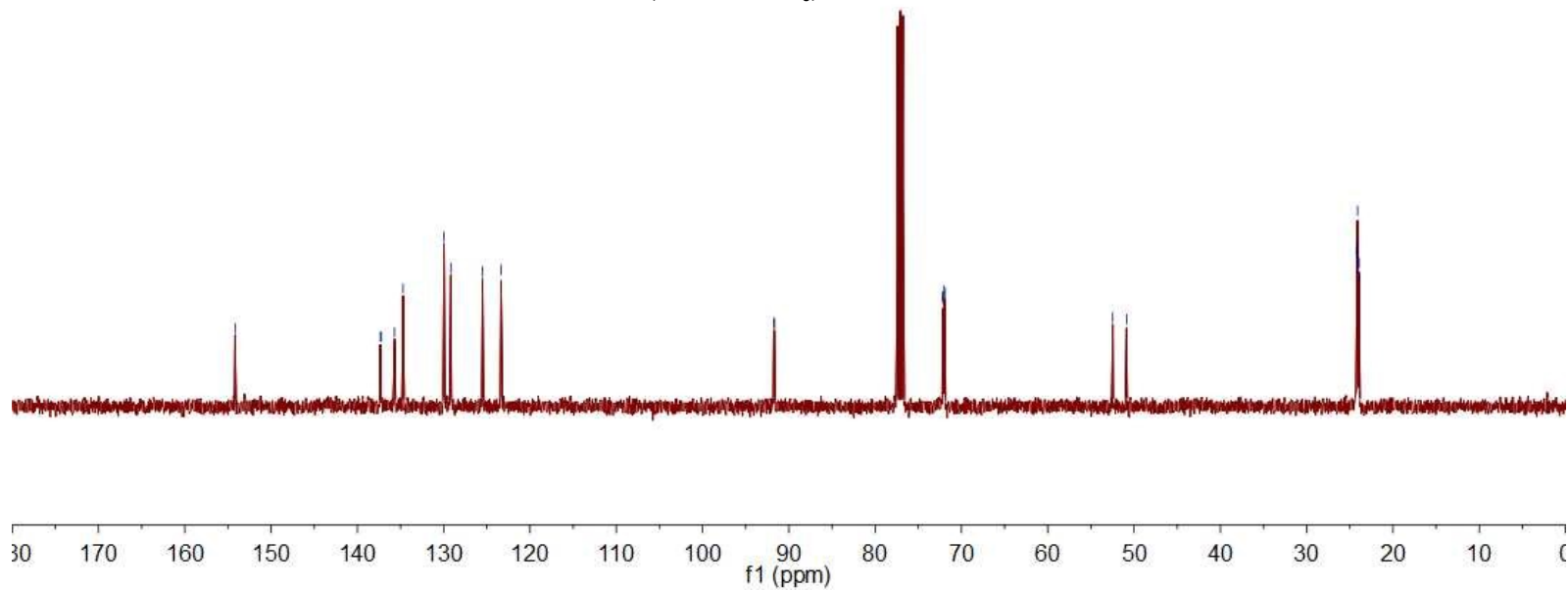
24.03

23.93

23.88

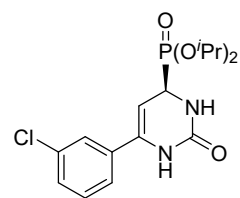


1h ¹³C NMR (100 MHz, CDCl₃)

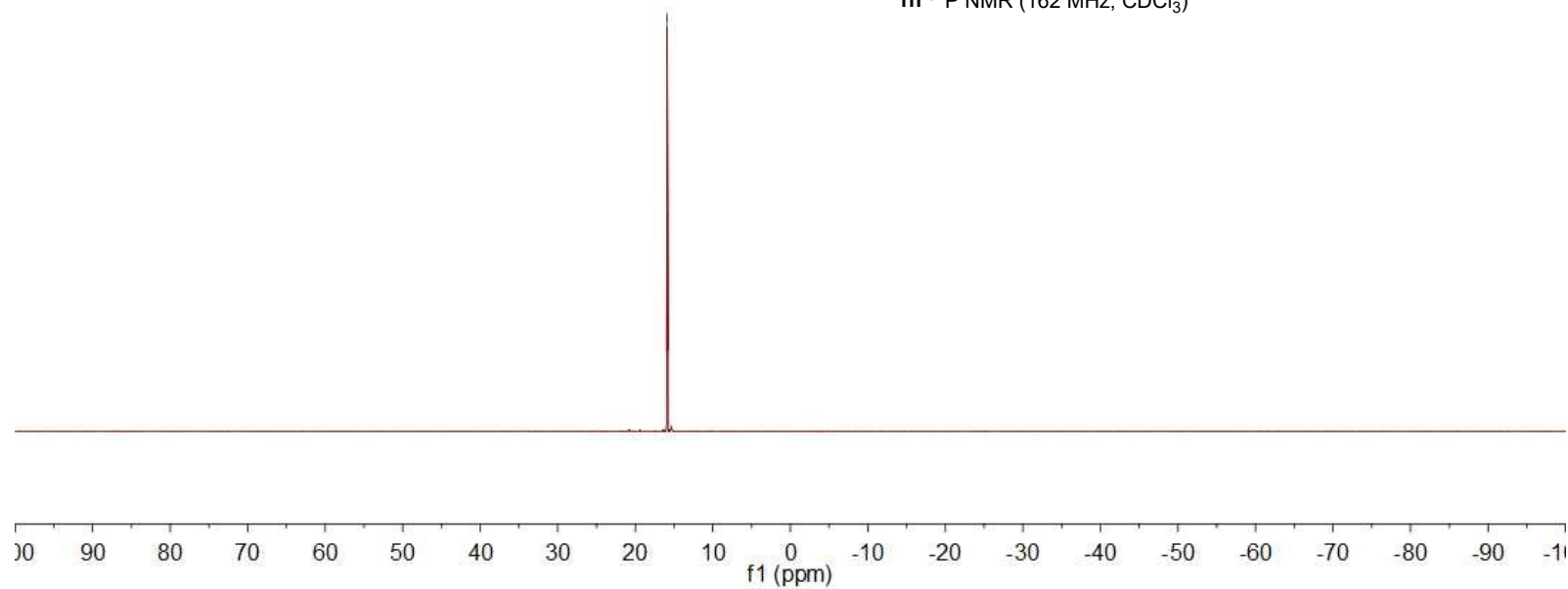


31P NMR FM-5-34H in CDCl3

—15.90



1h ³¹P NMR (162 MHz, CDCl₃)



¹H NMR FM-5-34I in CDCl₃

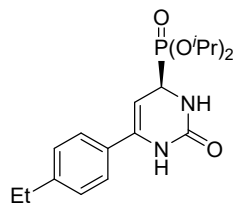
7.5145
7.3748
7.3586
7.2140
7.1980

5.6907

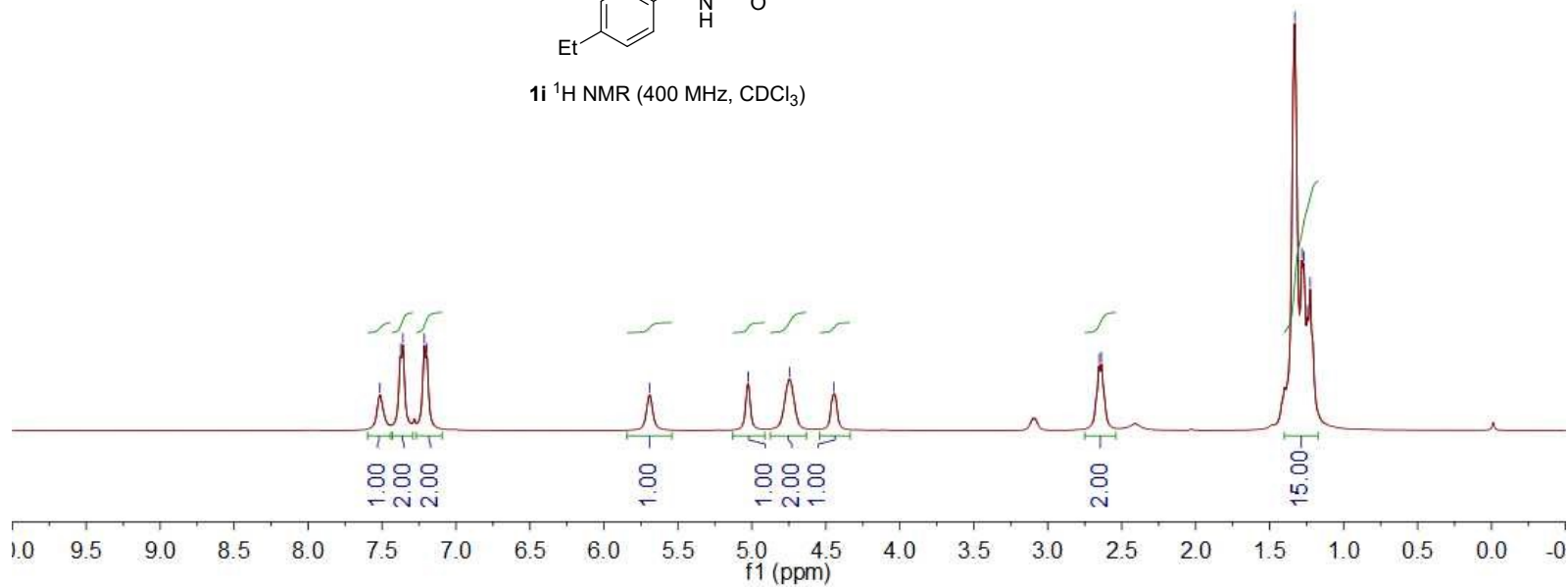
5.0263
4.7464
4.4460

2.6530
2.6363

1.3302
1.2822
1.2701
1.2450
1.2266



1i ¹H NMR (400 MHz, CDCl₃)



¹³C NMR FM-5-34I in CDCl₃

154.00

145.59

138.27

138.16

131.41

128.28

125.04

89.94

89.85

72.19

72.11

71.80

71.72

52.52

50.92

28.57

24.28

24.25

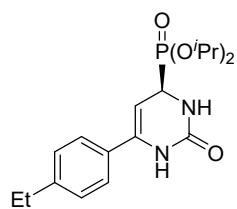
24.09

24.05

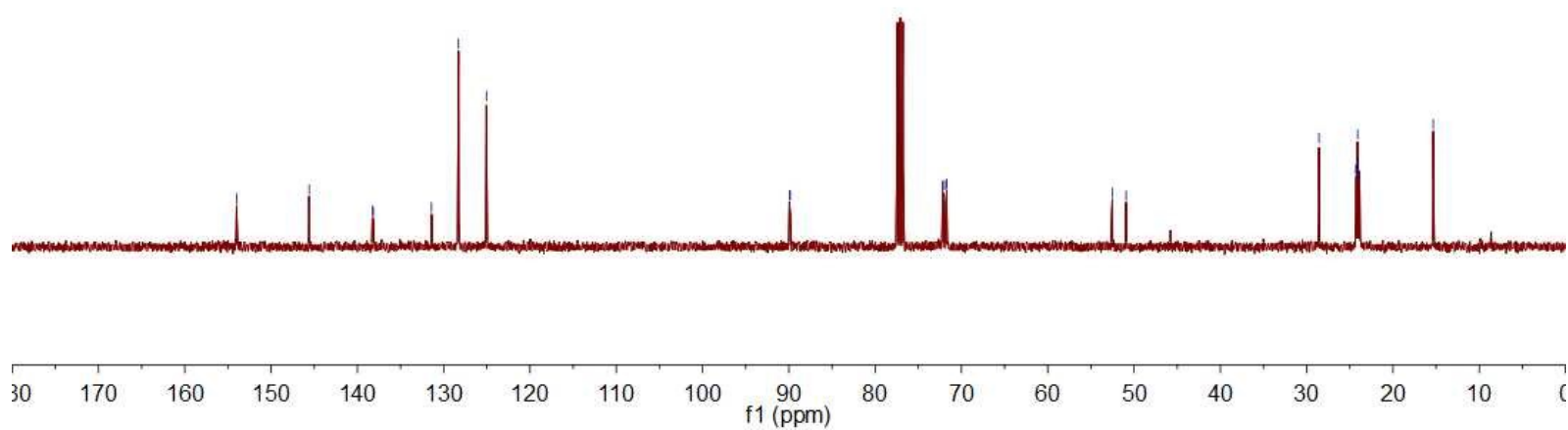
23.90

23.85

15.33

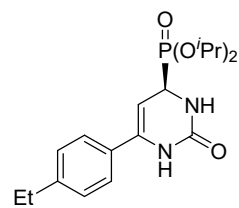


1i ¹³C NMR (100 MHz, CDCl₃)

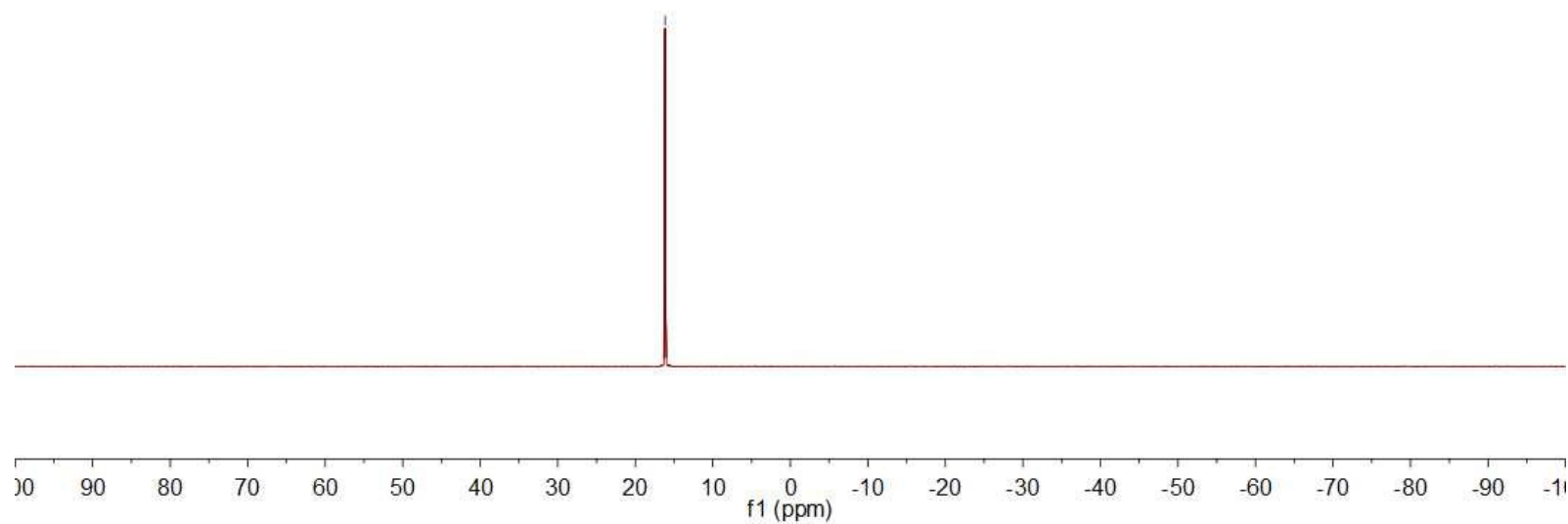


31P NMR FM-5-34I in CDCl3

-16.16



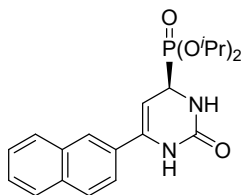
1i ³¹P NMR (162 MHz, CDCl₃)



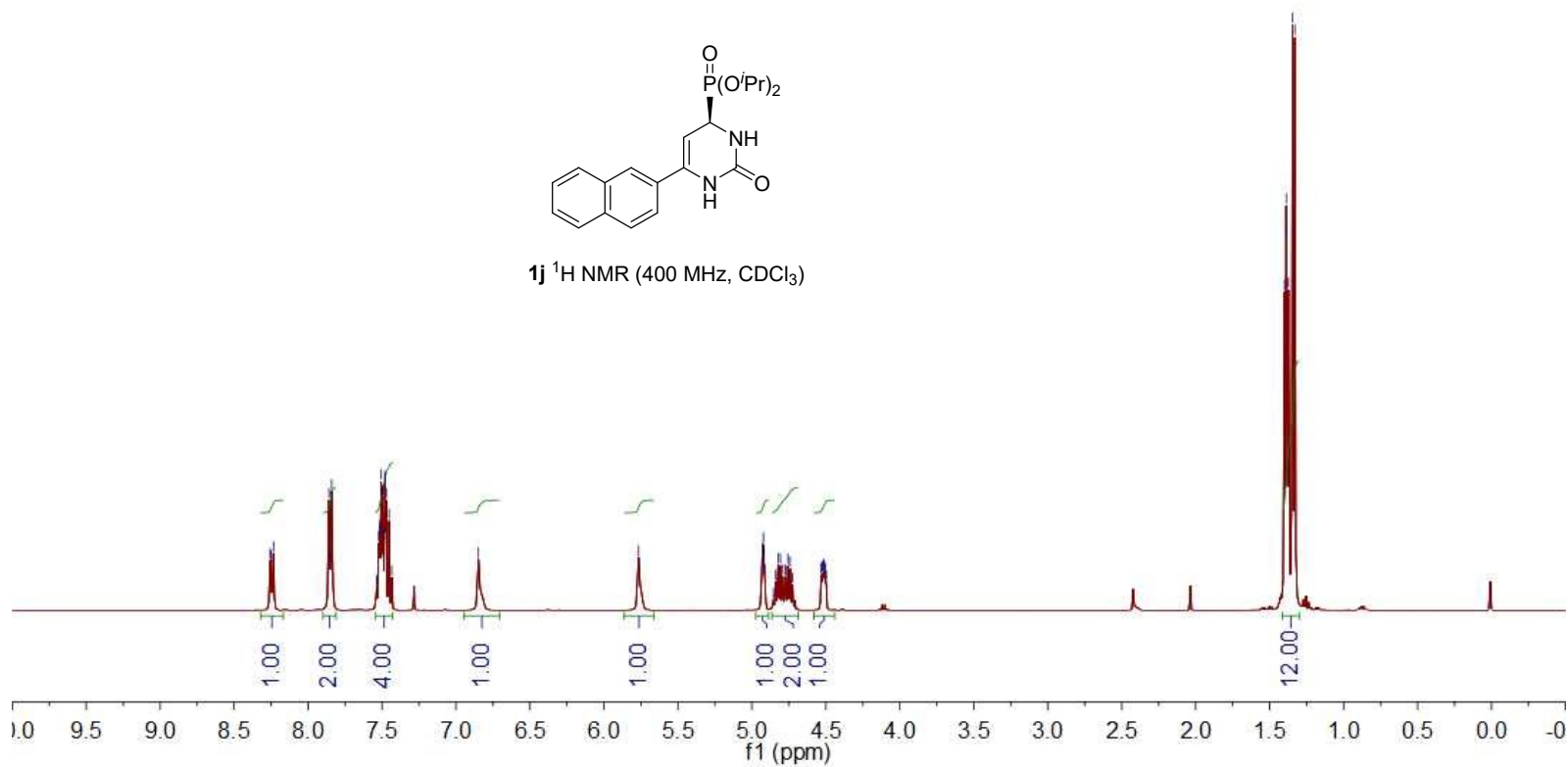
¹H NMR FM-5-34J in CDCl₃

8.2561
8.2504
8.2333
7.8407
7.5065
7.4978
7.4958
7.4818
6.8768

5.7659
4.9323
4.9269
4.9225
4.9180
4.9127
4.8390
4.8234
4.8076
4.7906
4.7734
4.7574
4.7416
4.7244
4.5315
4.5269
4.5213
4.5164
4.5118
4.5071
4.5016
1.3873
1.3838
1.3723
1.3453
1.3298



1j ¹H NMR (400 MHz, CDCl₃)



¹³C NMR FM-5-34J in CDCl₃

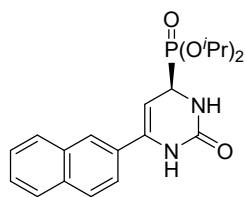
153.22
137.26
137.16
133.69
132.72
130.83
129.61
128.43
126.62
126.28
126.13
126.10
125.23
125.18

94.20
94.11

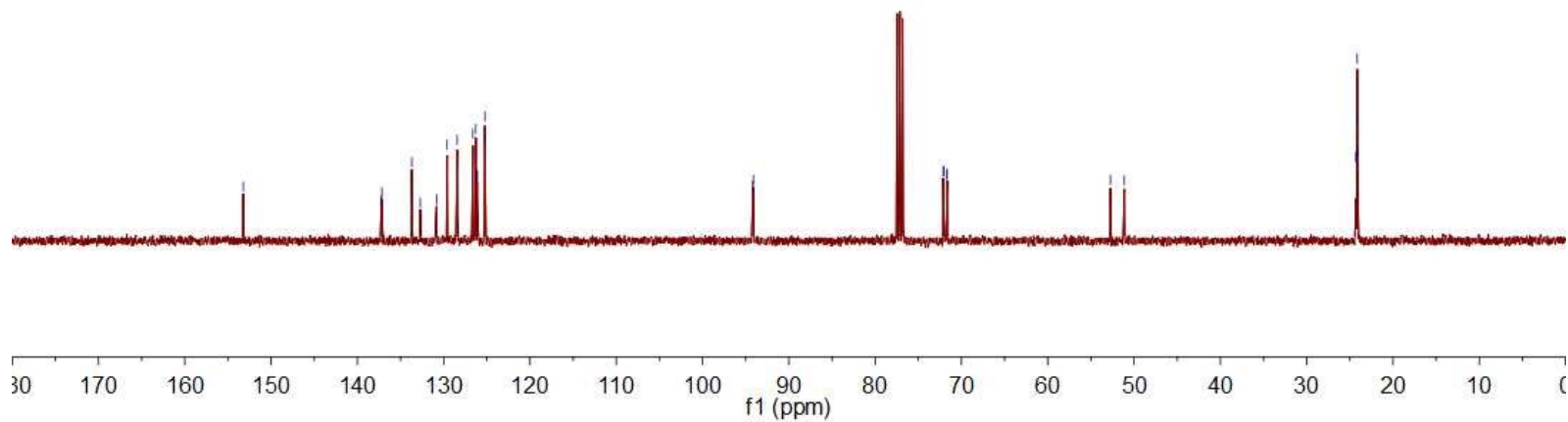
72.11
72.04
71.73
71.65

52.74
51.14

24.28
24.25
24.18
24.14
24.11

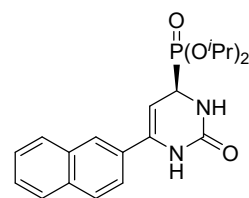


1j ¹³C NMR (100 MHz, CDCl₃)

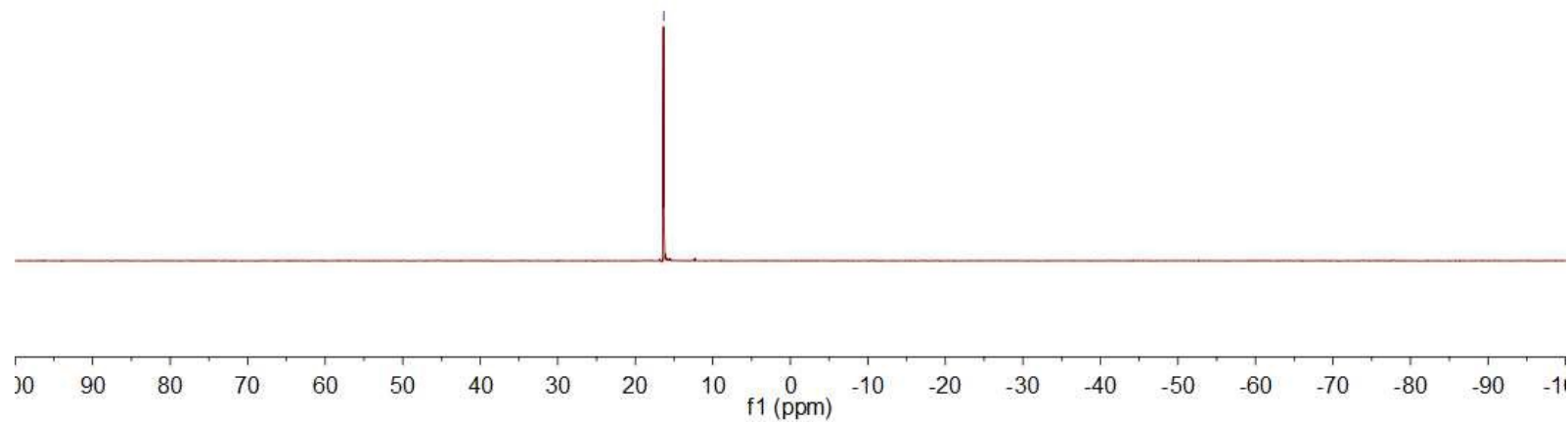


31P NMR FM-5-34J in CDCl3

-16.33



1j ³¹P NMR (162 MHz, CDCl₃)

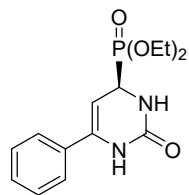


¹H NMR FM-5-34K in CDCl₃

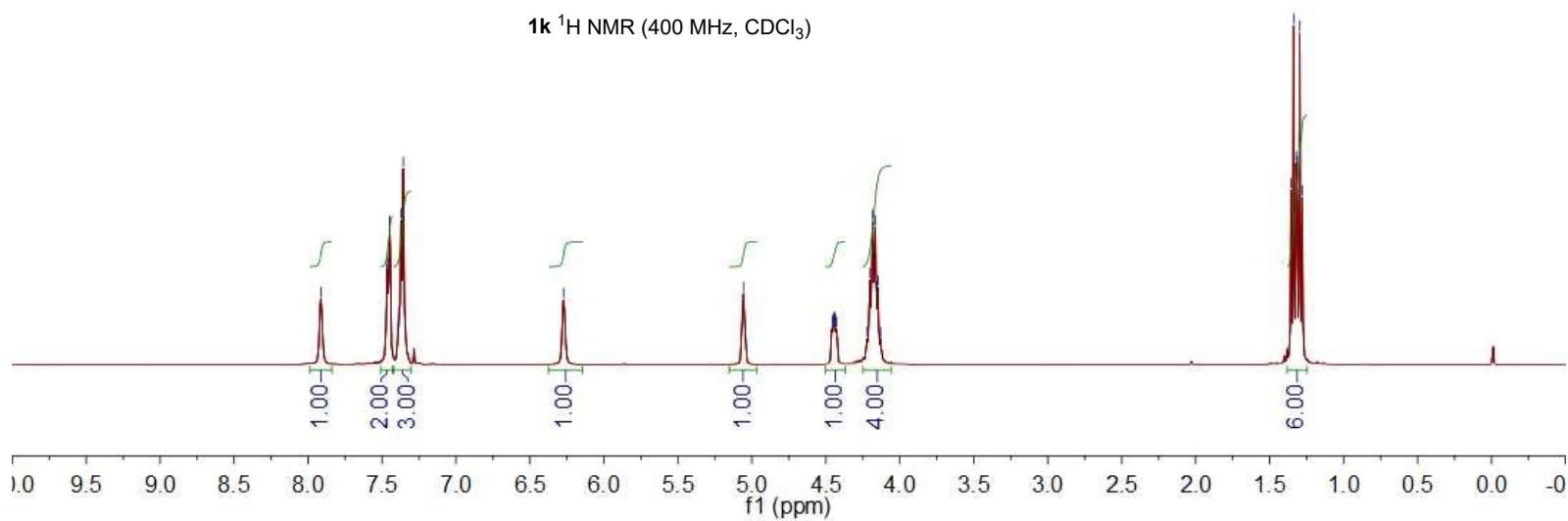
7.9137
7.4684
7.4640
7.4488
7.3941
7.3855
7.3726
7.3561
6.2730

5.0566
4.4569
4.4497
4.4451
4.4401
4.4360
4.4287
4.2203
4.2009
4.1830
4.1738
4.1653
4.1561
4.1478
4.1304

1.3557
1.3381
1.3202
1.3146
1.2968
1.2792



1k ¹H NMR (400 MHz, CDCl₃)



13C NMR FM-5-34K in CDCl₃

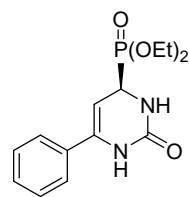
154.52
138.73
138.63
133.86
133.82
129.29
128.77
125.21
125.19

90.42
90.33

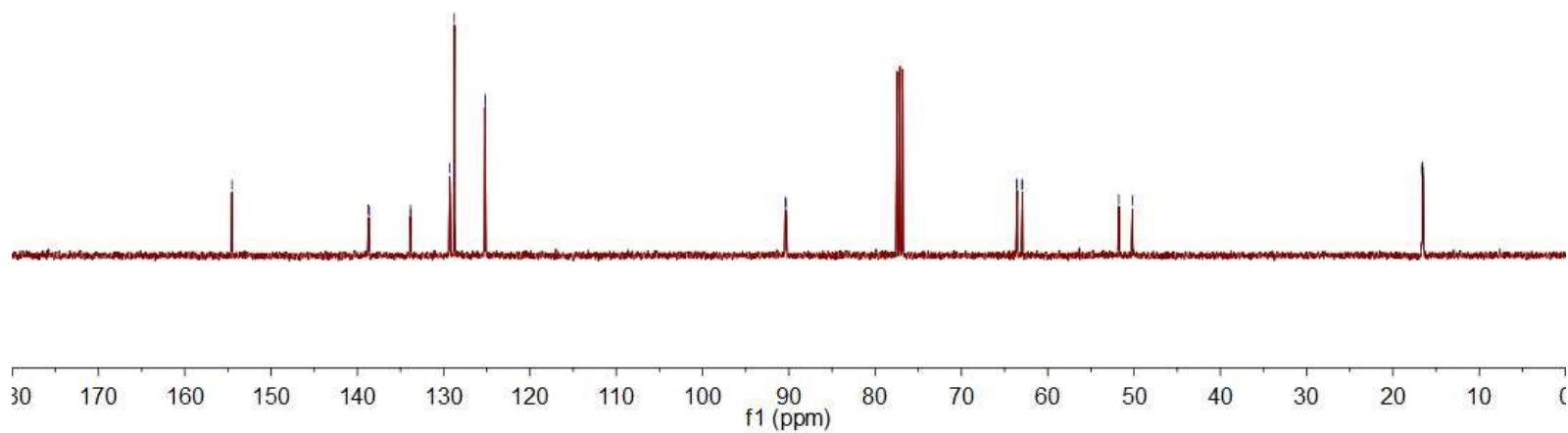
63.62
63.55
63.00
62.92

51.77
50.19

16.66
16.61
16.55
16.50

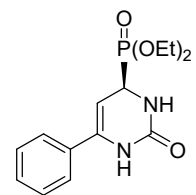


1k ¹³C NMR (100 MHz, CDCl₃)

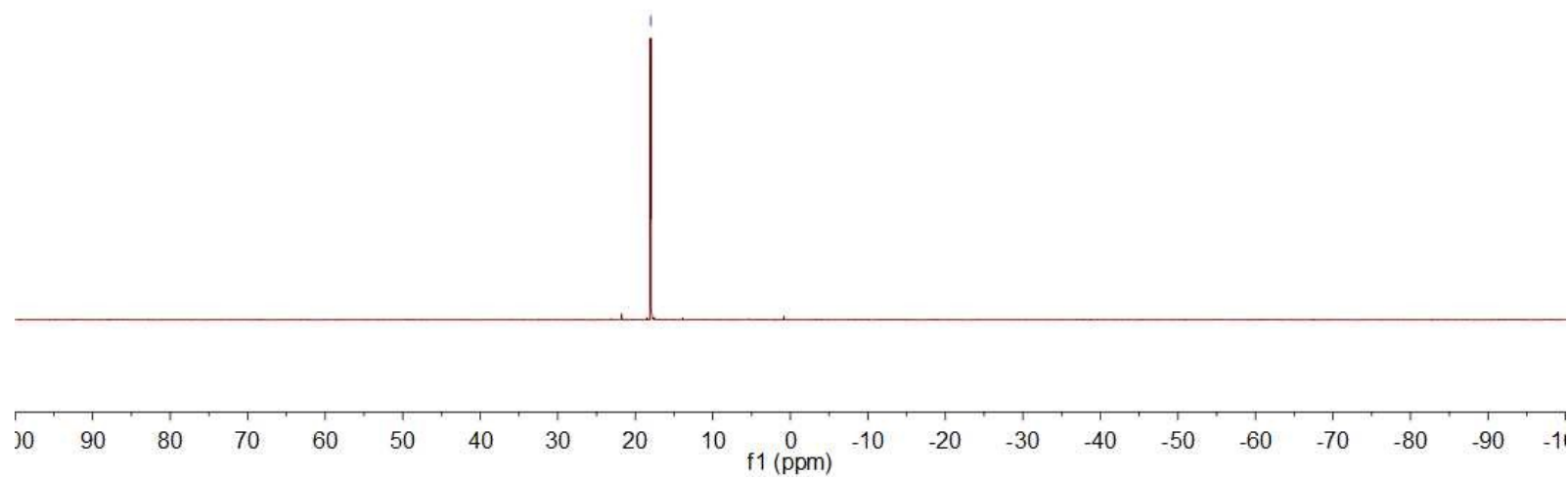


31P NMR FM-5-34K in CDCl3

—18.01



1k ³¹P NMR (162 MHz, CDCl₃)

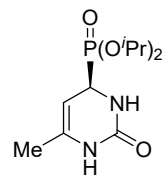


¹H NMR FM-5-34L in CDCl₃

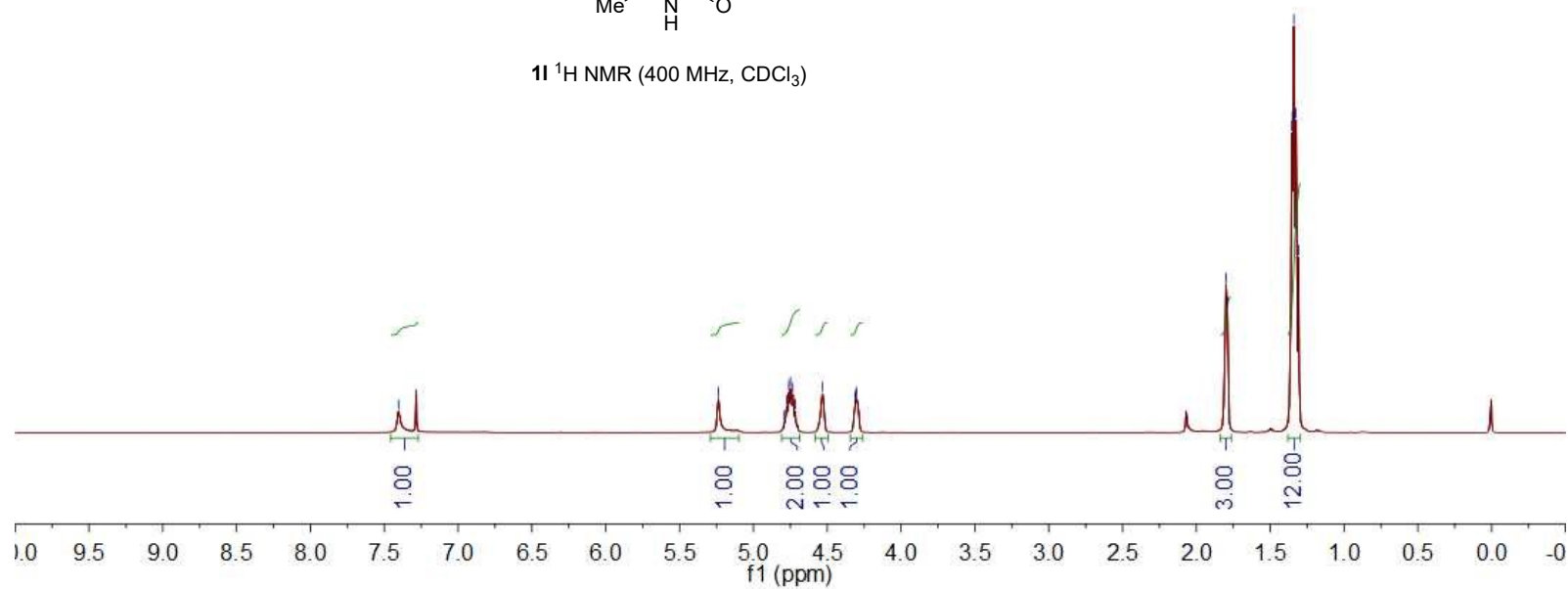
7.4031

5.2373
4.7906
4.7753
4.7598
4.7492
4.7332
4.7173
4.5322
4.3123
4.3076
4.3026

1.8006
1.7895
1.3542
1.3499
1.3403
1.3348
1.3252
1.3078



11 ¹H NMR (400 MHz, CDCl₃)



13C NMR FM-5-34L in CDCl3

154.28

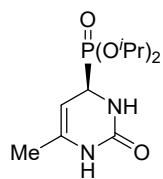
135.16
135.06

88.90
88.82

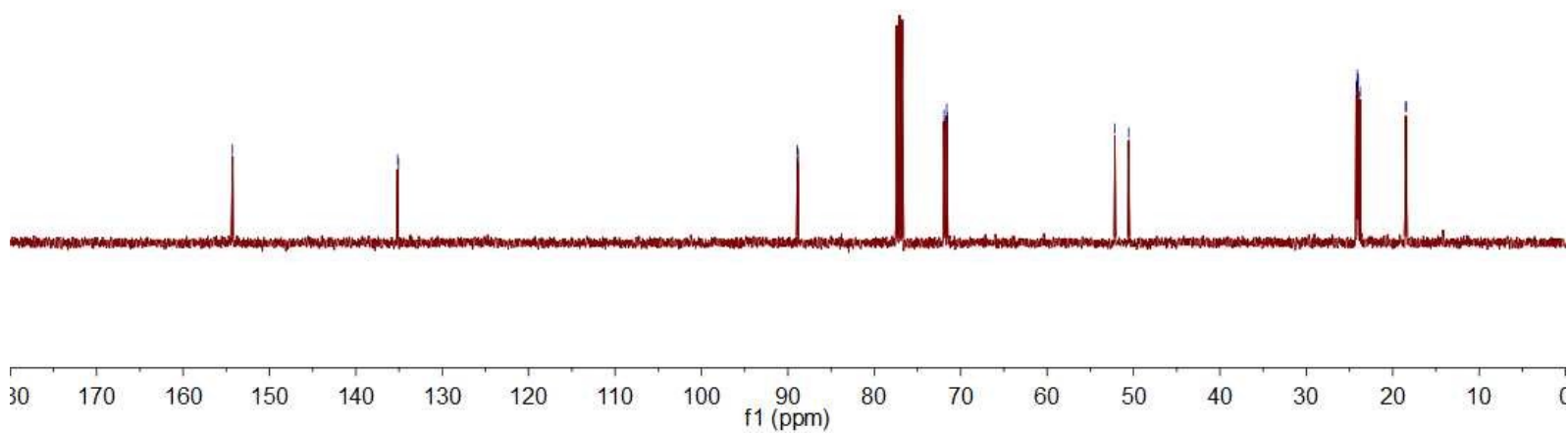
71.93
71.86
71.62
71.55

52.16
50.56

24.22
24.19
24.10
24.06
24.03
23.98
23.82
23.77
18.49
18.47

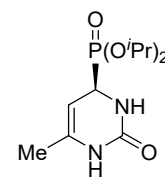


11 ¹³C NMR (100 MHz, CDCl₃)

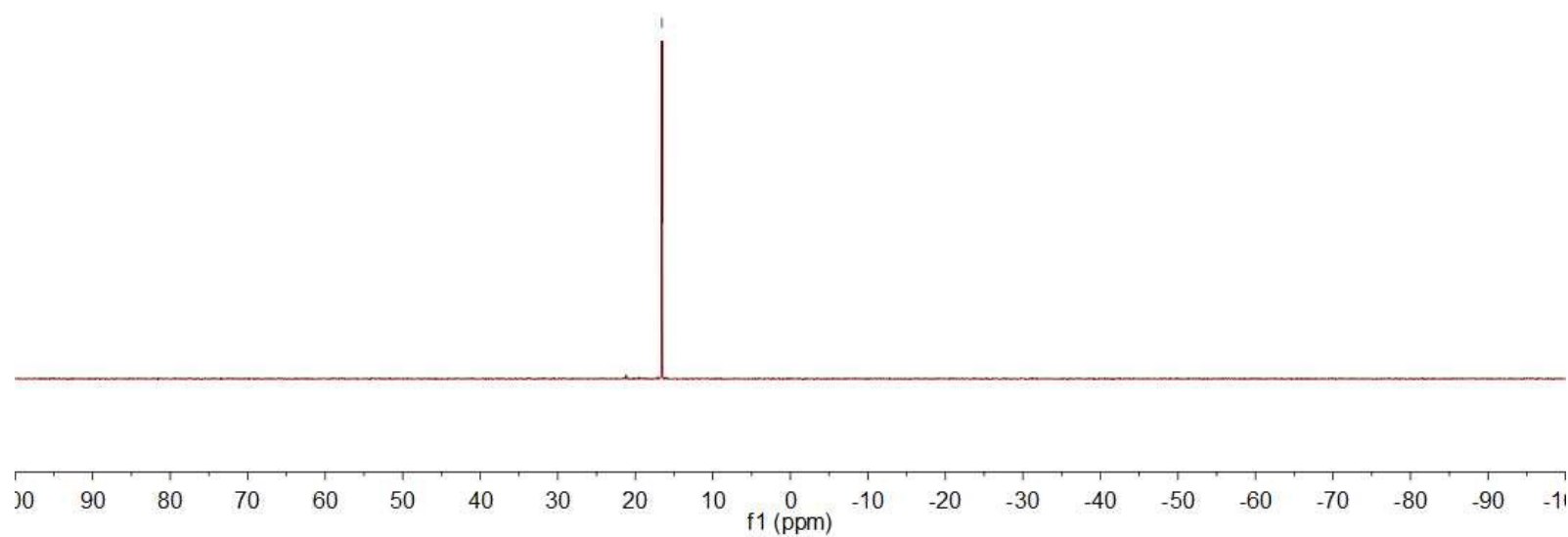


31P NMR FM-5-34L in CDCl3

-16.57



11 ³¹P NMR (162 MHz, CDCl₃)



¹H NMR FM-5-34M in CDCl₃

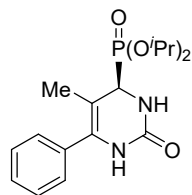
7.3998
7.3818
7.3582
7.3310
7.3128

6.4997

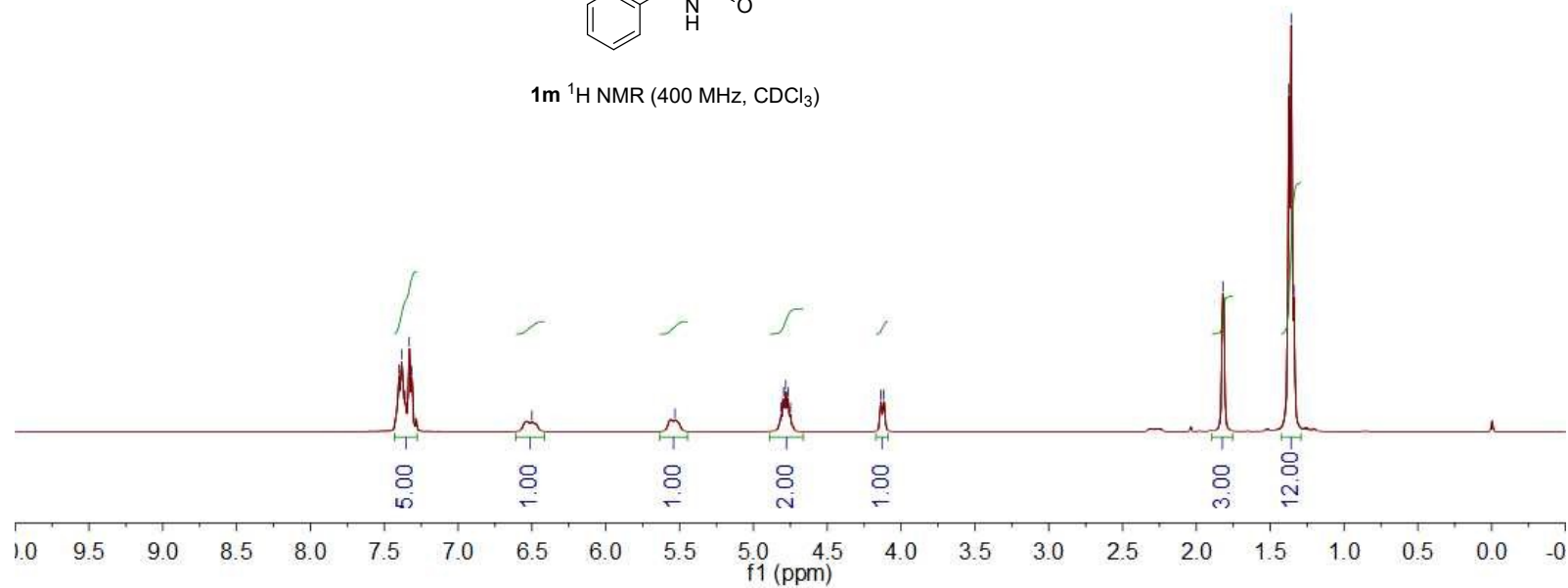
5.5315

4.8119
4.7965
4.7810
4.7654
4.7500
4.1364
4.1161

1.8207
1.3734
1.3575
1.3396

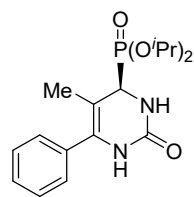


1m ¹H NMR (400 MHz, CDCl₃)

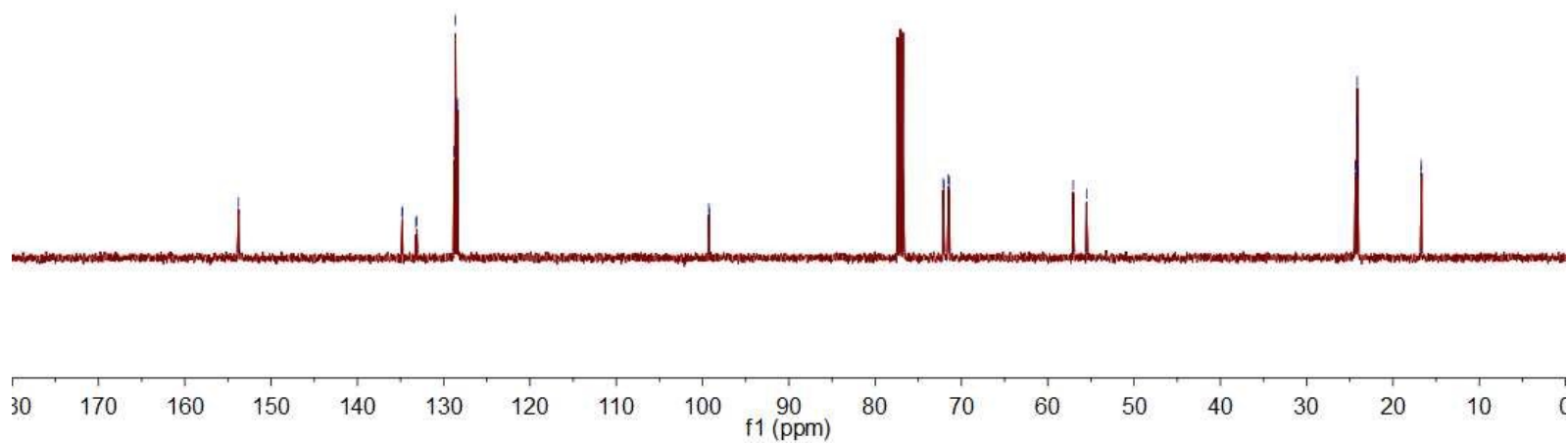


¹³C NMR FM-5-34M in CDCl₃

153.77
134.83
134.80
133.21
133.12
128.81
128.65
128.44
128.41
99.27
99.21
72.11
72.04
71.50
71.42
57.06
55.51
24.39
24.36
24.17
24.13
24.06
24.01
16.72
16.71

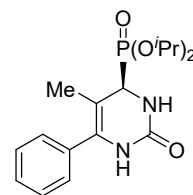


1m ¹³C NMR (100 MHz, CDCl₃)

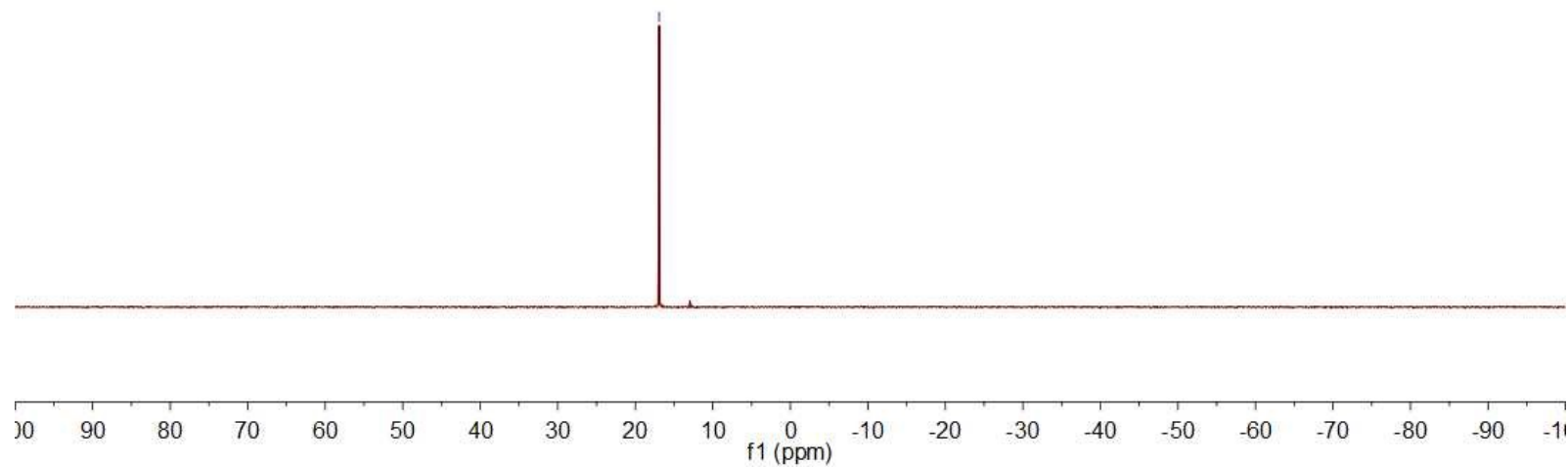


31P NMR FM-5-34M in CDCl3

— 16.93



1m ³¹P NMR (162 MHz, CDCl₃)

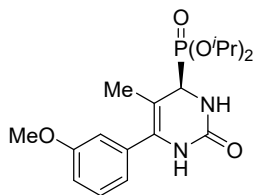


¹H NMR FM-5-34N in CDCl₃

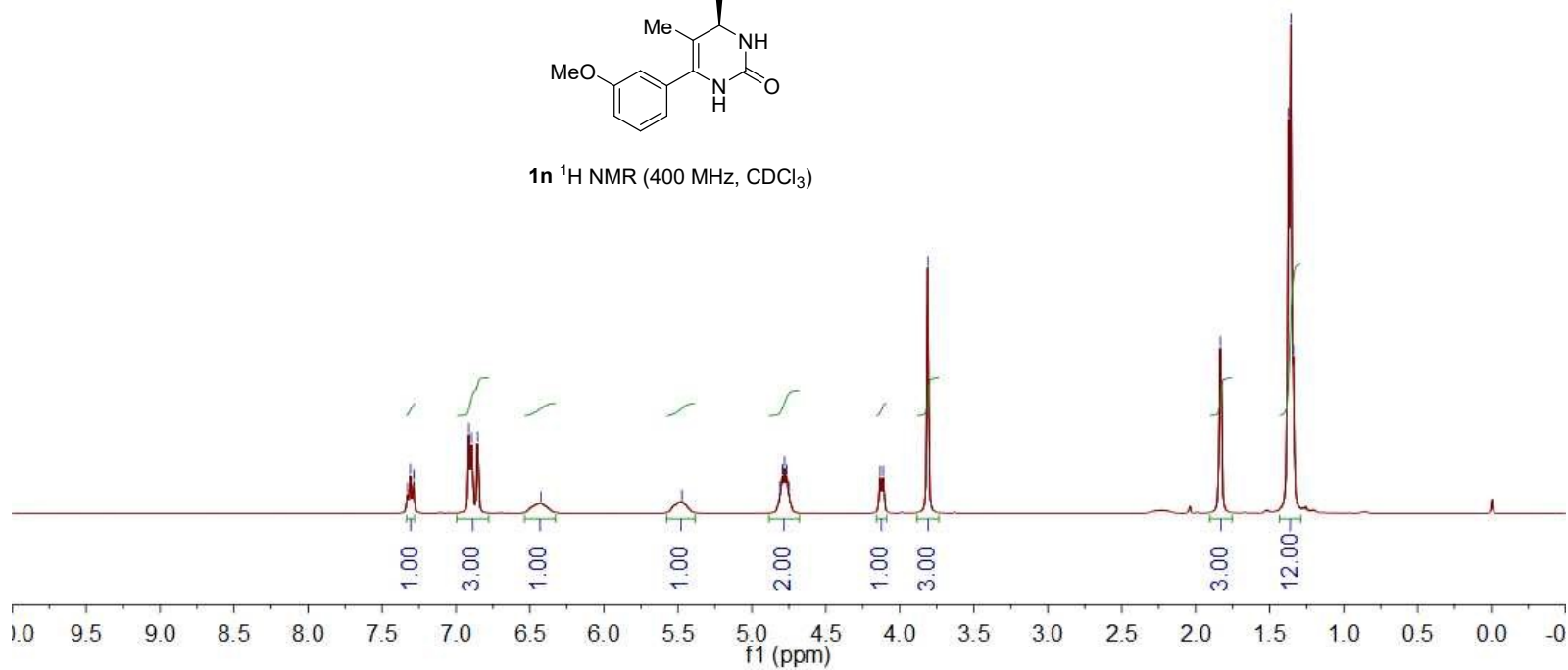
7.3282
7.3092
7.2843
6.9124
6.8935
6.8533
6.4261

5.4732
4.8086
4.7944
4.7793
4.7642
4.7496
4.1325
4.1121
3.8106

1.8331
1.3726
1.3573
1.3414



1n ¹H NMR (400 MHz, CDCl₃)



¹³C NMR FM-5-34N in CDCl₃

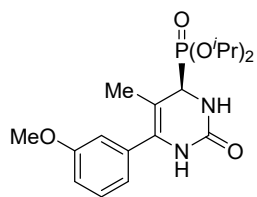
159.67
153.64
136.10
136.06
133.02
132.92
129.75
120.79
120.76
114.45
113.89
113.87

99.36
99.29

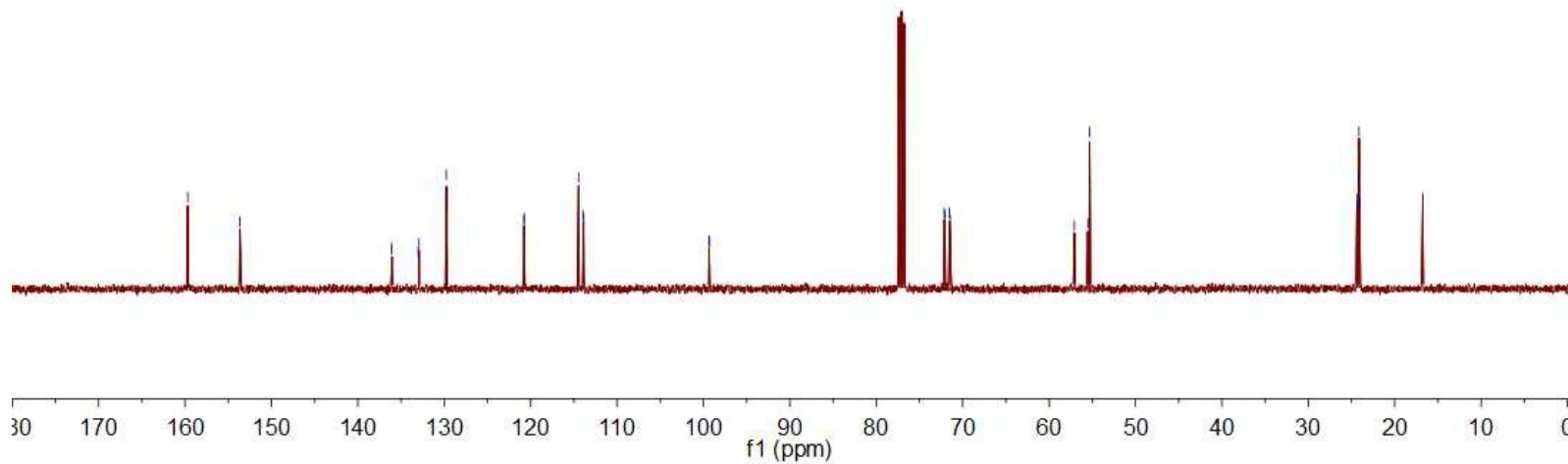
72.14
72.06
71.52
71.45

57.07
55.53
55.30

24.38
24.35
24.17
24.13
24.06
24.01
16.76
16.75

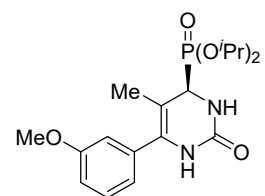


1n ¹³C NMR (100 MHz, CDCl₃)

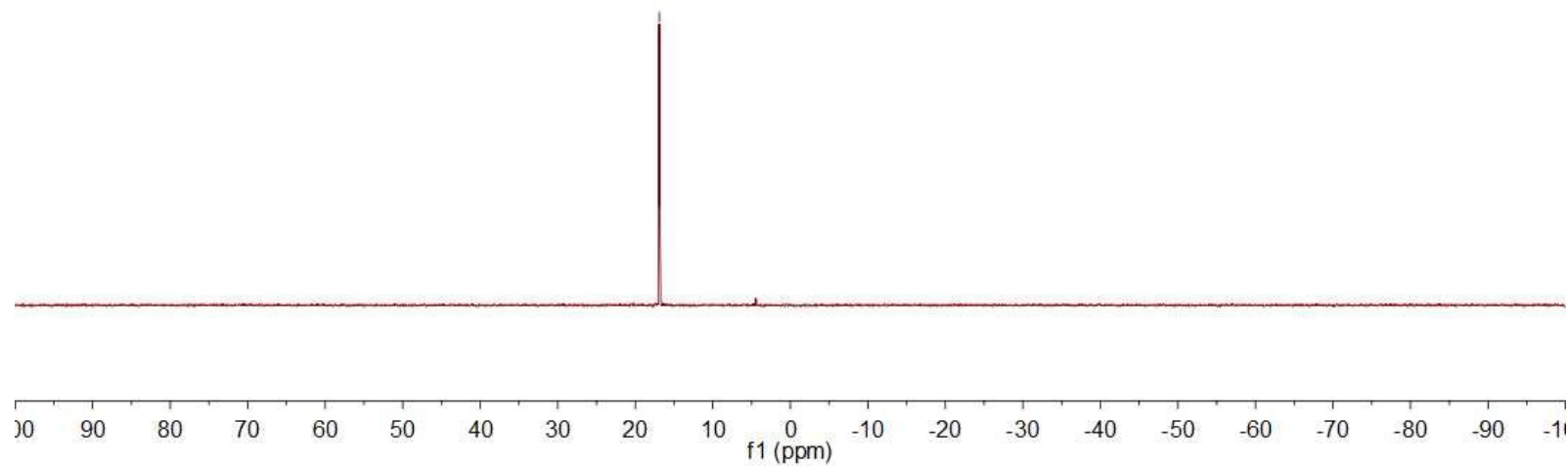


31P NMR FM-5-34N in CDCl3

— 16.90



1n ³¹P NMR (162 MHz, CDCl₃)

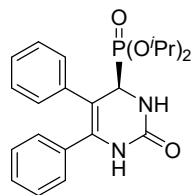


7.2552
7.2430
7.2253
7.2169
7.2114
7.2035
7.1605
7.1574
7.1490
7.1418
7.1362
7.1296
7.1146
6.4350

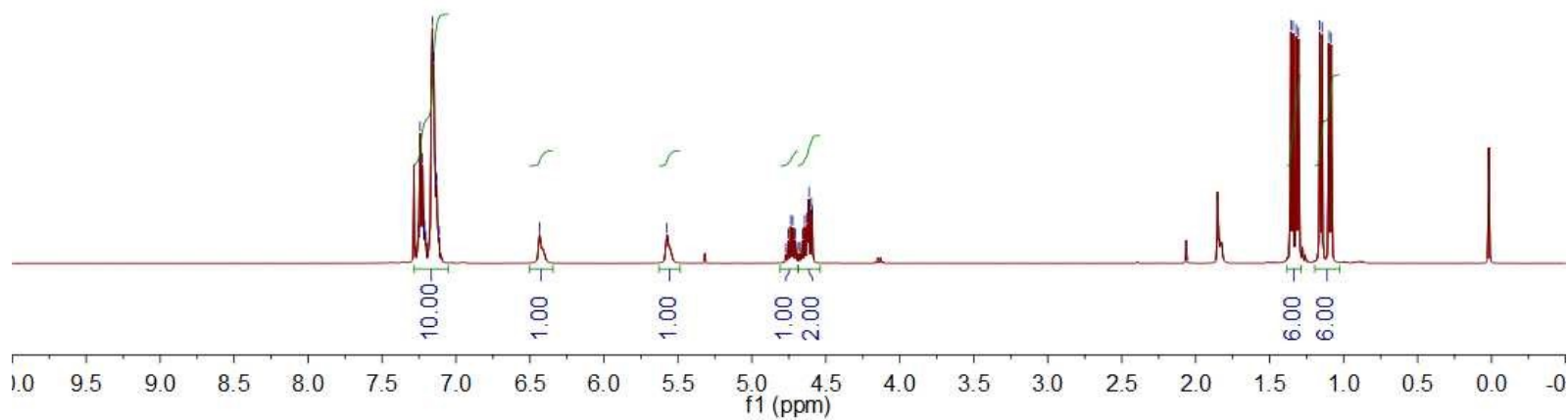
5.5742
4.7695
4.7540
4.7383
4.7224
4.7064
4.6907
4.6749
4.6593
4.6437
4.6276
4.6196
4.6131
4.5971
4.5909

1.3574
1.3420
1.3204
1.3049
1.1614
1.1460
1.0988
1.0833

¹H NMR FM-5-340 in CDCl₃



1o ¹H NMR (400 MHz, CDCl₃)



13C NMR FM-5-340 in CDCl3

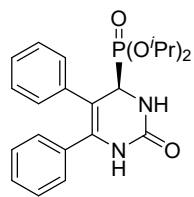
154.17
137.02
136.98
135.37
135.00
134.96
130.30
128.59
128.44
127.96
126.67
118.80

105.35
105.31

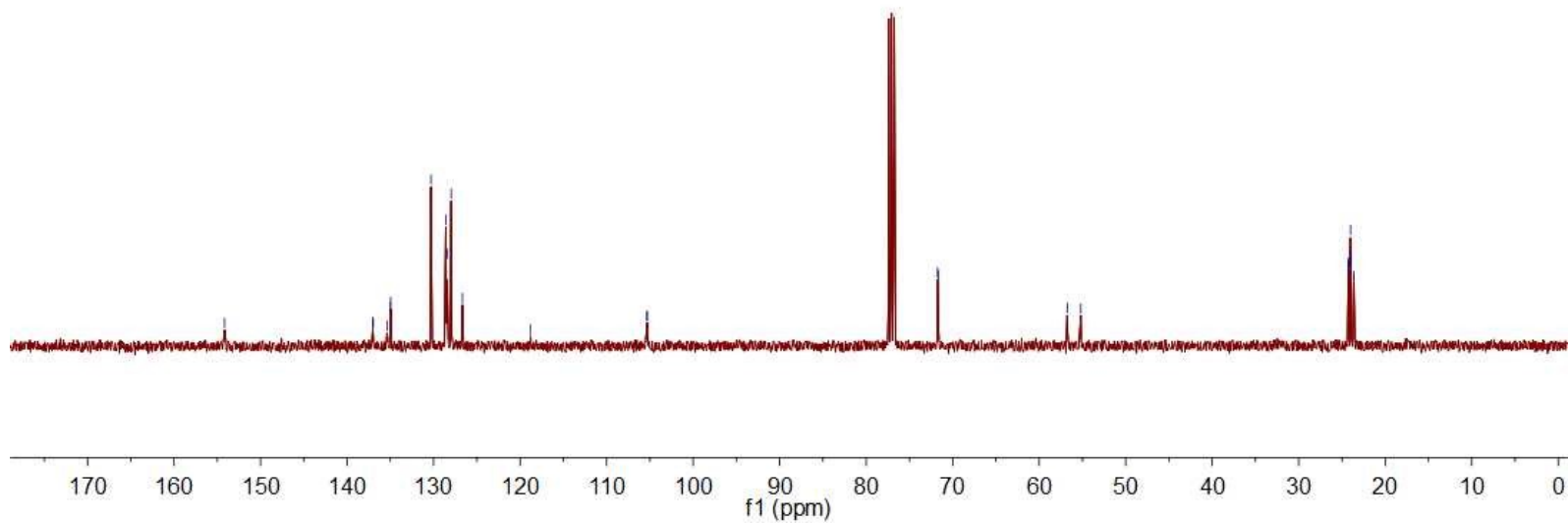
71.74
71.66

56.76
55.19

24.29
24.26
24.06
24.02
23.99
23.66
23.61

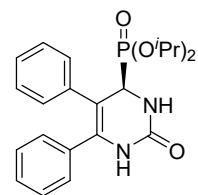


1o ¹³C NMR (100 MHz, CDCl₃)

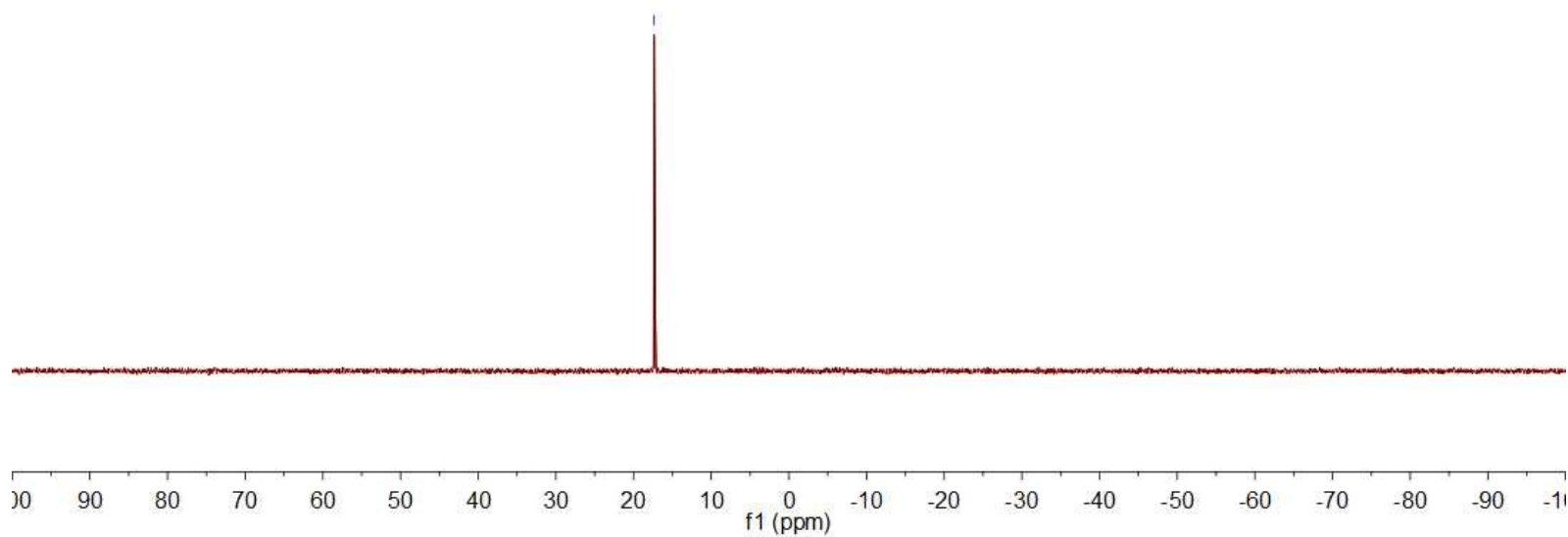


31P NMR FM-5-340 in CDCl3

—17.35



1o ³¹P NMR (162 MHz, CDCl₃)

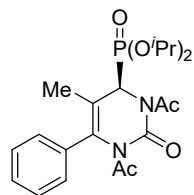


7.3906
7.3717
7.3534
7.2996
7.2797
7.2593

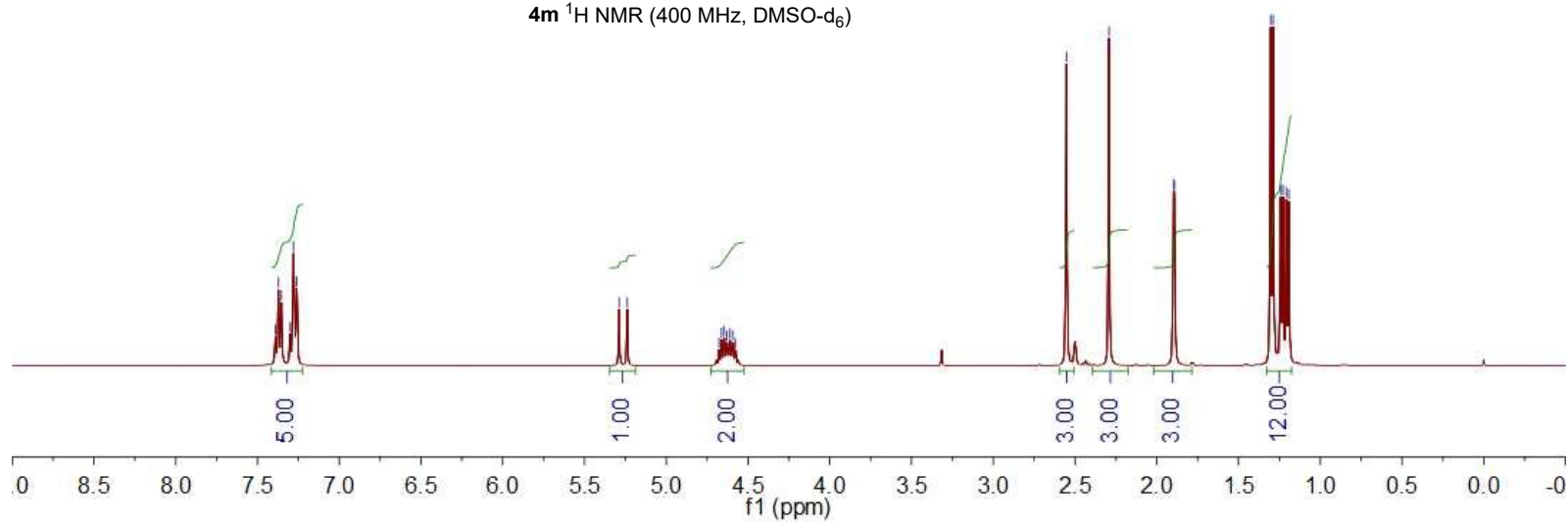
5.2880
5.2380
4.6774
4.6615
4.6452
4.6285
4.6098
4.5916
4.5759

2.5525
2.2922
1.8973
1.8918
1.3038
1.2884
1.2428
1.2274
1.2076
1.1923

¹H NMR FM-5-57 in DMSO



4m ¹H NMR (400 MHz, DMSO-d₆)



170.88
170.87
169.61

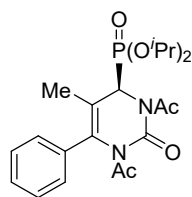
153.29
135.98
135.95
135.53
135.44
128.38
128.17
127.93
120.74
120.73

72.41
72.34
71.91
71.84

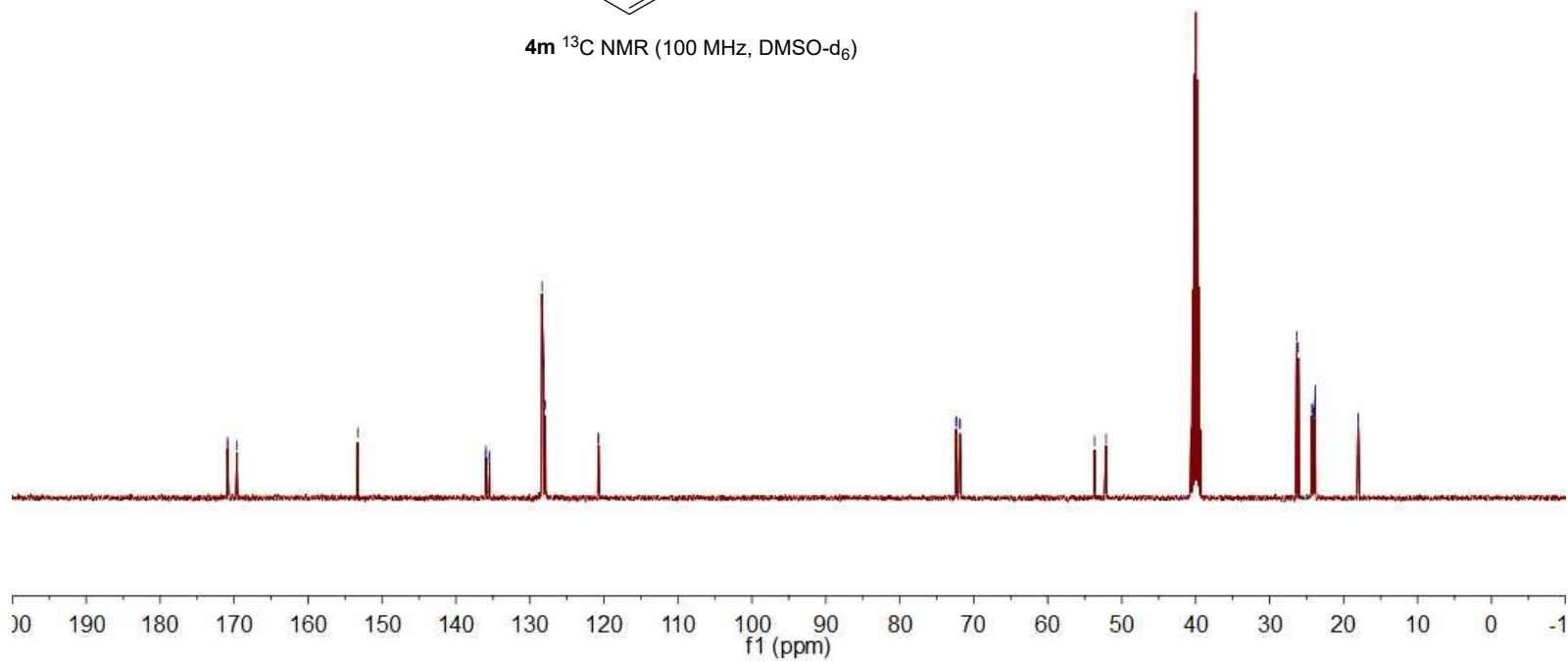
53.67
52.12

26.36
26.10
24.30
24.26
24.08
24.04
23.91
23.88
23.85
23.83
18.04
18.00

¹³C NMR FM-5-57 in DMSO

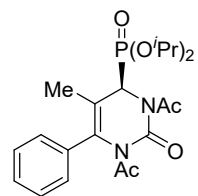


4m ¹³C NMR (100 MHz, DMSO-d₆)

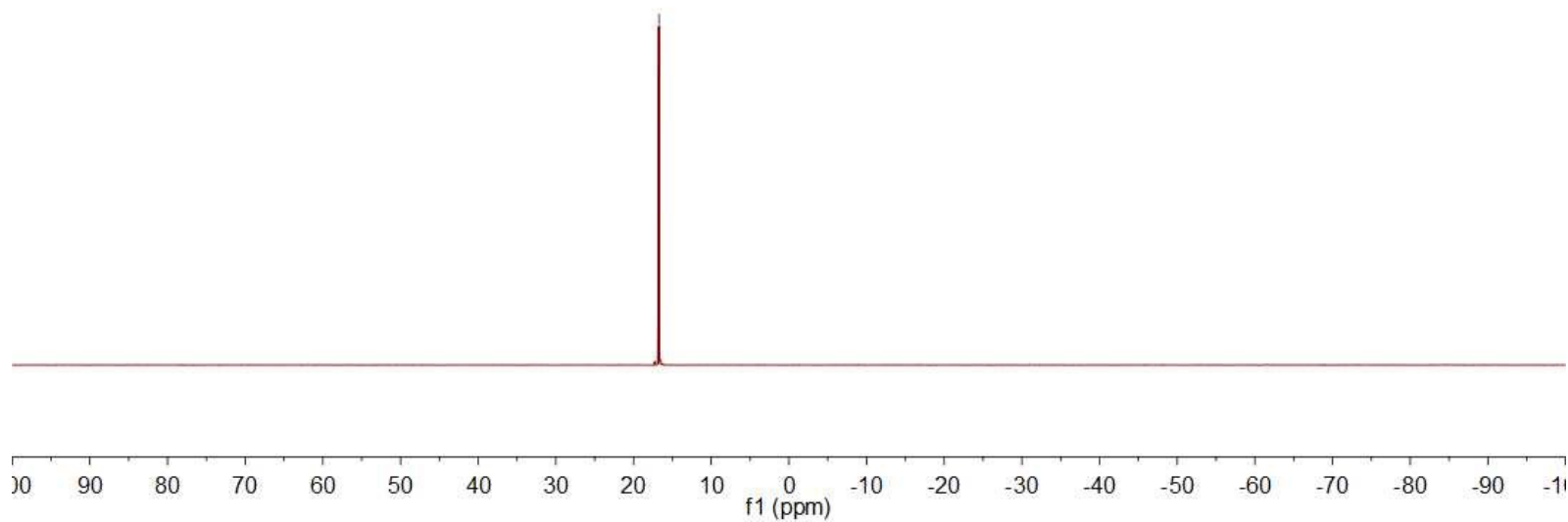


31P NMR FM-5-57 in DMSO

-16.71



4m ³¹P NMR (162 MHz, DMSO-d₆)



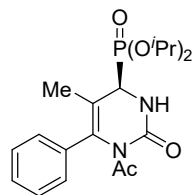
8.6481
8.6347

7.3600
7.3415
7.3229
7.2613
7.2434
7.1729
7.1542

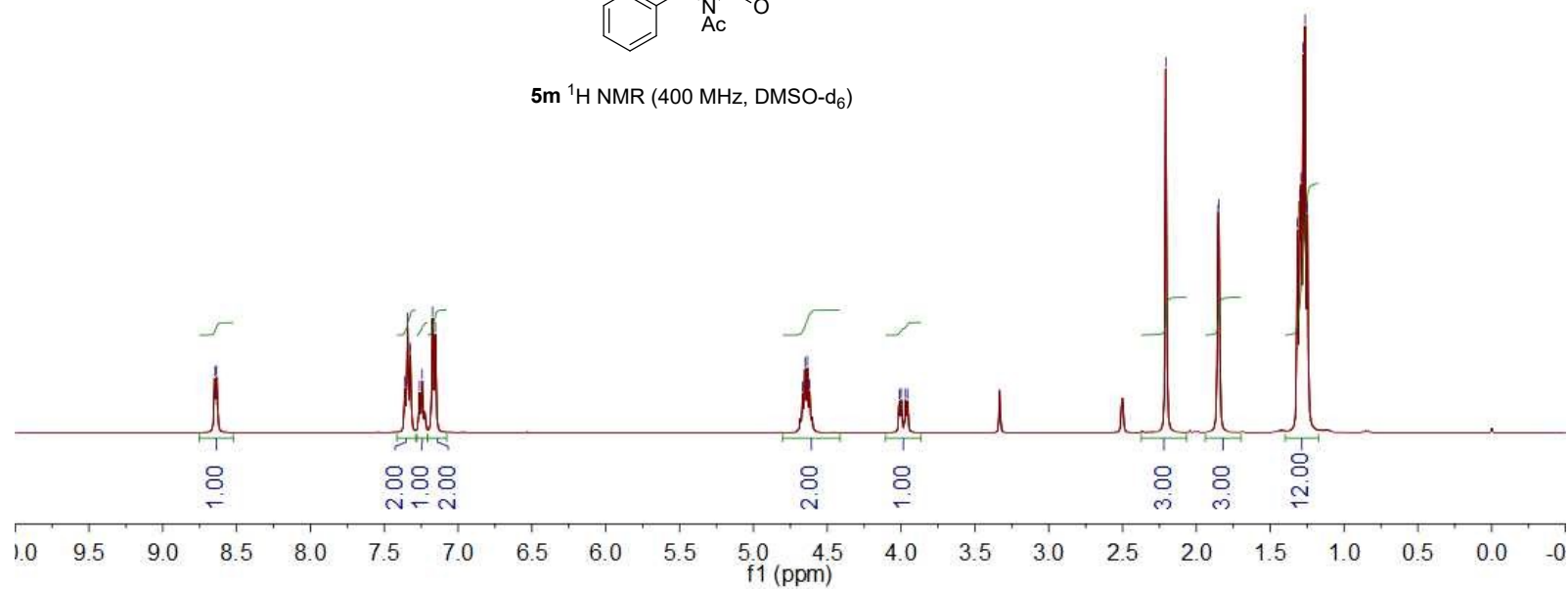
4.6664
4.6503
4.6344
4.6186
4.0118
3.9984
3.9697
3.9562

2.2071
1.8531
1.8477
1.3156
1.3000
1.2915
1.2771
1.2634
1.2482

¹H NMR FM-5-66 in DMSO



5m ¹H NMR (400 MHz, DMSO-d₆)



168.45
168.43

154.65

137.12
137.09
135.75
135.65

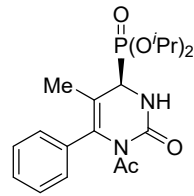
128.32
127.84
120.00
119.99

71.49
71.42
71.33
71.26

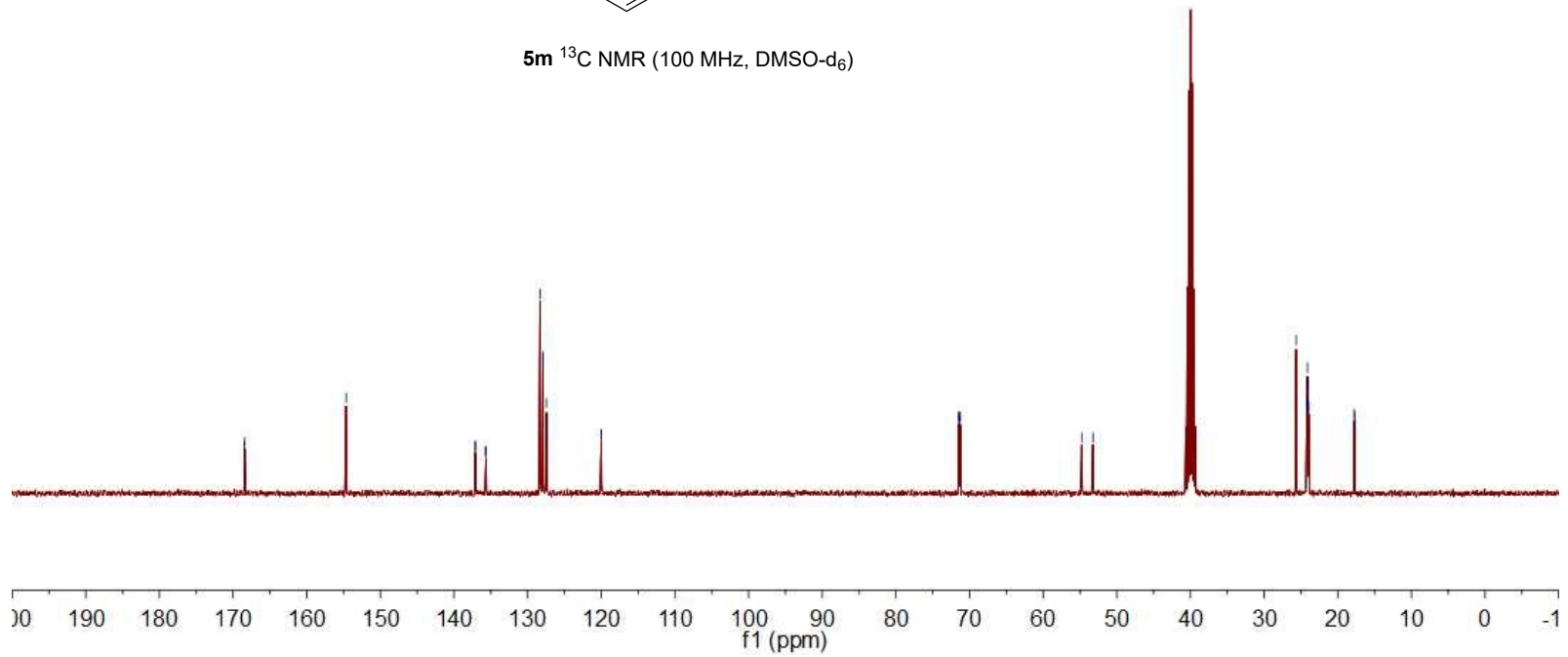
54.77
53.24

25.65
24.22
24.18
24.11
24.08
24.06
23.99
23.95
17.75
17.71

¹³C NMR FM-5-66 in DMSO

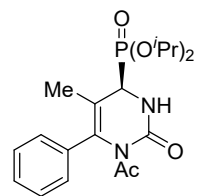


5m ¹³C NMR (100 MHz, DMSO-d₆)

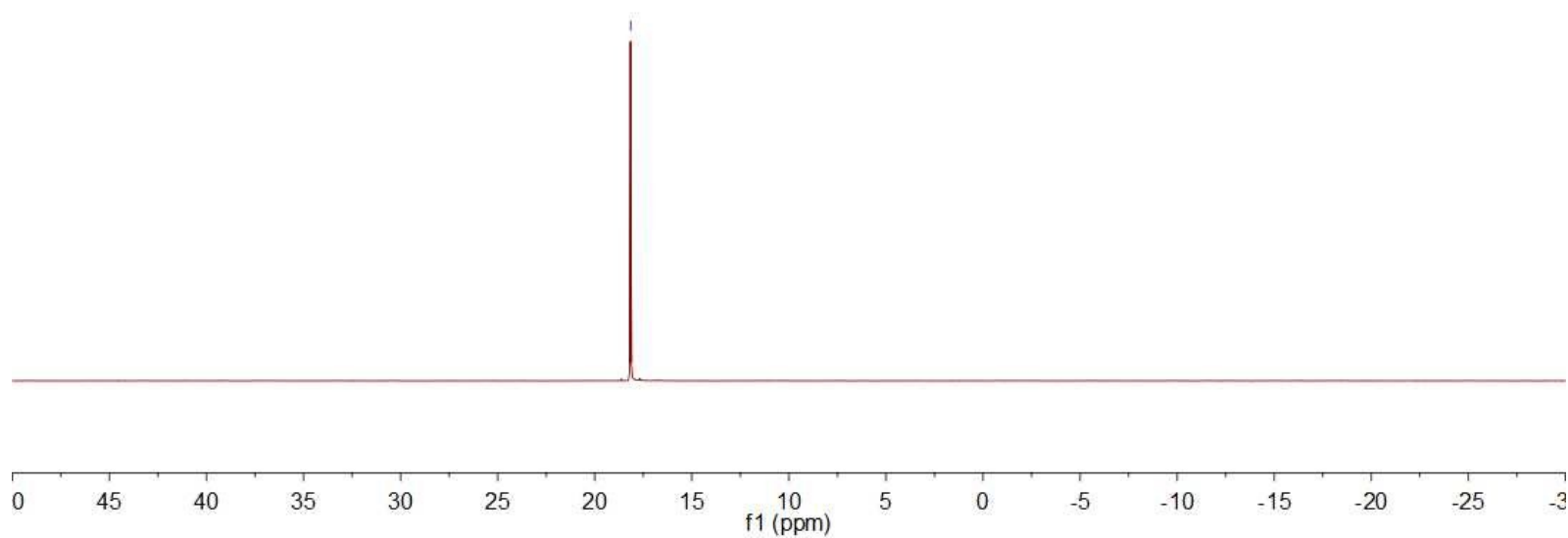


31P NMR FM-5-66 in DMSO

-18.15



5m ³¹P NMR (162 MHz, DMSO-d₆)



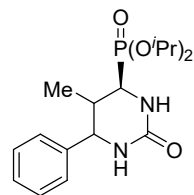
7.4024
7.3849
7.3660
7.3329
7.3149
7.2963
7.2836
7.2644

5.2684
5.0091
4.9893
4.8186
4.8029
4.7881
4.7837
4.7712
4.7536
4.7378
4.7222
4.0580
4.0510
4.0225
4.0155

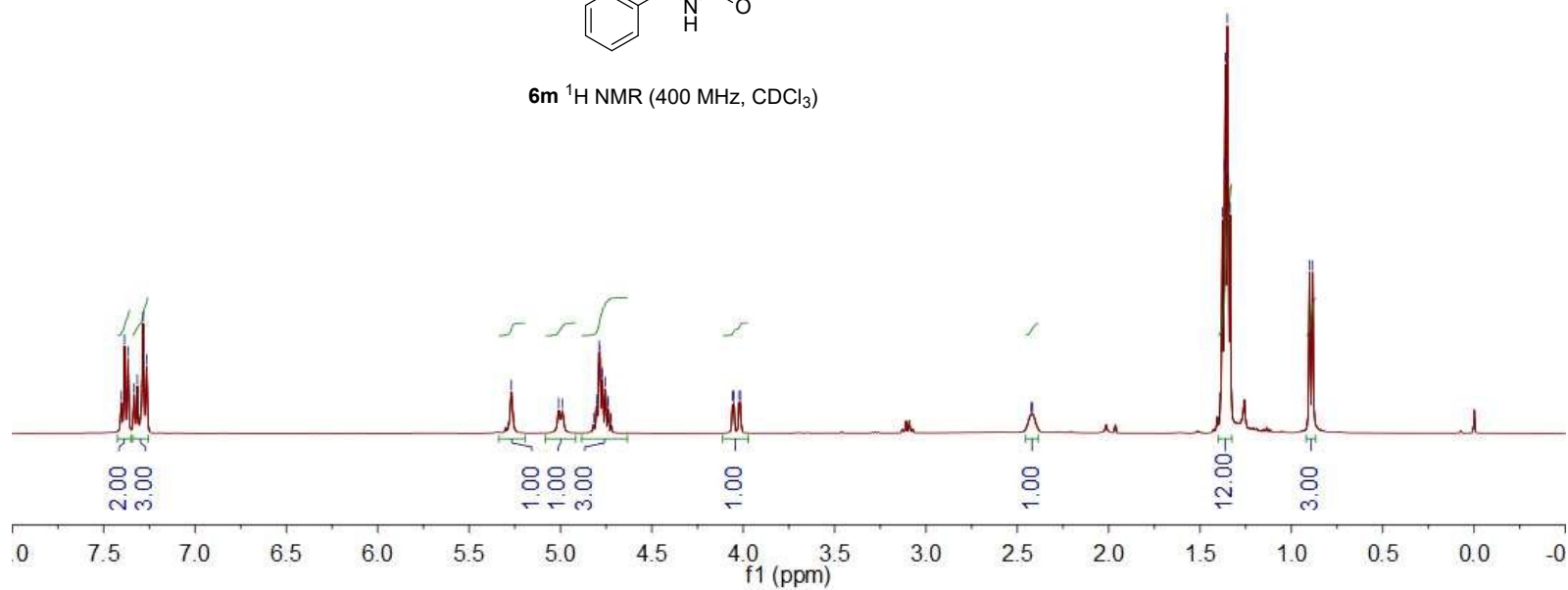
2.4240
2.4158

1.3774
1.3664
1.3611
1.3508
1.3446
1.3351
0.9010
0.8838

¹H NMR FM-6-10 in CDCl₃



6m ¹H NMR (400 MHz, CDCl₃)



156.36
156.24

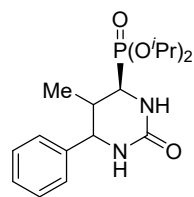
138.87
138.84

128.69
128.03
126.28

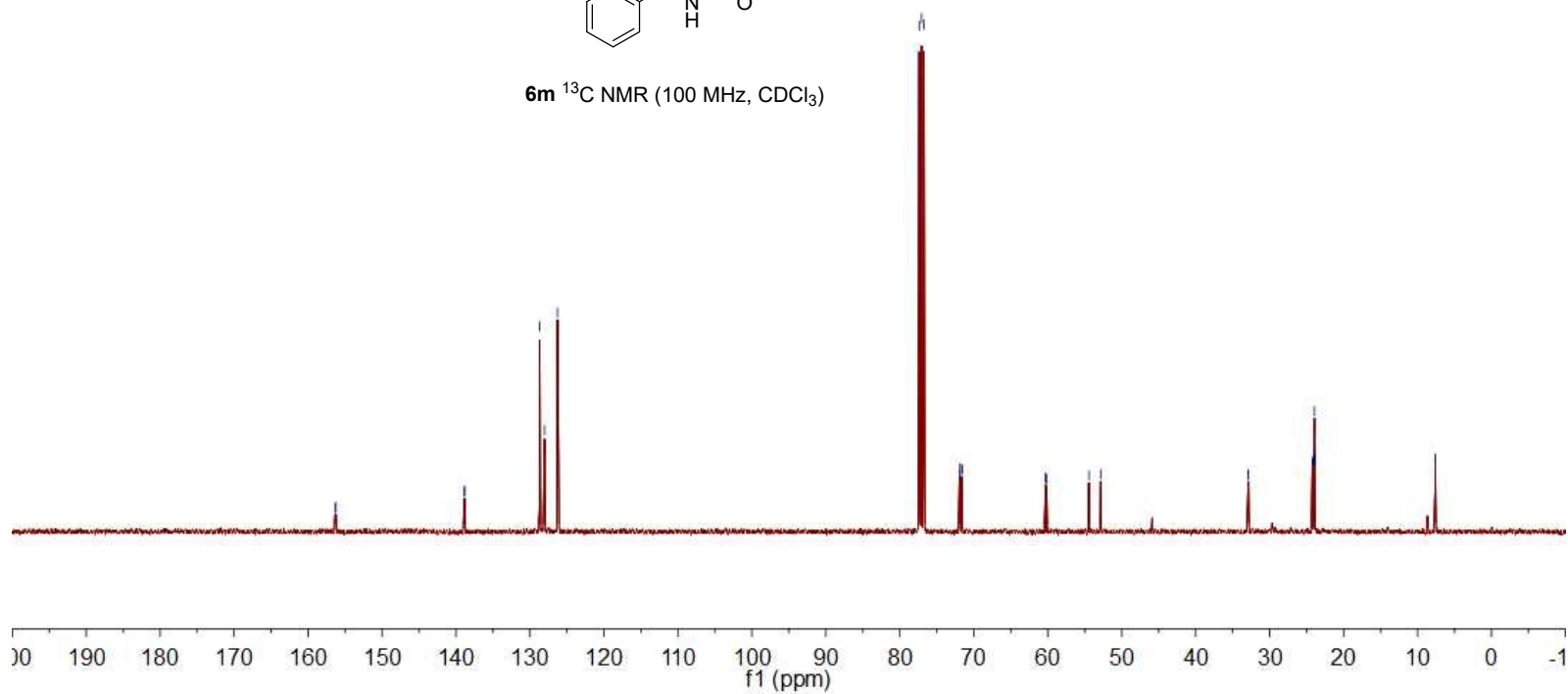
77.38
77.06
76.74
71.95
71.89
71.63
71.56
60.34
60.15
54.42
52.84

32.92
32.87
24.07
24.02
23.98
23.95
23.90
7.62
7.60

^{13}C NMR FM-6-10 in CDCl_3

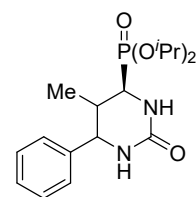


6m ^{13}C NMR (100 MHz, CDCl_3)

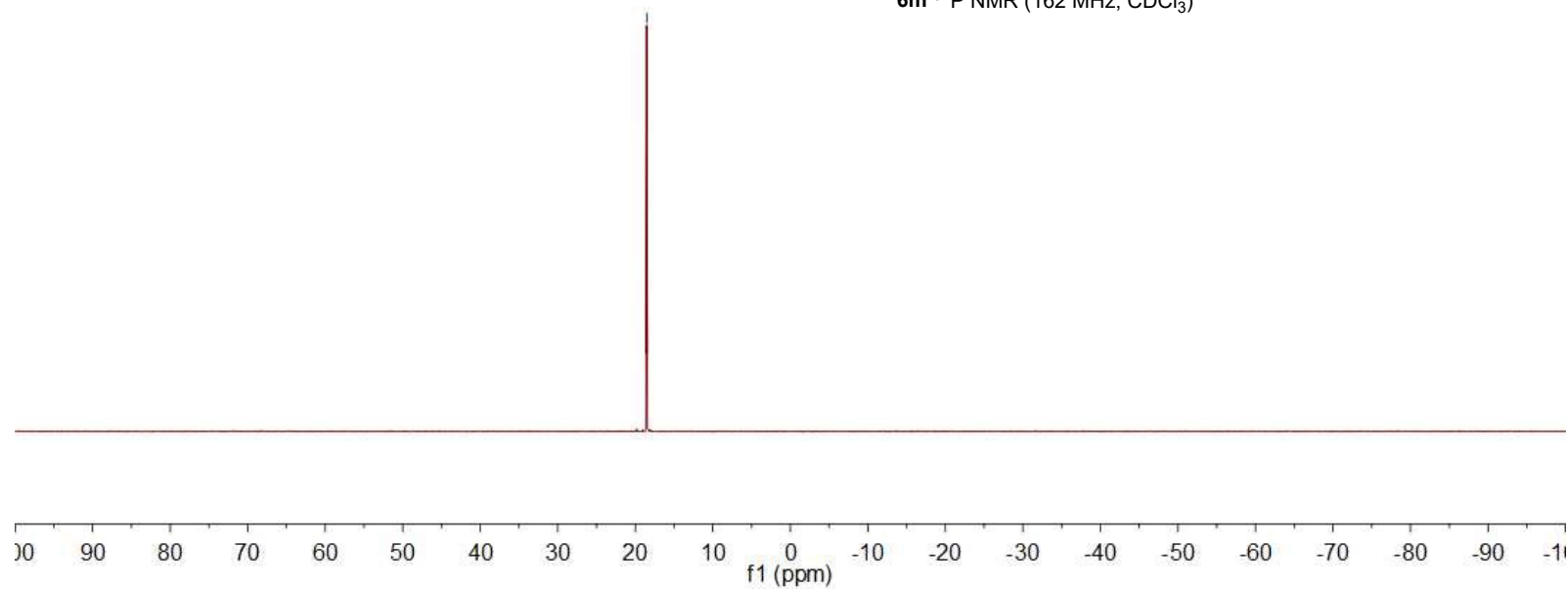


31P NMR FM-6-10 in CDCl3

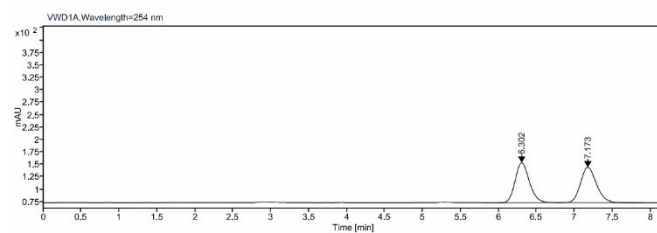
—18.52



6m ³¹P NMR (162 MHz, CDCl₃)

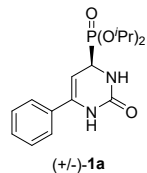


Data file: FM-5-34-1(+)-V-2020-10-28 17-31-31+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-1(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-28 17:35:45+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm

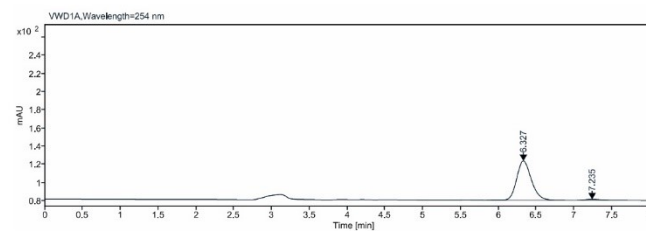


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
6.302	0.799	1045.78	80.34	50.15
7.173	1.117	1039.68	70.97	49.85
Sum		2085.47		

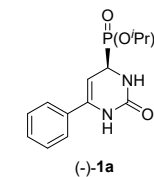


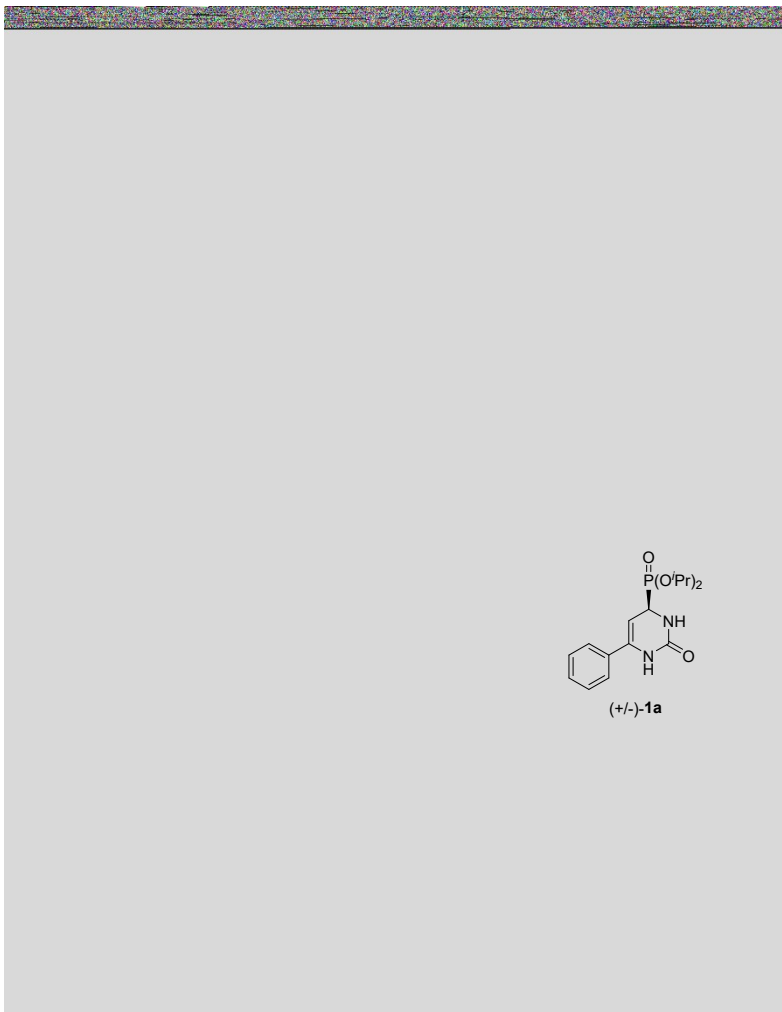
Data file: FM-5-34-1-V-2020-10-27 15-23-03+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-1 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-27 15:24:09+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm



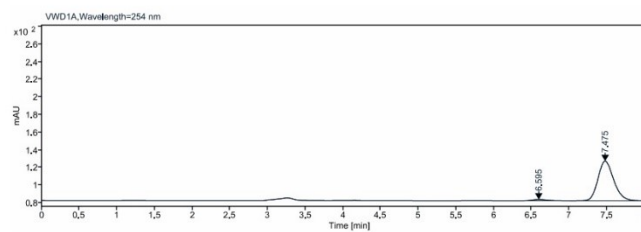
Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
6.327	1.143	579.55	43.22	98.18
7.235	0.200	10.76	0.87	1.82
Sum		590.31		



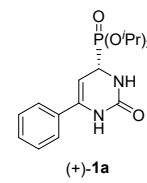
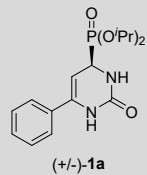


Data file: FM-6-15-V-2021-04-24 09-30-51+08-00.dlx
Sequence Name: SingleSample Project Name: 1260
Sample name: FM-6-15 Operator: SYSTEM
Instrument: Ic1260 Injection date: 2021-04-24 09:31:57+08:00
Acq. method: FM-4-41.amx Type: Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

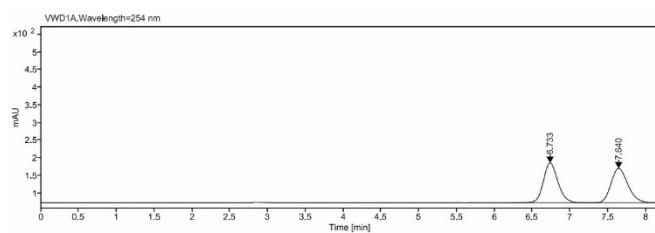


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
6.595	0.176	14.14	1.29	2.10
7.475	1.523	658.18	45.03	97.90
Sum		672.31		

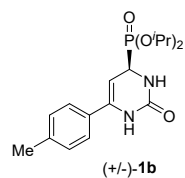


Data file: FM-5-34-2(+)-V-2020-10-28 16-18-09+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-2(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-28 16:19:47+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

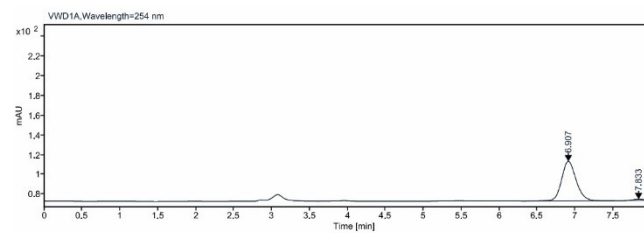


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
6.733	1,004	1516,86	113,11	49,99
7,640	1,260	1517,43	97,54	50,01
Sum		3034,28		

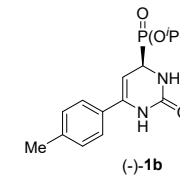


Data file: FM-5-34-2-V-2020-10-28 16-05-23+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-2 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-28 16:05:42+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

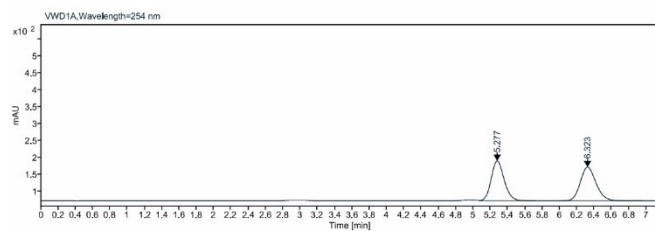


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
6,907	1,193	538,35	40,21	97,14
7,833	0,204	15,83	1,24	2,86
Sum		554,18		

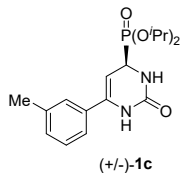


Data file: FM-5-34-3(+/-)-V-2020-10-28 17-01-24+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-3(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-28 17:01:36+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

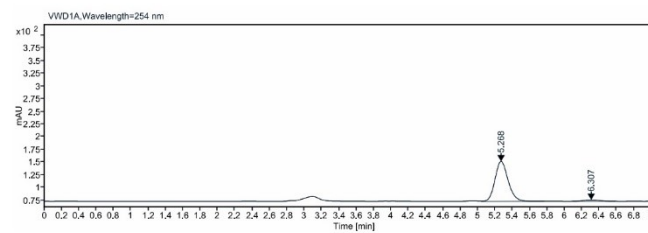


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5.277	0.656	1230,58	117,85	49,45
6.323	0,953	1257,85	99,45	50,55
	Sum	2488,43		

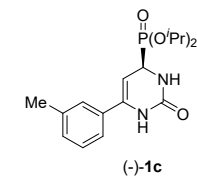


Data file: FM-5-34-3-V-2020-10-28 16-31-24+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-3 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-28 16:45:37+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

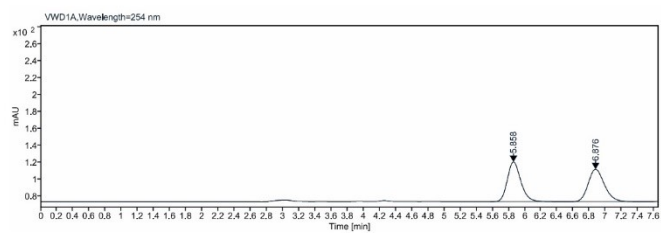


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5.268	0.160	823,65	78,76	96,03
6.307	0,199	34,07	2,68	3,97
	Sum	857,72		

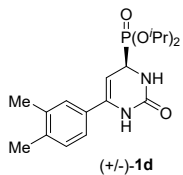


Data file: FM-5-34-10(+)-V-2020-10-31 10-05-18+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-10(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-31 10:06:47+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm

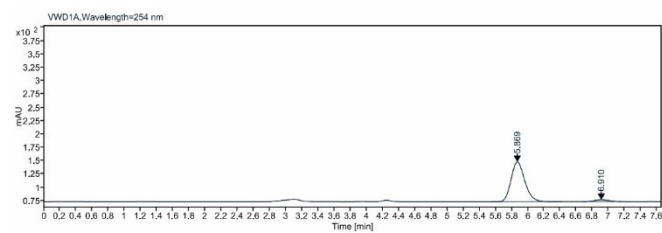


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5,858	0,973	546,78	47,18	50,32
6,876	1,050	539,80	38,46	49,68
Sum		1086,58		

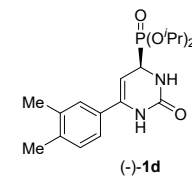


Data file: FM-5-34-10-V-2020-10-31 09-50-52+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-10 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-31 09:53:08+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm

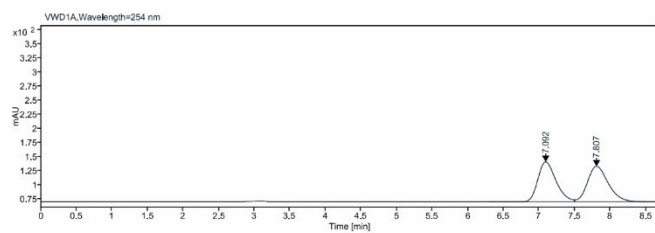


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5,869	0,874	886,25	74,86	95,19
6,910	0,205	44,79	3,40	4,81
Sum		931,04		

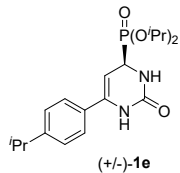


Data file: FM-5-34-11(+)-V-2020-10-31 11-07-10+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-11(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-31 11:07:20+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: OD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

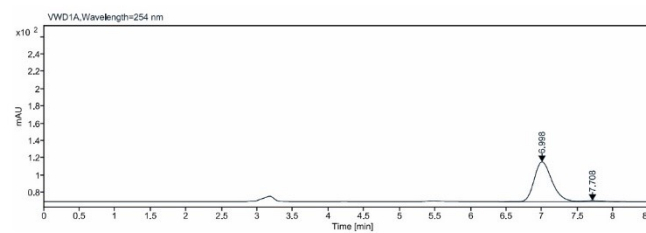


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
7.092	1.196	1264.80	71.19	49.52
7.807	1.508	1289.42	63.40	50.48
Sum		2554.22		

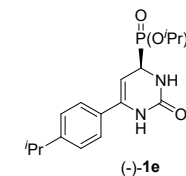


Data file: FM-5-34-11-V-2020-10-31 11-18-49+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-11 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-31 11:19:59+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: OD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

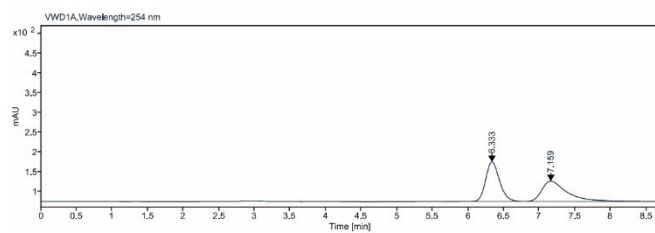


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
6.998	1.044	804.31	46.18	97.04
7.708	0.289	24.54	1.28	2.96
Sum		828.85		

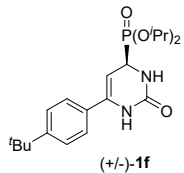


Data file: FM-5-34-12(+)-V-2020-11-01 20-42-35+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-12(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-11-01 20:46:07+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm

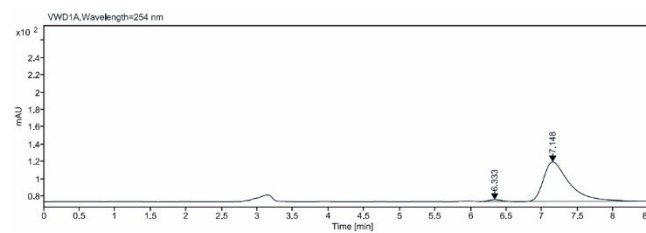


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
6.333	1,134	1364,83	100,31	50,62
7,159	2,416	1331,25	51,68	49,38
Sum		2696,08		

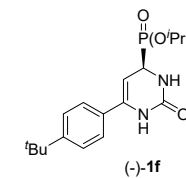


Data file: FM-5-34-12-V-2020-11-01 21-08-33+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-12 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-11-01 21:32:51+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm

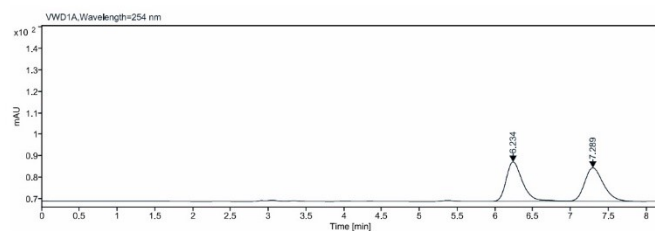


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
6.333	0,210	30,03	2,22	2,51
7,148	0,376	1166,27	45,74	97,49
Sum		1196,30		

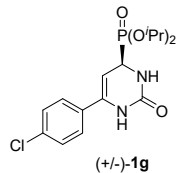


Data file: FM-5-34-6(+/-)-V-2020-10-30 10-02-22+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-6(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-30 10:03:49+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: OD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

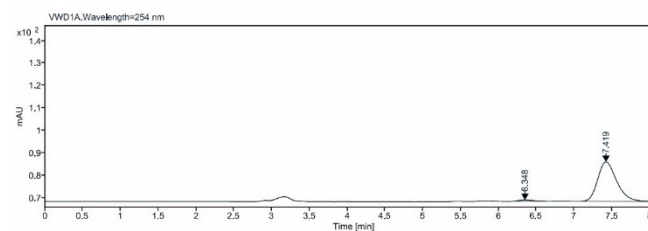


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
6,234	1,027	273,60	18,35	50,57
7,289	1,000	267,38	15,58	49,43
Sum		540,98		

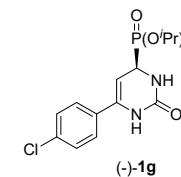


Data file: FM-5-34-6-V-2020-10-30 10-27-24+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-6 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-30 10:28:04+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: OD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

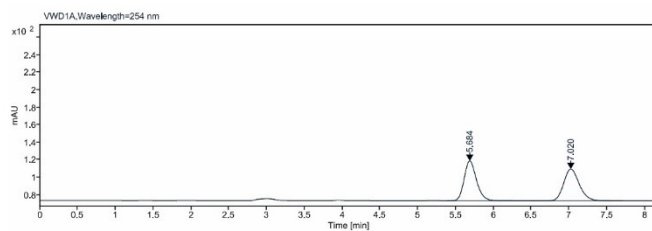


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
6,348	0,203	7,74	0,59	2,45
7,419	1,410	308,38	17,55	97,55
Sum		316,12		

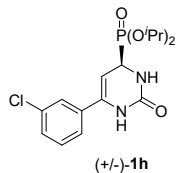


Data file: FM-5-34-7(+/-)-V-2020-10-30 11-08-55+08-00.dlx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-7(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-30 11:09:43+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

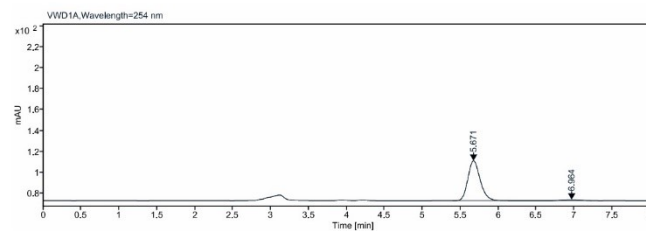


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5.684	1.273	519.72	45.55	50.04
7.020	1.043	518.98	36.28	49.96
Sum		1038.70		

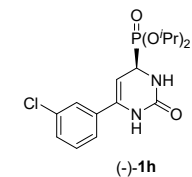


Data file: FM-5-34-7-V-2020-10-30 11-20-48+08-00.dlx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-7 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-30 11:21:09+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

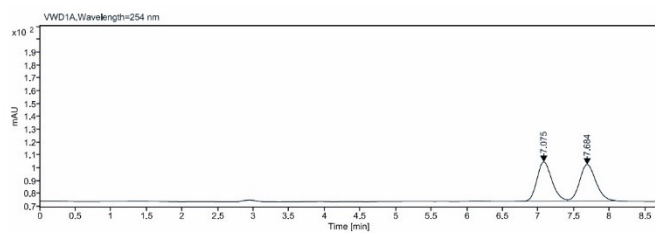


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5.671	1.220	430.29	38.07	96.54
6.964	0.259	15.43	0.93	3.46
Sum		445.72		

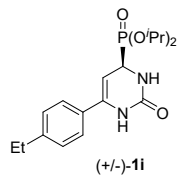


Data file: FM-5-34-9(+/-)-V-2020-10-30 18-52-33+08-00,dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-9(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-30 18:54:39+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

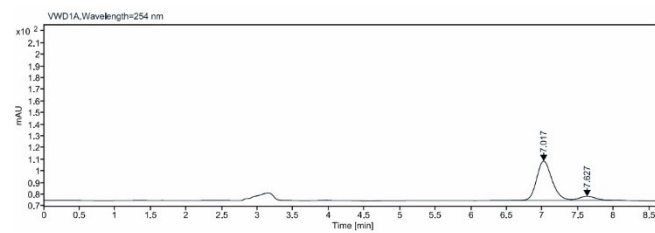


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
7.075	0,224	444,15	30,55	49,95
7,684	0,244	445,12	28,29	50,05
Sum		889,27		

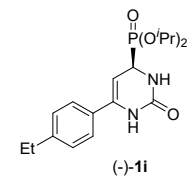


Data file: FM-5-34-9-V-2020-11-01 20-26-13+08-00,dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-9 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-11-01 20:27:45+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

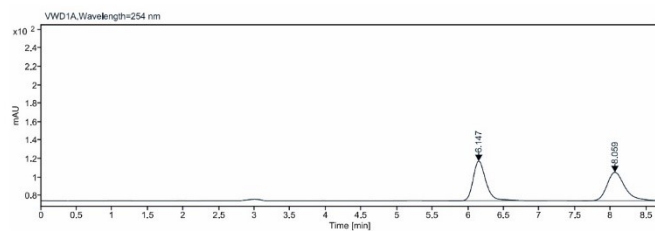


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
7,017	0,844	503,17	33,70	90,38
7,627	0,560	53,57	3,45	9,62
Sum		556,74		

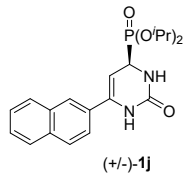


Data file: FM-5-34-8(+/-)-V-2020-10-30 19-43-05+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-8(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-30 19:43:19+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

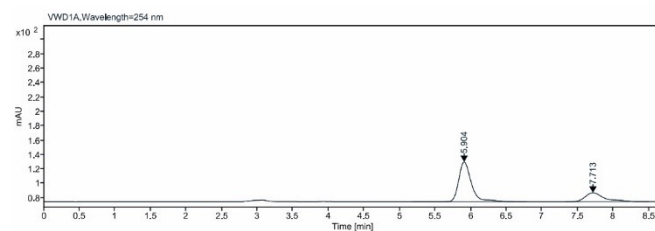


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
6.147	1.385	538.38	43.11	49.78
8.059	1.800	543.24	30.90	50.22
Sum		1081.62		

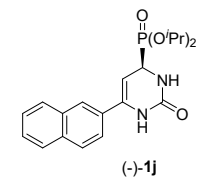


Data file: FM-5-34-8-V-2020-10-30 17-31-47+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-8 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-10-30 17:32:01+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

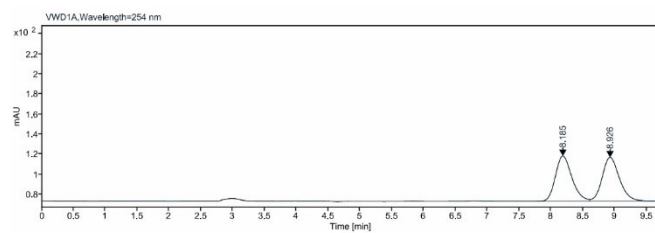


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5.904	1.596	689.70	55.55	74.45
7.713	1.172	236.67	12.55	25.55
Sum		926.37		

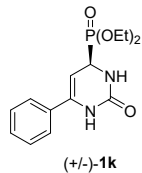


Data file: FM-5-34-16(+)-V-2020-11-03 10-11-19+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-16(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-11-03 10:13:52+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm

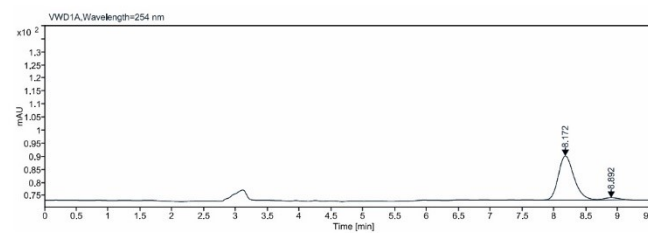


Signal: VWD1A, Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
8.185	0,839	807,43	45,02	49,75
8,926	1,017	815,62	43,59	50,25
Sum		1623,06		

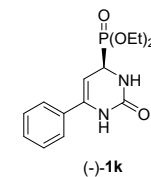


Data file: FM-5-34-16-V-2020-11-03 11-19-14+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-16 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-11-03 11:20:28+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm

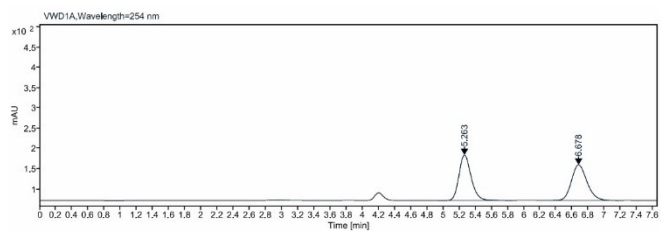


Signal: VWD1A, Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
8.172	0,881	290,13	16,91	95,04
8,892	0,261	15,13	0,88	4,96
Sum		305,26		

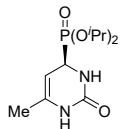


Data file: FM-5-34-17(+)-V-2020-11-04 10-27-28+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-17(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-11-04 10:28:14+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm



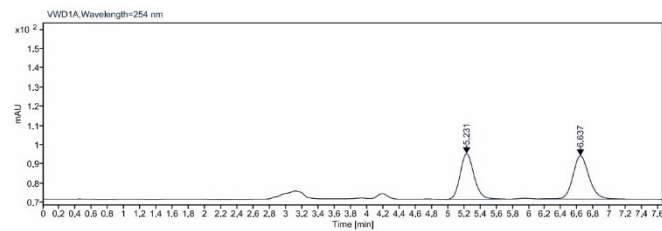
Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5.263	0.913	1184.38	112.57	50.10
6.678	1.025	1179.44	88.14	49.90
Sum		2363.82		



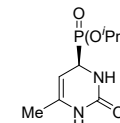
(+/-)-11

Data file: FM-5-34-17-V-2020-11-04 10-42-23+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-17 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-11-04 10:42:32+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm



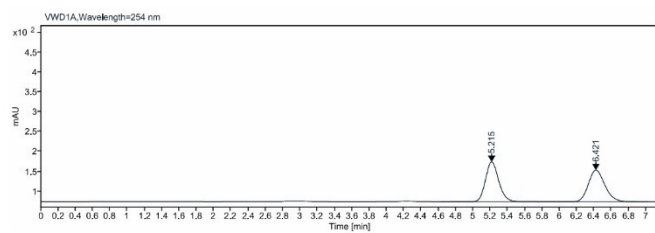
Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5.231	0.795	281.72	23.70	47.65
6.637	1.123	309.52	22.46	52.35
Sum		591.24		



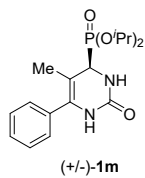
(-)-11

Data file: FM-5-34-14(+)-V-2020-11-02 17-01-18+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-14(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-11-02 17:01:29+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

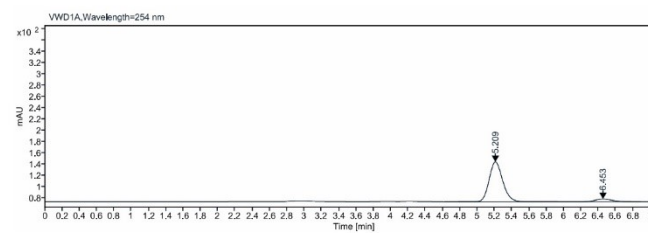


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5.215	1,483	1089,61	100,35	50,67
6.421	0,926	1060,73	79,57	49,33
Sum		2150,34		

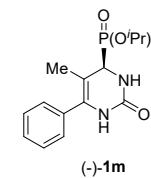


Data file: FM-5-34-14-V-2020-11-02 17-19-03+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-14 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-11-02 17:21:09+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

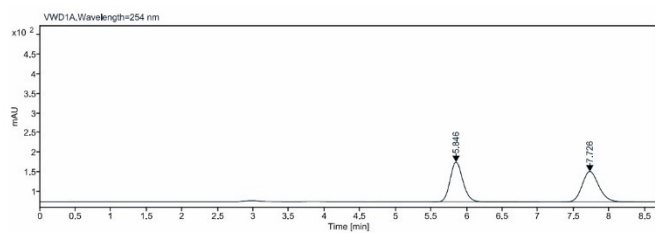


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5.209	1,502	784,30	70,70	91,91
6.453	0,767	69,02	5,15	8,09
Sum		853,33		

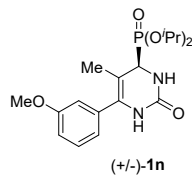


Data file: FM-5-34-15(+)-V-2020-11-03 09-39-02+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-15(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-11-03 09:45:25+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

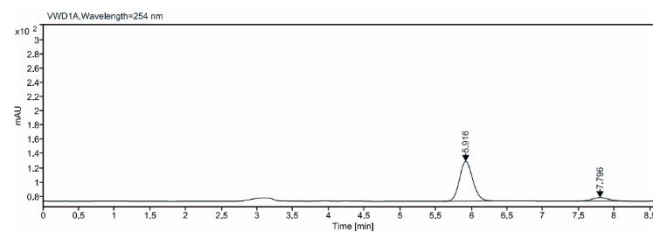


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5.846	1.513	1280,86	101,73	50,12
7.726	1,315	1274,52	78,00	49,88
Sum		2555,37		

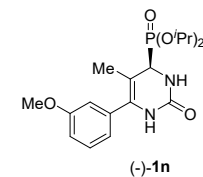


Data file: FM-5-34-15-V-2020-11-03 09-56-40+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-15 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-11-03 09:56:07+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 oC, 254 nm

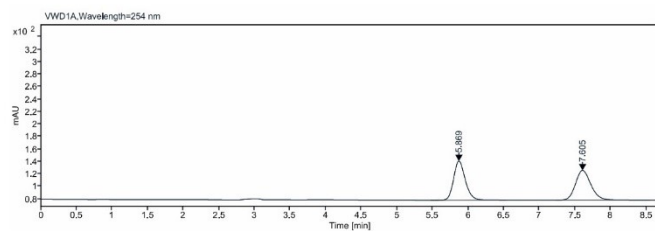


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5.916	0,848	723,74	55,87	90,08
7.796	0,252	79,69	4,89	9,92
Sum		803,43		

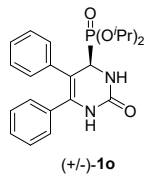


Data file: FM-5-34-13(+)-V-2020-11-02 15-58-37+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-13(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-11-02 15:58:47+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm

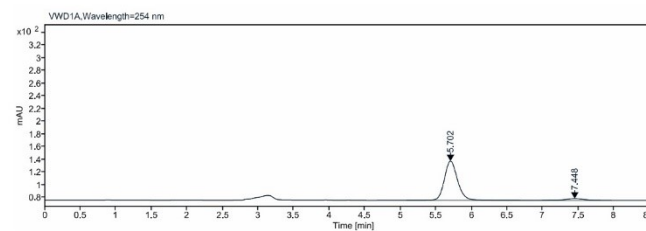


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5,869	1,062	714,51	62,72	50,02
7,605	1,315	714,03	47,62	49,98
Sum		1428,54		

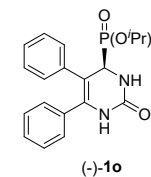


Data file: FM-5-34-13-V-2020-11-02 16-14-13+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-34-13 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2020-11-02 16:16:27+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm

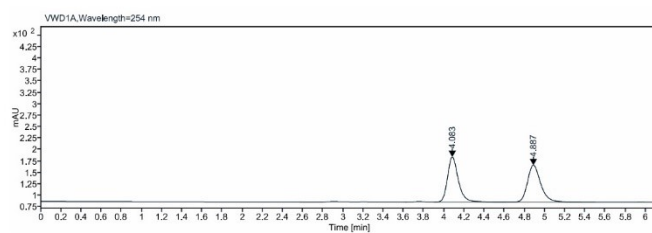


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
5,702	1,813	789,50	61,78	93,89
7,448	0,272	51,40	2,81	6,11
Sum		840,89		

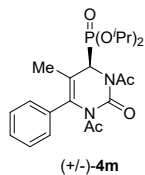


Data file: FM-5-56-V-2021-01-20 20-56-01+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-56 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2021-01-20 20:56:16+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm

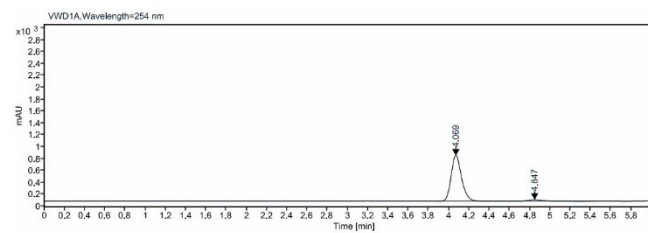


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
4,083	0,654	730,62	98,50	49,80
4,887	0,939	736,47	80,84	50,20
Sum		1467,09		

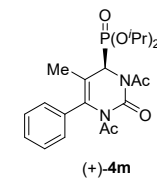


Data file: FM-5-57-V-2021-01-22 10-22-31+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-57 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2021-01-22 10:37:17+08:00
Acq. method: FM-4-41.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm

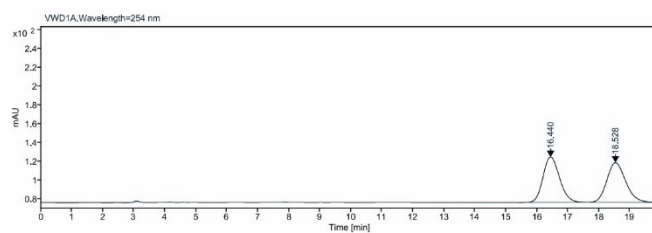


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
4,069	0,108	5491,10	770,44	96,17
4,847	0,127	218,76	26,54	3,83
Sum		5709,86		

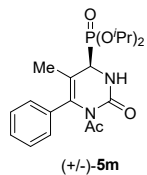


Data file: FM-5-65(+/-)-V-2021-02-02 10-35-10+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-65(+/-) **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2021-02-02 10:40:26+08:00
Acq. method: FM-5-65.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 90/10, 1.0 mL/min, 30 °C, 254 nm

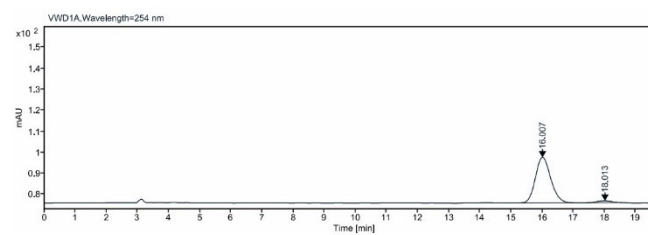


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
16,440	2,225	1794,88	48,41	50,06
18,528	2,693	1790,30	42,31	49,94
Sum		3585,18		

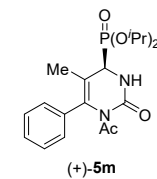


Data file: FM-5-66-V-2021-02-02 11-03-54+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-5-66 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2021-02-02 11:04:21+08:00
Acq. method: FM-5-65.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 90/10, 1.0 mL/min, 30 °C, 254 nm

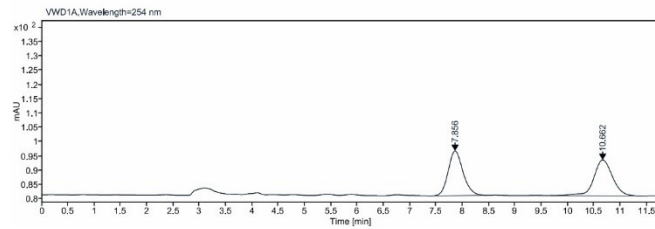


Signal: VWD1A,Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
16,007	0,528	740,92	21,63	95,91
18,013	0,470	31,58	0,88	4,09
Sum		772,50		

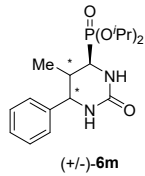


Data file: FM-6-11-V-2021-04-13 20-03-02+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-6-11 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2021-04-13 20:03:41+08:00
Acq. method: FM-6-10.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm

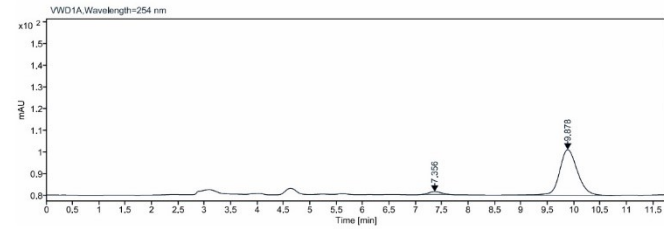


Signal: VWD1A, Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
7.856	1,069	306,59	15,60	49,75
10,662	1,737	309,68	12,53	50,25
Sum		616,27		



Data file: FM-6-11-V-2021-04-13 20-56-45+08-00.dx
Sequence Name: SingleSample **Project Name:** 1260
Sample name: FM-6-11 **Operator:** SYSTEM
Instrument: Ic1260 **Injection date:** 2021-04-13 20:59:20+08:00
Acq. method: FM-6-10.amx **Type:** Sample
Processing method: GC_LC Area Percent_DefaultMethod.pmx
Sample Info: AD, Hexane/i-PrOH = 80/20, 1.0 mL/min, 30 °C, 254 nm



Signal: VWD1A, Wavelength=254 nm

RT [min]	Peak Width Base	Area	Height	Area%
7,356	0,250	20,15	1,28	3,96
9,878	1,793	488,73	21,00	96,04
Sum		508,88		

