Electronic Supplementary Material (ESI) for ChemComm.

Supporting Information

Iridium-Catalyzed Chemoselective Asymmetric Hydrogenation of Conjugated Enones with Ferrocene-Based Multidentate Phosphine Ligands

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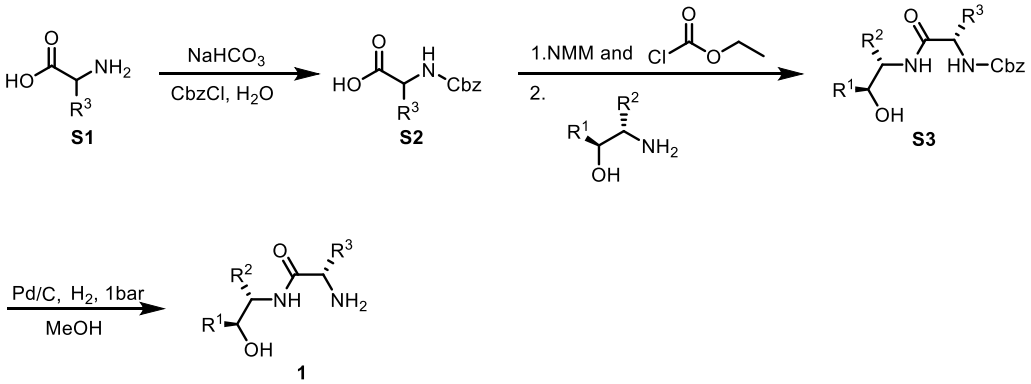
Table of contents

I. General remark

All reactions and manipulations which are sensitive to moisture or air were performed in an argon-filled glovebox or using standard schlenk techniques. Hydrogen gas (99.999%) was purchased from Shanghai Regulator Factory Co., Ltd. Anhydrous MeOH, EtOH, *i*-PrOH, DCM, 1,4-dioxane, *n*-hexane and $[Ir(COD)Cl]_2$ were purchased from J&K. Anhydrous THF, Et_2O were distilled from sodium benzophenoneketyl. Solvents were transferred by syringe. Melting point (m.p.) was determined by RY-1 Melting Point Apparatus. ^1H NMR (400 MHz), ^{13}C NMR (101 MHz) and ^{31}P NMR (162 MHz) spectra were recorded on a Bruker ADVANCE III spectrometer with $CDCl_3$ as the solvent and tetramethylsilane (TMS) as the internal standard. Chemical shifts are reported upfield to TMS (0.00 ppm) for ^1H NMR and relative to $CDCl_3$ (77.0 ppm) for ^{13}C NMR. HRMS were recorded on APEXII and ZAB-HS spectrometer. HPLC analyses were performed using an Agilent 1260 Series instrument. Column Chromatography was performed with silica gel Merck 60 (300 - 400 mesh).

II. Preparation of ferrocene-based tetradentate phosphine ligands

Procedure for the synthesis of compound 1[1]



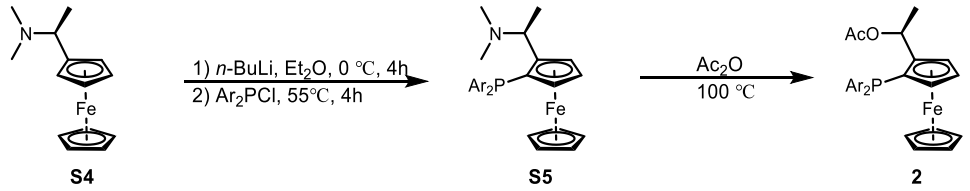
For the preparation of **S2**: In a 250 mL reaction flask, add sodium bicarbonate (15.00 mmol, 1.50 eq.), 60 mL water, add amino acid **S1** (10.00 mmol, 1.00 eq.) under ice bath stirring, then add benzyl chloroformate (11.00 mmol, 1.10 eq.) dropwise, and slowly increase after the addition. Stir for 4h after reaching room temperature. The residue is in an ice bath, adjusted to

pH=1 with hydrochloric acid, stirred for 15 minutes, filtered to obtain a white solid, dried in a vacuum drying oven to remove water, get white solid **S2**, the yield is 90% - 94%.

S2 (4.78 mmol, 1.00 eq.) was taken in DCM (40 mL) and a few drops of MeOH was added to dissolve the amino acid completely. The solution was cooled in an ice bath and N-methylmorpholine (5.23 mmol, 1.20 eq.) and ethyl chloroformate (5.23 mmol, 1.20 eq.) were added consecutively and stirred at 0 °C for 1 h. Glycinol (5.23 mmol, 1.2 eq., dissolved in 8 mL of DCM) was then added dropwise and the reaction mixture gradually warmed to room temperature. After stirring for 10 h, the reaction mixture was washed with 1 M hydrochloric acid. Combined organics were dried over anhydrous Na_2SO_4, filtered, concentrated and purified by flash chromatography to give the product **S3** as a white solid in 50% - 72% yield.

To a solution of **S3** (2.00 mmol) in 30 mL of anhydrous MeOH, 0.10 g of 10% palladium on activated charcoal was added and the flask purged with hydrogen gas five times. The reaction mixture was then allowed to stir at room temperature under an atmosphere of hydrogen. After 5 h, the mixture was filtered through a pad of celite and washed with MeOH. After concentrating the filtrate, product **1** was obtained as a solid in near quantitative yield.

Procedure for the synthesis of compound 2[2]



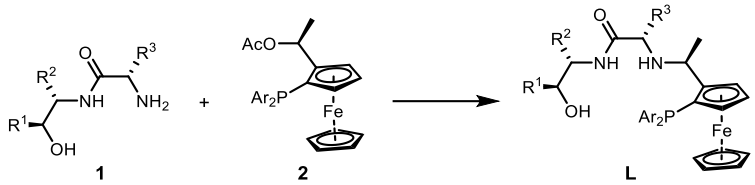
S4 **S5** **2**

To a solution of (S)-Ugi's amine **S4** (10.00 mmol, 1.00 eq.) in anhydrous Et_2O (20 mL) was added 2.4 M *n*-BuLi solution in *n*-hexane (11.20 mmol, 1.12 eq.) at 0 ℃. After addition was completed, the mixture was warmed to room temperature and stirred for 4 h. The mixture was then 55 ℃, Then Ar_2PCl (12 mmol, 1.20 eq.) was added dropwise to the reaction solution under reflux, and the reflux was continued for about 4 h, monitored by TLC. After the reaction was completed, it was quenched by adding water, and the organic phase was extracted with ether. The organic phase was extracted with anhydrous Na_2SO_4. Filter and dry to obtain a red oily liquid and recrystallize with a certain amount of EtOH to obtain the product **S5** (Ar = Ph,

60% yield; Ar = 3,5-(*t*-Bu)$_2$C$_6$H$_3$, 55% yield).

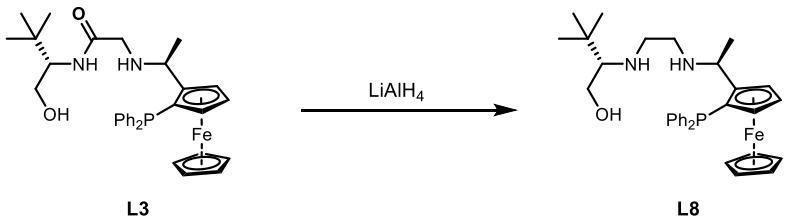
A solution of aminophosphine **S5** (1.00 mmol) in acetic anhydride (2 mL) was heated to 90 - 100 ℃ (Ar = Ph, 100 ℃; Ar = 3,5-(*t*-Bu)$_2$C$_6$H$_3$, 90 ℃) for 1 - 2 h (monitored by TLC). After the starting material disappeared, the volatiles were removed in vacuo and then toluene (2 mL) was added, concentrated. The operation was repeated three times to remove excess acetic anhydride. To the residue, a small amount of anhydrous MeOH was added and then the solvent was removed by high vacuum, the obtained yellow solid (> 95% yield) was pure enough for next step.

Procedure for the synthesis of L1 - L7 and L9 - L12



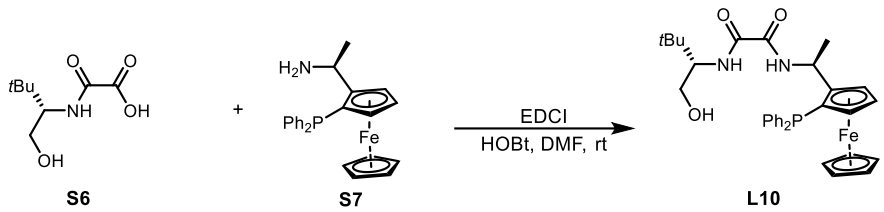
A mixture of compound **2** (0.50 mmol, 1.0 eq.), amino acid **1** (1.00 mmol, 2.0 eq.) and in dry Acetonitrile (2 mL) was stirred for 10 min at room temperature under nitrogen. If the solubility is not good, a few drops of MeOH was added to dissolve the amino acid **1** completely. Then the mixture was heated at 100 ℃ overnight. The solvent was evaporated in vacuum to afford the crude product. After chromatography on basic alumina column with DCM/MeOH (100:1 to 50:1) as eluent, the corresponding ligands were obtained as orange solids **L** in 35% - 92% yields.

Procedure for the synthesis of L8[3]

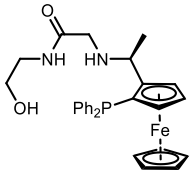


To a suspension of $LiAlH_4$ (2.60 mmol, 2.00 eq.) in Et_2O (5 mL) was added compound **L3** (1.30 mmol, 1.00 eq.). The mixture was stirred at 70 ℃ for 3 h. The reaction was quenched with H_2O (1 mL), dried over Na_2SO_4, filtered, concentrated and purified by flash chromatography to give the product as a yellow solid **L8** in 65% yield.

Procedure for the synthesis of L10

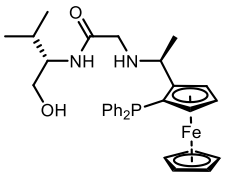


At 0 °C, **S6** (1.00 mmol, 1.00 eq.) was added in DCM (10 ml), EDCI(1.20 mmol, 1.20 eq.) and HOBt (1.50 mmol, 1.50 eq.) were added and stirred for 1 hour, then DIEA(1.50 mmol, 1.50 eq.) was added, **S7**(1.00 mmol, 1.00 eq.) was added, stirred at room temperature overnight. The reaction was quenched with H_2O (3 mL), dried over Na_2SO_4, filtered, concentrated and purified by flash chromatography to give the product as a yellow solid **L10** in 40% yield.



L1

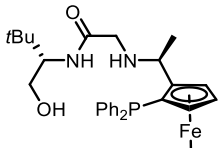
Yellow solid, 344.6 mg, 67% yield. m.p. 44 - 48 ℃, $[\alpha]_D^{25}$ = +299 (c = 0.1, CH_2Cl_2); ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.57 - 7.50 (m, 2H), 7.41 - 7.36 (m, 3H), 7.26 - 7.18 (m, 5H), 4.47 - 4.42 (m, 1H), 4.35 - 4.30 (m, 1H), 4.17 - 4.11 (m, 1H), 3.97 (s, 5H), 3.88 - 3.84 (m, 1H), 3.55 - 3.46 (m, 2H), 3.10 - 3.01 (m, 4H), 1.43 (d, *J* = 6.6 Hz, 3H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 174.2, 140.6 (d, *J* = 9.4 Hz), 137.1, 135.1 (d, *J* = 21.3 Hz), 132.4 (d, *J* = 17.8 Hz), 129.3, 128.4 (d, *J* = 5.8 Hz), 128.3, 128.2, 96.6 (d, *J* = 24.2 Hz), 74.9, 71.8 (d, *J* = 4.6 Hz), 69.7, 69.3, 69.2, 63.2, 51.9 (d, *J* = 8.1 Hz), 49.1, 42.5, 18.9. ^{31}P NMR (162 MHz, Chloroform-*d*) δ -24.20. HRMS(ESI) calcd. for $C_{28}H_{32}FeN_2O_2P[M+H]^+$: 515.1545, found: 515.1548



L2

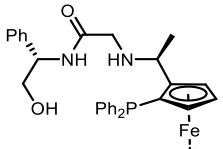
Yellow solid, 283.8 mg, 51% yield, m.p. 46 - 52 ℃ , $[\alpha]_D^{25}$ = +240 (c = 0.1, CH_2Cl_2); ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.57 - 7.49 (m, 2H), 7.44 - 7.35 (m, 4H), 7.27 - 7.18 (m,

4H), 4.47 - 4.41 (m, 1H), 4.35 - 4.29 (m, 1H), 4.22 - 4.14 (m, 1H), 3.99 (s, 5H), 3.86 - 3.80 (m, 1H), 3.65 - 3.58 (m, 1H), 3.54 - 3.40 (m, 2H), 2.89 (dd, 2H), 1.88 - 1.78 (m, 1H), 1.40 (d, J = 6.7 Hz, 3H), 0.90 (d, J = 6.8 Hz, 3H), 0.86 (d, J = 6.8 Hz, 3H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 173.8, 140.0 (d, J = 9.5 Hz), 136.9 (d, J = 8.4 Hz), 134.9 (d, J = 21.1 Hz), 132.5 (d, J = 18.5 Hz), 129.3, 128.5 (d, J = 2.2 Hz), 128.4, 128.2 (d, J = 8.0 Hz), 96.5 (d, J = 23.7 Hz), 75.2(d, J = 7.9 Hz), 71.7 (d, J = 4.2 Hz), 69.7, 69.5 (d, J = 4.2 Hz), 69.2, 64.6, 57.9, 51.6 (d, J = 8.2 Hz), 48.5, 28.8, 19.5, 19.1, 19.0.^{31}P NMR (162 MHz, Chloroform-*d*) δ -24.72. HRMS(ESI) calcd. for $C_{31}H_{38}O_2N_2FeP[M+H]^+$: 557.2015, found: 557.2020.



L3

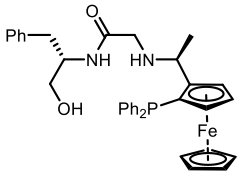
Yellow solid, 399.3 mg, 70% yield. m.p. 65 - 72 ℃, $[\alpha]_D^{25}$ = +237 (c = 0.1, CH_2Cl_2); ^{1}H NMR (400 MHz, Chloroform-d) δ 7.58 - 7.45 (m, 3H), 7.43 - 7.33 (m, 3H), 7.31 - 7.17 (m, 4H), 4.47 - 4.41 (m, 1H), 4.35 - 4.28 (m, 1H), 4.24 - 4.15 (m, 1H), 4.00 (s, 5H), 3.85 - 3.79 (m, 1H), 3.81 - 3.73 (m, 1H), 3.70 - 3.59 (m, 1H), 3.45 - 3.31 (m, 1H), 2.95 (d, J = 17.5 Hz, 1H), 2.76 (d, J = 17.5 Hz, 1H), 1.41 (d, J = 6.7 Hz, 3H), 0.91 (s, 9H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 173.9, 139.7 (d, J = 9.5 Hz), 136.7 (d, J = 8.7 Hz), 134.7 (d, J = 20.9 Hz), 132.5 (d, J = 18.9 Hz), 129.2, 128.6, 128.4 (d, J = 6.4 Hz), 128.1 (d, J = 7.6 Hz), 96.2 (d, J = 23.6 Hz), 75.1 (d, J = 7.8 Hz), 71.5 (d, J = 4.2 Hz), 69.6, 69.5 (d, J = 4.2 Hz), 69.1, 63.5, 60.1, 51.4 (d, J = 8.5 Hz), 48.0, 33.3, 26.9, 19.2. ^{31}P NMR (162 MHz, Chloroform-d) δ -25.08; HRMS(ESI) calcd. for $C_{32}H_{40}FeN_2O_2P[M+H]^+$: 571.2171, found: 571.2174



L4

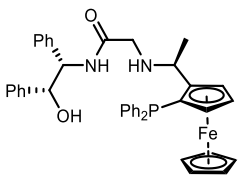
Yellow solid, 395.6 mg, 67% yield, m.p. 70 - 74 ℃, $[\alpha]_D^{25}$ = +207 (c = 0.1, CH_2Cl_2); ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.85 (d, J = 7.2 Hz, 1H), 7.56 - 7.46 (m, 2H), 7.41 - 7.27

(m, 6H), 7.28 - 7.17 (m, 6H), 4.95 - 4.87 (m, 1H), 4.44 - 4.39 (m, 1H), 4.33 - 4.28 (m, 1H), 4.21 - 4.11 (m, 1H), 3.99 (s, 5H), 3.84 - 3.79 (m, 1H), 3.76 (d, *J* = 5.7 Hz, 2H), 3.19 - 2.52 (m, 2H), 1.35 (d, *J* = 6.7 Hz, 3H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 173.4, 139.9 (d, *J* = 9.4 Hz), 138.9, 136.8 (d, *J* = 8.6 Hz), 134.8 (d, *J* = 20.9 Hz), 132.6 (d, *J* = 18.7 Hz), 129.3, 128.8, 128.6 (d, *J* = 6.9 Hz), 128.5, 128.2 (d, *J* = 7.8 Hz), 127.9, 126.9, 96.3 (d, *J* = 23.6 Hz), 75.2 (d, *J* = 7.5 Hz), 71.7 (d, *J* = 4.4 Hz), 69.7, 69.6 (d, *J* = 4.3 Hz), 69.2, 67.1, 56.4, 51.6 (d, *J* = 8.1 Hz), 48.5, 19.0.^{31}P NMR (162 MHz, Chloroform-*d*) δ -24.77. HRMS(ESI) calcd. for $C_{34}H_{36}FeN_2O_2P[M+H]^+$: 591.1853, found: 591.1862.



L5

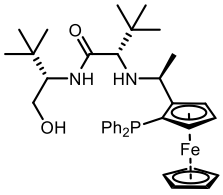
Yellow solid, 308.3 mg, 51% yield, m.p. 66 - 72 ℃, $[\alpha]_D^{25}$ = +214 (c = 0.1, CH_2Cl_2); ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.56 - 7.49 (m, 2H), 7.42 - 7.34 (m, 4H), 7.31 - 7.13 (m, 9H), 4.41 - 4.36 (m, 1H), 4.33 - 4.28 (m, 1H), 4.13 - 4.06 (m, 1H), 3.97 (s, 5H), 3.90 - 3.85 (m, 1H), 3.85 - 3.80 (m, 1H), 3.61 - 3.55 (m, 1H), 3.48 - 3.41 (m, 1H), 2.92 - 2.67 (m, 4H), 1.23 (d, *J* = 6.7 Hz, 3H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 173.5, 140.1 (d, *J* = 9.4 Hz), 137.8, 136.9 (d, *J* = 8.0 Hz), 134.9 (d, *J* = 21.0 Hz), 132.5 (d, *J* = 18.4 Hz), 129.3, 129.2, 128.6, 128.5, 128.4, 128.2 (d, *J* = 7.8 Hz), 126.6, 96.4 (d, *J* = 23.9 Hz), 75.1 (d, *J* = 7.7 Hz), 71.7 (d, *J* = 4.0 Hz), 69.7, 69.5(d, *J* = 4.4 Hz), 69.2, 65.2, 53.7, 51.4 (d, *J* = 8.3 Hz), 48.3, 36.8, 18.7.^{31}P NMR (162 MHz, Chloroform-*d*) δ -24.66. HRMS(ESI) calcd. for $C_{35}H_{38}FeN_2O_2P[M+H]^+$: 605.2015, found: 605.2022.



L6

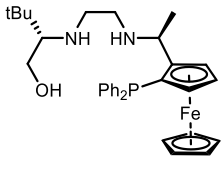
Yellow solid, 266.6 mg, 40% yield. m.p. 79 - 83 ℃, $[\alpha]_D^{25}$ = +176 (c = 0.1, CH_2Cl_2); ^{1}H NMR (400 MHz, Chloroform-*d*) δ 8.02 (d, *J* = 8.4 Hz, 1H), 7.56 - 7.51 (m, 2H), 7.40 - 7.37

(m, 3H), 7.24 - 7.15 (m, 11H), 7.03 - 7.00 (m, 2H), 6.97 - 6.93 (m, 2H), 5.18 - 5.09 (m, 1H), 4.95 - 4.89 (m, 1H), 4.40 (s, 1H), 4.32 - 4.29 (m, 1H), 4.14 - 4.08 (m, 1H), 3.99 (s, 5H), 3.83 - 3.80 (m, 1H), 2.90 (d, *J* = 17.4 Hz, 1H), 2.73 (d, *J* = 17.4 Hz, 1H), 1.27 (d, *J* = 6.7 Hz, 3H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 172.3, 139.9, 139.7 (d, *J* = 9.5 Hz), 137.5, 136.7 (d, *J* = 8.5 Hz), 134.7 (d, *J* = 20.9 Hz), 132.5 (d, *J* = 18.8 Hz), 129.2, 128.5, 128.5 (d, *J* = 6.3 Hz), 128.2, 128.1, 128.0, 127.9, 127.7, 127.5 (d, *J* = 6.1 Hz), 126.7, 96.2 (d, *J* = 23.5 Hz), 75.0 (d, *J* = 7.8 Hz), 71.5 (d, *J* = 4.1 Hz), 70.5, 69.7, 69.6 (d, *J* = 4.2 Hz), 69.2, 59.3, 51.6 (d, *J* = 8.3 Hz), 48.2, 19.1. ^{31}P NMR (162 MHz, Chloroform-*d*) δ -24.80. HRMS(ESI) calcd. for $C_{40}H_{40}FeN_2O_2P[M+H]^+$: 667.2171, found: 667.2178.



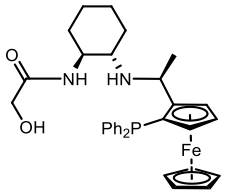
L7

Yellow solid, 401.0 mg, 64% yield. m.p. 46 - 50 °C, $[\alpha]_D^{25}$ = +216 (c = 0.1, CH_2Cl_2); ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.83 - 7.74 (m, 1H), 7.57 - 7.53 (m, 2H), 7.41 - 7.37 (m, 3H), 7.26 - 7.15 (m, 5H), 4.49 - 4.45 (m, 1H), 4.39 - 4.35 (m, 1H), 4.07 - 4.02 (m, 1H), 3.95 (s, 5H), 3.91 - 3.86 (m, 2H), 3.66 - 3.62 (m, 1H), 3.56 - 3.52 (m, 1H), 2.78 (s, 1H), 1.46 (d, *J* = 6.6 Hz, 3H), 0.94 (s, 9H), 0.61 (s, 9H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 176.7, 140.6 (d, *J* = 8.7 Hz), 137.3 (d, *J* = 8.3 Hz), 135.4 (d, *J* = 21.9 Hz), 132.2 (d, *J* = 17.2 Hz), 129.4, 128.4 (d, *J* = 5.7 Hz), 128.1 (d, *J* = 8.2 Hz), 128.0, 99.0 (d, *J* = 26.5 Hz), 74.2 (d, *J* = 8.8 Hz), 71.1 (d, *J* = 4.4 Hz), 70.9, 69.8, 69.6, 69.1 (d, *J* = 4.7 Hz), 65.0, 61.1, 52.5 (d, *J* = 8.6 Hz), 33.9, 33.0, 27.1, 27.0, 19.7. ^{31}P NMR (162 MHz, Chloroform-*d*) δ -26.05. HRMS(ESI) calcd. for $C_{36}H_{48}FeN_2O_2P[M+H]^+$: 627.2797, found: 627.2806.



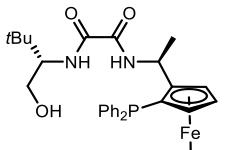
L8

Yellow solid, 445.2 mg, 80% yield. m.p. 37 - 40 ℃, $[\alpha]_D^{25}$ = +312 (c = 0.1, CH_2Cl_2); ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.59 - 7.48 (m, 2H), 7.41 - 7.28 (m, 8H), 4.52 - 4.46 (m, 1H), 4.32 - 4.26 (m, 1H), 4.04 (s, 6H), 3.80 - 3.74 (m, 1H), 3.57 - 3.49 (m, 1H), 3.16 - 3.05 (m, 1H), 2.53 - 2.42 (m, 1H), 2.23 - 2.16 (m, 1H), 2.15 - 2.08 (m, 2H), 2.03 - 1.99 (m, 1H), 1.47 (d, *J* = 6.5 Hz, 3H), 0.79 (s, 9H).^{13}C NMR (101 MHz, Chloroform-*d*) δ 139.8 (d, *J* = 10.2 Hz), 136.6 (d, *J* = 8.8 Hz), 134.7 (d, *J* = 20.8 Hz), 132.9 (d, *J* = 19.6 Hz), 129.1, 128.7, 128.5 (d, *J* = 6.6 Hz), 128.2 (d, *J* = 7.8 Hz), 97.1 (d, *J* = 23.7 Hz), 75.2 (d, *J* = 6.5 Hz), 71.2 (d, *J* = 4.1 Hz), 69.7, 69.4 (d, *J* = 4.0 Hz), 69.1, 67.4, 61.6, 51.4 (d, *J* = 9.8 Hz), 49.3, 46.6, 34.6, 27.0, 18.9.^{31}P NMR (162 MHz, Chloroform-d) δ -25.53. HRMS(ESI) calcd. for $C_{32}H_{42}FeN_2OP[M+H]^+$: 557.2379, found: 557.2389.



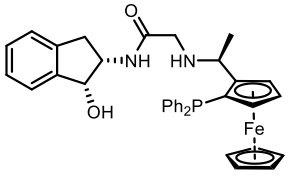
L9

Yellow solid, 227.3 mg, 40% yield. m.p. 136 - 142 ℃, $[\alpha]_D^{25}$ = +126 (c = 0.1, CH_2Cl_2); ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.55 - 7.47 (m, 2H), 7.40 - 7.20 (m, 8H), 6.61 (s, 1H), 4.53 - 4.48 (m, 1H), 4.29 (s, 1H), 4.24 - 4.14 (m, 1H), 4.03 (s, 5H), 3.84 - 3.79 (m, 2H), 3.75 - 3.70 (m, 1H), 2.69 - 2.58 (m, 1H), 2.36 - 2.26 (m, 1H), 2.13 - 1.98 (m, 2H), 1.62 - 1.47 (m, 2H), 1.43 (d, *J* = 6.4 Hz, 3H), 1.12 - 0.98 (m, 2H), 1.00 - 0.91 (m, 1H), 0.47 - 0.28 (m, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 171.8, 139.4 (d, *J* = 9.5 Hz), 136.3 (d, *J* = 8.3 Hz), 134.9 (d, *J* = 21.0 Hz), 132.7 (d, *J* = 19.1 Hz), 129.2, 129.0, 128.7 (d, *J* = 6.5 Hz), 128.1 (d, *J* = 7.9 Hz), 97.2 (d, *J* = 23.6 Hz), 74.7 (d, *J* = 6.3 Hz), 71.4 (d, *J* = 4.3 Hz), 69.6, 69.5 (d, *J* = 4.0 Hz), 69.3, 61.9, 56.8, 53.4, 46.8 (d, *J* = 9.7 Hz), 32.1, 30.2, 24.6, 24.2, 19.1. ^{31}P NMR (162 MHz,Chloroform-*d*) δ -25.09. HRMS(ESI) calcd. for $C_{32}H_{38}FeN_2O_2P[M+H]^+$: 569.2015, found: 569.2018.



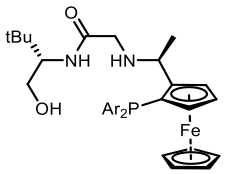
L10

Yellow solid, 233.7 mg, 40% yield. m.p. 90 - 93 ℃, $[\alpha]_D^{25}$ = +399 (c = 0.1, CH_2Cl_2); ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.89 (s, 1H), 7.55 (s, 2H), 7.42 - 7.34 (m, 4H), 7.22 - 7.18 (m, 3H), 7.15 - 7.09 (m, 2H), 5.25 - 5.14 (m, 1H), 4.51 - 4.48 (m, 1H), 4.35 - 4.31 (m, 1H), 4.00 (s, 5H), 3.85 - 3.82 (m, 1H), 3.80 - 3.74 (m, 1H), 3.64 - 3.50 (m, 2H), 1.50 (d, *J* = 6.8 Hz, 3H), 0.94 (s, 9H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 160.4, 157.2, 139.4 (d, *J* = 8.5 Hz), 136.9 (d, *J* = 7.6 Hz), 135.2 (d, *J* = 21.3 Hz), 132.2 (d, *J* = 17.9 Hz), 129.2, 128.1 (d, *J* = 8.1 Hz), 127.9 (d, *J* = 6.1 Hz), 127.8, 94.7 (d, *J* = 25.0 Hz), 74.8 (d, *J* = 10.6 Hz), 72.1 (d, *J* = 4.4 Hz), 69.9 (d, *J* = 4.4 Hz), 69.8, 69.5, 62.6, 60.8, 44.8 (d, *J* = 6.4 Hz), 33.6, 26.8, 21.6. ^{31}P NMR (162 MHz, Chloroform-*d*) δ -24.47. HRMS(ESI) calcd. for $C_{32}H_{38}FeN_2O_3P[M+H]^+$: 585.1964, found: 585.1974.



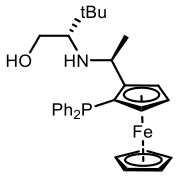
L11

Yellow solid, 210.8 mg, 35% yield. m.p. 76 - 79 ℃, $[\alpha]_D^{25}$ = +268 (c = 0.1, CH_2Cl_2); ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.78 - 7.71 (m, 1H), 7.48 - 7.42 (m, 2H), 7.38 - 7.34 (m, 3H), 7.25 - 7.11 (m, 9H), 5.31 - 5.24 (m, 1H), 4.55 - 4.48 (m, 1H), 4.45 - 4.42 (m, 1H), 4.31 - 4.28 (m, 1H), 4.21 - 4.15 (m, 1H), 3.97 (s, 5H), 3.82 - 3.79 (m, 1H), 3.14 - 3.05 (m, 2H), 2.93 - 2.84 (m, 2H), 1.41 (d, *J* = 6.8 Hz, 3H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 173.2, 140.4, 140.2, 139.8 (d, *J* = 9.6 Hz), 136.8 (d, *J* = 8.6 Hz), 134.8 (d, *J* = 21.2 Hz), 132.5 (d, *J* = 18.7 Hz), 129.1, 128.4, 128.3, 128.1 (d, *J* = 1.4 Hz), 128.0, 127.0, 125.3, 124.6, 96.2 (d, *J* = 23.8 Hz), 75.0 (d, *J* = 8.0 Hz), 73.7, 71.5 (d, *J* = 4.1 Hz), 70.4, 69.6, 69.1, 57.1, 51.5 (d, *J* = 8.1 Hz), 48.4, 39.5, 19.1. ^{31}P NMR (162 MHz, Chloroform-*d*) δ -25.08. HRMS(ESI) calcd. for $C_{35}H_{36}FeN_2O_2P[M+H]^+$: 603.1858, found: 603.1868.



Ar = 3,5-*t*Bu-C_6H_3 **L12**

Yellow solid, 731.3 mg, 92% yield. m.p. 73 - 76 ℃, $[\alpha]_D^{25}$ = +194 (c = 0.1, CH_2Cl_2); ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.75 - 7.69 (m, 1H), 7.44 - 7.36 (m, 3H), 7.33 - 7.29 (m, 1H), 7.24 - 7.18 (m, 2H), 4.39 - 4.35 (m, 1H), 4.30 - 4.23 (m, 1H), 4.15 - 4.09 (m, 1H), 4.06 (s, 5H), 3.83 - 3.77 (m, 1H), 3.73 - 3.70 (m, 1H), 3.61 - 3.56 (m, 1H), 3.47 - 3.39 (m, 1H), 2.71 (d, *J* = 17.8 Hz, 1H), 2.55 (d, *J* = 17.8 Hz, 1H), 1.35 (d, *J* = 6.9 Hz, 3H), 1.30 (s, 18H), 1.22 (s, 18H), 0.90 (s, 9H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 174.5, 150.8 (d, *J* = 6.9 Hz), 150.3 (d, *J* = 7.4 Hz), 138.2 (d, *J* = 8.0 Hz), 135.0 (d, *J* = 7.4 Hz), 128.8 (d, *J* = 21.0 Hz), 127.7 (d, *J* = 20.8 Hz), 123.0, 122.8, 95.5 (d, *J* = 21.6 Hz), 71.3 (d, *J* = 3.9 Hz), 69.7, 69.1 (d, *J* = 3.7 Hz), 68.6, 64.2, 60.6, 52.0 (d, *J* = 8.7 Hz), 48.7, 34.9 (d, *J* = 6.7 Hz), 33.3, 31.5, 31.4, 26.9, 19.1. ^{31}P NMR (162 MHz, Chloroform-d) δ -23.87. HRMS(ESI) calcd. for $C_{48}H_{72}FeN_2O_2P[M+H]^+$: 795.4675, found: 795.4685.



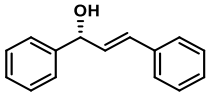
L13

Yellow solid, 400.4 mg, 78% yield. m.p. 49 - 52 ℃, $[\alpha]_D^{25}$ = +240 (c = 0.1, CH_2Cl_2); ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.56 – 7.51 (m, 2H), 7.39 – 7.35 (m, 3H), 7.25 – 7.19 (m, 5H), 4.50 – 4.45 (m, 1H), 4.37 – 4.32 (m, 1H), 4.27 – 4.20 (m, 1H), 3.99 (s, 5H), 3.87 – 3.80 (m, 1H), 3.36 (dd, *J* = 10.1, 5.1 Hz, 1H), 2.89 (dd, *J* = 10.1, 7.8 Hz, 1H), 2.38 (dd, *J* = 7.9, 5.1 Hz, 1H), 1.46 (d, *J* = 6.4 Hz, 3H), 0.61 (s, 9H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 140.2 (d, *J* = 9.2 Hz), 137.3 (d, *J* = 9.0 Hz), 135.3 (d, *J* = 21.6 Hz), 132.5 (d, *J* = 18.1 Hz), 129.2, 128.4 (d, *J* = 6.0 Hz), 128.2, 128.0 (d, *J* = 8.1 Hz), 99.9 (d, *J* = 25.7 Hz), 74.1, 71.1 (d, *J* = 4.5

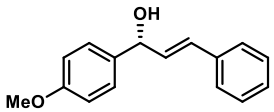
Hz), 69.6, 69.5, 69.1 (d, J = 4.7 Hz), 62.9, 59.9, 50.0 (d, J = 7.6 Hz), 34.5, 26.8 (d, J = 1.9 Hz), 21.2. ^{31}P NMR (162 MHz, Chloroform-*d*) δ -25.74. HRMS (ESI) calcd for $C_{30}H_{37}FeNOP$ $[M+H]^+$: 514.1957; Found: 514.1943.

III. General procedure for asymmetric hydrogenation of chalcones

General procedure for S/C = 2 000: To a 2.5 mL vial was added the catalyst precursor $[Ir(COD)Cl]_2$ (1.7 mg, 0.0025 mmol), ligand **L12** (4.4 mg, 0.0055 mmol) and anhydrous *i*-PrOH (2 mL) under argon atmosphere. The mixture was stirred for 1 h at room temperature to give a clear orange solution. An aliquot of the catalyst solution (20 μL, 0.00005 mmol) was transferred into a 5 mL hydrogenation vessel, then Cs_2CO_3 (1.6 mg, 0.005 mmol), ketone (0.1 mmol) and anhydrous *n*-hexane (2 mL) was added. The vessels were placed in an autoclave which was then charged with 50 atm of H_2 and stirred at 25 - 30 ℃ for 12 h. After slowly releasing the hydrogen pressure, the reaction mixture was passed through a short column of silica gel to remove the metal complex. The product was analyzed by ^{1}H NMR to determine the conversion. The ee values were determined by HPLC analysis on a chiral stationary phase.

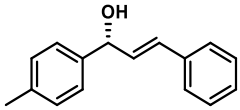


(*R, E*)-1,3-diphenylprop-2-en-1-ol (4a). Colorless oil, 20.0 mg, >99% yield; 97% ee; $[\alpha]_D^{25}$ = +26.4 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol=90:10, 1.0 mL/min, 254 nm) indicated 97% ee: t_R (minor) = 17.4 min, t_R (major) = 22.7 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.46 - 7.20 (m, 10H), 6.68 (dd, J = 15.8, 1.2 Hz, 1H), 6.38 (dd, J = 15.8, 6.5 Hz, 1H), 5.42 - 5.33 (m, 1H), 2.12 (s, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 142.7, 136.5, 131.5, 130.5, 128.6, 128.5, 127.8, 127.8, 126.6, 126.3, 75.1.

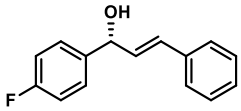


(*R, E*)-1-(4-methoxyphenyl)-3-phenylprop-2-en-1-ol (4b). Colorless oil, 23.9 mg, >99%yield; 93% ee; $[\alpha]_D^{25}$ = +28.0 (c = 1.00,$CHCl_3$).HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 93% ee: t_R (minor) = 23.9 min, t_R (major)

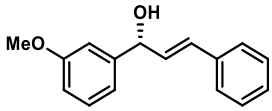
= 35.3 min.^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.41 - 7.27 (m, 6H), 7.25 - 7.19 (m, 1H), 6.90 (d, *J* = 8.7 Hz, 2H), 6.67 (dd, *J* = 16.2, 1.1 Hz, 1H), 6.38 (dd, *J* = 15.9, 6.3 Hz, 1H), 5.34 (d, *J* = 6.3 Hz, 1H), 3.81 (s, 3H), 2.00 (s, 1H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 159.3, 136.6, 135.0, 131.7, 130.2, 128.6, 127.7, 126.6, 114.0, 74.7, 55.3.



(*R, E*)-3-phenyl-1-(p-tolyl)prop-2-en-1-ol (4c). Colorless oil, 22.3 mg, >99% yield; 94% ee; $[\alpha]_D^{25}$ = +16.6 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 94% ee: t_R (minor) = 14.9 min, t_R (major) = 23.1 min.^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.42 - 7.27 (m, 6H), 7.25 - 7.15 (m, 3H), 6.68 (dd, *J* = 15.9, 1.3 Hz, 1H), 6.38 (dd, *J* = 15.8, 6.4 Hz, 1H), 5.39 - 5.32 (m, 1H), 2.35 (s, 3H), 1.97 (d, *J* = 3.5 Hz, 1H).^{13}C NMR (101 MHz, $CDCl_3$) δ 139.9, 137.6, 136.6, 131.7, 130.3, 129.3, 128.6, 127.7, 126.6, 126.3, 75.0, 21.2.

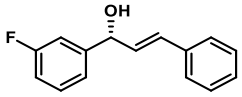


(*R, E*)-1-(4-fluorophenyl)-3-phenylprop-2-en-1-ol (4d). Colorless oil, 22.7 mg, >99% yield; 95% ee; $[\alpha]_D^{25}$ = +24.7 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane : isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 95% ee: t_R (minor) = 13.9 min, t_R (major) = 20.5 min.^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.44 - 7.35 (m, 4H), 7.35 - 7.28 (m, 2H), 7.28 - 7.21 (m, 1H), 7.10 - 7.00 (m, 2H), 6.68 (dd, *J* = 15.9, 1.3 Hz, 1H), 6.35 (dd, *J* = 15.8, 6.6 Hz, 1H), 5.41 - 5.34 (m, 1H), 2.03 (d, *J* = 3.4 Hz, 1H).^{13}C NMR (101 MHz, Chloroform-*d*) δ 162.35 (d, *J* = 246.1 Hz), 138.50 (d, *J* = 3.2 Hz), 136.35, 131.31, 130.81, 128.63, 128.06 (d, *J* = 8.1 Hz), 127.95, 126.63, 115.45 (d, *J* = 21.3 Hz), 74.51.

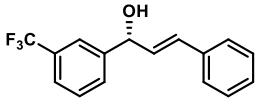


(*R, E*)-1-(3-methoxyphenyl)-3-phenylprop-2-en-1-ol (4e). Colorless oil, 23.9 mg, >99% yield; 86% ee; $[\alpha]_D^{25}$ = +5.3 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane : isopropanol

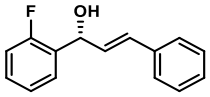
= 90:10, 1.0 mL/min, 254 nm) indicated 86% ee: t_R (minor) = 24.7 min, t_R (major) = 34.7 min.^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.43 - 7.35 (m, 2H), 7.34 - 7.27 (m, 3H), 7.27 - 7.20 (m, 1H), 7.05 - 6.96 (m, 2H), 6.87 - 6.80 (m, 1H), 6.69 (dd, *J* = 15.9, 1.2 Hz, 1H), 6.37 (dd, *J* = 15.8, 6.5 Hz, 1H), 5.36 (d, *J* = 5.9 Hz, 1H), 3.81 (s, 3H), 2.07 (d, *J* = 3.3 Hz, 1H).^{13}C NMR (101 MHz, $CDCl_3$) δ 159.9, 144.5, 136.5, 131.4, 130.7, 129.7, 128.6, 127.8, 126.6, 118.6, 113.4, 111.8, 75.1, 55.3.



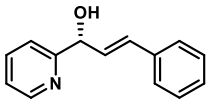
(*R, E*)-1-(3-fluorophenyl)-3-phenylprop-2-en-1-ol (4f). Colorless oil, 22.7 mg, >99% yield; 95% ee; $[\alpha]_D^{25}$ = +1.2 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 95% ee: t_R (minor) = 15.4 min, t_R (major) = 22.9 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.42 - 7.28 (m, 5H), 7.28 - 7.22 (m, 1H), 7.22 - 7.13 (m, 2H), 7.03 - 6.92 (m, 1H), 6.69 (dd, *J* = 15.8, 1.2 Hz, 1H), 6.34 (dd, *J* = 15.8, 6.8 Hz, 1H), 5.38 (d, *J* = 6.7 Hz, 1H), 2.07 (s, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 163.1 (d, *J* = 246.1 Hz), 145.3 (d, *J* = 6.7 Hz), 136.3, 131.3, 130.9, 130.1 (d, *J* = 8.2 Hz), 128.6, 128.0, 126.7, 121.9 (d, *J* = 2.9 Hz), 114.6 (d, *J* = 21.3 Hz), 113.2 (d, *J* = 22.1 Hz), 74.6 (d, *J* = 1.9 Hz).



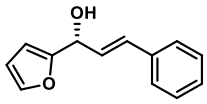
(*R, E*)-3-phenyl-1-(3-(trifluoromethyl)phenyl)prop-2-en-1-ol (4g). Yellow oil, 27.7 mg, >99% yield; 94% ee; $[\alpha]_D^{25}$ = +1.2 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane : isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 94% ee: t_R (minor) = 13.2 min, t_R (major) = 22.2 min.^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.72 (s, 1H), 7.61 (d, *J* = 7.6 Hz, 1H), 7.56 (d, *J* = 7.8 Hz, 1H), 7.52 - 7.44 (m, 1H), 7.43 - 7.36 (m, 2H), 7.36 - 7.28 (m, 2H), 7.30 - 7.22 (m, 1H), 6.71 (dd, *J* = 15.8, 1.2 Hz, 1H), 6.34 (dd, *J* = 15.8, 6.9 Hz, 1H), 5.44 (d, *J* = 6.9 Hz, 1H), 2.04 (m, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 143.6, 136.1, 131.6, 130.9 (q, *J* = 32.3 Hz), 130.7, 129.7, 129.0, 128.6, 128.1, 126.7, 124.5 (q, *J* = 3.8 Hz), 124.1(q, *J* = 273.7 Hz), 123.0 (q, *J* = 3.8 Hz), 74.63.



(*R, E*)-1-(2-fluorophenyl)-3-phenylprop-2-en-1-ol (4h). Colorless oil, 22.7 mg, >99% yield; 98% ee; $[\alpha]_D^{25}$ = +28.0 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane : isopropanol = 92:8, 0.5 mL/min, 254 nm) indicated 98% ee: t_R (major) = 29.8 min, t_R (minor) = 31.3 min.^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.49 - 7.26 (m, 6H), 7.26 - 7.15 (m, 1H), 7.12 - 6.98 (m, 2H), 6.87 (dd, *J* = 16.0, 1.3 Hz, 1H), 6.47 (dd, *J* = 16.0, 6.5 Hz, 1H), 5.44 - 5.37 (m, 1H), 2.07 (d, *J* = 3.5 Hz, 1H).^{13}C NMR (101 MHz, Chloroform-*d*) δ 160.4 (d, *J* = 249.7 Hz), 142.6, 134.0 (d, *J* = 4.8 Hz), 129.1(d, *J* = 8.5 Hz), 128.7, 127.91, 127.6 (d, *J* = 3.6 Hz), 126.4, 124.3 (d, *J* = 12.2 Hz), 124.1 (d, *J* = 3.6 Hz), 122.9 (d, *J* = 3.7 Hz), 115.8 (d, *J* = 22.2 Hz), 75.3.

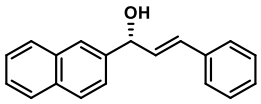


(*R, E*)-3-phenyl-1-(pyridin-2-yl)prop-2-en-1-ol (4i). Colorless oil, 21.0 mg, >99% yield; 93% ee; $[\alpha]_D^{25}$ = +22.6 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 95:5, 0.5 mL/min, 254 nm) indicated 93% ee: t_R (minor) = 51.3 min, t_R (major) = 54.6 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 8.75 (m, 1H), 8.31 (d, *J* = 16.0 Hz, 1H), 8.20 (m, 1H), 7.95 (d, *J* = 16.1 Hz, 1H), 7.88 (m, 1H), 7.79 - 7.69 (m, 2H), 7.49 (m, 1H), 7.42 (m, 4H), 1.61 (m, 1H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 189.5, 154.3, 148.9, 144.8, 137.0, 135.2, 130.6, 128.9, 126.9, 123.0, 120.9, 29.7.

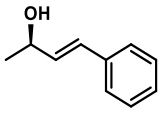


(*R, E*)-1-(furan-2-yl)-3-phenylprop-2-en-1-ol (4j). Colorless oil, 19.7 mg, >99% yield; 91% ee; $[\alpha]_D^{25}$ = +21.1 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 91% ee: t_R (minor) = 14.8 min, t_R (major) = 20.7 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.43 - 7.39 (m, 3H), 7.32 (m, 2H), 7.24 (m, 1H), 6.73 (dd, *J* = 15.9, 1.3 Hz, 1H), 6.45 (dd, *J* = 15.9, 6.4 Hz, 1H), 6.35 (m, 1H), 6.30 (m, 1H), 5.43 -

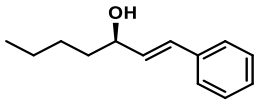
5.36 (m, 1H), 2.26 (m, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 155.1, 142.5, 136.3, 131.9, 128.6, 128.0, 127.9, 126.7, 110.3, 106.7, 68.5.



(*R, E*)-1-(naphthalen-2-yl)-3-phenylprop-2-en-1-ol (4k). Colorless oil, 24.5 mg, >99% yield; 94% ee; $[\alpha]_D^{25}$ = +30.5 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 94% ee: t_R (minor) = 26.4 min, t_R (major) = 44.4 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.91 - 7.77 (m, 4H), 7.55 - 7.19 (m, 8H), 6.71 (dd, *J* = 15.9, 1.2 Hz, 1H), 6.43 (dd, *J* = 15.9, 6.5 Hz, 1H), 5.51 (d, *J* = 6.4 Hz, 1H), 2.31 (s, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 140.1, 136.5, 133.3, 133.0, 131.3, 130.8, 128.6, 128.4, 128.0, 127.8, 127.7, 126.6, 126.2, 126.0, 124.9, 124.5, 75.2.

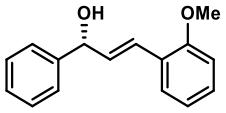


(*R, E*)-4-phenylbut-3-en-2-ol (4l). Colorless oil, 14.0 mg, >99% yield; 90% ee; $[\alpha]_D^{25}$ = +17.8 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol=90:10, 1.0 mL/min, 254 nm) indicated 90% ee: t_R (minor) = 10.0 min, t_R (major) = 15.8 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.42 - 7.27 (m, 4H), 7.27 - 7.20 (m, 1H), 6.57 (dd, *J* = 15.9, 1.2 Hz, 1H), 6.26 (dd, *J* = 15.9, 6.4 Hz, 1H), 4.49 (m, 1H), 1.66 (m, 1H), 1.37 (d, *J* = 6.4 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 136.7, 133.6, 129.4, 128.6, 127.7, 126.5, 23.4.

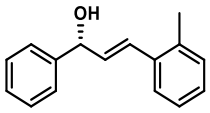


(*R, E*)-1-phenylhept-1-en-3-ol (4m). Colorless oil, 20.7 mg, >99% yield; 90% ee; $[\alpha]_D^{25}$ = +13.7 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 90% ee: t_R (major) = 7.8 min, t_R (minor) = 12.5 min.^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.41 - 7.20 (m, 5H), 6.55 (dd, *J* = 15.9, 1.1 Hz, 1H), 6.21 (dd, *J* = 15.9, 6.8 Hz, 1H), 4.32 - 4.19 (m, 1H), 1.76 (s, 1H), 1.70 - 1.55 (m, 2H), 1.45 - 1.29 (m, 4H), 0.96 - 0.87

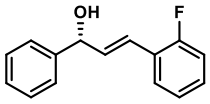
(m, 3H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 136.7, 132.6, 130.1, 128.5, 127.6, 126.4, 73.1, 37.0, 27.6, 22.6, 14.0.



(*R, E*)-3-(2-methoxyphenyl)-1-phenylprop-2-en-1-ol (4n). Colorless oil, 23.5 mg, >99% yield; 89% ee; $[\alpha]_D^{25}$ = +2.0 (c = 1.00, $CHCl_3$). HPLC analysis (IC-H, *n*-hexane: isopropanol = 95:05, 1.0 mL/min, 254 nm) indicated 89% ee: t_R (major) = 19.2 min, t_R (minor) = 23.5 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.48 - 7.33 (m, 5H), 7.32 - 7.26 (m, 1H), 7.25 - 7.19 (m, 1H), 7.04 (d, *J* = 16.2 Hz, 1H), 6.95 - 6.83 (m, 2H), 6.40 (dd, *J* = 15.9, 6.9 Hz, 1H), 5.42 - 5.36 (m, 1H), 3.85 (s, 3H), 2.05 (d, *J* = 3.2 Hz, 1H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 156.9, 143.0, 132.1, 128.9, 128.6, 127.6, 127.1, 126.3, 125.6, 125.5, 120.6, 110.9, 75.7, 55.5.

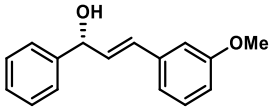


(*R, E*)-1-phenyl-3-(o-tolyl)prop-2-en-1-ol (4o). Colorless oil, 21.6 mg, >99% yield; 97% ee; $[\alpha]_D^{25}$ = +16.0 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 97% ee: t_R (minor) = 16.6min, t_R (major) = 22.0 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.47 - 7.26 (m, 6H), 7.17 - 7.11 (m, 3H), 6.91 (dd, *J* = 15.7, 1.3 Hz, 1H), 6.27 (dd, *J* = 15.7, 6.6 Hz, 1H), 5.40 (d, *J* = 6.6 Hz, 1H), 2.36 (s, 3H), 2.05 (s, 1H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 142.9, 135.7, 135.6, 132.9, 130.3, 128.7, 128.4, 127.8, 127.7, 126.4, 126.1, 125.8, 75.4, 19.8.

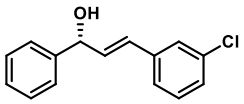


(*R, E*)-3-(2-fluorophenyl)-1-phenylprop-2-en-1-ol (4p). Colorless oil, 23.1 mg, >99% yield; 98% ee; $[\alpha]_D^{25}$ = +27.0 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 92:8, 0.5 mL/min, 254 nm) indicated 98% ee: t_R (major) = 30.3min, t_R (minor) = 32.0 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.47 - 7.26 (m, 6H), 7.23 - 7.15 (m, 1H), 7.11 - 6.97 (m,

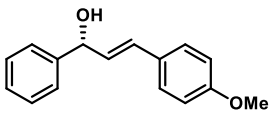
2H), 6.86 (dd, *J* = 16.0, 1.3 Hz, 1H), 6.46 (dd, *J* = 16.0, 6.5 Hz, 1H), 5.38 (dd, 1H), 2.17 (d, *J* = 3.5 Hz, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 160.3 (d, *J* = 249.5 Hz), 142.5, 134.0 (d, *J* = 4.7 Hz), 129.0 (d, *J* = 8.4 Hz), 128.6, 127.9, 127.6 (d, *J* = 3.7 Hz), 126.3, 124.3 (d, *J* = 12.2 Hz), 124.1 (d, *J* = 3.6 Hz), 122.9 (d, *J* = 3.7 Hz), 115.7 (d, *J* = 22.1 Hz), 75.3.



(*R, E*)-3-(3-methoxyphenyl)-1-phenylprop-2-en-1-ol (4q). Colorless oil, 23.9 mg, >99% yield; 99% ee; $[\alpha]_D^{25}$ = +27.4 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 99% ee: t_R (minor) = 33.5min, t_R (major) = 73.0 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.48 - 7.27 (m, 5H), 7.25 - 7.18 (m, 1H), 7.02 - 6.95 (m, 1H), 6.95 - 6.89 (m, 1H), 6.83 - 6.76 (m, 1H), 6.66 (dd, *J* = 15.8, 1.3 Hz, 1H), 6.38 (dd, *J* = 15.9, 6.5 Hz, 1H), 5.39 (dd, *J* = 6.4, 1.2 Hz, 1H), 3.80 (s, 3H), 2.04 (s, 1H).^{13}C NMR (101 MHz, $CDCl_3$) δ 159.8, 142.7, 138.0, 131.8, 130.5, 129.6, 128.7, 127.9, 126.4, 119.3, 113.6, 111.8, 75.1, 55.2.

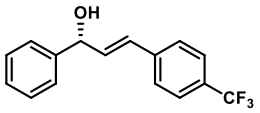


(*R, E*)-3-(3-chlorophenyl)-1-phenylprop-2-en-1-ol (4r). Colorless oil, 25.1 mg, >99% yield; 97% ee; $[\alpha]_D^{25}$ = +22.4 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 97% ee: t_R (minor) = 14.1min, t_R (major) = 18.6 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.45 - 7.28 (m, 6H), 7.25 - 7.18 (m, 3H), 6.64 (dd, *J* = 15.9, 1.3 Hz, 1H), 6.40 (dd, *J* = 15.8, 6.2 Hz, 1H), 5.42 - 5.36 (m, 1H), 2.05 (d, *J* = 3.6 Hz, 1H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 142.5, 138.5, 134.5, 133.0, 129.8, 129.0, 128.7, 128.0, 127.7, 126.5, 126.4, 124.8, 74.9.

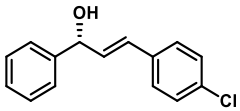


(*R, E*)-3-(4-methoxyphenyl)-1-phenylprop-2-en-1-ol (4s). Colorless oil, 23.2 mg, >99%

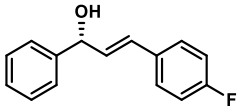
yield; 94% ee; $[\alpha]_D^{25}$ = +23.8 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 94% ee: t_R (major) = 21.4 min, t_R (minor) = 24.7 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.46 - 7.26 (m, 7H), 6.84 (d, *J* = 8.8 Hz, 2H), 6.62 (dd, *J* = 15.8, 1.2 Hz, 1H), 6.25 (dd, *J* = 15.8, 6.7 Hz, 1H), 5.36 (d, *J* = 6.8 Hz, 1H), 3.80 (s, 3H), 2.04 (d, *J* = 2.9 Hz, 1H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 159.4, 143.0, 130.3, 129.4, 129.3, 128.6, 127.8, 127.7, 126.3, 114.0, 75.3, 55.3.



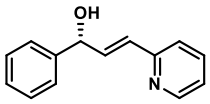
(*R, E*)-1-phenyl-3-(4-(trifluoromethyl)phenyl)prop-2-en-1-ol (4t). Colorless oil, 28.5 mg, >99% yield; 97% ee; $[\alpha]_D^{25}$ = +23.8 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 97% ee: t_R (major) = 10.0 min, t_R (minor) = 11.5 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.47 - 7.21 (m, 7H), 7.10 - 7.00 (m, 2H), 6.68 (dd, *J* = 15.9, 1.2 Hz, 1H), 6.35 (dd, *J* = 15.8, 6.6 Hz, 1H), 5.38 (dd, *J* = 7.1, 2.8 Hz, 1H), 2.03 (d, *J* = 3.4 Hz, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 162.4 (d, *J* = 246.1 Hz), 138.5 (d, *J* = 3.2 Hz), 136.4, 131.3, 130.8, 128.6, 128.1, 128.0, 128.0, 126.6, 115.5 (d, *J* = 21.3 Hz), 74.5.



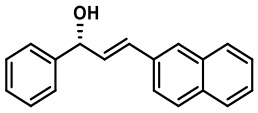
(*R, E)*-3-(4-chlorophenyl)-1-phenylprop-2-en-1-ol (4u). Colorless oil, 22.8 mg, >99% yield; 96% ee; $[\alpha]_D^{25}$ = +24.3 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 96% ee: t_R (major) = 12.9 min, t_R (minor) = 17.2 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.46 - 7.26 (m, 9H), 6.65 (dd, *J* = 15.9, 1.3 Hz, 1H), 6.36 (dd, *J* = 15.8, 6.3 Hz, 1H), 5.41 - 5.36 (m, 1H), 2.04 (s, 1H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 142.6, 135.1, 133.4, 132.2, 129.2, 128.8, 128.7, 128.0, 127.8, 126.4, 75.0.



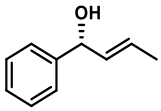
(*R, E*)-3-(4-fluorophenyl)-1-phenylprop-2-en-1-ol (4v). Colorless oil, 23.2 mg, >99% yield; 96% ee; $[\alpha]_D^{25}$ = +22.6 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 96% ee: t_R (major) = 11.4 min, t_R (minor) = 14.0 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.45 - 7.27 (m, 7H), 6.99 (t, *J* = 8.7 Hz, 2H), 6.65 (dd, *J* = 15.9, 1.3 Hz, 1H), 6.30 (dd, *J* = 15.9, 6.5 Hz, 1H), 5.38 (d, *J* = 6.5 Hz, 1H), 2.03 (s, 1H).^{13}C NMR (101 MHz, Chloroform-*d*) δ 162.4 (d, *J* = 247.0 Hz), 142.7, 132.7 (d, *J* = 3.6 Hz), 131.3 (d, *J* = 2.2 Hz), 129.4, 128.7, 128.2 (d, *J* = 8.1 Hz), 127.9, 126.3, 115.5 (d, *J* = 21.6 Hz), 75.1.



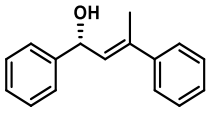
(*R, E*)-1-phenyl-3-(pyridin-2-yl)prop-2-en-1-ol (4w). Colorless oil, 20.5 mg, >99% yield; 96% ee; $[\alpha]_D^{25}$ = +22.6 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 96% ee: t_R (minor) = 23.9 min, t_R (major) = 29.0 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 8.52 (d, *J* = 4.6 Hz, 1H), 7.67 - 7.55 (m, 1H), 7.50 - 7.41 (m, 2H), 7.40 - 7.33 (m, 2H), 7.33 - 7.26 (m, 2H), 7.17 - 7.08 (m, 1H), 6.89 (dd, *J* = 15.7, 5.7 Hz, 1H), 6.84 - 6.75 (dd, *J* = 16.0, 4.0 Hz,1H), 5.45 (d, *J* = 5.7 Hz, 1H), 1.75 (s, 1H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 155.2, 149.4, 142.5, 136.6, 136.4, 129.6, 128.7, 127.8, 126.5, 122.3, 121.8, 74.6.



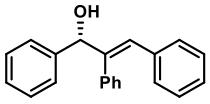
(*R, E*)-3-(naphthalen-2-yl)-1-phenylprop-2-en-1-ol (4x). Colorless oil, 28.2 mg, >99% yield; 97% ee; $[\alpha]_D^{25}$ = +11.5 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 97% ee: t_R (major) = 24.7 min, t_R (minor) = 29.3 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.81 - 7.73 (m, 4H), 7.61 - 7.56 (m, 1H), 7.49 - 7.28 (m, 7H), 6.85 (dd, *J* = 15.8, 1.2 Hz, 1H), 6.51 (dd, *J* = 15.8, 6.5 Hz, 1H), 5.51 - 5.38 (m, 1H), 2.17 - 2.08 (m, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 142.8, 134.0, 133.6, 133.1, 131.9, 130.7, 128.7, 128.2, 128.0, 127.9, 127.7, 126.7, 126.4, 126.3, 126.0, 123.7, 75.3.



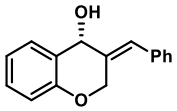
(*R, E*)-1-phenylbut-2-en-1-ol (4y). Colorless oil, 16.3 mg, >99% yield; 95% ee; $[\alpha]_D^{25}$ = +0.5 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 95% ee: t_R (major) = 6.7 min, t_R (minor) = 7.3 min.^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.42 - 7.20 (m, 5H), 6.57 (dd, *J* = 15.9, 1.2 Hz, 1H), 6.26 (dd, *J* = 15.9, 6.4 Hz, 1H), 4.55 - 4.43 (m, 1H), 1.63 (s, 1H), 1.37 (d, *J* = 6.4 Hz, 3H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 136.7, 133.5, 129.4, 128.6, 127.6, 126.4, 68.9, 23.4.



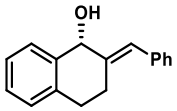
(*R, E*)-1,3-diphenylbut-2-en-1-ol (4z). Colorless oil, 24.4 mg, >99% yield; 99% ee; $[\alpha]_D^{25}$ = +34.4 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 99% ee: t_R (minor) = 11.3 min, t_R (major) = 18.8 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.47 - 7.26 (m, 10H), 6.01 (dd, *J* = 8.6, 1.3 Hz, 1H), 5.65 (dd, *J* = 8.5, 2.7 Hz, 1H), 2.20 (d, *J* = 1.4 Hz, 3H), 1.96 (d, *J* = 3.2 Hz, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 143.6, 142.7, 137.3, 130.1, 128.6, 128.2, 127.6, 127.4, 126.0, 125.9, 71.1, 16.5.



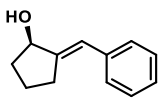
(*S, E*)-1,2,3-triphenylprop-2-en-1-ol (4aa). Colorless oil, 29.2 mg, >99% yield; 99% ee; $[\alpha]_D^{25}$ = +33.3 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 99% ee: t_R (major) = 10.1 min, t_R (minor) = 11.8min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.36 - 7.25 (m, 5H), 7.24 - 7.18 (m, 3H), 7.11 - 7.06 (m, 3H), 6.98 - 6.91 (m, 4H), 6.87 (d, *J* = 1.2 Hz, 1H), 5.55 (s, 1H), 2.16 (d, *J* = 3.8 Hz, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 143.9, 141.7, 138.0, 136.4, 129.4, 129.3, 128.5, 128.3, 128.0, 127.7, 127.4, 127.2, 127.0, 126.9, 79.2.



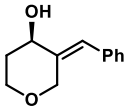
(*R, E*)-3-benzylidenechroman-4-ol (4ab). Colorless oil, 23.0 mg, >99% yield; 88% ee; $[\alpha]_D^{25}$ = +0.8 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 88% ee: t_R (minor) = 12.9 min, t_R (major) = 21.5 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.44 - 7.19 (m, 7H), 7.01 - 6.93 (m, 2H), 6.86 (dd, *J* = 8.2, 1.2 Hz, 1H), 5.21 (s, 1H), 4.97 - 4.88 (m, 2H), 2.10 (s, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 154.5, 135.7, 134.6, 129.8, 129.2, 129.1, 128.9, 128.5, 127.6, 125.0, 121.2, 117.0, 69.3, 62.8.



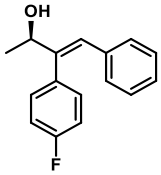
(*R, E*)-2-benzylidene-1,2,3,4-tetrahydronaphthalen-1-ol (4ac). Colorless oil, 23.1 mg, >99% yield; 89% ee; $[\alpha]_D^{25}$ = +37.8 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 89% ee: t_R (minor) = 12.5 min, t_R (major) = 14.6 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.51 - 7.46 (m, 1H), 7.38 - 7.27 (m, 5H), 7.26 - 7.25 (m, 1H), 7.24 - 7.21 (m, 1H), 7.17 - 7.13 (m, 1H), 6.74 (s, 1H), 5.19 (d, *J* = 4.3 Hz, 1H), 3.06 - 2.85 (m, 2H), 2.84 - 2.77 (m, 2H), 1.98 (d, *J* = 5.0 Hz, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 140.9, 138.7, 137.4, 137.3, 128.9, 128.4, 128.3, 128.0, 127.9, 126.7, 126.6, 125.5, 73.9, 29.9, 24.1.



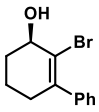
(*R, E*)-2-benzylidenecyclopentan-1-ol (4ad). Colorless oil, 16.9 mg, >99% yield; > 99% ee; $[\alpha]_D^{25}$ = -12.5 (c = 1.00, $CHCl_3$). HPLC analysis (AD-H, *n*-hexane: isopropanol = 95:05, 1.0 mL/min, 254 nm) indicated >99% ee: t_R (major) = 14.5 min, t_R (minor) = 15.9 min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.39 - 7.31 (m, 4H), 7.24 - 7.20 (m, 1H), 6.58 (d, *J* = 2.0 Hz, 1H), 4.60 (d, *J* = 5.3 Hz, 1H), 2.79 - 2.55 (m, 2H), 2.01 - 1.91 (m, 2H), 1.77 - 1.62 (m, 2H), 1.56 - 1.51 (m, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 147.8, 137.8, 128.5, 128.4, 128.3, 126.6, 123.7, 34.9, 29.4, 22.6.



(*R, E*)-3-benzylidenetetrahydro-2H-pyran-4-ol (4ae). Colorless oil, 19.5 mg, >99% yield; 98% ee; $[\alpha]_D^{25}$= +25.2 (c = 1.00, $CHCl_3$).HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 1.0 mL/min, 254 nm) indicated 98% ee: t_R (minor) = 15.1 min, t_R (major) = 16.0min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.37 - 7.29 (m, 2H), 7.28 - 7.22 (m, 1H), 7.19 - 7.12 (m, 2H), 6.66 (s, 1H), 4.60 (d, *J* = 12.9 Hz, 1H), 4.52 - 4.39 (m, 1H), 4.17 (d, *J* = 12.1 Hz, 1H), 4.08 - 3.95 (m, 1H), 3.75 - 3.65 (m, 1H), 2.19 - 2.08 (m, 1H), 1.91 - 1.79 (m, 1H), 1.77 - 1.71 (m, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 139.3, 136.1, 129.0, 128.3, 127.1, 124.5, 70.7, 65.3, 64.8, 36.6.



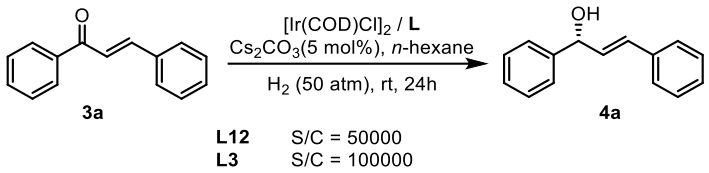
(*R, E*)-3-(4-fluorophenyl)-4-phenylbut-3-en-2-ol (4af). Colorless oil, 24.5 mg, >99% yield; >99% ee; $[\alpha]_D^{25}$ = -37.2 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 0.5 mL/min, 254 nm) indicated >99% ee: t_R (major) = 14.6 min, t_R (minor) = 15.5min. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.19 - 6.99 (m, 7H), 6.95 - 6.90 (m, 2H), 6.70 (d, *J* = 1.0 Hz, 1H), 4.70 - 4.60 (m, 1H), 1.77 (s, 1H), 1.29 (d, *J* = 6.5 Hz, 3H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 162.2 (d, *J* = 246.4 Hz), 145.0, 136.4, 134.3(d, *J* = 3.5 Hz), 131.0 (d, *J* = 7.8 Hz), 129.2, 128.0, 126.9, 126.4, 115.7 (d, *J* = 21.3 Hz), 73.0, 22.1. HRMS(ESI) calcd. for $C_{16}H_{14}F$ [M-H_2O+H]: 225.1074, found: 225.1067.



(*R*)-2-bromo-3,4,5,6-tetrahydro-[1,1'-biphenyl]-3-ol (4ag). Yellow solid, 19.2 mg, 80% yield; 98% ee; $[\alpha]_D^{25}$ = +50.0 (c = 1.00, $CHCl_3$). HPLC analysis (OD-H, *n*-hexane: isopropanol = 90:10, 0.5 mL/min, 254 nm) indicated 98% ee: t_R (minor) = 6.2 min, t_R (major) = 7.4min. ^{1}H

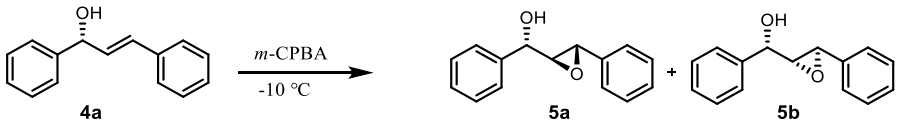
NMR (400 MHz, Chloroform-*d*) δ 7.41 - 7.28 (m, 3H), 7.25 - 7.19 (m, 2H), 4.42 (s, 1H), 2.51 - 2.30 (m, 3H), 2.04 - 1.89 (m, 3H), 1.83 - 1.73 (m, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 142.3, 141.7, 128.2, 127.6, 127.5, 123.7, 71.1, 34.5, 31.7, 18.6.

IV. Gram-scale reaction and transformations of products

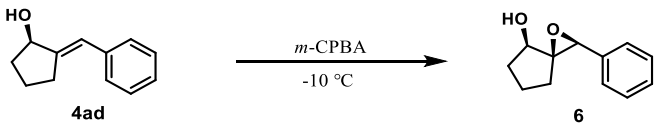


General procedure for S/C = 50 000: To a 2.5 mL vial was added the catalyst precursor $[Ir(COD)Cl]_2$ (1.7 mg, 0.0025 mmol), ligand **L12** (4.4 mg, 0.0055 mmol) and anhydrous *i*-PrOH (2 mL) under argon atmosphere. The mixture was stirred for 1 h at room temperature to give a clear orange solution. An aliquot of the catalyst solution (40 μL, 0.0001 mmol) was transferred into a 50 mL hydrogenation vessel, then Cs_2CO_3 (81 mg, 0.25 mmol), chalcone (1.04 g, 5 mmol) and anhydrous *n*-hexane (20 mL) was added. The vessels were placed in an autoclave which was then charged with 50 atm of H_2 and stirred at 25 - 30 ℃ for 48 h. After slowly releasing the hydrogen pressure, the reaction mixture was passed through a short column of silica gel to get the pure product. The product was analyzed by ^{1}H NMR to determine the conversion. The ee values were determined by HPLC analysis on a chiral stationary phase.

General procedure for S/C = 100 000: To a 2.5 mL vial was added the catalyst precursor $[Ir(COD)Cl]_2$ (1.7 mg, 0.0025 mmol), ligand **L3** (3.1mg, 0.0055 mmol) and anhydrous *i*-PrOH (2 mL) under argon atmosphere. The mixture was stirred for 1 h at room temperature to give a clear orange solution. An aliquot of the catalyst solution (20 μL, 0.00005 mmol) was transferred into a 50 mL hydrogenation vessel, then Cs_2CO_3 (81 mg, 0.25 mmol), chalcone (1.04 g, 5 mmol) and anhydrous *n*-hexane (20 mL) was added. The vessels were placed in an autoclave which was then charged with 50 atm of H_2 and stirred at 25 - 30 ℃ for 48 h. After slowly releasing the hydrogen pressure, the reaction mixture was passed through a short column of silica gel to get the pure product. The product was analyzed by ^{1}H NMR to determine the conversion. The ee values were determined by HPLC analysis on a chiral stationary phase.

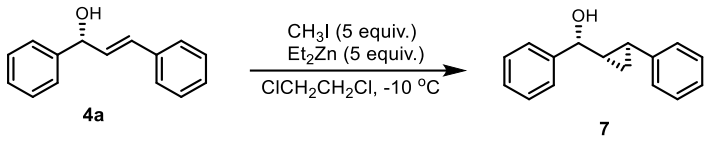


To a solution of **4a** (0.10 mmol, 1.00 eq.) in DCM (2 mL) at 0 °C was added *m*-chloroperbenzoic acid (0.20 mmol, 2.00 eq.). After 0.5 h, the resulting solution was stirred at room temperature for 24 h until complete consumption of starting material (verified by TLC). The mixture was washed with 10% solution of Na_2CO_3 (5 mL) and then extracted with DCM (2 mL). The organic layer was dried (Na_2SO_4) and the solvent was removed under reduced pressure. The crude product was purified by flash chromatography on SiO_2 to afford product **5** (212.5 mg, 94% yield) as Colorless oil.[4] Mixture of two diastereoisomers that could not be separated by flash cromatography. As mixture of both diastereoisomers **5a** and **5b**. Major diastereoisomer(**5a**): ^{1}H NMR (400 MHz, Chloroform-*d*) δ 2.50 (m, 1H), 3.31 (dd, 2.9 Hz, 2.2 Hz, 1H), 4.16 (d, *J* = 2.1 Hz, 1H), 5.02 (d, *J* = 2.9 Hz, 1H), 7.26 - 7.31 (m, 2H),7.31 - 7.38 (m, 4H), 7.38 - 7.44 (m, 2H), 7.44 - 7.53 (m, 2H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 54.9, 64.9, 71.1, 125.7, 126.5, 128.3, 128.4, 128.5, 128.7, 136.5, 139.1. HPLC (Chiralcel AD‐H, *n*-hexane: isopropanol = 95:05, 1 mL/min, λ = 220 nm) indicated 96% ee : t_R = 30.1 min, t_R = 31.8 min. Minor diastereoisomer (**5b**): ^{1}H NMR (400 MHz, Chloroform-*d*) δ 2.58 (m, 1H), 3.32 (dd, 4.8 Hz, 2.2 Hz, 1H), 4.03(d, *J* = 2.1 Hz, 1H), 4.74 (d, *J* = 4.7 Hz, 1H), 7.26 - 7.31 (m, 2H), 7.31 - 7.38 (m, 4H), 7.38 - 7.44 (m, 2H), 7.44 - 7.53 (m, 2H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 56.8, 65.7, 73.3, 125.7, 126.2, 128.1, 128.3, 128.4, 128.6, 136.2, 140.1. HPLC (Chiralcel AD‐H, *n*-hexane: isopropanol = 95:05, 1 mL/min, λ = 220 nm) indicated 96% ee : t_R = 21.1 min, t_R = 27.2 min.



To a solution of **4ad** (0.10 mmol) in DCM (2 mL) at 0 °C was added *m*-chloroperbenzoic acid (0.20 mmol). After 0.5 h, the resulting solution was stirred at room temperature for 24 h until complete consumption of starting material (verified by TLC). The mixture was washed with an 10% solution of Na_2CO_3 (5 mL) and then extracted with DCM (2 mL). The organic

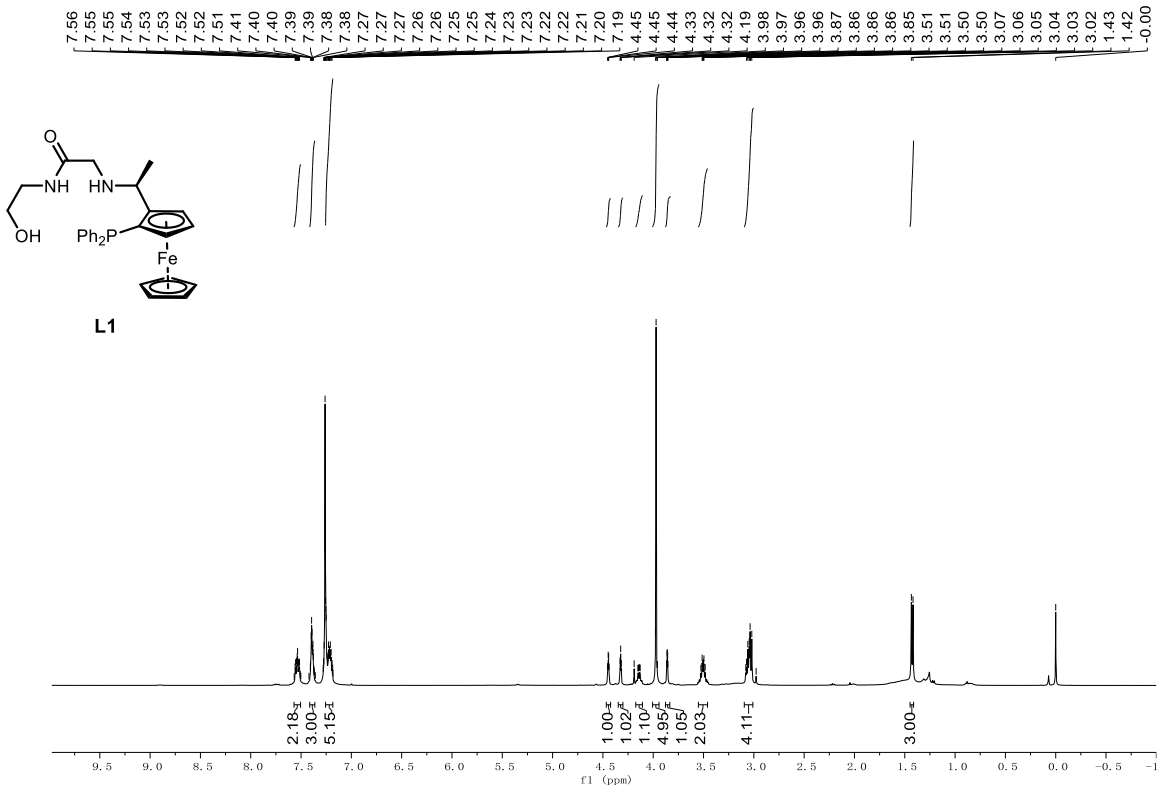
layer was dried (Na_2SO_4) and the solvent was removed under reduced pressure. The crude product was purified by flash chromatography on SiO_2 to afford product **6** (146.5 mg, 77% yield) as colorless oil[6]. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.47 - 7.13 (m, 5H), 4.16 - 3.93 (m, 2H), 2.27 (s, 1H), 2.12 - 2.00 (m, 1H), 1.92 - 1.76 (m, 2H), 1.75 - 1.59 (m, 2H), 1.51 - 1.38 (m, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 135.7, 128.2, 127.8, 126.1, 72.3, 72.2, 61.7, 33.9, 25.7, 19.4. HPLC (Chiralcel AD‐H, *n*-hexane: isopropanol = 95:05, 1 mL/min, λ =220 nm) indicated 99% ee : t_R =13.0 min, t_R = 14.9 min.



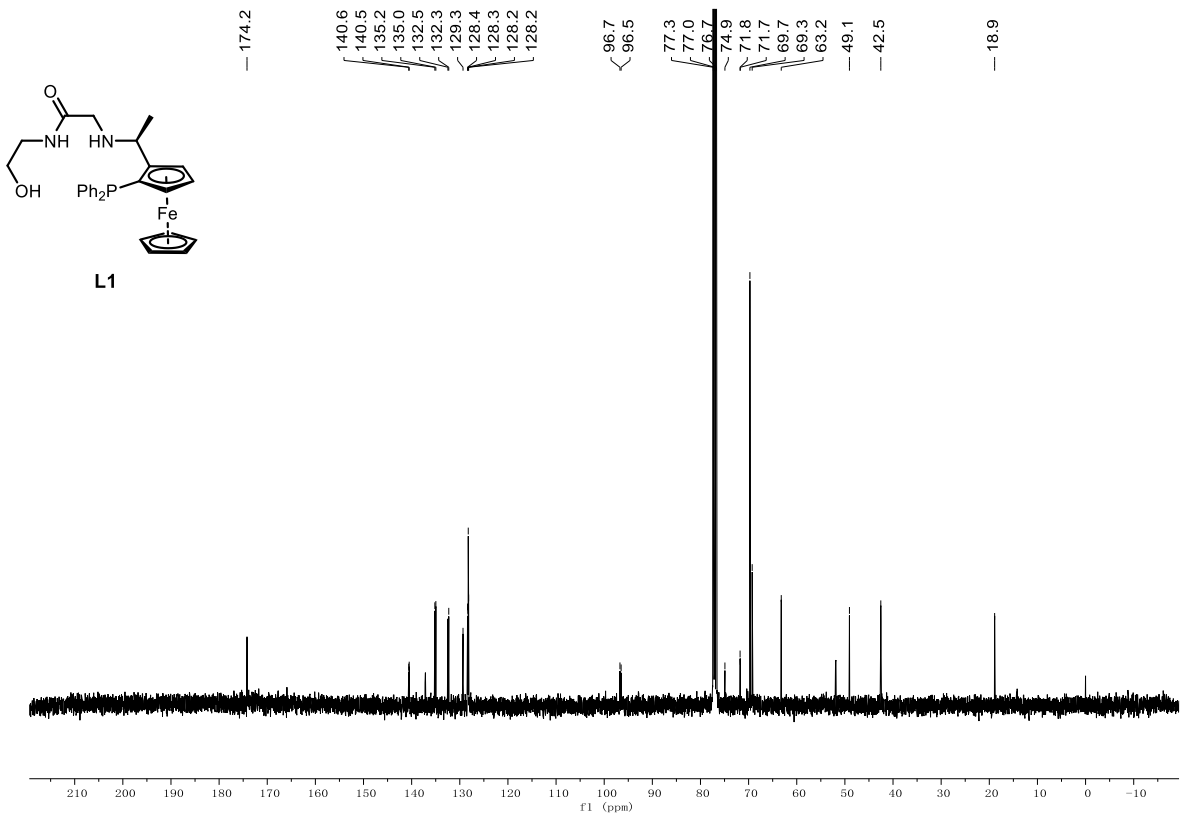
4a **7**

Et_2Zn (1.00 M in heptane, 4.16 mmol, 5.00 eq.) was dissolved in anhydrous $(CH_2Cl)_2$ (3.00 mL) and cooled to -10 °C. CH_2I_2 (4.16 mmol, 5.00 eq.) was added and the reaction mixture was stirred for 5 min at -10 °C. Racemic enol **4a** (0.83 mmol, 1.00 eq.) was added and the reaction mixture was stirred for 16 h, while warming up to rt. A saturated aqueous Na_2CO_3 solution (10 mL) was added and the aqueous layer was extracted with ethyl acetate (3 × 20 mL). The combined organic layers were washed with water and saturated aqueous NaCl solution (10 mL), dried over anhydrous Na_2SO_4 and the solvent was removed under reduced pressure. The residue was purified by chromatography PE/EtOAc (10/1) to afford product **7** (136.8 mg, 61%) as colorless oil[5]. ^{1}H NMR (400 MHz, Chloroform-*d*) δ 7.60 - 6.83 (m, 10H), 4.35 (d, *J* = 7.4 Hz, 1H), 2.07 (s, 1H), 2.02 - 1.94 (m, 1H), 1.57 - 1.49 (m, 1H), 1.20 - 1.13 (m, 1H), 1.08 - 0.98 (m, 1H). ^{13}C NMR (101 MHz, Chloroform-*d*) δ 143.5, 142.0, 128.4, 128.3, 127.6, 126.1, 126.0, 125.6, 76.7, 30.0, 21.0, 13.6. HPLC (Chiralcel AD‐H, *n*-hexane: isopropanol = 95:05, 1 mL/min, λ =220 nm) indicated 96% ee : t_R = 13.7 min, t_R = 18.0 min.

V. NMR spectra of ligands and hydrogenation products



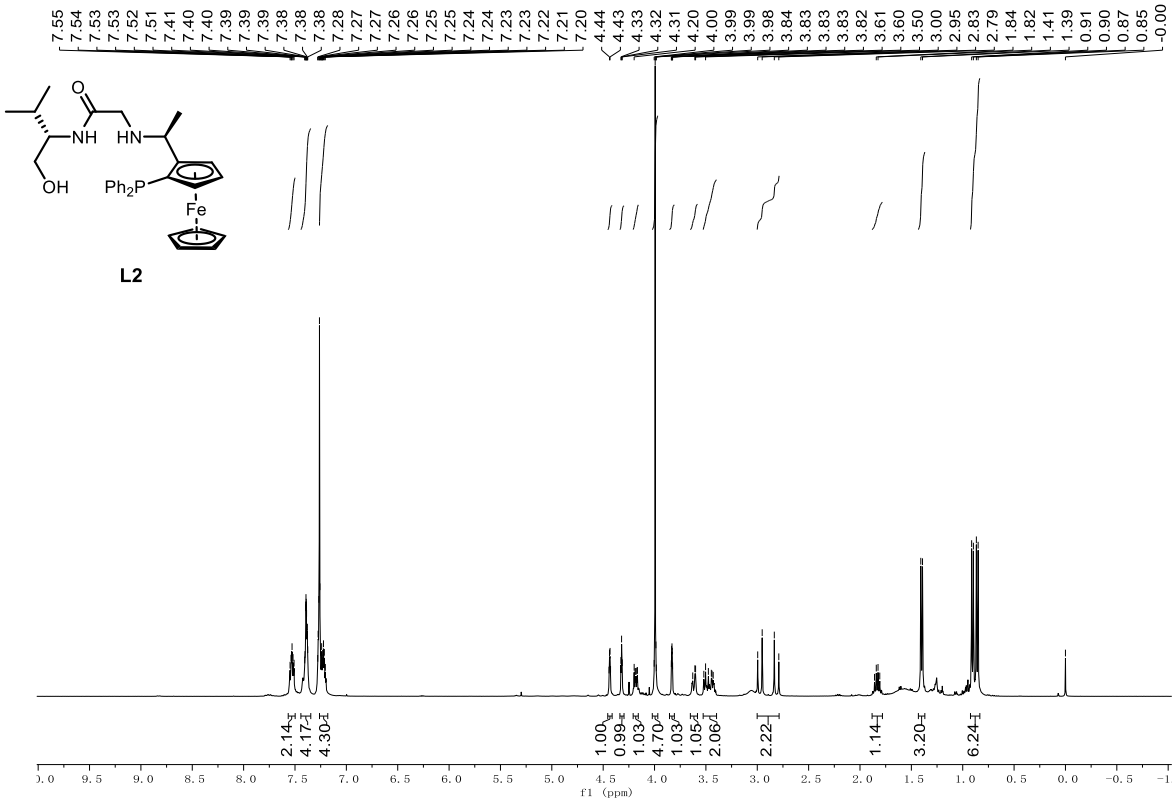
^{1}H NMR



^{13}C NMR

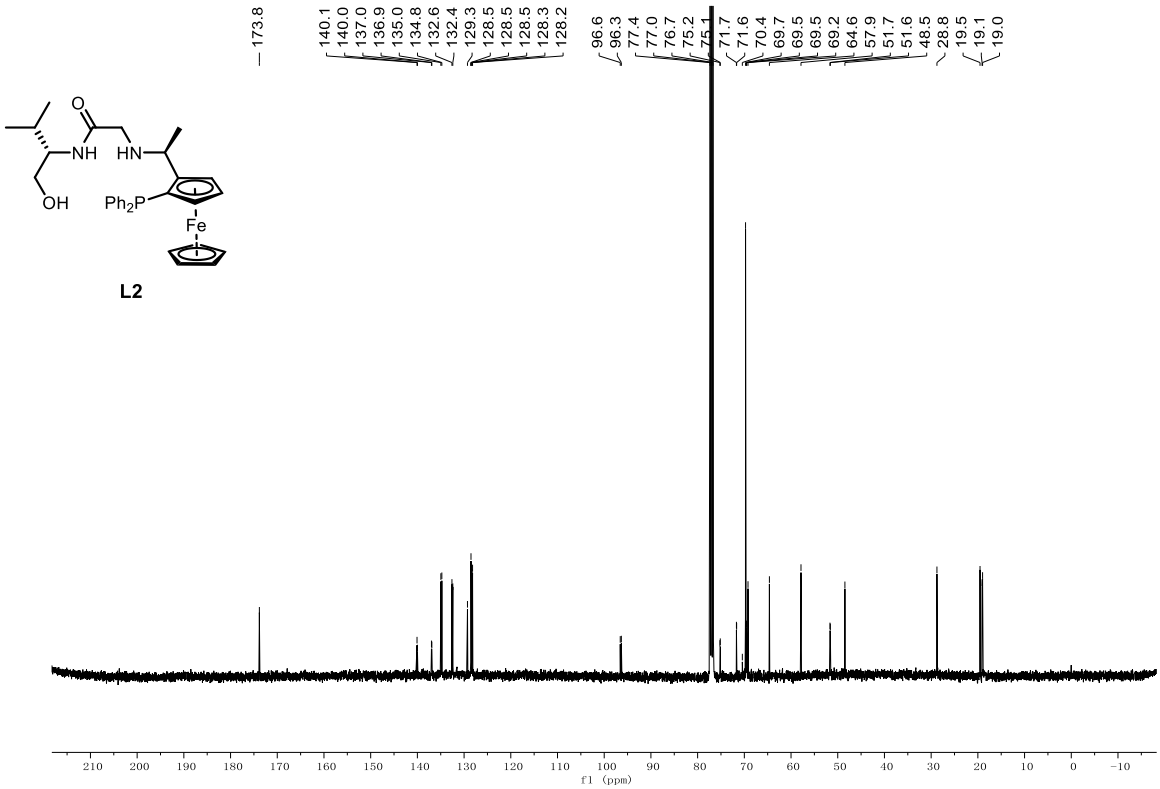
L1

^{31}P NMR

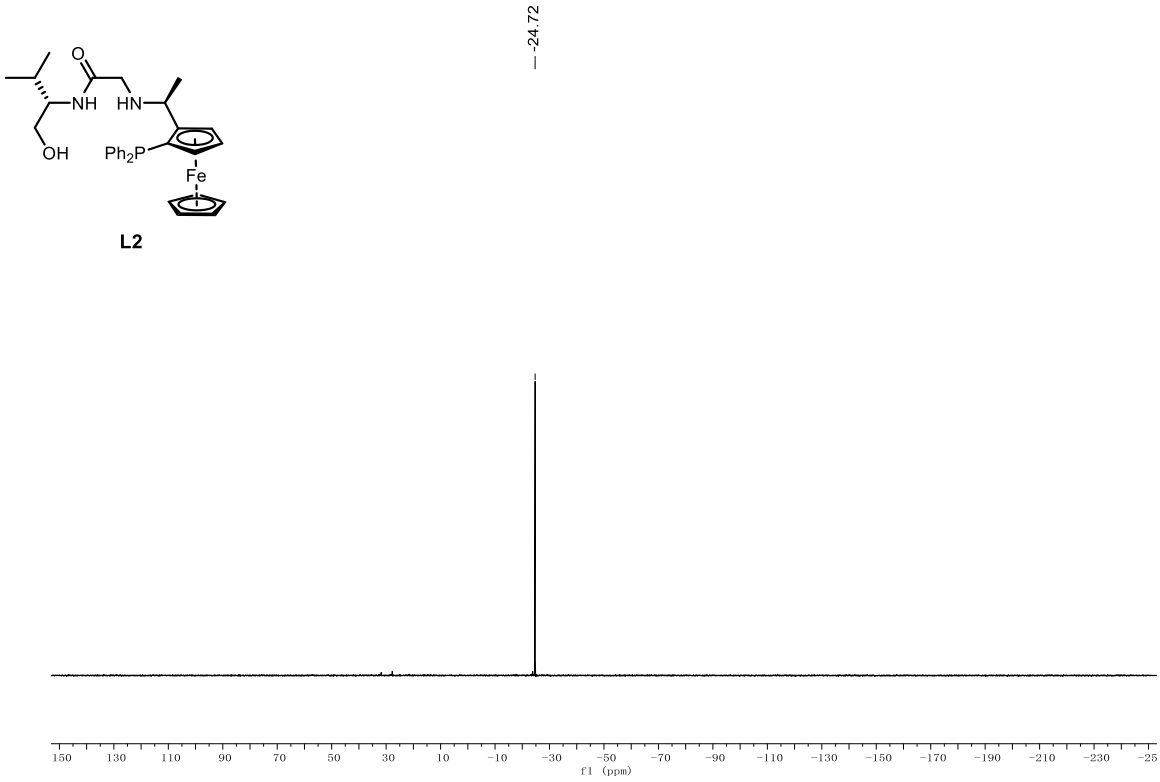


L2

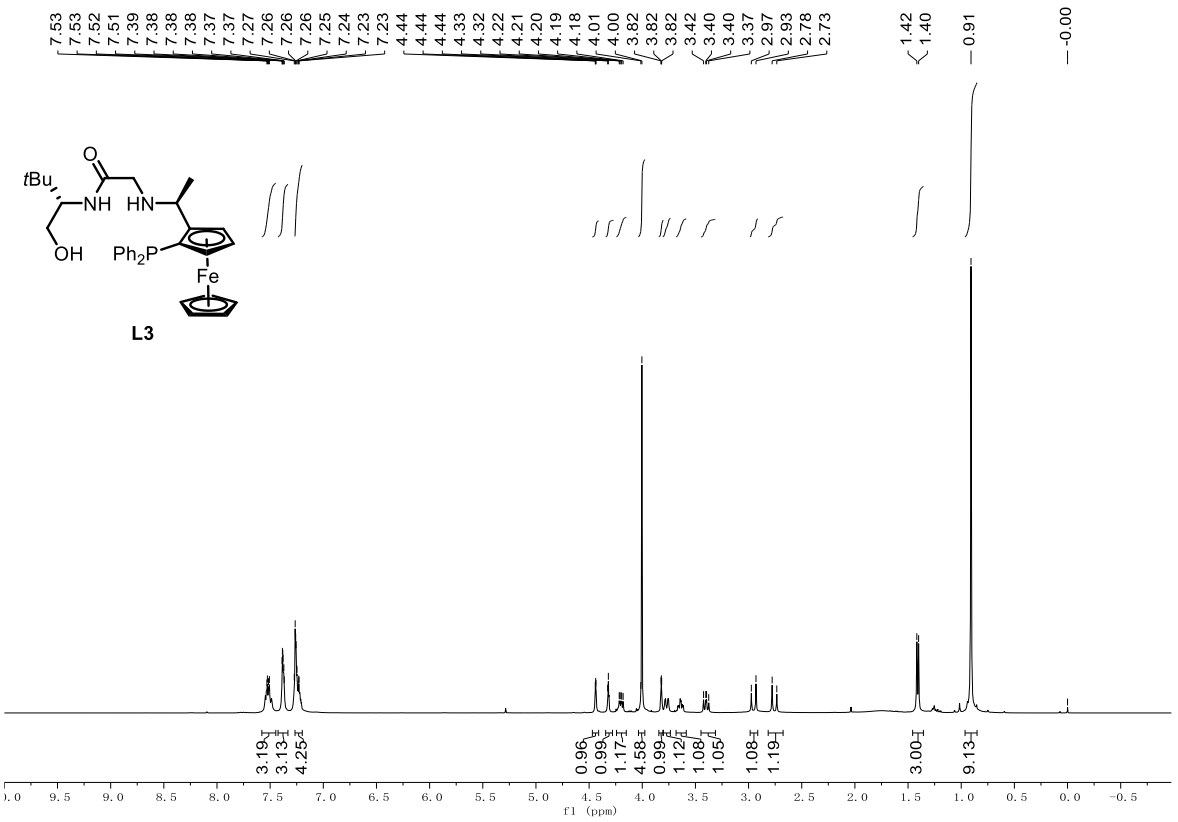
^{1}H NMR



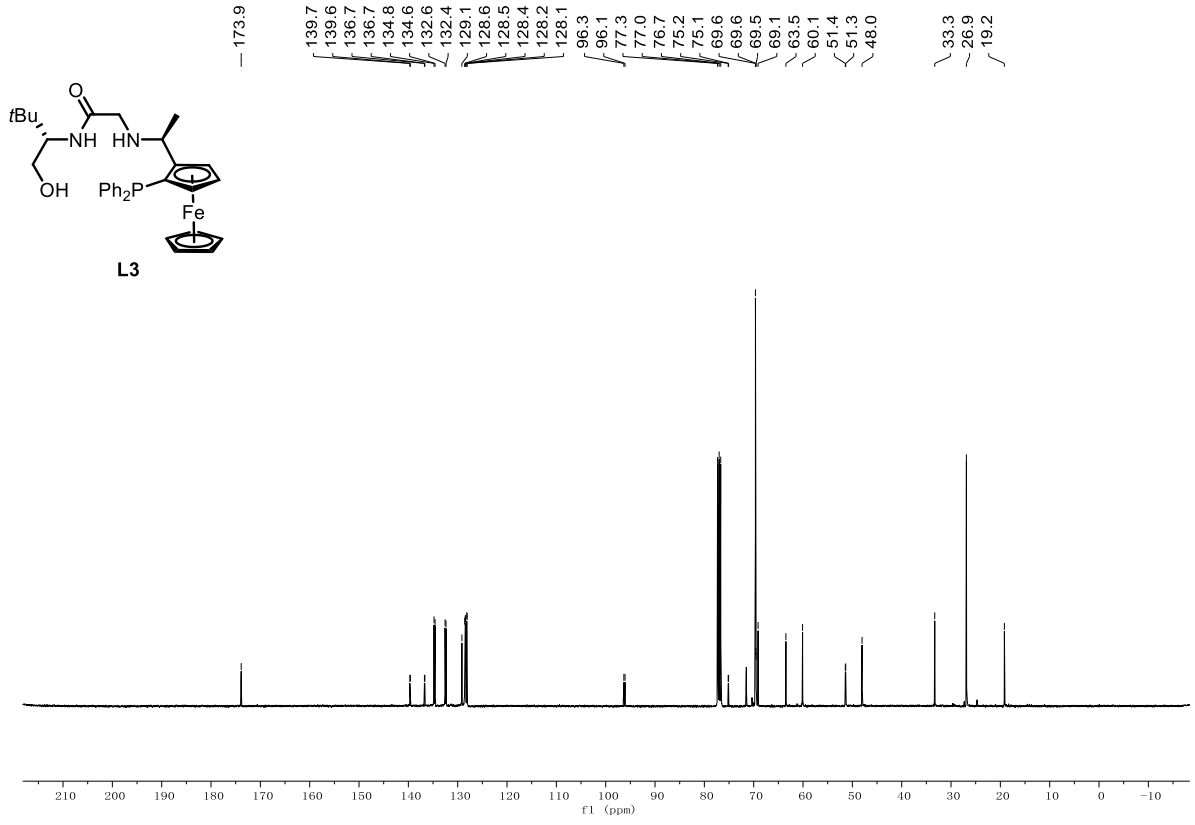
^{13}C NMR



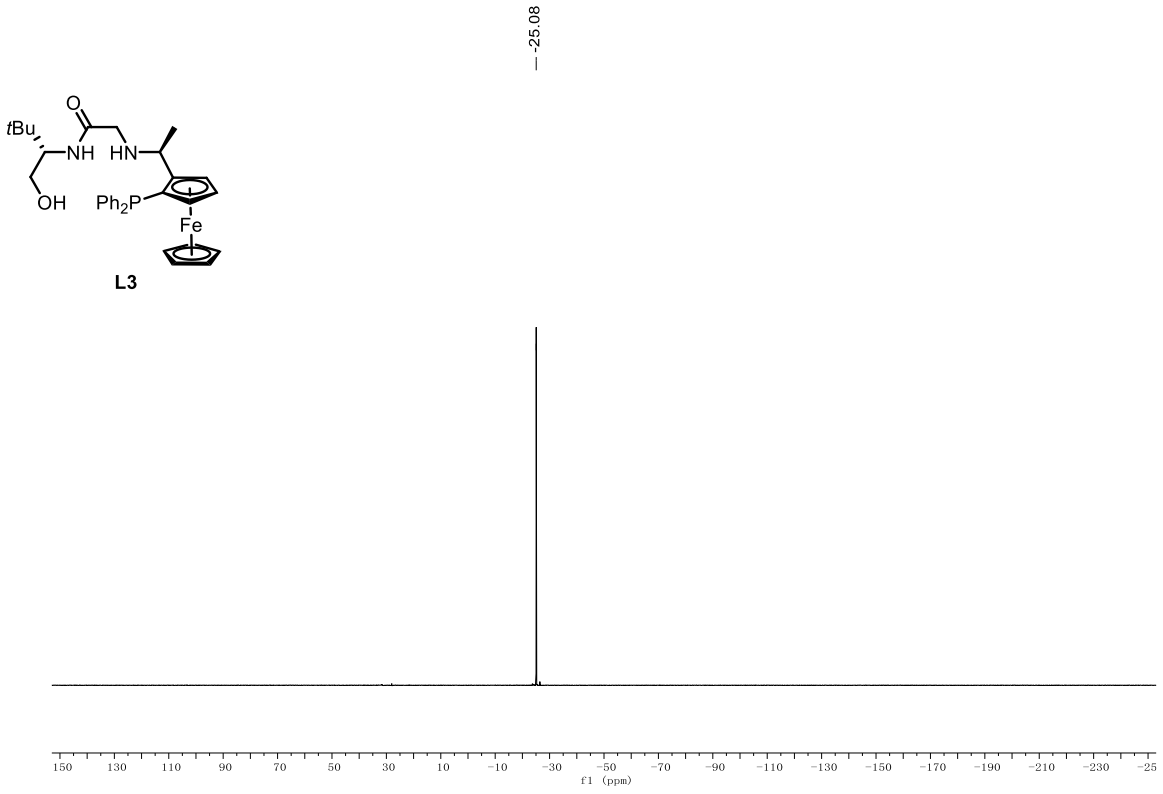
^{31}P NMR



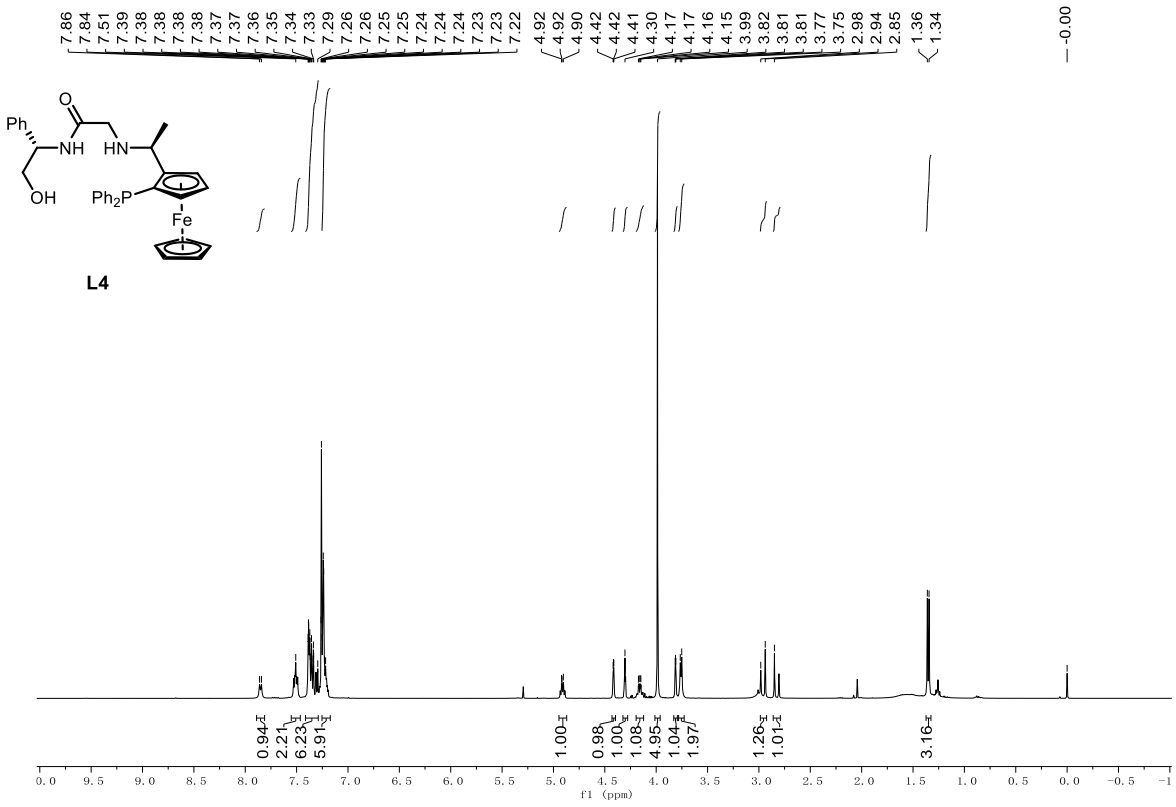
^{1}H NMR



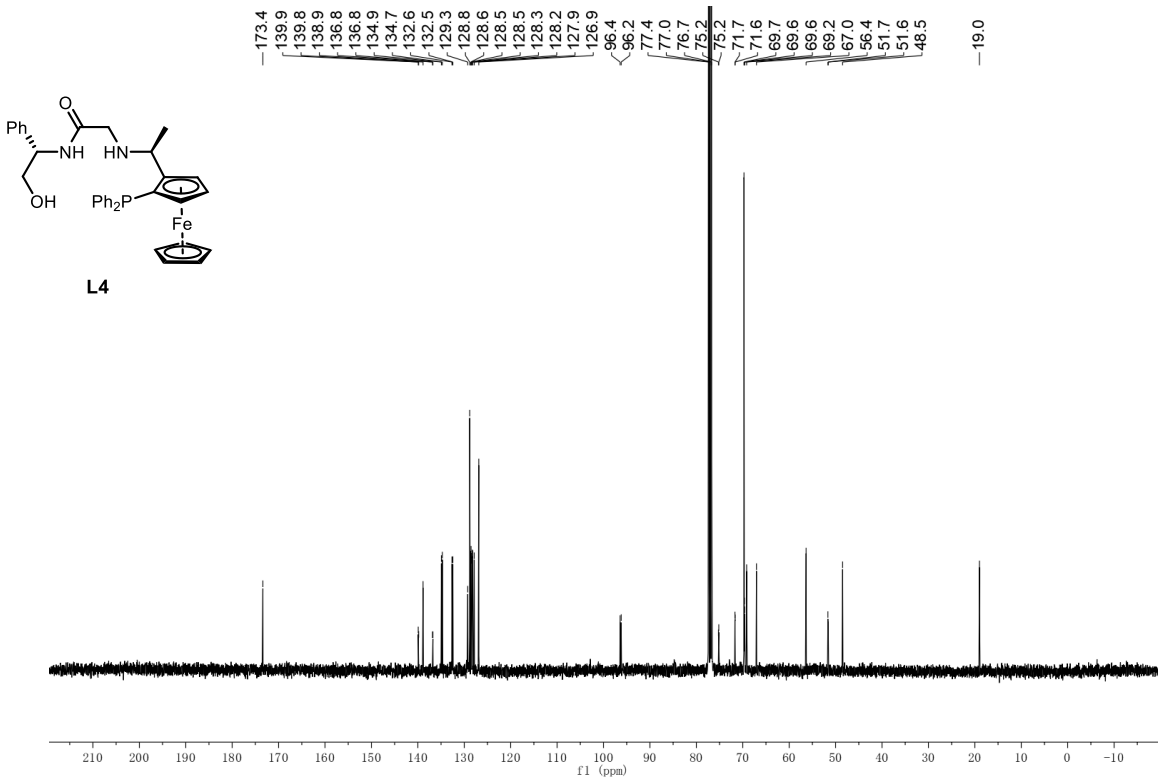
^{13}C NMR



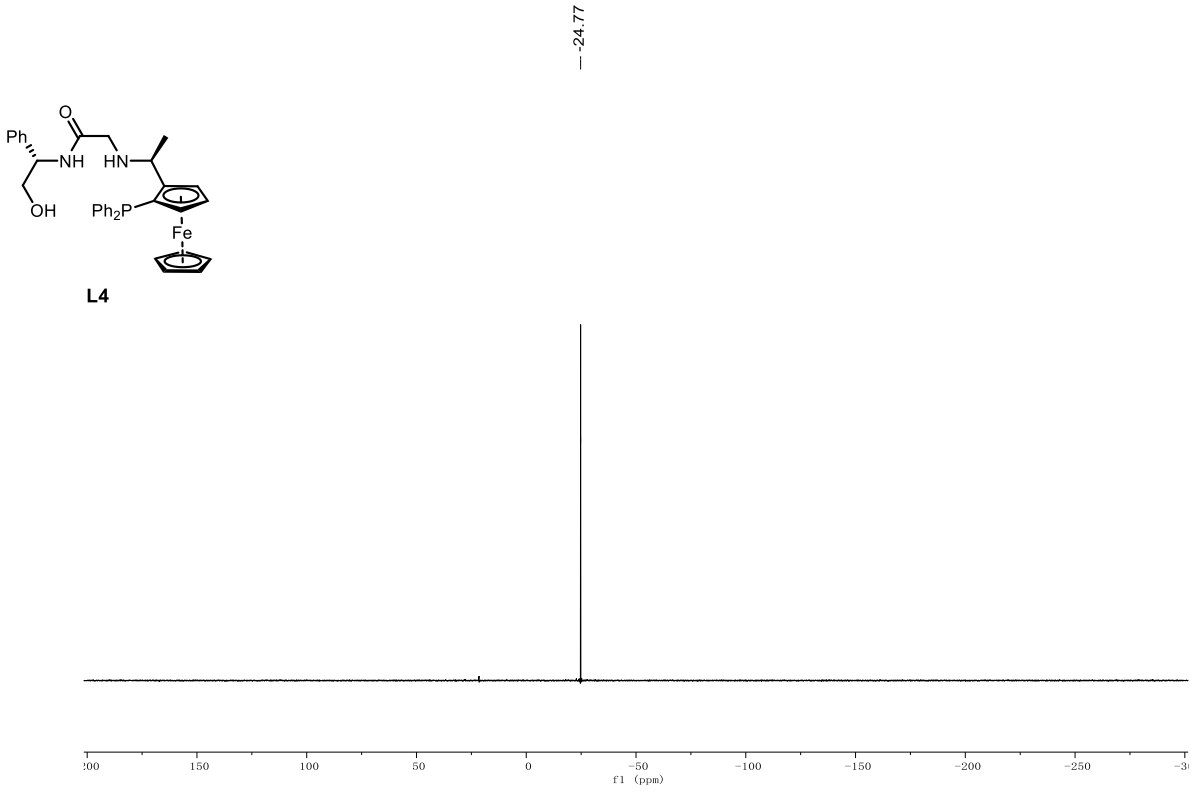
^{31}P NMR



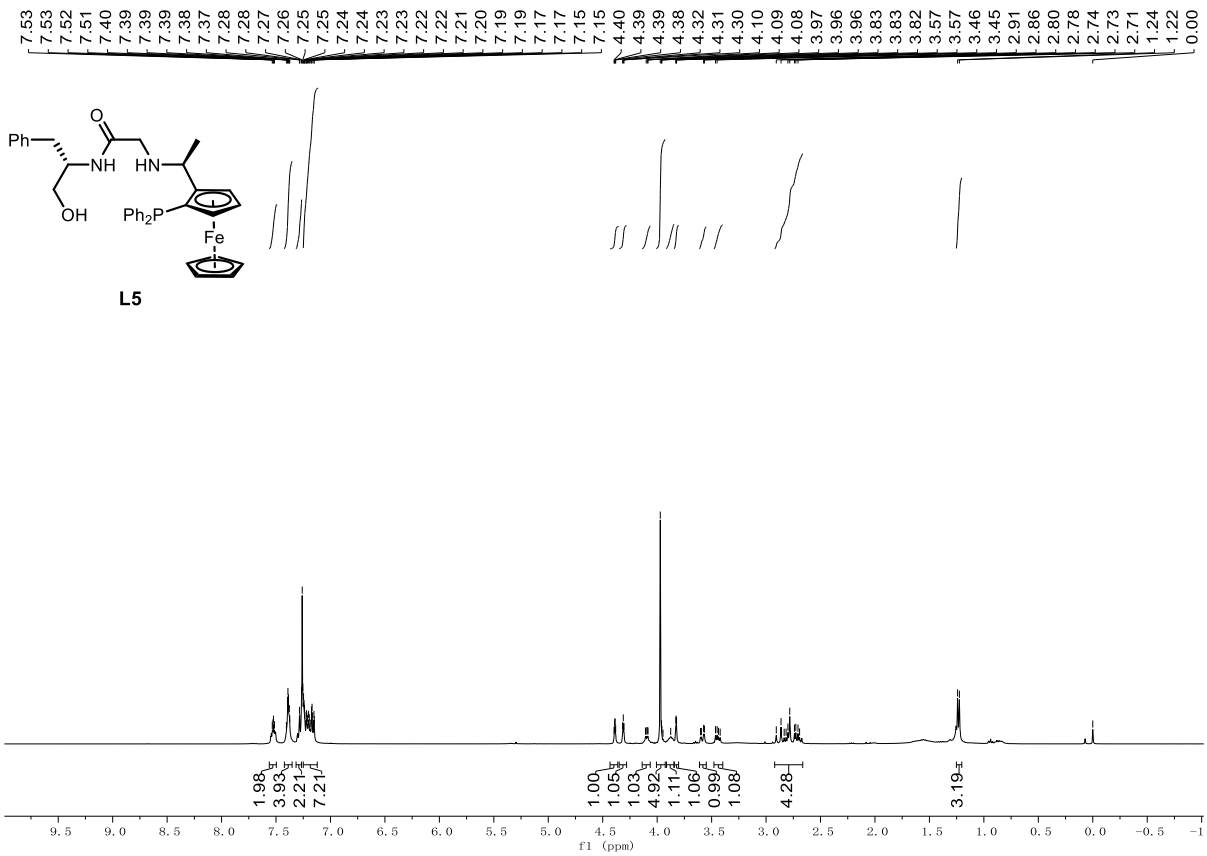
^{1}H NMR



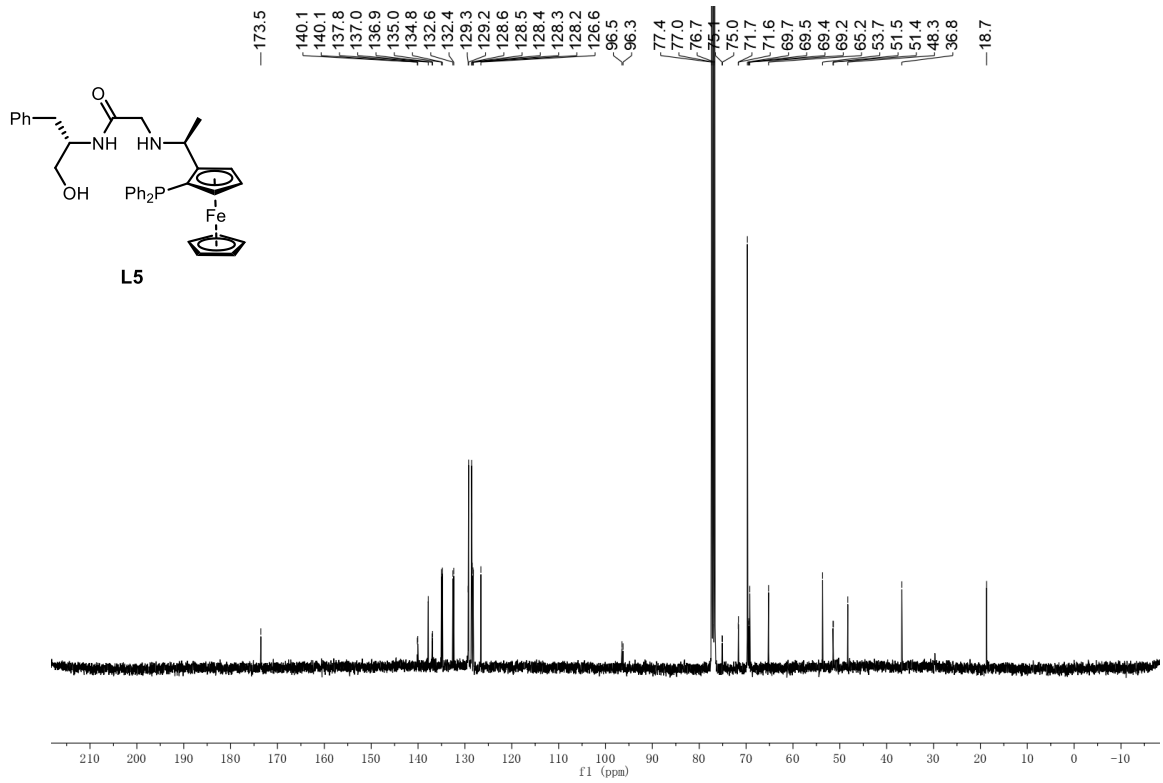
^{13}C NMR



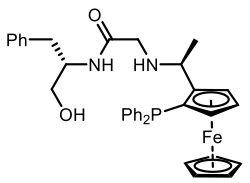
^{31}P NMR


7.53 7.53 7.52 7.51 7.40 7.39 7.39 7.39 7.38 7.37 7.28 7.28 7.27 7.26 7.25 7.25 7.24 7.24 7.23 7.23 7.22 7.22 7.21 7.20 7.19 7.19 7.17 7.17 7.15 7.15 4.40 4.39 4.39 4.38 4.32 4.31 4.30 4.10 4.09 4.08 3.97 3.96 3.96 3.83 3.83 3.82 3.57 3.57 3.46 3.45 2.91 2.86 2.80 2.78 2.74 2.73 2.71 1.24 1.22 0.00
Ph
NH
HN
O
OH
Ph2P
Fe
L5
1.98 3.93 2.21 7.21 1.00 1.05 1.03 4.92 1.11 1.06 0.99 1.08 4.28 3.19
f1 (ppm)

^{1}H NMR

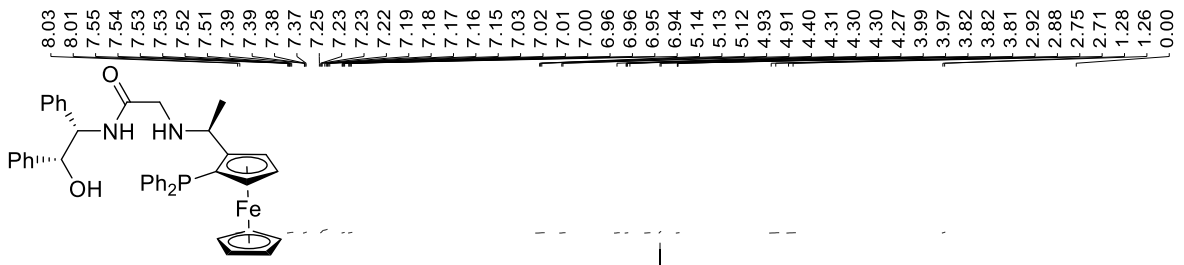

173.5 140.1 140.1 137.8 137.0 136.9 135.0 134.8 132.6 132.4 129.3 129.2 128.6 128.5 128.4 128.3 128.2 126.6 96.5 96.3 77.4 77.0 76.7 75.1 75.0 71.7 71.6 69.7 69.5 69.4 69.2 65.2 53.7 51.5 51.4 48.3 36.8 18.7
Ph
NH
HN
O
OH
Ph2P
Fe
L5
f1 (ppm)

^{1}C NMR



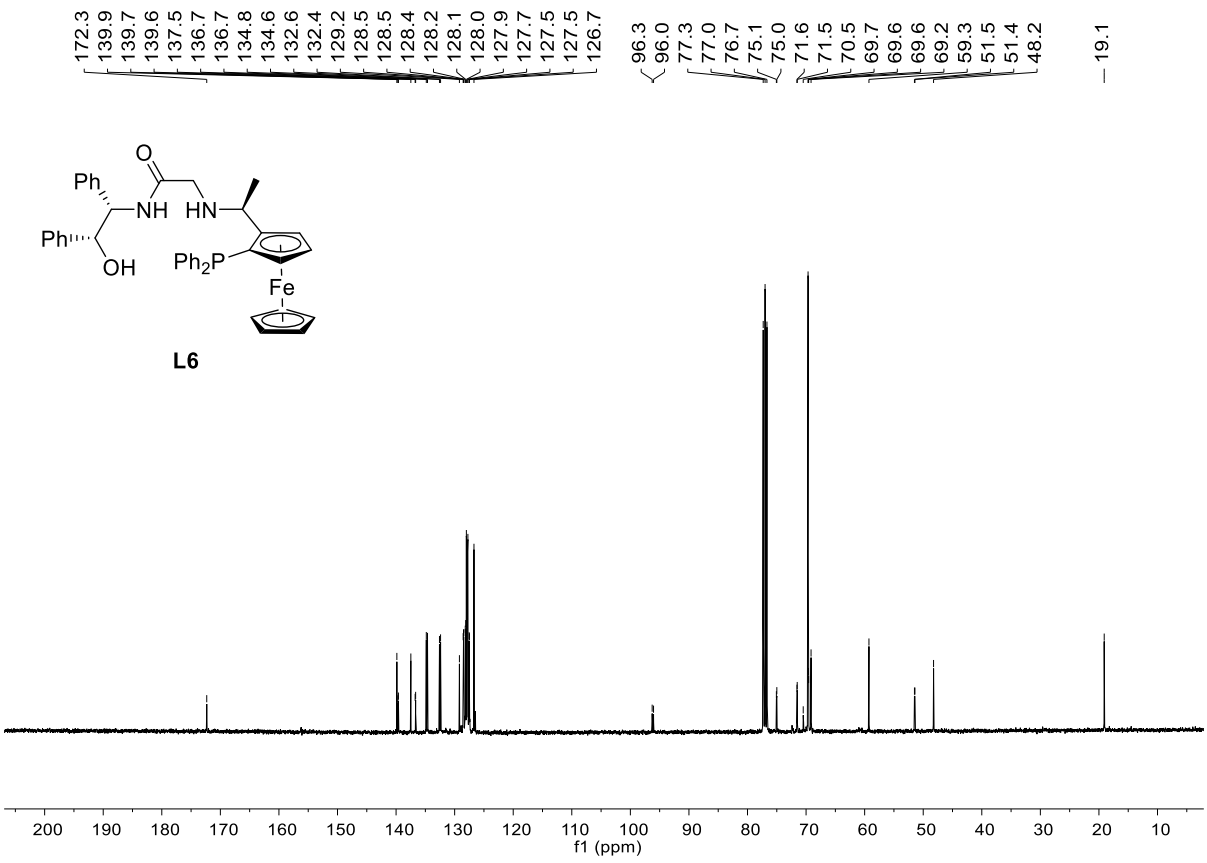
L5

^{31}P NMR

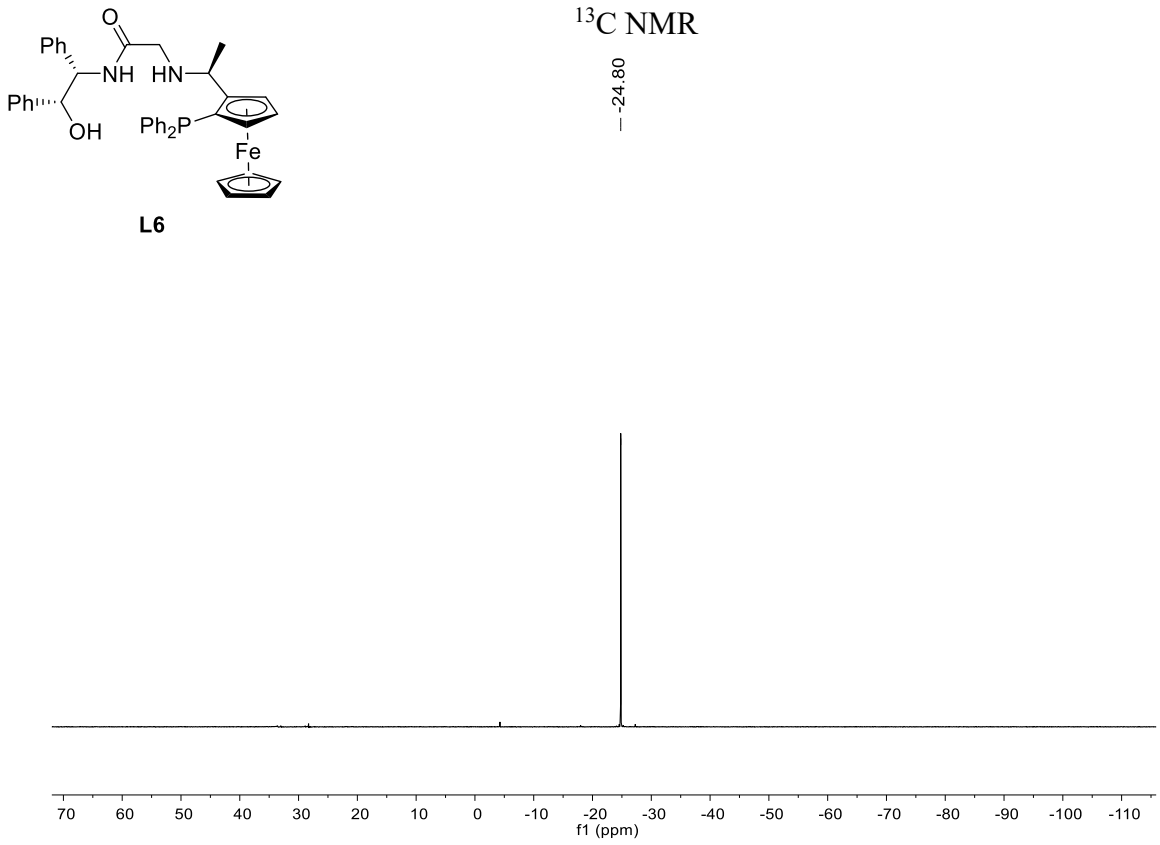


L6

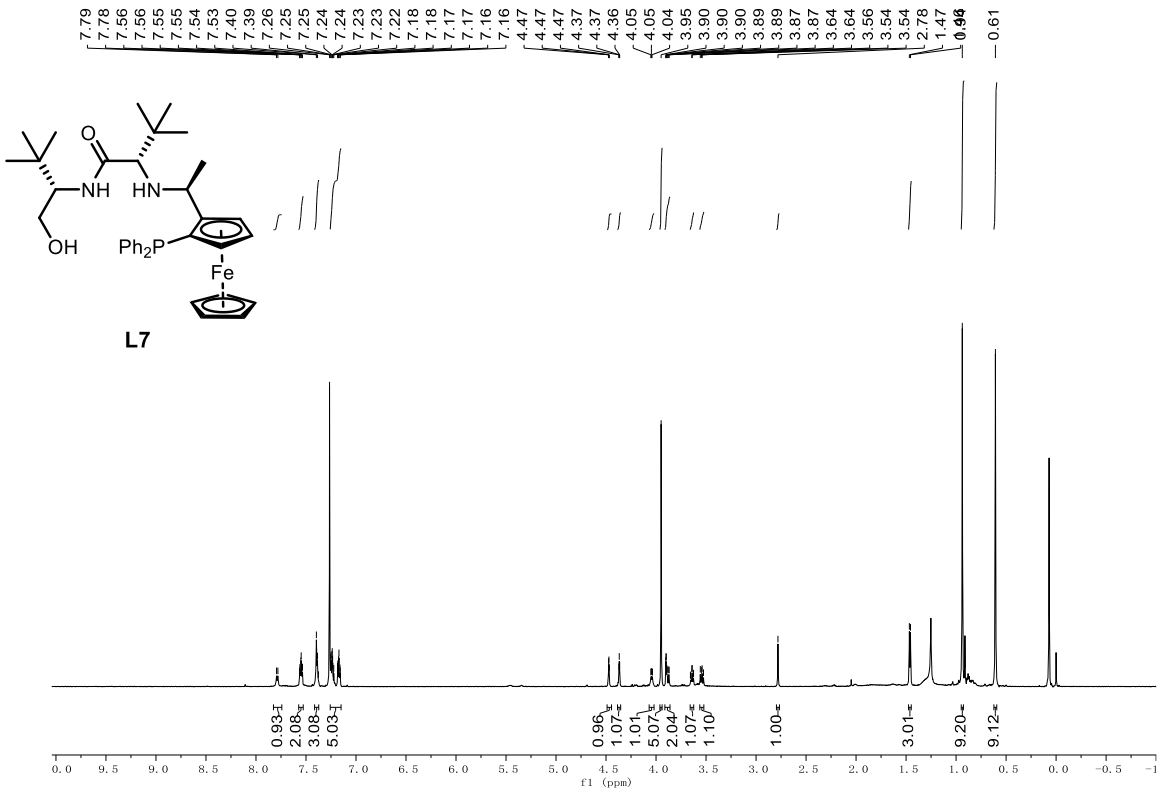
^{1}H NMR



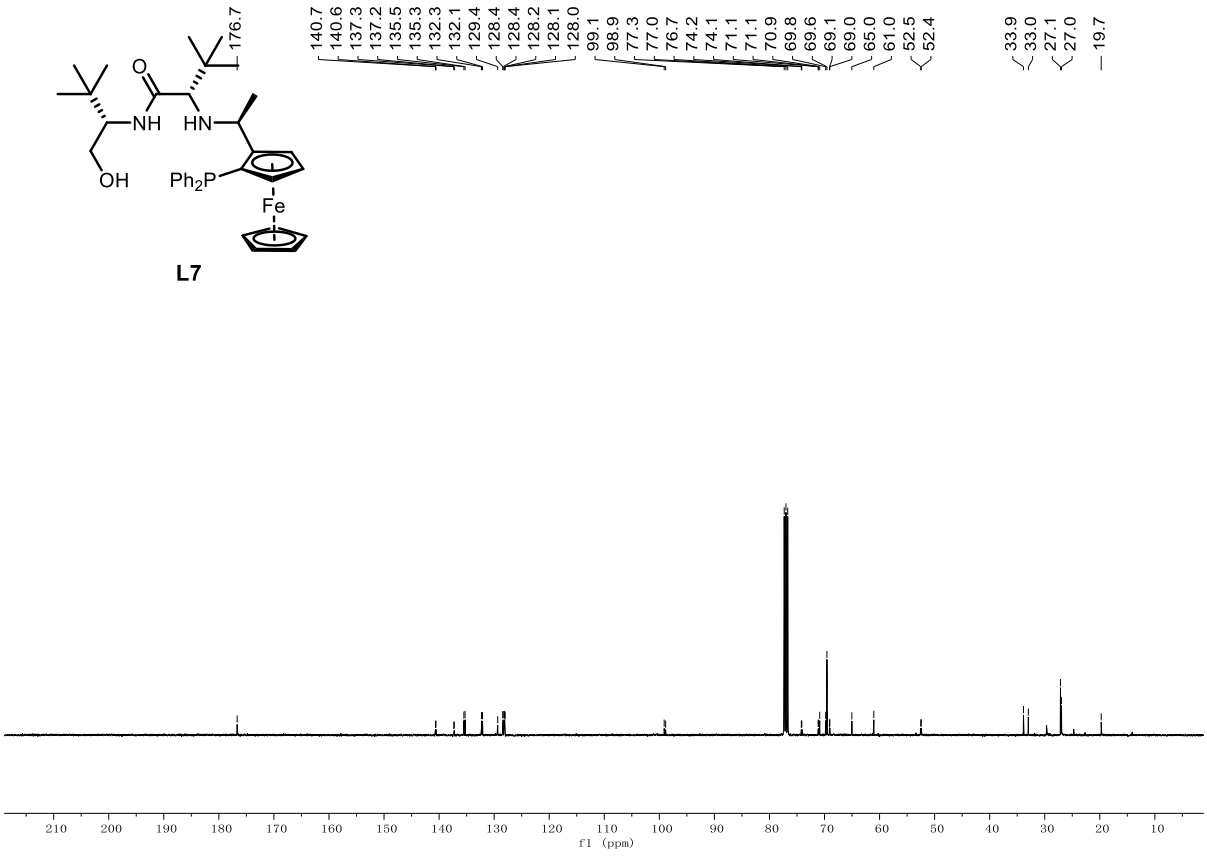
^{13}C NMR



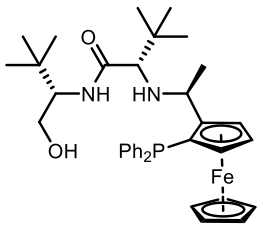
^{31}P NMR



^{1}H NMR

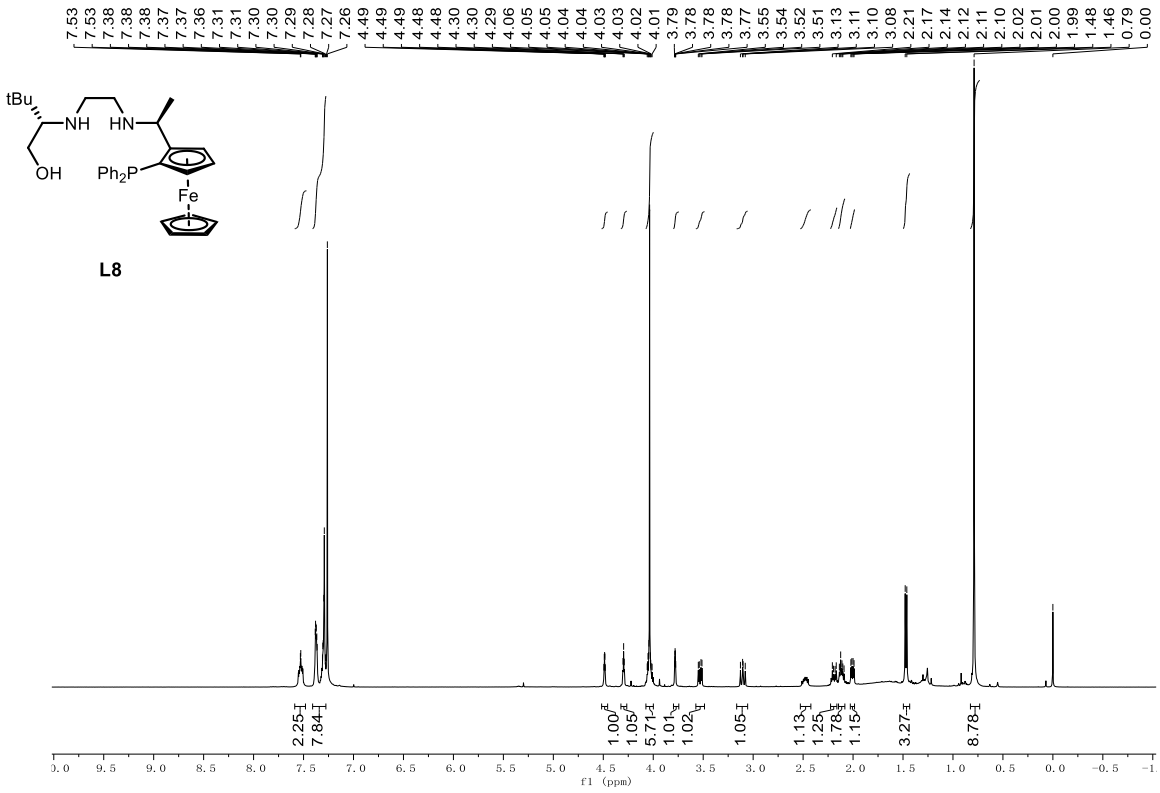


^{13}C NMR



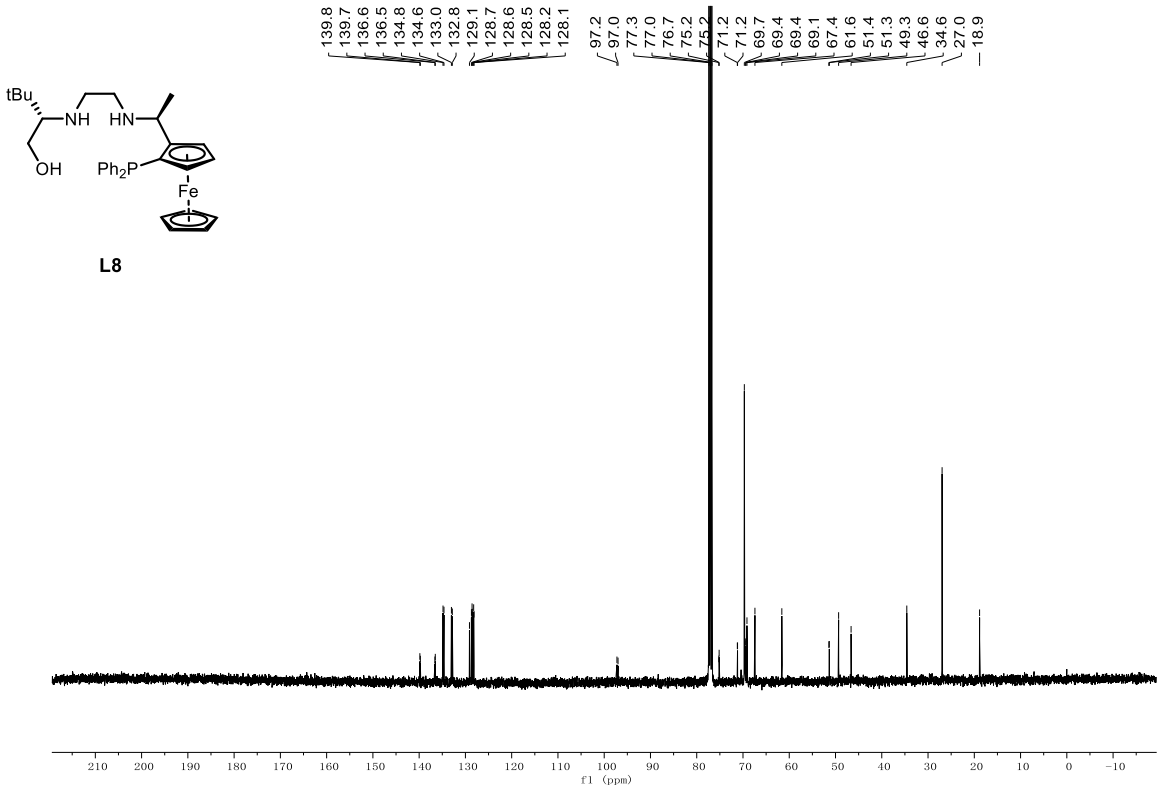
L7

^{31}P NMR



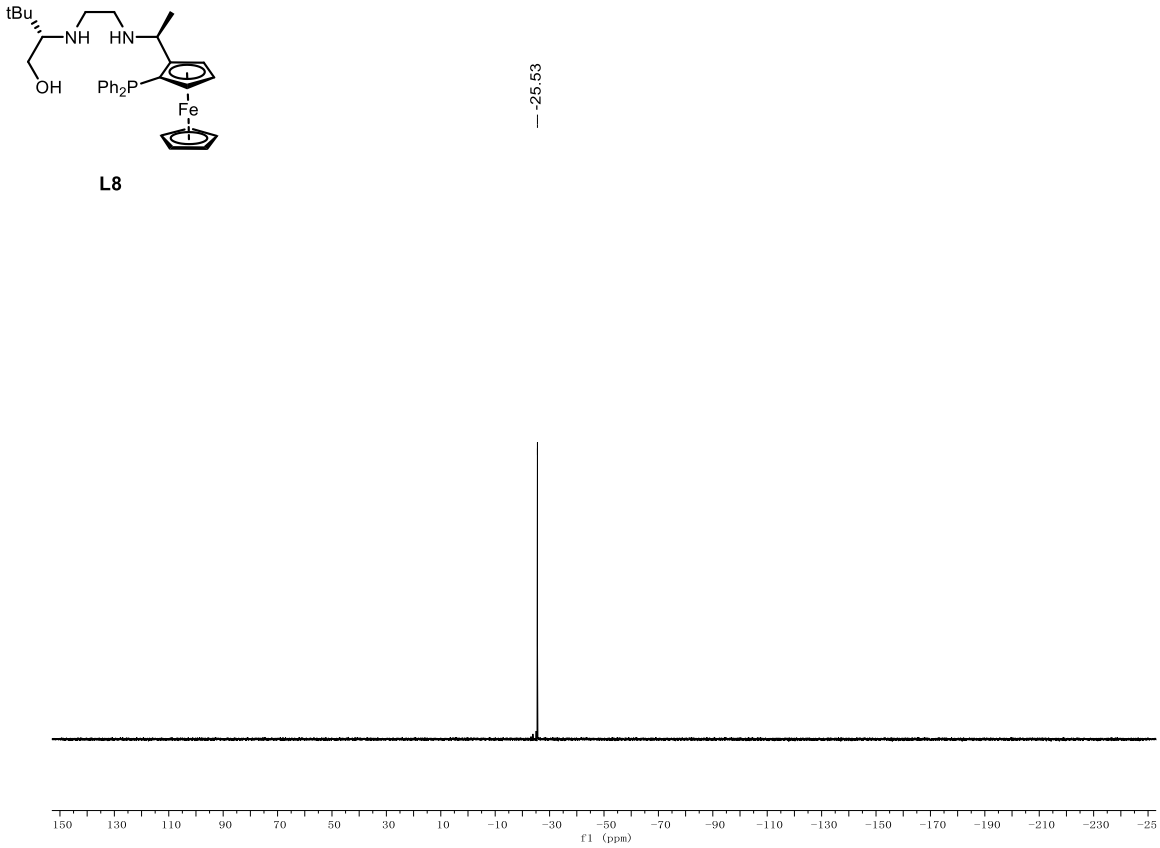
L8

^{1}H NMR



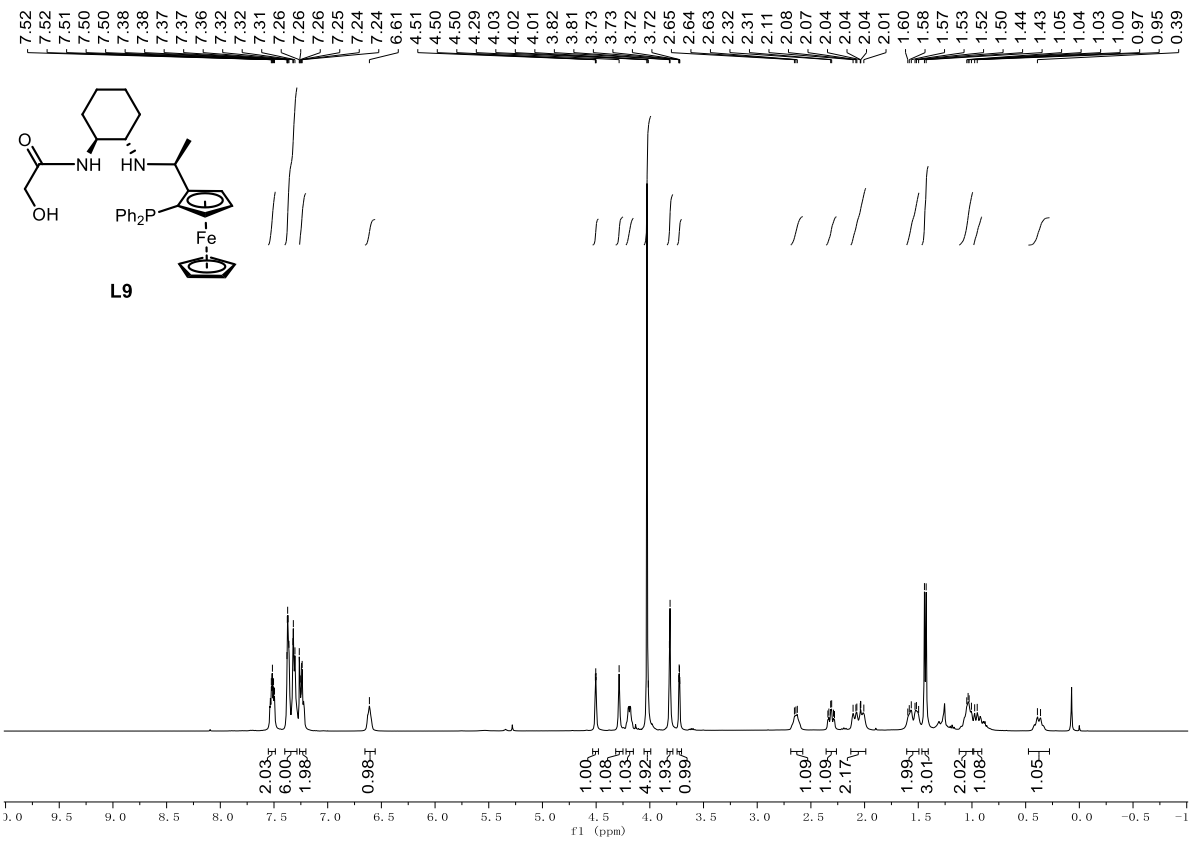
L8

^{13}C NMR

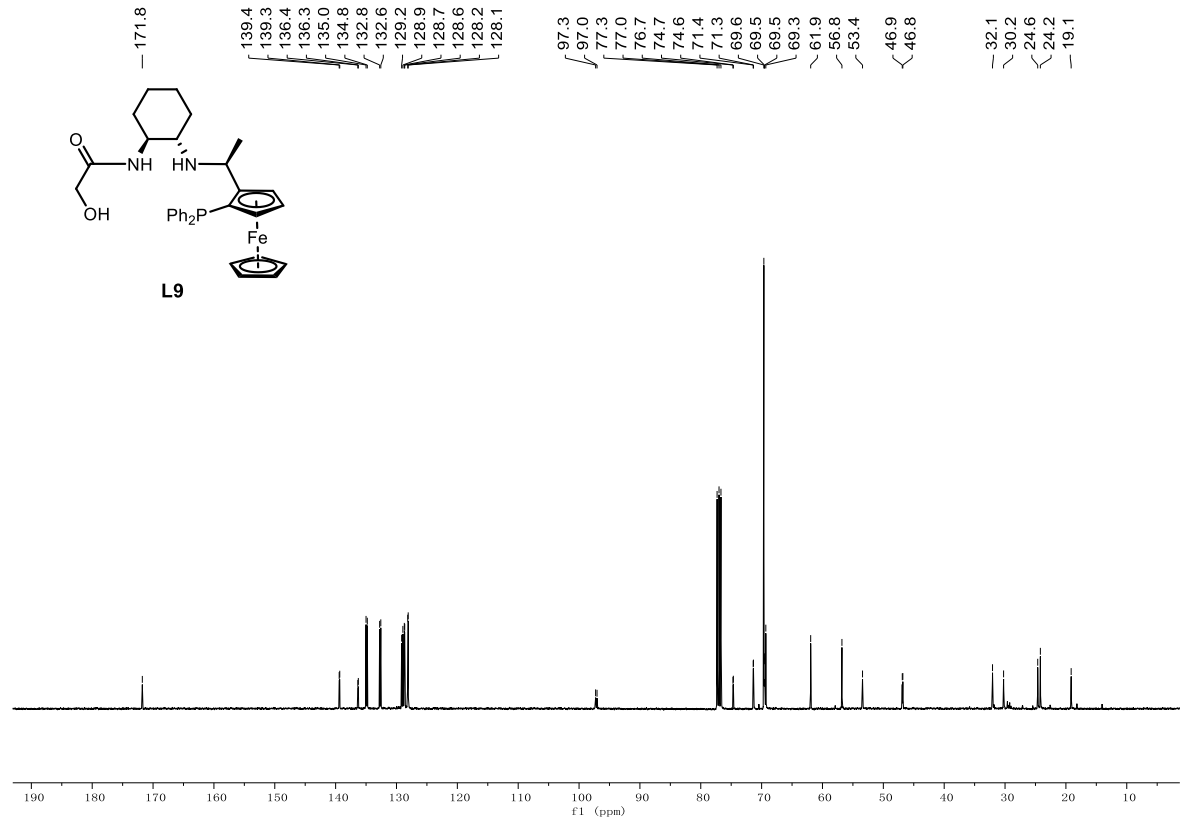


L8

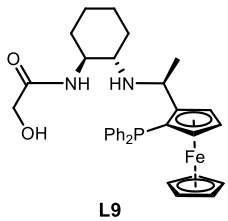
^{31}P NMR



^{1}H NMR

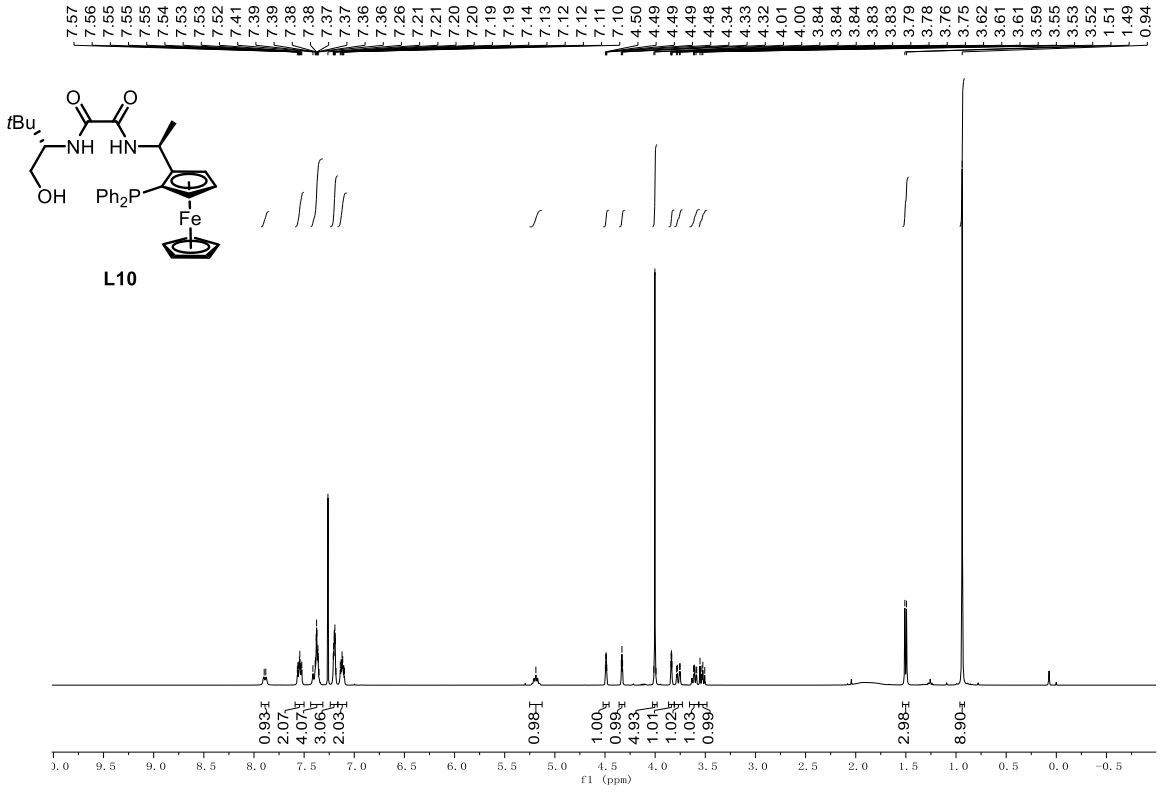


^{13}C NMR



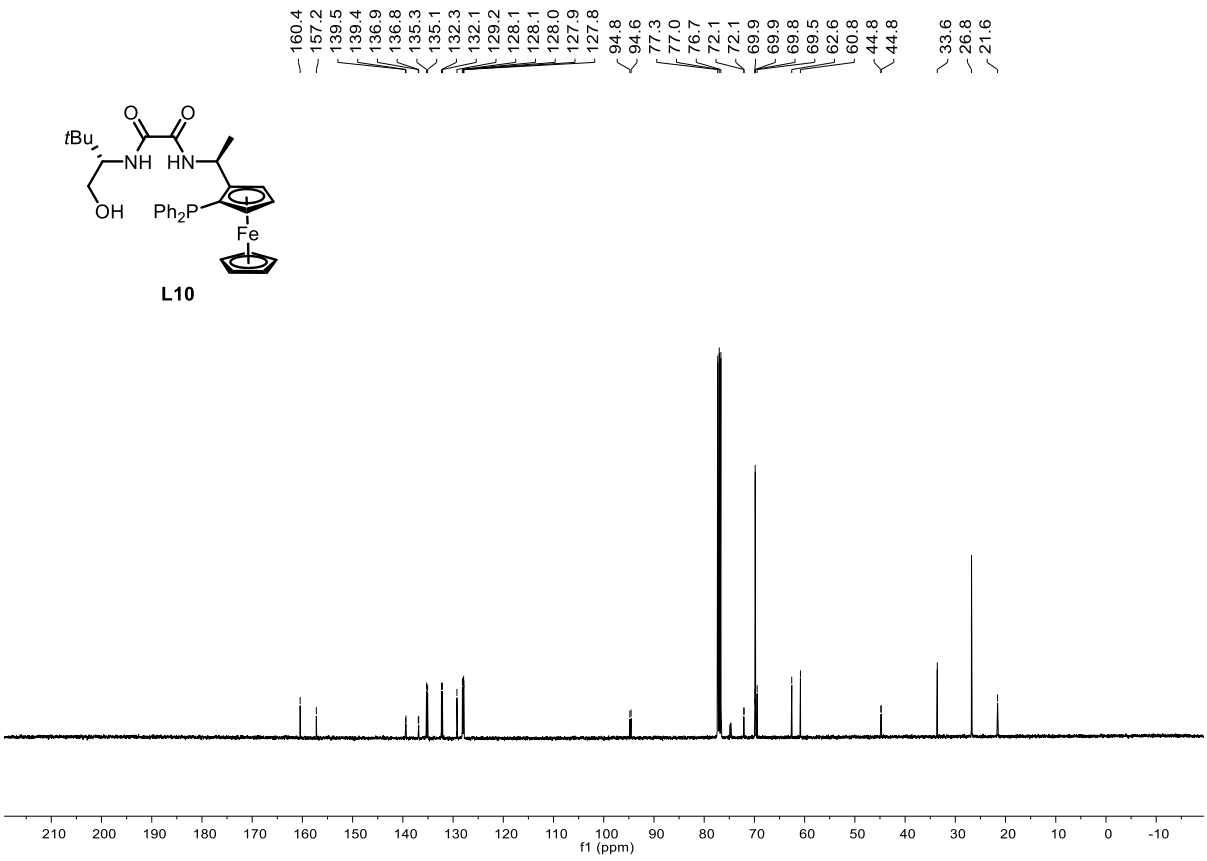
L9

^{31}P NMR

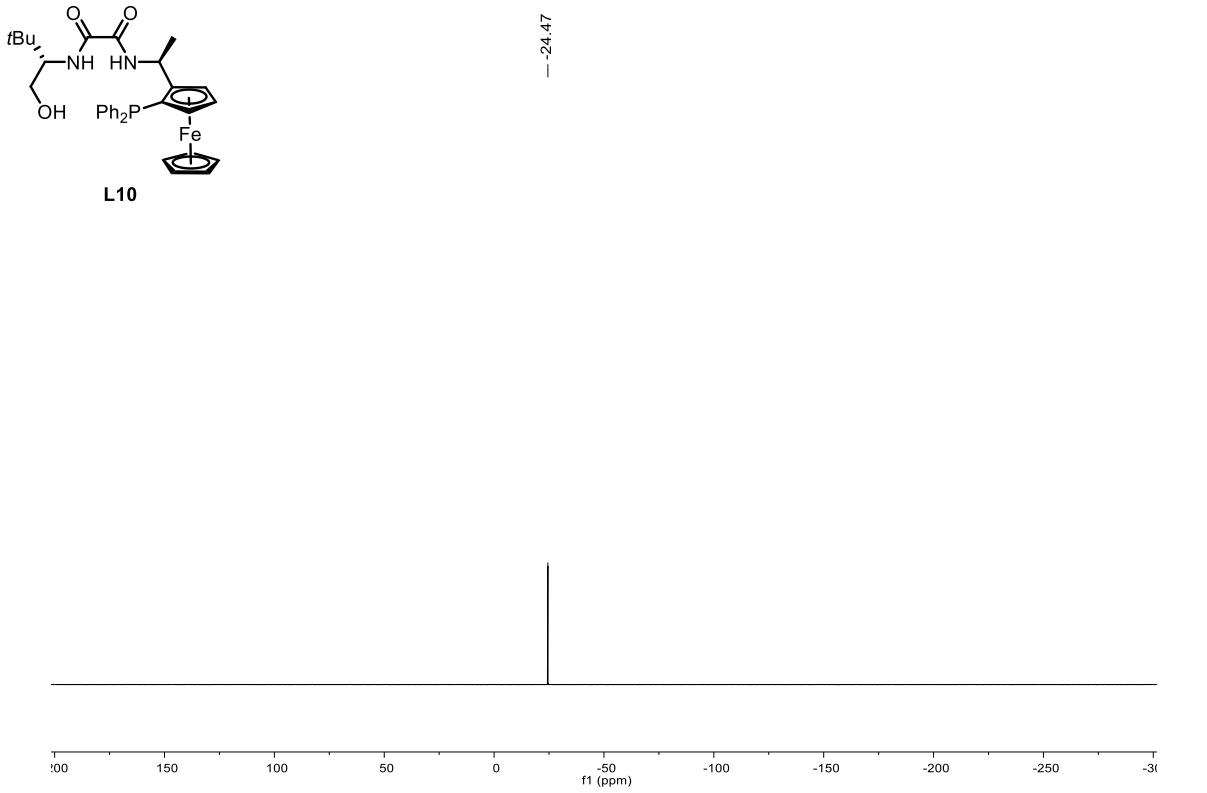


L10

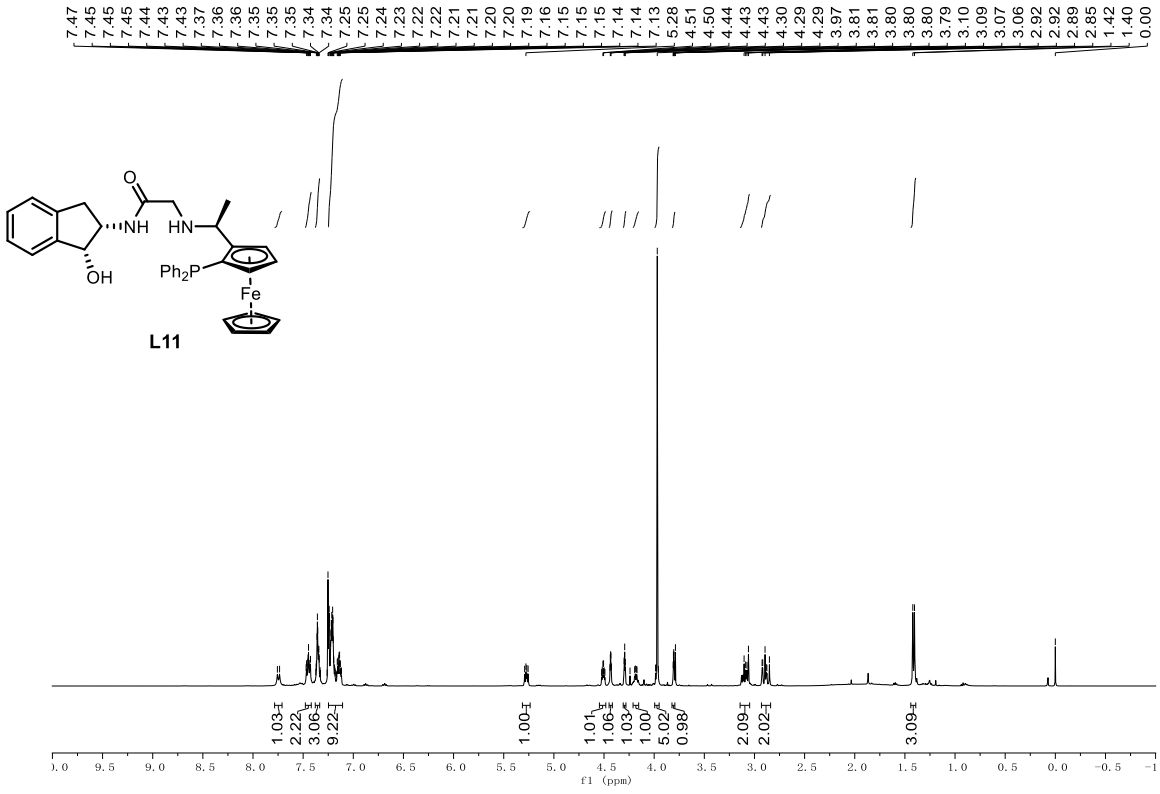
^{1}H NMR



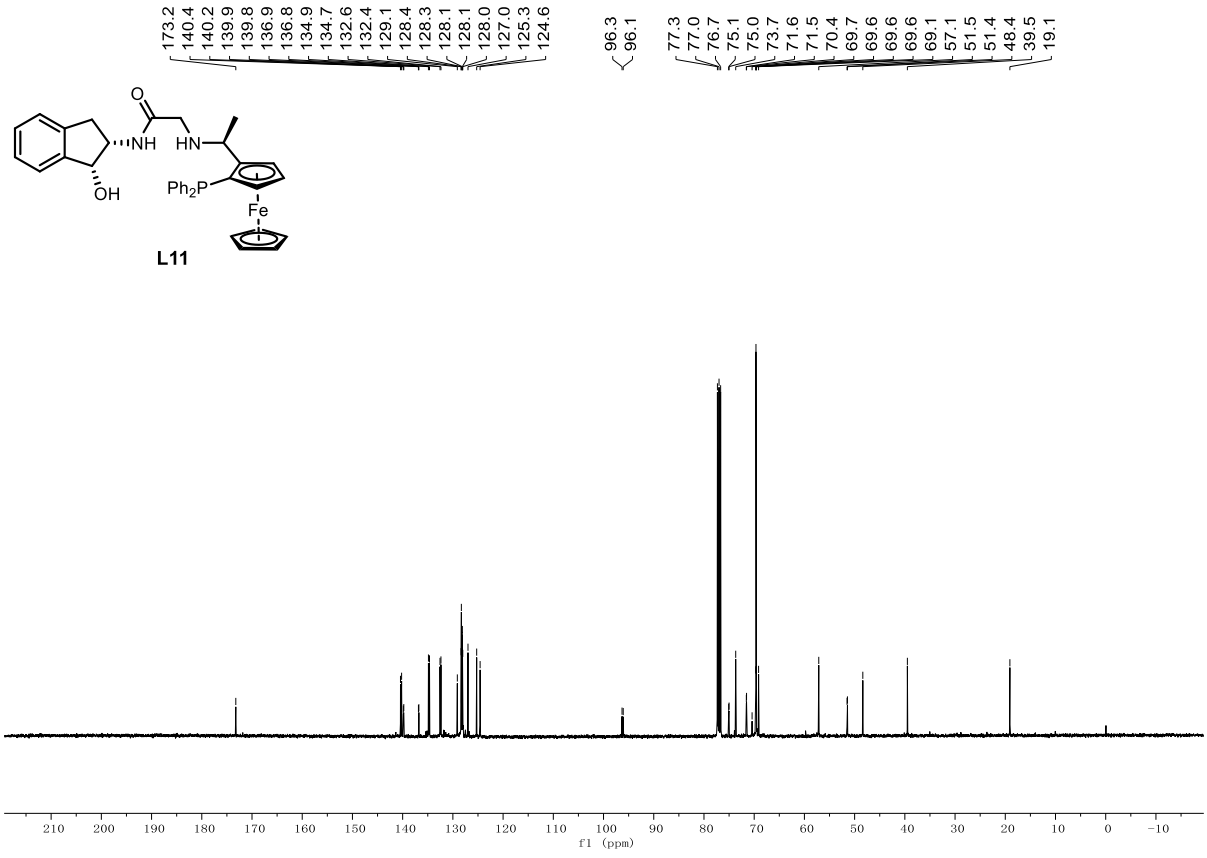
^{13}C NMR



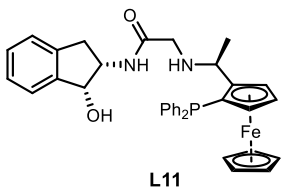
^{31}P NMR



^{1}H NMR

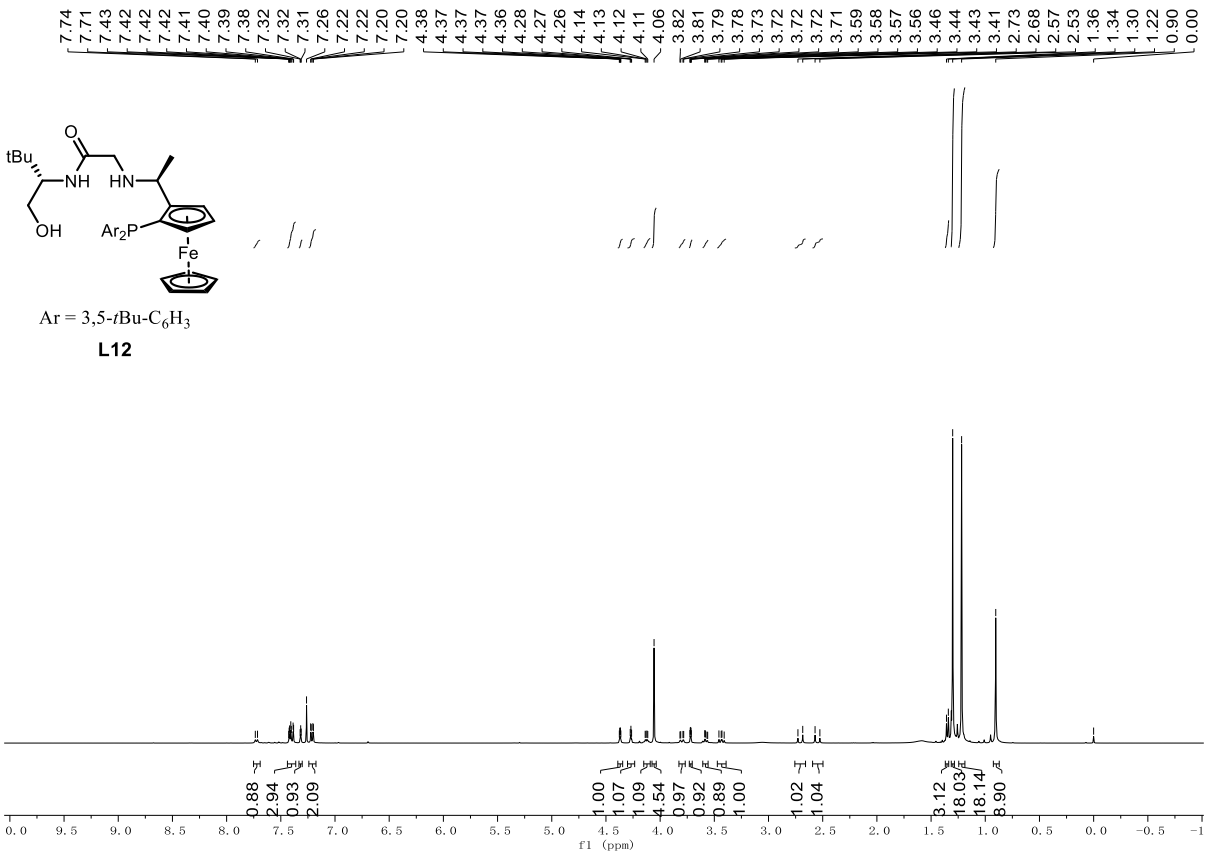


^{13}C NMR



L11

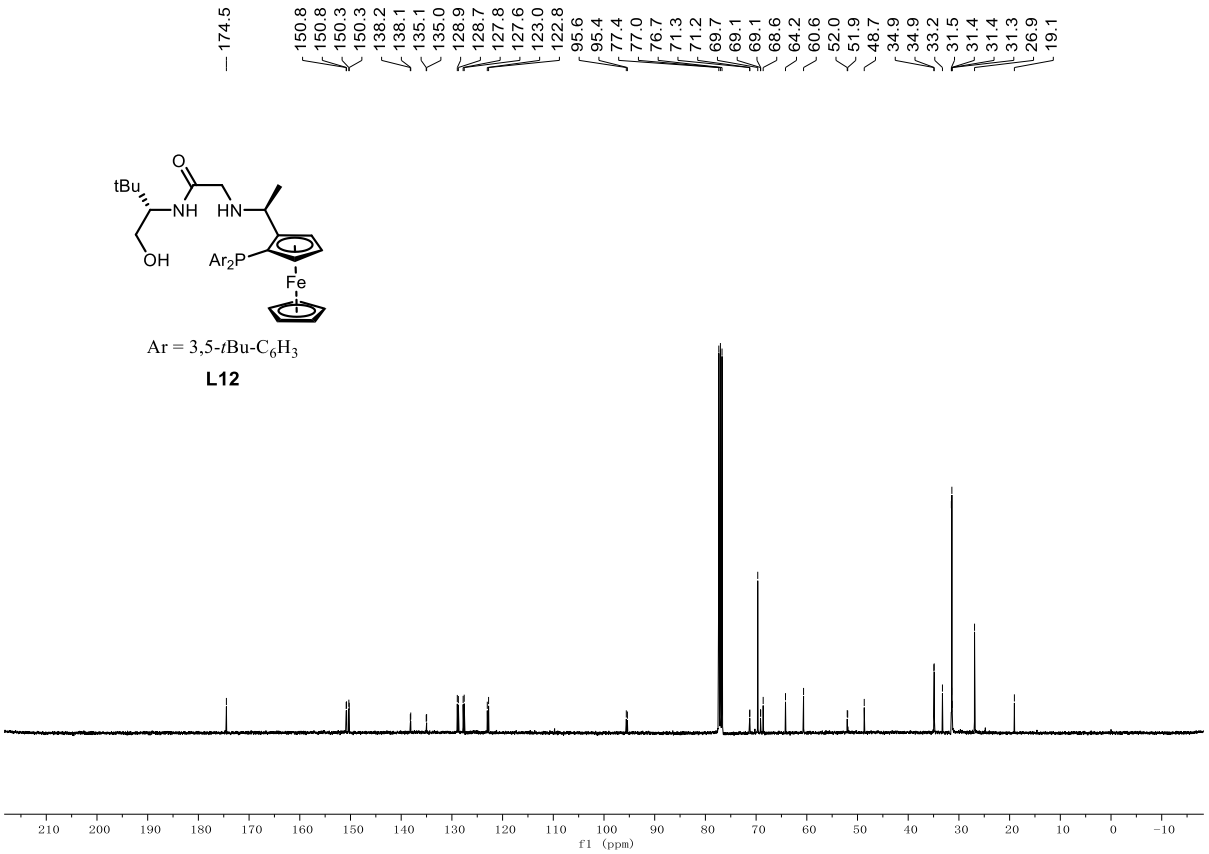
^{31}P NMR



Ar = 3,5-*t*Bu-C_6H_3

L12

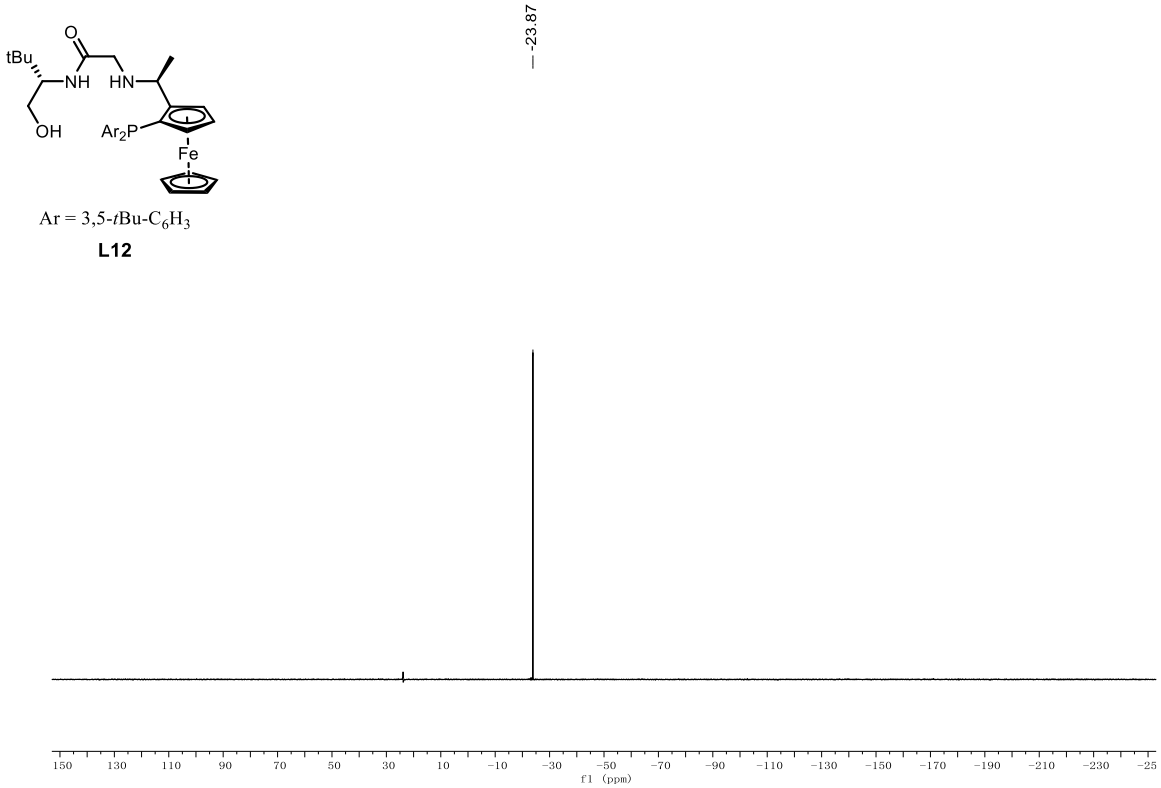
^{1}H NMR



Ar = 3,5-*t*Bu-C_6H_3

L12

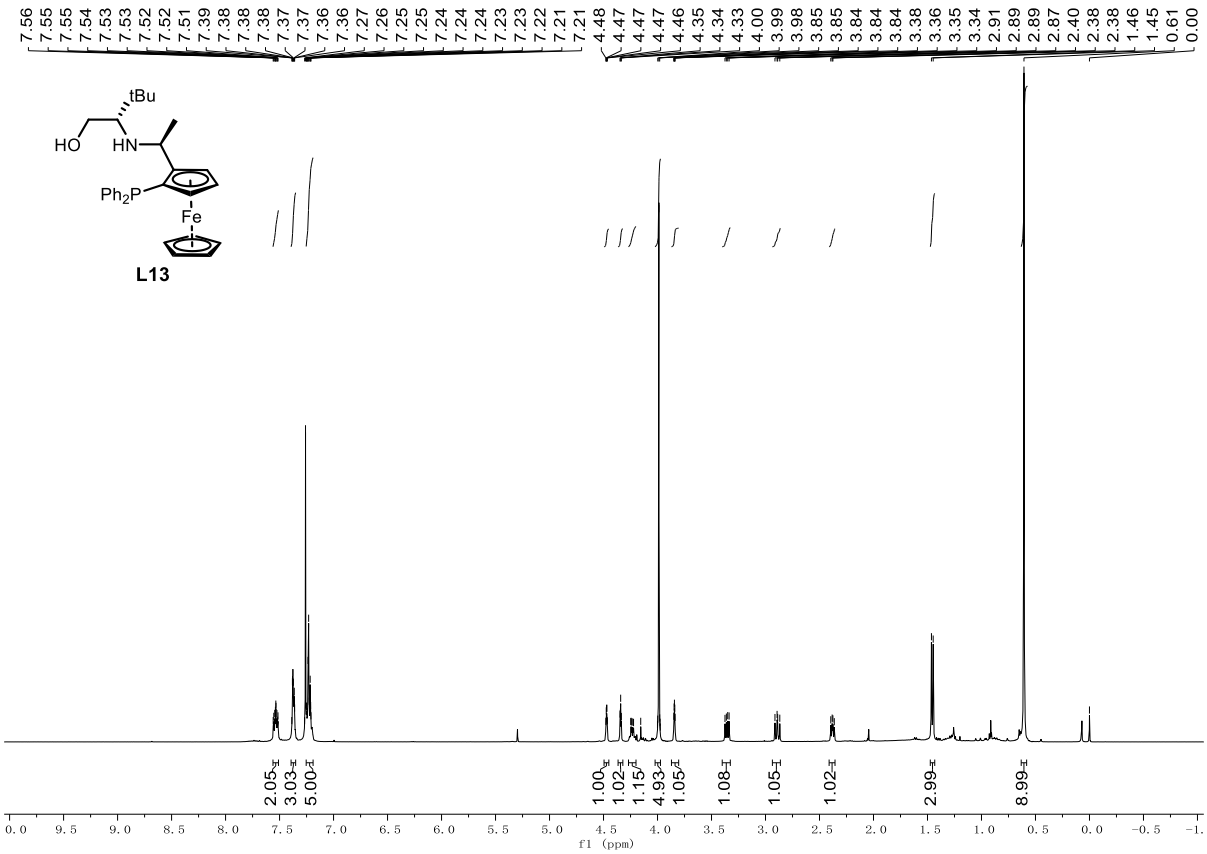
^{13}C NMR



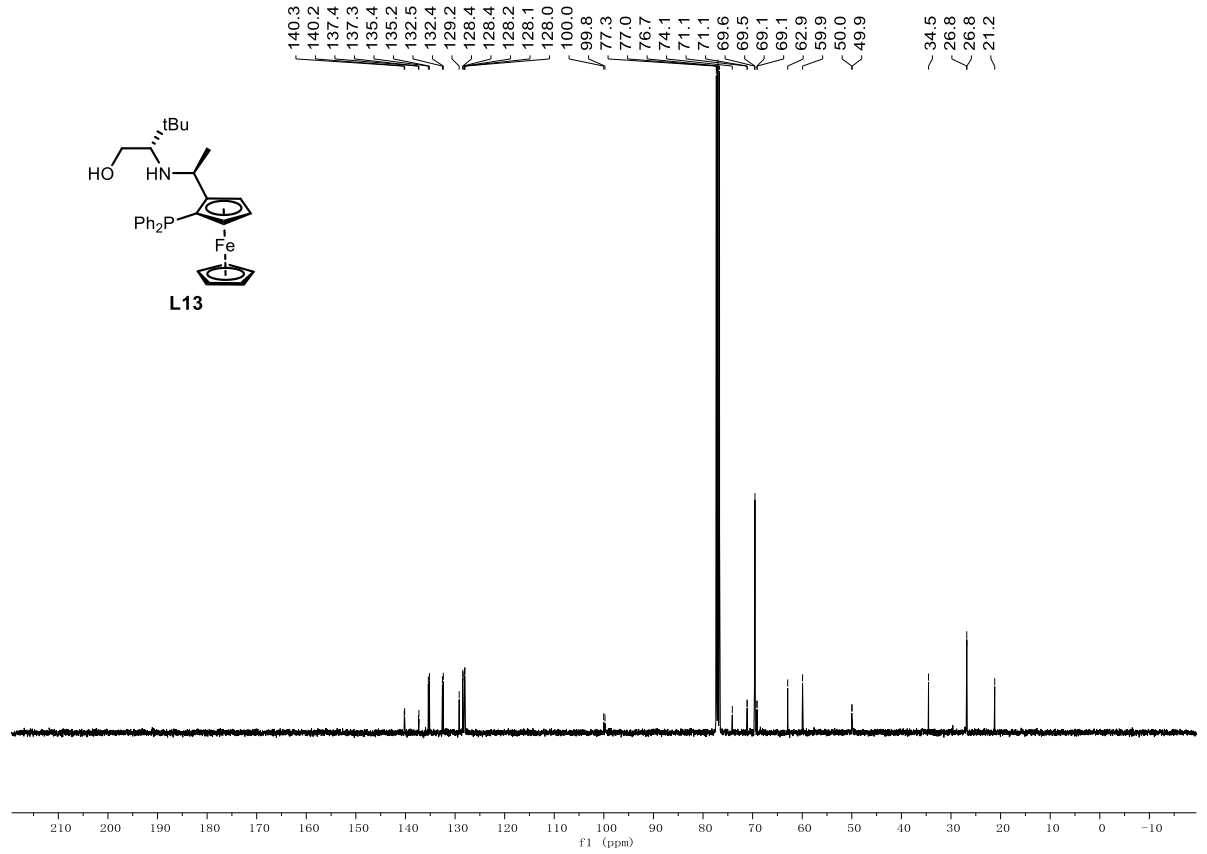
Ar = 3,5-*t*Bu-C_6H_3

L12

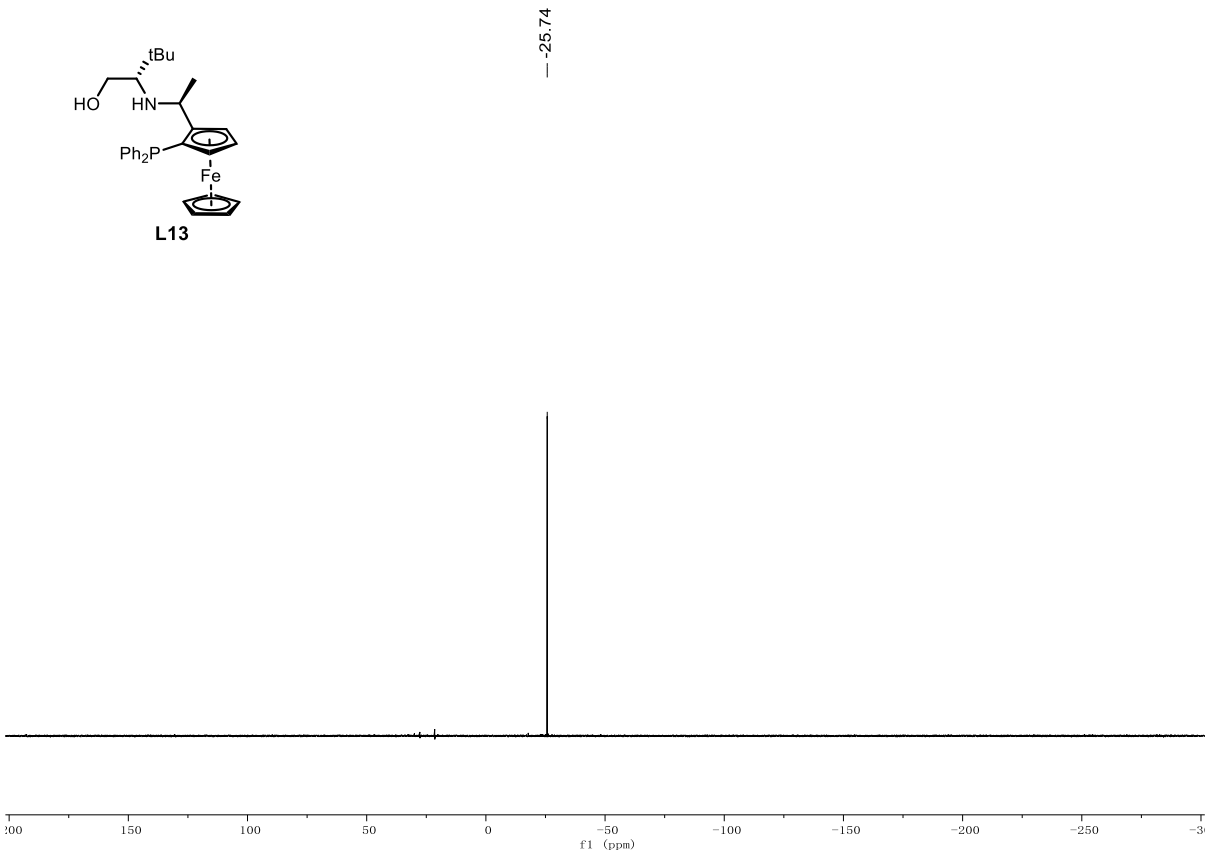
^{31}P NMR



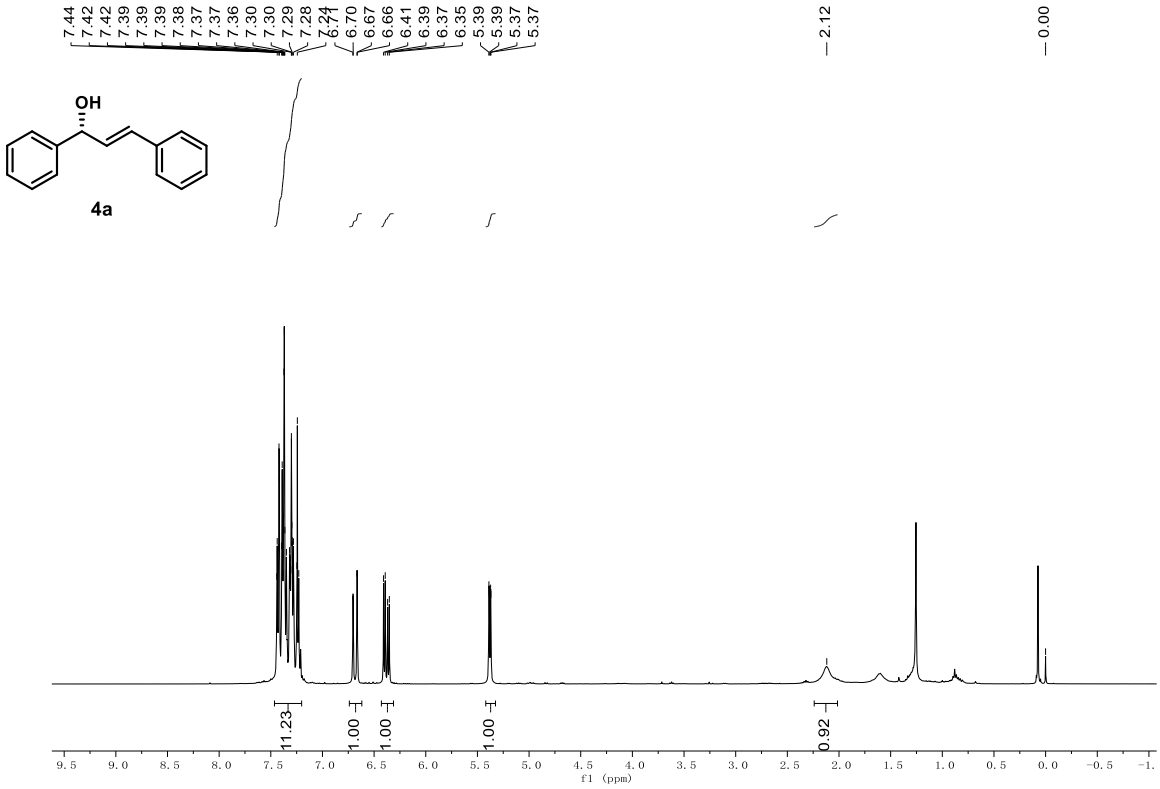
^{1}H NMR



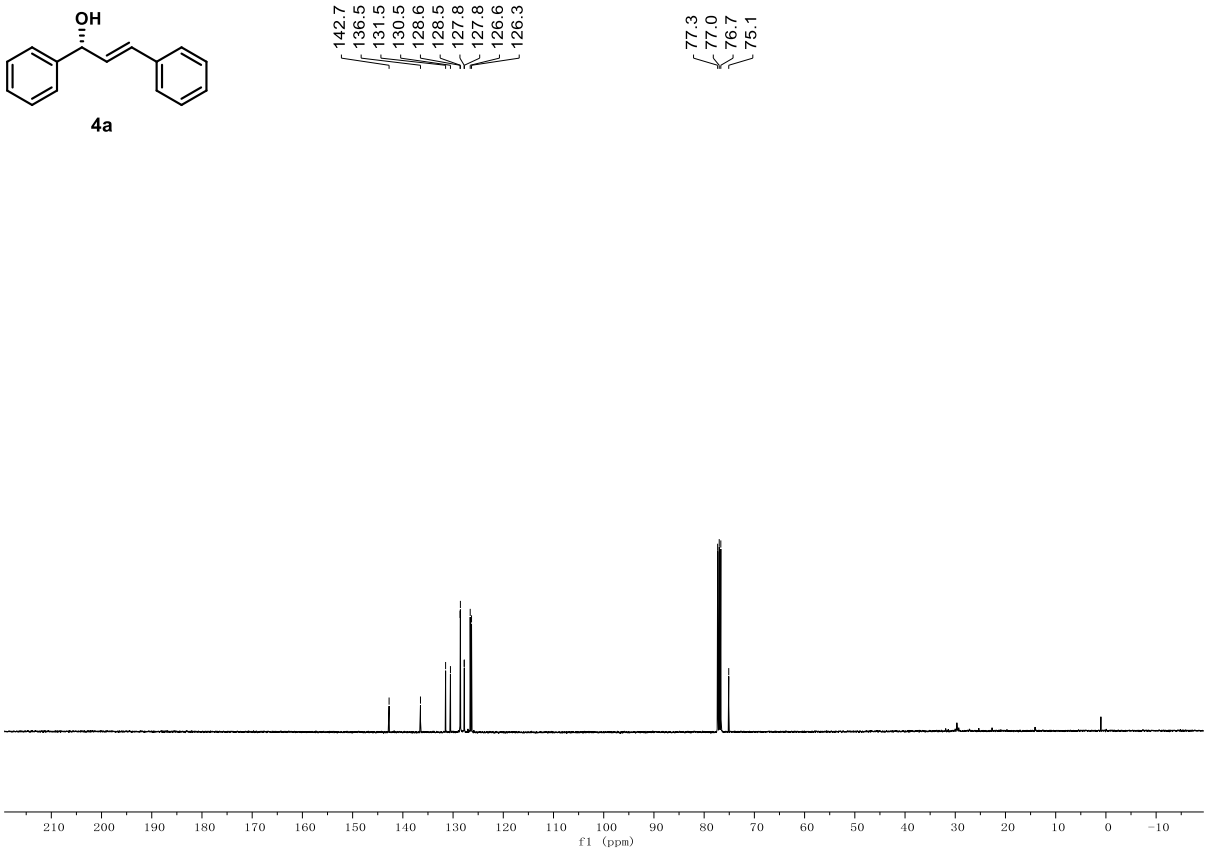
^{13}C NMR



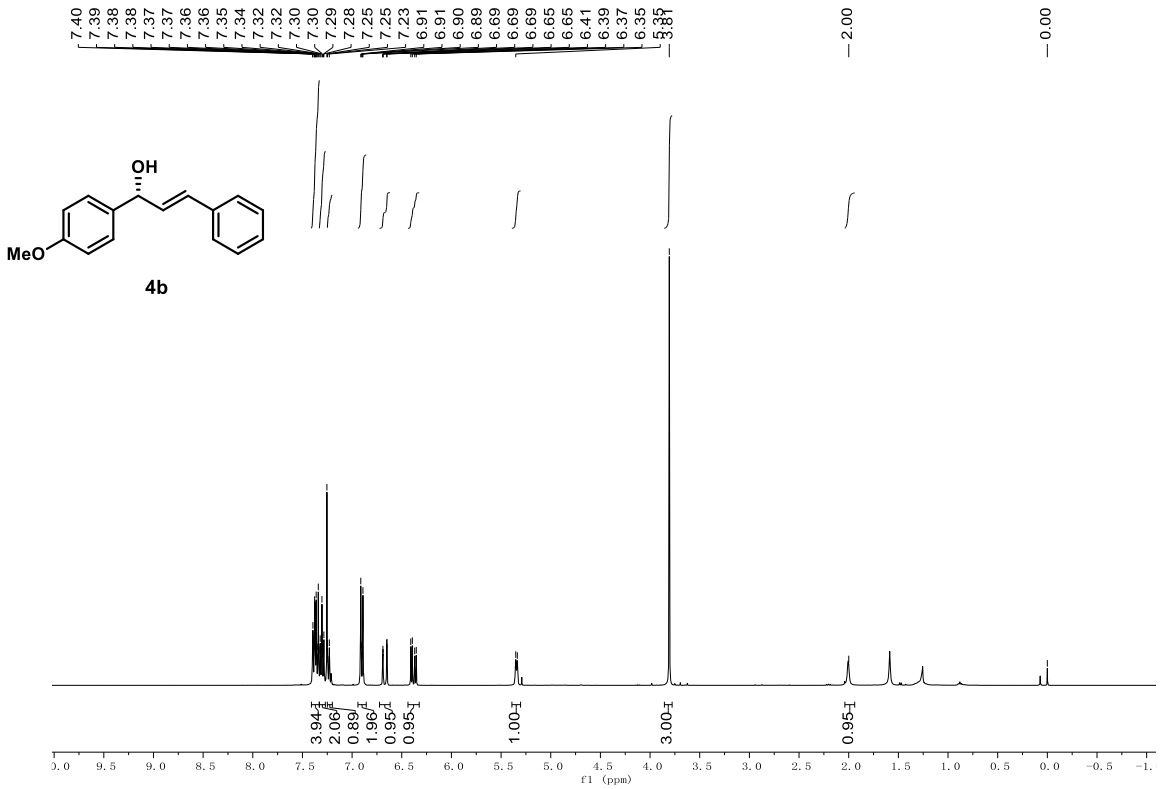
^{31}P NMR



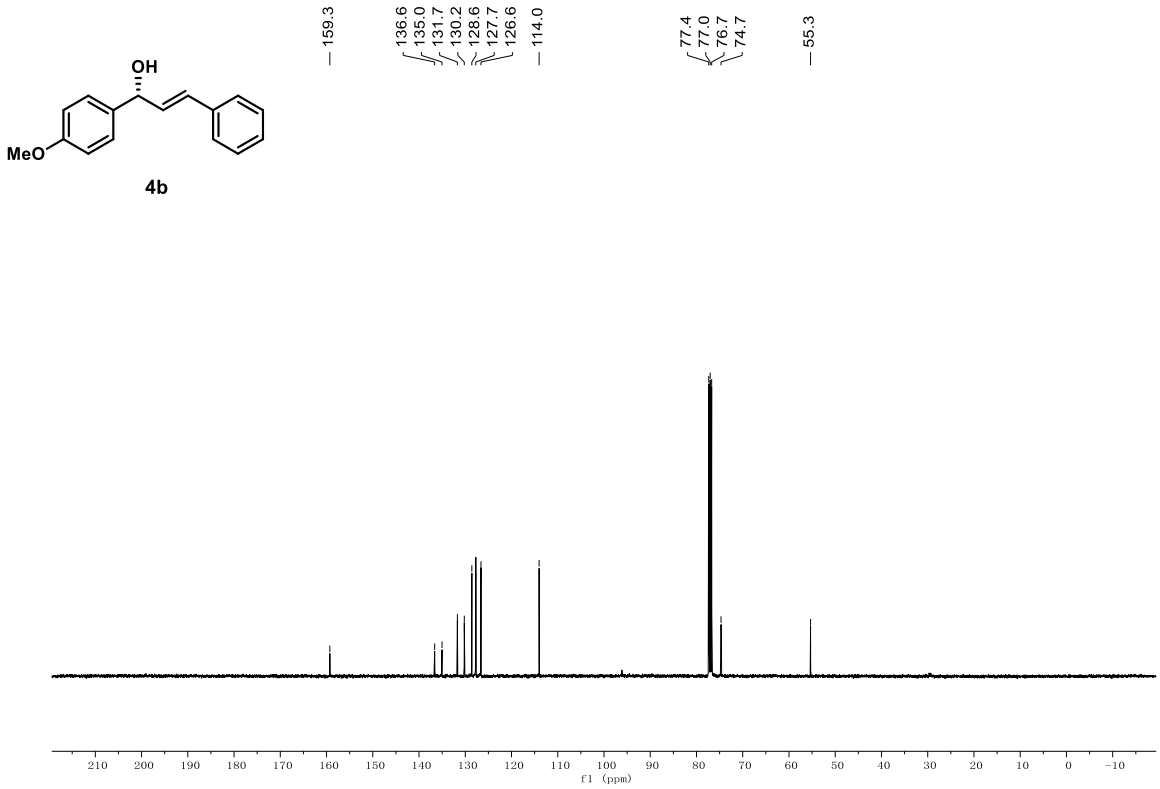
^{1}H NMR



^{13}C NMR



^{1}H NMR



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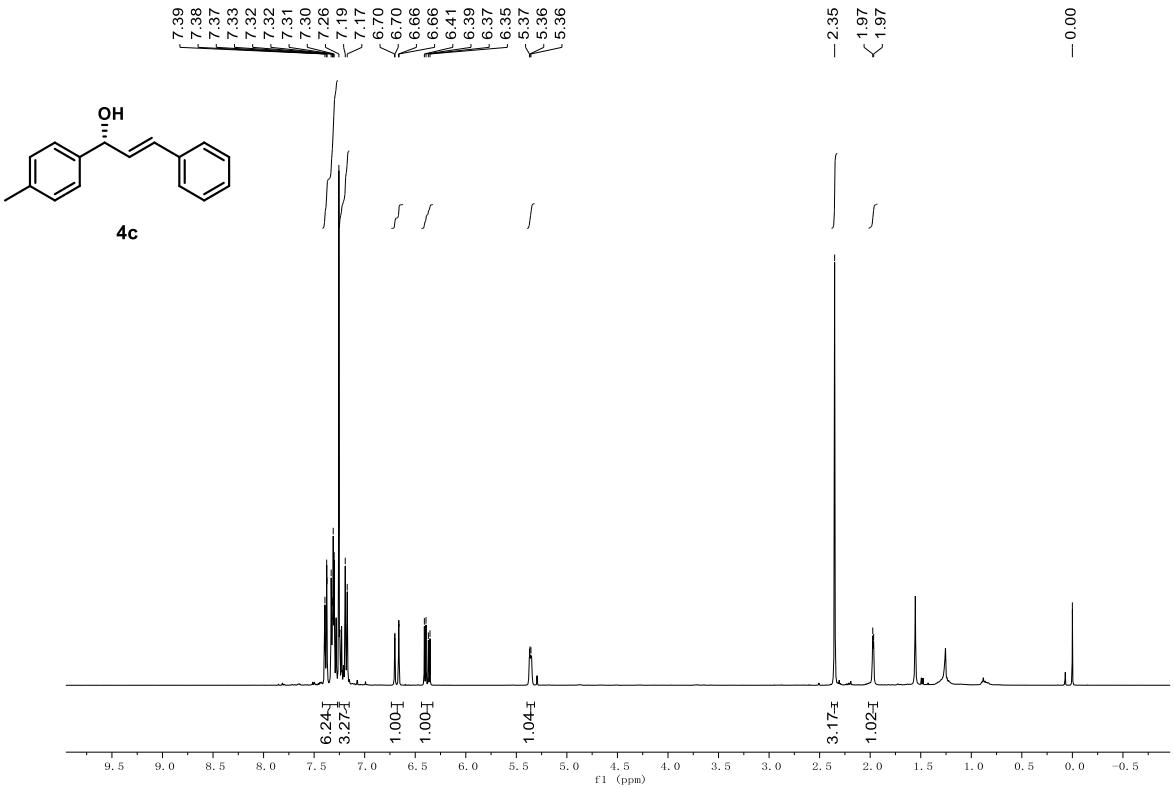
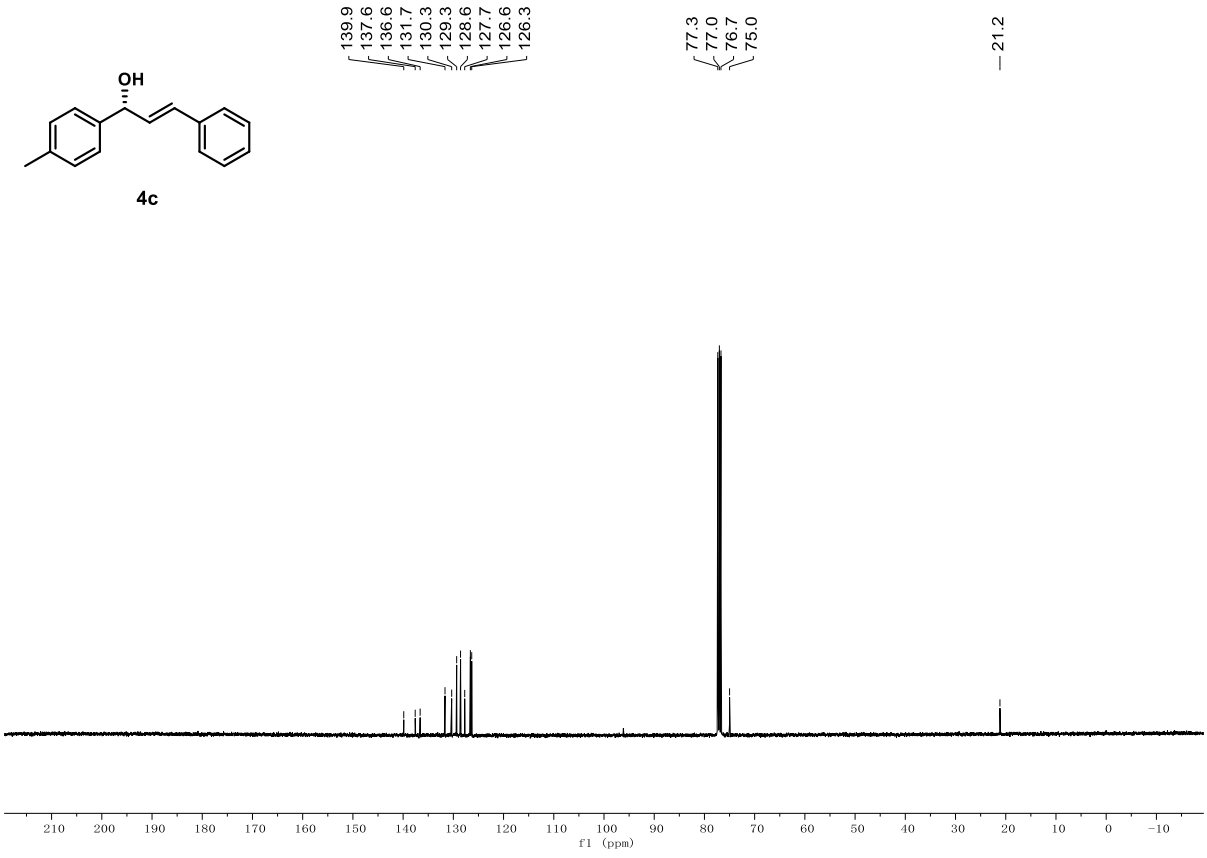
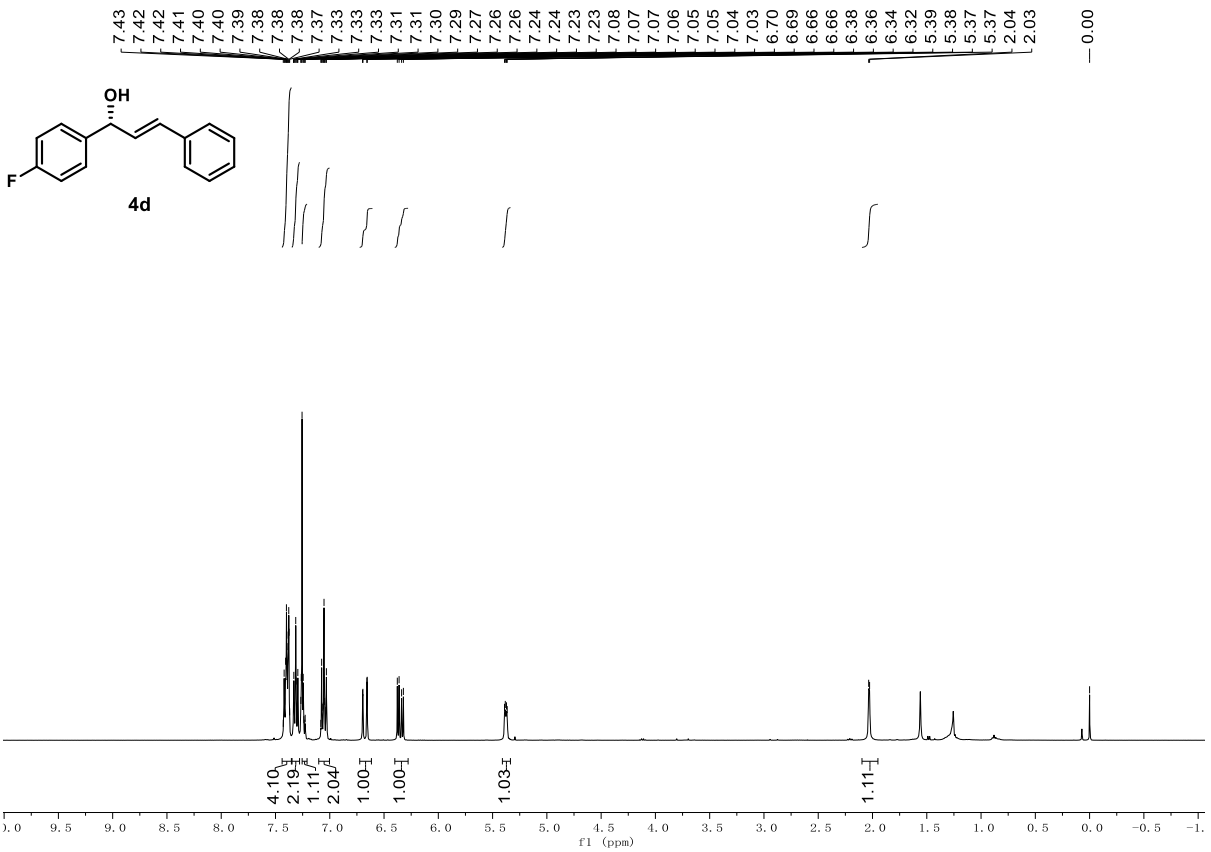


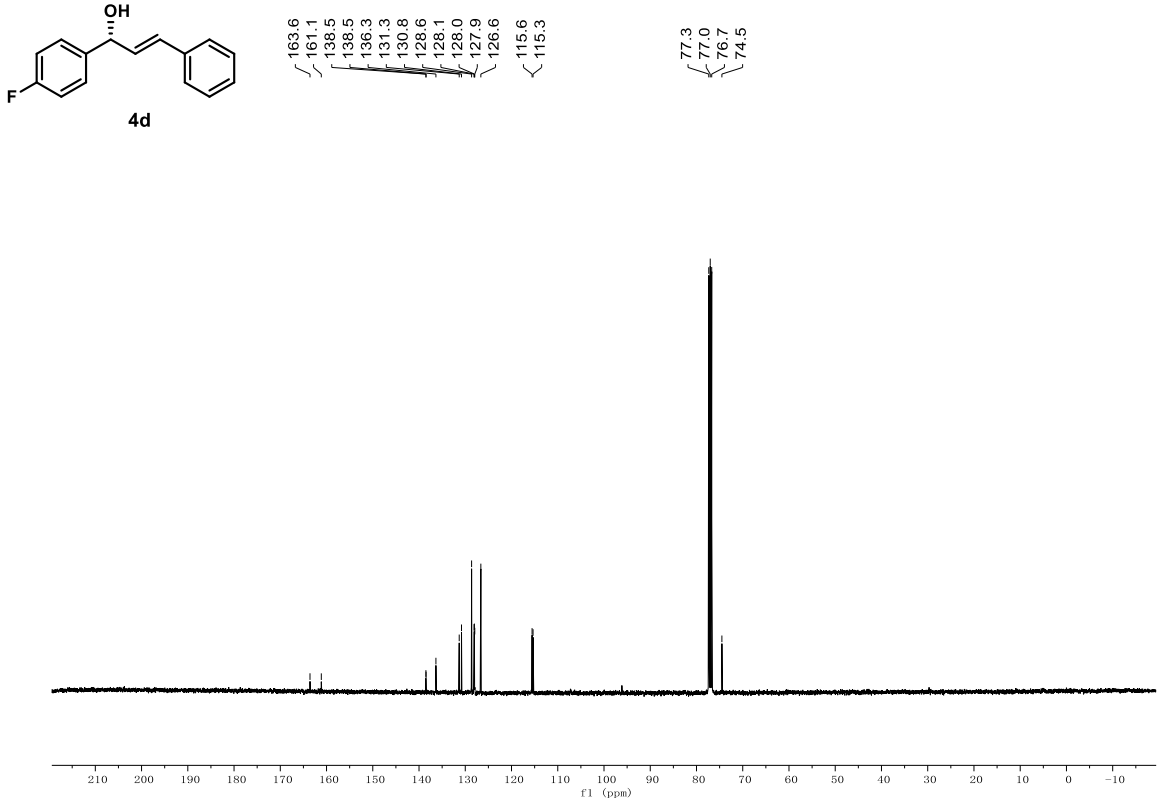
^{1}H NMR



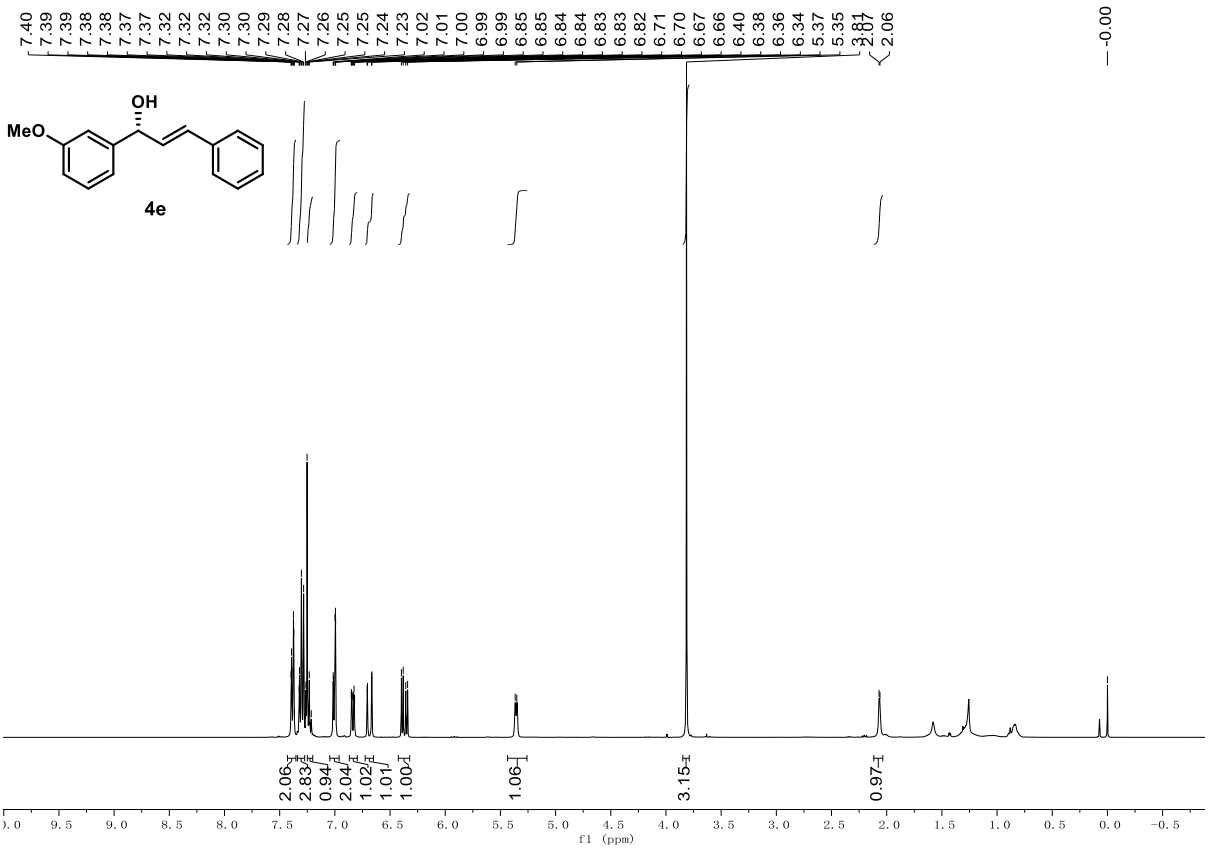
^{13}C NMR



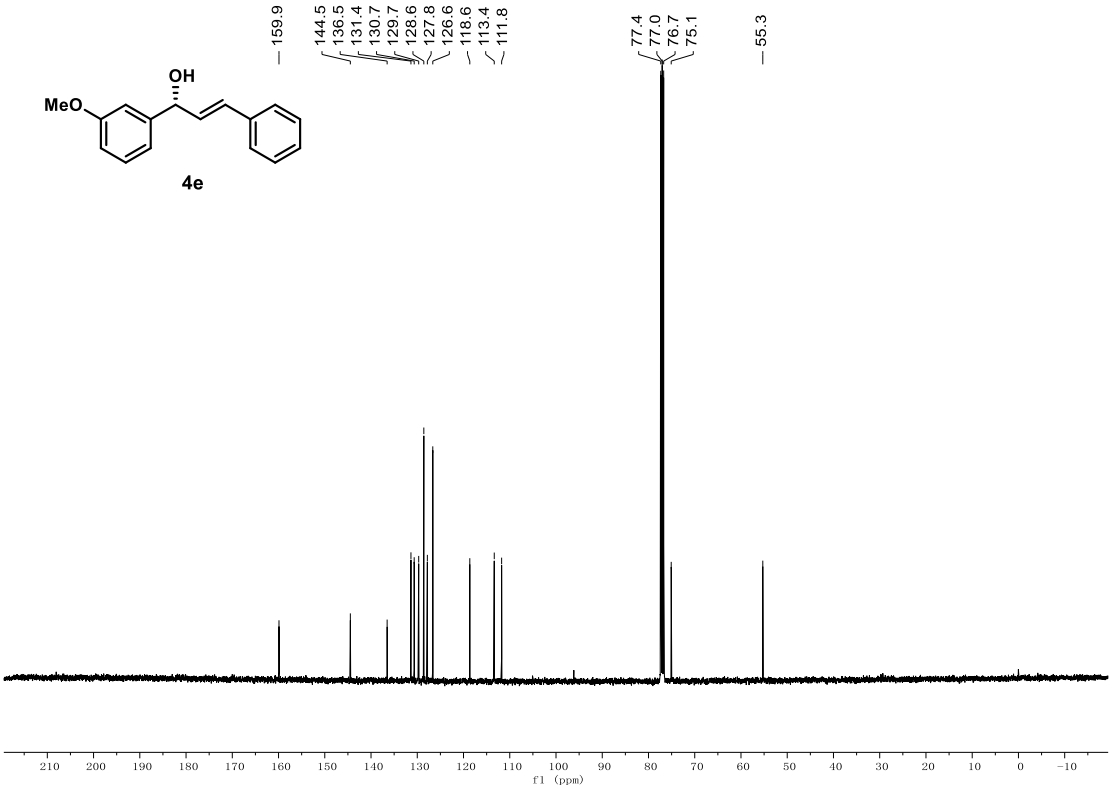
^{1}H NMR



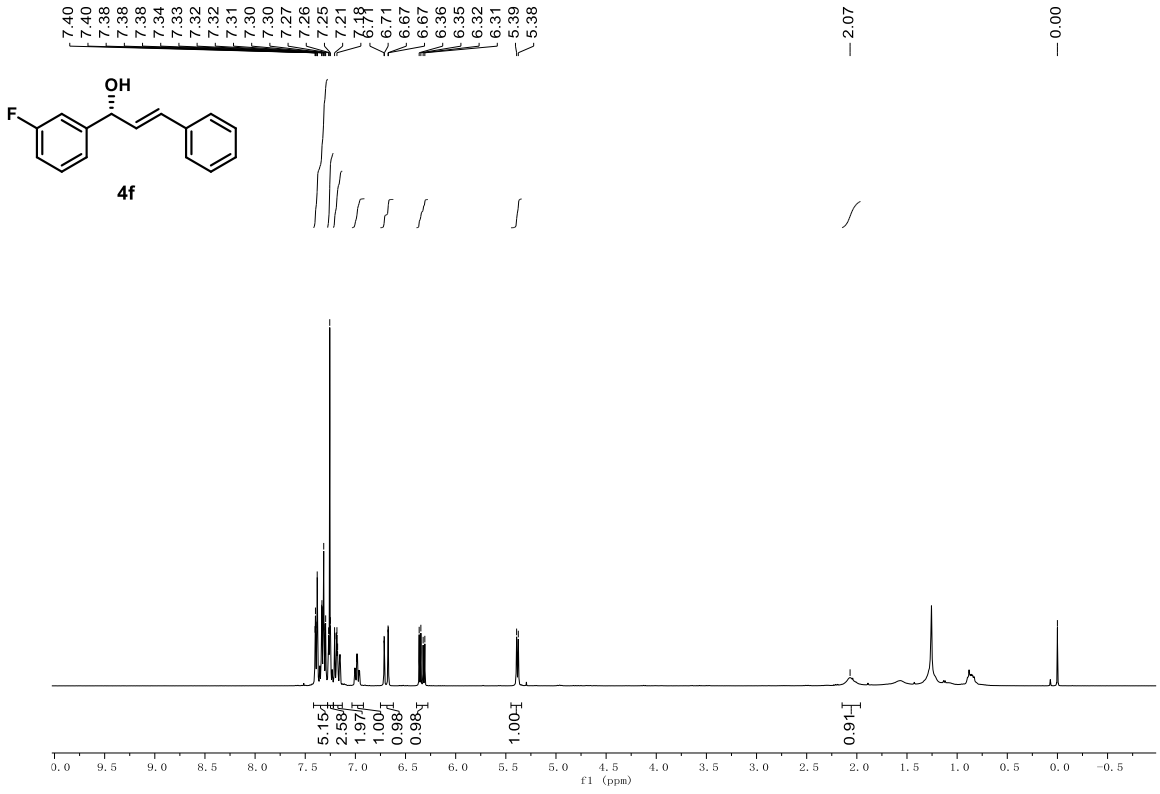
^{13}C NMR



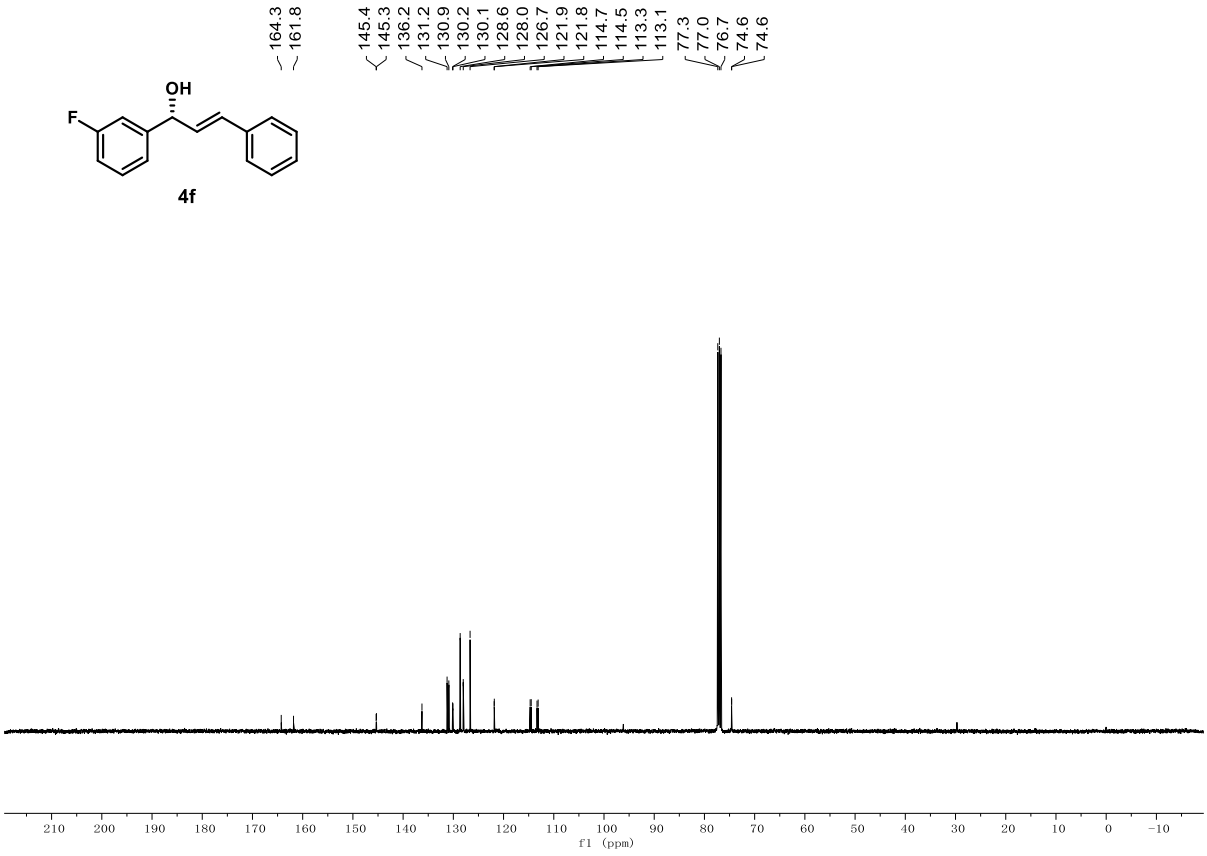
^{1}H NMR



^{13}C NMR



^{1}H NMR



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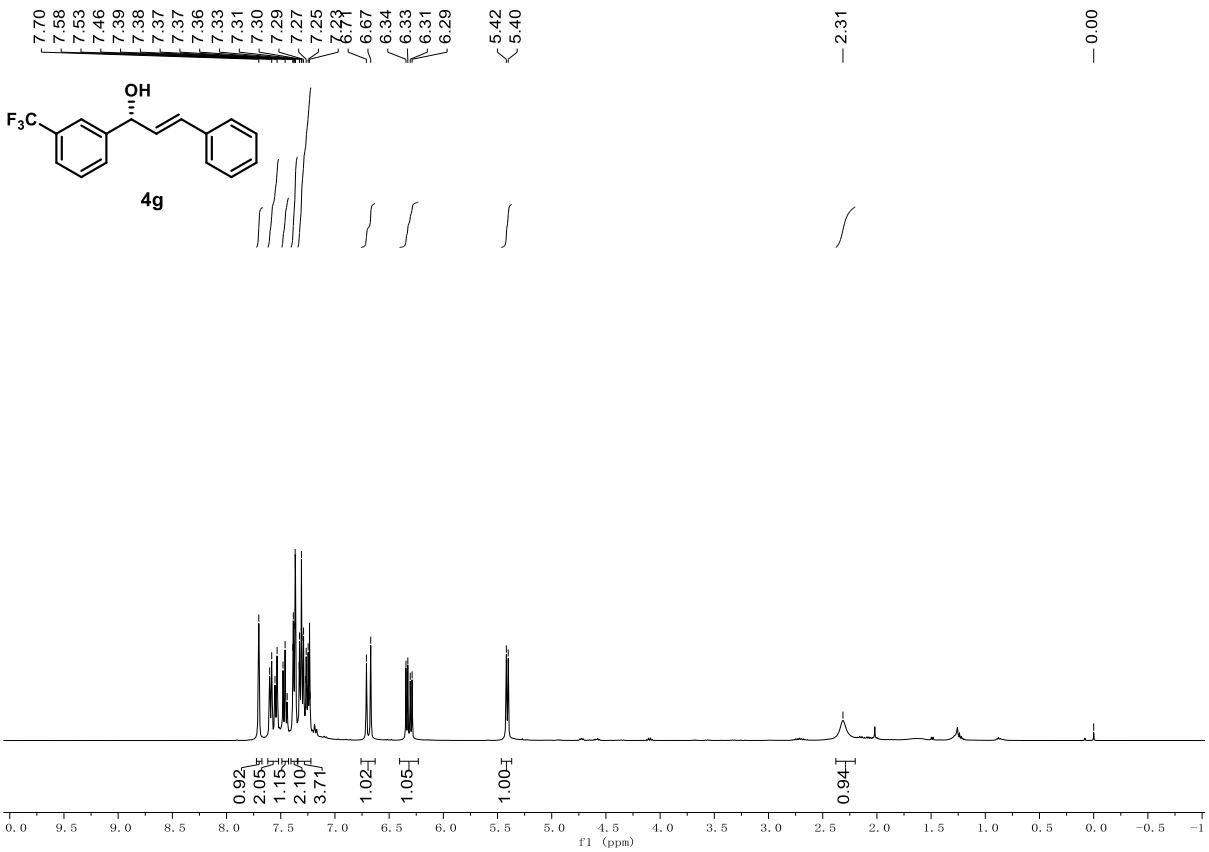
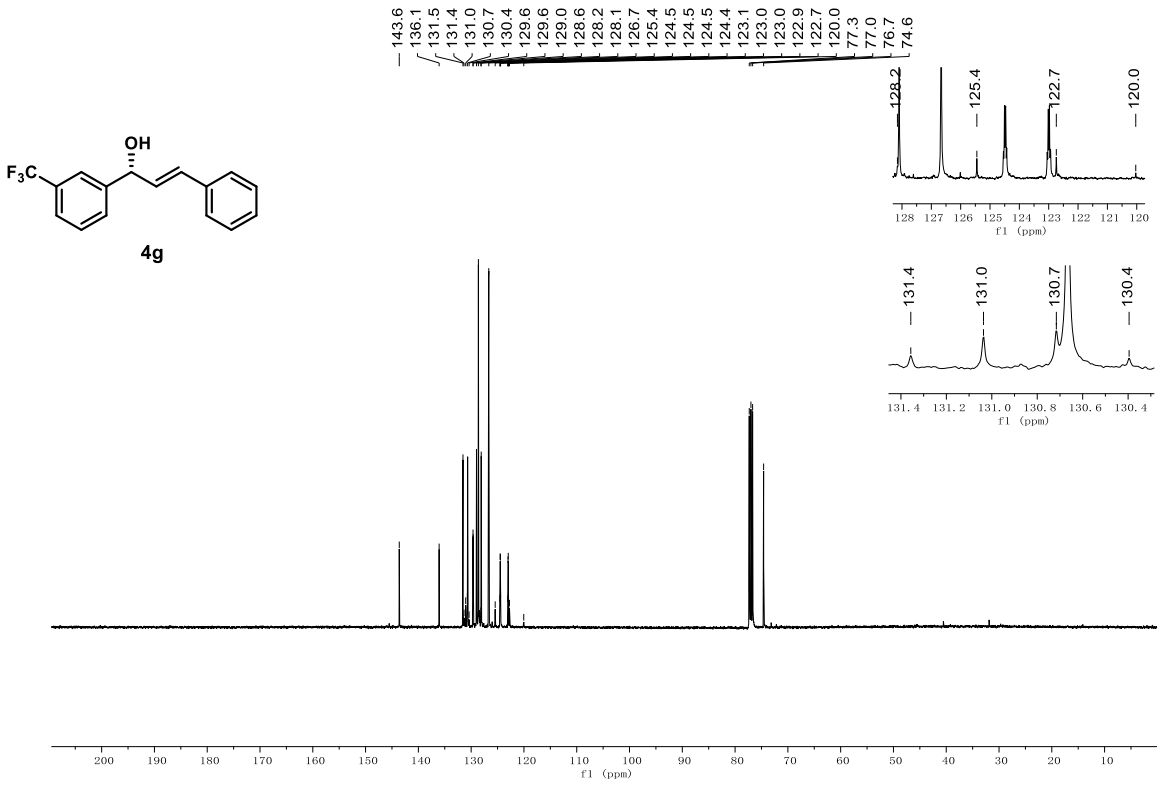


^{1}H NMR



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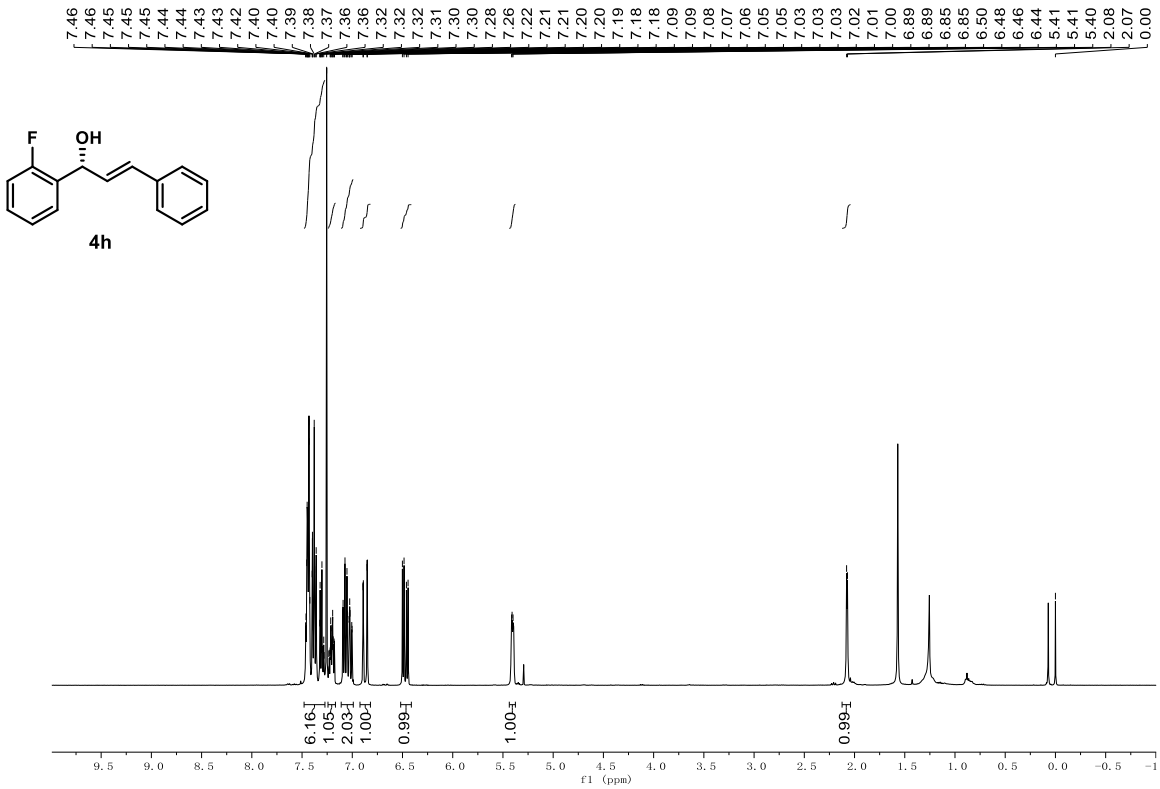

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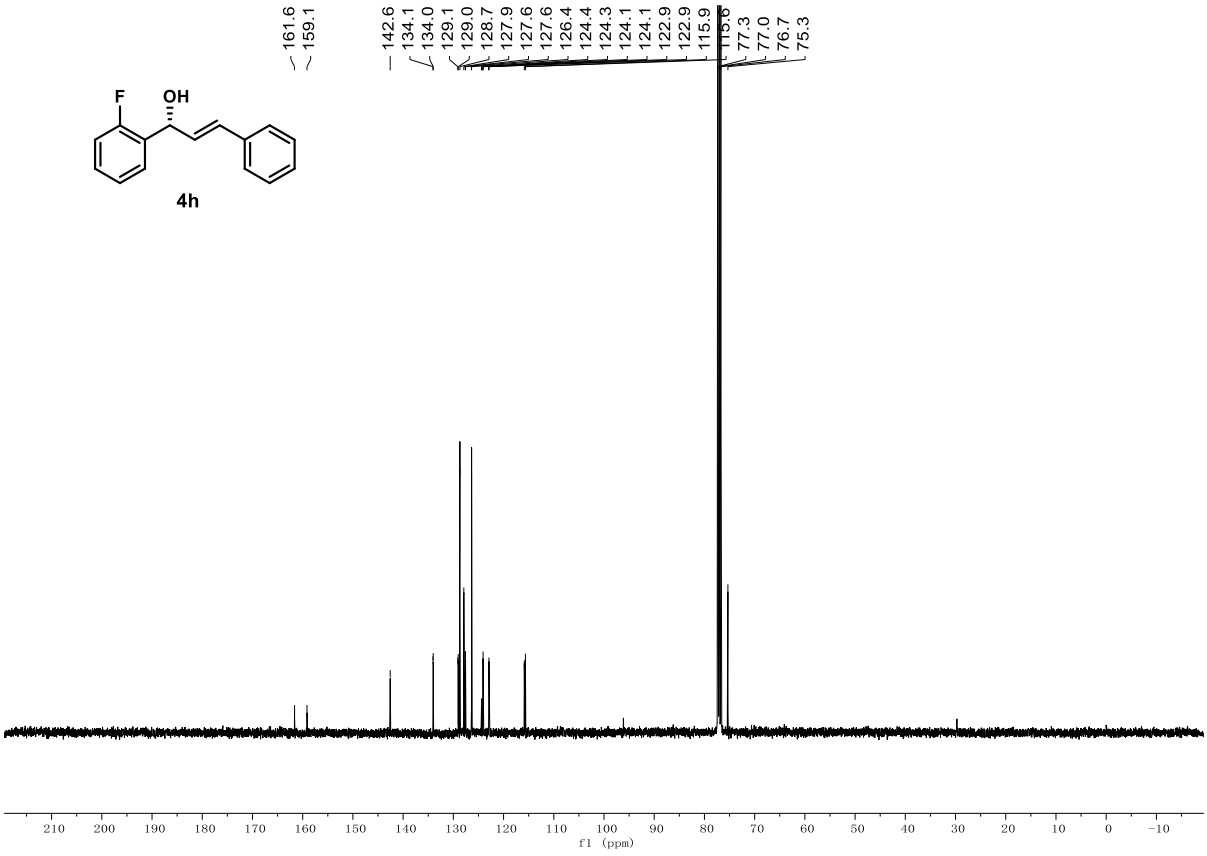

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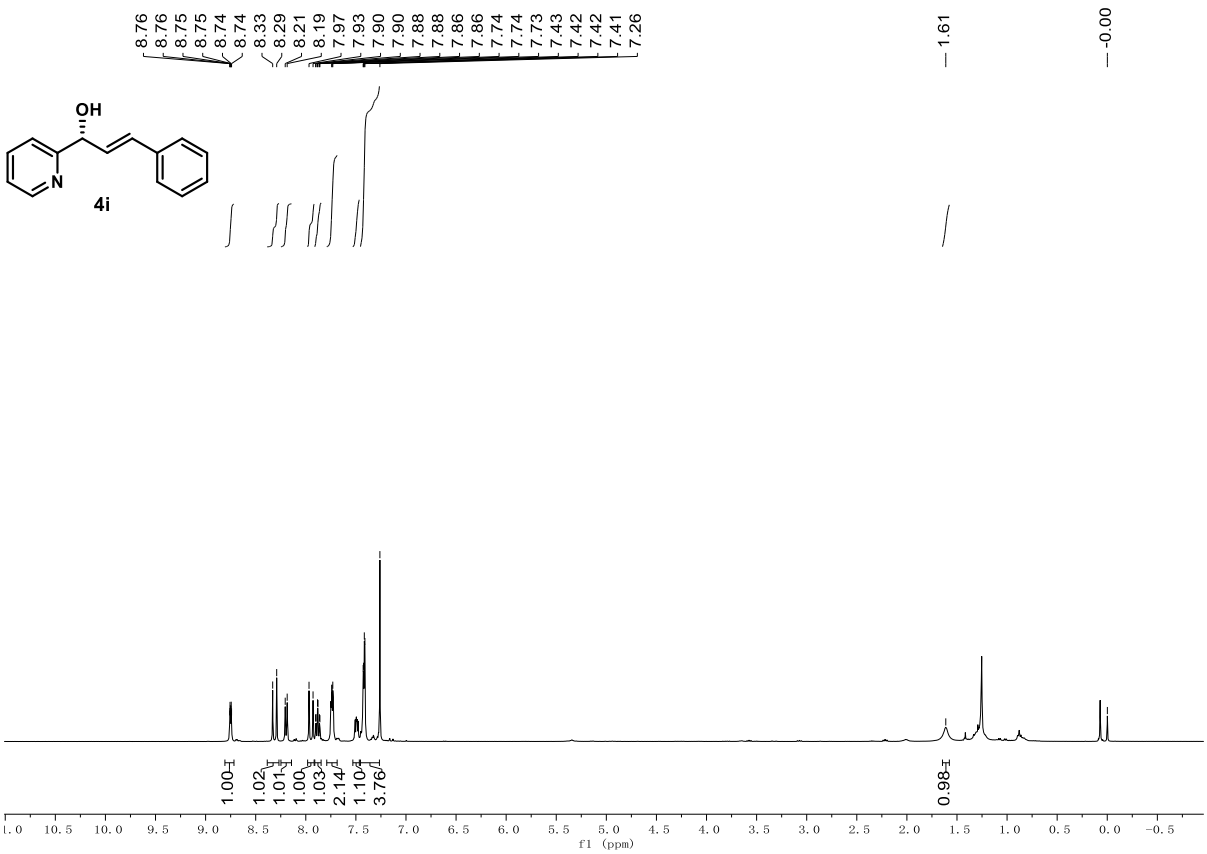
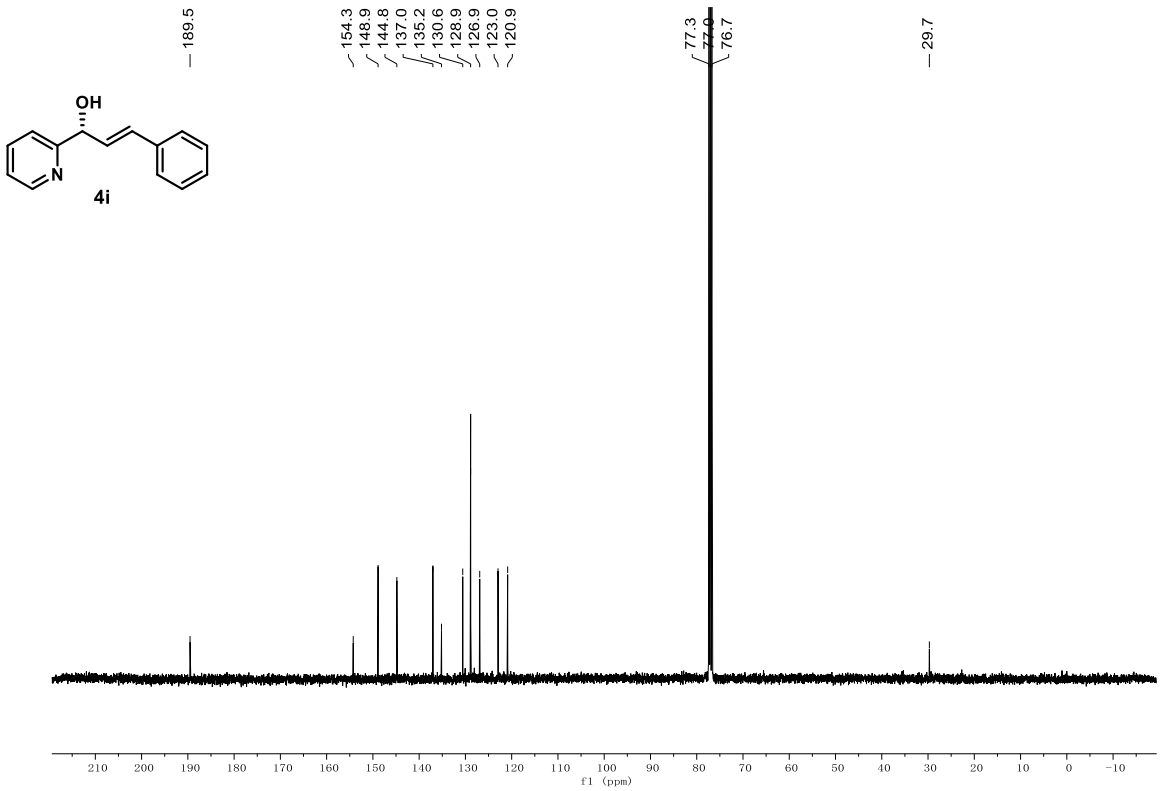
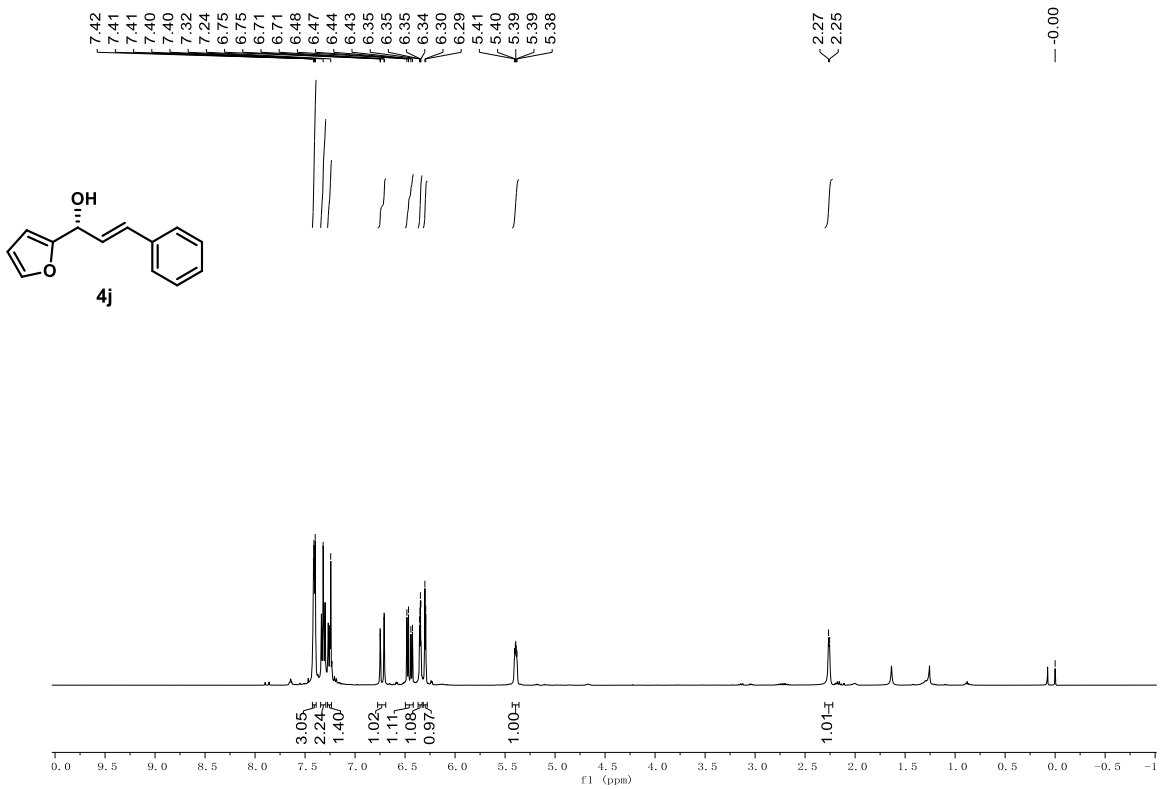


^{1}H NMR



^{13}C NMR



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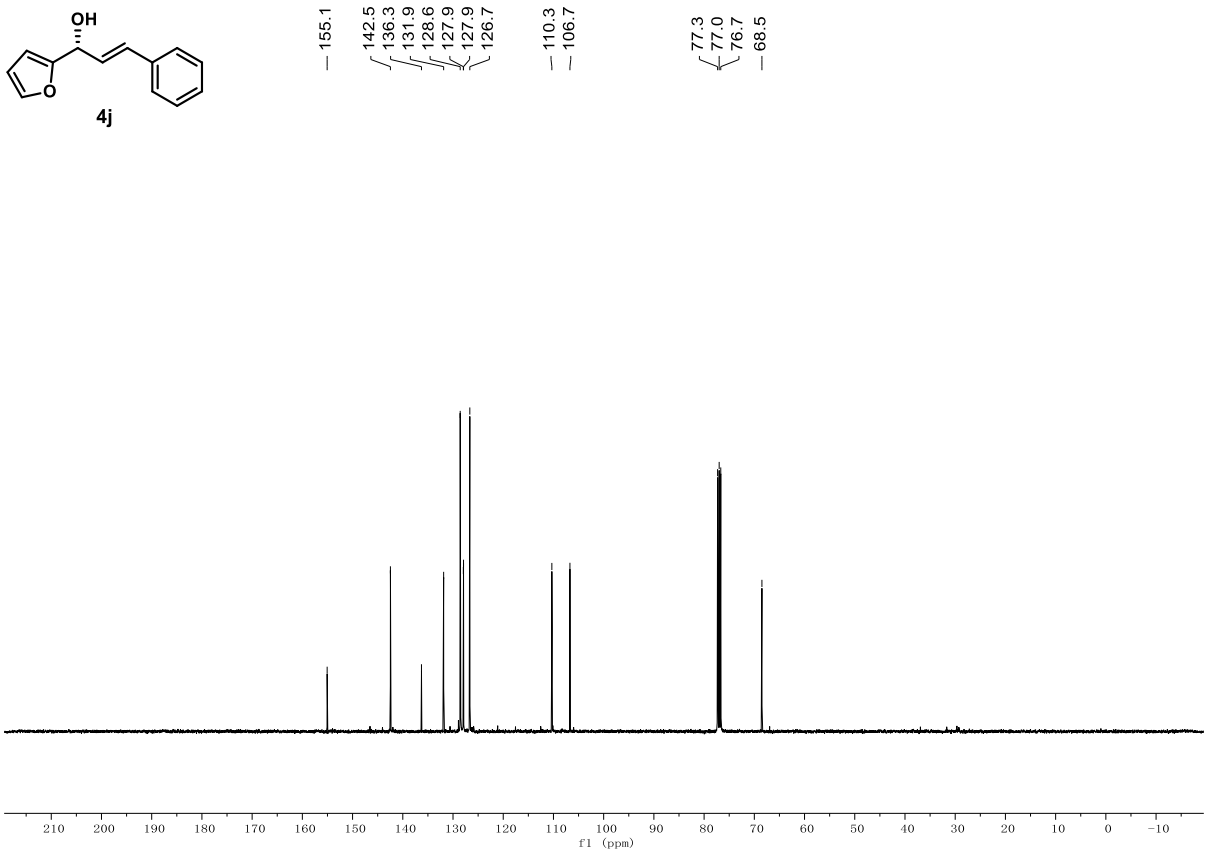

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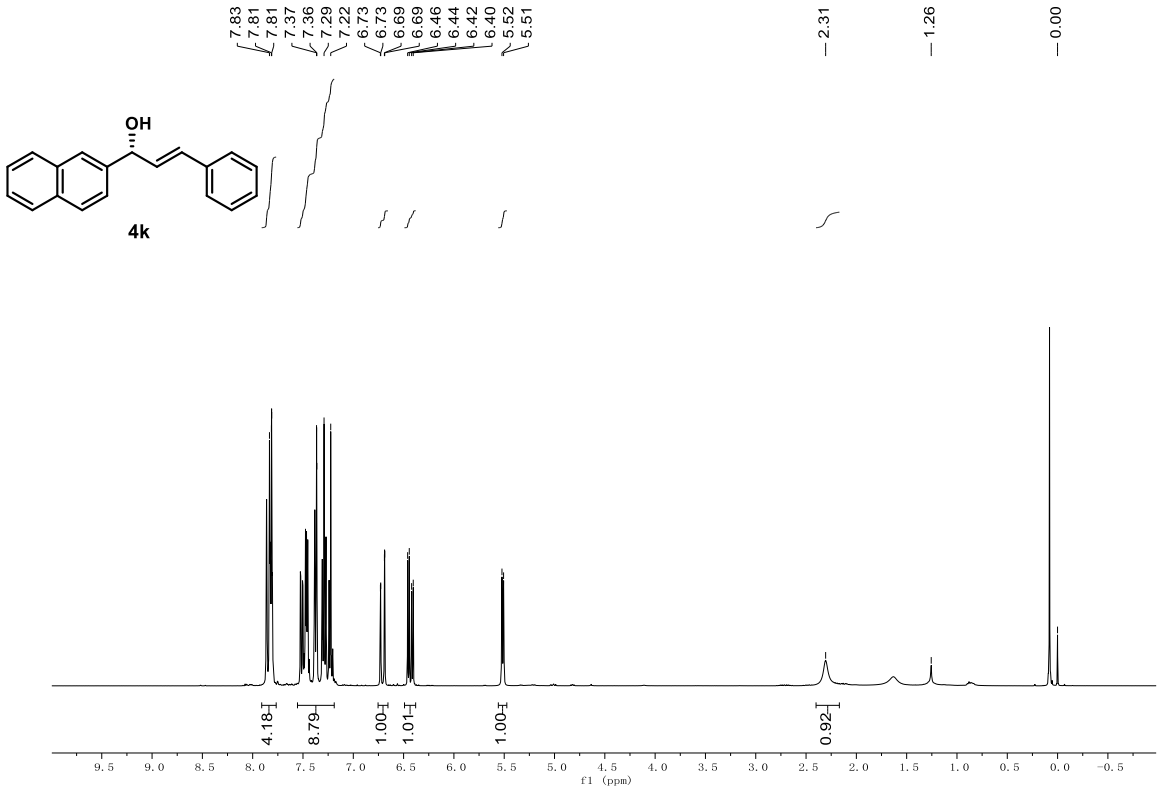

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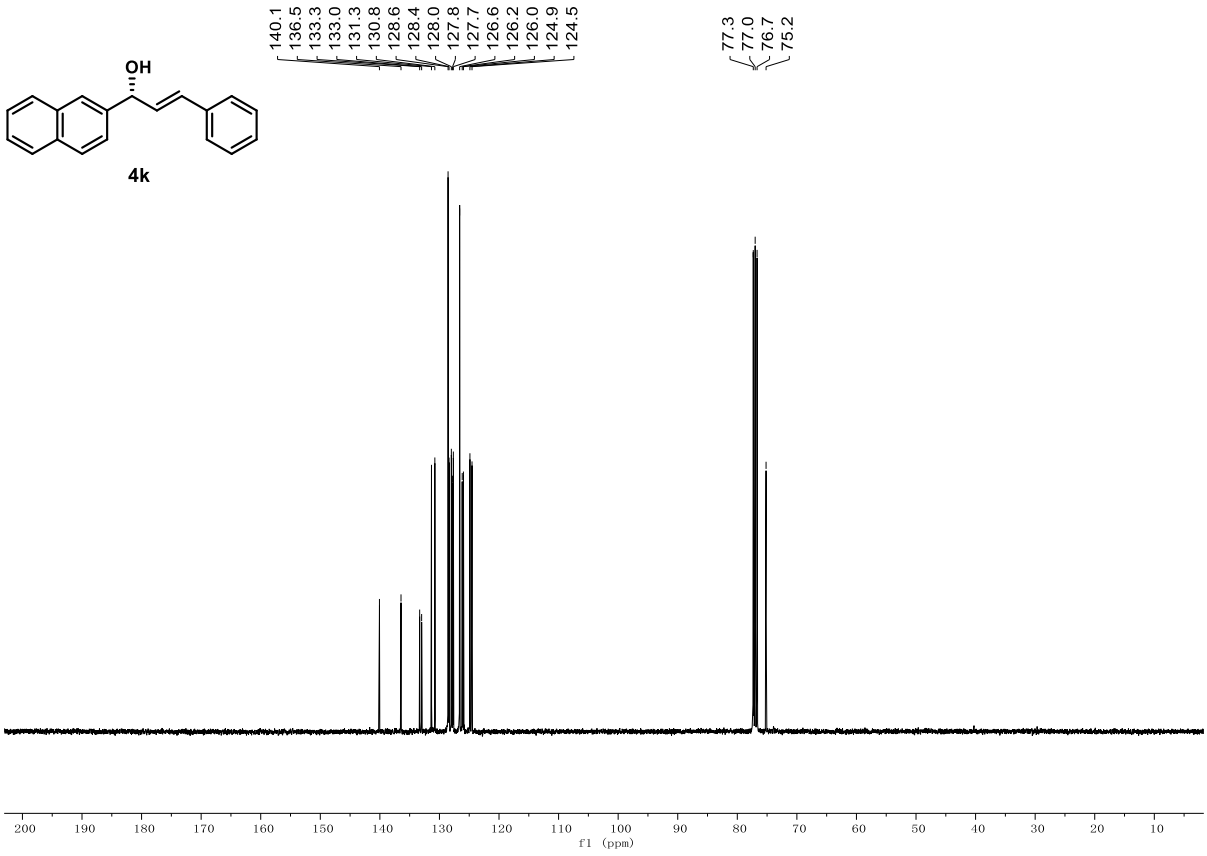

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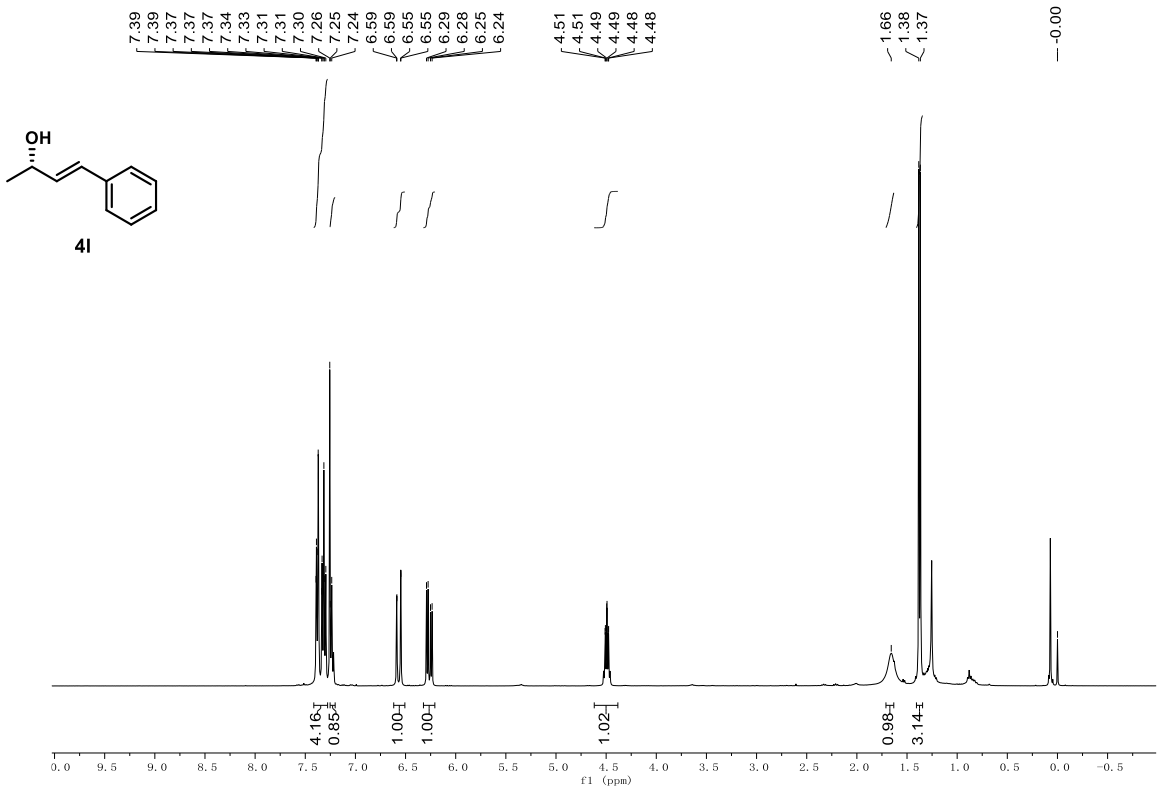

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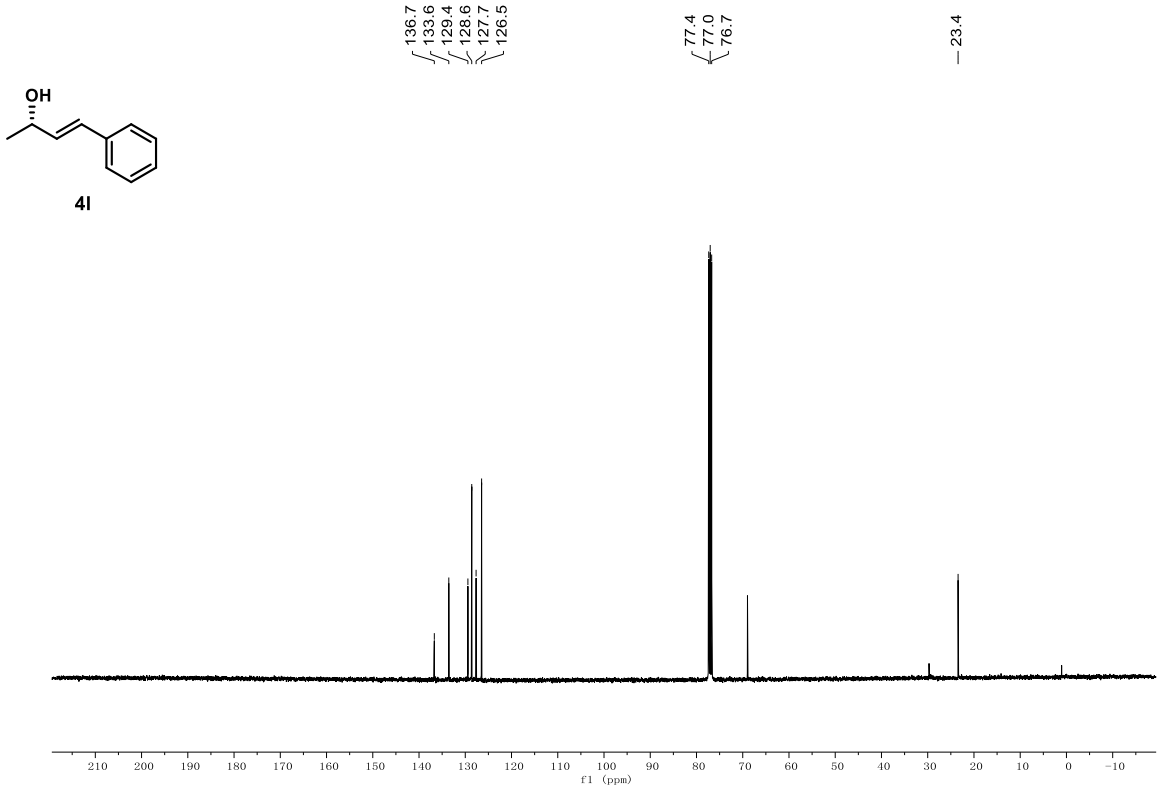

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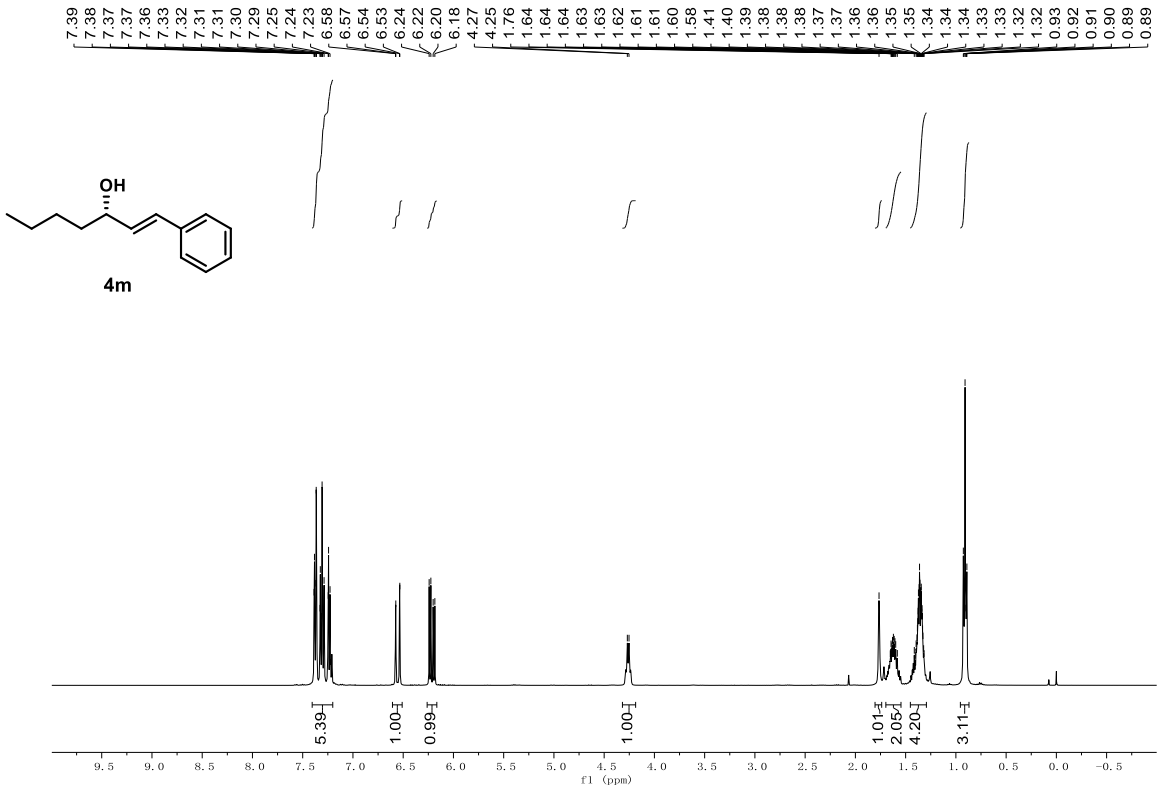
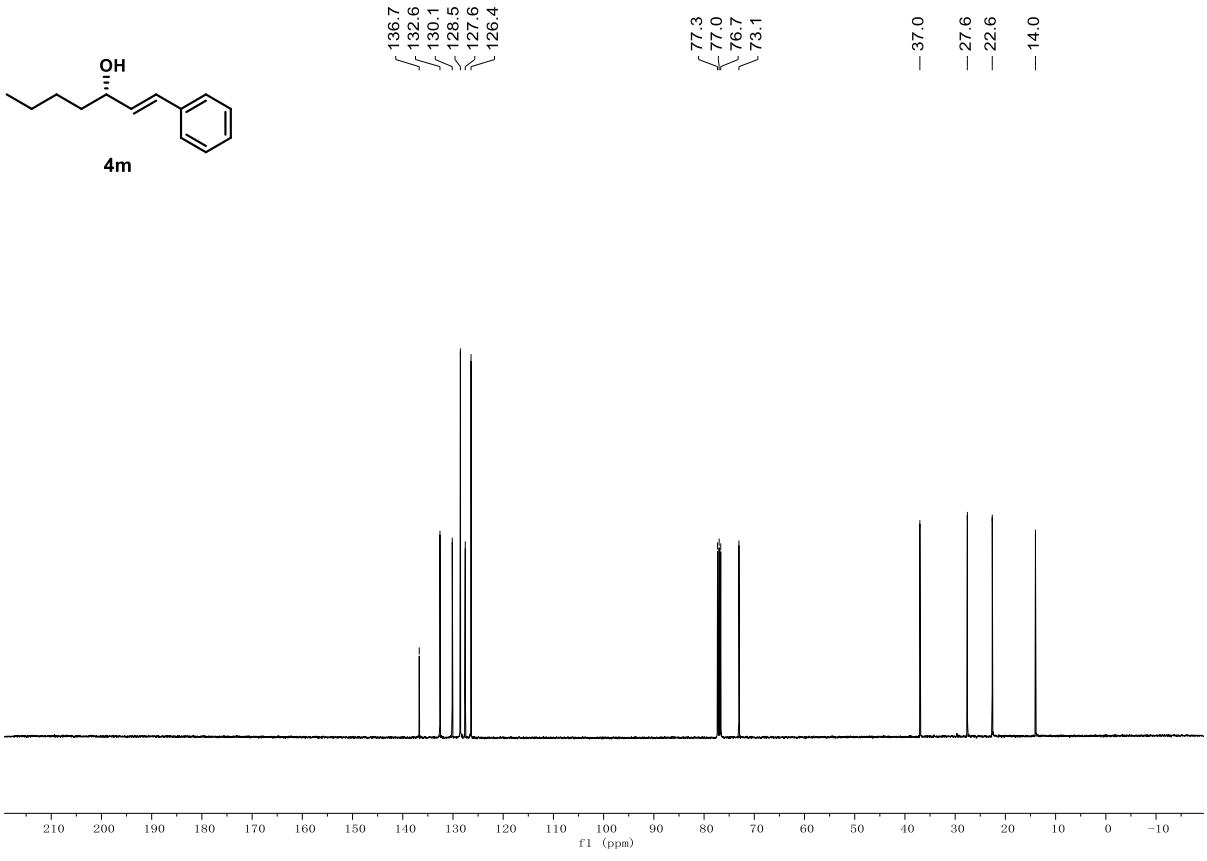
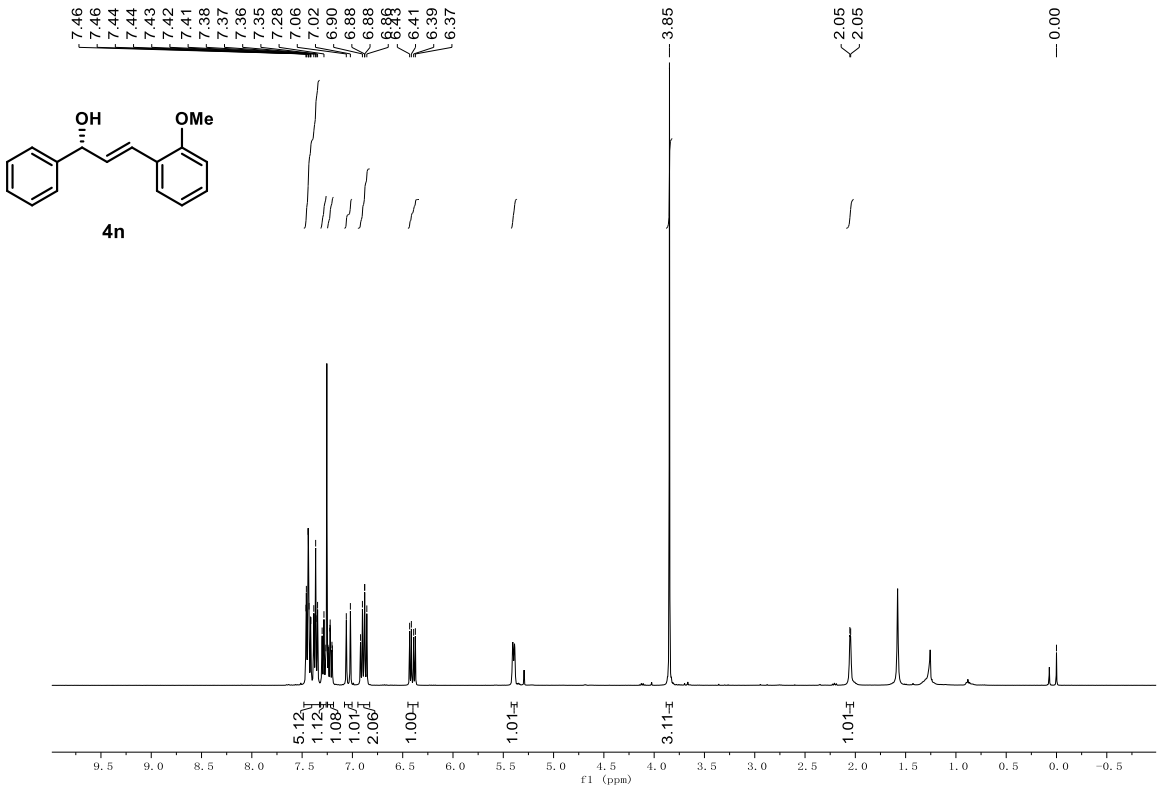


^{1}H NMR



^{13}C NMR



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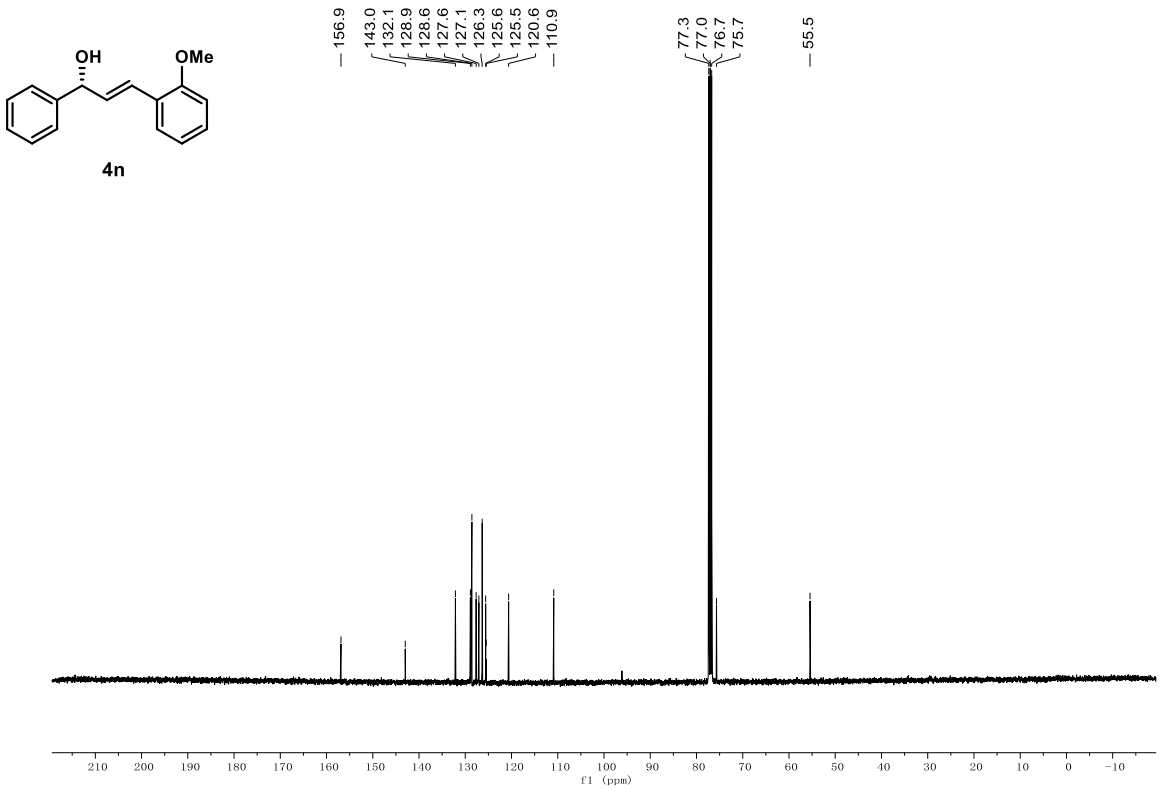
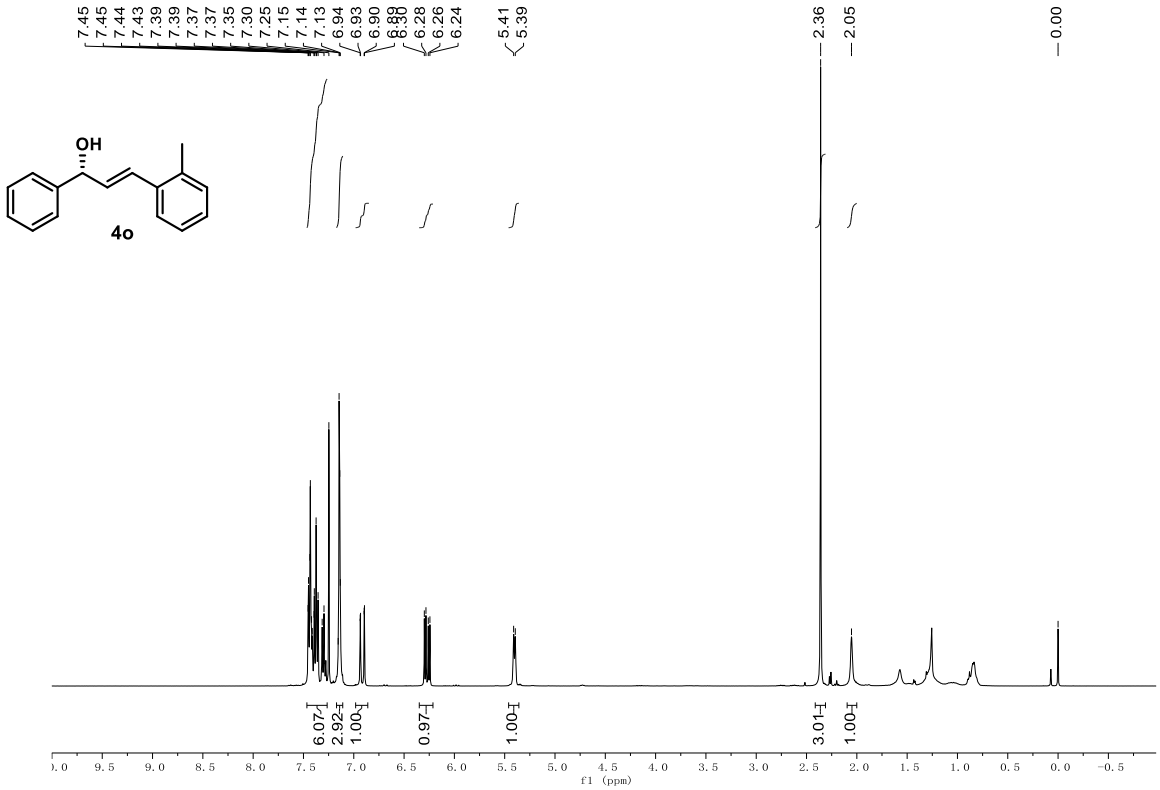
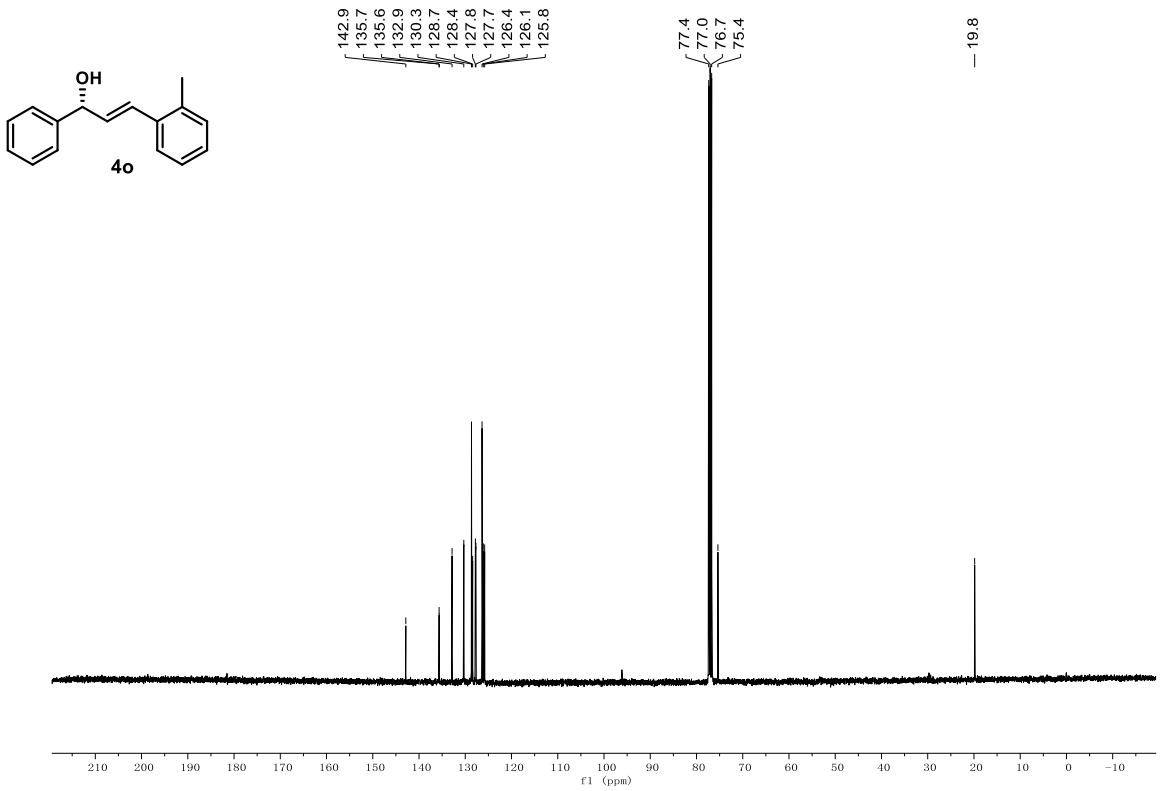


^{13}C NMR



^{1}H NMR



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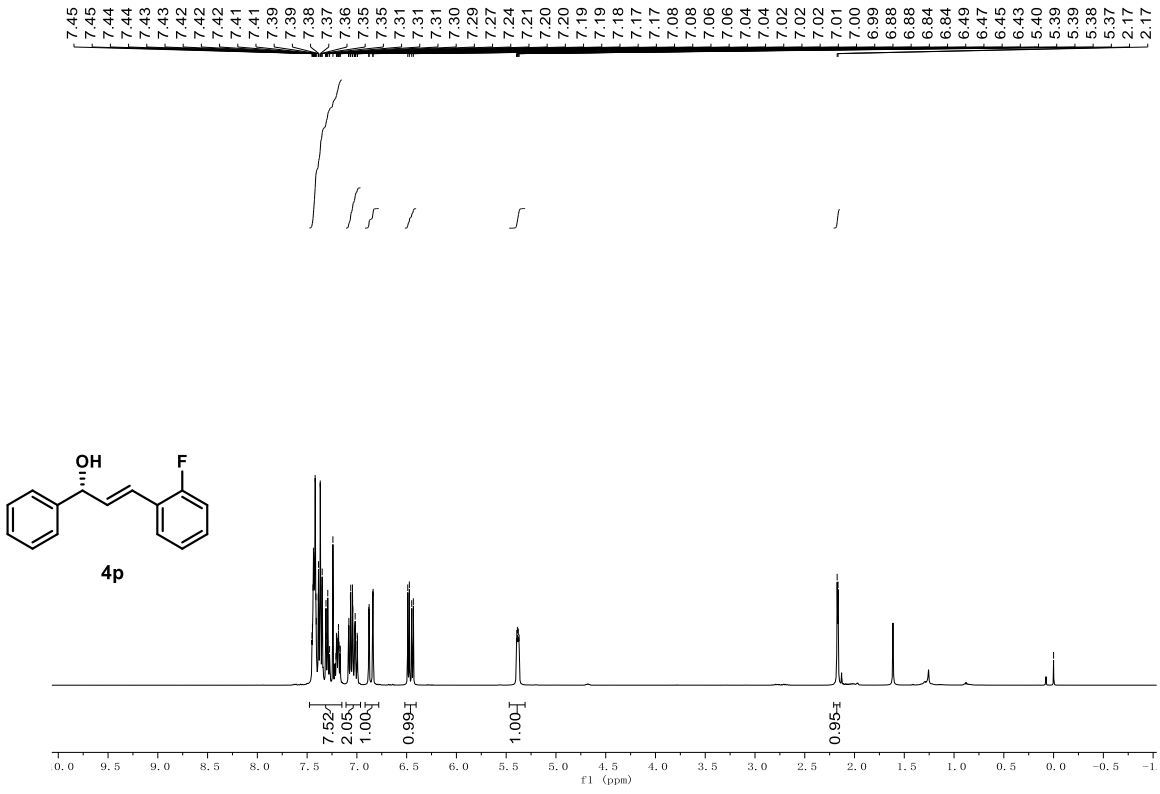

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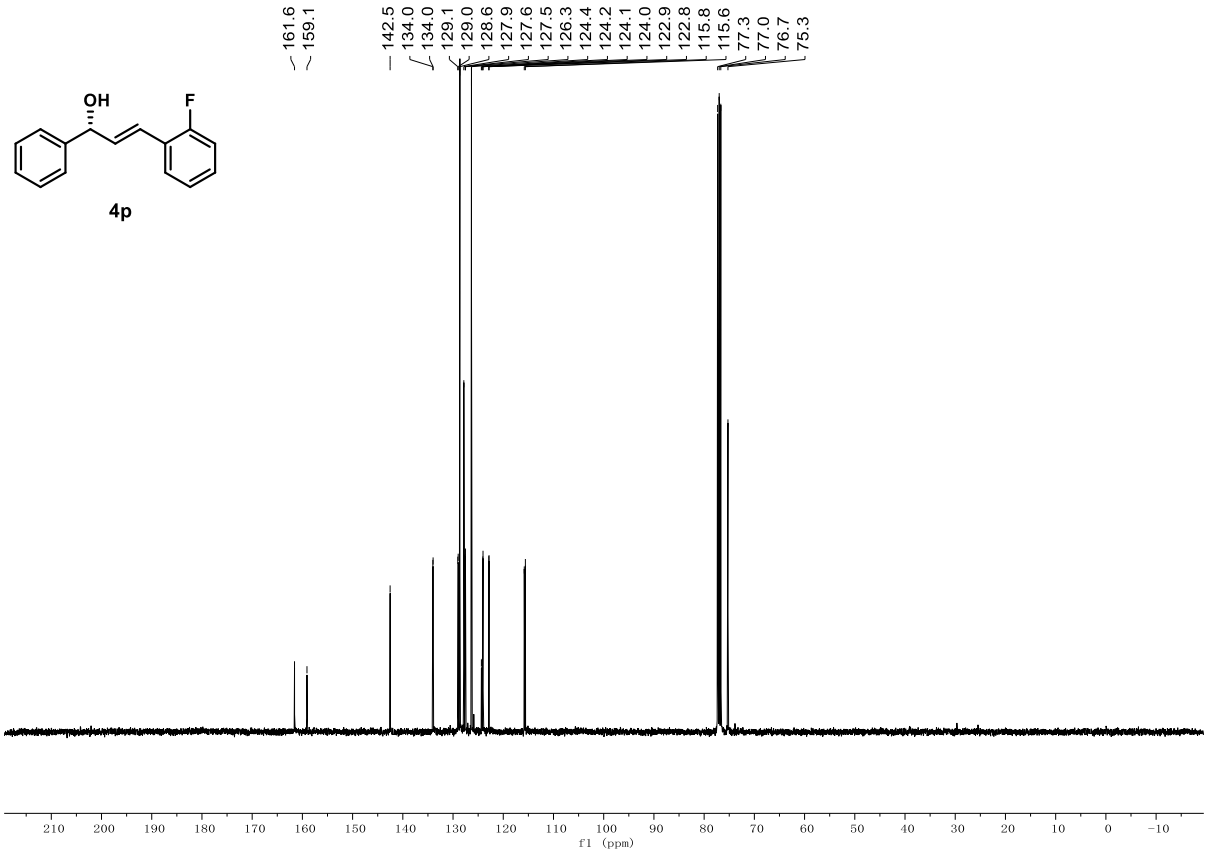

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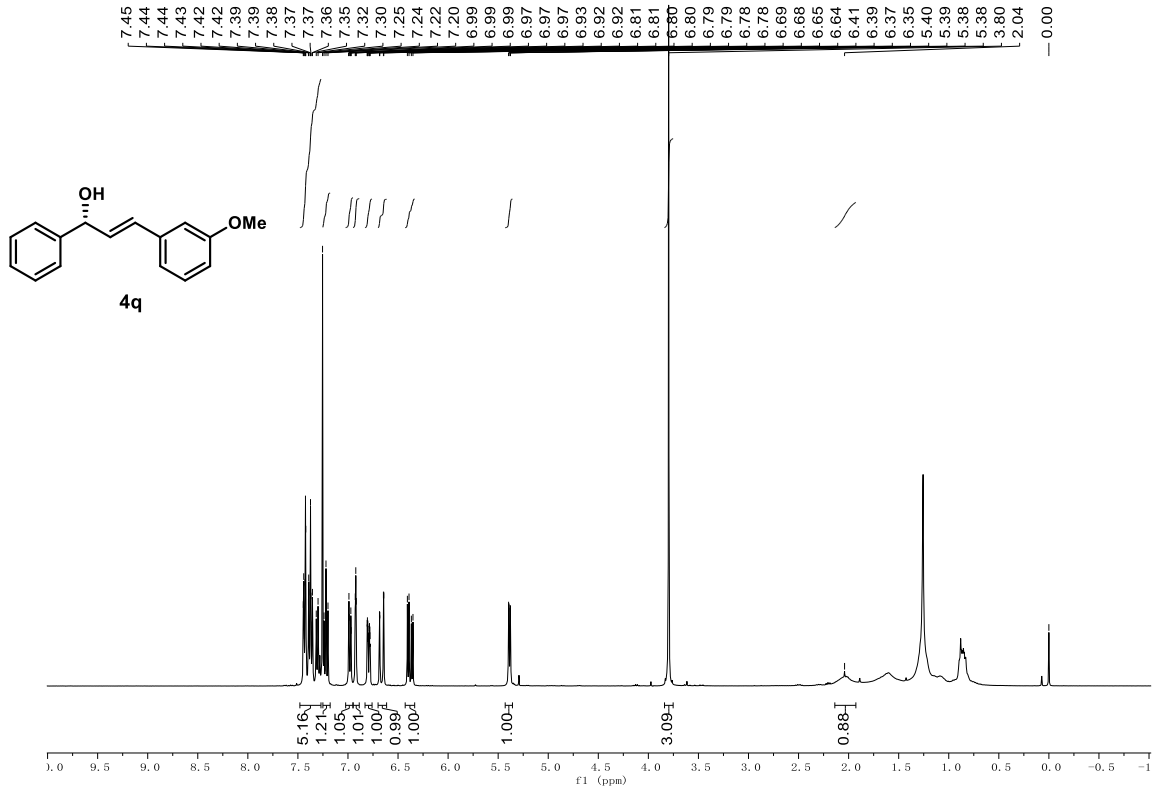

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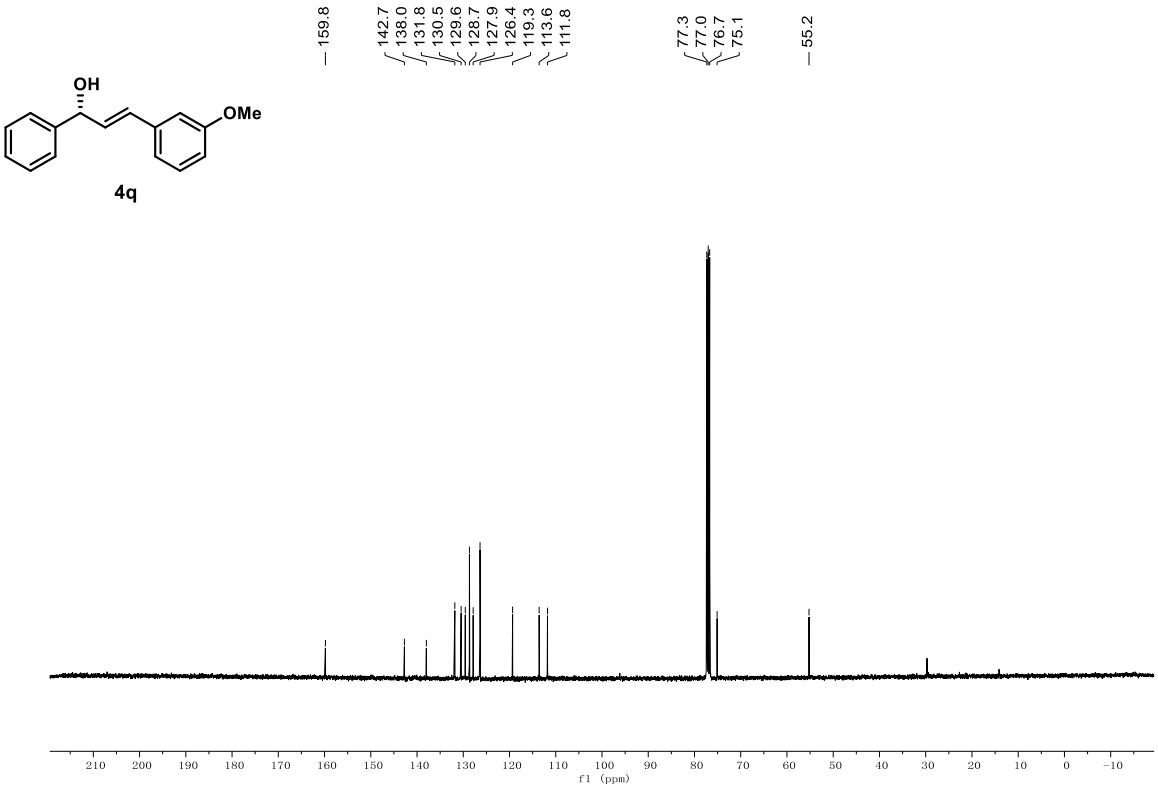

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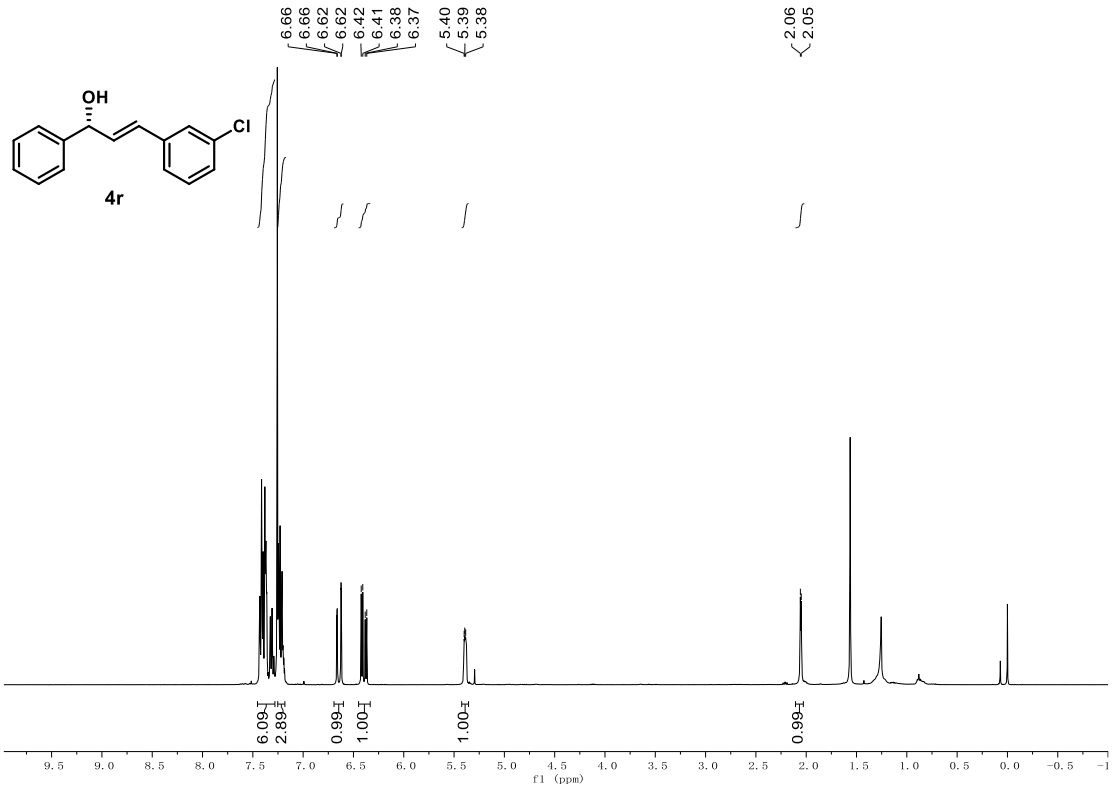

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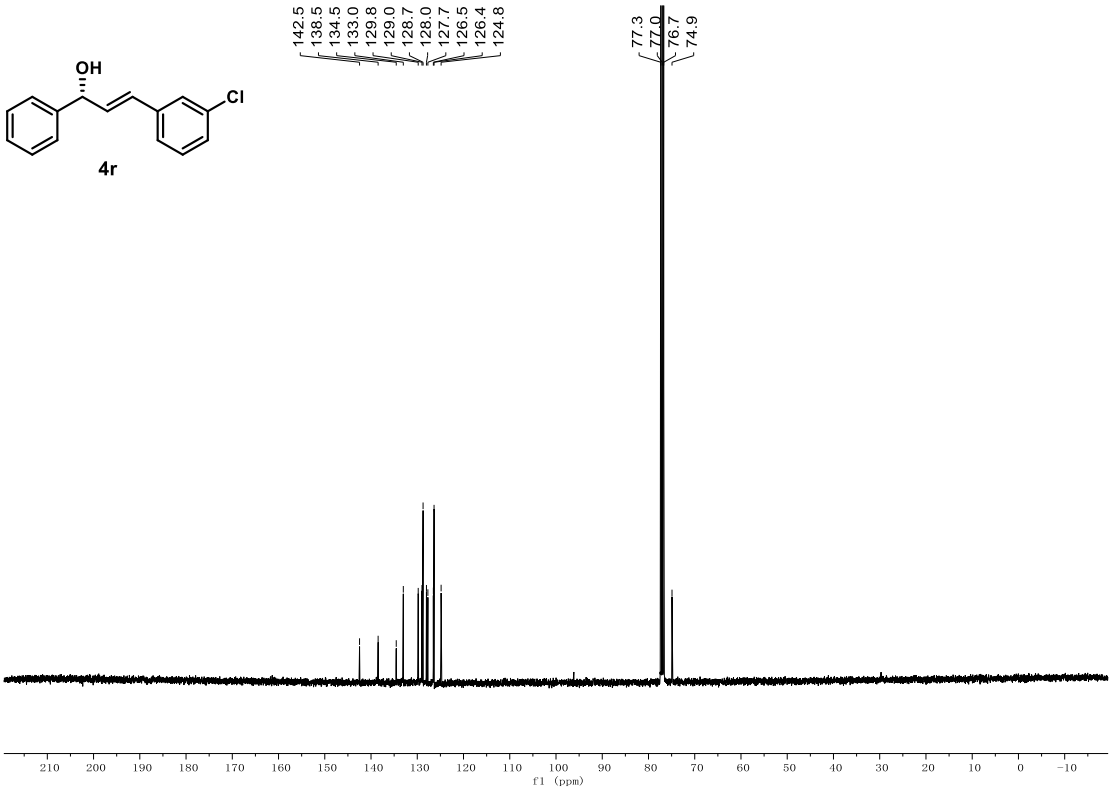

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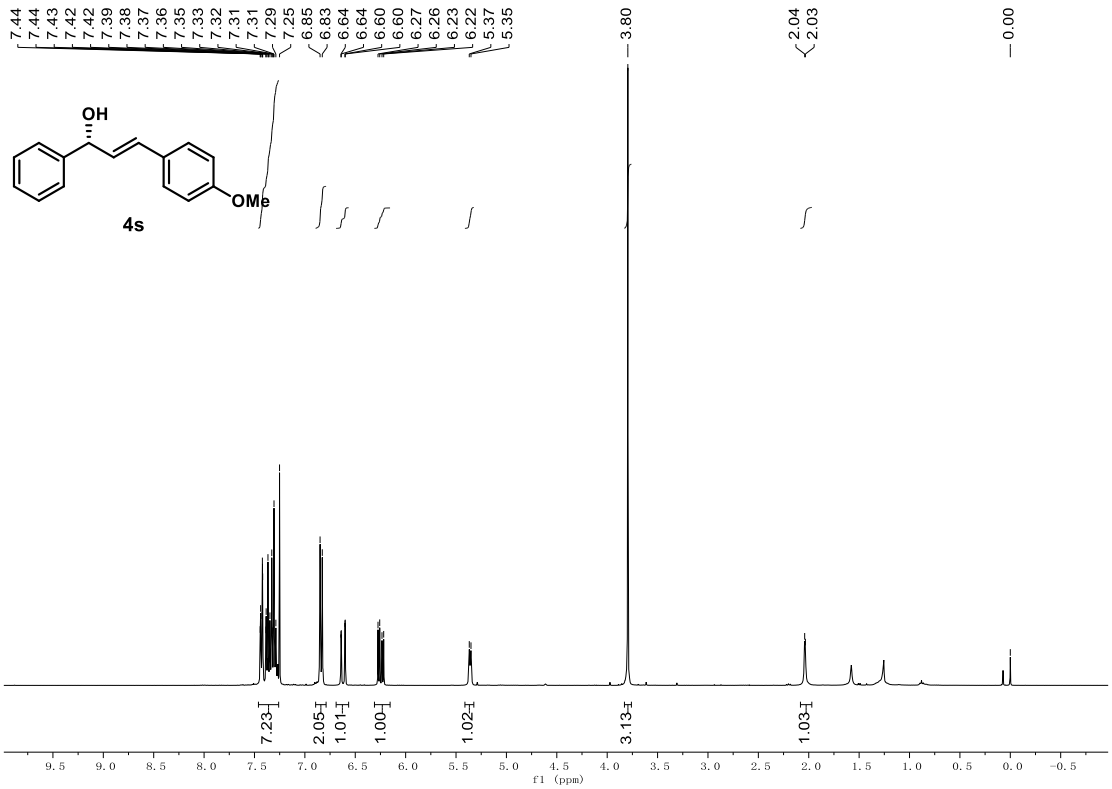

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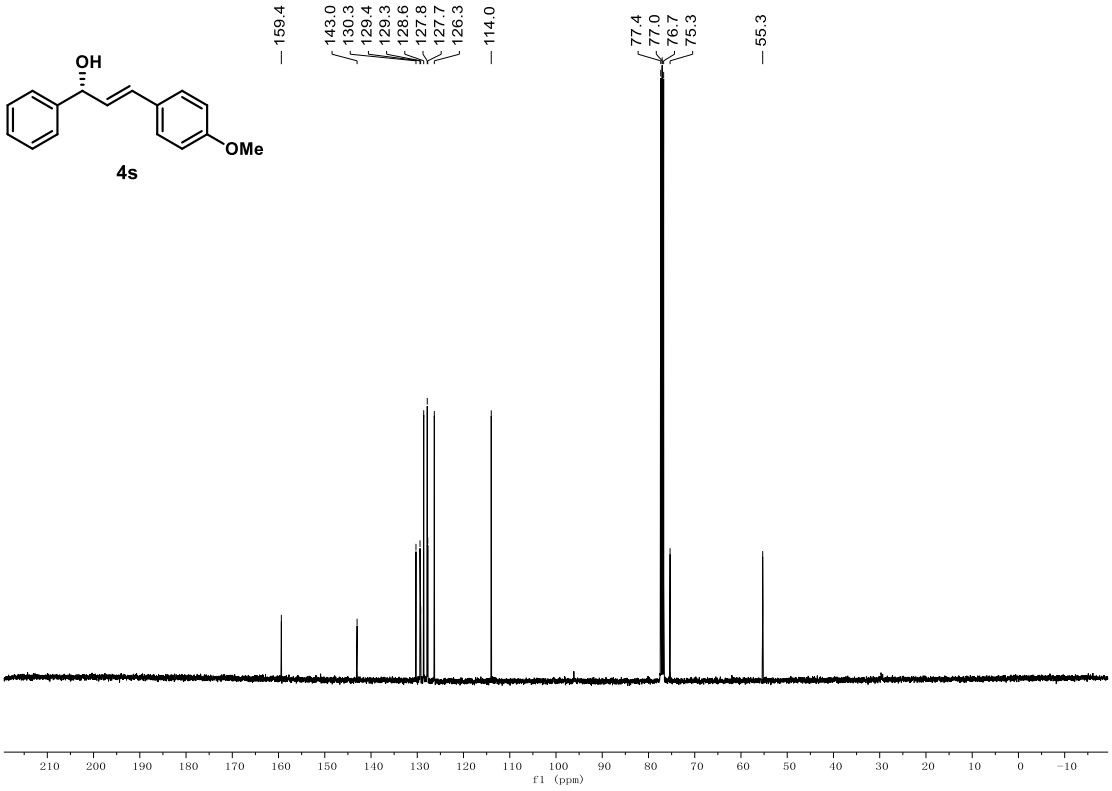

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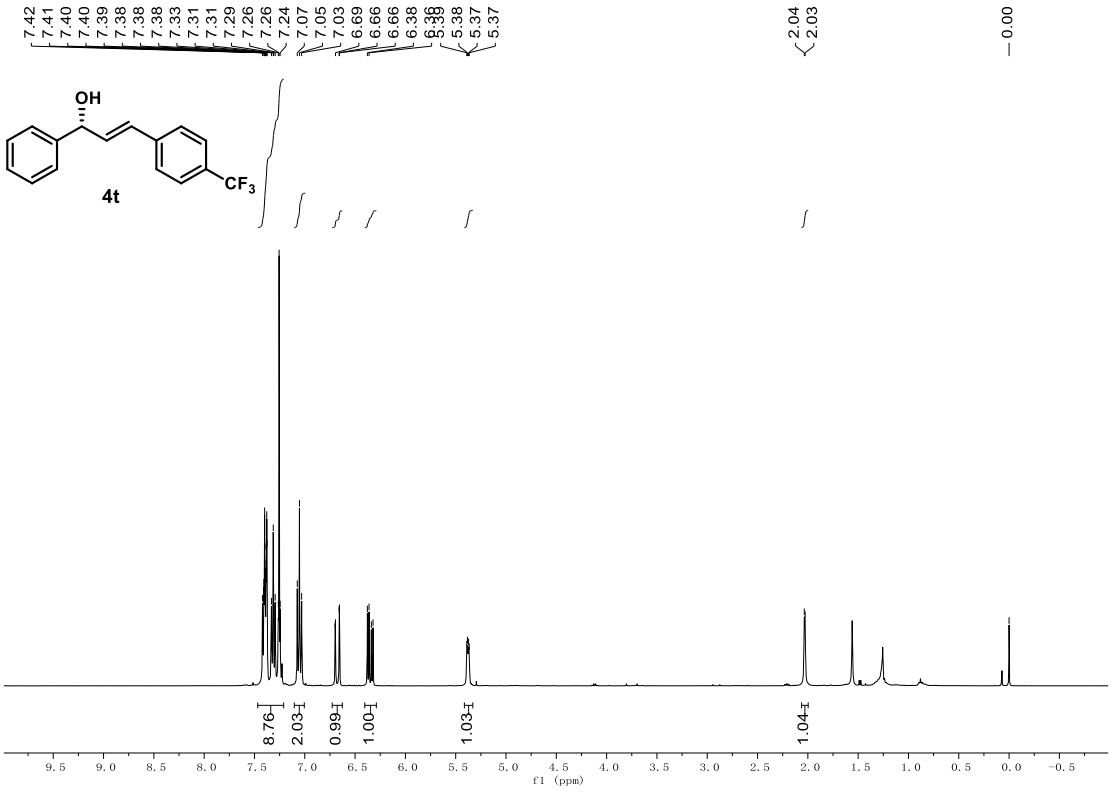

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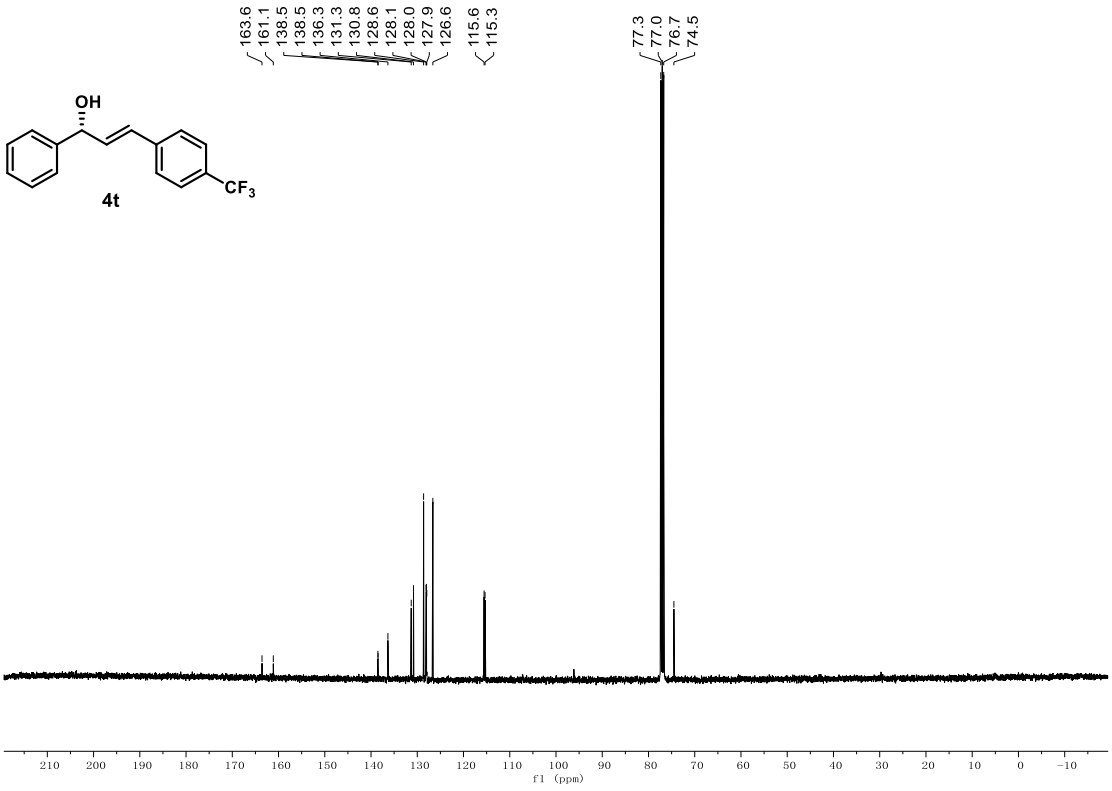

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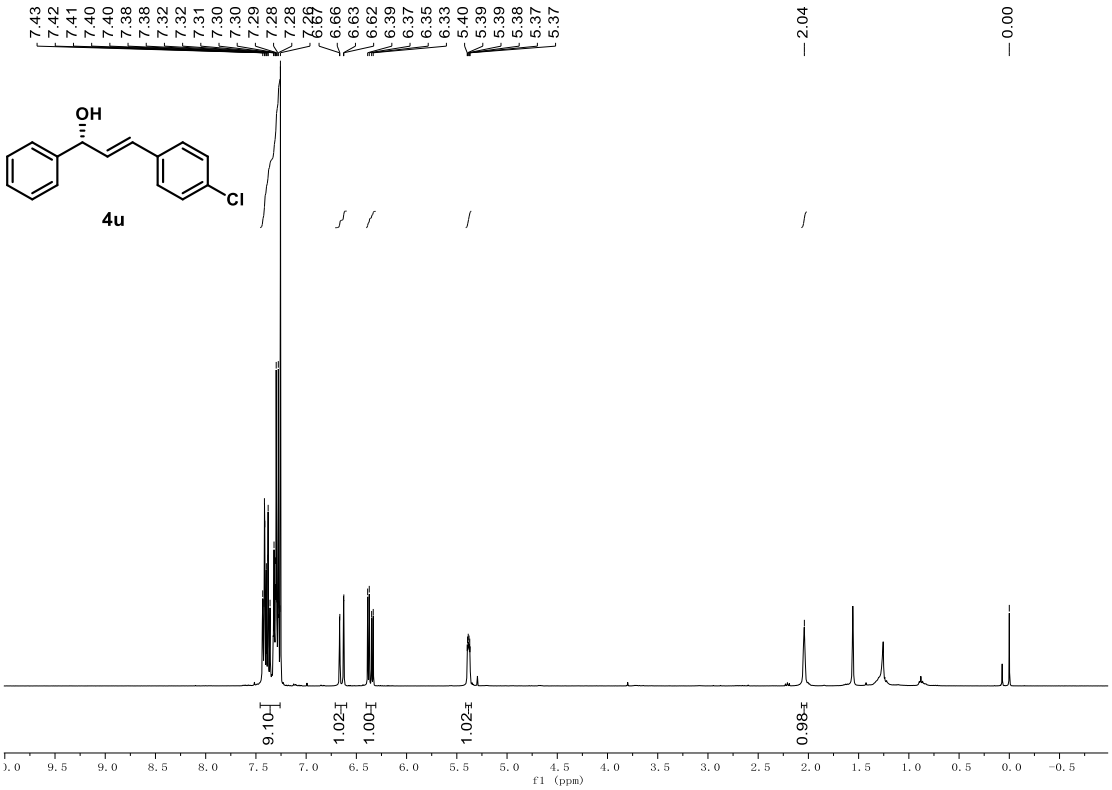

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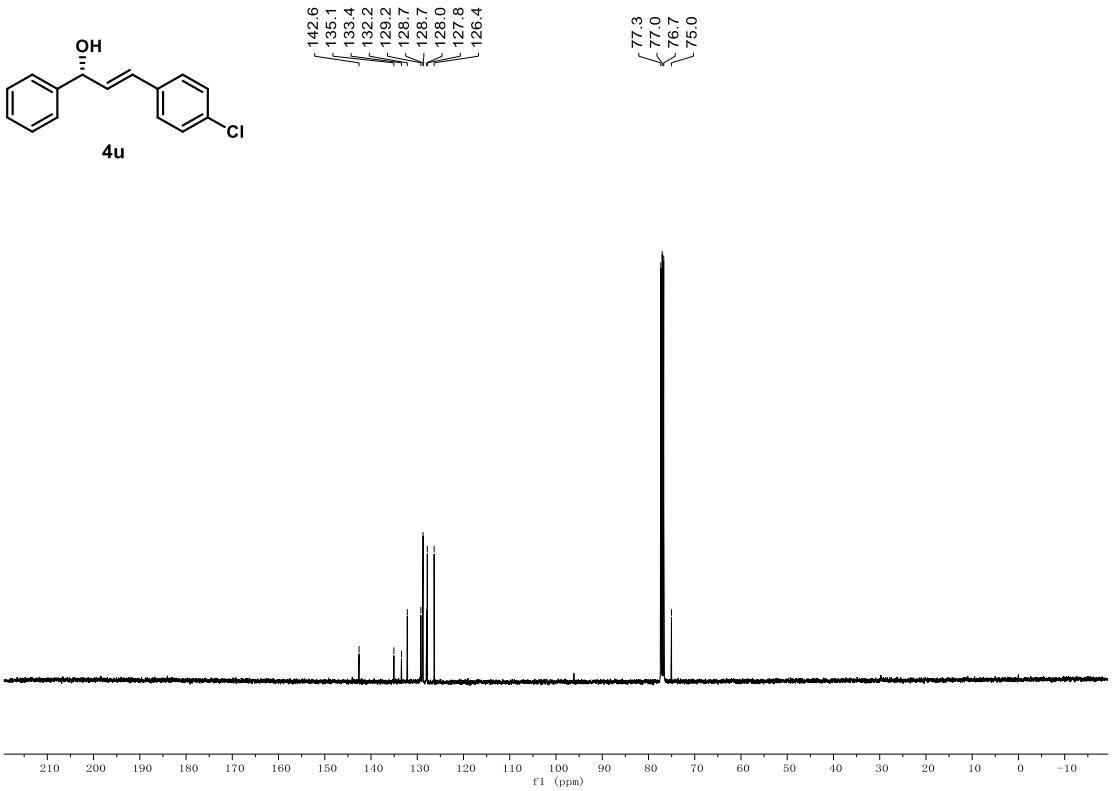

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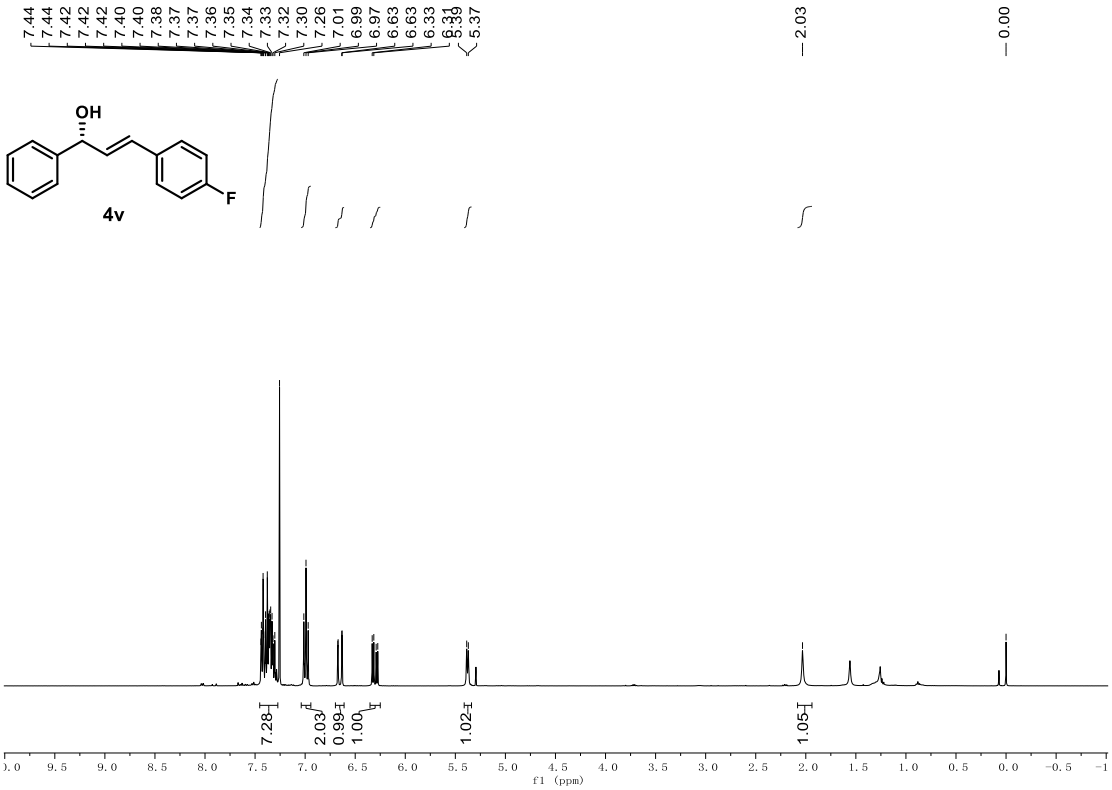

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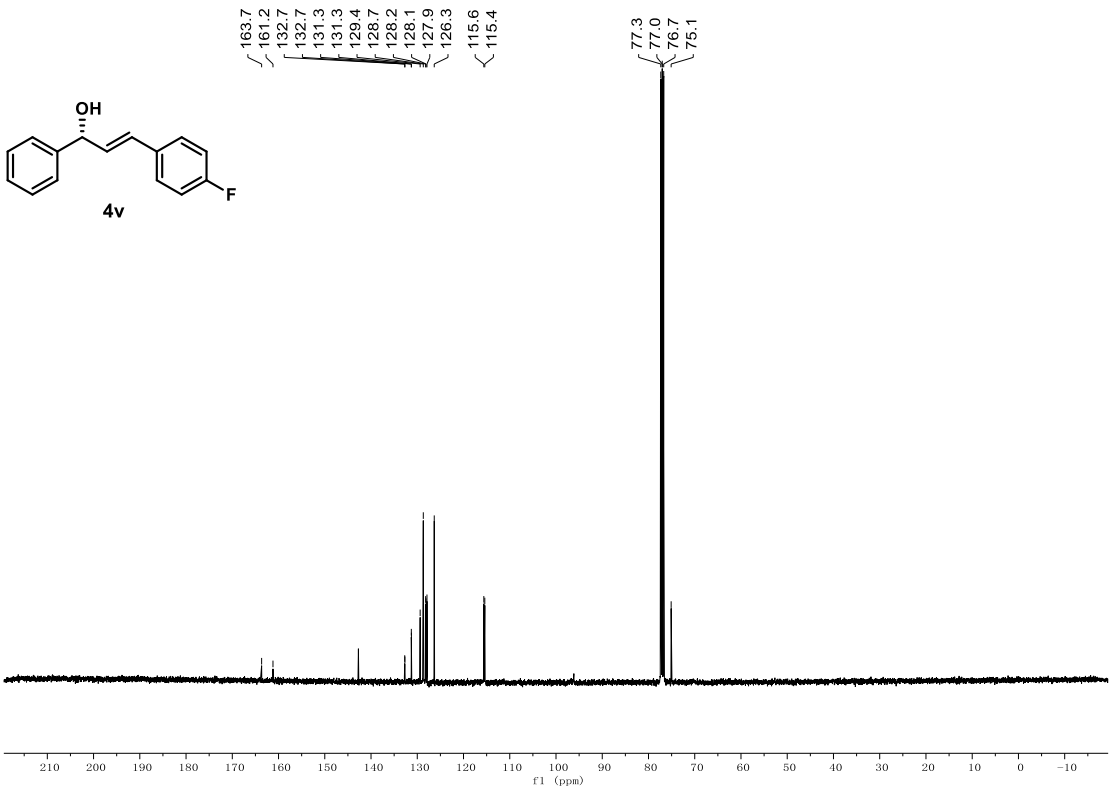

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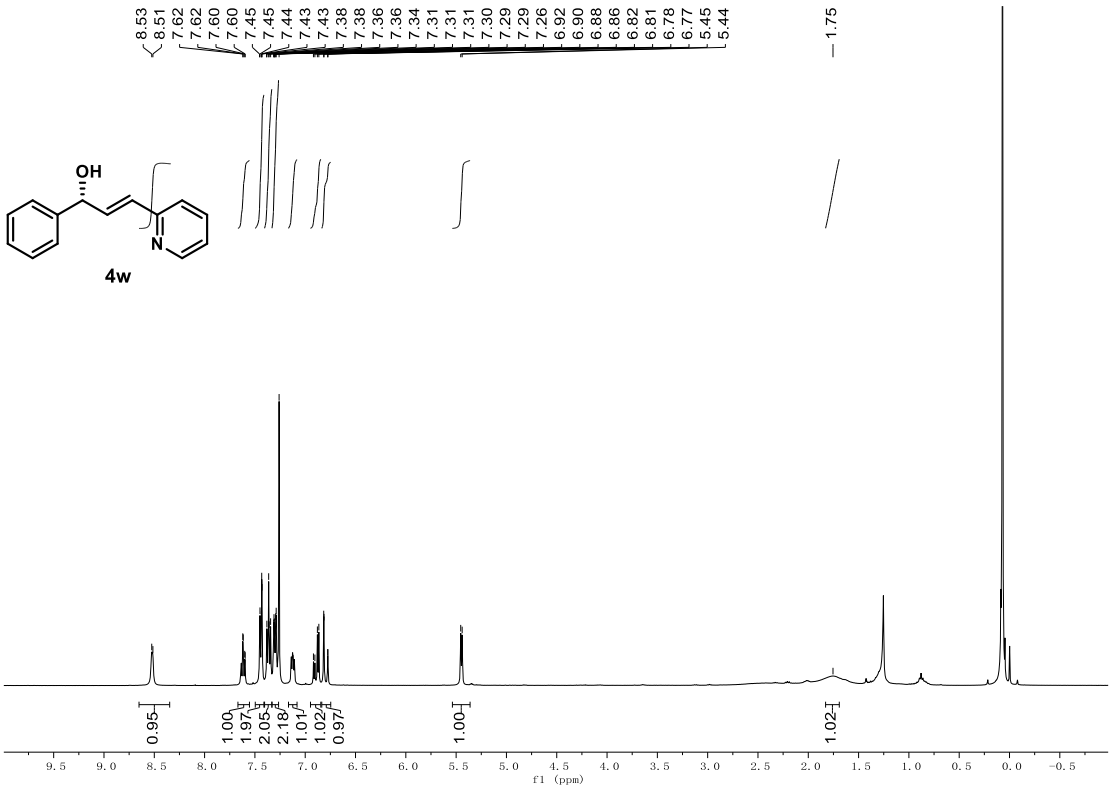

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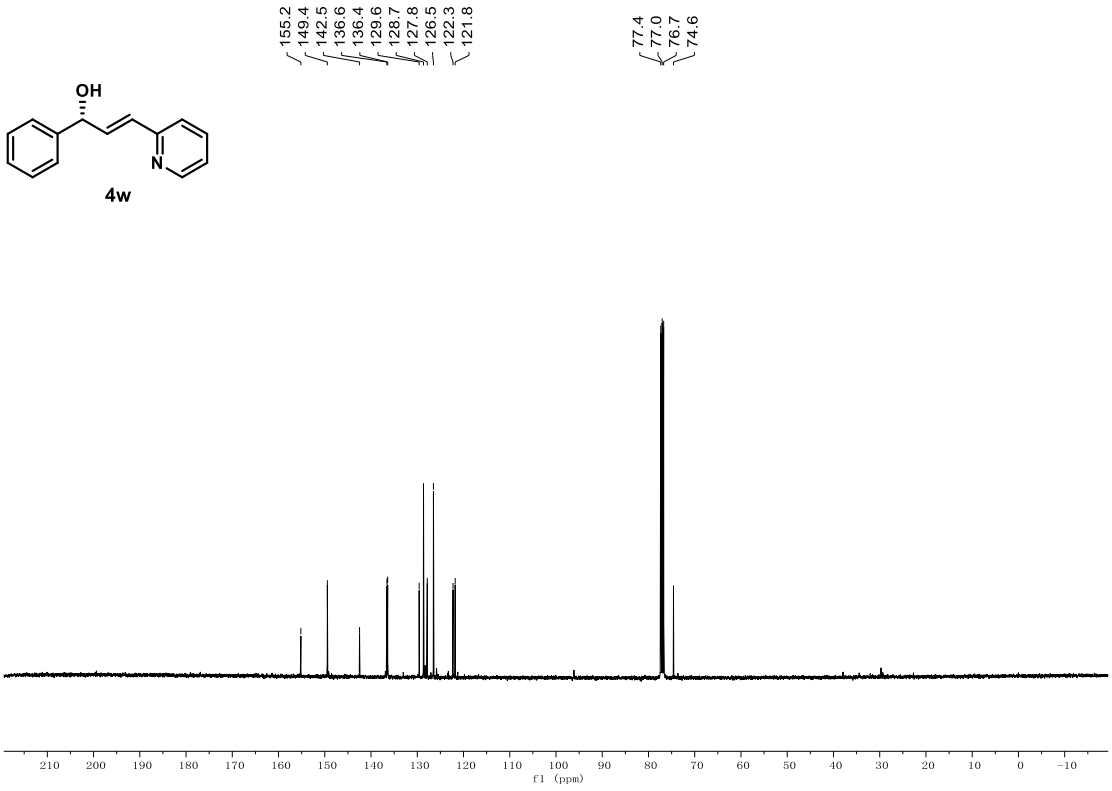

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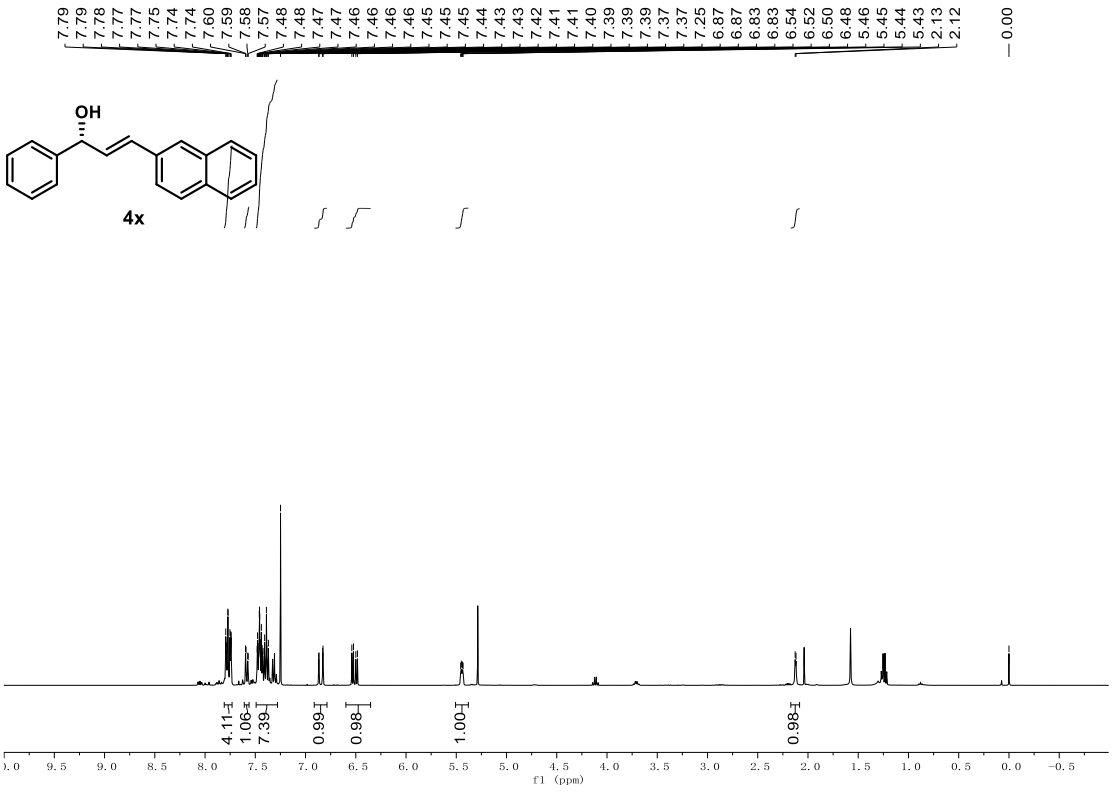

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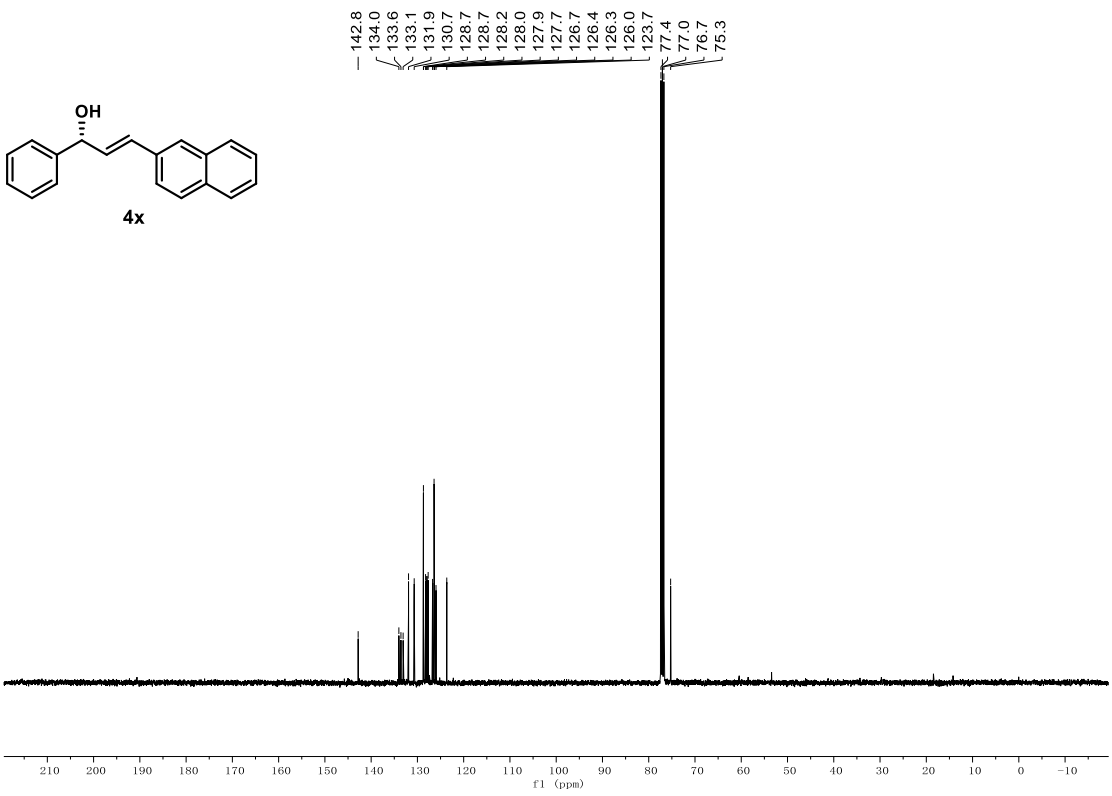

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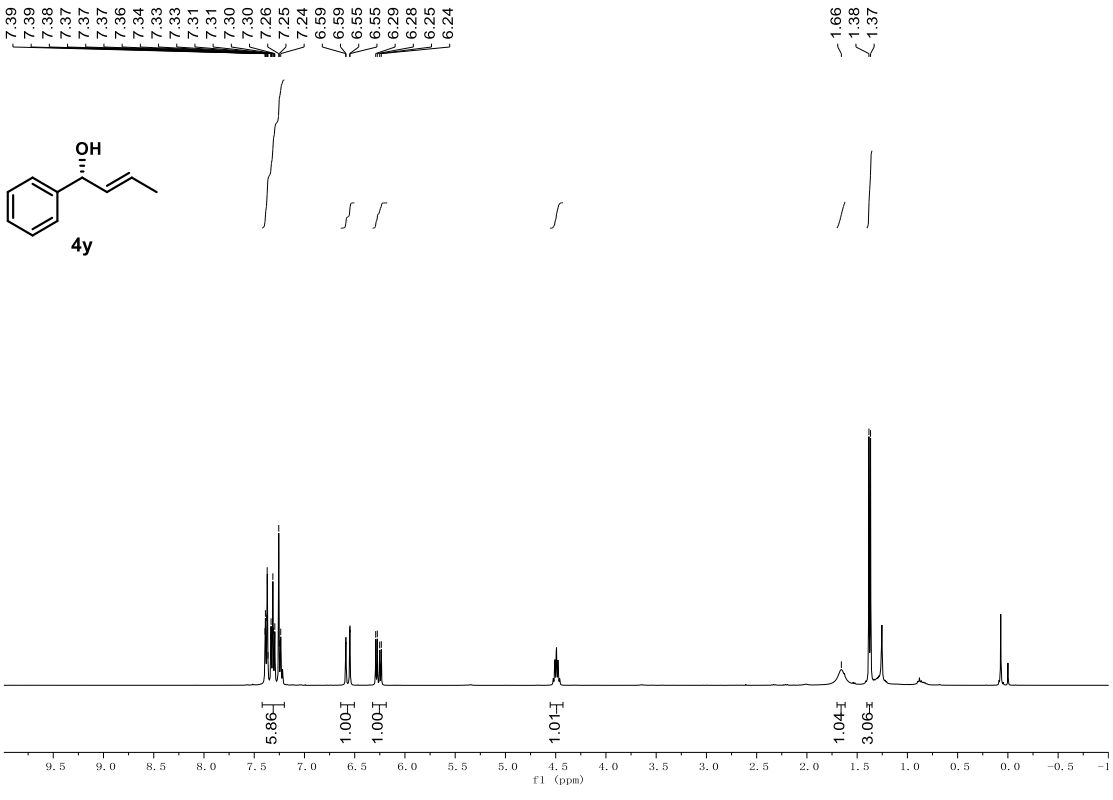

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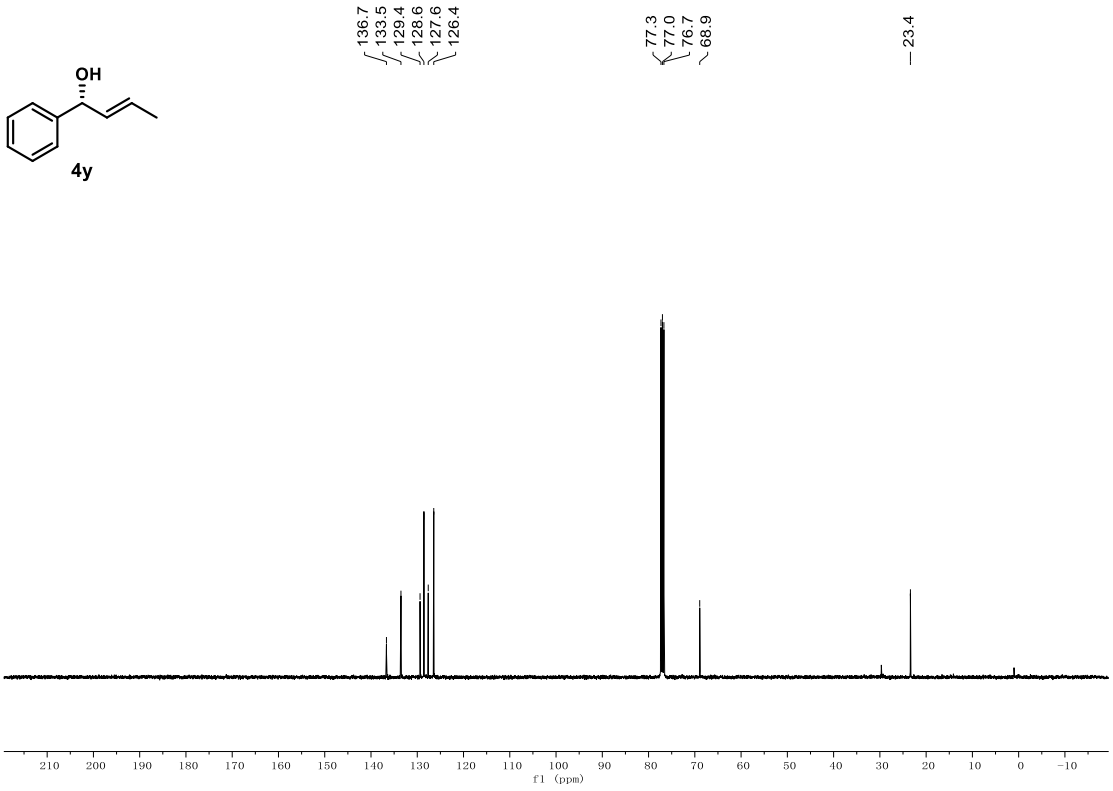

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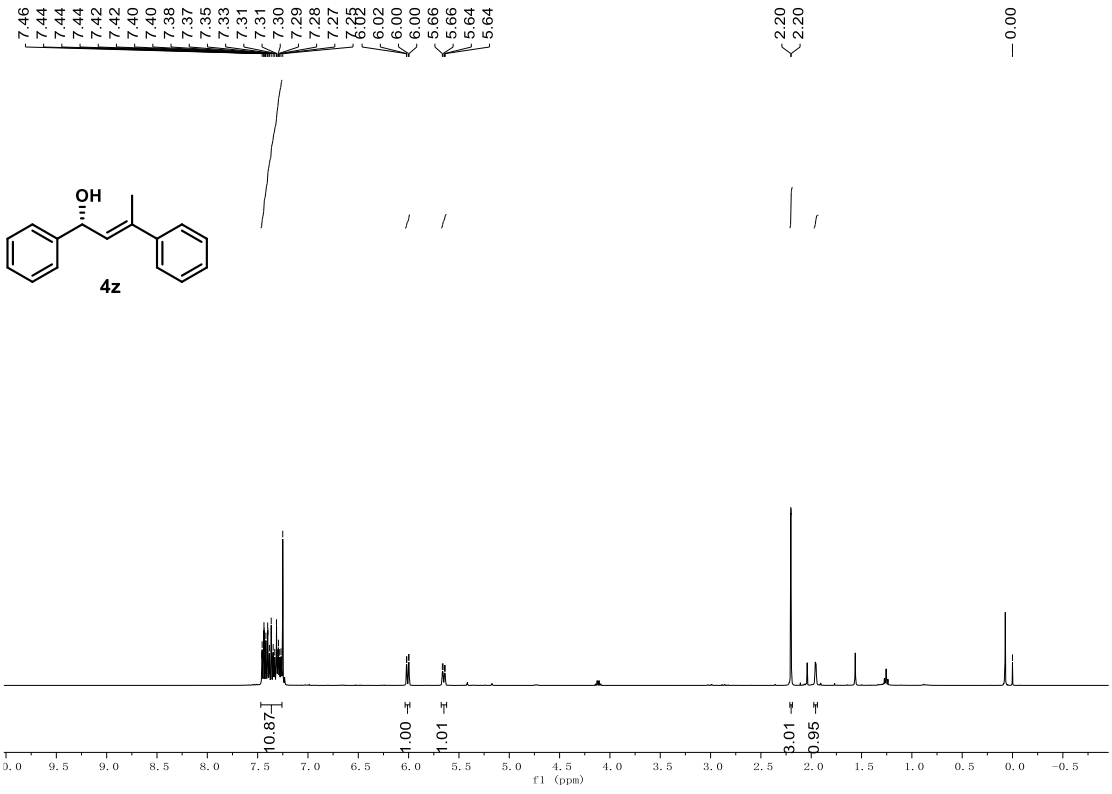

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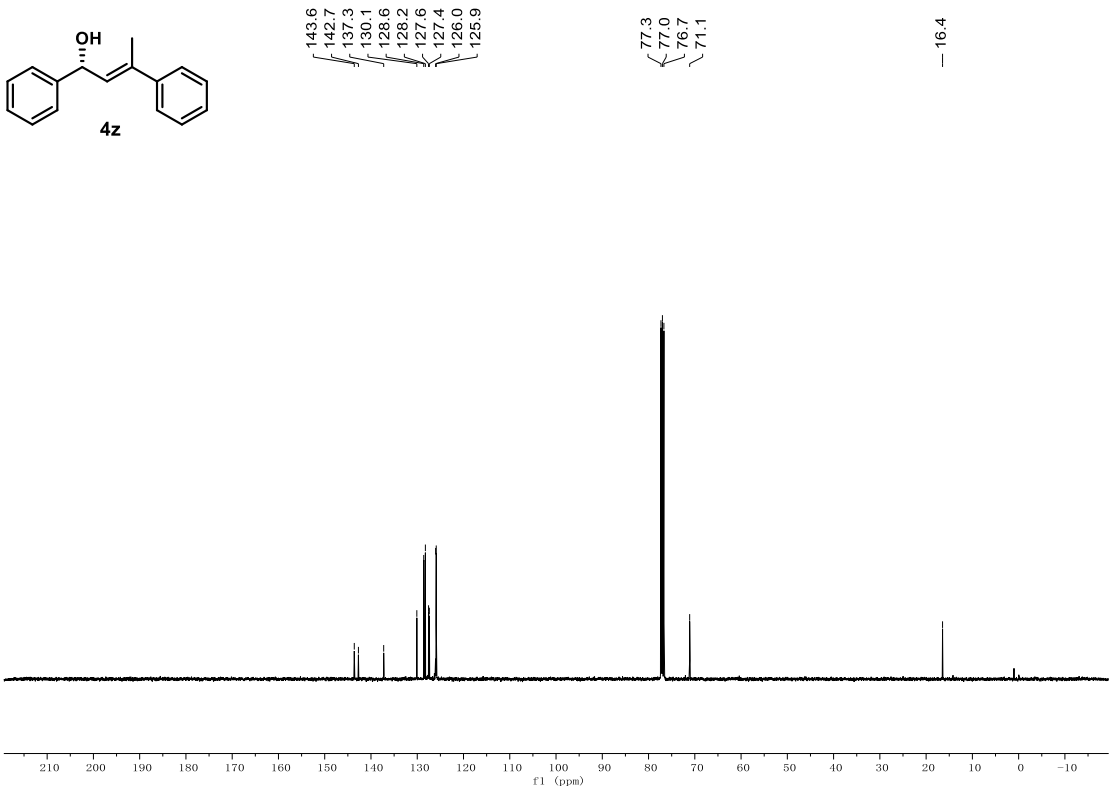

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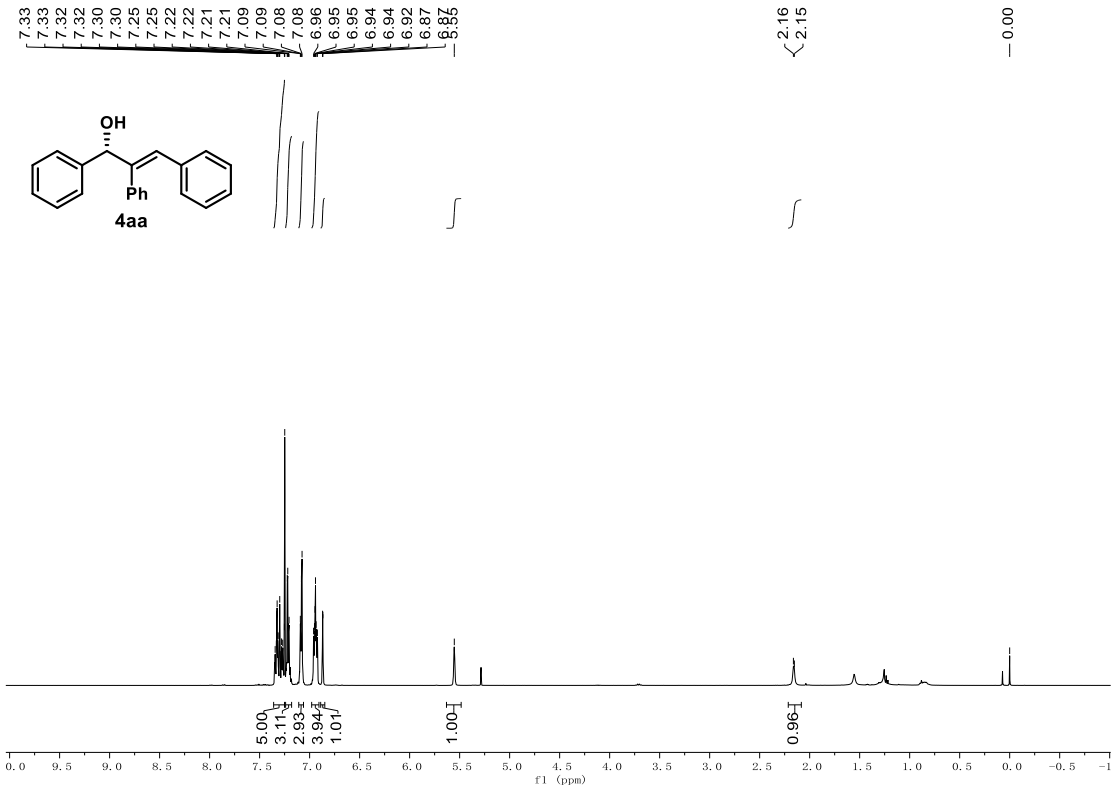

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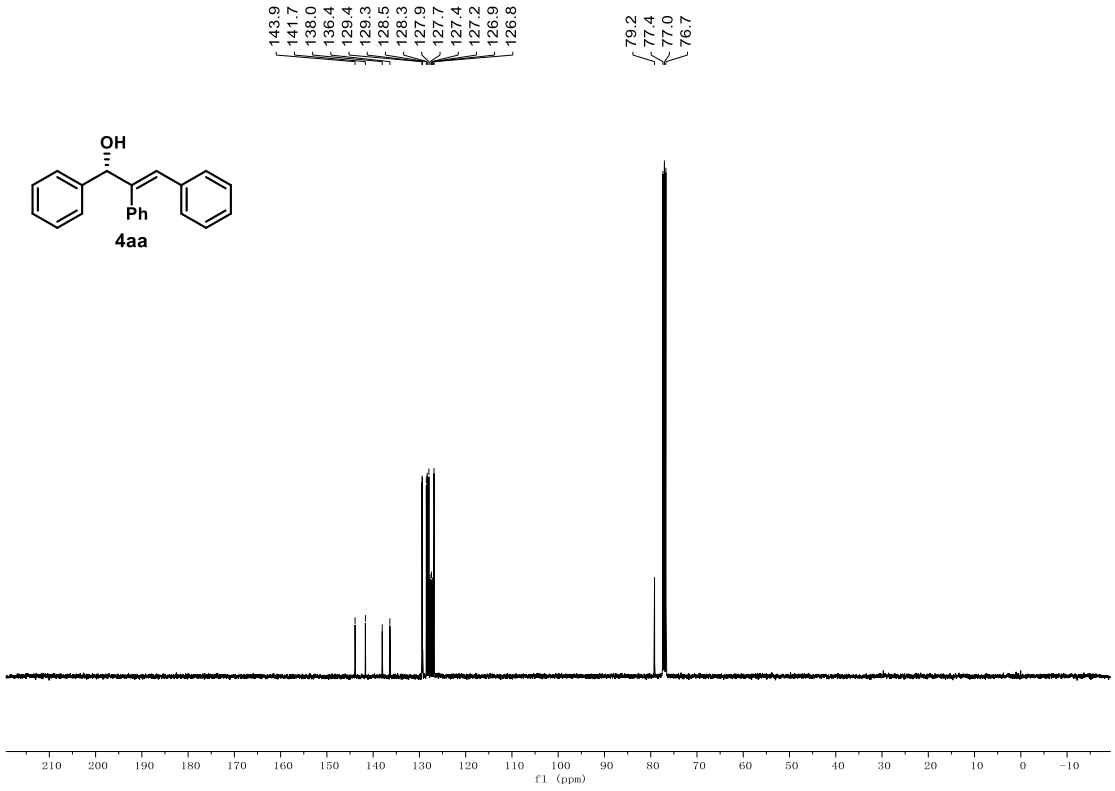

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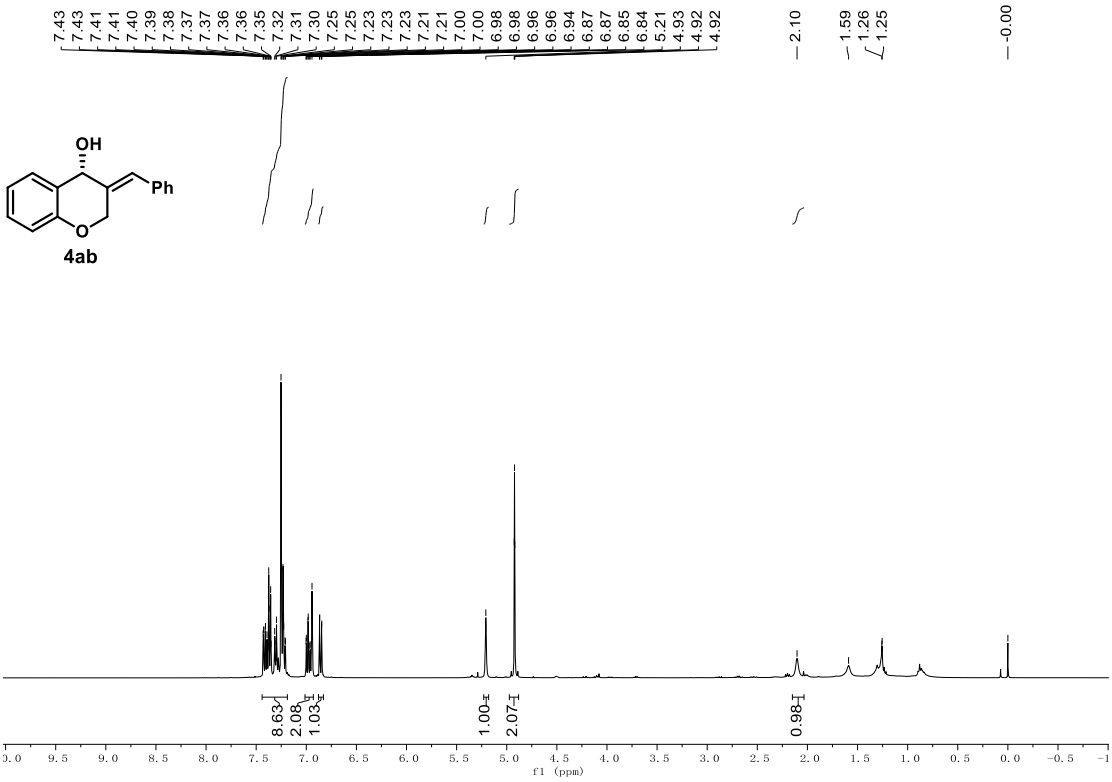

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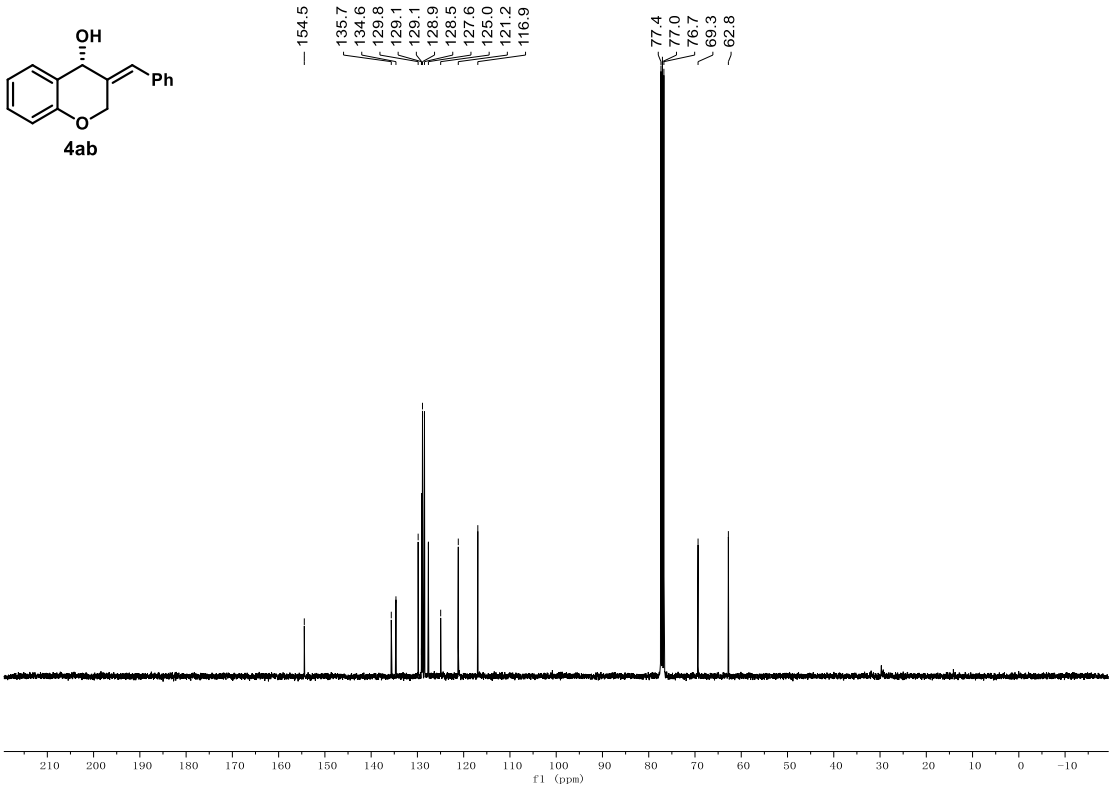

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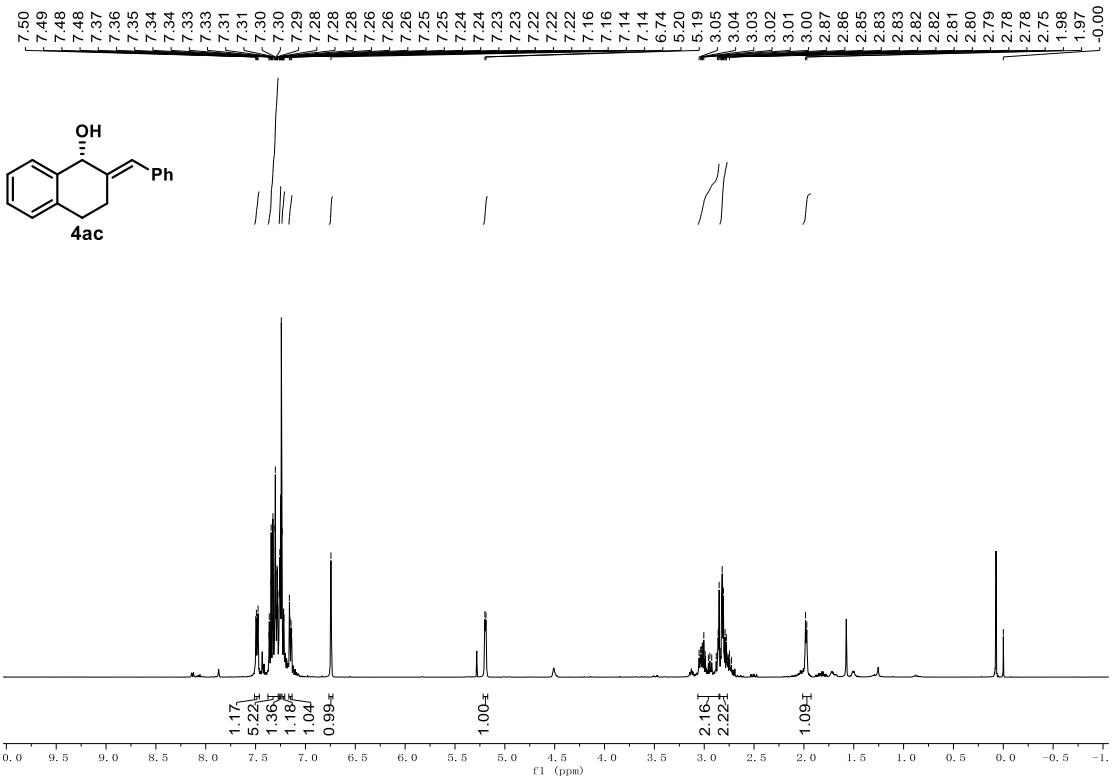

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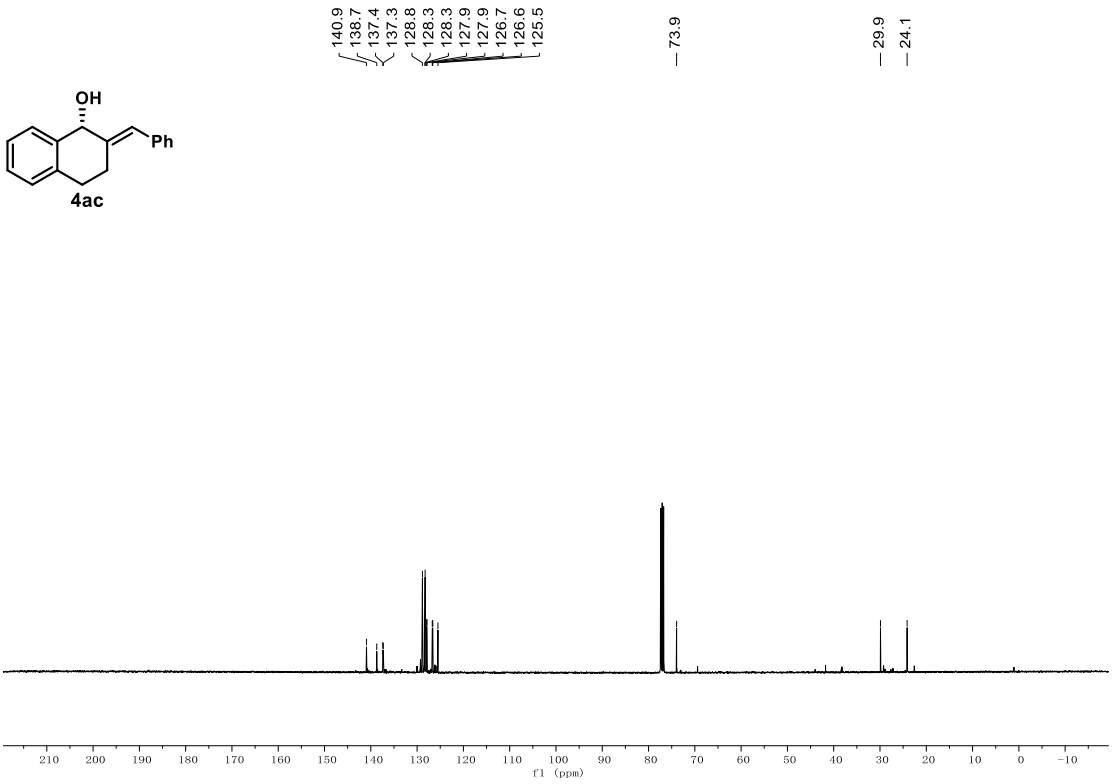

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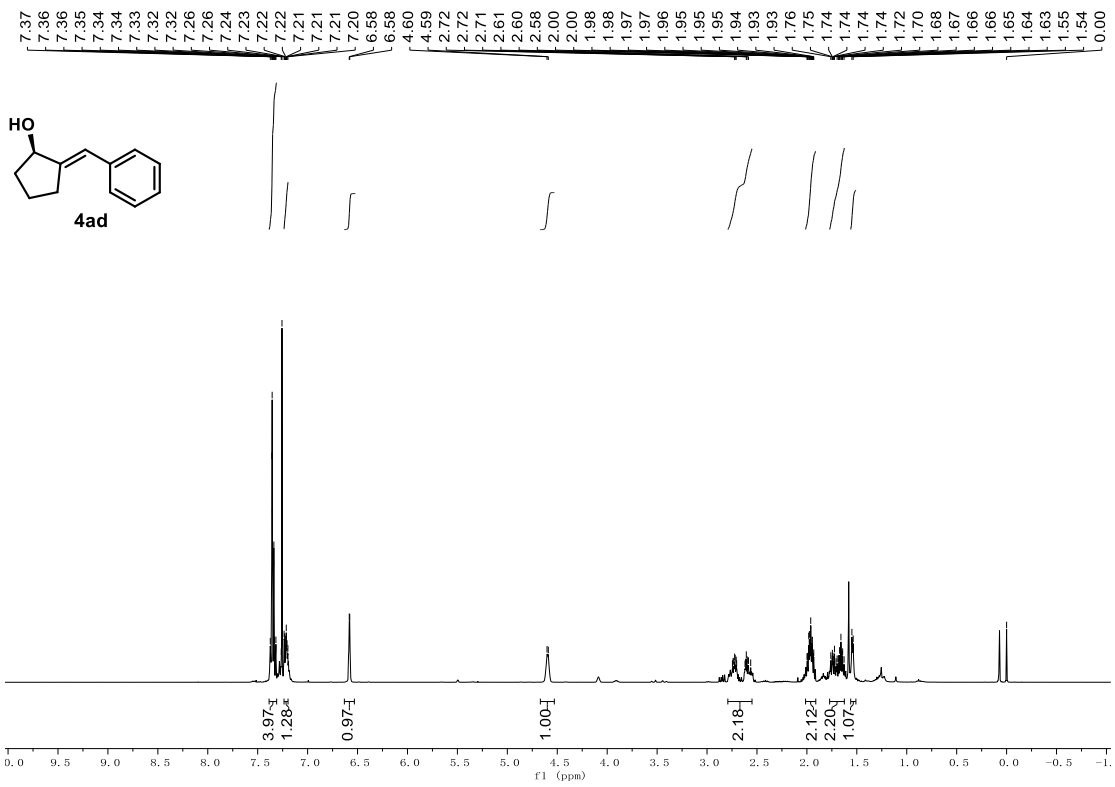

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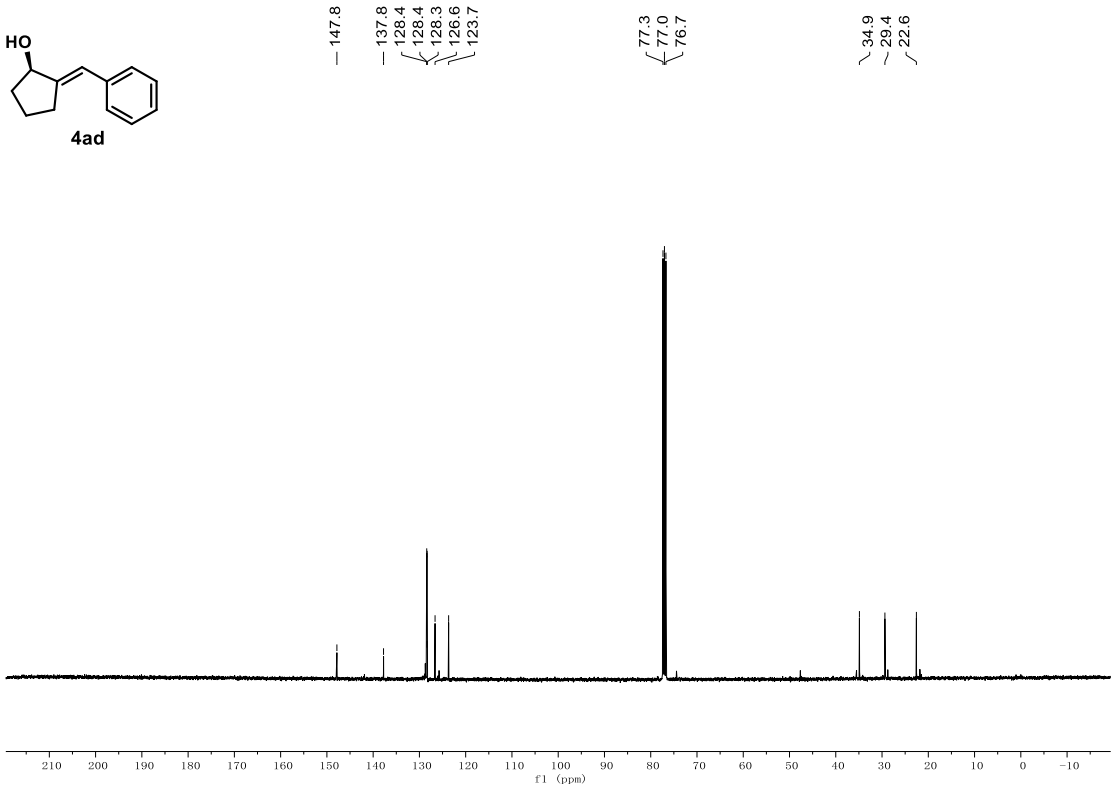

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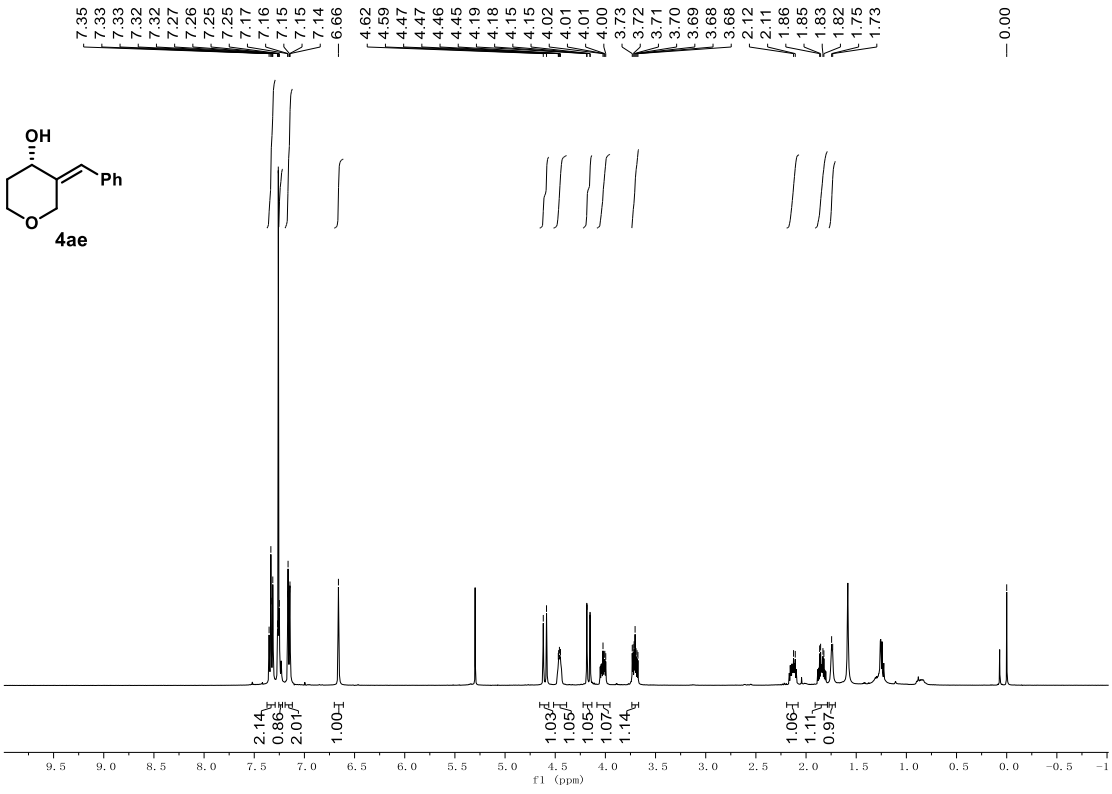

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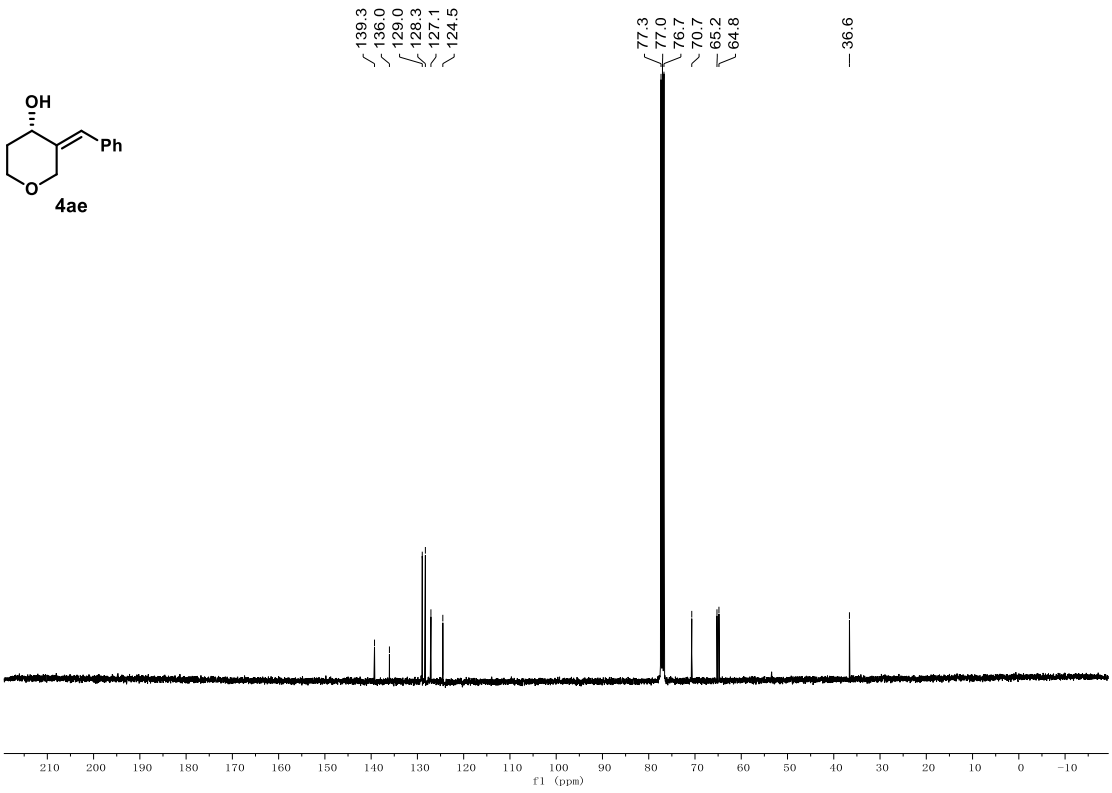
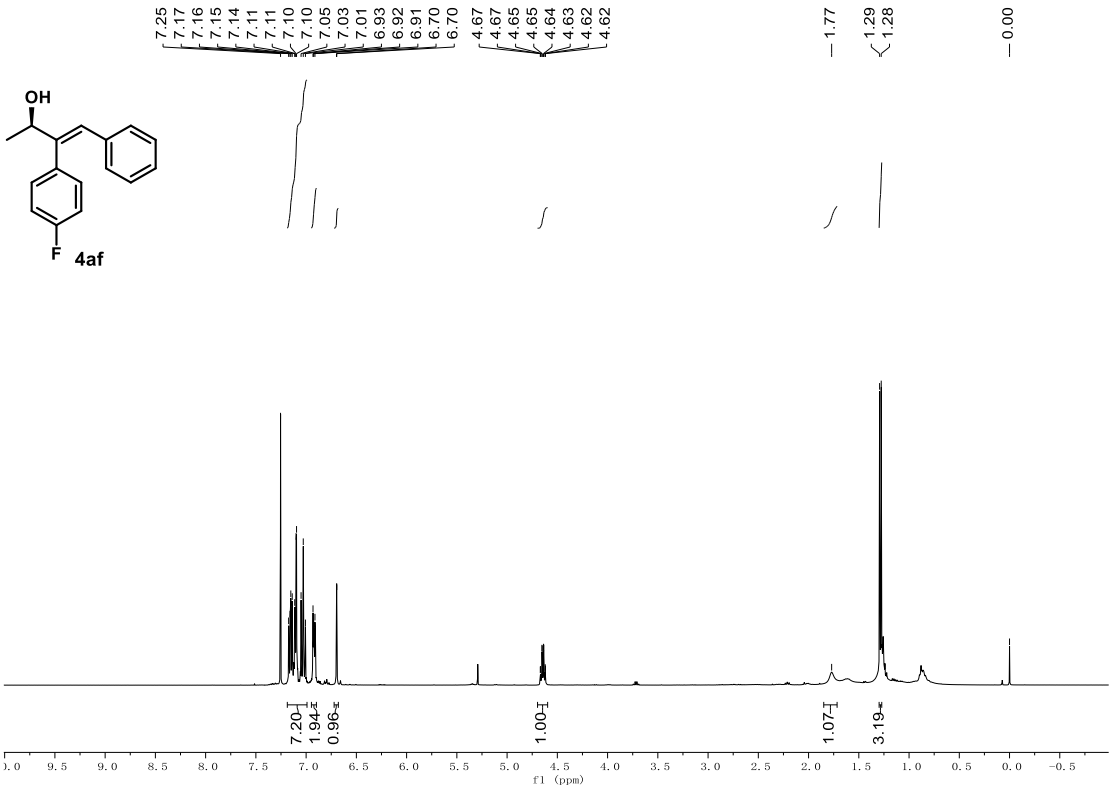


^{13}C NMR



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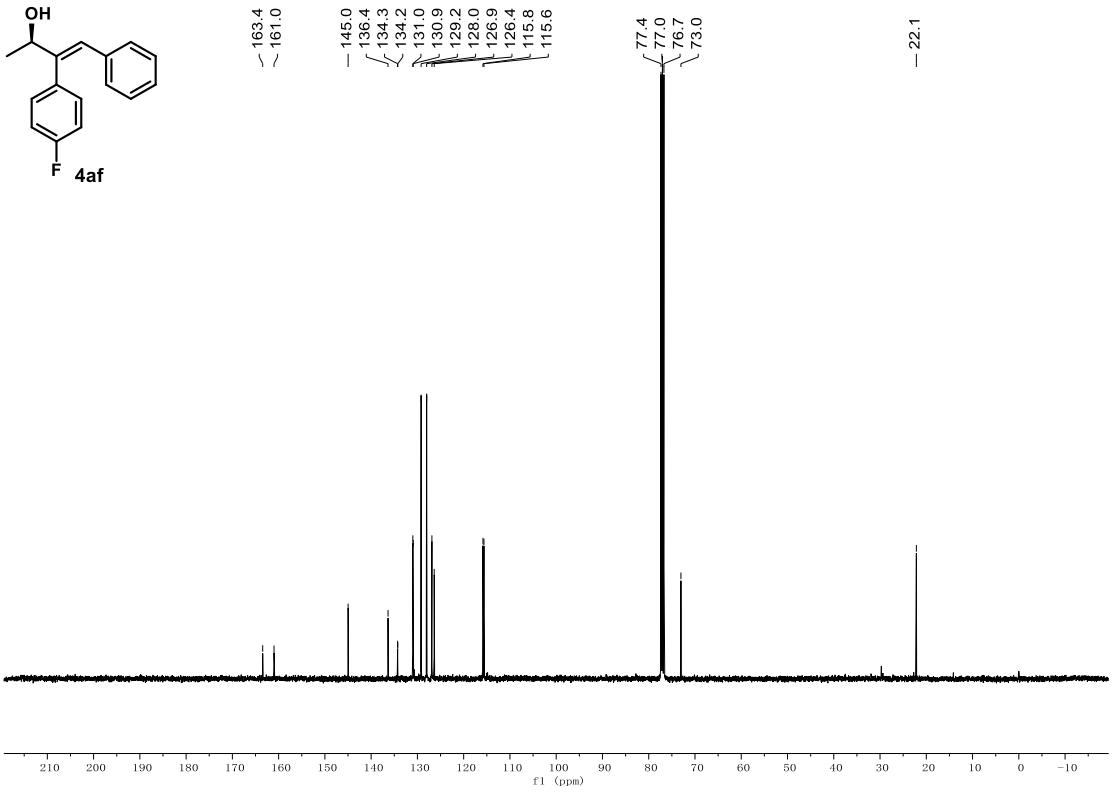

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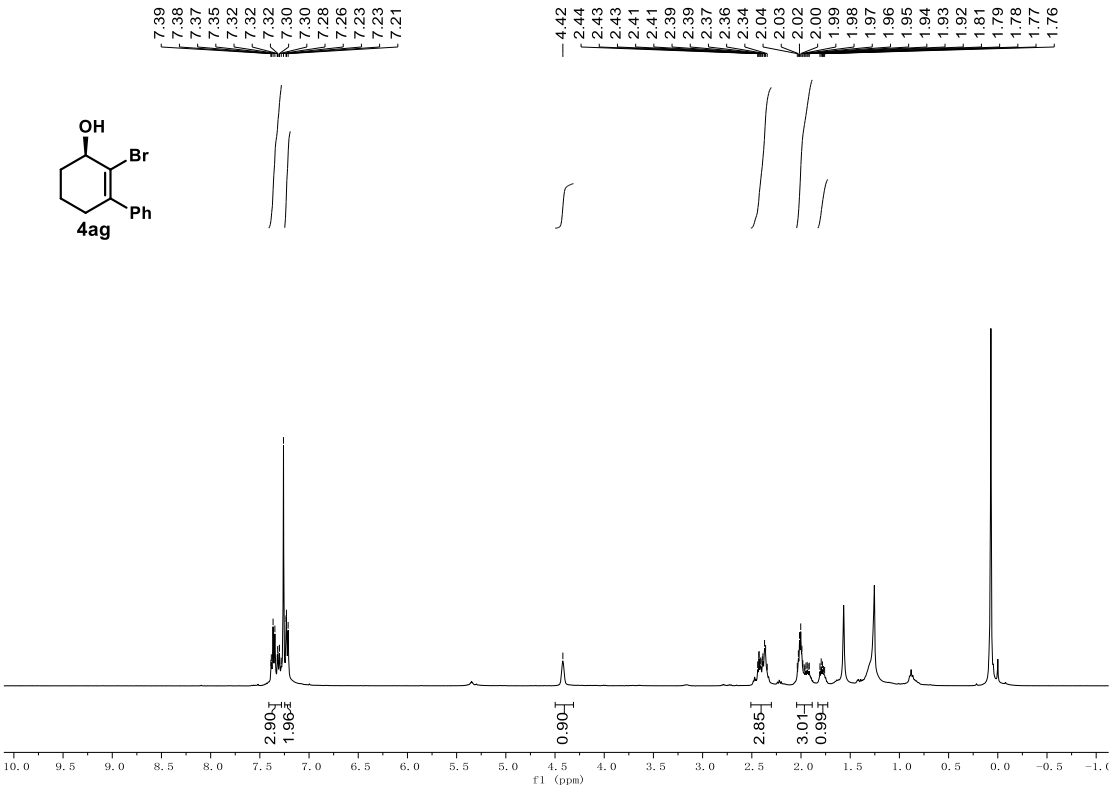

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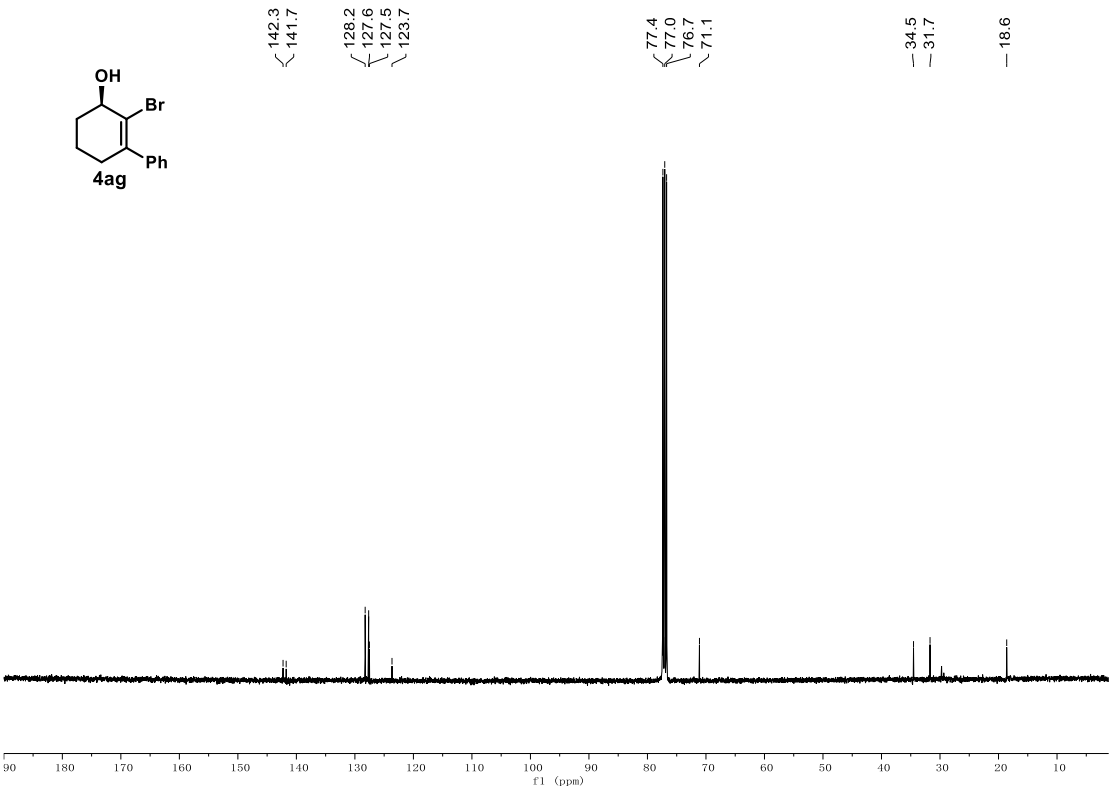

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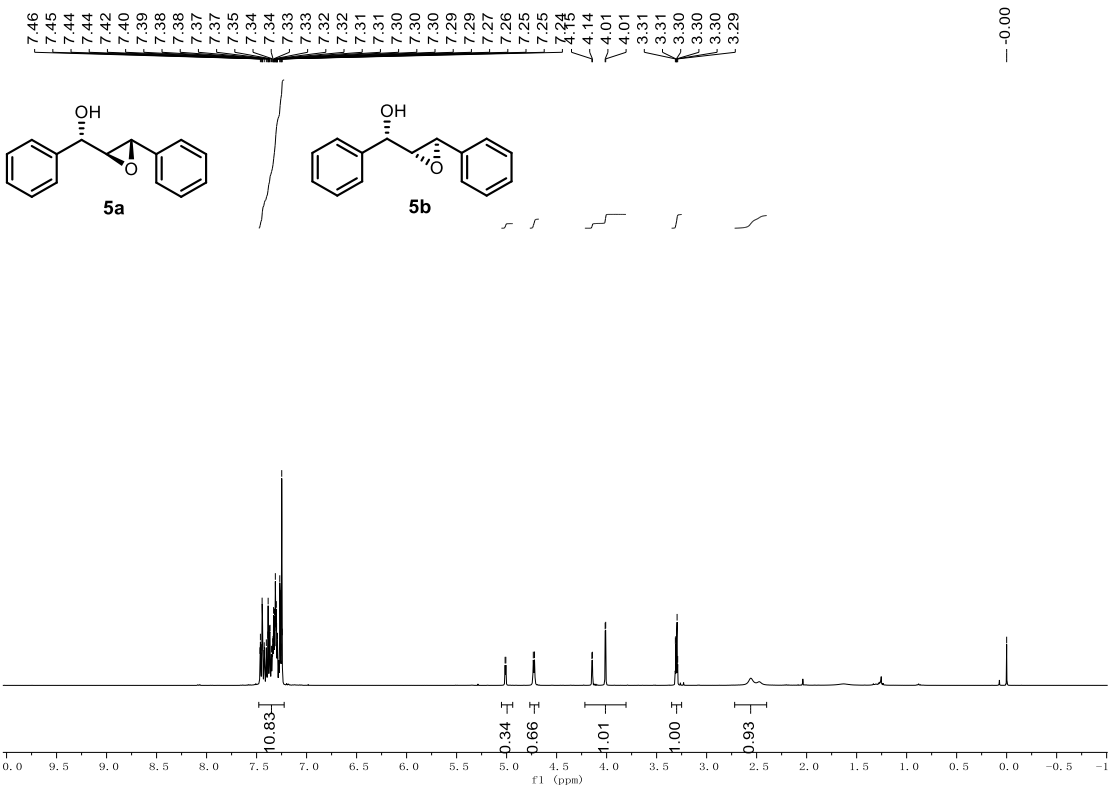

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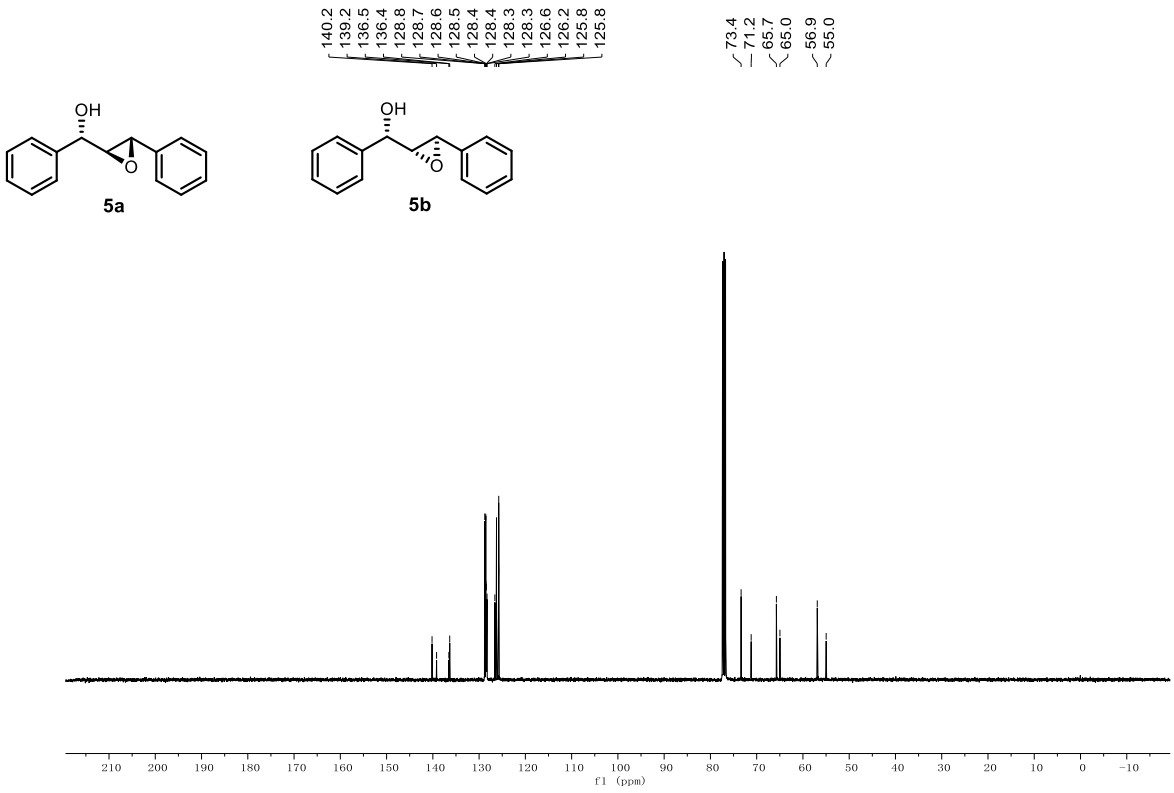

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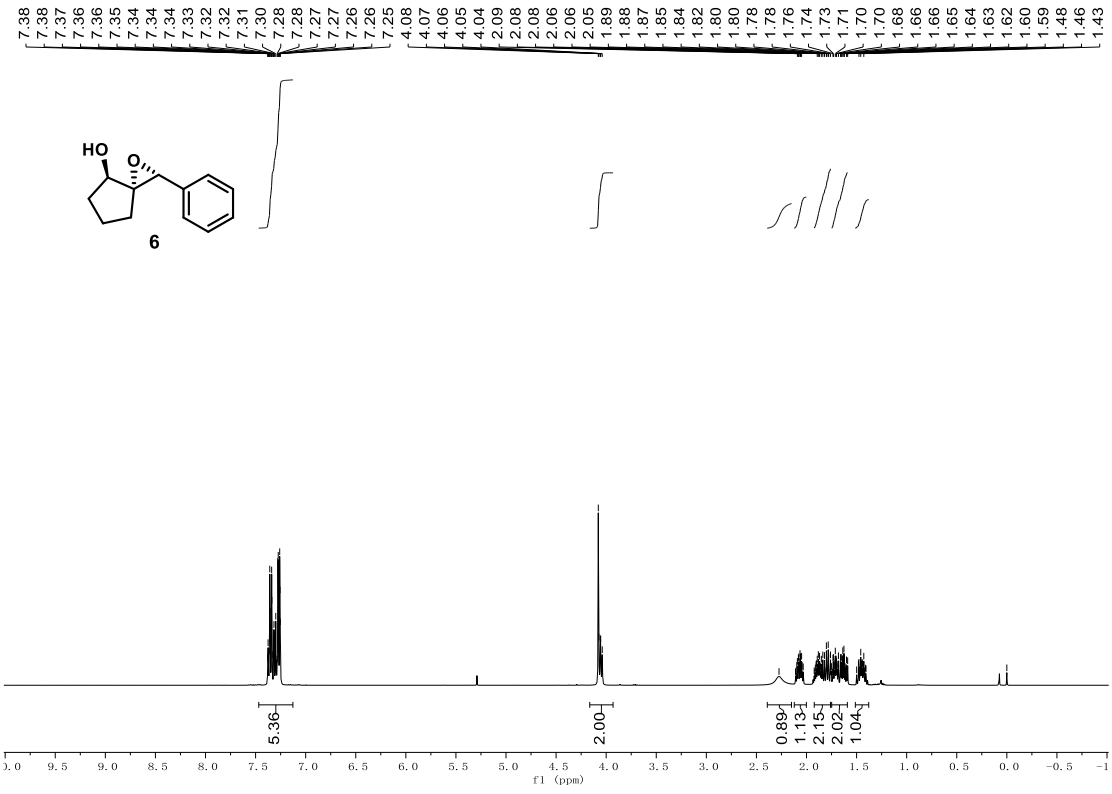

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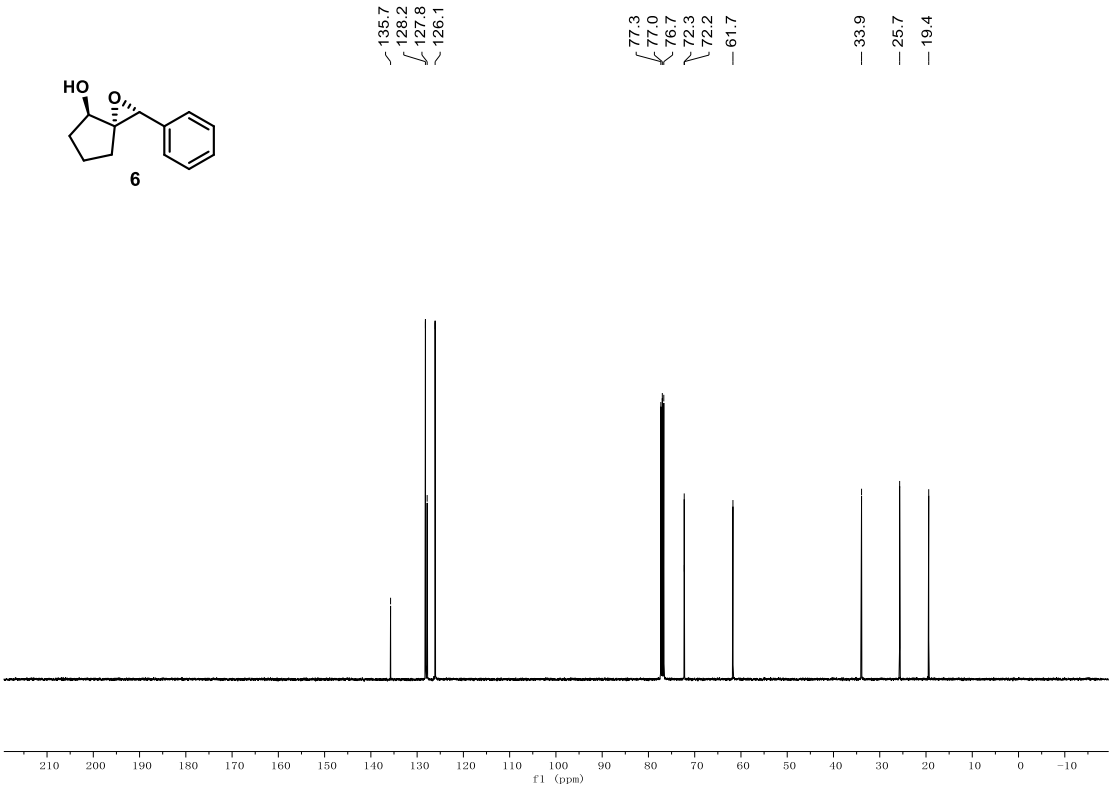

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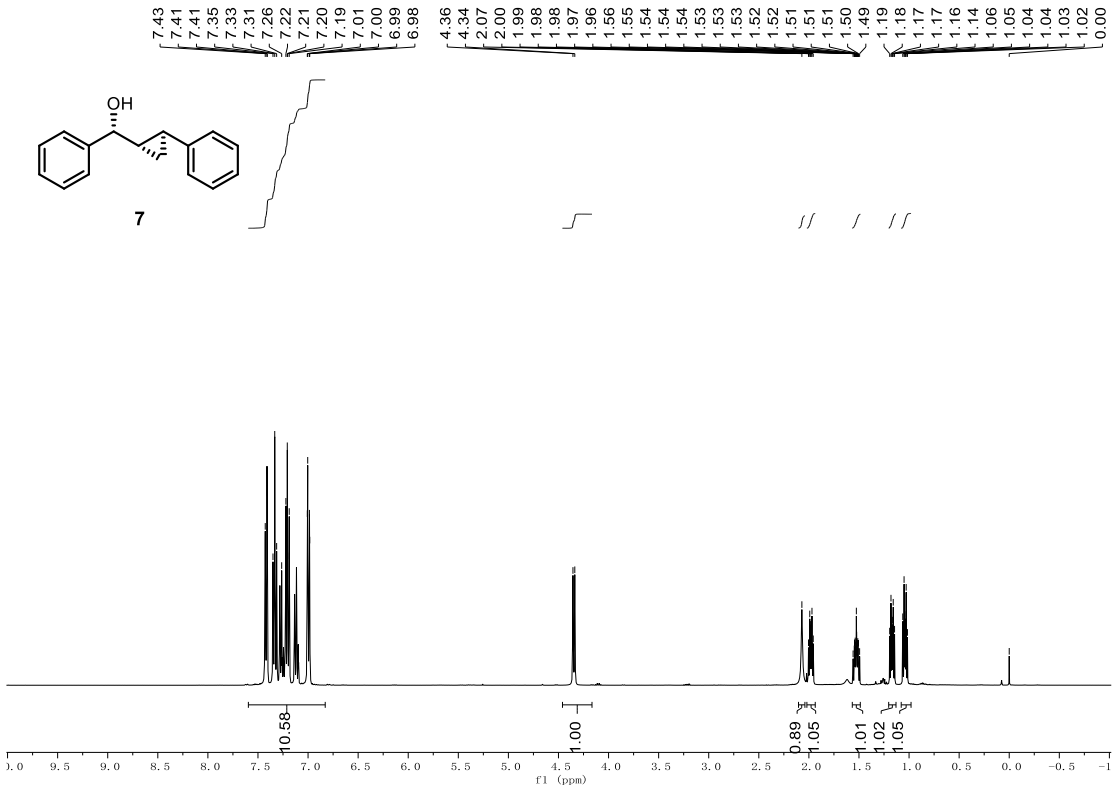

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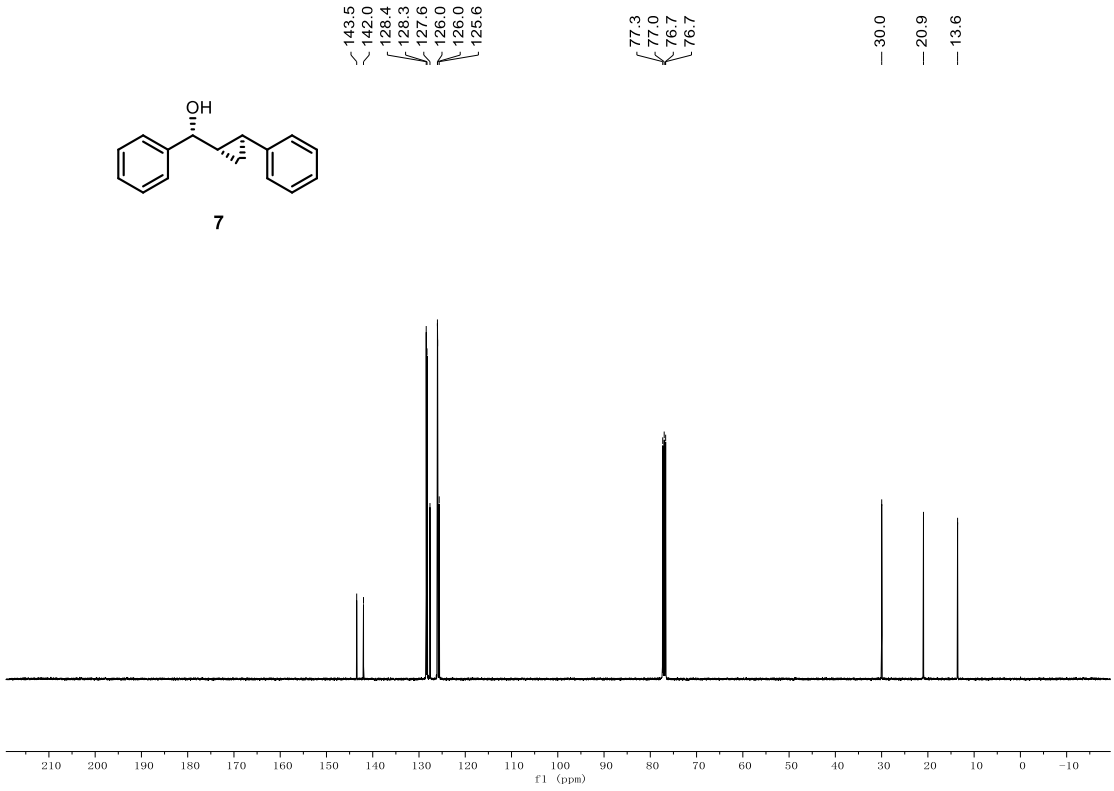

^{13}C NMR

VI. HPLC charts for hydrogenation products and derivatives

Data File D:\DATA\JI...NG\DATA\MJM-20211105PT\YXL-2021-11-2 2021-11-05 10-38-59\013-0501.D
Sample Name: MJM-187-rac

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    Acq. Instrument : Instrument 2                  Location : Vial 13
    Injection Date  : 11/5/2021 11:58:04 AM              Inj :   1
                                                  Inj Volume : 3.000 µl
    Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-20211105PT\YXL-2021-11-2 2021-11-05 10-38-59\DAD-
                      OD(1-2)-90-10-1.0ML-3UL-220NM-25MIN.M
    Last changed    : 6/3/2021 9:05:08 AM
    Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-90-10-1.0ML-3UL-220NM-25MIN.M
    Last changed    : 12/14/2021 7:23:16 PM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
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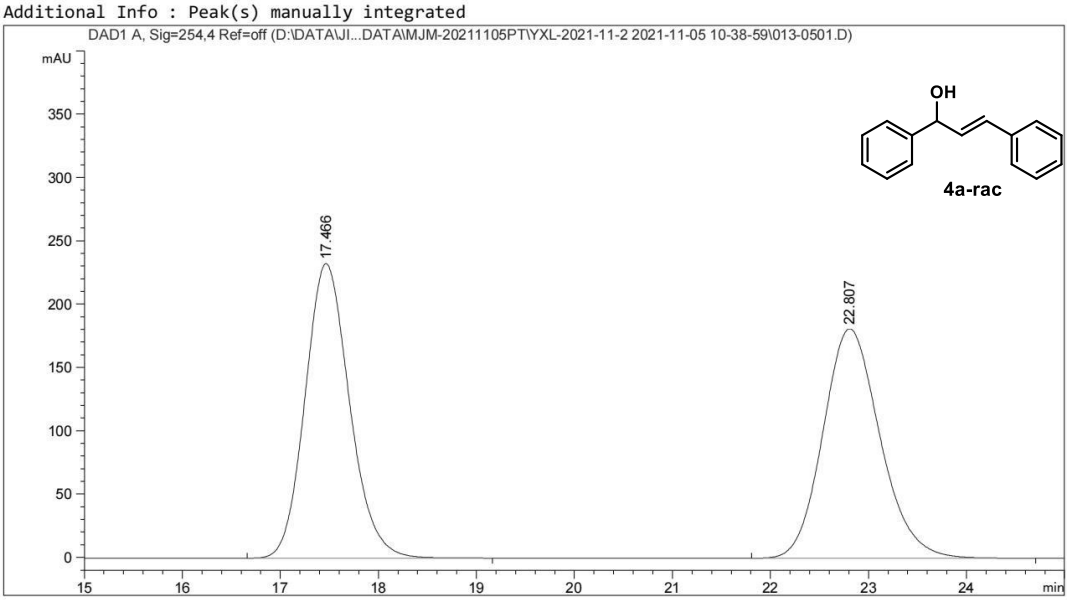


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    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=254,4 Ref=off

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  17.466 BB    0.4874 7318.80322  232.39673  49.9979
       2  22.807 BB    0.6234 7319.40918  181.14827  50.0021

    Totals :                  1.46382e4   413.54500
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Data File D:\DATA\JI...NG\DATA\MJM-20211105PT\YXL-2021-11-2 2021-11-05 10-38-59\012-0401.D
Sample Name: MJM-187-2

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Acq. Instrument : Instrument 2                  Location : Vial 12
Injection Date  : 11/5/2021 11:32:07 AM              Inj :   1
                                              Inj Volume : 3.000 µl
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                  OD(1-2)-90-10-1.0ML-3UL-220NM-25MIN.M
Last changed    : 6/3/2021 9:05:08 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-90-10-1.0ML-3UL-220NM-25MIN.M
Last changed    : 12/14/2021 7:24:29 PM
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Additional Info : Peak(s) manually integrated
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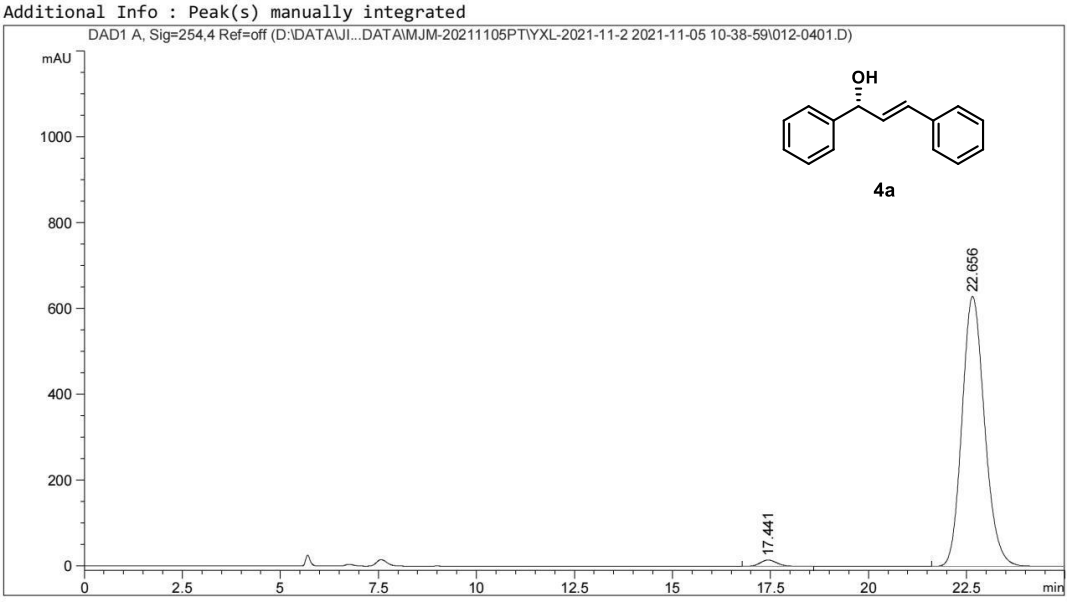


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======================================================================
                        Area Percent Report
======================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  17.441 BB    0.4487  444.73172   14.87916   1.7338
   2  22.656 BBA   0.6175 2.52065e4   629.05090  98.2662

Totals :                  2.56512e4   643.93006
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Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\014-0601.D
Sample Name: MJM-40-9-RAC

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Acq. Instrument : Instrument 2                  Location : Vial 14
Injection Date  : 12/6/2021 12:26:46 PM              Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\DAD-OD(1-6
                  )-90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
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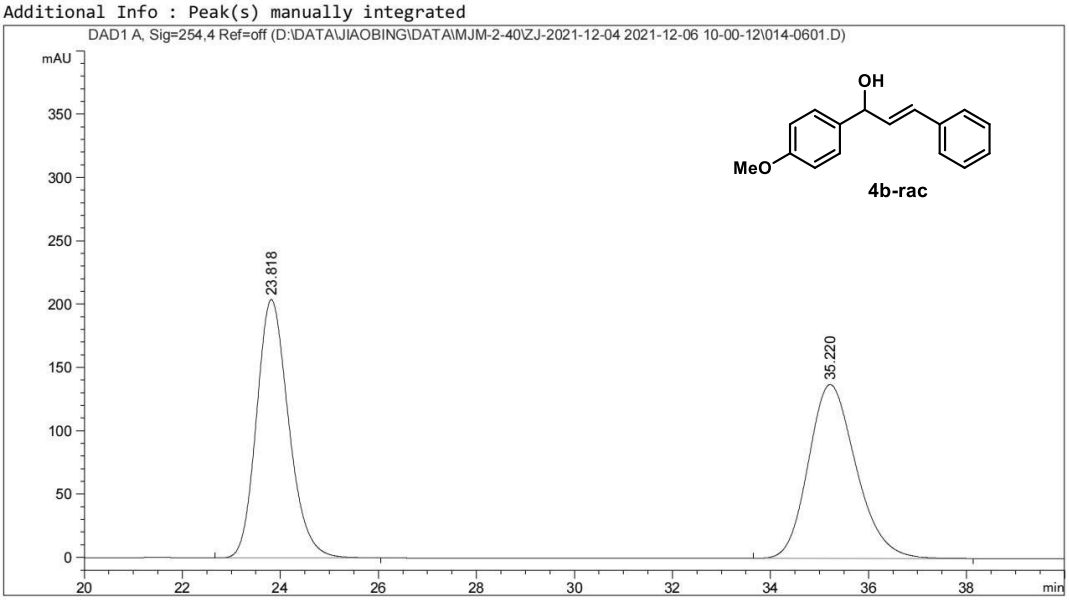
Last changed    : 12/7/2021 9:20:19 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

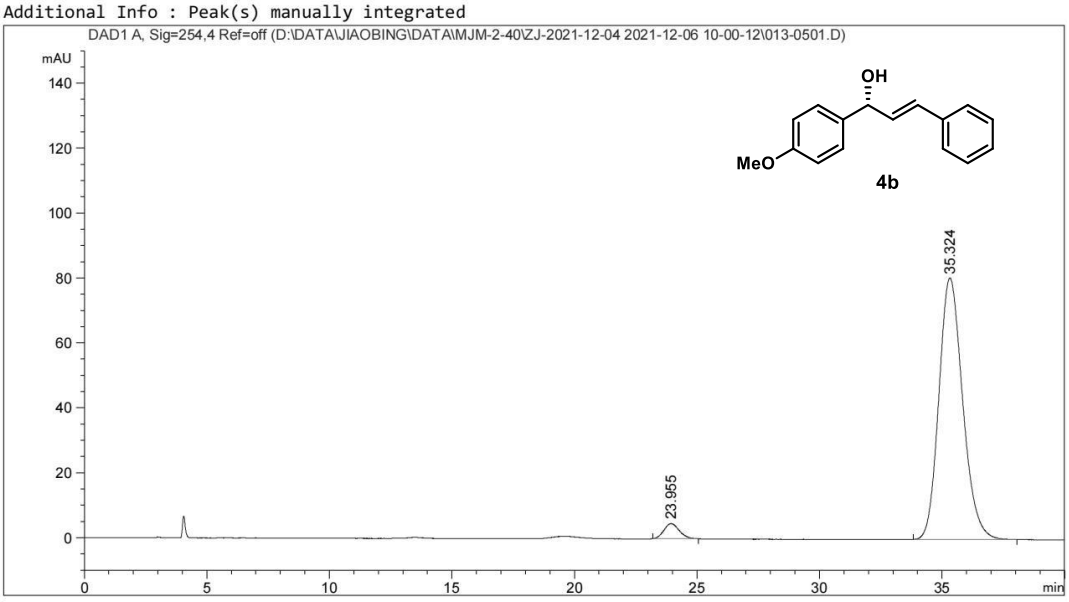

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  23.818 BB    0.7033 9290.55859  204.00586  50.0536
   2  35.220 BB    1.0279 9270.64746  137.26563  49.9464

Totals :                  1.85612e4   341.27148
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\013-0501.D
Sample Name: MJM-40-9

```
=====================================================================
Acq. Operator   :                              Seq. Line :   5
Acq. Instrument : Instrument 2                  Location : Vial 13
Injection Date  : 12/6/2021 11:45:48 AM              Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\DAD-OD(1-6
                  )-90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-90-10-1.0ML-3UL-220NM-90MIN.M
Last changed    : 12/6/2021 3:04:35 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

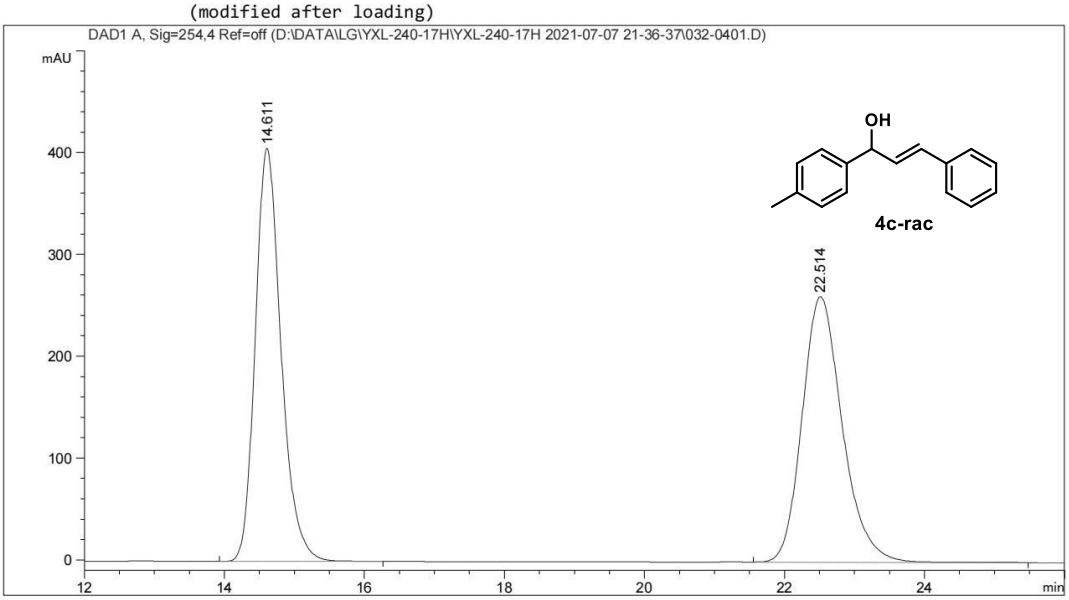

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  23.955 BB    0.5226  203.23677    4.66176   3.6027
   2  35.324 BB    1.0292 5437.92676   80.58797  96.3973

Totals :                  5641.16353   85.24972
```

Data File D:\DATA\LG\YXL-240-17H\YXL-240-17H 2021-07-07 21-36-37\032-0401.D
Sample Name: MJM-6-RAC

```
==========================================================================
Acq. Operator   :                                Seq. Line :   4
Acq. Instrument : Instrument 2                    Location : Vial 32
Injection Date  : 7/7/2021 10:43:48 PM                 Inj :   1
                                                 Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\LG\YXL-240-17H\YXL-240-17H 2021-07-07 21-36-37\DAD-OD(1-2)-90-10-1.
                  0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\MYC\DAD-OJ(1-6)-80-20-0.3ML-5UL-ALL-90MIN.M
Last changed    : 7/8/2021 9:34:54 AM
                  (modified after loading)
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=254,4 Ref=off

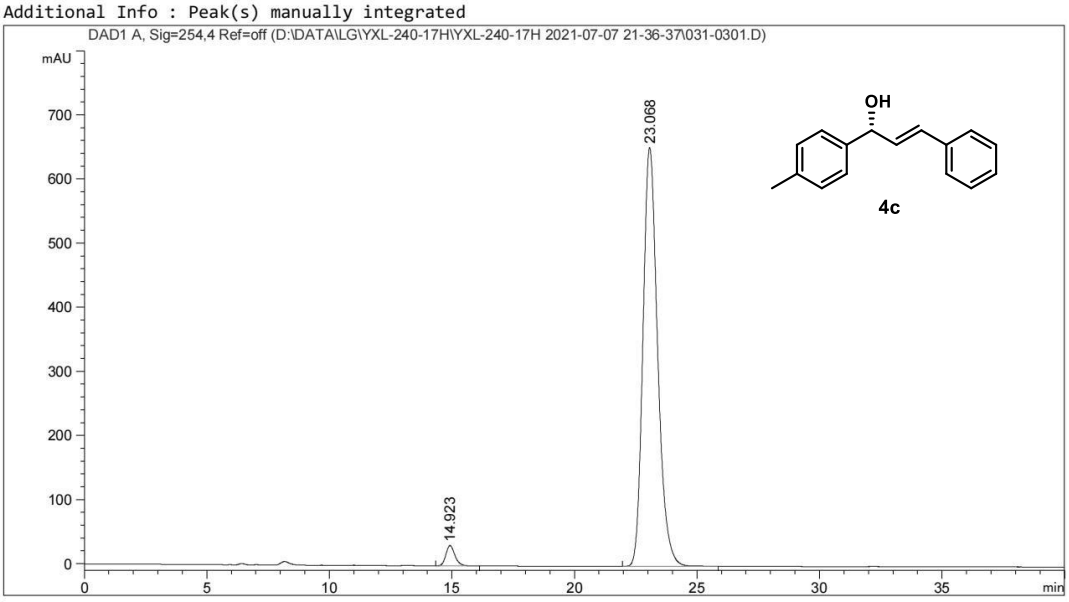
Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  14.611 BB    0.3922 1.03730e4   405.77725  49.9995
   2  22.514 BB    0.6080 1.03732e4   260.83344  50.0005

Totals :                  2.07462e4   666.61069


==========================================================================
```

Data File D:\DATA\LG\YXL-240-17H\YXL-240-17H 2021-07-07 21-36-37\031-0301.D
Sample Name: MJM-6

```
==========================================================================
Acq. Operator   :                                Seq. Line :   3
Acq. Instrument : Instrument 2                    Location : Vial 31
Injection Date  : 7/7/2021 10:02:49 PM                 Inj :   1
                                                 Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\LG\YXL-240-17H\YXL-240-17H 2021-07-07 21-36-37\DAD-OD(1-2)-90-10-1.
                  0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\MYC\DAD-OJ(1-6)-80-20-0.3ML-5UL-ALL-90MIN.M
Last changed    : 7/8/2021 9:33:42 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

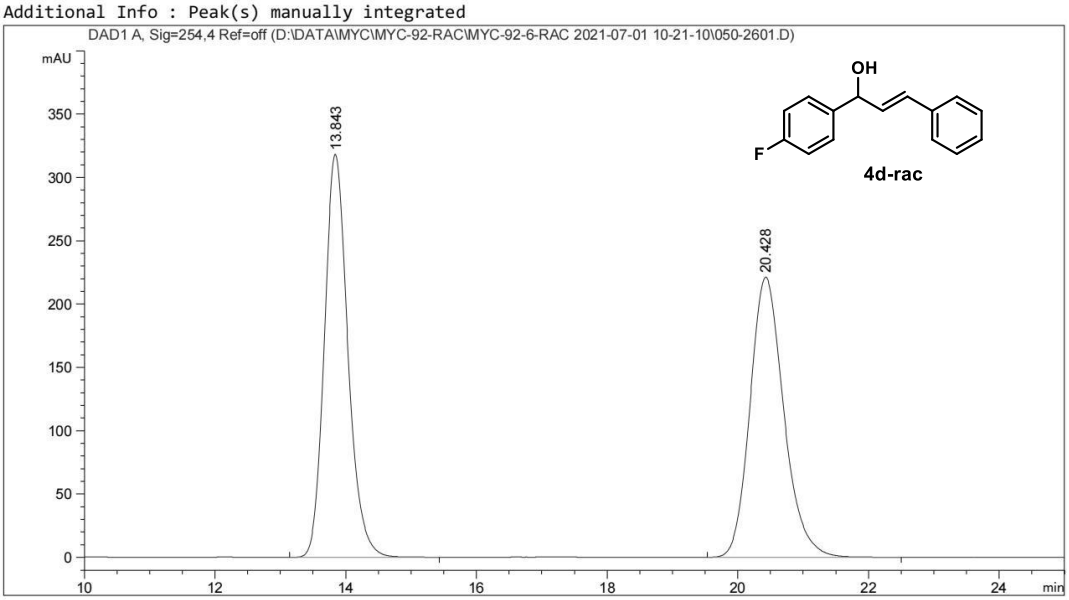

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  14.923 BB    0.3934  815.95038   31.79375   2.9188
   2  23.068 BB    0.6367 2.71386e4   653.19257  97.0812

Totals :                  2.79546e4   684.98632
```

Data File D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\050-2601.D
Sample Name: MJM-10-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :  26
Acq. Instrument : Instrument 2                  Location : Vial 50
Injection Date  : 7/2/2021 1:51:06 AM                Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\DAD-OD(1-2)-90-10-1
                  .0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 11:12:06 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

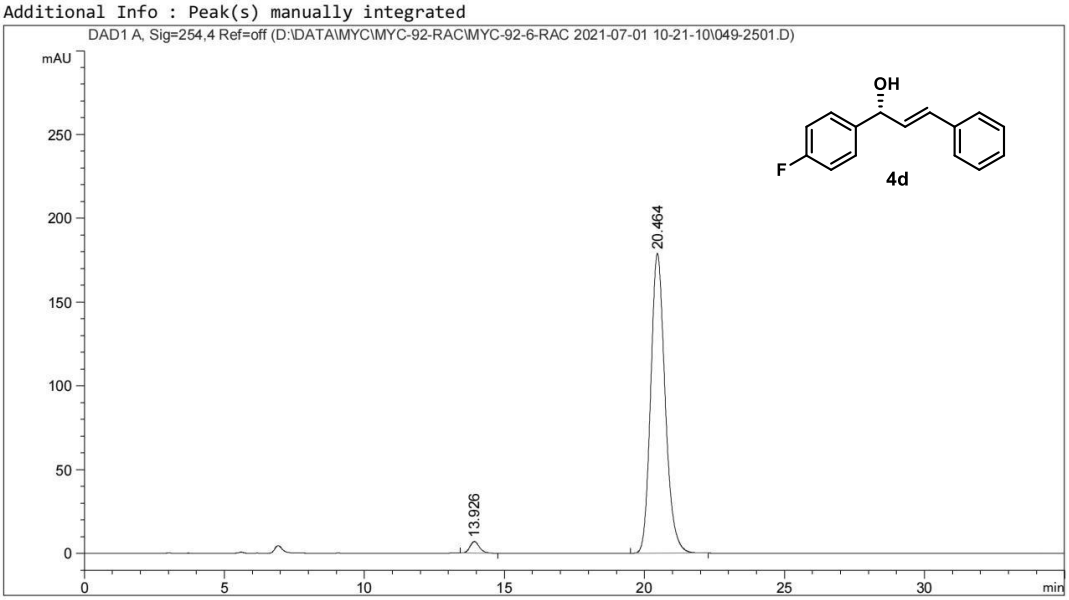

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  13.843 BB    0.3835 7947.25977  318.11285  50.0256
   2  20.428 BB    0.5509 7939.12354  221.08963  49.9744

Totals :                  1.58864e4   539.20248
```

Data File D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\049-2501.D
Sample Name: MJM-10

```
=====================================================================
Acq. Operator   :                              Seq. Line :  25
Acq. Instrument : Instrument 2                  Location : Vial 49
Injection Date  : 7/2/2021 1:10:06 AM                Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\DAD-OD(1-2)-90-10-1
                  .0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 2:45:36 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

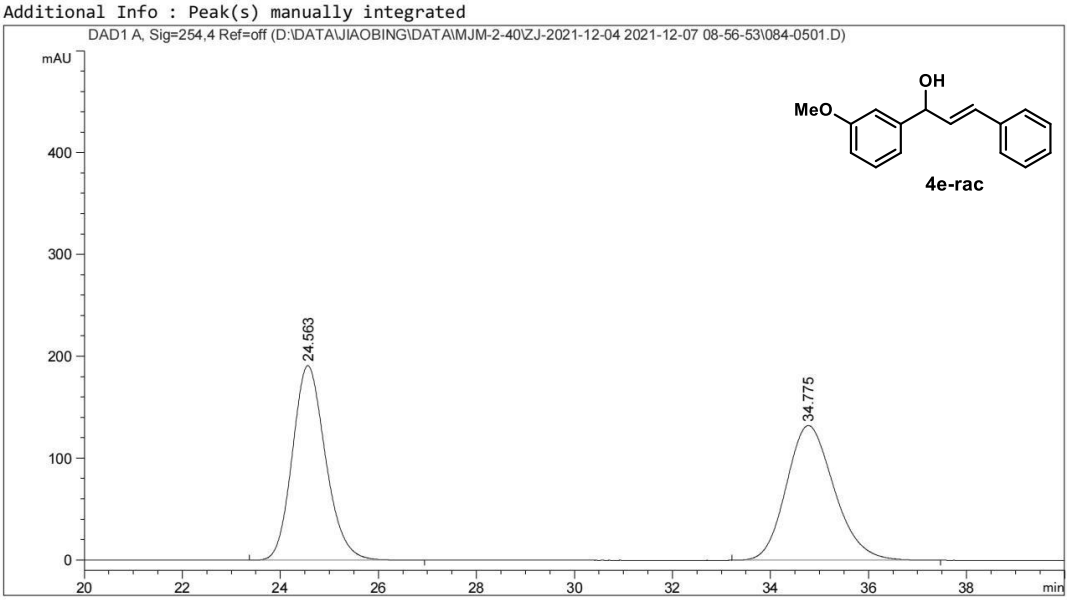

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  13.926 BB    0.3564  163.30948    6.94467   2.4847
   2  20.464 BB    0.5479 6409.35986  178.91289  97.5153

Totals :                  6572.66934  185.85756
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-07 08-56-53\084-0501.D
Sample Name: MJM-40-18-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :   5
Acq. Instrument : Instrument 2                  Location : Vial 84
Injection Date  : 12/7/2021 11:12:31 AM              Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-07 08-56-53\DAD-OD(1-6
                  )-90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\MYC\DAD-AD(1-2)-80-20-1.0ML-5UL-ALL-10MIN.M
Last changed    : 12/8/2021 9:27:11 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

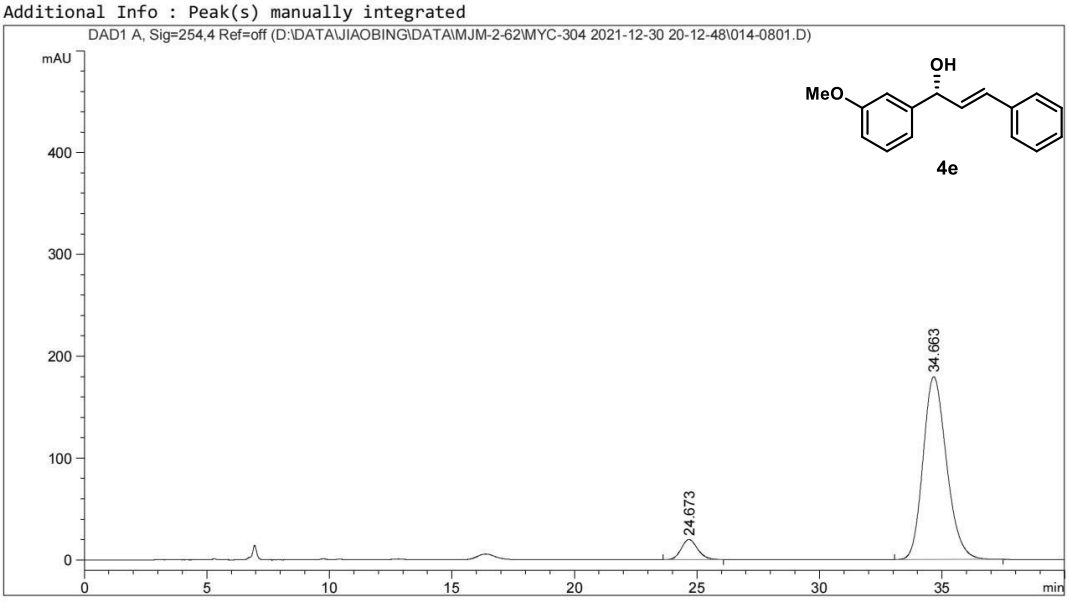

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  24.563 BB    0.7185 8983.49512  191.09201  50.0340
   2  34.775 BB    1.0449 8971.29883  132.33879  49.9660

Totals :                  1.79548e4   323.43080
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-62\MYC-304 2021-12-30 20-12-48\014-0801.D
Sample Name: MJM-62-4

```
=====================================================================
Acq. Operator   :                              Seq. Line :   8
Acq. Instrument : Instrument 2                  Location : Vial 14
Injection Date  : 12/30/2021 10:42:17 PM             Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-62\MYC-304 2021-12-30 20-12-48\DAD-OD(1-6)-90-
                  10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\MYC\DAD-OJ(1-6)-90-10-1.0ML-5UL-ALL-70MIN.M
Last changed    : 1/14/2022 5:06:13 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

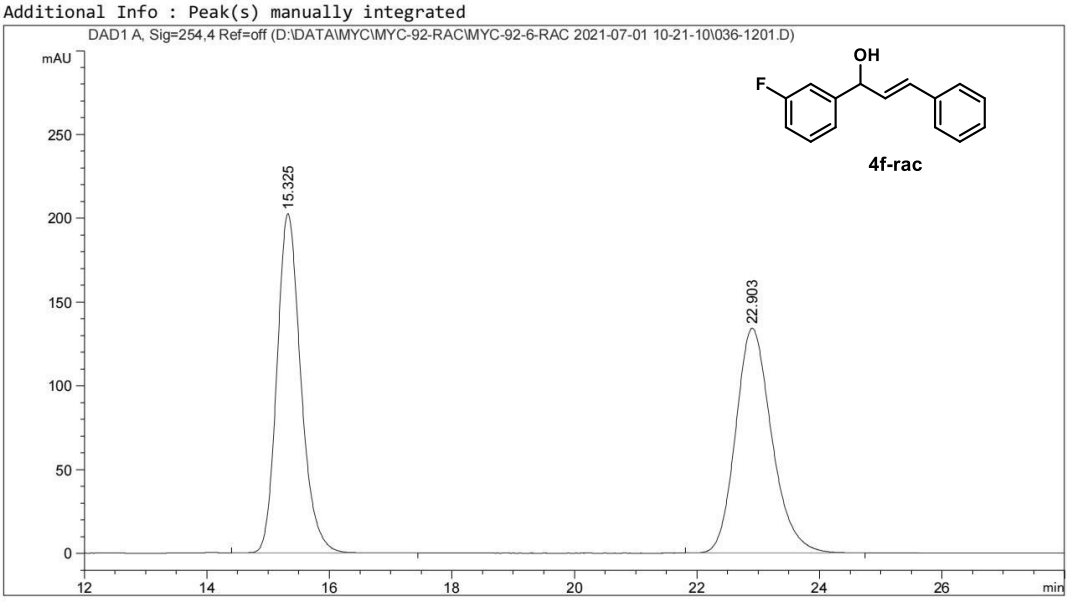

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  24.673 BB    0.6922  911.63104   19.68872   7.0701
   2  34.663 BB    1.0192 1.19825e4   179.41107  92.9299

Totals :                  1.28941e4   199.09980
```

Data File D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\036-1201.D
Sample Name: MJM-3-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :  12
Acq. Instrument : Instrument 2                  Location : Vial 36
Injection Date  : 7/1/2021 4:17:18 PM                Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\DAD-OD(1-2)-90-10-1
                  .0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 10:57:19 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

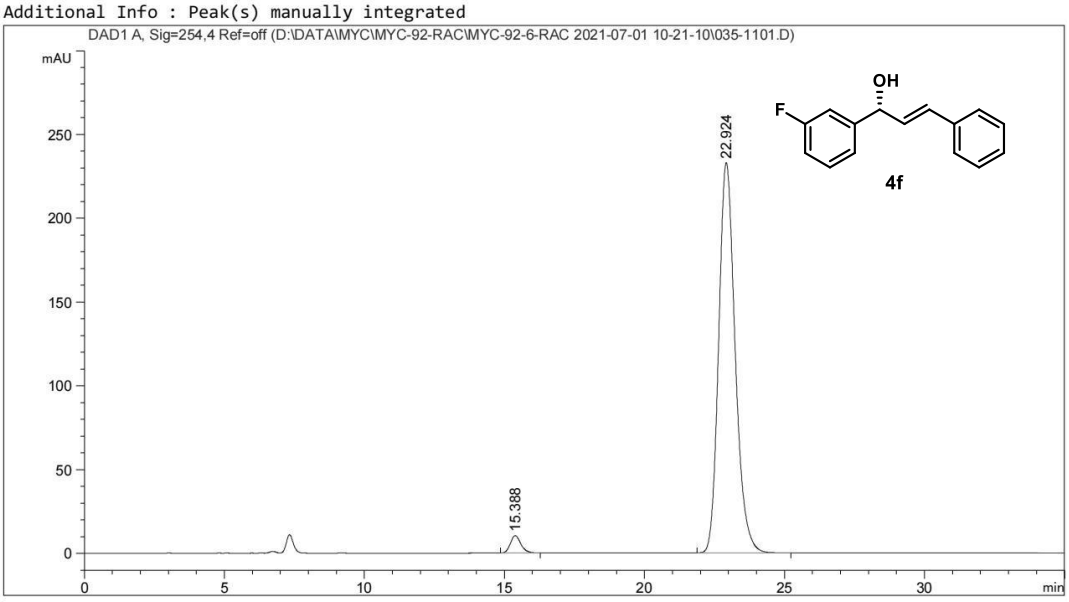

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  15.325 BB    0.4138 5483.68115  202.61005  50.0038
   2  22.903 BB    0.6247 5482.84131  134.17958  49.9962

Totals :                  1.09665e4   336.78963
```

Data File D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\035-1101.D
Sample Name: MJM-3

```
=====================================================================
Acq. Operator   :                              Seq. Line :  11
Acq. Instrument : Instrument 2                  Location : Vial 35
Injection Date  : 7/1/2021 3:36:20 PM                Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\DAD-OD(1-2)-90-10-1
                  .0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 11:08:23 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

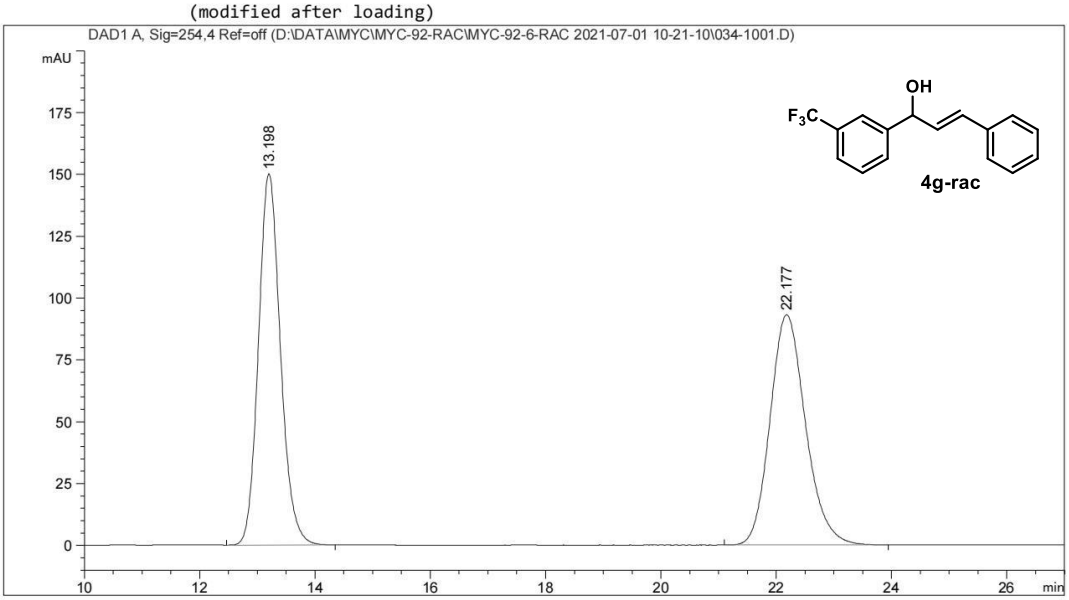

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  15.388 BB    0.4005  272.78506   10.38456   2.7813
   2  22.924 BB    0.6296 9534.89160  232.93919  97.2187

Totals :                  9807.67667  243.32375
```

Data File D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\034-1001.D
Sample Name: MJM-2-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :  10
Acq. Instrument : Instrument 2                  Location : Vial 34
Injection Date  : 7/1/2021 2:55:21 PM                Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\DAD-OD(1-2)-90-10-1
                  .0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 10:49:58 AM
                  (modified after loading)
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=254,4 Ref=off

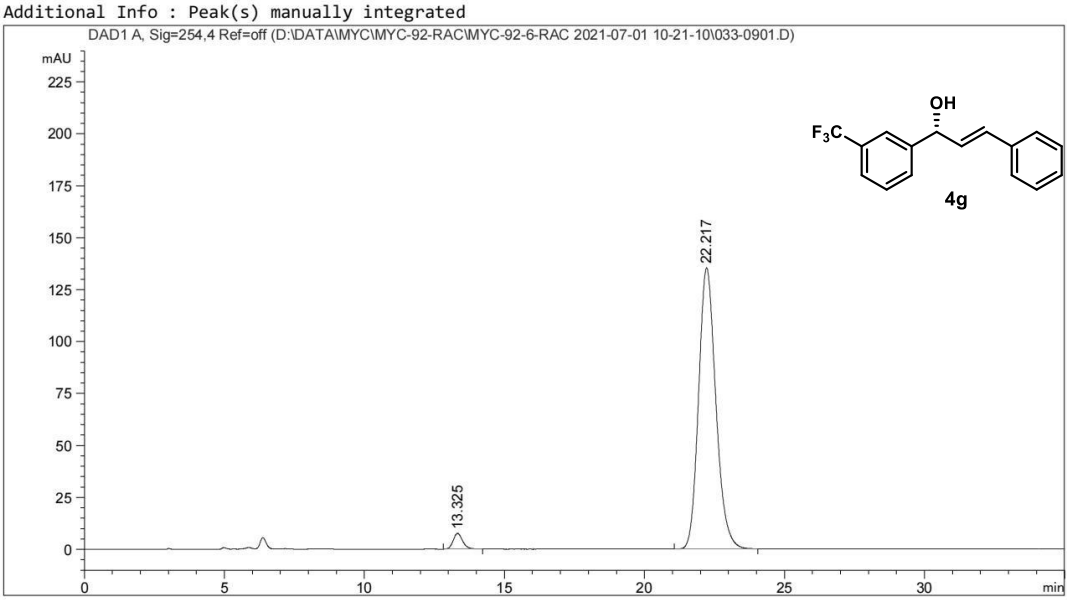
Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  13.198 BB    0.4071 3977.56860  150.13560  49.9705
   2  22.177 BB    0.6590 3982.26172   93.09669  50.0295

Totals :                  7959.83032  243.23230


=====================================================================
```

Data File D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\033-0901.D
Sample Name: MJM-2

```
======================================================================
Acq. Operator   :                              Seq. Line :   9
Acq. Instrument : Instrument 2                  Location : Vial 33
Injection Date  : 7/1/2021 2:14:23 PM                Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\DAD-OD(1-2)-90-10-1
                  .0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 11:10:16 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

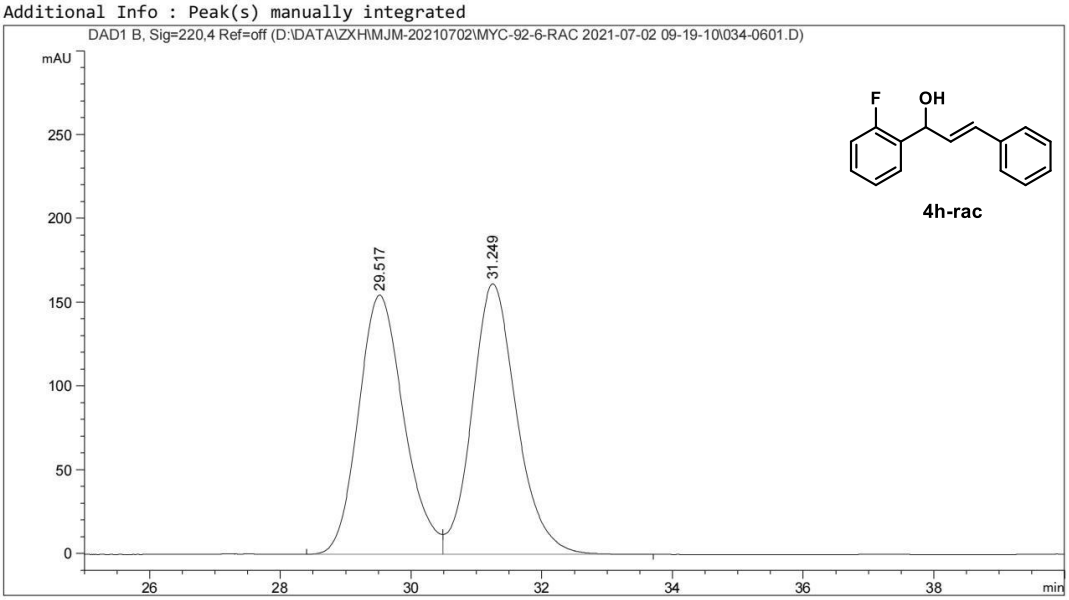

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  13.325 BB    0.3576  178.65067    7.56233   2.9915
   2  22.217 BB    0.6615 5793.31299  135.30731  97.0085

Totals :                  5971.96365  142.86965
```

Data File D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-02 09-19-10\034-0601.D
Sample Name: MJM-5-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :   6
Acq. Instrument : Instrument 2                  Location : Vial 34
Injection Date  : 7/2/2021 11:49:49 AM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-02 09-19-10\DAD-OD(1-2)-92-8-
                  0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 9:17:17 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 3:11:04 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

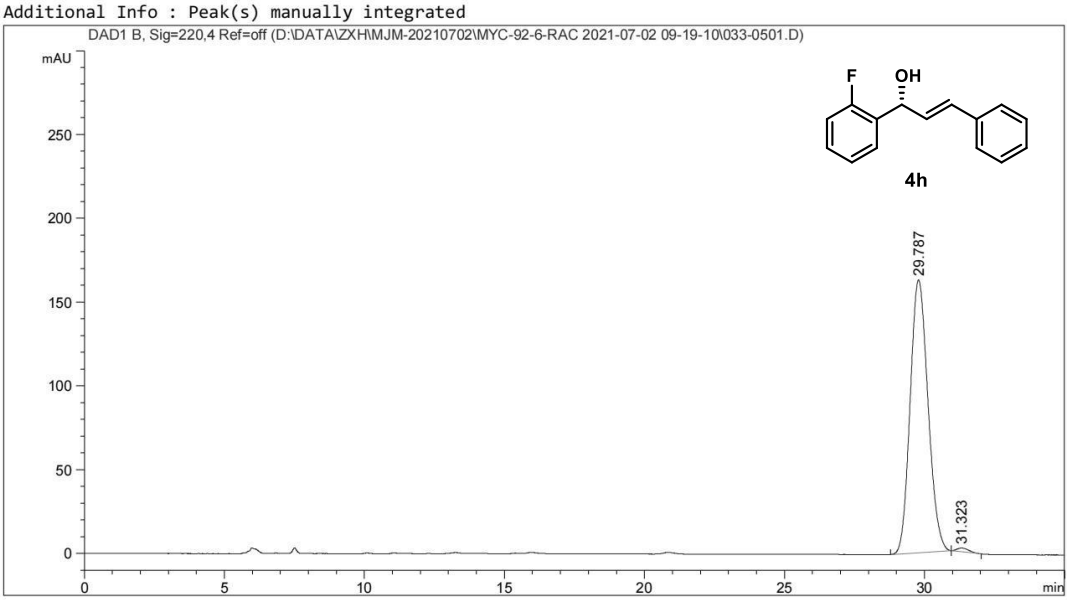

Signal 1: DAD1 B, Sig=220,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  29.517 BV    0.7400 7452.60254  154.71988  49.3092
   2  31.249 VB    0.7216 7661.42529  161.47006  50.6908

Totals :                  1.51140e4   316.18994
```

Data File D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-02 09-19-10\033-0501.D
Sample Name: MJM-5

```
=====================================================================
Acq. Operator   :                              Seq. Line :   5
Acq. Instrument : Instrument 2                  Location : Vial 33
Injection Date  : 7/2/2021 11:08:50 AM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-02 09-19-10\DAD-OD(1-2)-92-8-
                  0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 9:17:17 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 3:05:30 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

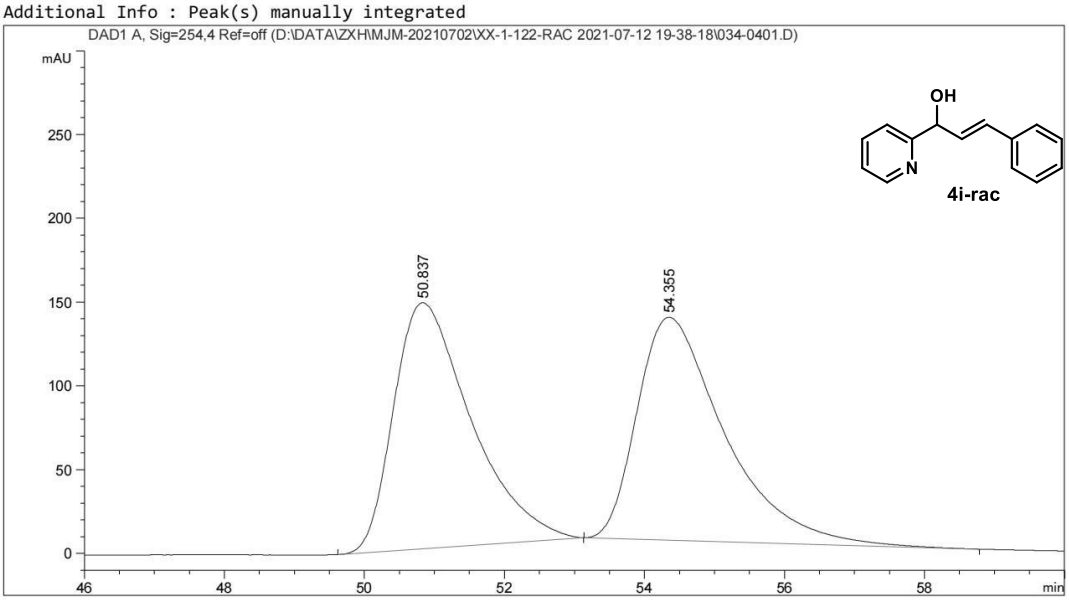

Signal 1: DAD1 B, Sig=220,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  29.787 BB    0.6891 7219.68457  162.87515  99.0907
   2  31.323 BB    0.3584   66.25014    2.23147   0.9093

Totals :                  7285.93471  165.10663
```

Data File D:\DATA\ZXH\MJM-20210702\XX-1-122-RAC 2021-07-12 19-38-18\034-0401.D
Sample Name: MJM-17-RAC-2

```
=====================================================================
Acq. Operator   :                              Seq. Line :   4
Acq. Instrument : Instrument 2                  Location : Vial 34
Injection Date  : 7/12/2021 9:02:22 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-20210702\XX-1-122-RAC 2021-07-12 19-38-18\DAD-OD(1-2)-95-5-
                  0.5ML-3UL-220NM-60MIN.M
Last changed    : 4/22/2021 8:13:33 PM
Analysis Method : D:\METHOD\LG\DAD-OD(1-2)-90-10-0.5ML-3UL-ALL-60MIN.M
Last changed    : 7/13/2021 8:43:21 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

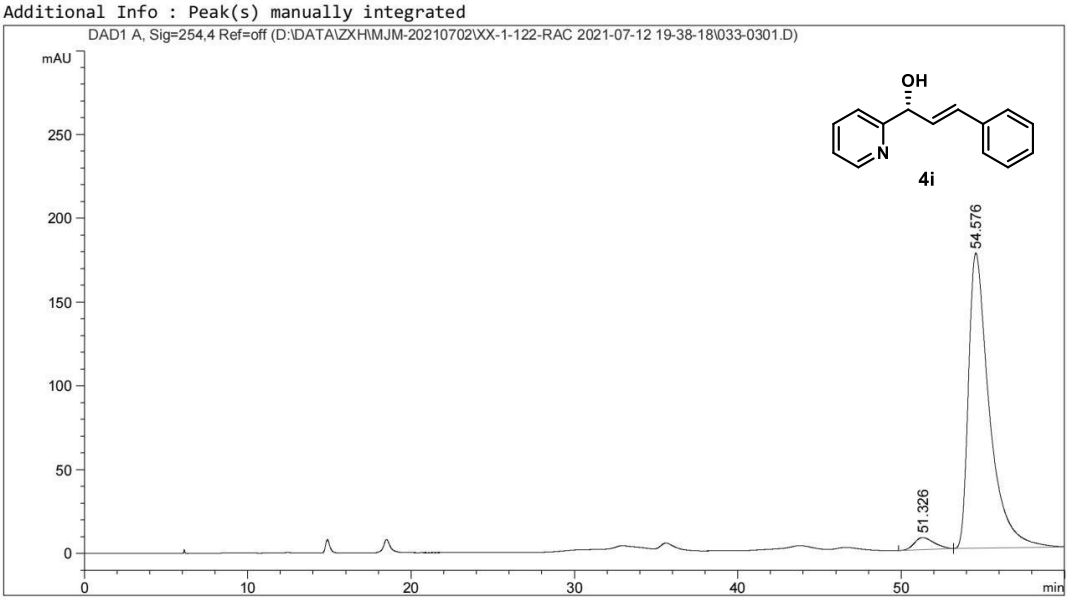

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  50.837 BB    1.1393 1.12723e4   146.88838  49.4098
   2  54.355 BBA   1.2782 1.15416e4   133.03151  50.5902

Totals :                  2.28138e4   279.91989
```

Data File D:\DATA\ZXH\MJM-20210702\XX-1-122-RAC 2021-07-12 19-38-18\033-0301.D
Sample Name: MJM-17-2

```
=====================================================================
Acq. Operator   :                              Seq. Line :   3
Acq. Instrument : Instrument 2                  Location : Vial 33
Injection Date  : 7/12/2021 8:01:23 PM               Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-20210702\XX-1-122-RAC 2021-07-12 19-38-18\DAD-OD(1-2)-95-5-
                  0.5ML-3UL-220NM-60MIN.M
Last changed    : 4/22/2021 8:13:33 PM
Analysis Method : D:\METHOD\LG\DAD-OD(1-2)-90-10-0.5ML-3UL-ALL-60MIN.M
Last changed    : 7/13/2021 8:45:30 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

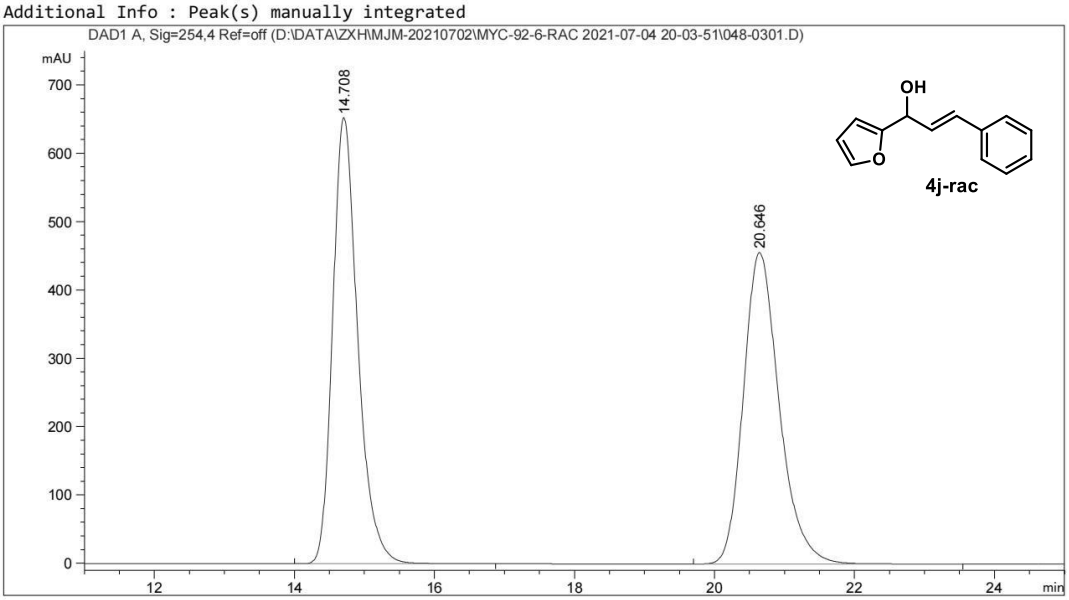

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  51.326 BB    0.9966  612.13190    7.28317   3.7734
   2  54.576 BBA   1.2942 1.56100e4   176.09096  96.2266

Totals :                  1.62221e4   183.37413
```

Data File D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-04 20-03-51\048-0301.D
Sample Name: MJM-18-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :   3
Acq. Instrument : Instrument 2                  Location : Vial 48
Injection Date  : 7/4/2021 8:26:56 PM               Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-04 20-03-51\DAD-OD(1-2)-90-10
                  -1.0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\MYC\DAD-OJ(1-6)-80-20-0.3ML-5UL-ALL-90MIN.M
Last changed    : 7/5/2021 9:55:24 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

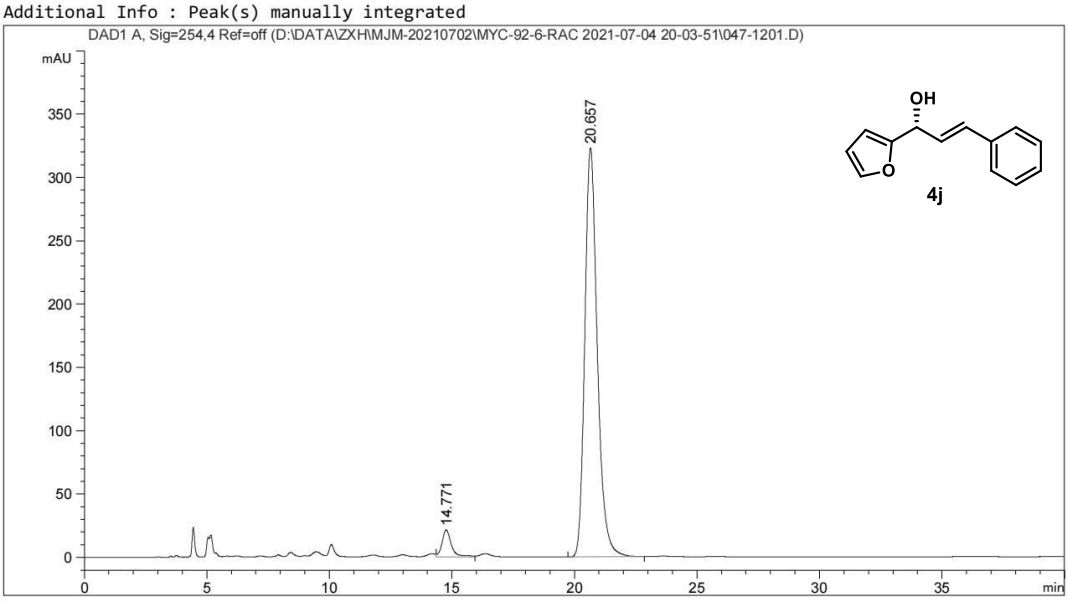

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  14.708 BB    0.3779 1.62117e4   652.50378  49.9940
   2  20.646 BB    0.5471 1.62156e4   455.70313  50.0060

Totals :                  3.24274e4  1108.20691
```

Data File D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-04 20-03-51\047-1201.D
Sample Name: MJM-18

```
=====================================================================
Acq. Operator   :                              Seq. Line :  12
Acq. Instrument : Instrument 2                  Location : Vial 47
Injection Date  : 7/5/2021 2:35:51 AM                Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-04 20-03-51\DAD-OD(1-2)-90-10
                  -1.0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\MYC\DAD-OJ(1-6)-80-20-0.3ML-5UL-ALL-90MIN.M
Last changed    : 7/5/2021 9:47:04 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

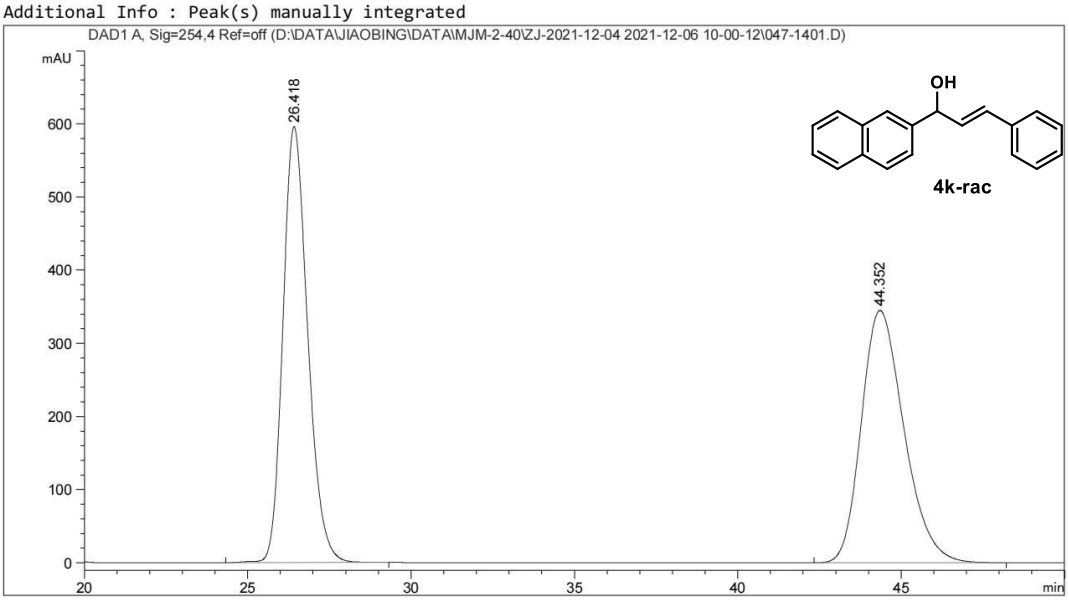

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  14.771 VV    0.3956  568.26611   21.27679   4.7236
   2  20.657 BB    0.5421 1.14622e4   322.92261  95.2764

Totals :                  1.20304e4   344.19939
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\047-1401.D
Sample Name: MJM-40-8-RAC

```
    ======================================================================
    Acq. Operator   :                              Seq. Line :  14
    Acq. Instrument : Instrument 2                  Location : Vial 47
    Injection Date  : 12/6/2021 6:44:39 PM               Inj :   1
                                                  Inj Volume : 3.000 µl
    Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\DAD-OD(1-6
                      )-90-10-1.0ML-3UL-220NM-90MIN.M
    Last changed    : 12/5/2021 6:42:59 PM
    Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-1.0ML-3UL-220NM-60MIN.M
    Last changed    : 12/7/2021 9:32:14 AM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Use Multiplier & Dilution Factor with ISTDs

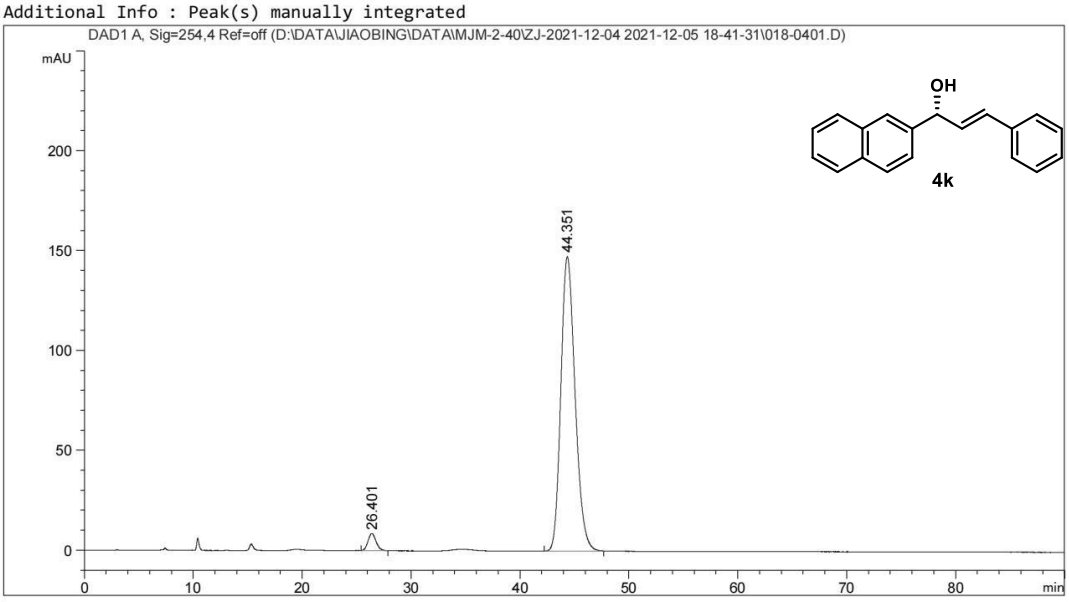

    Signal 1: DAD1 A, Sig=254,4 Ref=off

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  26.418 BB    0.8121 3.13856e4   596.29742  50.0536
       2  44.352 BB    1.3711 3.13183e4   344.98941  49.9464

    Totals :                  6.27039e4   941.28683
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-05 18-41-31\018-0401.D
Sample Name: MJM-40-8

```
=====================================================================
Acq. Operator   :                              Seq. Line :   4
Acq. Instrument : Instrument 2                  Location : Vial 18
Injection Date  : 12/5/2021 8:36:12 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-05 18-41-31\DAD-OD(1-6
                  )-90-10-1.0ML-3UL-220NM-90MIN.M
Last changed    : 12/5/2021 6:42:59 PM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-1.0ML-3UL-220NM-60MIN.M
Last changed    : 12/7/2021 9:39:44 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

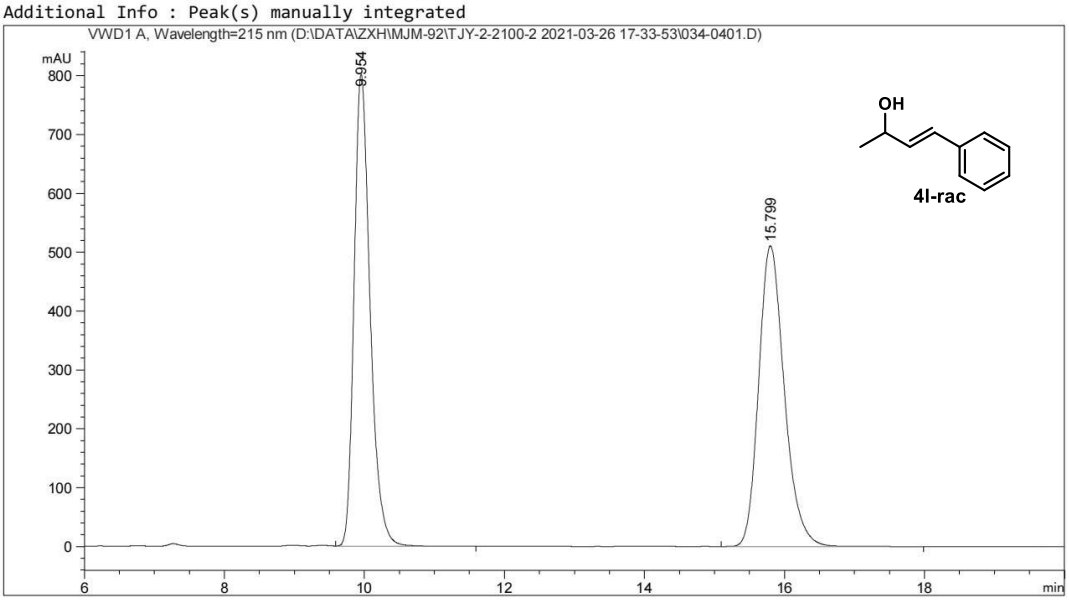

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  26.401 BB    0.6562  440.75201    8.53818   3.1924
   2  44.351 BB    1.3561 1.33656e4   147.36328  96.8076

Totals :                  1.38063e4   155.90146
```

Data File D:\DATA\ZXH\MJM-92\TJY-2-2100-2 2021-03-26 17-33-53\034-0401.D
Sample Name: MJM-92-6-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :   4
Acq. Instrument : Instrument 1                  Location : Vial 34
Injection Date  : 3/26/2021 6:59:24 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-92\TJY-2-2100-2 2021-03-26 17-33-53\VWD-OD(1-2)-90-10-1ML-
                  3UL-210NM-40MIN.M
Last changed    : 3/25/2021 10:15:35 AM
Analysis Method : D:\DATA\ZXH\MJM-92\TJY-2-2100-2 2021-03-26 17-33-53\034-0401.D\DA.M (VWD-OD
                  (1-2)-90-10-1ML-3UL-210NM-40MIN.M, From Data File)
Last changed    : 3/26/2021 9:01:40 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

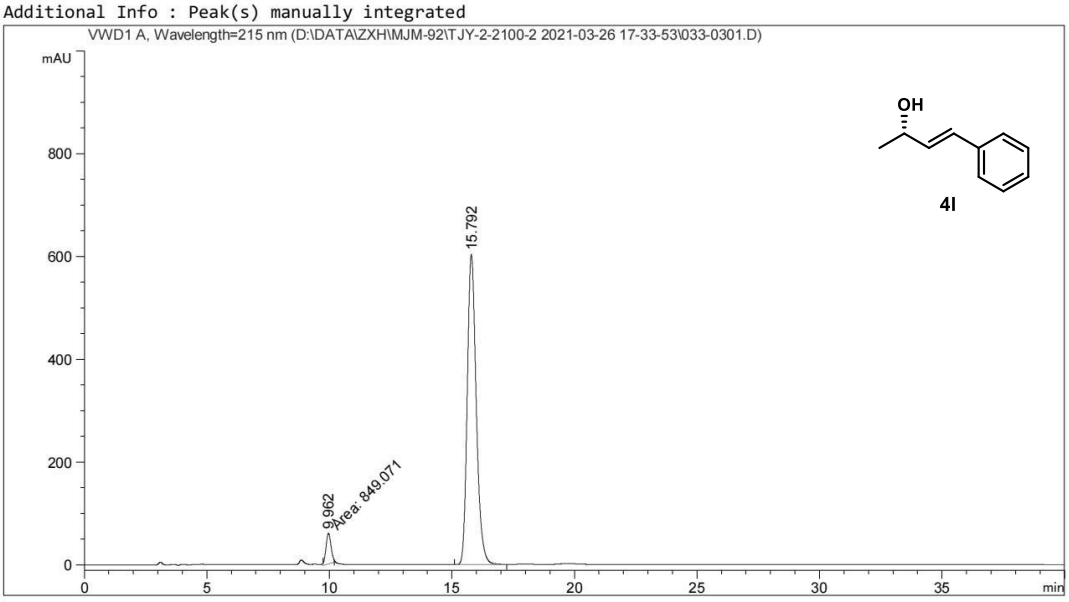

Signal 1: VWD1 A, Wavelength=215 nm

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   9.954 VB    0.2437 1.27655e4   801.92676  49.5786
   2  15.799 BB    0.3915 1.29825e4   510.90018  50.4214

Totals :                  2.57481e4  1312.82693
```

Data File D:\DATA\ZXH\MJM-92\TJY-2-2100-2 2021-03-26 17-33-53\033-0301.D
Sample Name: MJM-92-6

```
======================================================================
Acq. Operator   :                              Seq. Line :   3
Acq. Instrument : Instrument 1                  Location : Vial 33
Injection Date  : 3/26/2021 6:18:34 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-92\TJY-2-2100-2 2021-03-26 17-33-53\VWD-OD(1-2)-90-10-1ML-
                  3UL-210NM-40MIN.M
Last changed    : 3/25/2021 10:15:35 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-95-5-1ML-2UL-220NM-20MIN.M
Last changed    : 12/11/2021 9:49:50 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

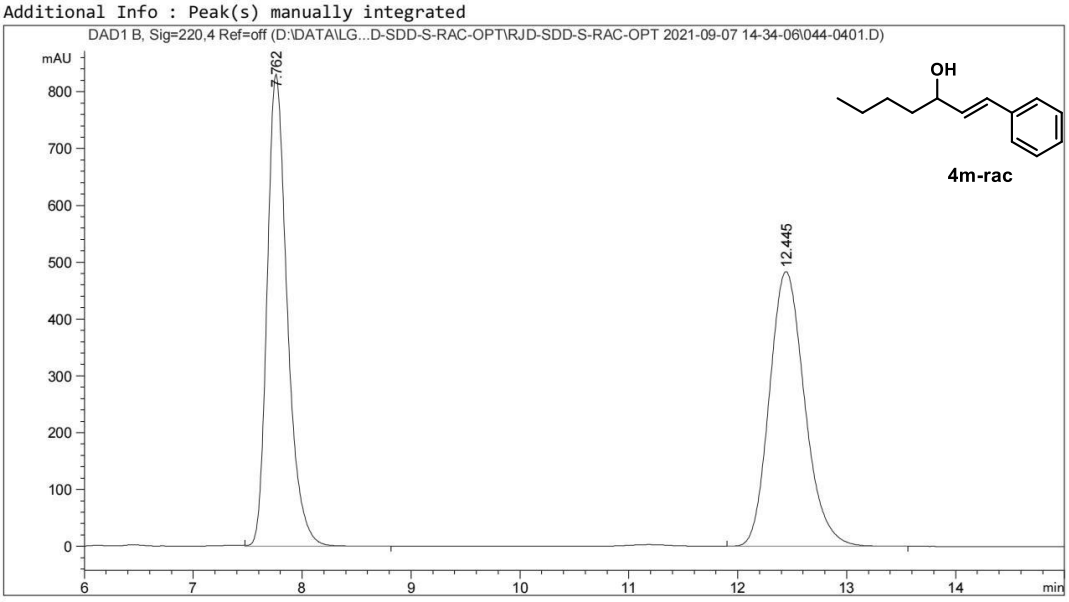

Signal 1: VWD1 A, Wavelength=215 nm

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   9.962 MM    0.2370  849.07104   59.71696   5.2330
   2  15.792 BB    0.3925 1.53763e4   603.05988  94.7670

Totals :                  1.62254e4   662.77683
```

Data File D:\DATA\LG\RJD-SDD-S-RAC-OPT\RJD-SDD-S-RAC-OPT 2021-09-07 14-34-06\044-0401.D
Sample Name: MJM-159-2-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :   4
Acq. Instrument : Instrument 2                  Location : Vial 44
Injection Date  : 9/7/2021 3:39:55 PM                Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\LG\RJD-SDD-S-RAC-OPT\RJD-SDD-S-RAC-OPT 2021-09-07 14-34-06\DAD-OD(1
                  -2)-90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\LG\DAD-AS(1-6)95-5-0.5ML-5UL-ALL-10MIN.M
Last changed    : 9/7/2021 8:02:20 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

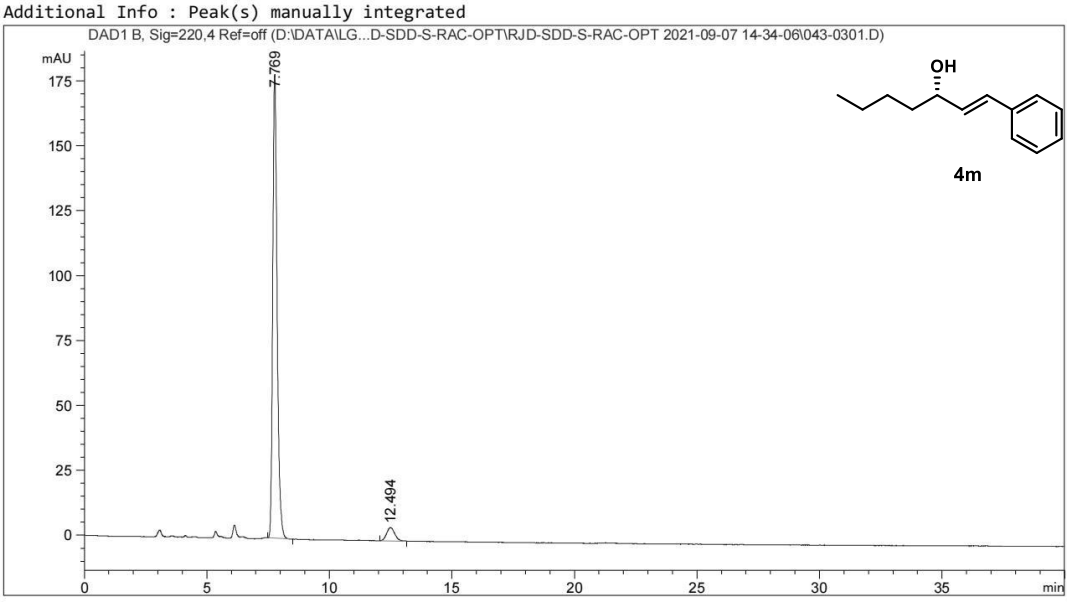

Signal 1: DAD1 B, Sig=220,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   7.762 VB    0.1954 1.06399e4   830.67584  49.5190
   2  12.445 BB    0.3517 1.08466e4   483.52878  50.4810

Totals :                  2.14864e4  1314.20462
```

Data File D:\DATA\LG\RJD-SDD-S-RAC-OPT\RJD-SDD-S-RAC-OPT 2021-09-07 14-34-06\043-0301.D
Sample Name: MJM-159-2

```
======================================================================
Acq. Operator   :                                Seq. Line :   3
Acq. Instrument : Instrument 2                    Location : Vial 43
Injection Date  : 9/7/2021 2:58:54 PM                  Inj :   1
                                                 Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\LG\RJD-SDD-S-RAC-OPT\RJD-SDD-S-RAC-OPT 2021-09-07 14-34-06\DAD-OD(1
                  -2)-90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\LG\DAD-AS(1-6)95-5-0.5ML-5UL-ALL-10MIN.M
Last changed    : 9/7/2021 8:00:47 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

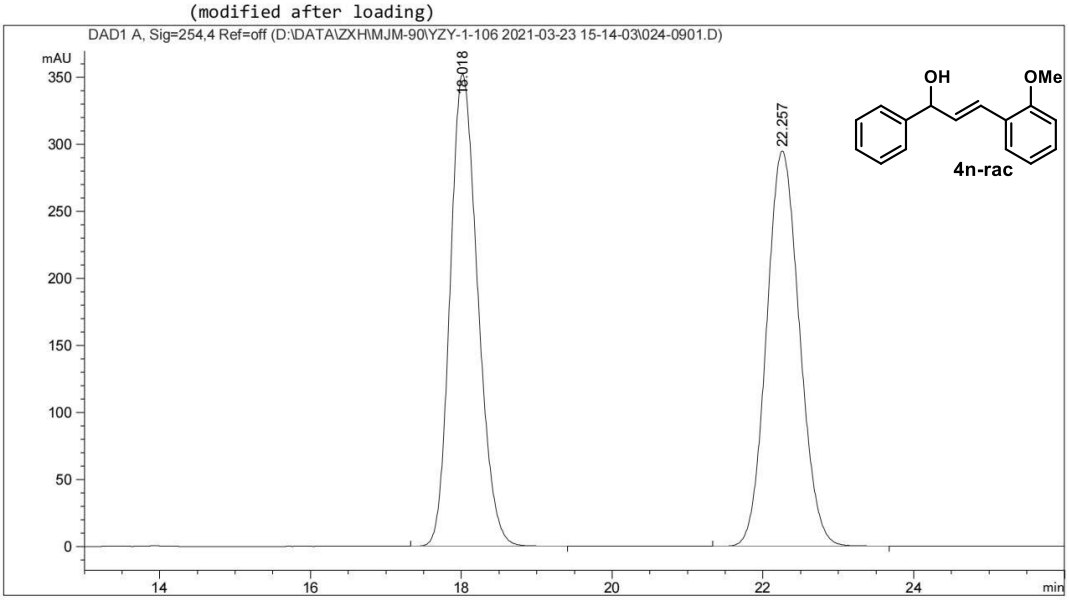

Signal 1: DAD1 B, Sig=220,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   7.769 BB    0.1891 2224.87915  178.83931  94.9420
   2  12.494 BB    0.3179  118.53072    5.12311   5.0580

Totals :                  2343.40987  183.96242
```

Data File D:\DATA\ZXH\MJM-90\YZY-1-106 2021-03-23 15-14-03\024-0901.D
Sample Name: MJM-90-8-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :   9
Acq. Instrument : Instrument 2                  Location : Vial 24
Injection Date  : 3/23/2021 7:15:48 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-90\YZY-1-106 2021-03-23 15-14-03\DAD-IC(1-6)-95-5-1ML-3UL-
                  ALL-40MIN.M
Last changed    : 3/19/2021 7:41:20 PM
Analysis Method : D:\METHOD\LG\DAD-AS(1-2)-95-5--1ML-5UL-ALL-60MIN.M
Last changed    : 3/23/2021 8:11:59 PM
                  (modified after loading)
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=254,4 Ref=off

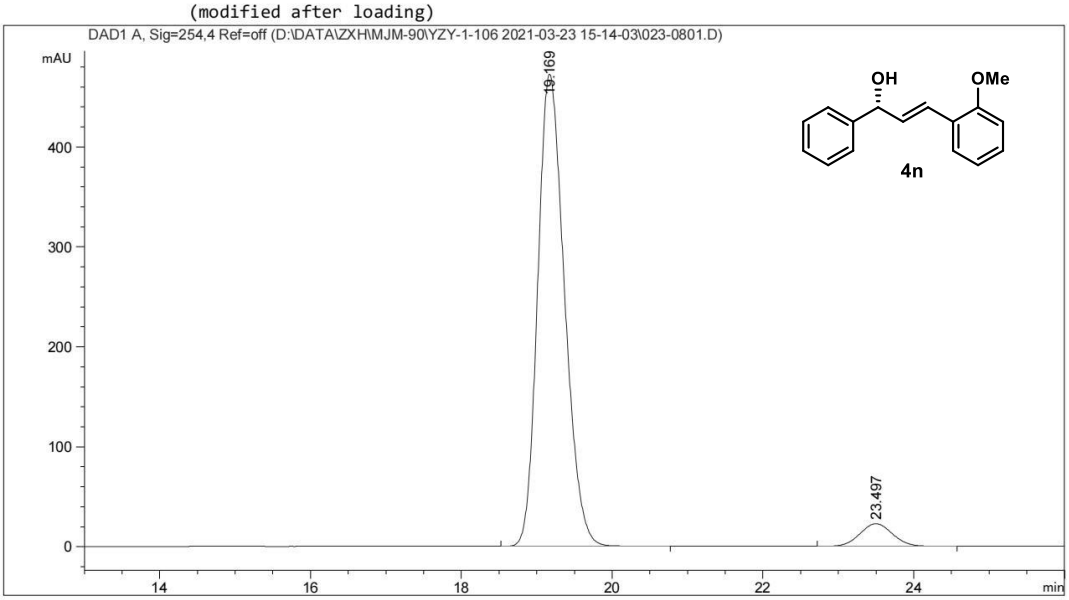
Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  18.018 BB    0.3943 8932.91309  351.77542  49.9900
   2  22.257 BB    0.4739 8936.49316  294.58200  50.0100

Totals :                  1.78694e4   646.35742


======================================================================
```

Data File D:\DATA\ZXH\MJM-90\YZY-1-106 2021-03-23 15-14-03\023-0801.D
Sample Name: MJM-90-8

```
======================================================================
Acq. Operator   :                              Seq. Line :   8
Acq. Instrument : Instrument 2                  Location : Vial 23
Injection Date  : 3/23/2021 6:34:50 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-90\YZY-1-106 2021-03-23 15-14-03\DAD-IC(1-6)-95-5-1ML-3UL-
                  ALL-40MIN.M
Last changed    : 3/19/2021 7:41:20 PM
Analysis Method : D:\METHOD\LG\DAD-AS(1-2)-95-5--1ML-5UL-ALL-60MIN.M
Last changed    : 3/23/2021 8:12:33 PM
                  (modified after loading)
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=254,4 Ref=off

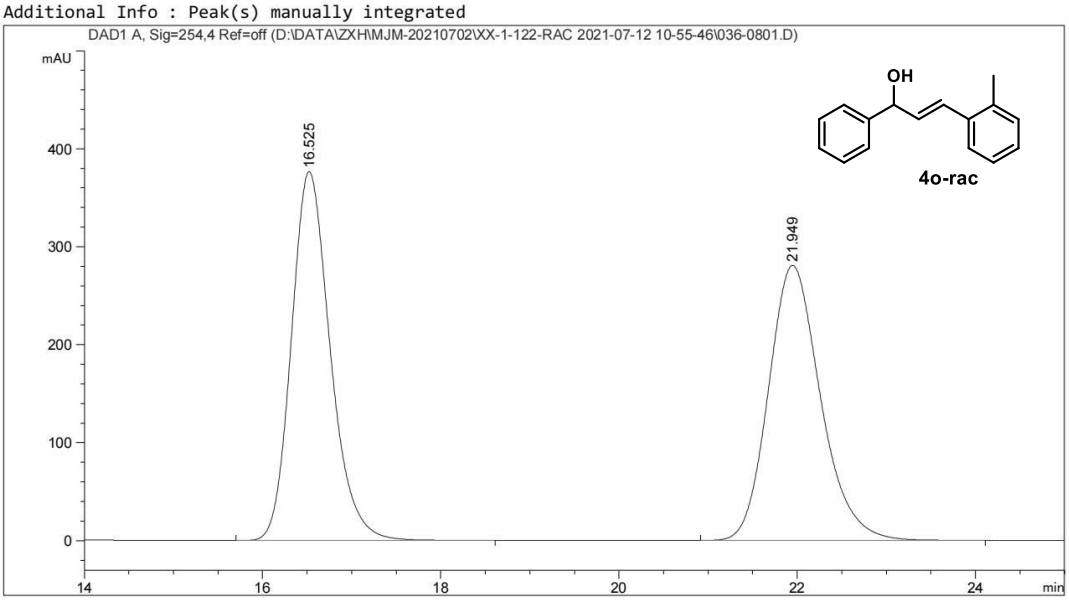
Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  19.169 BB    0.3813 1.16268e4   472.19525  94.4814
   2  23.497 BB    0.4644  679.11884   22.61008   5.5186

Totals :                  1.23059e4   494.80533


======================================================================
```

Data File D:\DATA\ZXH\MJM-20210702\XX-1-122-RAC 2021-07-12 10-55-46\036-0801.D
Sample Name: MJM-22-RAC

```
==========================================================================
Acq. Operator   :                                Seq. Line :   8
Acq. Instrument : Instrument 2                    Location : Vial 36
Injection Date  : 7/12/2021 2:46:57 PM                 Inj :   1
                                                 Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-20210702\XX-1-122-RAC 2021-07-12 10-55-46\DAD-OD(1-2)-90-10
                  -1.0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\LG\DAD-OD(1-2)-90-10-0.5ML-3UL-ALL-60MIN.M
Last changed    : 7/12/2021 7:34:10 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

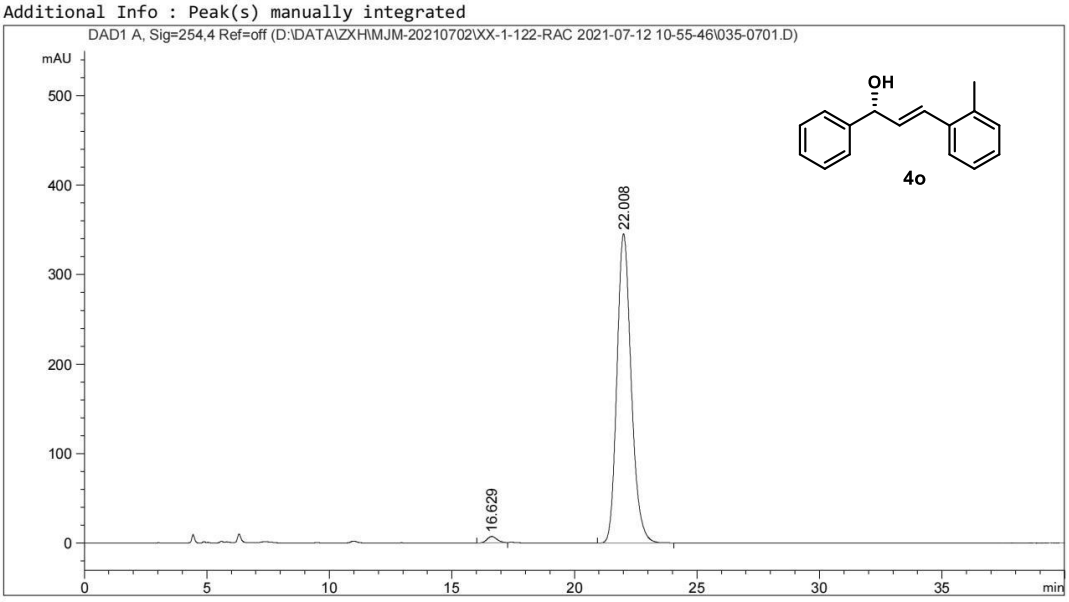

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  16.525 BB    0.4652 1.13998e4   376.50699  50.0509
   2  21.949 BB    0.6230 1.13766e4   280.62466  49.9491

Totals :                  2.27764e4   657.13165
```

Data File D:\DATA\ZXH\MJM-20210702\XX-1-122-RAC 2021-07-12 10-55-46\035-0701.D
Sample Name: MJM-22

```
=====================================================================
Acq. Operator   :                              Seq. Line :   7
Acq. Instrument : Instrument 2                  Location : Vial 35
Injection Date  : 7/12/2021 2:05:57 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-20210702\XX-1-122-RAC 2021-07-12 10-55-46\DAD-OD(1-2)-90-10
                  -1.0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\LG\DAD-OD(1-2)-90-10-0.5ML-3UL-ALL-60MIN.M
Last changed    : 7/12/2021 7:34:55 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

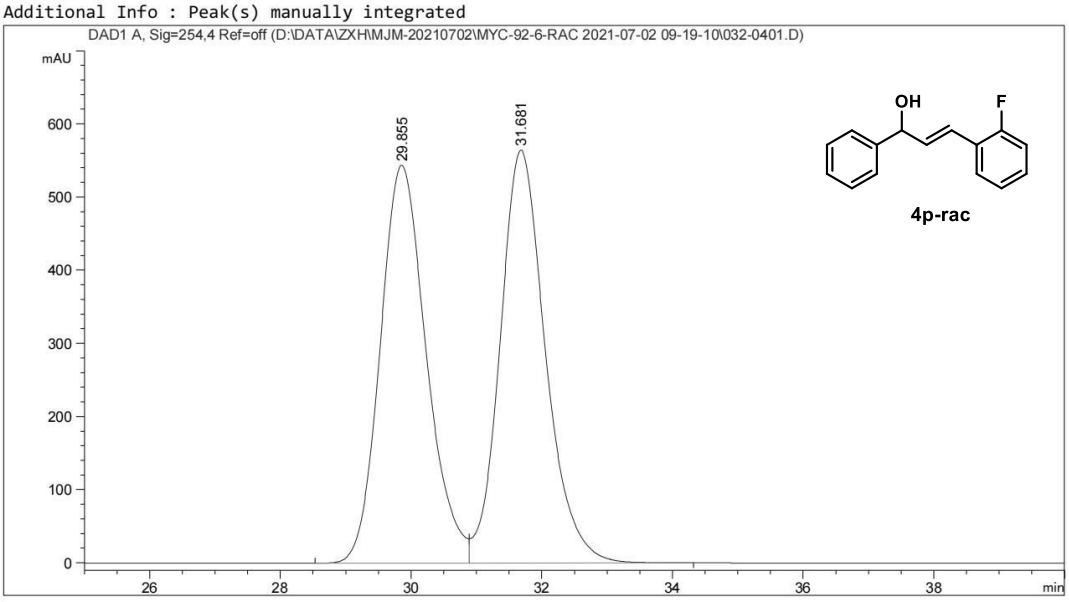

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  16.629 BB    0.4255  192.38765    6.98156   1.3567
   2  22.008 BB    0.6226 1.39881e4   345.31104  98.6433

Totals :                  1.41805e4   352.29260
```

Data File D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-02 09-19-10\032-0401.D
Sample Name: MJM-4-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :   4
Acq. Instrument : Instrument 2                  Location : Vial 32
Injection Date  : 7/2/2021 10:27:51 AM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-02 09-19-10\DAD-OD(1-2)-92-8-
                  0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 9:17:17 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 3:09:51 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

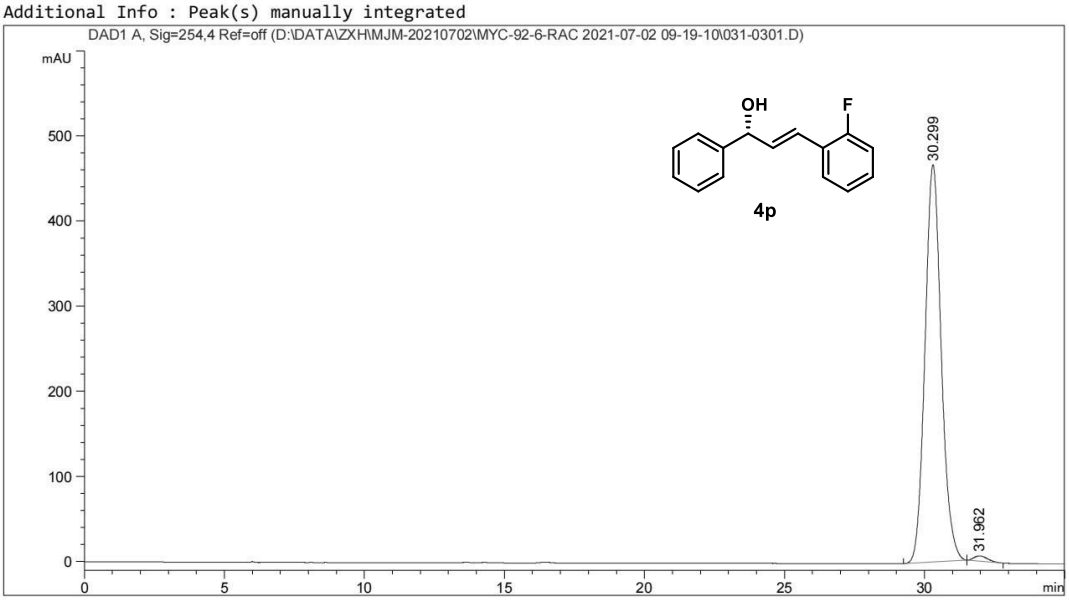

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  29.855 BV    0.7485 2.66012e4   543.97650  49.5036
   2  31.681 VB    0.7347 2.71346e4   564.63385  50.4964

Totals :                  5.37359e4  1108.61035
```

Data File D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-02 09-19-10\031-0301.D
Sample Name: MJM-4

```
======================================================================
Acq. Operator   :                                Seq. Line :   3
Acq. Instrument : Instrument 2                    Location : Vial 31
Injection Date  : 7/2/2021 9:46:54 AM                  Inj :   1
                                                 Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-02 09-19-10\DAD-OD(1-2)-92-8-
                  0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 9:17:17 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 3:08:18 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

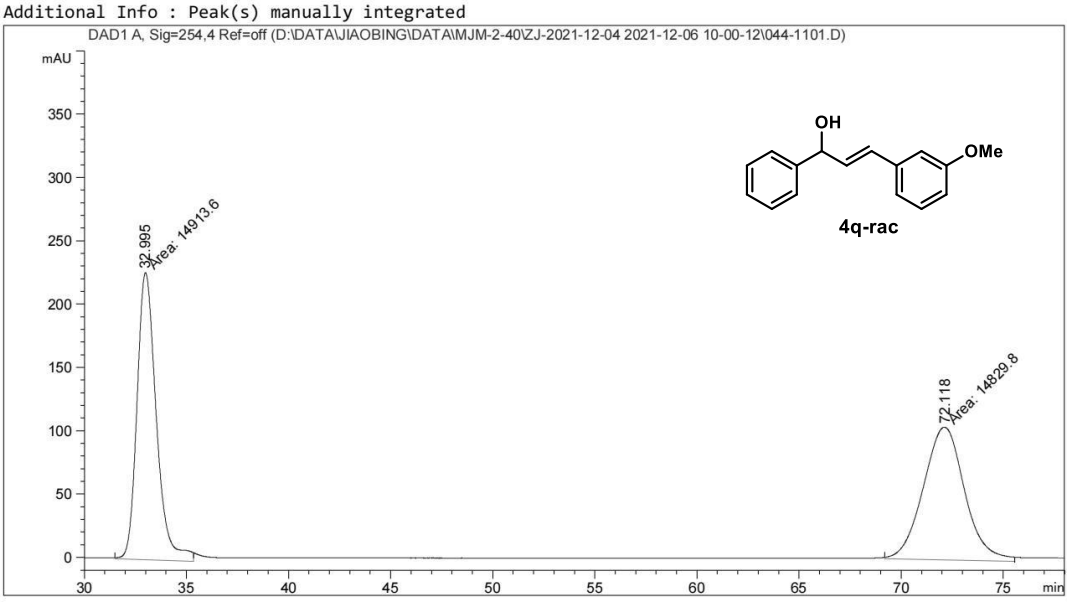

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  30.299 BB    0.6190 1.88381e4   466.57147  98.9066
   2  31.962 BB    0.4961  208.24881    6.22854   1.0934

Totals :                  1.90463e4   472.80001
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\044-1101.D
Sample Name: MJM-40-4-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :  11
Acq. Instrument : Instrument 2                  Location : Vial 44
Injection Date  : 12/6/2021 3:51:36 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\DAD-OD(1-6
                  )-90-10-1.0ML-3UL-220NM-90MIN.M
Last changed    : 12/5/2021 6:42:59 PM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-1.0ML-3UL-220NM-60MIN.M
Last changed    : 12/7/2021 9:29:09 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

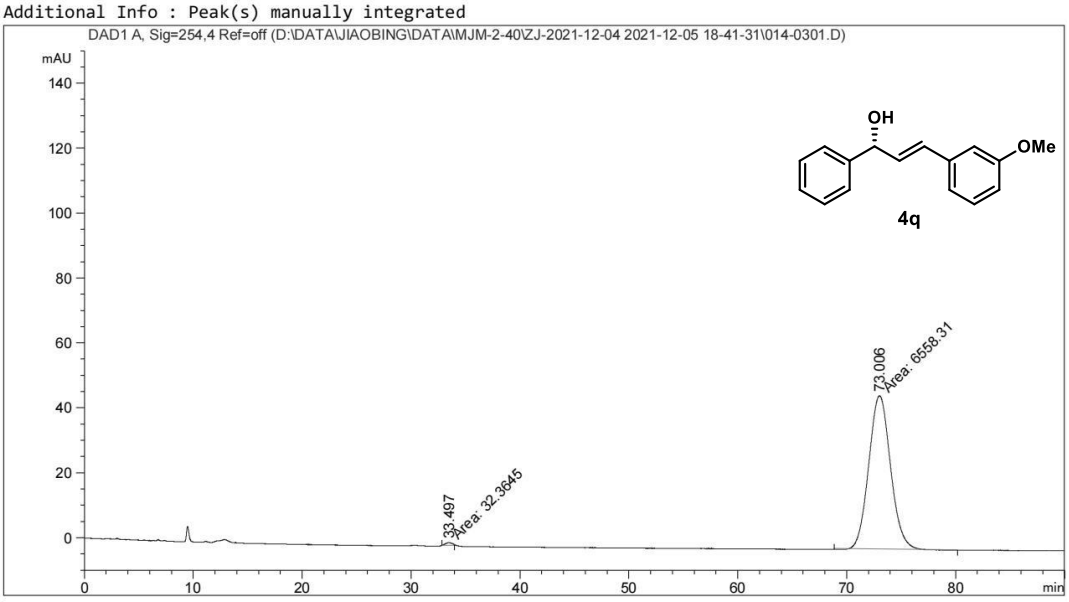

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  32.995 MM    1.0964 1.49136e4   226.70805  50.1407
   2  72.118 MM    2.3562 1.48298e4   104.90143  49.8593

Totals :                  2.97434e4   331.60948
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-05 18-41-31\014-0301.D
Sample Name: MJM-40-4

```
======================================================================
Acq. Operator   :                              Seq. Line :   3
Acq. Instrument : Instrument 2                  Location : Vial 14
Injection Date  : 12/5/2021 7:05:15 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-05 18-41-31\DAD-OD(1-6
                  )-90-10-1.0ML-3UL-220NM-90MIN.M
Last changed    : 12/5/2021 6:42:59 PM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-1.0ML-3UL-220NM-60MIN.M
Last changed    : 12/7/2021 9:42:54 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

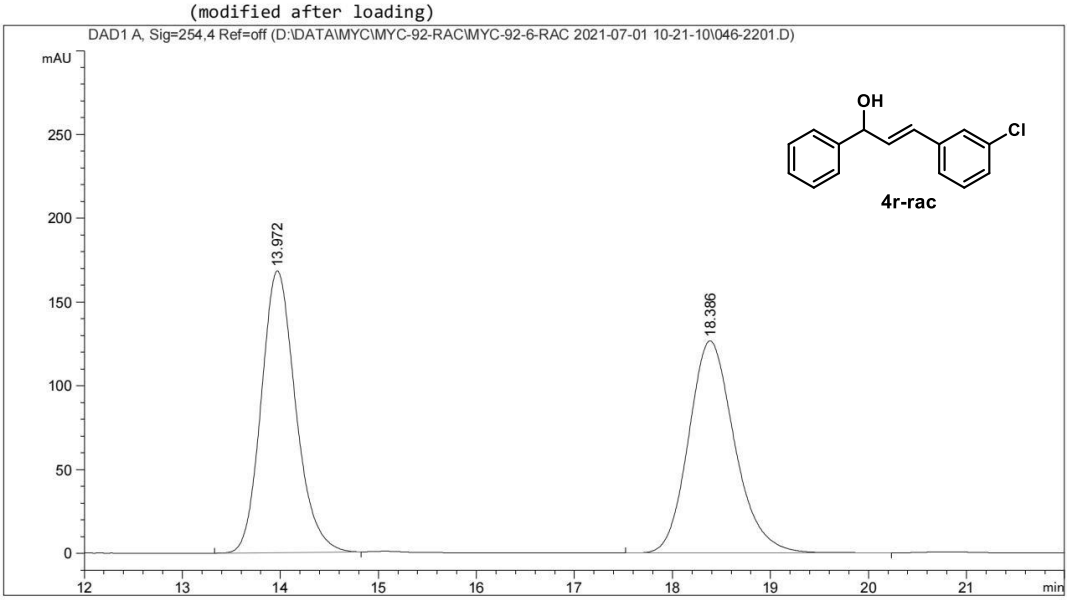

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  33.497 MM    0.7052   32.36450 7.64905e-1   0.4911
   2  73.006 MM    2.3157 6558.30957   47.20269  99.5089

Totals :                  6590.67407   47.96760
```

Data File D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\046-2201.D
Sample Name: MJM-8-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :  22
Acq. Instrument : Instrument 2                  Location : Vial 46
Injection Date  : 7/1/2021 11:07:07 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\DAD-OD(1-2)-90-10-1
                  .0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 10:59:37 AM
                  (modified after loading)
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=254,4 Ref=off

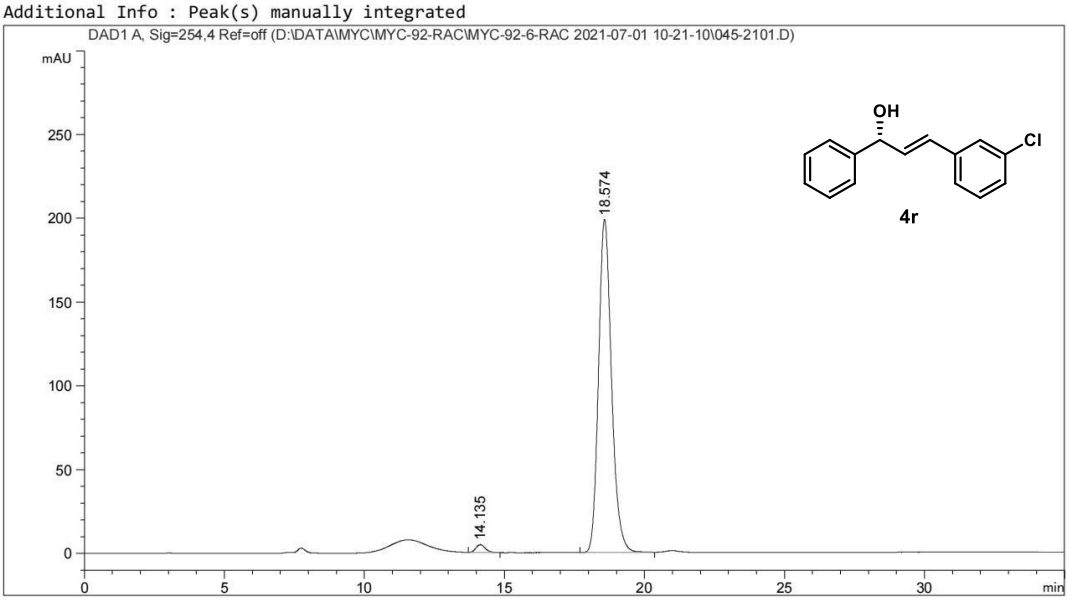
Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  13.972 BB    0.3735 4088.03174  168.26030  49.7875
   2  18.386 BB    0.5019 4122.92871  126.62140  50.2125

Totals :                  8210.96045  294.88170


=====================================================================
```

Data File D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\045-2101.D
Sample Name: MJM-8

```
=====================================================================
Acq. Operator   :                              Seq. Line :  21
Acq. Instrument : Instrument 2                  Location : Vial 45
Injection Date  : 7/1/2021 10:26:09 PM               Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\DAD-OD(1-2)-90-10-1
                  .0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 11:08:23 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

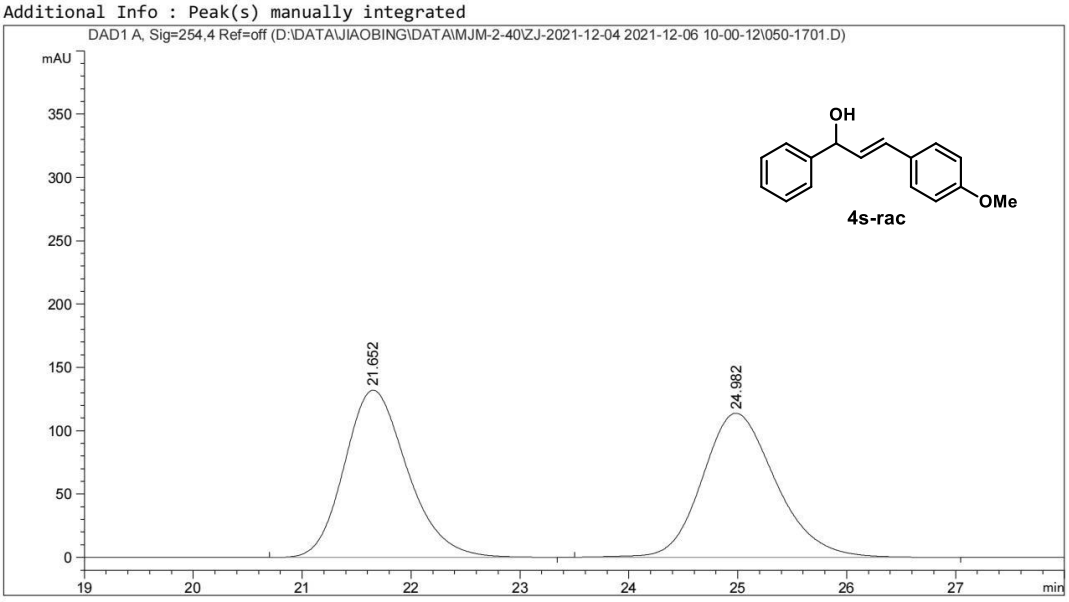

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  14.135 BB    0.3632  109.13181    4.69502   1.6720
   2  18.574 BB    0.4945 6417.94238  198.88658  98.3280

Totals :                  6527.07420  203.58161
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\050-1701.D
Sample Name: MJM-40-13-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :  17
Acq. Instrument : Instrument 2                  Location : Vial 50
Injection Date  : 12/6/2021 9:37:41 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\DAD-OD(1-6
                  )-90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-1.0ML-3UL-220NM-60MIN.M
Last changed    : 12/7/2021 9:35:16 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

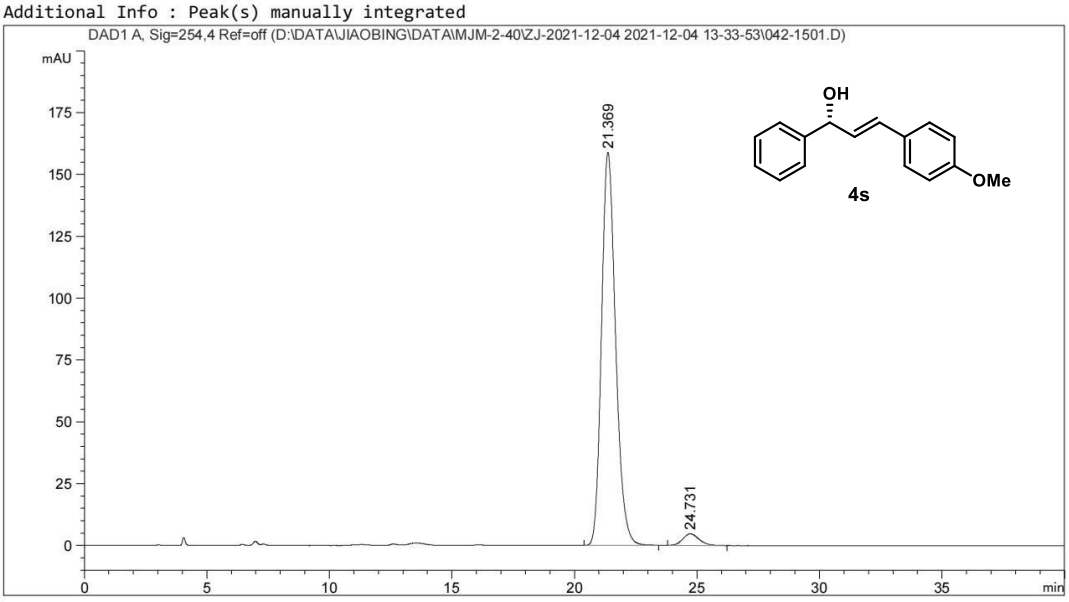

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  21.652 BB    0.6170 5307.06299  132.01846  49.8265
   2  24.982 BB    0.7182 5344.01758  113.72173  50.1735

Totals :                  1.06511e4   245.74019
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-04 13-33-53\042-1501.D
Sample Name: MJM-40-13

```
=====================================================================
Acq. Operator   :                              Seq. Line :  15
Acq. Instrument : Instrument 2                  Location : Vial 42
Injection Date  : 12/4/2021 10:09:17 PM              Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-04 13-33-53\DAD-OD(1-6
                  )-90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-1.0ML-3UL-220NM-60MIN.M
Last changed    : 12/7/2021 9:10:35 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

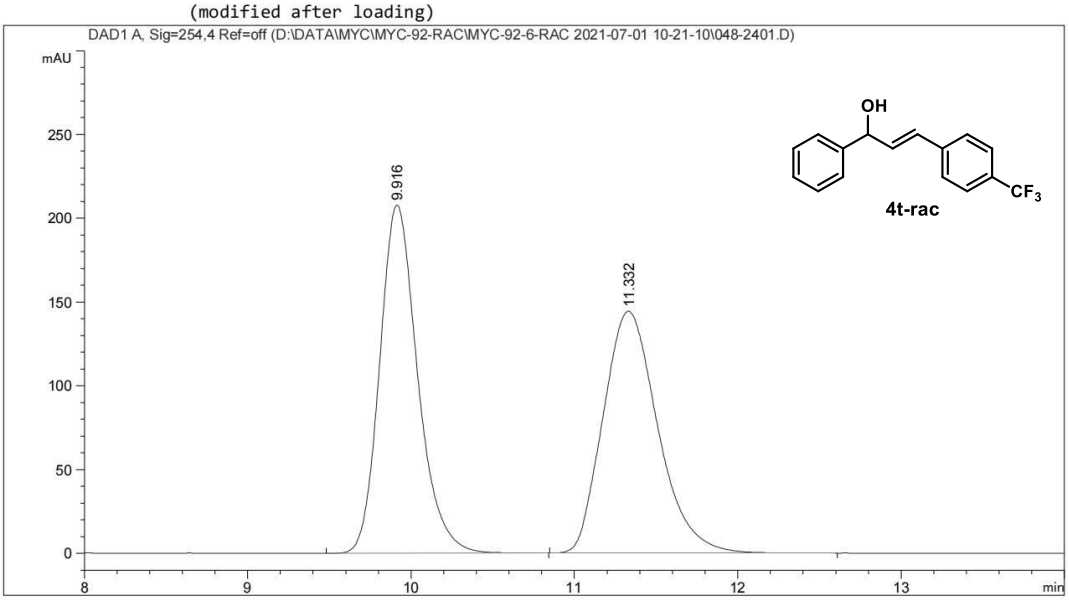

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  21.369 BB    0.6161 6350.30664  158.95970  96.7048
   2  24.731 BB    0.5508  216.38510    4.70247   3.2952

Totals :                  6566.69174  163.66218
```

Data File D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\048-2401.D
Sample Name: MJM-9-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :  24
Acq. Instrument : Instrument 2                  Location : Vial 48
Injection Date  : 7/2/2021 12:29:06 AM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\DAD-OD(1-2)-90-10-1
                  .0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 11:02:44 AM
                  (modified after loading)
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=254,4 Ref=off

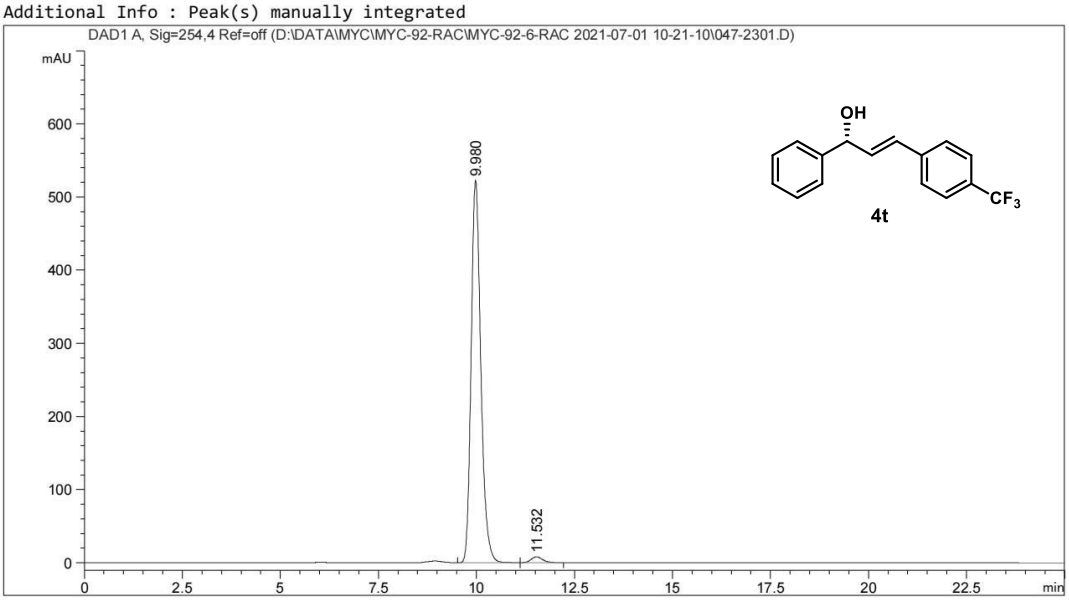
Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   9.916 BB    0.2459 3347.41919  207.87682  49.9667
   2  11.332 BB    0.3549 3351.88379  144.36092  50.0333

Totals :                  6699.30298  352.23773


=====================================================================
```

Data File D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\047-2301.D
Sample Name: MJM-9

```
==========================================================================
Acq. Operator   :                                Seq. Line :  23
Acq. Instrument : Instrument 2                    Location : Vial 47
Injection Date  : 7/1/2021 11:48:07 PM                 Inj :   1
                                                 Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\MYC\MYC-92-RAC\MYC-92-6-RAC 2021-07-01 10-21-10\DAD-OD(1-2)-90-10-1
                  .0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-92-8-0.5ML-3UL-220NM-40MIN.M
Last changed    : 7/2/2021 11:05:52 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

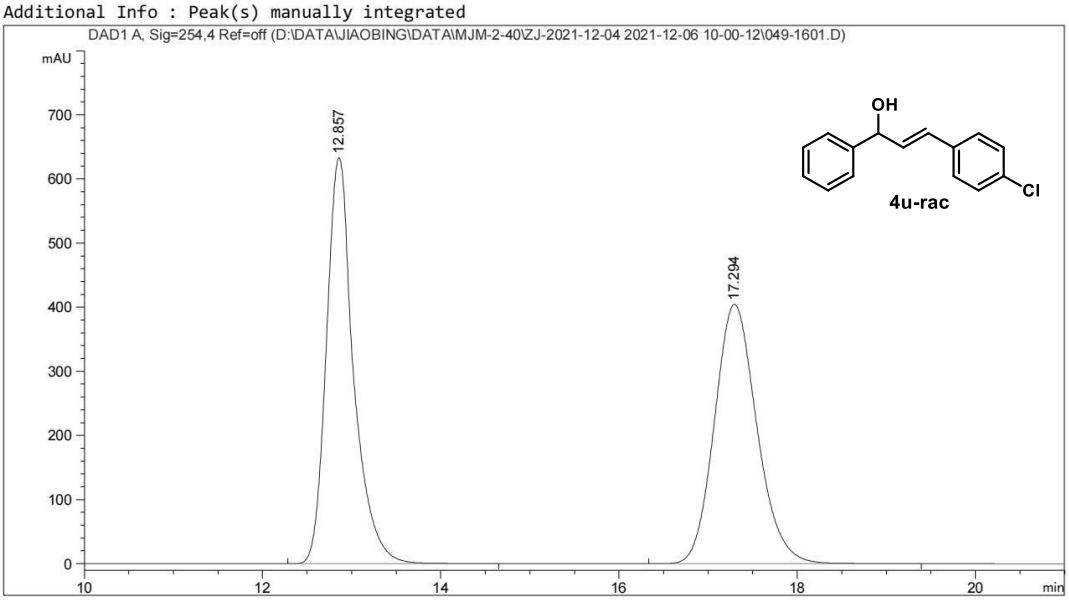

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   9.980 BB    0.2641 8962.30859  522.51434  98.2225
   2  11.532 BB    0.3080  162.18472    7.95159   1.7775

Totals :                  9124.49332  530.46593
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\049-1601.D
Sample Name: MJM-40-12-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :  16
Acq. Instrument : Instrument 2                  Location : Vial 49
Injection Date  : 12/6/2021 8:56:39 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\DAD-OD(1-6
                  )-90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-1.0ML-3UL-220NM-60MIN.M
Last changed    : 12/7/2021 9:34:13 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

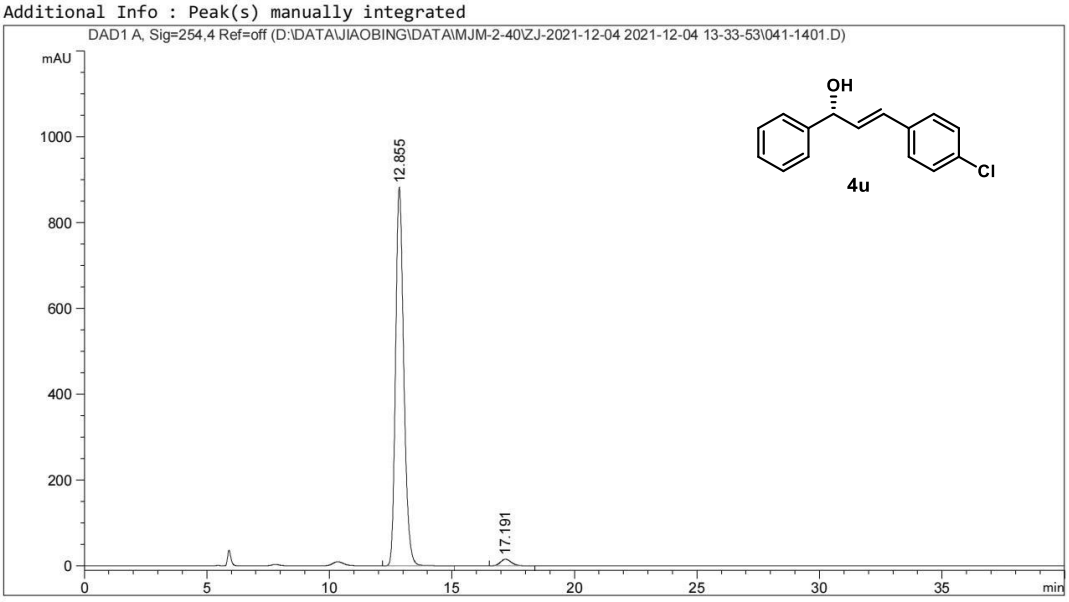

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  12.857 BB    0.3145 1.33760e4   633.20538  49.9610
   2  17.294 BB    0.5103 1.33969e4   404.56702  50.0390

Totals :                  2.67729e4  1037.77240
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-04 13-33-53\041-1401.D
Sample Name: MJM-40-12

```
======================================================================
Acq. Operator   :                              Seq. Line :  14
Acq. Instrument : Instrument 2                  Location : Vial 41
Injection Date  : 12/4/2021 9:28:20 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-04 13-33-53\DAD-OD(1-6
                  )-90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-1.0ML-3UL-220NM-60MIN.M
Last changed    : 12/7/2021 9:09:07 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

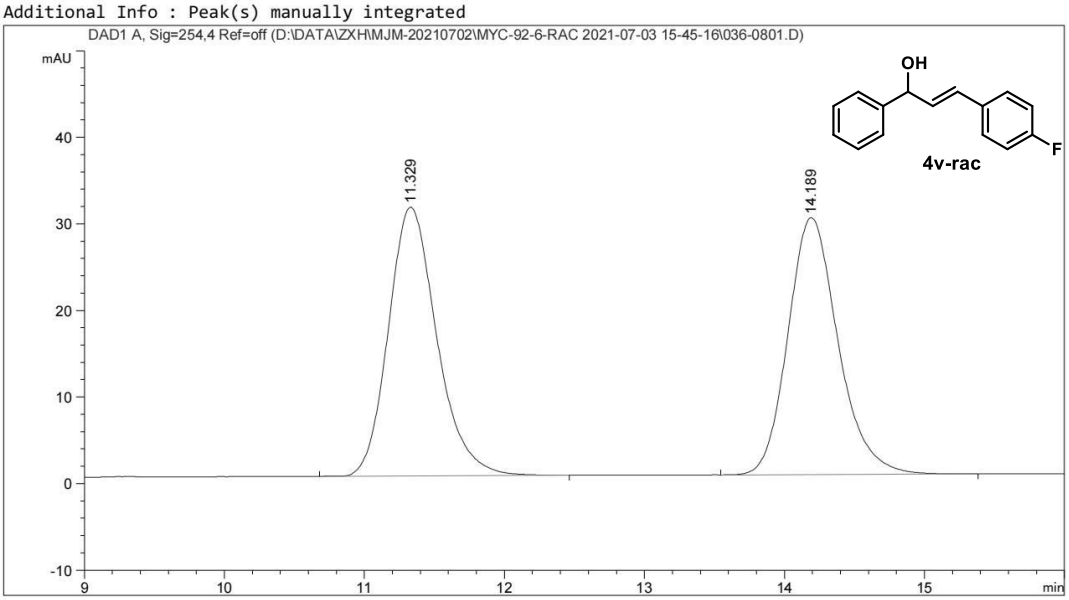

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  12.855 BB    0.3578 2.05308e4   881.40686  97.7369
   2  17.191 BB    0.4584  475.38721   15.55974   2.2631

Totals :                  2.10062e4   896.96660
```

Data File D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-03 15-45-16\036-0801.D
Sample Name: MJM-14-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :   8
Acq. Instrument : Instrument 2                  Location : Vial 36
Injection Date  : 7/3/2021 7:33:12 PM                Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-03 15-45-16\DAD-OD(1-2)-90-10
                  -1.0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\MYC\DAD-OJ(1-6)-80-20-0.3ML-5UL-ALL-90MIN.M
Last changed    : 7/5/2021 4:13:40 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

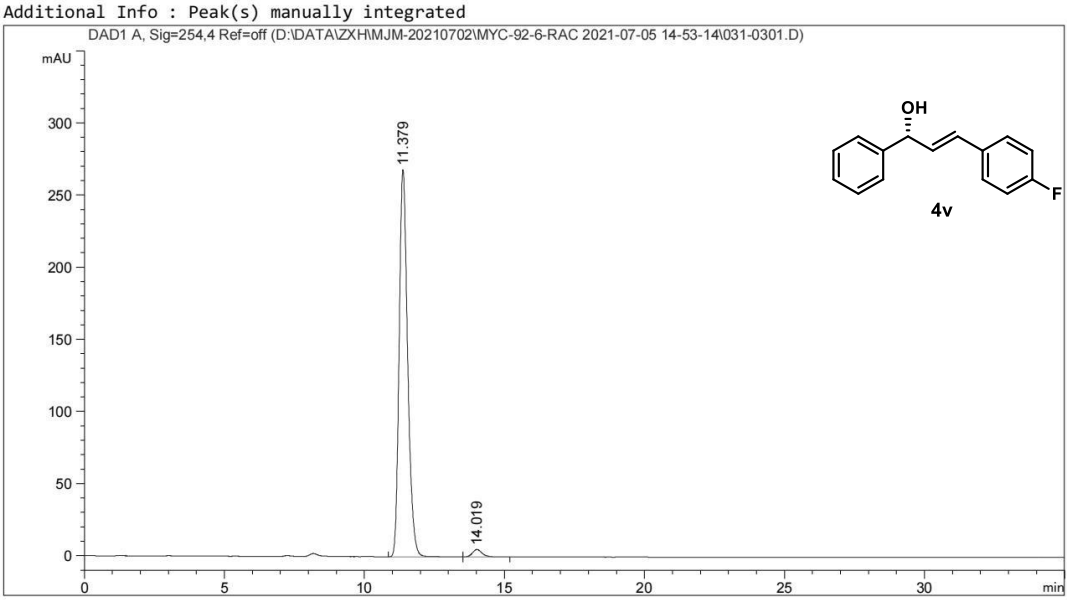

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  11.329 BB    0.3684  746.20404   31.05257  50.2296
   2  14.189 BB    0.3825  739.38275   29.69274  49.7704

Totals :                  1485.58679   60.74531
```

Data File D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-05 14-53-14\031-0301.D
Sample Name: MJM-14

```
=====================================================================
Acq. Operator   :                              Seq. Line :   3
Acq. Instrument : Instrument 2                  Location : Vial 31
Injection Date  : 7/5/2021 3:20:01 PM                Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-05 14-53-14\DAD-OD(1-2)-90-10
                  -1.0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\MYC\DAD-OJ(1-6)-80-20-0.3ML-5UL-ALL-90MIN.M
Last changed    : 7/5/2021 4:11:15 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

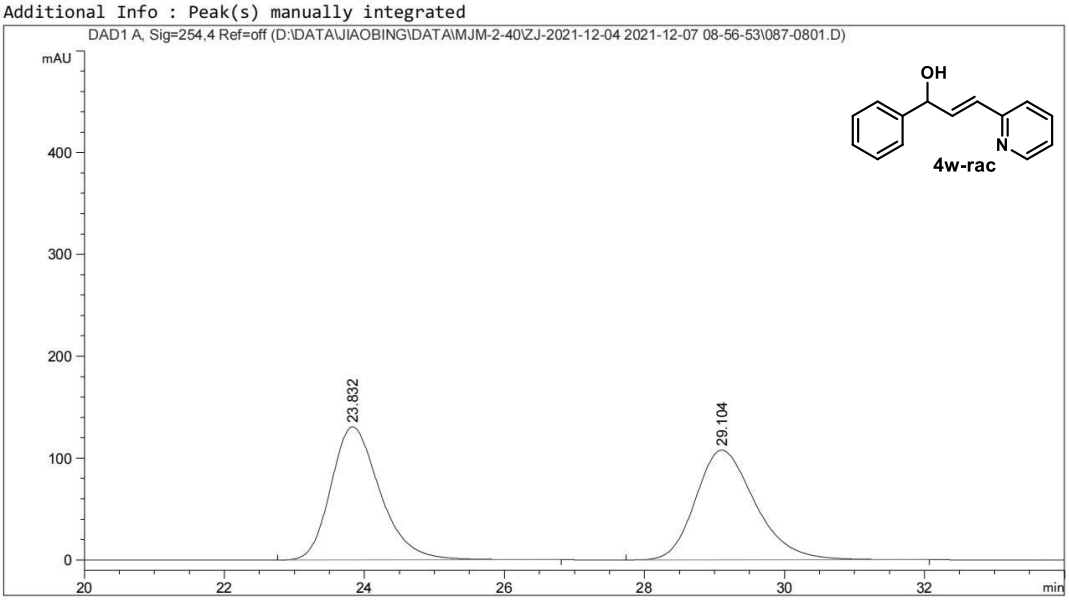

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  11.379 BV    0.3223 5663.76660  268.27240  97.8578
   2  14.019 VB    0.3598  123.98618    5.16986   2.1422

Totals :                  5787.75278  273.44226
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-07 08-56-53\087-0801.D
Sample Name: MJM-40-21-RAC

```
    ======================================================================
    Acq. Operator   :                              Seq. Line :   8
    Acq. Instrument : Instrument 2                  Location : Vial 87
    Injection Date  : 12/7/2021 1:15:26 PM               Inj :   1
                                                  Inj Volume : 3.000 µl
    Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-07 08-56-53\DAD-OD(1-6
                      )-90-10-1.0ML-3UL-220NM-40MIN.M
    Last changed    : 12/4/2021 11:30:53 AM
    Analysis Method : D:\METHOD\MYC\DAD-AD(1-2)-80-20-1.0ML-5UL-ALL-10MIN.M
    Last changed    : 12/8/2021 9:23:05 AM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Use Multiplier & Dilution Factor with ISTDs

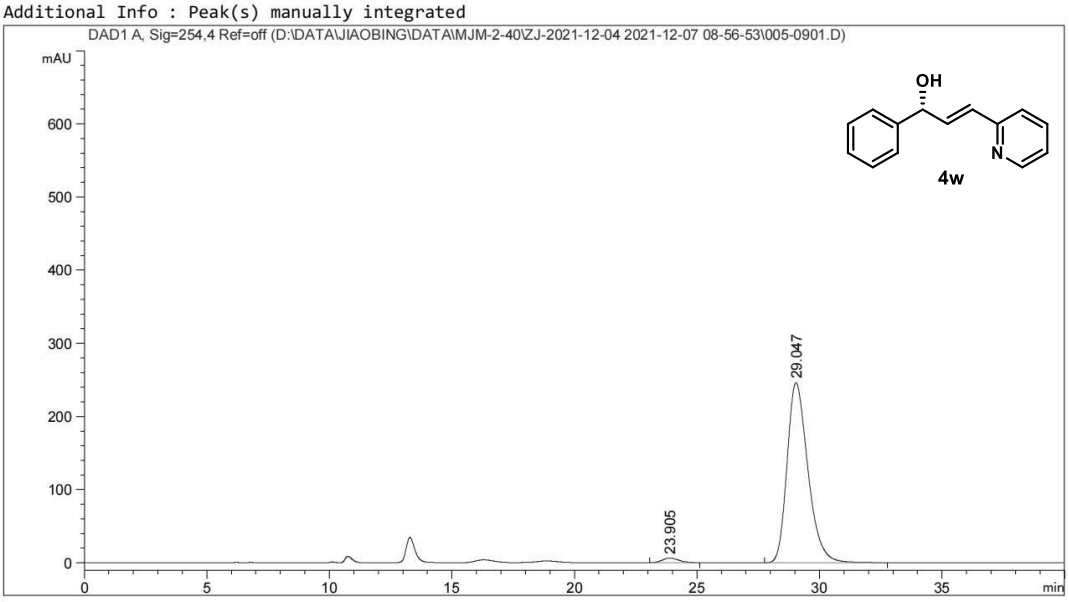

    Signal 1: DAD1 A, Sig=254,4 Ref=off

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  23.832 BB    0.7441 6387.95801  130.71585  50.0469
       2  29.104 BB    0.9027 6375.98438  107.69790  49.9531

    Totals :                  1.27639e4   238.41375
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-07 08-56-53\005-0901.D
Sample Name: MJM-40-21

```
=====================================================================
Acq. Operator   :                              Seq. Line :   9
Acq. Instrument : Instrument 2                  Location : Vial 5
Injection Date  : 12/7/2021 1:56:28 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-07 08-56-53\DAD-OD(1-6
                  )-90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\MYC\DAD-AD(1-2)-80-20-1.0ML-5UL-ALL-10MIN.M
Last changed    : 12/8/2021 9:20:54 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

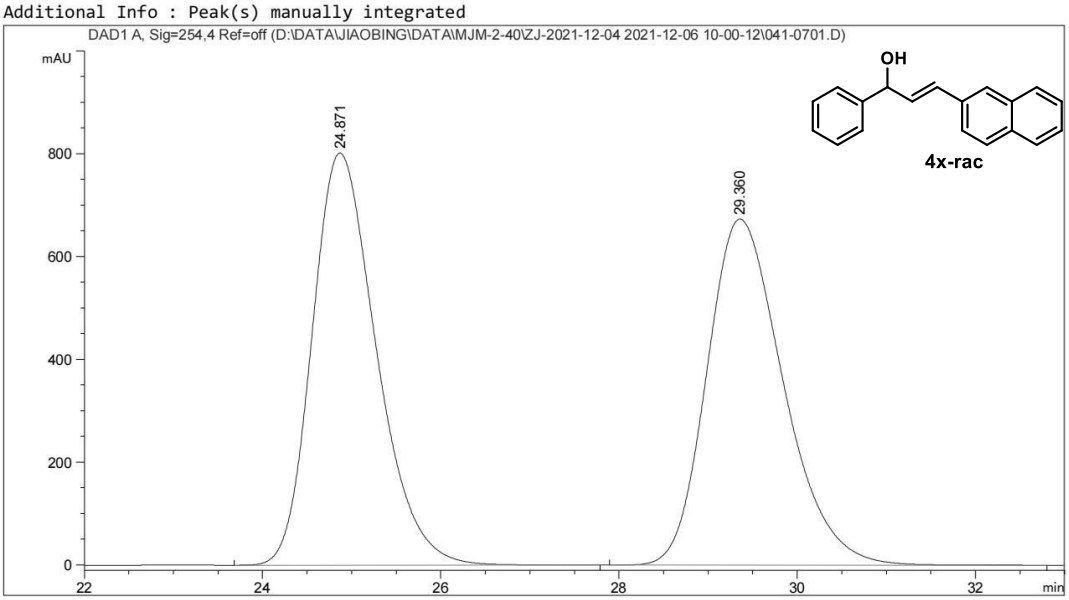

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  23.905 BB    0.5914  284.25131    6.17075   1.9099
   2  29.047 BB    0.9111 1.45990e4   246.43993  98.0901

Totals :                  1.48833e4   252.61068
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\041-0701.D
Sample Name: MJM-40-1-RAC

```
==========================================================================
Acq. Operator   :                                Seq. Line :   7
Acq. Instrument : Instrument 2                    Location : Vial 41
Injection Date  : 12/6/2021 1:07:43 PM                 Inj :   1
                                                 Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-06 10-00-12\DAD-OD(1-6
                  )-90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-1.0ML-3UL-220NM-60MIN.M
Last changed    : 12/7/2021 9:25:44 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

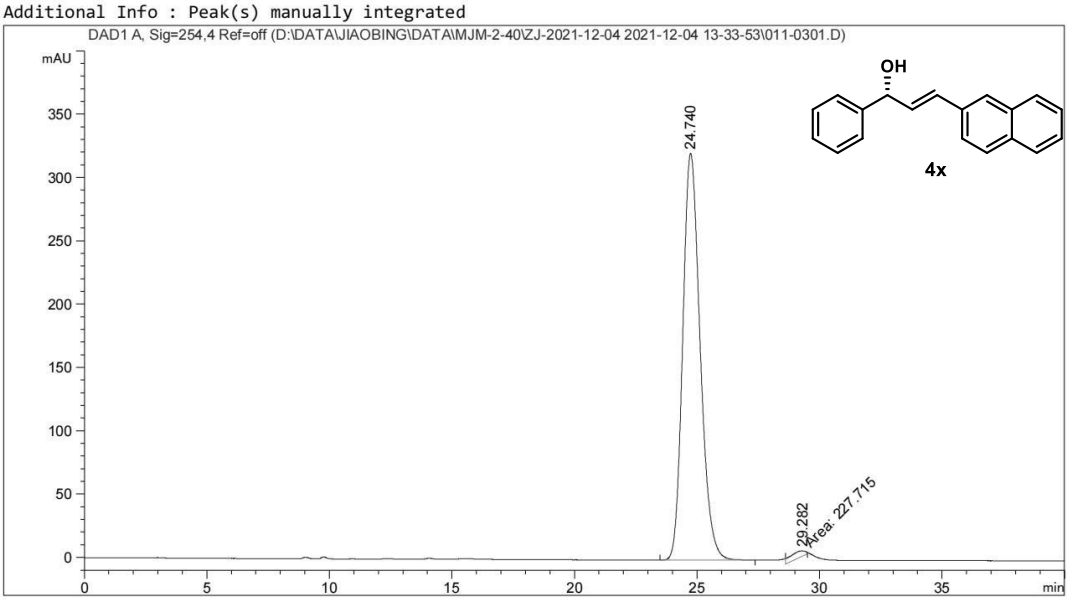

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  24.871 BB    0.7710 4.00538e4   801.49219  49.9801
   2  29.360 BB    0.9168 4.00857e4   673.06232  50.0199

Totals :                  8.01395e4  1474.55450
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-04 13-33-53\011-0301.D
Sample Name: MJM-40-1

```
=====================================================================
Acq. Operator   :                              Seq. Line :   3
Acq. Instrument : Instrument 2                  Location : Vial 11
Injection Date  : 12/4/2021 1:57:39 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-40\ZJ-2021-12-04 2021-12-04 13-33-53\DAD-OD(1-6
                  )-90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-90-10-1.0ML-3UL-220NM-90MIN.M
Last changed    : 12/6/2021 3:07:47 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

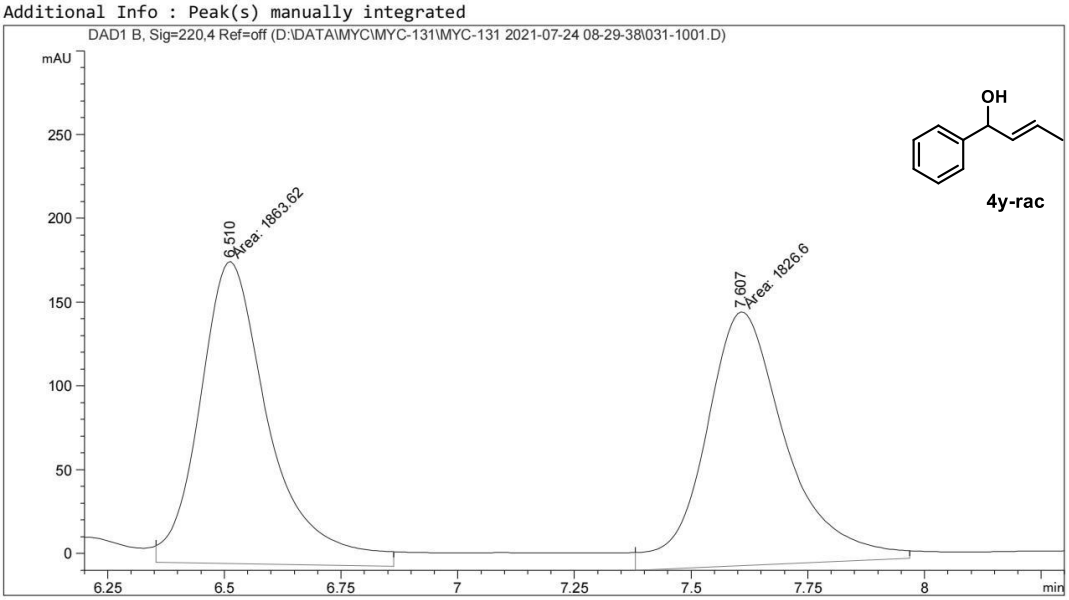

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  24.740 BB    0.7607 1.58156e4   321.08249  98.5806
   2  29.282 MM    0.6575  227.71501    4.45119   1.4194

Totals :                  1.60433e4   325.53368
```

Data File D:\DATA\MYC\MYC-131\MYC-131 2021-07-24 08-29-38\031-1001.D
Sample Name: MJM-20-RAC

```
==========================================================================
Acq. Operator   :                                Seq. Line :  10
Acq. Instrument : Instrument 2                    Location : Vial 31
Injection Date  : 7/24/2021 2:15:51 PM                 Inj :   1
                                                 Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\MYC\MYC-131\MYC-131 2021-07-24 08-29-38\DAD-OD(1-2)-90-10-1.0ML-3UL
                  -220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-90-10-1.0ML-3UL-220NM-80MIN.M
Last changed    : 7/26/2021 11:02:22 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

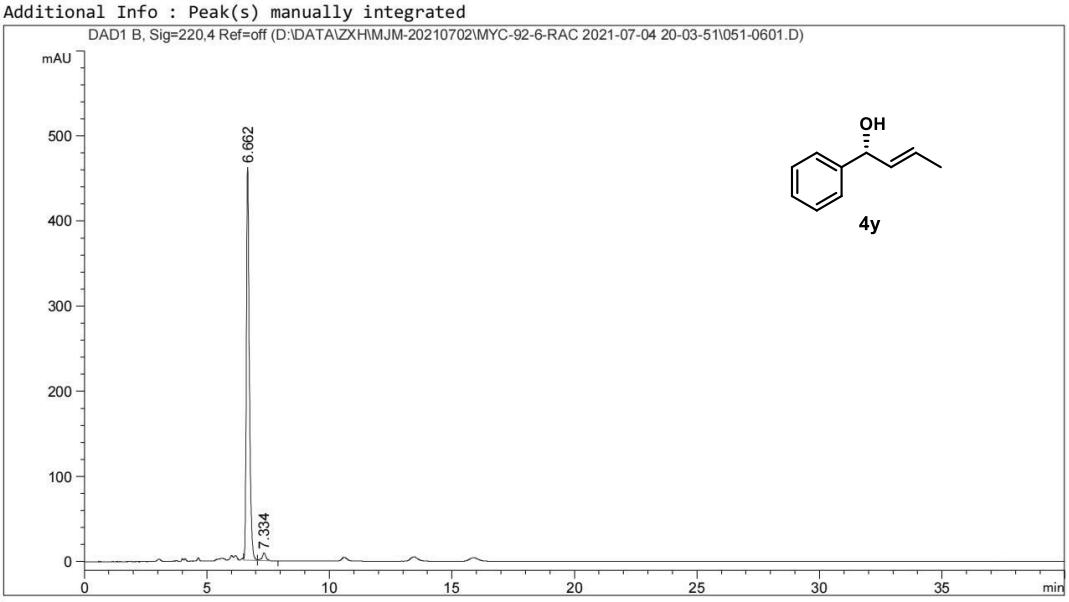

Signal 1: DAD1 B, Sig=220,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   6.510 MM    0.1723 1863.61768  180.22163  50.5016
   2   7.607 MM    0.2009 1826.59924  151.56111  49.4984

Totals :                  3690.21692  331.78275
```

Data File D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-04 20-03-51\051-0601.D
Sample Name: MJM-20

```
=====================================================================
Acq. Operator   :                              Seq. Line :   6
Acq. Instrument : Instrument 2                  Location : Vial 51
Injection Date  : 7/4/2021 10:29:56 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\ZXH\MJM-20210702\MYC-92-6-RAC 2021-07-04 20-03-51\DAD-OD(1-2)-90-10
                  -1.0ML-3UL-220NM-40MIN.M
Last changed    : 4/24/2021 11:29:01 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-2)-90-10-1.0ML-3UL-220NM-80MIN.M
Last changed    : 7/26/2021 10:52:37 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

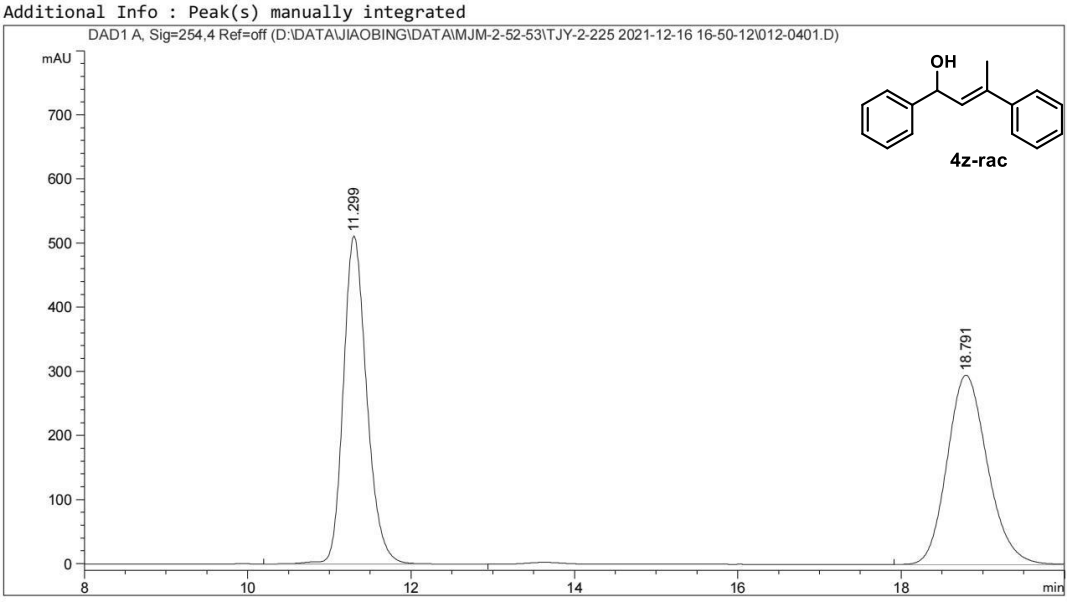

Signal 1: DAD1 B, Sig=220,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   6.662 VV    0.1266 3908.25781  462.37070  97.4786
   2   7.334 VB    0.1582  101.09191    9.19882   2.5214

Totals :                  4009.34972  471.56952
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-52-53\TJY-2-225 2021-12-16 16-50-12\012-0401.D
Sample Name: mjm-47-1-rac

```
======================================================================
Acq. Operator   :                              Seq. Line :   4
Acq. Instrument : Instrument 2                  Location : Vial 12
Injection Date  : 12/16/2021 5:55:00 PM              Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-52-53\TJY-2-225 2021-12-16 16-50-12\DAD-OD(1-6)
                  -90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\TJY\DAD-OD(1-6)-80-20-1ML-5UL-ALL-10MIN.M
Last changed    : 12/17/2021 8:59:40 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

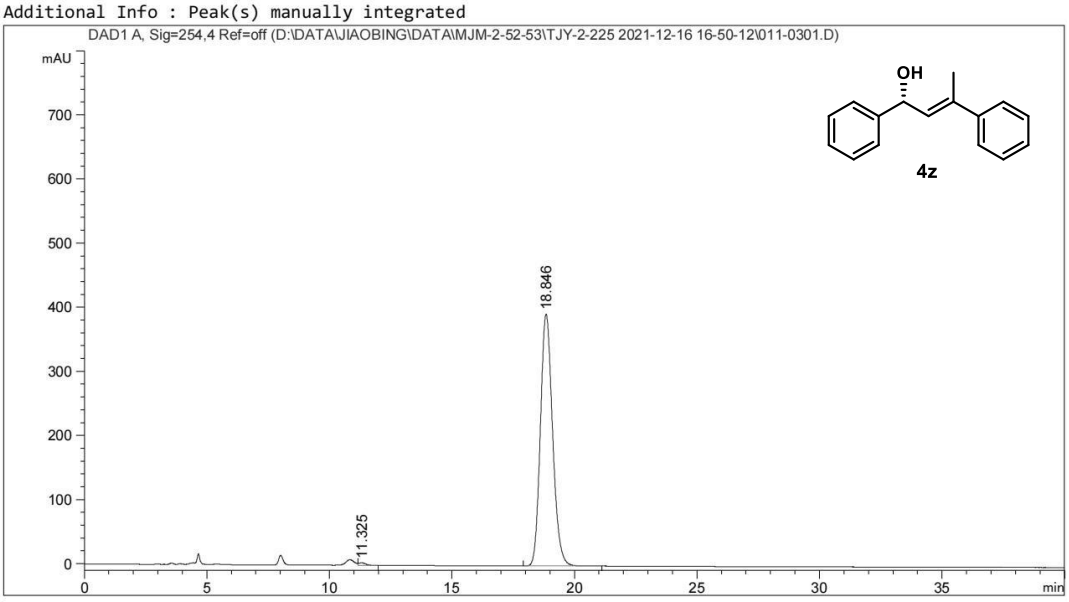

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  11.299 BB    0.3067 1.01984e4   511.39557  50.1839
   2  18.791 BB    0.5282 1.01236e4   295.11301  49.8161

Totals :                  2.03220e4   806.50858
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-52-53\TJY-2-225 2021-12-16 16-50-12\011-0301.D
Sample Name: mjm-47-1

```
=====================================================================
Acq. Operator   :                              Seq. Line :   3
Acq. Instrument : Instrument 2                  Location : Vial 11
Injection Date  : 12/16/2021 5:14:01 PM              Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-52-53\TJY-2-225 2021-12-16 16-50-12\DAD-OD(1-6)
                  -90-10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\TJY\DAD-OD(1-6)-80-20-1ML-5UL-ALL-10MIN.M
Last changed    : 12/17/2021 8:57:45 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

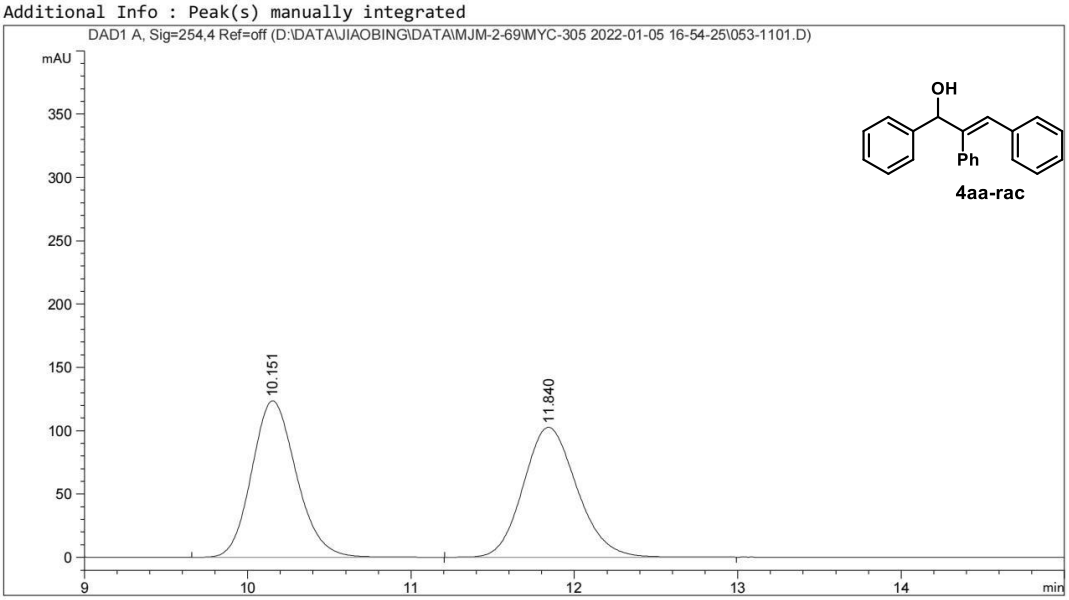

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  11.325 VB    0.2879   79.00240    3.97460   0.5788
   2  18.846 BB    0.5329 1.35713e4   392.93716  99.4212

Totals :                  1.36503e4   396.91176
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-69\MYC-305 2022-01-05 16-54-25\053-1101.D
Sample Name: MJM-69-6-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :  11
Acq. Instrument : Instrument 2                  Location : Vial 53
Injection Date  : 1/5/2022 10:45:17 PM               Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-69\MYC-305 2022-01-05 16-54-25\DAD-OD(1-6)-90-
                  10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-0.5ML-3UL-220NM-10MIN.M
Last changed    : 1/7/2022 4:28:40 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

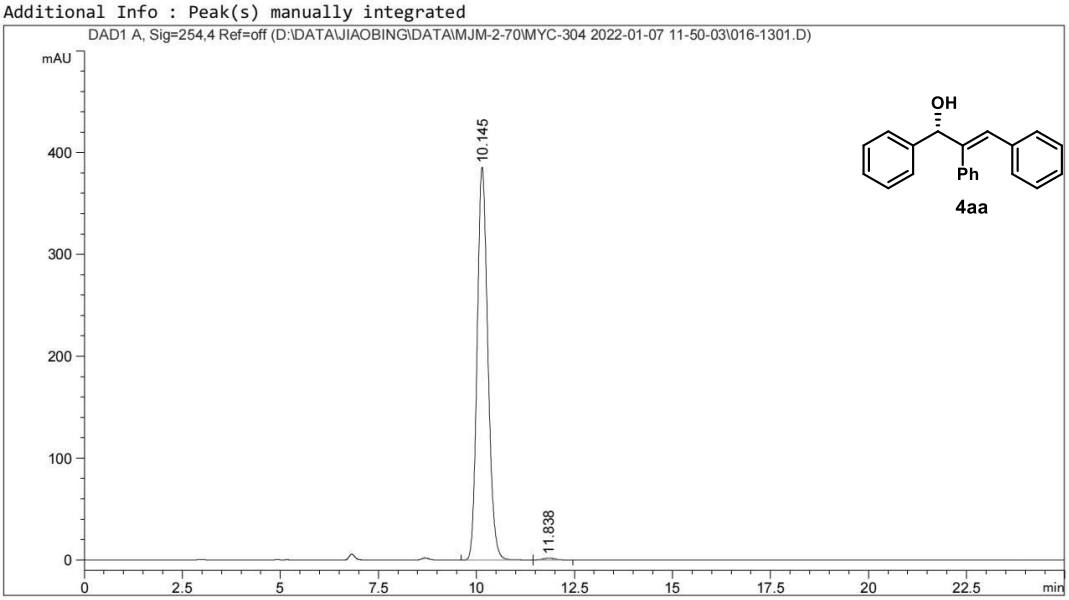

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  10.151 BB    0.2931 2340.56372  123.48109  50.0377
   2  11.840 BB    0.3520 2337.03760  102.51072  49.9623

Totals :                  4677.60132  225.99181
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-70\MYC-304 2022-01-07 11-50-03\016-1301.D
Sample Name: MJM-72-2

```
=====================================================================
Acq. Operator   :                              Seq. Line :  13
Acq. Instrument : Instrument 2                  Location : Vial 16
Injection Date  : 1/7/2022 3:58:51 PM                Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-70\MYC-304 2022-01-07 11-50-03\DAD-OD(1-6)-90-
                  10-1.0ML-3UL-220NM-25MIN.M
Last changed    : 12/14/2021 9:39:25 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-0.5ML-3UL-220NM-10MIN.M
Last changed    : 1/7/2022 4:26:47 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

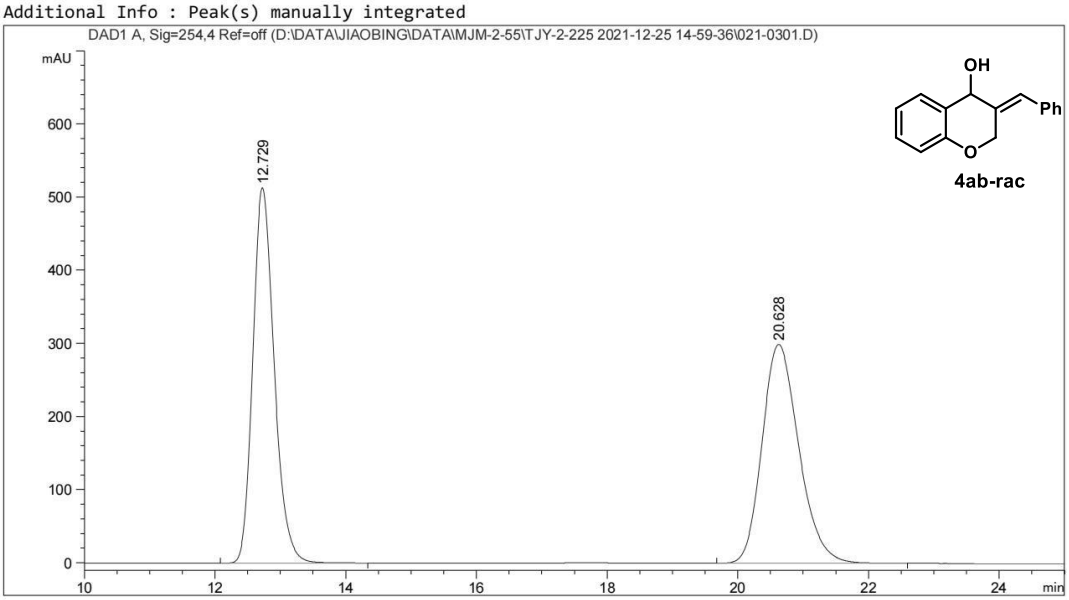

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  10.145 BB    0.2936 7331.55469  385.96646  99.4805
   2  11.838 BB    0.2832   38.28793    1.71048   0.5195

Totals :                  7369.84261  387.67694
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-55\TJY-2-225 2021-12-25 14-59-36\021-0301.D
Sample Name: mjm-55-2-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :   3
Acq. Instrument : Instrument 2                  Location : Vial 21
Injection Date  : 12/25/2021 3:23:13 PM              Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-55\TJY-2-225 2021-12-25 14-59-36\DAD-OD(1-6)-90
                  -10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\MYC\DAD-AD(1-2)-90-10-0.5ML-5UL-ALL-10MIN.M
Last changed    : 12/29/2021 12:45:40 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

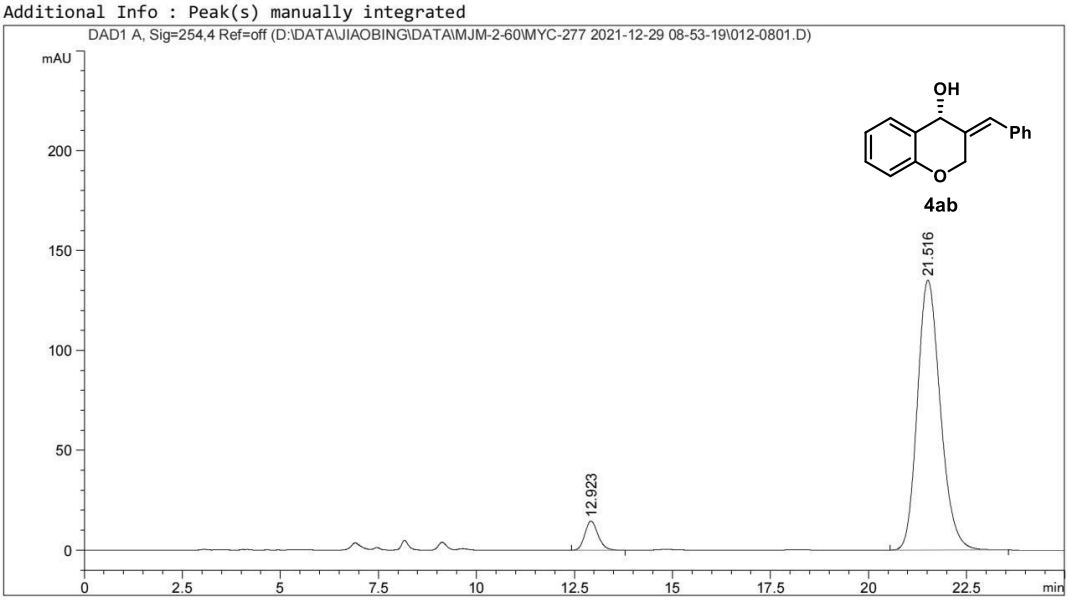

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  12.729 BB    0.3493 1.16694e4   513.14795  49.9573
   2  20.628 BB    0.5999 1.16894e4   299.14352  50.0427

Totals :                  2.33588e4   812.29147
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-29 08-53-19\012-0801.D
Sample Name: MJM-55-2

```
=====================================================================
Acq. Operator   :                              Seq. Line :   8
Acq. Instrument : Instrument 2                  Location : Vial 12
Injection Date  : 12/29/2021 10:47:35 AM             Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-29 08-53-19\DAD-OD(1-6)-90-
                  10-1.0ML-3UL-220NM-25MIN.M
Last changed    : 12/14/2021 9:39:25 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-0.5ML-3UL-220NM-10MIN.M
Last changed    : 1/7/2022 4:19:55 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

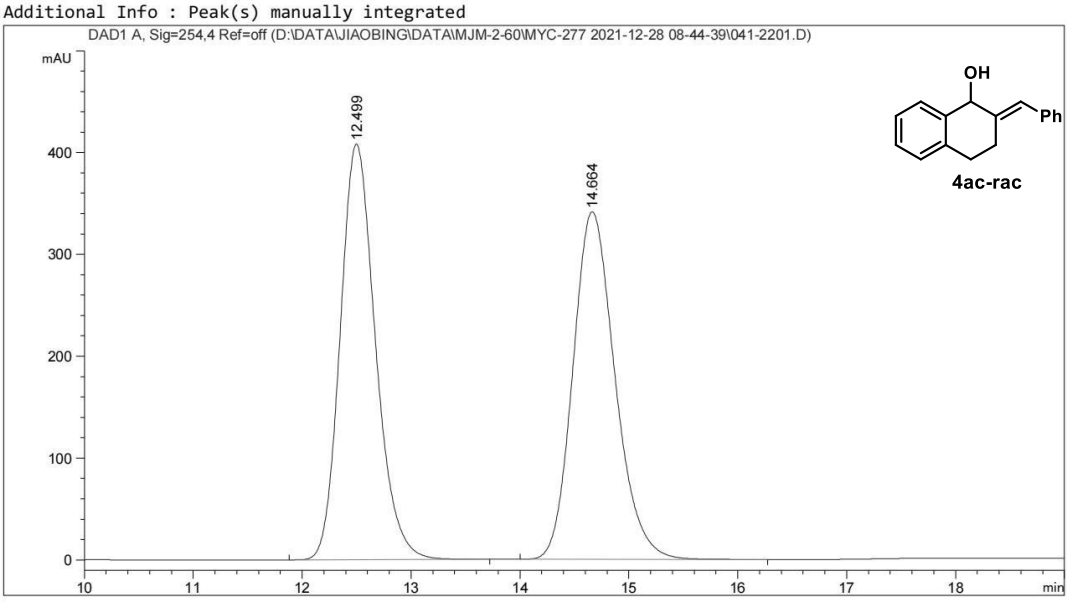

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  12.923 BB    0.3578  342.42648   14.58962   5.8452
   2  21.516 BB    0.6283 5515.86035  135.11511  94.1548

Totals :                  5858.28683  149.70473
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\041-2201.D
Sample Name: MJM-55-1-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :  22
Acq. Instrument : Instrument 2                  Location : Vial 41
Injection Date  : 12/28/2021 6:07:56 PM              Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\DAD-OD(1-6)-90-
                  10-1.0ML-3UL-220NM-25MIN.M
Last changed    : 12/14/2021 9:39:25 AM
Analysis Method : D:\METHOD\MYC\DAD-AD(1-2)-90-10-0.5ML-5UL-ALL-10MIN.M
Last changed    : 12/29/2021 12:43:13 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

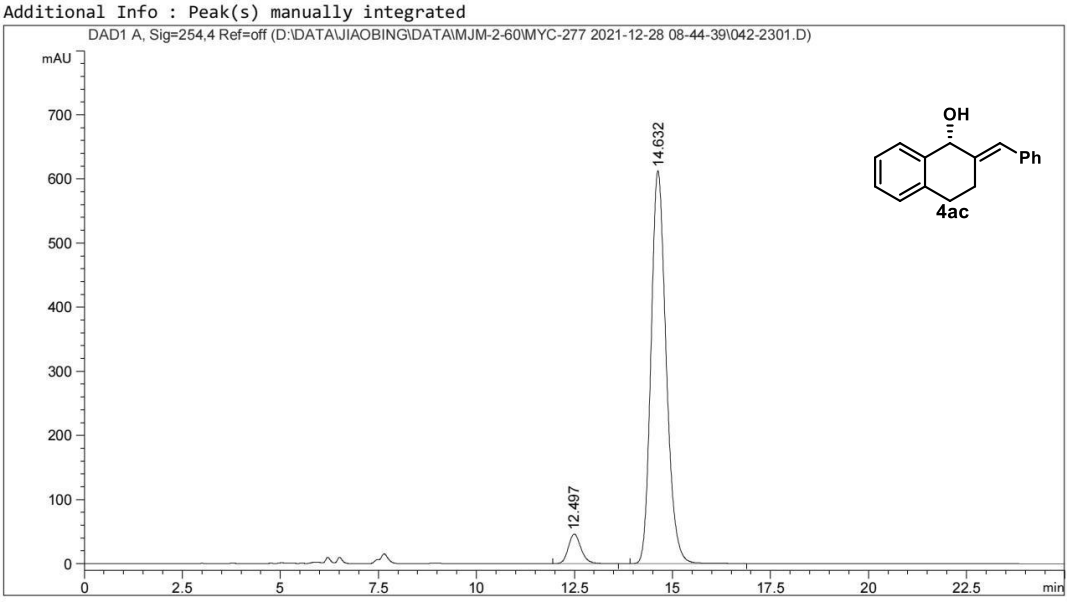

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  12.499 BB    0.3459 9162.37012  408.19144  50.0285
   2  14.664 BB    0.4128 9151.92676  341.39313  49.9715

Totals :                  1.83143e4   749.58456
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\042-2301.D
Sample Name: MJM-55-1-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :  23
Acq. Instrument : Instrument 2                  Location : Vial 42
Injection Date  : 12/28/2021 6:33:53 PM              Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\DAD-OD(1-6)-90-
                  10-1.0ML-3UL-220NM-25MIN.M
Last changed    : 12/14/2021 9:39:25 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-0.5ML-3UL-220NM-10MIN.M
Last changed    : 1/7/2022 4:17:09 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

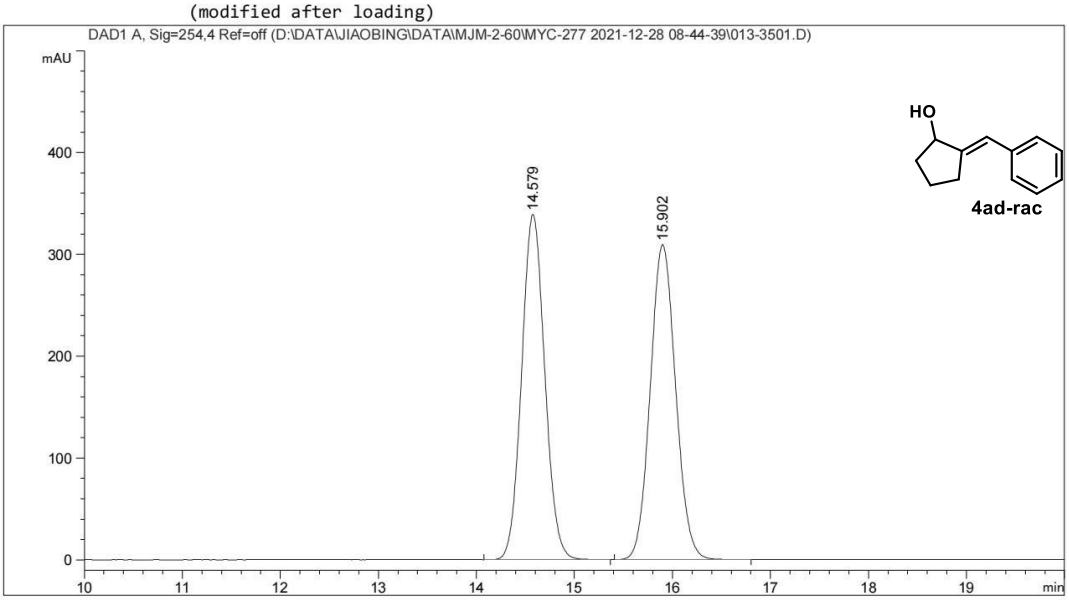

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  12.497 BB    0.3436 1034.30835   46.11881   5.9165
   2  14.632 BB    0.4130 1.64474e4   612.99146  94.0835

Totals :                  1.74817e4   659.11027
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\013-3501.D
Sample Name: MJM-55-9-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :  35
Acq. Instrument : Instrument 2                  Location : Vial 13
Injection Date  : 12/29/2021 12:21:01 AM             Inj :   1
                                               Inj Volume : 2.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\DAD-AD(1-2)-95-5
                  -1ML-2UL-ALL-60MIN.M
Last changed    : 12/10/2021 3:08:05 PM
Analysis Method : D:\METHOD\MYC\DAD-AD(1-2)-90-10-0.5ML-5UL-ALL-10MIN.M
Last changed    : 12/29/2021 10:28:32 AM
                  (modified after loading)
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=254,4 Ref=off

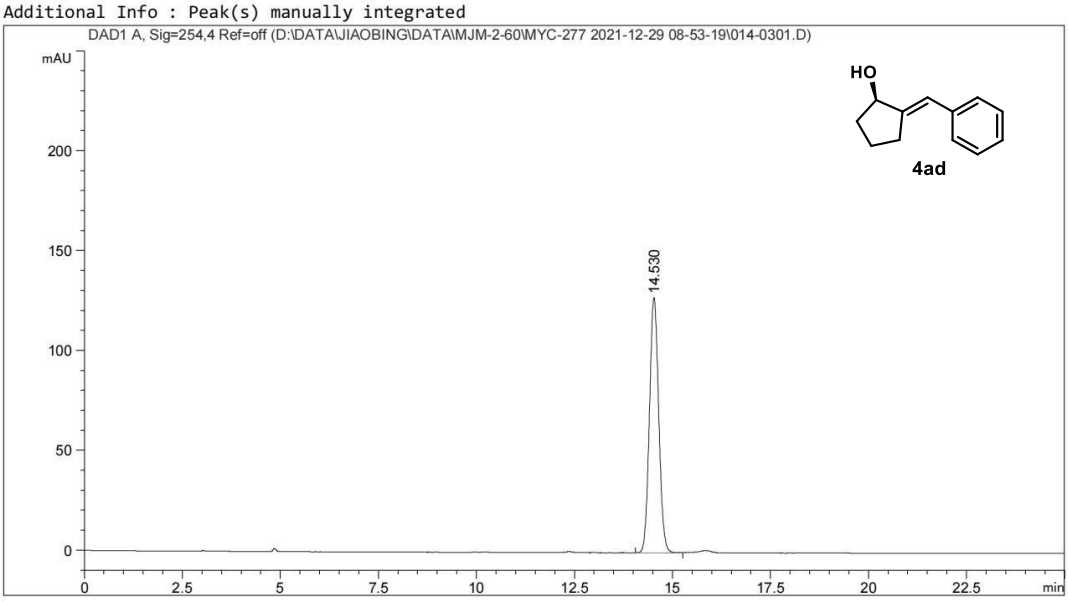
Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  14.579 BB    0.2552 5558.33301  339.12198  50.0054
   2  15.902 BB    0.2796 5557.12305  309.26376  49.9946

Totals :                  1.11155e4   648.38574


=====================================================================
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-29 08-53-19\014-0301.D
Sample Name: MJM-55-9

```
=====================================================================
Acq. Operator   :                              Seq. Line :   3
Acq. Instrument : Instrument 2                  Location : Vial 14
Injection Date  : 12/29/2021 9:17:37 AM              Inj :   1
                                               Inj Volume : 2.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-29 08-53-19\DAD-AD(1-2)-95-5
                  -1ML-2UL-ALL-30MIN.M
Last changed    : 12/11/2021 10:00:45 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-0.5ML-3UL-220NM-10MIN.M
Last changed    : 1/7/2022 4:19:55 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=254,4 Ref=off

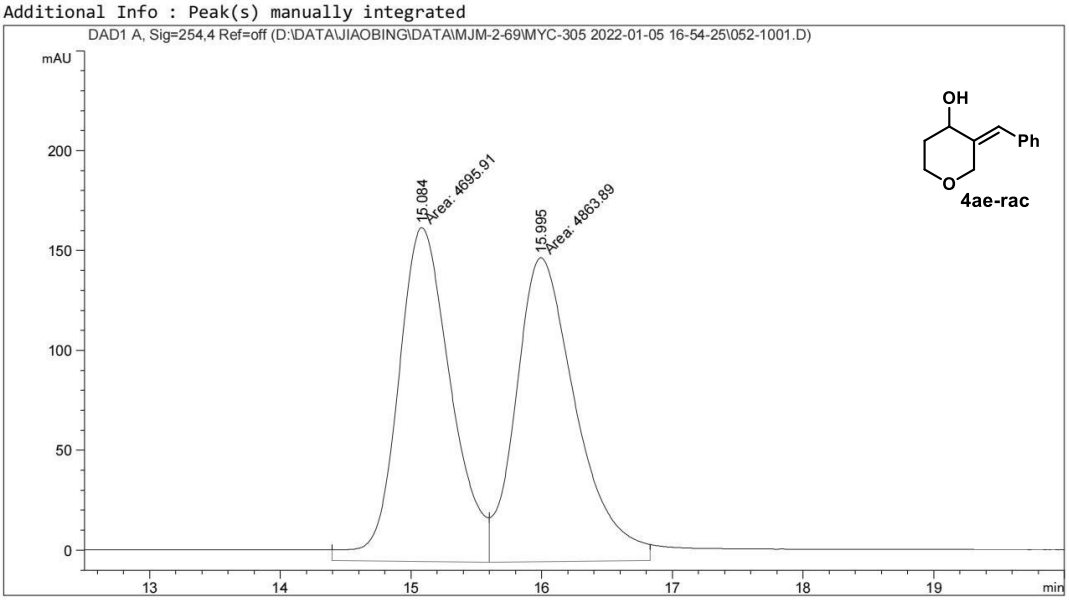
Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  14.530 BB    0.2558 2099.72510  127.75042 100.0000

Totals :                  2099.72510  127.75042


=====================================================================
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-69\MYC-305 2022-01-05 16-54-25\052-1001.D
Sample Name: MJM-69-5-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :  10
Acq. Instrument : Instrument 2                  Location : Vial 52
Injection Date  : 1/5/2022 10:04:16 PM               Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-69\MYC-305 2022-01-05 16-54-25\DAD-OD(1-6)-90-
                  10-1.0ML-3UL-220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\LWD\DAD-AD(1-2)-95-5-1ML-3UL-ALL-10MIN.M
Last changed    : 1/6/2022 10:31:45 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

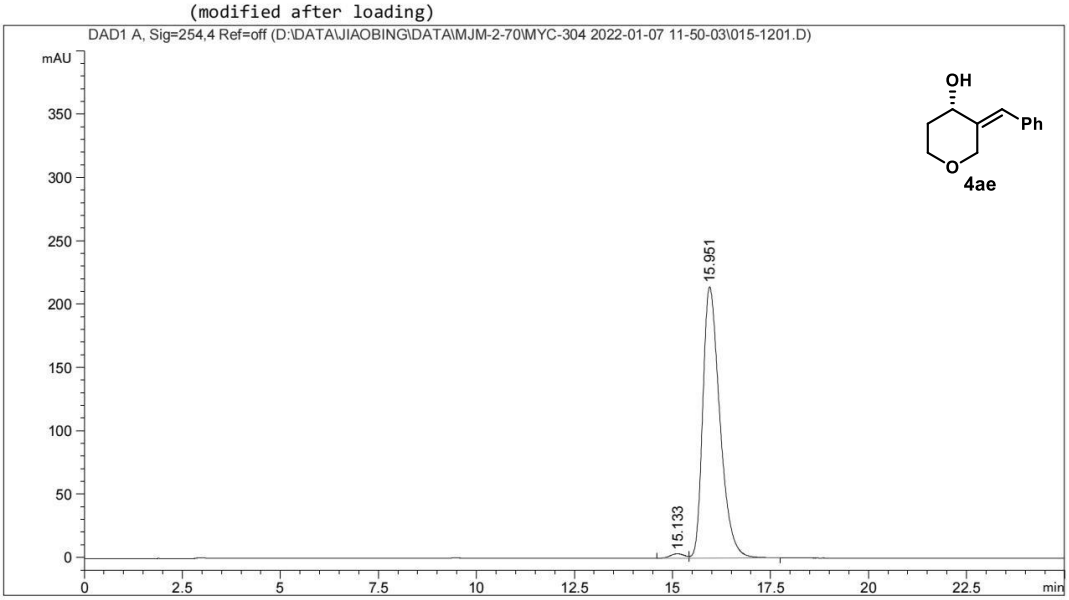

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  15.084 MM    0.4681 4695.90527  167.19333  49.1214
   2  15.995 MM    0.5323 4863.88525  152.29037  50.8786

Totals :                  9559.79053  319.48370
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-70\MYC-304 2022-01-07 11-50-03\015-1201.D
Sample Name: MJM-72-1

```
    ======================================================================
    Acq. Operator   :                              Seq. Line :  12
    Acq. Instrument : Instrument 2                  Location : Vial 15
    Injection Date  : 1/7/2022 3:32:52 PM                Inj :   1
                                                  Inj Volume : 3.000 µl
    Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-70\MYC-304 2022-01-07 11-50-03\DAD-OD(1-6)-90-
                      10-1.0ML-3UL-220NM-25MIN.M
    Last changed    : 12/14/2021 9:39:25 AM
    Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-0.5ML-3UL-220NM-10MIN.M
    Last changed    : 1/7/2022 4:07:54 PM
                      (modified after loading)
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=254,4 Ref=off

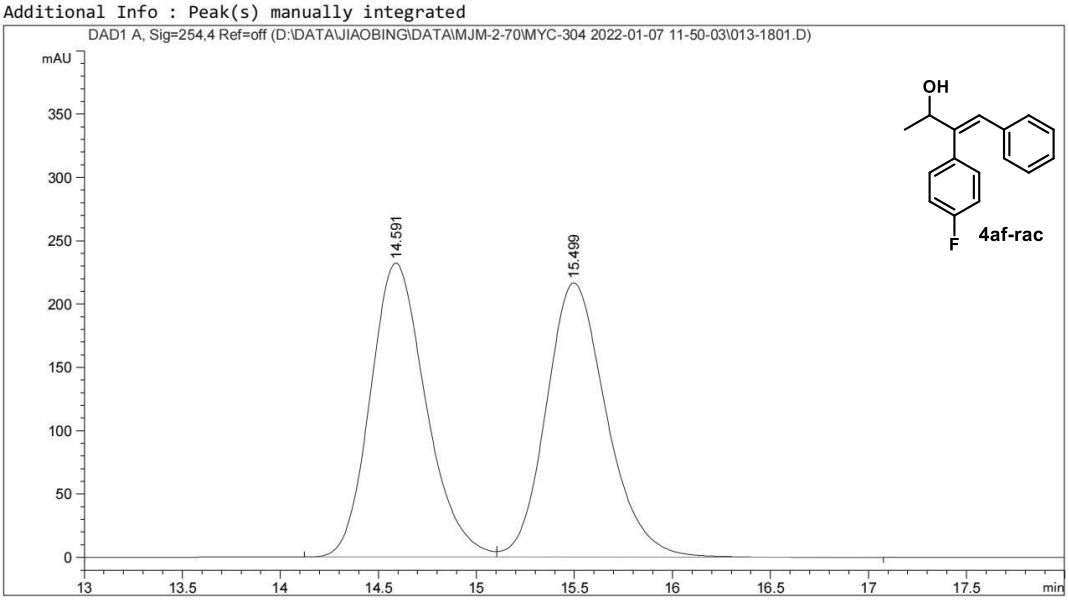
    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  15.133 BV    0.3366   84.86633    3.47929   1.2918
       2  15.951 VB    0.4614 6484.65576  214.06369  98.7082

    Totals :                  6569.52209  217.54298


    ======================================================================
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-70\MYC-304 2022-01-07 11-50-03\013-1801.D
Sample Name: MJM-71-2-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :  18
Acq. Instrument : Instrument 2                  Location : Vial 13
Injection Date  : 1/7/2022 5:38:53 PM                Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-70\MYC-304 2022-01-07 11-50-03\DAD-OD(1-6)-90-
                  10-0.5ML-3UL-220NM-40MIN.M
Last changed    : 1/7/2022 3:58:44 PM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-0.5ML-3UL-220NM-10MIN.M
Last changed    : 1/7/2022 9:40:51 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

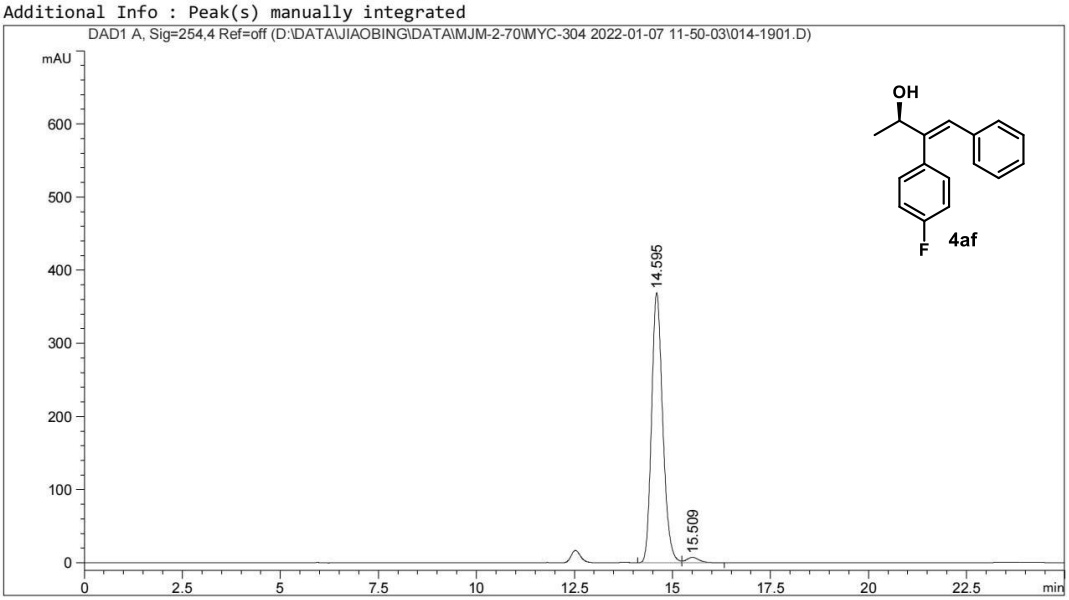

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  14.591 BV    0.3017 4568.65869  232.01660  49.7049
   2  15.499 VB    0.3270 4622.90088  216.63348  50.2951

Totals :                  9191.55957  448.65009
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-70\MYC-304 2022-01-07 11-50-03\014-1901.D
Sample Name: MJM-71-2

```
    ============================================================================
    Acq. Operator   :                                Seq. Line :  19
    Acq. Instrument : Instrument 2                    Location : Vial 14
    Injection Date  : 1/7/2022 6:19:50 PM                  Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-70\MYC-304 2022-01-07 11-50-03\DAD-OD(1-6)-90-
                      10-0.5ML-3UL-220NM-40MIN.M
    Last changed    : 1/7/2022 6:34:09 PM
                      (modified after loading)
    Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-0.5ML-3UL-220NM-10MIN.M
    Last changed    : 1/7/2022 9:48:19 PM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Use Multiplier & Dilution Factor with ISTDs

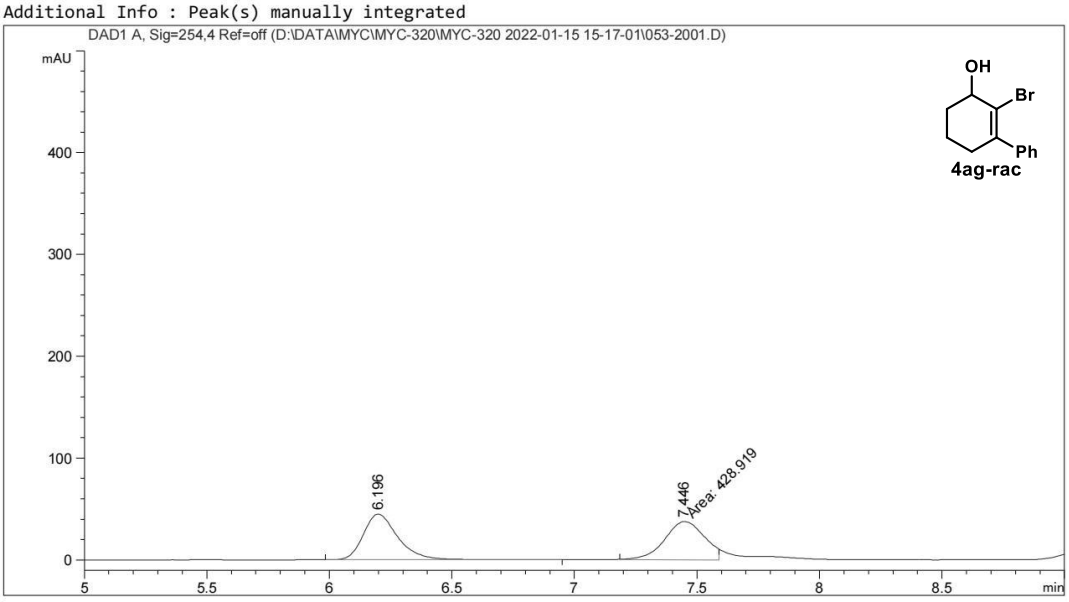

    Signal 1: DAD1 A, Sig=254,4 Ref=off

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  14.595 BV    0.3037 7324.59912  368.86664  97.7628
       2  15.509 VB    0.3315  167.61787    7.42204   2.2372

    Totals :                  7492.21700  376.28868
```

Data File D:\DATA\MYC\MYC-320\MYC-320 2022-01-15 15-17-01\053-2001.D
Sample Name: MJM-2-74-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :  20
Acq. Instrument : Instrument 2                  Location : Vial 53
Injection Date  : 1/16/2022 1:27:32 AM               Inj :   1
                                               Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\MYC\MYC-320\MYC-320 2022-01-15 15-17-01\DAD-OD(1-6)-90-10-1.0ML-3UL
                  -220NM-40MIN.M
Last changed    : 12/4/2021 11:30:53 AM
Analysis Method : D:\METHOD\MYC\DAD-AD(1-2)-85-15-1.0ML-5UL-ALL-10MIN.M
Last changed    : 1/17/2022 10:15:58 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

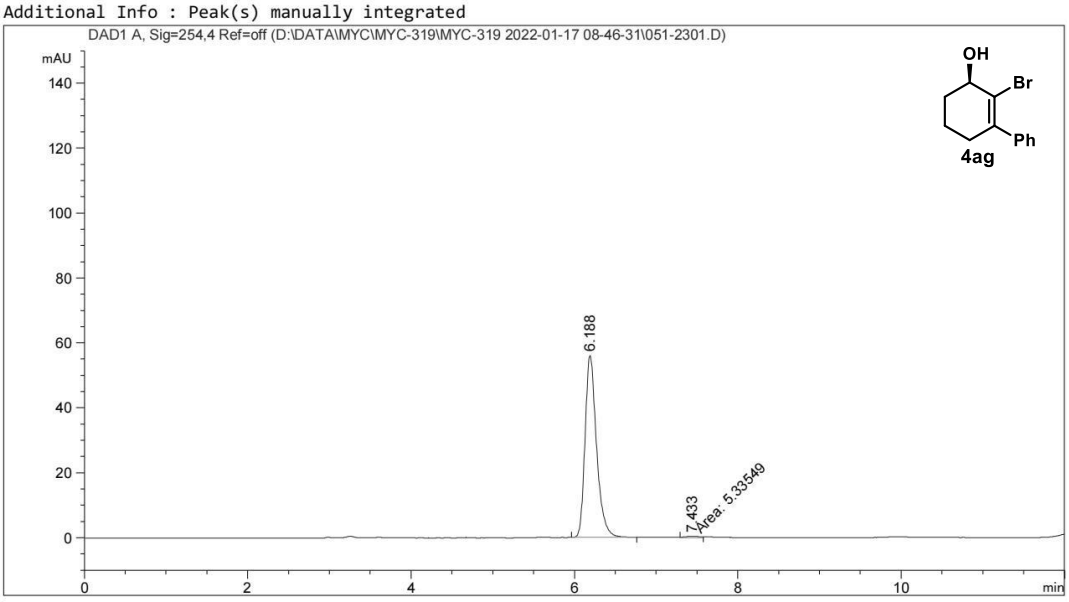

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   6.196 BB    0.1482  439.48764   44.88778  50.6085
   2   7.446 MM    0.1896  428.91882   37.70900  49.3915

Totals :                   868.40646   82.59678
```

Data File D:\DATA\MYC\MYC-319\MYC-319 2022-01-17 08-46-31\051-2301.D
Sample Name: MJM-2-74-4

```
=====================================================================
Acq. Operator   :                              Seq. Line :  23
Acq. Instrument : Instrument 2                  Location : Vial 51
Injection Date  : 1/17/2022 5:41:12 PM               Inj :   1
                                              Inj Volume : 3.000 µl
Acq. Method     : D:\DATA\MYC\MYC-319\MYC-319 2022-01-17 08-46-31\DAD-OD(1-6)-90-10-1.0ML-3UL
                  -220NM-30MIN.M
Last changed    : 12/3/2021 2:45:21 PM
Analysis Method : D:\METHOD\MYC\DAD-OD(1-6)-95-5-1.0ML-5UL-ALL-70MIN.M
Last changed    : 1/17/2022 7:34:36 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

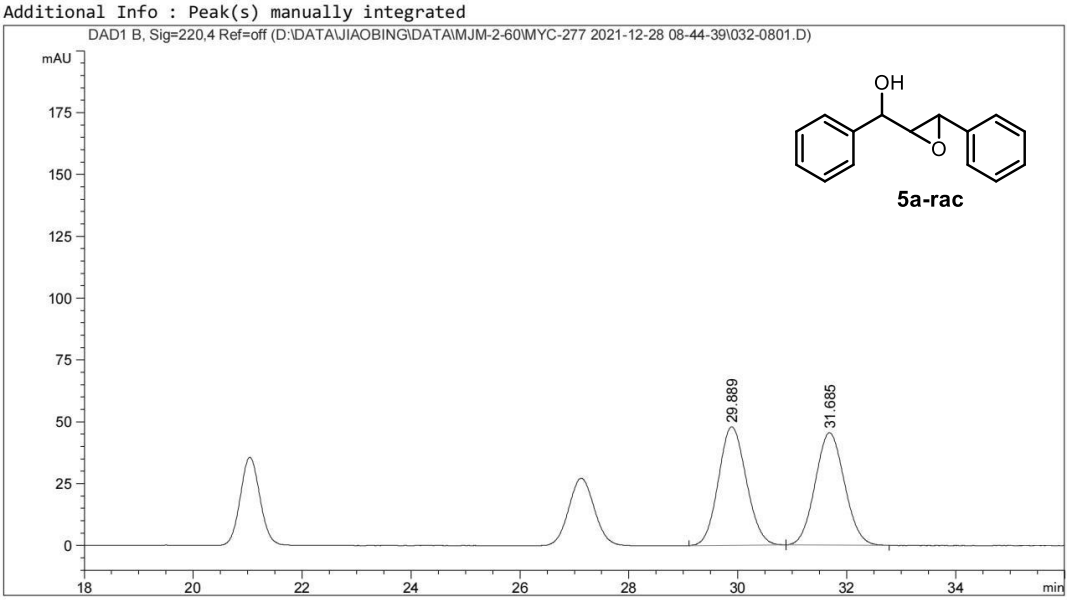

Signal 1: DAD1 A, Sig=254,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   6.188 BB    0.1459  547.10388   56.05243  99.0342
   2   7.433 MM    0.2034    5.33549 4.37186e-1   0.9658

Totals :                   552.43937   56.48962
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\032-0801.D
Sample Name: MJM-60-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :   8
Acq. Instrument : Instrument 2                  Location : Vial 32
Injection Date  : 12/28/2021 11:04:02 AM             Inj :   1
                                               Inj Volume : 2.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\DAD-AD(1-2)-95-5
                  -1ML-2UL-ALL-60MIN.M
Last changed    : 12/10/2021 3:08:05 PM
Analysis Method : D:\METHOD\MYC\DAD-OJ(1-6)-90-10-1.0ML-5UL-ALL-70MIN.M
Last changed    : 1/14/2022 9:03:08 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

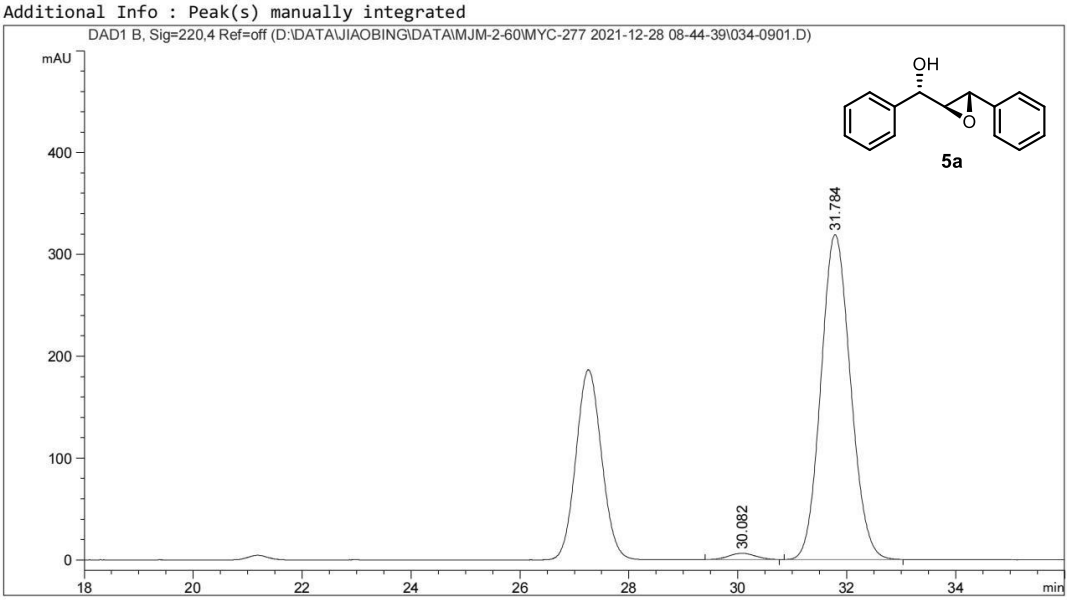

Signal 1: DAD1 B, Sig=220,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  29.889 BB    0.5392 1704.77136   47.90083  50.0656
   2  31.685 BB    0.5728 1700.30469   45.41810  49.9344

Totals :                  3405.07605   93.31893
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\034-0901.D
Sample Name: MJM-60

```
==========================================================================
Acq. Operator   :                              Seq. Line :   9
Acq. Instrument : Instrument 2                  Location : Vial 34
Injection Date  : 12/28/2021 12:04:59 PM             Inj :   1
                                              Inj Volume : 2.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\DAD-AD(1-2)-95-5
                  -1ML-2UL-ALL-60MIN.M
Last changed    : 12/10/2021 3:08:05 PM
Analysis Method : D:\METHOD\MYC\DAD-OJ(1-6)-90-10-1.0ML-5UL-ALL-70MIN.M
Last changed    : 1/14/2022 9:06:07 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

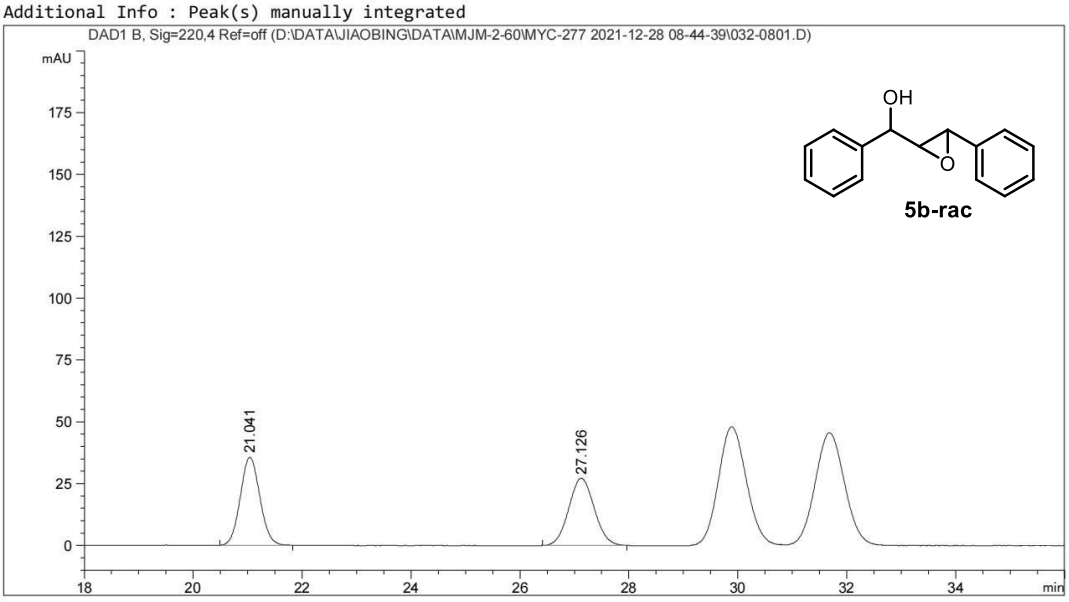

Signal 1: DAD1 B, Sig=220,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  30.082 BB    0.4186  217.02499    6.35182   1.7674
   2  31.784 BB    0.5850 1.20626e4   319.12558  98.2326

Totals :                  1.22796e4   325.47740
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\032-0801.D
Sample Name: MJM-60-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :   8
Acq. Instrument : Instrument 2                  Location : Vial 32
Injection Date  : 12/28/2021 11:04:02 AM             Inj :   1
                                               Inj Volume : 2.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\DAD-AD(1-2)-95-5
                  -1ML-2UL-ALL-60MIN.M
Last changed    : 12/10/2021 3:08:05 PM
Analysis Method : D:\METHOD\MYC\DAD-OJ(1-6)-90-10-1.0ML-5UL-ALL-70MIN.M
Last changed    : 1/14/2022 9:03:08 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

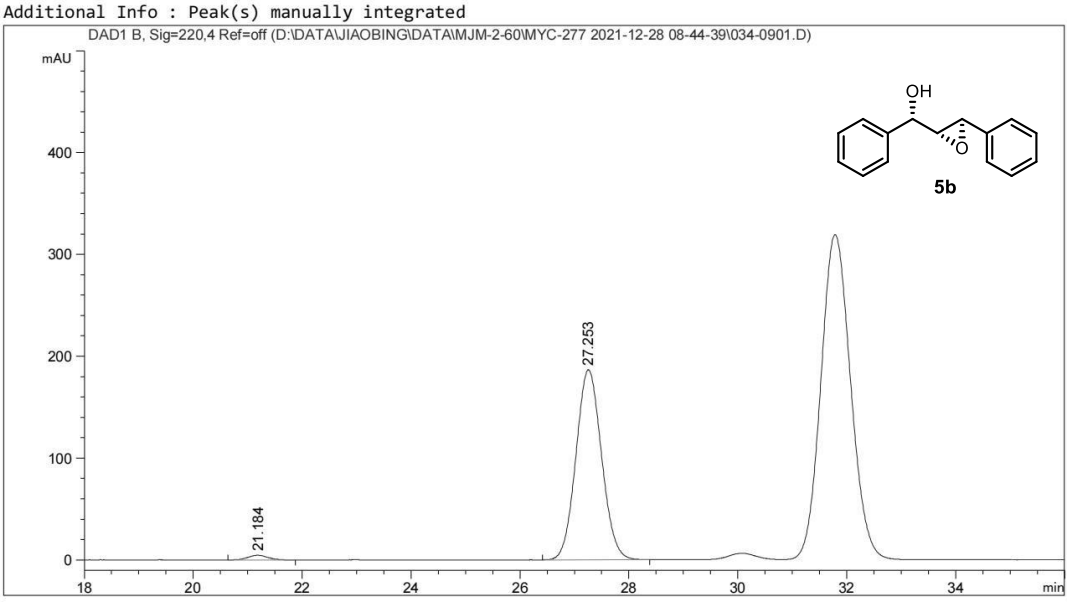

Signal 1: DAD1 B, Sig=220,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  21.041 BB    0.3856  888.44031   35.54108  50.1501
   2  27.126 BB    0.4848  883.12042   27.20190  49.8499

Totals :                  1771.56073   62.74298
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\034-0901.D
Sample Name: MJM-60

```
=====================================================================
Acq. Operator   :                              Seq. Line :   9
Acq. Instrument : Instrument 2                  Location : Vial 34
Injection Date  : 12/28/2021 12:04:59 PM             Inj :   1
                                               Inj Volume : 2.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\DAD-AD(1-2)-95-5
                  -1ML-2UL-ALL-60MIN.M
Last changed    : 12/10/2021 3:08:05 PM
Analysis Method : D:\METHOD\MYC\DAD-OJ(1-6)-90-10-1.0ML-5UL-ALL-70MIN.M
Last changed    : 1/14/2022 9:06:07 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

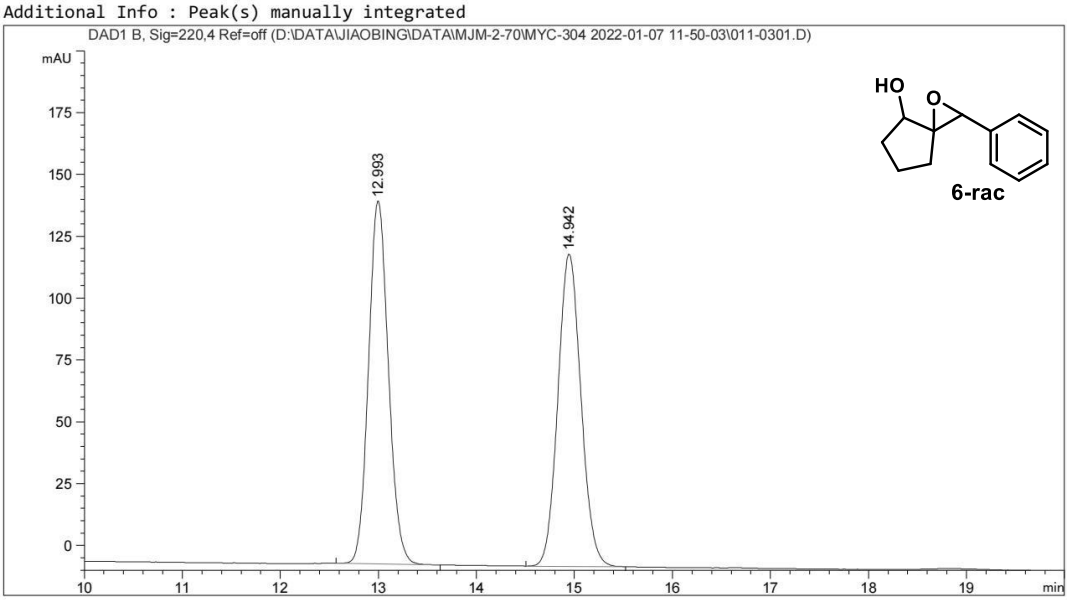

Signal 1: DAD1 B, Sig=220,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  21.184 BB    0.3170  121.54846    4.64967   1.9535
   2  27.253 BB    0.5075 6100.59229  186.58453  98.0465

Totals :                  6222.14075  191.23420
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-70\MYC-304 2022-01-07 11-50-03\011-0301.D
Sample Name: MJM-70-RAC

```
=====================================================================
Acq. Operator   :                              Seq. Line :   3
Acq. Instrument : Instrument 2                  Location : Vial 11
Injection Date  : 1/7/2022 12:13:44 PM               Inj :   1
                                              Inj Volume : 2.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-70\MYC-304 2022-01-07 11-50-03\DAD-AD(1-2)-95-5
                  -1ML-2UL-ALL-30MIN.M
Last changed    : 12/11/2021 10:00:45 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-0.5ML-3UL-220NM-10MIN.M
Last changed    : 1/7/2022 4:10:50 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

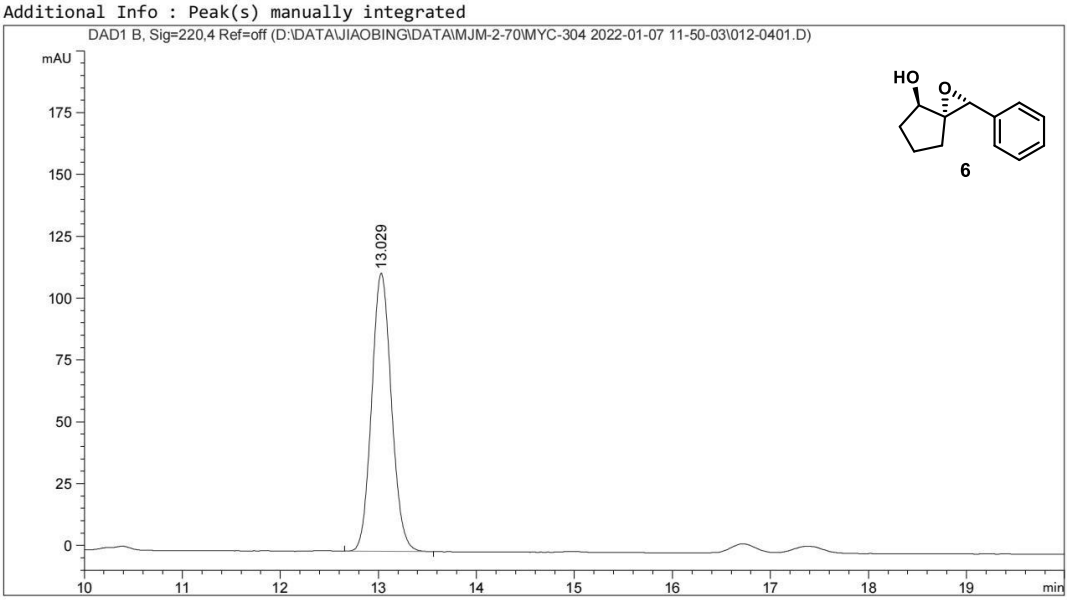

Signal 1: DAD1 B, Sig=220,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  12.993 BB    0.2182 2065.73169  146.76743  49.9989
   2  14.942 BB    0.2529 2065.82251  126.26190  50.0011

Totals :                  4131.55420  273.02933
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-70\MYC-304 2022-01-07 11-50-03\012-0401.D
Sample Name: MJM-70

```
=====================================================================
Acq. Operator   :                              Seq. Line :   4
Acq. Instrument : Instrument 2                  Location : Vial 12
Injection Date  : 1/7/2022 12:44:40 PM               Inj :   1
                                              Inj Volume : 2.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-70\MYC-304 2022-01-07 11-50-03\DAD-AD(1-2)-95-5
                  -1ML-2UL-ALL-30MIN.M
Last changed    : 12/11/2021 10:00:45 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-80-20-0.5ML-3UL-220NM-10MIN.M
Last changed    : 1/7/2022 4:10:50 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 B, Sig=220,4 Ref=off

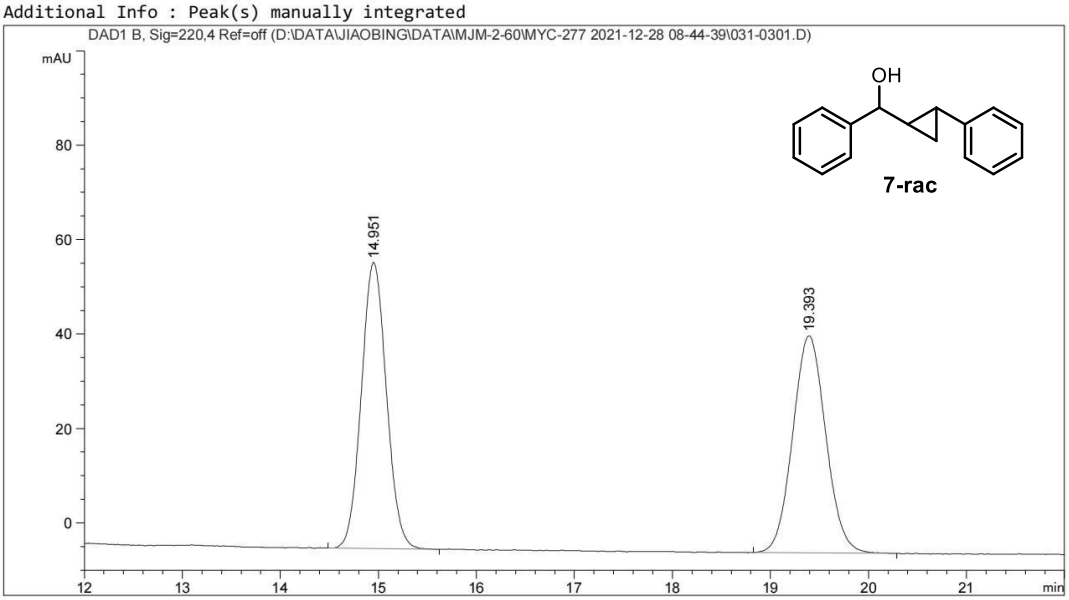
Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  13.029 BB    0.2176 1579.12024  112.62241 100.0000

Totals :                  1579.12024  112.62241


=====================================================================
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\031-0301.D
Sample Name: MJM-61-RAC

```
======================================================================
Acq. Operator   :                              Seq. Line :   3
Acq. Instrument : Instrument 2                  Location : Vial 31
Injection Date  : 12/28/2021 9:08:49 AM              Inj :   1
                                               Inj Volume : 2.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\DAD-AD(1-2)-95-5
                  -1ML-2UL-ALL-30MIN.M
Last changed    : 12/11/2021 10:00:45 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-95-5-0.5ML-2UL-220NM-40MIN.M
Last changed    : 12/28/2021 11:34:41 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

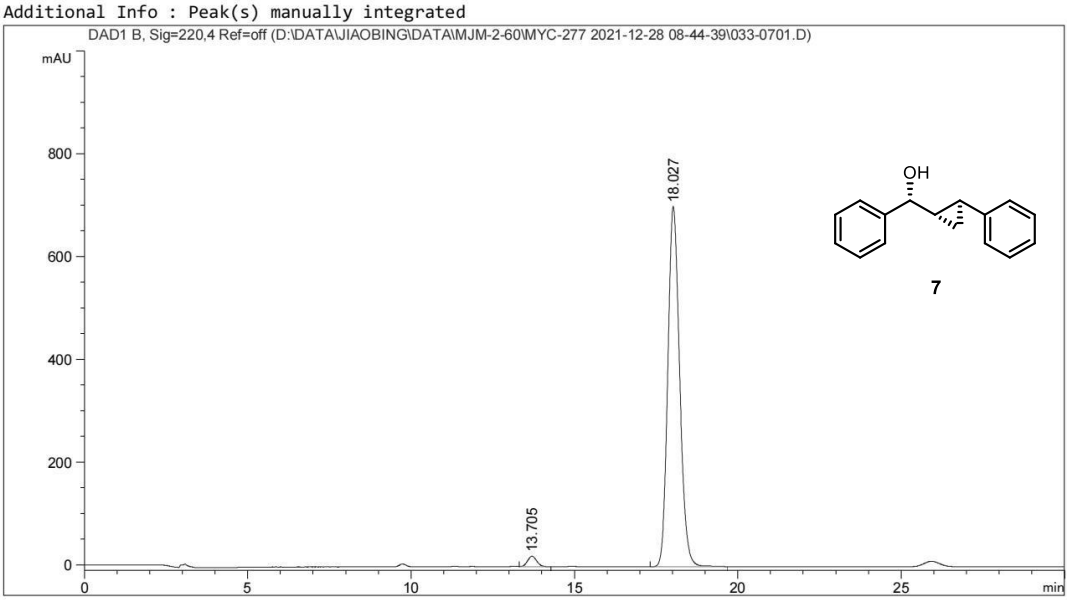

Signal 1: DAD1 B, Sig=220,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  14.951 BB    0.2756 1078.75049   60.63454  49.9701
   2  19.393 BB    0.3660 1080.04211   45.98788  50.0299

Totals :                  2158.79260  106.62243
```

Data File D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\033-0701.D
Sample Name: MJM-61

```
=====================================================================
Acq. Operator   :                              Seq. Line :   7
Acq. Instrument : Instrument 2                  Location : Vial 33
Injection Date  : 12/28/2021 10:33:03 AM             Inj :   1
                                               Inj Volume : 2.000 µl
Acq. Method     : D:\DATA\JIAOBING\DATA\MJM-2-60\MYC-277 2021-12-28 08-44-39\DAD-AD(1-2)-95-5
                  -1ML-2UL-ALL-30MIN.M
Last changed    : 12/11/2021 10:00:45 AM
Analysis Method : D:\METHOD\ZXH\DAD-OD(1-6)-95-5-0.5ML-2UL-220NM-40MIN.M
Last changed    : 12/28/2021 11:32:24 AM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```




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

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 B, Sig=220,4 Ref=off

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  13.705 BB    0.2981  393.07919   20.46746   2.1824
   2  18.027 BB    0.3894 1.76181e4   700.61224  97.8176

Totals :                  1.80112e4   721.07971
```

VII. Reference

1. (a) Dola VR.; Soni A.; Agarwal P.; Ahmad H.; Raju KSR.; Rashid M.; Wahajuddin M.; Srivastava K.; Haq W.; Dwivedi A.; Puri S.; Katti S., **2017**. Antimicrob Agents Chemother 61: e01152-16, https://doi.org/10.1128/AAC.01152-16.; (b)Das D.; Mal R.; Mittal N.; Zhu Z.; Emge T.; Seidel D., Beilstein J. Org. Chem. **2018**, 14, 2002-2011.
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