Electronic Supplementary Information for

Catalytic Asymmetric Synthesis of Quaternary Trifluoromethyl-Containing α- to ε-Amino Acids *via* Umpolung Allylation/2-aza-Cope Rearrangement

Xi-Shang Sun, Xing-Heng Wang, Hai-Yan Tao, Liang Wei* and Chun-Jiang Wang*

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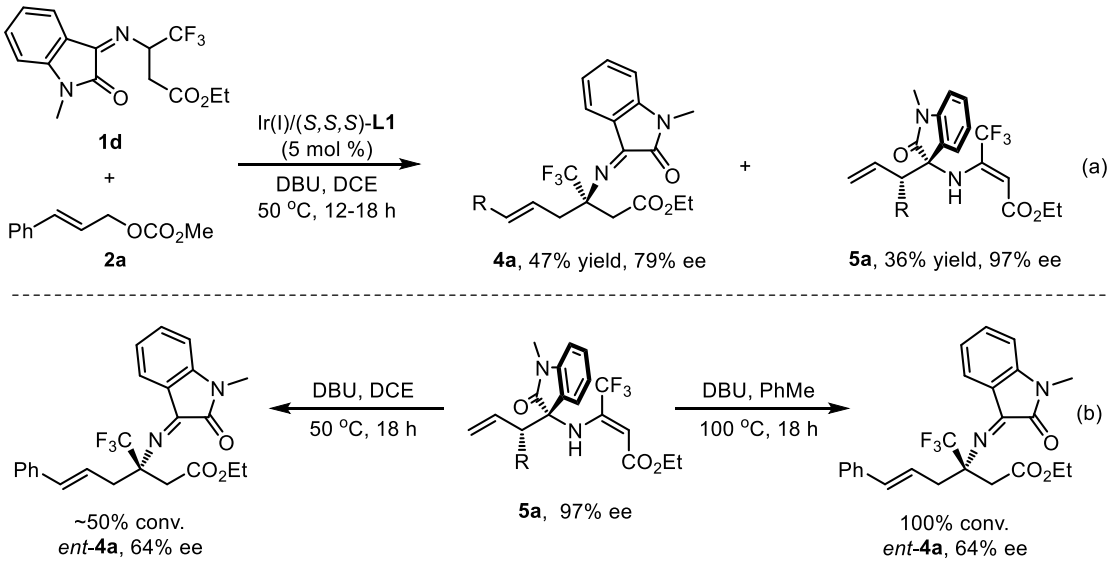
1. General remarks

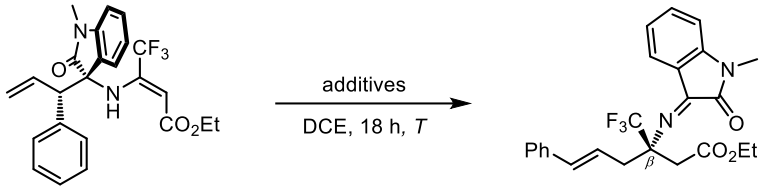
^{1}H NMR spectra were recorded on a Bruker 400 MHz spectrometer in $CDCl_3$. Chemical shifts are reported in ppm with the internal TMS signal at 0.0 ppm as a standard. ^{13}C NMR spectra were recorded on a Bruker 100 MHz spectrometer in $CDCl_3$. Chemical shifts are reported in ppm with the internal chloroform signal at 77.0 ppm as a standard. ^{19}F NMR spectra were recorded on a Bruker 376 MHz spectrometer in $CDCl_3$. Chemical shifts are reported in ppm with the internal CF_3COOH signal at -76.55 ppm. The data are reported as (s = single, d = double, t = triple, q = quartet, m = multiple or unresolved, brs = broad single, coupling constant(s) in Hz, integration). Commercially obtained reagents were used without further purification. All reactions were monitored by TLC with silica gel-coated plates. Enantiomeric ratios were determined by HPLC, using a chiralpak AD-H, chiralpak IE, chiralpak ID and chiralpak AS with hexane and *i*-PrOH. High Resolution Mass Spectra were recorded using ESI-TOF technique. Optical rotations were measured on an Rudolph Research Analytical Autopol VI polarimeter with [α]D values reported in degrees; concentration (c) is in g/100 mL. All reactions were reacted under N_2 atmosphere. Allylic carbonates **2**[1] were prepared according to the literature procedure. Chiral ligands (*S,S,S*)-**L1** was prepared according to the literature procedure.[2] The racemic products were obtained by running reactions with a racemic catalyst.

2. Control experiments



Scheme S1. Control experiments.

Table S1. The evaluation of the acceleration effect of additives

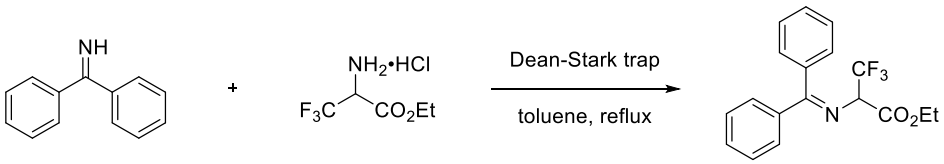


(*S*,*S*)-**5a**, 97% ee (*S*)-**4a**

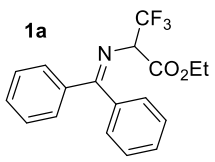
entry	Additives (x equiv)	*T*/°C	Conv. (%)[a]	ee (%)[b]
1	(*R*)-CPA (1.0 equiv)	25	-	-
2	(+)-CSA (1.0 equiv)	25	-	-
3	Et_3B (1.0 equiv)	25	-	-
4	$AlCl_3$ (1.0 equiv)	25	-	-
5	DBU (1.0 equiv)	25	-	-
6	DBU (1.0 equiv)	50	50	64
7	Ir-complex (0.1 equiv)	50	50	64

[a] Determined by crude ^{1}H NMR. [b] Determined by HPLC analysis.

3. Procedure for the synthesis of ketoimine ester 1

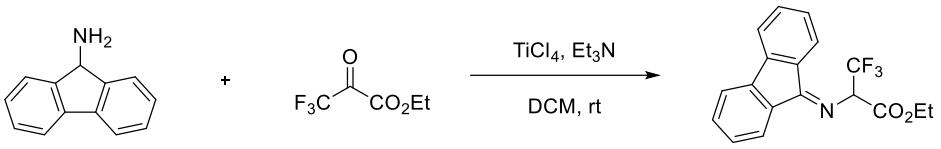


In a 100 mL round-bottom flask, diphenylmethanimine (10.0 mmol, 1.0 equiv) and α-trifluoromethyl α-amino ester hydrochloride[4] (11.0 mmol, 1.1 equiv) were dissolved in 40 mL toluene. Equipped with a reflux condenser, a magnic stirring bar and Dean-Stark trap, the systerm was heated to reflux for 5 hours to ensure equivalent water was distilled out. After cooling to rt, toluene was evaporated in vacuo to give the crude **1a** which was purified by column chromatography (PE : EA = 20 : 1).

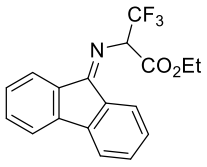


Ethyl 2-((diphenylmethylene)amino)-3,3,3-trifluoropropanoate:

Colourless oil; 80% yield. ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.74 – 7.66 (m, 2H), 7.54 – 7.42 (m, 4H), 7.36 (t, *J* = 7.5 Hz, 2H), 7.23 – 7.15 (m, 2H), 4.60 (qd, *J* = 7.2, 1.7 Hz, 1H), 4.36 – 4.08 (m, 2H), 1.26 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.7, 164.9 (q, *J* = 2.1 Hz), 138.5, 135.1, 131.4, 129.4, 129.3, 128.9, 128.2, 127.6, 123.1 (q, *J* = 281.5 Hz), 67.2 (q, *J* = 29.1 Hz), 62.2, 14.0. ^{19}F NMR (376 MHz, $CDCl_3$) δ -71.18 (d, *J* = 7.1 Hz). HRMS Calcd. For $C_{18}H_{17}F_3NO_2$ ($[M+H]^+$): 336.1202, found: 336.1193.



In a 100 mL round-bottom flask, 9*H*-fluoren-9-amine (12.0 mmol, 1.2 equiv.) and ethyl 3,3,3-trifluoro-2-oxopropanoate (10.0 mmol, 1.0 equiv.) were dissolved with 40 mL DCM, and triethylamine (30.0 mmol, 3.0 equiv.) was added to the solution.Then the mixture was cooled to 0 °C,and then titanium tetrachloride (6.0 mmol, 0.6 equiv.) was added dropwise to the solution and the reaction mixture was stirred at room temperature until TLC revealed complete conversion of ethyl 3,3,3-trifluoro-2-oxopropanoate. After reaction completed, the reaction mixture was quenched by 10% NaOH solution, the reaction mixture was filtered and the organic layer was washed with saturated $NaHCO_3$, saturated NaCl, and dried over Na_2SO_4. Organic layer was concentrated under reduced pressure, the crude mixture was purified by silica-gel (treated with Et_3N) column chromatography to obtain the compounds **1b** in good yields.

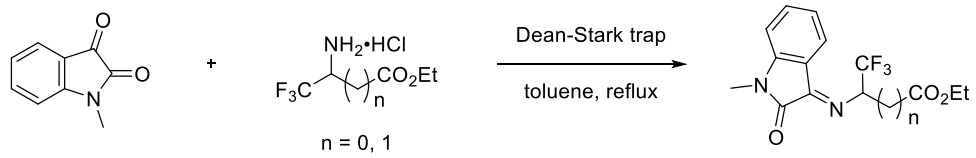


1b

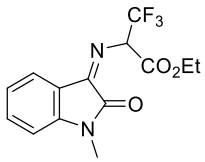
Ethyl 2-((9H-fluoren-9-ylidene)amino)-3,3,3-trifluoropropanoate:

Yellow oil; 88% yield. ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.92 (d, *J* = 7.5 Hz, 1H), 7.67 (dd, *J* = 16.3, 7.6 Hz, 2H), 7.55 (d, *J* = 7.5 Hz, 1H), 7.52 – 7.40 (m, 2H), 7.38 – 7.25 (m, 2H), 5.58 (q, *J* = 7.1 Hz, 1H), 4.30 (q, *J* = 7.1 Hz, 2H), 1.26 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$)

δ 168.7, 164.5, 144.4, 141.3, 137.8, 132.7, 132.2, 131.2, 128.7, 128.2, 126.7, 123.9, 123.4 (q, J = 282.0 Hz), 120.8, 119.5, 66.5 (q, J = 29.9 Hz), 62.8, 14.0. ^{19}F NMR (376 MHz, $CDCl_3$) δ -72.38 (d, J = 7.0 Hz). HRMS Calcd. For $C_{18}H_{15}F_3NO_2$ ([M+H]$^+$): 334.1049, found: 334.1040.



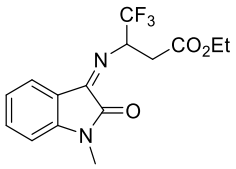
α-Trifluoromethyl α-amino ester hydrochloride or β-trifluoromethyl β-amino ester hydrochloride[5] (10.0 mmol, 1.0 equiv) and N-methyl isatin (11.0 mmol, 1.1 equiv) were added to a 100 mL round-bottom flask which was equipped with a reflux condenser, a magnic stirring bar and Dean-Stark trap. After the addition of toluene, the systerm was heated to reflux for 5 hours to ensure equivalent water was distilled out. After cooling to rt, toluene was evaporated in vacuo to give the crude isatin-activated ketoimine esters which were purified by column chromatography (PE : EA = 5:1).



1c

Ethyl (*Z*)-3,3,3-trifluoro-2-((1-methyl-2-oxoindolin-3-ylidene)amino)propanoate

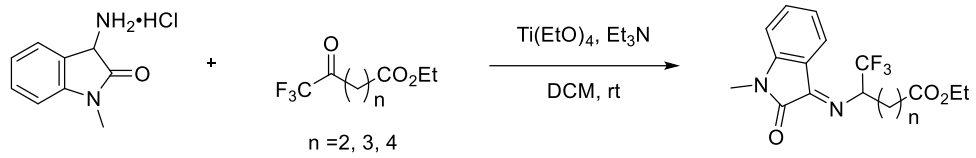
Yellow solid; 90% yield. ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.79 (d, J = 7.4 Hz, 1H), 7.49 (td, J = 7.8, 1.0 Hz, 1H), 7.14 (t, J = 7.5 Hz, 1H), 6.84 (d, J = 7.9 Hz, 1H), 6.22 (q, J = 8.0 Hz, 1H), 4.43 – 4.16 (m, 2H), 3.21 (s, 3H), 1.32 (t, J = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 163.8, 158.5, 158.1, 146.7, 134.4, 123.7, 123.6, 123.3 (q, J = 280.9 Hz), 120.5, 108.9, 64.5 (q, J = 30.1 Hz), 62.6, 25.9, 14.0. ^{19}F NMR (376 MHz, $CDCl_3$) δ -71.84 (d, J = 8.1 Hz). HRMS Calcd. For $C_{14}H_{14}F_3N_2O_3$ ([M+H]$^+$): 315.0951, found: 315.0939.



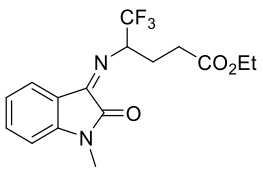
1d

Ethyl (*Z*)-4,4,4-trifluoro-3-((1-methyl-2-oxoindolin-3-ylidene)amino)butanoate:

Yellow solid; 91% yield. ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.57 (dd, *J* = 7.4, 0.6 Hz, 1H), 7.37 (td, *J* = 7.8, 1.2 Hz, 1H), 7.00 (td, *J* = 7.6, 0.7 Hz, 1H), 6.72 (d, *J* = 7.9 Hz, 1H), 6.65 – 6.47 (m, 1H), 4.10 – 3.95 (m, 2H), 3.13 (s, 3H), 2.95 – 2.75 (m, 2H), 1.11 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 168.4, 157.6, 156.5, 145.1, 133.1, 123.6 (q, *J* = 282.8 Hz), 122.3, 122.1, 119.7, 107.7, 60.0, 55.2 (q, *J* = 29.5 Hz), 33.9, 24.8, 13.0. ^{19}F NMR (376 MHz, $CDCl_3$) δ -74.93 (d, *J* = 7.3 Hz). HRMS Calcd. For $C_{15}H_{16}F_3N_2O_3$ ([M+H]$^+$): 329.1108, found: 329.1100.



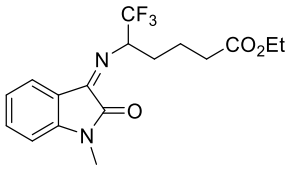
In a 100 mL round-bottom flask, 3-amino oxindole hydrochloride (12.0 mmol, 1.2 equiv.) and trifluoromethyl substituted γ- to ε-ketoesters[6] (10.0 mmol, 1.0 equiv.) were dissolved with 40 mL DCM, and triethylamine (30.0 mmol, 3.0 equiv.) was added to the solution.Then tetraethyl titanate (30.0 mmol, 3.0 equiv.) was added dropwise to the solution and the reaction mixture was stirred at room temperature until TLC revealed complete conversion of ketoesters. After reaction completed, the reaction mixture was quenched by water, the reaction mixture was filtered and the organic layer was washed with saturated $NaHCO_3$, saturated NaCl, and dried over Na_2SO_4. Organic layer was concentrated under reduced pressure, the crude mixture was purified by silica-gel column chromatography to obtain compounds in good yields.



1e

Ethyl (Z)-5,5,5-trifluoro-4-((1-methyl-2-oxoindolin-3-ylidene)amino)pentanoate:

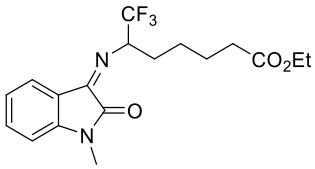
Yellow solid; 88% yield. ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.67 (d, *J* = 7.4 Hz, 1H), 7.47 (td, *J* = 7.8, 1.2 Hz, 1H), 7.11 (t, *J* = 7.6 Hz, 1H), 6.83 (d, *J* = 7.8 Hz, 1H), 6.18 – 6.02 (m, 1H), 4.15 – 4.04 (m, 2H), 3.22 (s, 3H), 2.47 – 2.28 (m, 3H), 2.24 – 2.12 (m, 1H), 1.21 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 172.4, 158.7, 156.6, 146.0, 134.0, 125.2 (q, *J* = 281.6 Hz), 123.5, 123.1, 120.7, 108.7, 60.6, 59.0 (q, *J* = 28.9 Hz), 30.1, 25.9, 25.0, 14.2. ^{19}F NMR (376 MHz, $CDCl_3$) δ -74.53 (d, *J* = 7.3 Hz). HRMS Calcd. For $C_{16}H_{18}F_3N_2O_3$ ($[M+H]^+$): 344.1295, found: 344.1287.



1f

Ethyl (Z)-6,6,6-trifluoro-5-((1-methyl-2-oxoindolin-3-ylidene)amino)hexanoate:

Yellow solid; 90% yield. ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.68 (d, *J* = 7.5 Hz, 1H), 7.46 (t, *J* = 7.7 Hz, 1H), 7.11 (t, *J* = 7.5 Hz, 1H), 6.82 (d, *J* = 7.8 Hz, 1H), 6.19 – 5.93 (m, 1H), 4.10 (q, *J* = 7.1 Hz, 2H), 3.22 (s, 3H), 2.41 – 2.27 (m, 2H), 2.14 – 1.97 (m, 1H), 1.97 – 1.81 (m, 1H), 1.79 – 1.57 (m, 2H), 1.23 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 173.1, 158.7, 156.2, 145.9, 133.8, 123.4, 123.0, 122.5 (q, *J* = 281.0 Hz), 120.8, 108.7, 60.4, 59.5 (q, *J* = 28.7 Hz), 33.9, 29.4, 25.8, 20.7, 14.2. ^{19}F NMR (376 MHz, $CDCl_3$) δ -74.45 (d, *J* = 7.2 Hz). HRMS Calcd. For $C_{17}H_{20}F_3N_2O_3$ ($[M+H]^+$): 357.1421, found: 357.1413.



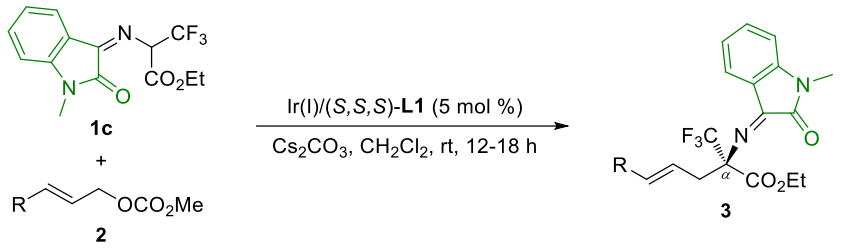
1g

Ethyl (*Z*)-7,7,7-trifluoro-6-((1-methyl-2-oxoindolin-3-ylidene)amino)heptanoate:

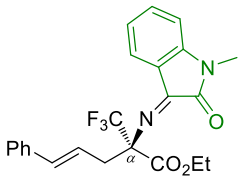
Yellow solid; 92% yield. ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.68 (dd, *J* = 7.4, 0.6 Hz, 1H), 7.46 (td, *J* = 7.8, 1.2 Hz, 1H), 7.11 (td, *J* = 7.6, 0.7 Hz, 1H), 6.83 (d, *J* = 7.8 Hz, 1H), 6.20 – 5.97 (m, 1H), 4.08 (q, *J* = 7.1 Hz, 2H), 2.27 (t, *J* = 7.5 Hz, 2H), 2.07 – 1.96 (m, 1H), 1.89 – 1.76 (m, 1H), 1.70 – 1.60 (m, 2H), 1.44 – 1.30 (m, 2H), 1.21 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 173.5, 158.7, 156.0, 145.8, 133.8, 125.3 (q, *J* = 281.4 Hz), 123.4, 122.9, 120.8, 108.6, 60.3,

59.8 (q, J = 28.4 Hz), 34.0, 29.7, 25.9, 24.8, 24.7, 14.2. ^{19}F NMR (376 MHz, $CDCl_3$) δ -74.43 (d, J = 7.5 Hz). HRMS Calcd. For $C_{18}H_{22}F_3N_2O_3$ ([M+H]$^+$): 371.1577, found: 371.1569.

4. General procedure for the cascade umpolung allylation/2-aza-Cope rearrangement.



In a 25 mL nitrogen-filled dry Schlenk tube, $[Ir(COD)Cl]_2$ (3.3 mg, 0.005 mmol), phosphoramidite ligand (*S,S,S*)-**L1** (5.6 mg, 0.01 mmol), degassed THF (0.5 mL) and degassed propylamine (0.5 mL) were added. After stirring at 50 °C for 30 mins, the reaction was concentrated via rotary evaporation under reduced pressure to give the iridium complex as a pale yellow solid.[7] Then, ethyl (*Z*)-3,3,3-trifluoro-2-((1-methyl-2-oxoindolin-3-ylidene)amino)propanoate **1c** (0.20 mmol), allylic carbonates **2** (0.22 mmol), Cs_2CO_3 (0.2mmol) and dry CH_2Cl_2 (2 mL) was added into the nitrogen-refilled Schlenk tube. Once starting material was consumed (monitored by TLC), the reaction mixture was concentrated via rotary evaporation under reduced pressure, and then purified by flash chromatography on silica gel (PE / EA = 5:1) to give the racemic product **3**.

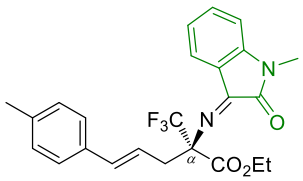


3a

Ethyl (*R*,*E*)-2-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-5-phenyl-2-(trifluoromethyl) pent-4-enoate:

Yellow oil; 99% yield. $[\alpha]^{25}_D$ = 80.9 (*c* 3.22, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.71 (dd, J = 7.4, 0.6 Hz, 1H), 7.41 (td, J = 7.7, 1.2 Hz, 1H), 7.24 – 7.03 (m, 6H), 6.69 (d, J = 7.8 Hz,

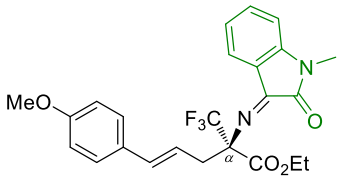
1H), 6.32 – 6.05 (m, 2H), 4.41 – 4.17 (m, 2H), 3.63 – 3.47 (m, 1H), 3.13 – 3.00 (m, 1H), 2.94 (s, 3H), 1.27 (t, J = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.4, 157.8, 156.1, 146.3, 137.0, 134.0, 133.9, 128.4, 127.3, 126.2, 125.0 (q, J = 287.4 Hz)124.6, 123.4, 123.3, 121.3, 108.6, 73.2 (q, J = 25.6 Hz), 62.1, 35.9, 25.7, 14.0. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.57 (s). HRMS Calcd. For $C_{23}H_{22}F_3N_2O_3$ ($[M+H]^+$): 431.1577, found: 431.1566. The product was analyzed by HPLC to determine the enantiomeric excess: 96% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 290 nm); t_r = 6.96 and 7.85 min.



3b

Ethyl (*R*,*E*)-2-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-5-(p-tolyl)-2-(trifluoromethyl)pent-4-enoate:

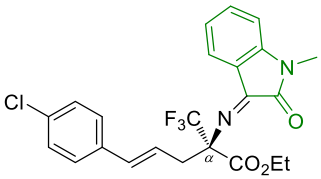
Yellow oil; 91% yield; $[\alpha]^{25}_D$ = 65.5 (*c* 6.64, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.71 (d, J = 6.9 Hz, 1H), 7.41 (td, J = 7.8, 1.2 Hz, 1H), 7.18 – 6.94 (m, 5H), 6.70 (d, J = 7.8 Hz, 1H), 6.17 – 6.02 (m, 2H), 4.42 – 4.15 (m, 2H), 3.52-3.51 (m, 1H), 3.12 – 3.01 (m, 1H), 2.96 (s, 3H), 2.28 (s, 3H), 1.27 (t, J = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.4, 157.7, 156.1, 146.3, 137.1, 134.3, 133.8, 129.0, 126.1, 125.0 (q, J = 287.3 Hz), 123.5, 123.3, 121.3, 108.5, 73.3 (q, J = 25.4 Hz), 62.1, 35.9, 25.7, 21.2, 13.9. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.57 (s). HRMS Calcd. For $C_{24}H_{24}F_3N_2O_3$ ($[M+H]^+$): 445.1734, found: 445.1722. The product was analyzed by HPLC to determine the enantiomeric excess: 94% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 246 nm); t_r = 6.64 and 7.42 min.



3c

Ethyl (*R*,*E*)-5-(4-methoxyphenyl)-2-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-2-(trifluoromethyl)pent-4-enoate:

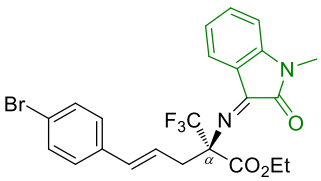
Yellow oil; 89% yield; $[\alpha]^{25}_D$ = 99.3 (*c* 4.97, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.71 (d, *J* = 7.2 Hz, 1H), 7.41 (td, *J* = 7.7, 0.9 Hz, 1H), 7.19 – 6.99 (m, 3H), 6.72 (dd, *J* = 23.2, 8.2 Hz, 3H), 6.20 – 5.87 (m, 2H), 4.42 – 4.17 (m, 2H), 3.76 (s, 3H), 3.59-3.47 (m, 1H), 3.09 – 2.98 (m, 1H), 2.95 (s, 3H), 1.27 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.4, 159.0, 157.8, 156.0, 146.3, 133.8, 133.4, 129.9, 127.3, 125.0 (q, *J* = 287.5 Hz), 123.3, 122.4, 121.3, 113.7, 108.5, 73.3 (q, *J* = 25.6 Hz), 62.1, 55.3, 35.9, 25.7, 13.9. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.57 (s). HRMS Calcd. For $C_{24}H_{24}F_3N_2O_4$ ($[M+H]^+$): 461.1683, found: 461.1676. The product was analyzed by HPLC to determine the enantiomeric excess: 96% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 246 nm); t_r = 10.47 and 12.92 min.



3d

Ethyl (*R*,*E*)-5-(4-chlorophenyl)-2-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-2-(trifluoromethyl)pent-4-enoate:

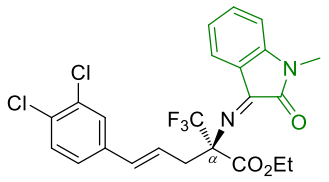
Yellow oil; 99% yield; $[\alpha]^{25}_D$ = 93.3 (*c* 5.23, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.71 (d, *J* = 7.4 Hz, 1H), 7.42 (t, *J* = 7.7 Hz, 1H), 7.23 – 7.01 (m, 5H), 6.72 (d, *J* = 7.8 Hz, 1H), 6.28 – 5.99 (m, 2H), 4.39 – 4.16 (m, 2H), 3.53-3.50 (m, 1H), 3.10-3.04 (m, 1H), 2.98 (s, 3H), 1.26 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.3, 157.7, 156.1, 146.3, 135.5, 134.0, 132.9, 132.6, 128.5, 127.4, 125.3, 124.9 (q, *J* = 287.4 Hz), 123.4, 123.4, 121.2, 108.6, 73.1 (q, *J* = 25.5 Hz), 62.2, 35.9, 25.8, 13.9. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.57 (s). HRMS Calcd. For $C_{23}H_{21}ClF_3N_2O_3$ ($[M+H]^+$): 465.1187, found: 465.1172. The product was analyzed by HPLC to determine the enantiomeric excess: 94% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 246 nm); t_r = 6.89 and 7.66 min.



3e

Ethyl (*R*,*E*)-5-(4-bromophenyl)-2-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-2-(trifluoromethyl)pent-4-enoate

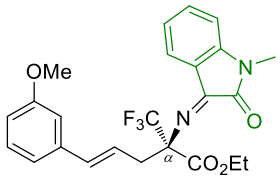
Yellow oil; 87% yield; $[\alpha]^{25}_{D}$ = 48.1 (*c* 7.52, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.76 – 7.65 (m, 1H), 7.43 (td, *J* = 7.8, 1.1 Hz, 1H), 7.33 (d, *J* = 8.5 Hz, 2H), 7.18 – 7.00 (m, 3H), 6.72 (d, *J* = 7.8 Hz, 1H), 6.13 (dt, *J* = 25.4, 12.2 Hz, 2H), 4.39 – 4.15 (m, 2H), 3.53-3.50 (m, 1H), 3.10-3.03 (m, 1H), 2.98 (s, 3H), 1.26 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.3, 157.7, 156.1, 146.3, 135.9, 134.0, 132.7, 131.4, 127.7, 125.5, 124.9 (q, *J* = 287.5), 123.4, 123.4, 121.2, 121.0, 108.6, 73.1 (q, *J* = 25.5), 62.2, 35.9, 25.8, 13.9. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.58 (s). HRMS Calcd. For $C_{23}H_{21}BrF_3N_2O_3$ ($[M+H]^+$): 509.0682, found: 509.0664. The product was analyzed by HPLC to determine the enantiomeric excess: 94% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 246 nm); t_r = 7.31 and 8.12 min.



3f

Ethyl (*R*,*E*)-5-(3,4-dichlorophenyl)-2-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-2-(trifluoromethyl)pent-4-enoate:

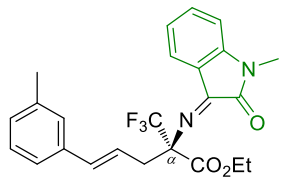
Yellow oil; 99% yield; $[\alpha]^{25}_{D}$ = 38.1 (*c* 7.51, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.71 (d, *J* = 7.4 Hz, 1H), 7.44 (t, *J* = 7.6 Hz, 1H), 7.31 – 7.19 (m, 2H), 7.13 – 6.97 (m, 2H), 6.74 (d, *J* = 7.8 Hz, 1H), 6.26 – 5.99 (m, 2H), 4.42 – 4.15 (m, 2H), 3.53-3.50 (m, 1H), 3.14 – 3.06 (m, 1H), 2.97 (s, 3H), 1.27 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.2, 157.7, 156.2, 146.3, 137.2, 134.1, 132.4, 131.5, 130.9, 130.3, 127.8, 126.8, 125.4, 124.9 (q, *J* = 287.0 Hz)123.5, 123.4, 121.2, 108.7, 73.0 (q, *J* = 25.6 Hz), 62.2, 35.8, 25.8, 13.9. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.54 (s). HRMS Calcd. For $C_{23}H_{20}Cl_2F_3N_2O_3$ ($[M+H]^+$): 499.0798, found: 499.0781. The product was analyzed by HPLC to determine the enantiomeric excess: 90% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 246 nm); t_r = 7.11 and 7.79 min.



3g

Ethyl (*R*,*E*)-5-(3-methoxyphenyl)-2-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-2-(trifluoromethyl)pent-4-enoate:

Yellow oil; 99% yield; $[\alpha]^{25}_{D}$ = 98.5 (*c* 4.36, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.71 (d, *J* = 7.3 Hz, 1H), 7.41 (td, *J* = 7.7, 1.0 Hz, 1H), 7.20 – 6.99 (m, 2H), 6.86 – 6.62 (m, 4H), 6.23 – 6.02 (m, 2H), 4.39 – 4.15 (m, 2H), 3.73 (s, 3H), 3.57-3.52 (m, 1H), 3.13 – 3.03 (m, 1H), 2.97 (s, 3H), 1.27 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.4, 159.6, 157.7, 156.2, 146.3, 138.5, 133.9, 133.9, 129.3, 125.0 (q, *J* = 287.2 Hz), 124.9, 123.4, 123.3, 121.3, 118.7, 113.0, 111.4, 108.6, 73.2 (q, *J* = 25.7 Hz), 62.1, 55.2, 35.8, 25.7, 13.9. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.56 (s). HRMS Calcd. For $C_{24}H_{24}F_3N_2O_4$ ($[M+H]^+$): 461.1683, found: 461.1668. The product was analyzed by HPLC to determine the enantiomeric excess: 94% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 246 nm); t_r = 10.07and 11.76 min.

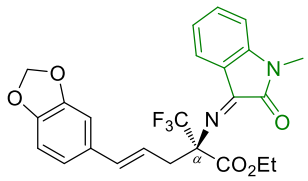


3h

Ethyl (*R*,*E*)-2-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-5-(m-tolyl)-2-(trifluoromethyl)pent-4-enoate:

Yellow oil; 92% yield; $[\alpha]^{25}_{D}$ = 178.2 (*c* 1.38, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.79 – 7.63 (m, 1H), 7.41 (td, *J* = 7.8, 1.2 Hz, 1H), 7.09 (ddd, *J* = 12.5, 6.9, 5.4 Hz, 2H), 6.97 (d, *J* = 6.5 Hz, 3H), 6.69 (d, *J* = 7.8 Hz, 1H), 6.18 – 6.04 (m, 2H), 4.41 – 4.14 (m, 2H), 3.56-3.52 (m, 1H), 3.11 – 3.01 (m, 1H), 2.94 (s, 3H), 2.26 (s, 3H), 1.26 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.4, 157.8, 156.1, 146.3, 137.9, 137.0, 134.2, 133.9, 128.3, 128.1, 126.9, 125.0 (q, *J* = 287.4 Hz), 124.4, 123.4, 123.3, 121.3, 108.6, 73.3(q, *J* = 25.5 Hz), 62.1, 35.9, 25.7, 21.4, 14.0. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.55 (s). HRMS Calcd. For $C_{24}H_{24}F_3N_2O_3$ ($[M+H]^+$): 445.1734, found: 445.1723. The product was analyzed by HPLC to determine the

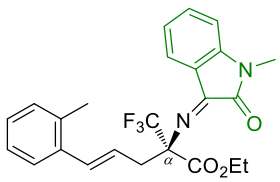
enantiomeric excess: 94% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 246 nm); t_r = 6.88 and 7.66 min.



3i

Ethyl (*R*,*E*)-5-(benzo[d][1,3]dioxol-5-yl)-2-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-2-(trifluoromethyl)pent-4-enoate:

Yellow oil; 98% yield; $[\alpha]^{25}_D$ = 116.9 (*c* 1.42, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.71 (d, *J* = 7.3 Hz, 1H), 7.42 (dd, *J* = 11.2, 4.3 Hz, 1H), 7.20 – 7.02 (m, 1H), 6.85 – 6.69 (m, 2H), 6.69 – 6.62 (m, 1H), 6.62 – 6.52 (m, 1H), 6.07 (d, *J* = 15.8 Hz, 1H), 6.02 – 5.81 (m, 3H), 4.33-4.21 (m, 2H), 3.53-3.48 (m, 1H), 3.12 – 3.04 (m, 1H), 2.95 (s, 3H), 1.27 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.4, 157.7, 156.1, 147.8, 146.9, 146.3, 133.9, 133.4, 131.6, 125.0 (q, *J* = 287.45 Hz), 123.4, 123.4, 122.8, 121.3, 120.6, 108.6, 108.1, 105.6, 101.0, 73.2 (q, *J* = 25.5 Hz), 62.1, 35.8, 25.8, 13.9. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.51 (s). HRMS Calcd. For $C_{24}H_{22}F_3N_2O_5$ ($[M+H]^+$): 475.1475, found: 475.1466. The product was analyzed by HPLC to determine the enantiomeric excess: 94% ee (Chiralpakl ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 246 nm); t_r = 12.73 and 16.89 min.

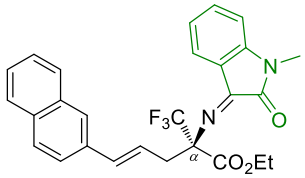


3j

Ethyl (*R*,*E*)-2-(((Z)-1-methyl-2-oxoindolin-3-ylidene)amino)-5-(o-tolyl)-2-(trifluoromethyl)pent-4-enoate:

Yellow oil; 82% yield; $[\alpha]^{25}_D$ = 78.7 (*c* 1.22, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.70 (d, *J* = 7.4 Hz, 1H), 7.41 (t, *J* = 7.7 Hz, 1H), 7.28 (dd, *J* = 12.7, 7.8 Hz, 2H), 7.15 – 6.96 (m, 3H), 6.71 (d, *J* = 7.8 Hz, 1H), 6.35 (d, *J* = 15.7 Hz, 1H), 6.01 (dt, *J* = 15.4, 7.5 Hz, 1H), 4.27 (dddd, *J* = 25.0, 10.7, 7.2, 3.6 Hz, 2H), 3.61-3.57 (m, 1H), 3.14-3.10 (m, 1H), 2.98 (s, 3H), 2.01 (s,

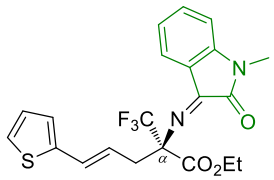
3H), 1.27 (t, J = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.4, 157.7, 156.1, 146.4, 136.1, 135.0, 134.0, 132.0, 130.0, 127.2, 126.0, 125.8, 125.7, 125. 1(q, J = 287.3 Hz), 123.4, 123.4, 121.3, 108.6, 73.2 (q, J = 25.7 Hz), 62.2, 36.1, 25.7, 19.3, 14.0. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.57 (s). HRMS Calcd. For $C_{24}H_{24}F_3N_2O_3$ ([M+H]$^+$): 445.1734, found: 445.1726. The product was analyzed by HPLC to determine the enantiomeric excess: 63% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 246 nm); t_r = 6.62 and 7.14min.



3k

Ethyl (*R*,*E*)-2-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-5-(naphthalen-2-yl)-2-(trifluoromethyl)pent-4-enoate:

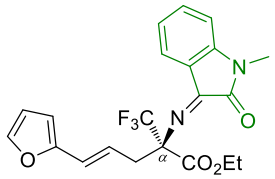
Yellow oil; 86% yield; $[\alpha]^{25}_D$ = 80.9 (*c* 2.51, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.83 – 7.61 (m, 4H), 7.53 – 7.34 (m, 5H), 7.09 (td, J = 7.6, 0.5 Hz, 1H), 6.62 (d, J = 7.8 Hz, 1H), 6.28 (s, 2H), 4.44 – 4.16 (m, 2H), 3.69 – 3.55 (m, 1H), 3.14 – 3.04 (m, 1H), 2.85 (s, 3H), 1.28 (t, J = 7.2 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.4, 157.8, 156.2, 146.3, 134.5, 134.2, 133.9, 133.4, 132.8, 128.0, 127.9, 127.6, 126.2, 125.7, 125.7, 125.1, 125.0 (q, J = 288.1 Hz),123.6, 123.4, 123.4, 121.3, 108.6, 73.3 (q, J = 25.6 Hz), 62.1, 36.1, 25.7, 14.0. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.58 (s). HRMS Calcd. For $C_{27}H_{24}F_3N_2O_3$ ([M+H]$^+$): 481.1734, found: 481.1722. The product was analyzed by HPLC to determine the enantiomeric excess: 94% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 246 nm); t_r = 8.78 and 10.12 min.



3l

Ethyl (*R*,*E*)-2-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-5-(thiophen-2-yl)-2-(trifluoromethyl)pent-4-enoate:

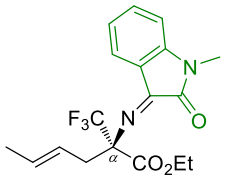
Yellow oil; 90% yield; $[\alpha]^{25}_D$ = 102.3 (*c* 6.60, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.77 – 7.65 (m, 1H), 7.42 (td, *J* = 7.8, 1.2 Hz, 1H), 7.16 – 6.99 (m, 2H), 6.86 (dd, *J* = 5.1, 3.5 Hz, 1H), 6.73 (d, *J* = 8.2 Hz, 2H), 6.30 (d, *J* = 15.6 Hz, 1H), 5.98 (dt, *J* = 15.4, 7.6 Hz, 1H), 4.40 – 4.18 (m, 2H), 3.50-3.47 (m, 1H), 3.12 – 3.00 (m, 1H), 2.98 (s, 3H), 1.27 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.3, 157.7, 156.2, 146.4, 142.0, 134.0, 127.1, 127.0, 125.0 (q, *J* = 287.3 Hz), 124.9, 124.2, 124.0, 123.4, 121.3, 108.6, 73.1 (q, *J* = 25.6 Hz), 62.2, 35.8, 25.8, 13.9. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.50 (s). HRMS Calcd. For $C_{21}H_{20}F_3N_2O_3S$ ($[M+H]^+$): 437.1141, found: 437.1128. The product was analyzed by HPLC to determine the enantiomeric excess: 94% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 246 nm); t_r = 8.33 and 9.01 min.



3m

Ethyl (*R*,*E*)-5-(furan-2-yl)-2-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-2-(trifluoromethyl)pent-4-enoate:

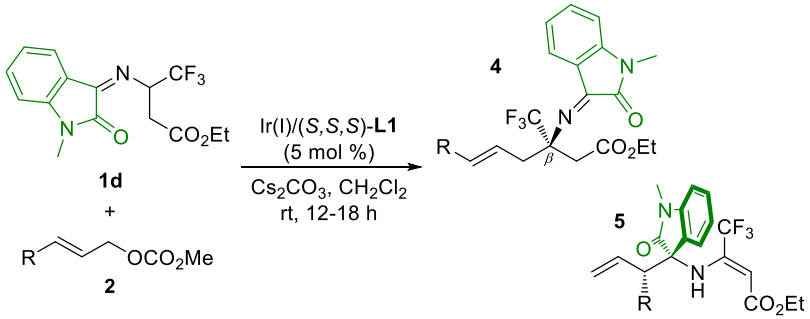
Yellow oil; 92% yield; $[\alpha]^{25}_D$ = 87.9 (*c* 0.88, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.71 (d, *J* = 7.0 Hz, 1H), 7.43 (td, *J* = 7.8, 1.1 Hz, 1H), 7.29 – 7.21 (m, 1H), 7.09 (dd, *J* = 9.8, 5.2 Hz, 1H), 6.76 (d, *J* = 7.8 Hz, 1H), 6.27 (dd, *J* = 3.2, 1.8 Hz, 1H), 6.09 (dd, *J* = 16.7, 2.9 Hz, 3H), 4.35 – 4.15 (m, 2H), 3.55-3.51 (m, 1H), 3.25 – 3.14 (m, 1H), 3.09 (s, 3H), 1.26 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.4, 157.6, 156.2, 152.6, 146.5, 141.7, 134.0, 125.0 (q, *J* = 287.4 Hz), 123.5, 123.4, 123.0, 122.2, 121.3, 111.1, 108.6, 107.0, 73.0 (q, *J* = 25.6 Hz), 62.2, 35.6, 25.9, 13.9. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.16 (s). HRMS Calcd. For $C_{21}H_{20}F_3N_2O_4$ ($[M+H]^+$): 421.1370, found: 421.1342. The product was analyzed by HPLC to determine the enantiomeric excess: 86% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 246 nm); t_r = 9.17 and 9.84 min.



3n

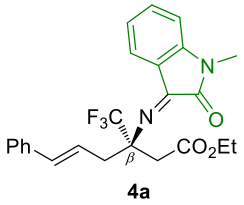
Ethyl (*R*,*E*)-2-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-2-(trifluoromethyl)hex-4-enoate:

Yellow oil; 95% yield; $[\alpha]^{25}_{D}$ = 95.1 (*c* 1.15, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.72 (d, *J* = 7.3 Hz, 1H), 7.45 (t, *J* = 7.4 Hz, 1H), 7.11 (t, *J* = 7.5 Hz, 1H), 6.81 (d, *J* = 7.8 Hz, 1H), 5.45 – 5.26 (m, 2H), 4.34 – 4.14 (m, 2H), 3.33 (dd, *J* = 14.7, 6.4 Hz, 1H), 3.18 (s, 3H), 3.02 (dd, *J* = 14.8, 6.3 Hz, 1H), 1.52 (d, *J* = 5.5 Hz, 2H), 1.31 – 1.20 (m, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 165.68, 157.59, 155.81, 146.43, 133.84, 129.57, 125.1 (q, *J* = 287.5 Hz), 124.87, 123.40, 123.37, 121.36, 108.55, 73.0 (q, *J* = 25.4 Hz), 62.05, 35.28, 25.97, 17.80, 13.90. ^{19}F NMR (376 MHz, $CDCl_3$) δ -75.15 (s). HRMS Calcd. For $C_{18}H_{20}F_3N_2O_3$ ($[M+H]^+$): 369.14213, found: 369.1412. The product was analyzed by HPLC to determine the enantiomeric excess: 86% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 246 nm); t_r = 6.07 and 6.78 min.



In a 25 mL nitrogen-filled dry Schlenk tube, $[Ir(COD)Cl]_2$ (3.3 mg, 0.005 mmol), phosphoramidite ligand (*S,S,S*)-**L1** (5.6 mg, 0.01 mmol), degassed THF (0.5 mL) and degassed propylamine (0.5 mL) were added. After stirring at 50 °C for 30 mins, the reaction was concentrated via rotary evaporation under reduced pressure to give the iridium complex as a pale yellow solid.[6] Then, **1d** (0.20 mmol), allylic carbonates **2** (0.22 mmol), DBU (0.2mmol) and dry DCE (2 mL) was added into the nitrogen-refilled Schlenk tube. Once starting material was consumed (monitored by TLC), the reaction mixture was concentrated via rotary

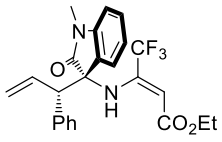
evaporation under reduced pressure, and then purified by chromatography on silica gel (PE / EA = 5:1) to give corresponding products **4** and **5**.



4a

Ethyl (*R*,*E*)-3-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-6-phenyl-3-(trifluoromethyl)hex-5-enoate:

Yellow oil; 37% yield; $[\alpha]^{25}_{D}$ = 54.4 (*c* 1.32, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.65 (d, *J* = 7.4 Hz, 1H), 7.41 (t, *J* = 7.7 Hz, 1H), 7.29 (t, *J* = 8.6 Hz, 4H), 7.20 (t, *J* = 6.8 Hz, 1H), 7.09 (t, *J* = 7.5 Hz, 1H), 6.78 (d, *J* = 7.8 Hz, 1H), 6.45 (d, *J* = 15.7 Hz, 1H), 6.20 – 6.07 (m, 1H), 4.10 – 3.91 (m, 3H), 3.29 – 3.14 (m, 4H), 3.15 – 2.95 (m, 2H), 1.08 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.5, 157.8, 155.0, 145.9, 137.1, 134.5, 133.4, 128.5, 127.4, 127.0 (q, *J* = 276.0 Hz), 126.3, 123.5, 123.3, 123.2, 122.2, 108.4, 67.9 (q, *J* = 25.5 Hz), 60.6, 37.4, 35.8, 26.2, 13.8. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.62 (s). HRMS Calcd. For $C_{24}H_{24}F_3N_2O_3$ ($[M+H]^+$): 445.1734, found: 445.1724. The product was analyzed by HPLC to determine the enantiomeric excess: 91% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 8.44 and 10.81 min.

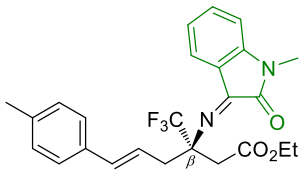


5a

Ethyl (*Z*)-4,4,4-trifluoro-3-(((*S*)-1-methyl-2-oxo-3-((*S*)-1-phenylallyl)indolin-3-yl)amino)but-2-enoate:

Yellow oil; 54% yield; $[\alpha]^{25}_{D}$ = -45.0 (*c* 3.25, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.89 (s, 1H), 7.39 (d, *J* = 7.3 Hz, 1H), 7.34 – 7.24 (m, 1H), 7.15 – 7.04 (m, 2H), 6.99 (t, *J* = 7.5 Hz, 2H), 6.56 (d, *J* = 7.4 Hz, 2H), 6.45 (d, *J* = 7.8 Hz, 1H), 6.41 – 6.29 (m, 1H), 5.61 (dd, *J* = 64.8, 13.5 Hz, 2H), 5.32 (s, 1H), 4.24 (q, *J* = 7.0 Hz, 2H), 3.93 (d, *J* = 10.2 Hz, 1H), 2.57 (s, 3H), 1.31 (t,

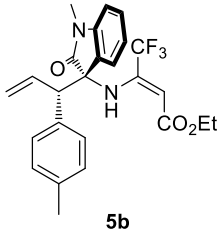
J = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.2, 168.9, 146.3 (q, J = 32.9 Hz), 143.7, 136.1, 132.7, 129.6, 128.9, 128.3, 127.5, 126.5, 124.6, 122.2, 122.1, 119.7 (q, J = 277.8 Hz), 107.9, 92.5 (q, J = 6.4 Hz), 68.3, 60.1, 59.6, 25.4, 14.3. ^{19}F NMR (376 MHz, $CDCl_3$) δ -65.78 (s). HRMS Calcd. For $C_{24}H_{24}F_3N_2O_3$ ($[M+H]^+$): 445.1734, found: 445.1724. The product was analyzed by HPLC to determine the enantiomeric excess: 98% ee (Chiralpak IE-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 13.91 and 15.70 min.



4b

Ethyl (*R*,*E*)-3-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-6-(p-tolyl)-3-(trifluoromethyl)hex-5-enoate:

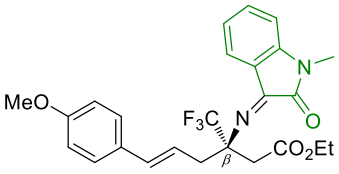
Yellow oil; 35% yield; $[\alpha]^{25}_D$ = 69.5 (*c* 1.07, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.65 (d, J = 7.2 Hz, 1H), 7.47 – 7.34 (m, 1H), 7.20 (d, J = 8.0 Hz, 2H), 7.09 (dd, J = 7.4, 6.1 Hz, 3H), 6.78 (d, J = 7.8 Hz, 1H), 6.41 (d, J = 15.7 Hz, 1H), 6.18 – 5.97 (m, 1H), 4.14 – 3.83 (m, 3H), 3.29 – 3.14 (m, 4H), 3.16 – 2.96 (m, 2H), 2.31 (s, 3H), 1.07 (t, J = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.6, 157.8, 155.0, 145.9, 137.3, 134.4, 134.3, 133.3, 129.2, 127.1 (q, J = 282.1 Hz), 126.2, 123.5, 123.1, 122.2, 108.4, 68.0 (q, J = 24.9 Hz), 60.5, 37.4, 35.8, 26.2, 21.2, 13.8. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.59 (s). HRMS Calcd. For $C_{25}H_{26}F_3N_2O_3$ ($[M+H]^+$): 459.1890, found: 459.1882. The product was analyzed by HPLC to determine the enantiomeric excess: 90% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 8.06 and 10.40 min.



5b

Ethyl (*Z*)-4,4,4-trifluoro-3-(((*S*)-1-methyl-2-oxo-3-((*S*)-1-(p-tolyl)allyl)indolin-3-yl)amino)but-2-enoate:

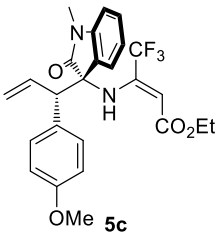
Yellow oil; 45% yield; $[\alpha]^{25}_D$ = -48.1 (*c* 3.08, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.87 (s, 1H), 7.38 (d, *J* = 7.3 Hz, 1H), 7.34 – 7.27 (m, 1H), 7.16 – 7.03 (m, 1H), 6.80 (d, *J* = 7.9 Hz, 2H), 6.46 (dd, *J* = 13.0, 7.9 Hz, 3H), 6.39 – 6.24 (m, 1H), 5.75 – 5.44 (m, 2H), 5.31 (s, 1H), 4.35 – 4.17 (m, 2H), 3.90 (d, *J* = 10.2 Hz, 1H), 2.60 (s, 3H), 2.19 (s, 3H), 1.31 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.3, 168.9, 146.3 (q, *J* = 32.8 Hz), 143.7, 137.1, 133.1, 132.9, 129.5, 128.2, 128.1, 127.8 (q, *J* = 299.0 Hz) 126.7, 124.6, 122.1, 121.9, 107.9, 92.4 (q, *J* = 6.4 Hz), 68.3, 60.1, 59.3, 25.5, 21.0, 14.3. ^{19}F NMR (376 MHz, $CDCl_3$) δ -65.78 (s). HRMS Calcd. For $C_{25}H_{26}F_3N_2O_3$ ($[M+H]^+$): 459.1890, found: 459.1879. The product was analyzed by HPLC to determine the enantiomeric excess: 98% ee (Chiralpak IE-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 14.80 and 16.92 min.



4c

Ethyl (*R*,*E*)-6-(4-methoxyphenyl)-3-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-3-(trifluoromethyl)hex-5-enoate:

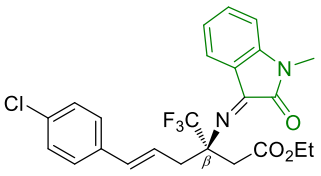
Yellow oil; 34% yield; $[\alpha]^{25}_D$ = 113.9 (*c* 1.19, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.65 (dd, *J* = 7.4, 0.7 Hz, 1H), 7.40 (td, *J* = 7.7, 1.2 Hz, 1H), 7.25 – 7.21 (m, 2H), 7.08 (td, *J* = 7.6, 0.6 Hz, 1H), 6.91 – 6.70 (m, 3H), 6.38 (d, *J* = 15.7 Hz, 1H), 6.08 – 5.91 (m, 1H), 4.05 – 3.88 (m, 3H), 3.78 (s, 3H), 3.28 – 3.14 (m, 4H), 3.12 – 2.97 (m, 2H), 1.07 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.6, 159.1, 157.8, 154.9, 145.9, 134.0, 133.3, 129.9, 127.1 (q, *J* = 286.5 Hz), 127.4, 123.5, 123.1, 122.2, 121.0, 113.9, 108.4, 68.0 (q, *J* = 25.0 Hz), 60.5, 55.3, 37.5, 35.8, 26.2, 13.8. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.56 (s). HRMS Calcd. For $C_{25}H_{26}F_3N_2O_4$ ($[M+H]^+$): 475.1839, found: 475.1827. The product was analyzed by HPLC to determine the enantiomeric excess: 85% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 13.90 and 19.53 min.



5c

Ethyl (*Z*)-4,4,4-trifluoro-3-(((*S*)-3-((*S*)-1-(4-methoxyphenyl)allyl)-1-methyl-2-oxoindolin-3-yl)amino)but-2-enoate:

Yellow oil; 57% yield; $[\alpha]^{25}_{D}$ = -51.4 (*c* 1.37, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.87 (s, 1H), 7.38 (d, *J* = 7.2 Hz, 1H), 7.35 – 7.29 (m, 1H), 7.16 – 7.05 (m, 1H), 6.66 – 6.42 (m, 5H), 6.42 – 6.21 (m, 1H), 5.78 – 5.44 (m, *J* 2H), 5.31 (s, 1H), 4.30 – 4.16 (m, 2H), 3.89 (d, *J* = 10.2 Hz, 1H), 3.69 (s, 3H), 2.63 (s, 3H), 1.32 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.4, 168.9, 158.8, 146.3 (q, *J* = 32.8 Hz), 143.7, 133.0, 129.5, 129.4, 128.2, 126.7, 124.6, 122.1, 121.8, 119.7 (q, *J* = 277.9 Hz), 112.9, 108.0, 92.4 (q, *J* = 6.4 Hz), 68.3, 60.1, 58.8, 55.2, 25.6, 14.3. ^{19}F NMR (376 MHz, $CDCl_3$) δ -65.80 (s). HRMS Calcd. For $C_{25}H_{26}F_3N_2O_4$ ($[M+H]^+$): 475.1839, found: 475.1824. The product was analyzed by HPLC to determine the enantiomeric excess: 96% ee (Chiralpak IE-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 18.85 and 23.81 min.

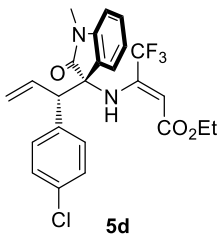


4d

Ethyl (*R*,*E*)-6-(4-chlorophenyl)-3-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-3-(trifluoromethyl)hex-5-enoate:

Yellow oil; 38% yield; $[\alpha]^{25}_{D}$ = 12.8 (*c* 0.52, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.70 – 7.61 (m, 1H), 7.41 (td, *J* = 7.7, 1.2 Hz, 1H), 7.30 – 7.17 (m, 4H), 7.13 – 7.03 (m, 1H), 6.78 (d, *J* = 7.8 Hz, 1H), 6.39 (d, *J* = 15.7 Hz, 1H), 6.21 – 6.02 (m, 1H), 4.09 – 3.90 (m, 3H), 3.32 – 3.16 (m, 4H), 3.13 – 2.96 (m, 2H), 1.08 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.4, 157.8, 155.1, 145.9, 135.5, 133.4, 133.2, 133.0, 128.6, 127.5, 127.0(q, *J* = 288.5 Hz), 124.1, 123.5, 123.1, 122.2, 108.5, 67.9 (q, *J* = 25.1 Hz), 60.6, 37.4, 35.8, 26.2, 13.8. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.66 (s). HRMS Calcd. For $C_{24}H_{23}ClF_3N_2O_3$ ($[M+H]^+$): 479.1344, found:

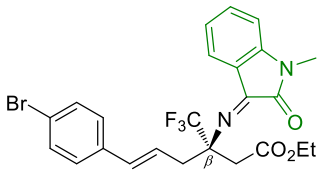
479.1326. The product was analyzed by HPLC to determine the enantiomeric excess: 91% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 8.62 and 10.73 min.



5d

Ethyl (*Z*)-3-(((*S*)-3-((*S*)-1-(4-chlorophenyl)allyl)-1-methyl-2-oxoindolin-3-yl)amino)-4,4,4-trifluorobut-2-enoate:

Yellow oil; 52% yield; $[\alpha]^{25}_D$ = -46.5 (*c* 1.94, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.87 (s, 1H), 7.38 (d, *J* = 7.3 Hz, 1H), 7.35 – 7.28 (m, 1H), 7.13 (t, *J* = 7.5 Hz, 1H), 6.98 (d, *J* = 8.6 Hz, 2H), 6.60 – 6.42 (m, 3H), 6.40 – 6.21 (m, 1H), 5.60 (dd, *J* = 54.3, 13.5 Hz, 2H), 5.33 (s, 1H), 4.23 (q, *J* = 6.8 Hz, 2H), 3.91 (d, *J* = 10.1 Hz, 1H), 2.64 (s, 3H), 1.31 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.1, 168.9, 146.2 (q, *J* = 32.9 Hz), 143.6, 134.7, 133.3, 132.2, 129.8, 129.7, 127.6, 126.2, 124.7, 122.6, 122.3, 119.6 (q, *J* = 277.8 Hz), 108.1, 92.8 (q, *J* = 6.4 Hz), 68.0, 60.2, 58.8, 25.5, 14.3. ^{19}F NMR (376 MHz, $CDCl_3$) δ -65.86 (s). HRMS Calcd. For $C_{24}H_{23}ClF_3N_2O_3$ ($[M+H]^+$): 479.1344, found: 479.1328. The product was analyzed by HPLC to determine the enantiomeric excess: 98% ee (Chiralpak IE-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 10.05 and 12.55 min.

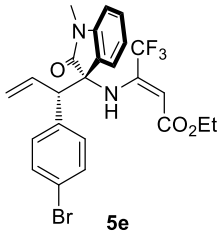


4e

Ethyl (*R*,*E*)-6-(4-bromophenyl)-3-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-3-(trifluoromethyl)hex-5-enoate:

Yellow oil; 35% yield; $[\alpha]^{25}_D$ = 90.8 (*c* 0.50, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.65 (d, *J* = 7.3 Hz, 1H), 7.47 – 7.34 (m, 3H), 7.16 (d, *J* = 8.4 Hz, 2H), 7.09 (t, *J* = 7.5 Hz, 1H), 6.79 (d, *J* = 7.8 Hz, 1H), 6.38 (d, *J* = 15.7 Hz, 1H), 6.20 – 6.06 (m, 1H), 4.08 – 3.91 (m, 3H), 3.31 –

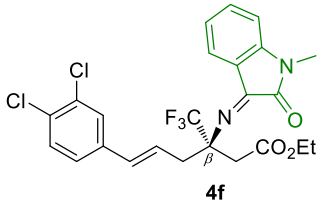
3.18 (m, 4H), 3.12 – 2.97 (m, 2H), 1.08 (t, J = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.4, 157.8, 155.1, 145.9, 136.0, 133.5, 133.3, 131.6, 127.8, 127.0 (q, J = 286.5 Hz), 124.2, 123.6, 123.2, 122.1, 121.2, 108.5, 67.8 (q, J = 25.1 Hz), 60.6, 37.4, 35.8, 26.2, 13.8. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.68 (s). HRMS Calcd. For $C_{24}H_{23}BrF_3N_2O_3$ ($[M+H]^+$): 523.0839, found: 523.0816. The product was analyzed by HPLC to determine the enantiomeric excess: 90% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 9.37 and 11.65 min.



5e

Ethyl (*Z*)-3-(((*S*)-3-((*S*)-1-(4-bromophenyl)allyl)-1-methyl-2-oxoindolin-3-yl)amino)-4,4,4-trifluorobut-2-enoate:

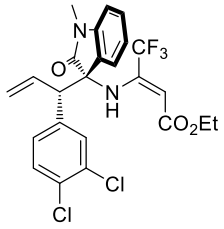
Yellow oil; 55% yield; $[\alpha]^{25}_D$ = -26.0 (*c* 0.85, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.87 (s, 1H), 7.38 (d, J = 7.3 Hz, 1H), 7.35 – 7.29 (m, 1H), 7.21 – 7.09 (m, 3H), 6.47 (dd, J = 30.6, 8.0 Hz, 3H), 6.37 – 6.21 (m, 1H), 5.73 – 5.47 (m, 2H), 5.33 (s, 1H), 4.32 – 4.19 (m, 2H), 3.90 (d, J = 10.1 Hz, 1H), 2.64 (s, 3H), 1.31 (t, J = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.1, 168.9, 146.2 (q, J = 32.8 Hz), 143.6, 135.2, 132.2, 130.6, 130.1, 129.8, 126.2, 124.7, 122.7, 122.3, 121.5, 119.6 (q, J = 277.5 Hz), 108.2, 92.9 (q, J = 6.4 Hz), 68.0, 60.2, 58.8, 25.5, 14.3. ^{19}F NMR (376 MHz, $CDCl_3$) δ -65.86 (s). HRMS Calcd. For $C_{24}H_{23}BrF_3N_2O_3$ ($[M+H]^+$): 523.0839, found: 523.0823. The product was analyzed by HPLC to determine the enantiomeric excess: 97% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 10.78 and 13.27 min.



4f

Ethyl (*R*,*E*)-6-(3,4-dichlorophenyl)-3-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-3-(trifluoromethyl)hex-5-enoate:

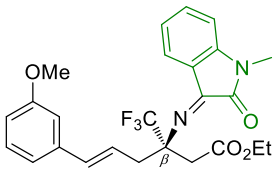
Yellow oil; 34% yield; $[\alpha]^{25}_D$ = 95.8 (*c* 1.02, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.58 (d, *J* = 7.3 Hz, 1H), 7.40 – 7.31 (m, 1H), 7.27 (dd, *J* = 14.6, 5.1 Hz, 2H), 7.11 – 6.99 (m, 2H), 6.72 (d, *J* = 7.8 Hz, 1H), 6.27 (d, *J* = 15.7 Hz, 1H), 6.15 – 5.99 (m, 1H), 4.01 – 3.82 (m, 3H), 3.28 – 3.09 (m, 4H), 3.09 – 2.92 (m, 2H), 1.01 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 168.3, 156.7, 154.2, 144.9, 136.1, 132.5, 131.5, 131.0, 130.0, 129.3, 126.9, 125.9 (q, *J* = 286.6 Hz), 124.6, 124.4, 122.6, 122.2, 121.0, 107.5, 66.7 (q, *J* = 25.0 Hz), 59.6, 36.2, 34.7, 25.2, 12.8. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.71 (s). HRMS Calcd. For $C_{24}H_{22}Cl_2F_3N_2O_3$ ($[M+H]^+$): 513.0954, found: 513.0953. The product was analyzed by HPLC to determine the enantiomeric excess: 92% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 9.11 and 11.26 min.



5f

Ethyl (*Z*)-3-(((*S*)-3-((*S*)-1-(3,4-dichlorophenyl)allyl)-1-methyl-2-oxoindolin-3-yl)amino)-4,4,4-trifluorobut-2-enoate:

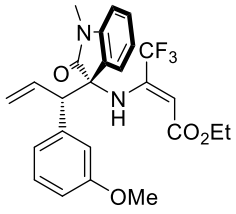
Yellow oil; 48% yield; $[\alpha]^{25}_D$ = -63.2 (*c* 2.79, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.86 (s, 1H), 7.45 – 7.30 (m, 2H), 7.23 – 7.05 (m, 2H), 6.67 – 6.46 (m, 3H), 6.36 – 6.17 (m, 1H), 5.61 (dd, *J* = 47.5, 13.5 Hz, 2H), 5.34 (s, 1H), 4.29 – 4.15 (m, 2H), 3.89 (d, *J* = 10.1 Hz, 1H), 2.69 (s, 3H), 1.31 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 174.96, 168.88, 146.09 (q, *J* = 32.9 Hz), 143.51, 136.43, 131.66, 131.47, 131.46, 130.05, 129.33, 128.09, 125.97, 125.96, 124.65, 123.10, 122.48, 119.61 (q, *J* = 277.6 Hz), 108.20, 93.12 (q, *J* = 6.4 Hz), 67.86, 60.25, 58.49, 25.60, 14.29. ^{19}F NMR (376 MHz, $CDCl_3$) δ -65.89 (s). HRMS Calcd. For $C_{24}H_{22}Cl_2F_3N_2O_3$ ($[M+H]^+$): 513.0954, found: 513.0941. The product was analyzed by HPLC to determine the enantiomeric excess: 87% ee (Chiralpak IE-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 7.39 and 13.24 min.



4g

Ethyl (*R*,*E*)-6-(3-methoxyphenyl)-3-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-3-(trifluoromethyl)hex-5-enoate:

Yellow oil; 32% yield; $[\alpha]^{25}_{D}$ = 80.4 (*c* 1.44, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.65 (dd, *J* = 7.4, 0.7 Hz, 1H), 7.41 (td, *J* = 7.7, 1.2 Hz, 1H), 7.18 (t, *J* = 7.9 Hz, 1H), 7.08 (td, *J* = 7.6, 0.7 Hz, 1H), 6.90 (d, *J* = 7.6 Hz, 1H), 6.86 – 6.81 (m, 1H), 6.81 – 6.72 (m, 2H), 6.41 (d, *J* = 15.7 Hz, 1H), 6.22 – 6.03 (m, 1H), 4.06 – 3.91 (m, 3H), 3.79 (s, 3H), 3.31 – 3.16 (m, 4H), 3.16 – 2.99 (m, 2H), 1.08 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.5, 159.7, 157.8, 155.0, 145.9, 138.5, 134.4, 133.4, 129.5, 127.0 (q, *J* = 286.8 Hz), 123.7, 123.5, 123.2, 122.2, 118.9, 113.1, 111.6, 108.5, 67.9 (q, *J* = 25.1 Hz), 60.6, 55.2, 37.4, 35.8, 26.2, 13.8. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.63 (s). HRMS Calcd. For $C_{25}H_{26}F_3N_2O_4$ ($[M+H]^+$): 475.1839, found: 475.1825. The product was analyzed by HPLC to determine the enantiomeric excess: 89% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 14.14 and 24.37 min.

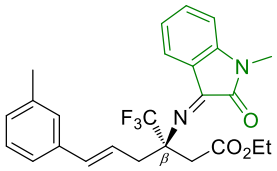


5g

Ethyl (*Z*)-4,4,4-trifluoro-3-(((*S*)-3-((*S*)-1-(3-methoxyphenyl)allyl)-1-methyl-2-oxoindolin-3-yl)amino)but-2-enoate:

Yellow oil; 47% yield; $[\alpha]^{25}_{D}$ = -60.8 (*c* 3.39, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.88 (s, 1H), 7.39 (d, *J* = 7.3 Hz, 1H), 7.37 – 7.28 (m, 1H), 7.13 (t, *J* = 7.4 Hz, 1H), 6.95 (t, *J* = 7.9 Hz, 1H), 6.64 (dd, *J* = 8.2, 2.2 Hz, 1H), 6.49 (d, *J* = 7.8 Hz, 1H), 6.42 – 6.25 (m, 2H), 5.96 (s, 1H), 5.82 – 5.48 (m, 2H), 5.32 (s, 1H), 4.24 (q, *J* = 7.1 Hz, 2H), 3.92 (d, *J* = 10.2 Hz, 1H), 3.49 (s, 3H), 2.62 (s, 3H), 1.31 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.2, 168.9, 158.6,

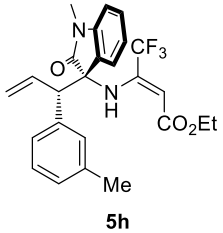
146.3 (q, J = 32.9 Hz), 143.9, 137.5, 132.6, 129.6, 128.5, 126.7, 124.6, 122.3, 122.1, 121.2, 119.7 (q, J = 277.6 Hz), 114.3, 112.3, 107.9, 92.6 (q, J = 6.5 Hz), 68.2, 60.2, 59.5, 54.9, 25.5, 14.3. ^{19}F NMR (376 MHz, $CDCl_3$) δ -65.81 (s). HRMS Calcd. For $C_{25}H_{26}F_3N_2O_4$ ($[M+H]^+$): 475.1839, found: 475.1827. The product was analyzed by HPLC to determine the enantiomeric excess: 91% ee (Chiralpak IE-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 4.29 and 4.89 min.



4h

Ethyl (*R*,*E*)-3-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-6-(*m*-tolyl)-3-(trifluoromethyl)hex-5-enoate:

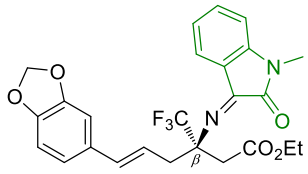
Yellow oil; 39% yield; $[\alpha]^{25}_D$ = 76.5 (*c* 0.95, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.65 (d, J = 7.4 Hz, 1H), 7.50 – 7.34 (m, 1H), 7.21 – 7.05 (m, 4H), 7.02 (d, J = 7.3 Hz, 1H), 6.77 (d, J = 7.8 Hz, 1H), 6.42 (d, J = 15.7 Hz, 1H), 6.24 – 6.07 (m, 1H), 4.11 – 3.91 (m, 3H), 3.33 – 3.15 (m, 4H), 3.15 – 2.95 (m, 2H), 2.31 (s, 3H), 1.07 (t, J = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.6, 157.8, 155.0, 145.9, 138.0, 137.0, 134.7, 133.4, 128.4, 128.3, 127.1 (q, J = 286.4 Hz), 127.0, 123.5, 123.5, 123.1, 123.0, 122.2, 108.4, 68.0 (q, J = 24.9 Hz), 60.6, 37.5, 35.8, 26.2, 21.4, 13.8. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.57 (s). HRMS Calcd. For $C_{25}H_{26}F_3N_2O_3$ ($[M+H]^+$): 459.1890, found: 459.1876. The product was analyzed by HPLC to determine the enantiomeric excess: 94% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 7.538 and 9.14 min.



5h

Ethyl (*Z*)-4,4,4-trifluoro-3-(((*S*)-1-methyl-2-oxo-3-((*S*)-1-(m-tolyl)allyl)indolin-3-yl)amino)but-2-enoate:

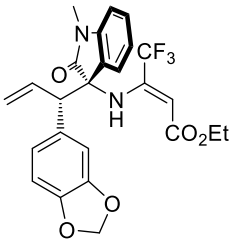
Yellow oil; 57% yield; $[\alpha]^{25}_D$ = -76.1 (*c* 2.86, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.87 (s, 1H), 7.39 (d, *J* = 7.3 Hz, 1H), 7.34 – 7.23 (m, 1H), 7.20 – 7.05 (m, 1H), 6.97 – 6.81 (m, 2H), 6.57 – 6.17 (m, 4H), 5.83 – 5.46 (m, 2H), 5.32 (s, 1H), 4.35 – 4.13 (m, 2H), 3.88 (d, *J* = 10.3 Hz, 1H), 2.58 (s, 3H), 2.07 (s, 3H), 1.31 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.2, 168.9, 146.3 (q, *J* = 32.8 Hz), 143.8, 137.0, 135.9, 132.8, 129.5, 128.1, 127.3, 127.2 (q, *J* = 332.7 Hz), 126.7, 124.6, 122.1, 122.0, 121.1, 118.3, 107.8, 92.5 (q, *J* = 6.4 Hz), 68.3, 60.1, 59.6, 25.4, 21.2, 14.3. ^{19}F NMR (376 MHz, $CDCl_3$) δ -65.75 (s). HRMS Calcd. For $C_{25}H_{26}F_3N_2O_3$ ($[M+H]^+$): 459.1890, found: 459.1882. The product was analyzed by HPLC to determine the enantiomeric excess: 97% ee (Chiralpak IE-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 12.89 and 14.27 min.



4i

Ethyl (*R*,*E*)-6-(benzo[d][1,3]dioxol-5-yl)-3-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-3-(trifluoromethyl)hex-5-enoate:

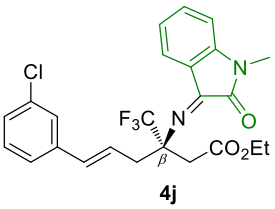
Yellow oil; 41% yield; $[\alpha]^{25}_D$ = 110.5 (*c* 1.84, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.65 (dd, *J* = 7.4, 0.7 Hz, 1H), 7.41 (td, *J* = 7.7, 1.2 Hz, 1H), 7.08 (td, *J* = 7.6, 0.6 Hz, 1H), 6.84 (d, *J* = 1.0 Hz, 1H), 6.78 (d, *J* = 7.8 Hz, 1H), 6.76 – 6.64 (m, 2H), 6.35 (d, *J* = 15.7 Hz, 1H), 6.05 – 5.86 (m, 3H), 4.12 – 3.92 (m, 3H), 3.26 – 3.13 (m, 4H), 3.12 – 2.98 (m, 2H), 1.07 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.6, 157.8, 155.0, 147.9, 147.1, 145.9, 134.0, 133.4, 131.6, 127.0 (q, *J* = 286.6 Hz), 123.5, 123.1, 122.2, 121.5, 120.8, 108.4, 108.2, 105.7, 101.0, 68.0 (q, *J* = 24.9 Hz), 60.5, 37.3, 35.8, 26.2, 13.8. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.57 (s). HRMS Calcd. For $C_{25}H_{24}F_3N_2O_5$ ($[M+H]^+$): 489.1632, found: 489.1620. The product was analyzed by HPLC to determine the enantiomeric excess: 85% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 9.39 and 14.25 min.



5i

Ethyl (*Z*)-3-(((*S*)-3-((*S*)-1-(benzo[d][1,3]dioxol-5-yl)allyl)-1-methyl-2-oxoindolin-3-yl)amino)-4,4,4-trifluorobut-2-enoate:

Yellow oil; 53% yield; $[\alpha]^{25}_{D}$ = -61.1 (*c* 2.19, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.85 (s, 1H), 7.43 – 7.30 (m, 2H), 7.11 (t, *J* = 7.3 Hz, 1H), 6.52 (dd, *J* = 20.5, 7.9 Hz, 2H), 6.35 – 6.12 (m, 2H), 5.95 (s, 1H), 5.81 (dd, *J* = 8.9, 1.2 Hz, 2H), 5.70 – 5.43 (m, 2H), 5.31 (s, 1H), 4.33 – 4.13 (m, 2H), 3.86 (d, *J* = 10.1 Hz, 1H), 2.71 (s, 3H), 1.31 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.3, 168.9, 146.7, 146.6, 146.2 (q, *J* = 32.9 Hz), 143.8, 132.8, 129.9, 129.7, 126.6, 124.6, 122.2, 122.0, 119.7 (q, *J* = 277.8 Hz), 108.4, 107.9, 107.4, 100.8, 92.6 (q, *J* = 6.4 Hz), 68.1, 60.1, 59.1, 25.7, 14.3. ^{19}F NMR (376 MHz, $CDCl_3$) δ -65.82 (s). HRMS Calcd. For $C_{25}H_{24}F_3N_2O_5$ ($[M+H]^+$): 489.1632, found: 489.1623. The product was analyzed by HPLC to determine the enantiomeric excess: 95% ee (Chiralpak IE-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 26.93 and 30.49 min.

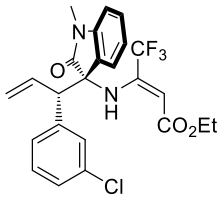


4j

Ethyl (*R*,*E*)-6-(3-chlorophenyl)-3-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-3-(trifluoromethyl)hex-5-enoate:

Yellow oil; 43 % yield; $[\alpha]^{25}_{D}$ = 118.6 (*c* 2.03, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.65 (d, *J* = 7.0 Hz, 1H), 7.49 – 7.35 (m, 1H), 7.27 (s, 1H), 7.24 – 7.14 (m, 3H), 7.09 (t, *J* = 7.4 Hz, 1H), 6.79 (d, *J* = 7.8 Hz, 1H), 6.38 (d, *J* = 15.7 Hz, 1H), 6.24 – 6.09 (m, 1H), 4.10 – 3.89 (m, 3H), 3.35 – 3.17 (m, 4H), 3.15 – 2.97 (m, 2H), 1.08 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.4, 157.8, 155.2, 145.9, 138.9, 134.4, 133.5, 133.1, 129.7, 127.4, 127.0 (q, *J* = 286.5 Hz), 126.2, 125.0, 124.5, 123.6, 123.2, 122.1, 108.5, 67.8 (q, *J* = 25.1 Hz), 60.6, 37.3, 35.8, 26.2,

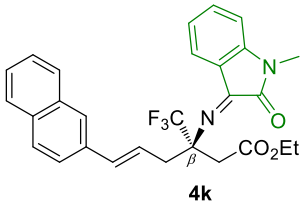
13.8. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.67 (s). HRMS Calcd. For $C_{24}H_{23}ClF_3N_2O_3$ ($[M+H]^+$): 479.1344, found: 479.1334. The product was analyzed by HPLC to determine the enantiomeric excess: 93% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 8.11 and 9.89 min.



5j

Ethyl (*Z*)-3-(((*S*)-3-((*S*)-1-(3-chlorophenyl)allyl)-1-methyl-2-oxoindolin-3-yl)amino)-4,4,4-trifluorobut-2-enoate:

Yellow oil; 56% yield; $[\alpha]^{25}_D$ = -100.3 (*c* 2.63, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.87 (s, 1H), 7.47 – 7.29 (m, 2H), 7.21 – 6.92 (m, 3H), 6.65 – 6.49 (m, 2H), 6.40 (s, 1H), 6.38 – 6.20 (m, 1H), 5.81 – 5.46 (m, 2H), 5.33 (s, 1H), 4.38 – 4.17 (m, 2H), 3.90 (d, *J* = 10.2 Hz, 1H), 2.64 (s, 3H), 1.31 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.0, 168.9, 146.2 (q, *J* = 32.8 Hz), 143.6, 138.1, 133.2, 132.0, 129.9, 128.7, 128.2, 127.6, 127.0, 126.2, 124.6, 122.8, 122.3, 119.6 (q, *J* = 277.6 Hz), 108.02, 92.9 (q, *J* = 6.3 Hz), 68.1, 60.2, 59.1, 25.5, 14.3. ^{19}F NMR (376 MHz, $CDCl_3$) δ -65.82 (s). HRMS Calcd. For $C_{24}H_{23}ClF_3N_2O_3$ ($[M+H]^+$): 479.1344, found: 479.1334. The product was analyzed by HPLC to determine the enantiomeric excess: 97% ee (Chiralpak IE-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 11.26 and 15.37 min.

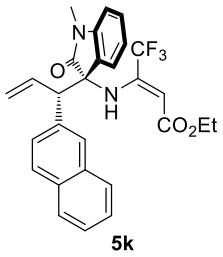


4k

Ethyl (*R*,*E*)-3-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-6-(naphthalen-2-yl)-3-(trifluoromethyl)hex-5-enoate:

Yellow oil; 35% yield; $[\alpha]^{25}_D$ = 65.6 (*c* 0.50, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.81 – 7.70 (m, 3H), 7.70 – 7.62 (m, 2H), 7.52 (dd, *J* = 8.5, 1.2 Hz, 1H), 7.48 – 7.36 (m, 3H), 7.08 (t,

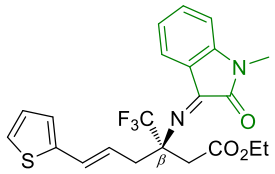
J = 7.5 Hz, 1H), 6.76 (d, *J* = 7.8 Hz, 1H), 6.60 (d, *J* = 15.7 Hz, 1H), 6.34 – 6.19 (m, 1H), 4.13 – 3.93 (m, 3H), 3.30 (dd, *J* = 14.4, 7.0 Hz, 1H), 3.18 (s, 3H), 3.22 – 3.02 (m, 2H), 1.08 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.6, 157.8, 155.1, 145.9, 134.7, 134.5, 133.5, 133.4, 132.9, 128.1, 128.0, 127.1 (q, *J* = 286.4 Hz), 127.6, 126.2, 126.0, 125.8, 123.7, 123.6, 123.5, 123.2, 122.2, 108.5, 68.0 (q, *J* = 25.1 Hz), 60.6, 37.6, 35.8, 26.2, 13.9. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.60 (s). HRMS Calcd. For $C_{28}H_{26}F_3N_2O_3$ ($[M+H]^+$): 495.1890, found: 495.1882. The product was analyzed by HPLC to determine the enantiomeric excess: 90% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 11.63 and 15.59 min.



5k

Ethyl (*Z*)-4,4,4-trifluoro-3-(((*S*)-1-methyl-3-((*S*)-1-(naphthalen-2-yl)allyl)-2-oxoindolin-3-yl)amino)but-2-enoate:

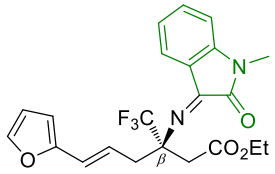
Yellow oil; 45% yield; $[\alpha]^{25}_D$ = -32.3 (*c* 3.60, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.96 (s, 1H), 7.74 – 7.60 (m, 1H), 7.57 – 7.43 (m, 3H), 7.41 – 7.33 (m, 2H), 7.32 – 7.26 (m, 1H), 7.16 (t, *J* = 7.3 Hz, 1H), 7.01 (s, 1H), 6.68 (d, *J* = 8.3 Hz, 1H), 6.54 – 6.39 (m, 1H), 6.33 (d, *J* = 7.7 Hz, 1H), 5.81 – 5.47 (m, 2H), 5.35 (s, 1H), 4.35 – 4.18 (m, 2H), 4.11 (d, *J* = 10.1 Hz, 1H), 2.41 (s, 3H), 1.32 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.3, 168.9, 146.3 (q, *J* = 32.8 Hz), 143.7, 133.6, 132.8, 132.7, 132.5, 129.6, 127.9, 127.6, 127.3, 126.8, 126.6, 126.3, 125.9, 125.8, 124.7, 122.3, 122.2, 119.7 (q, *J* = 277.8 Hz), 108.0, 92.7 (q, *J* = 6.3 Hz), 68.3, 60.2, 59.7, 25.4, 14.3. ^{19}F NMR (376 MHz, $CDCl_3$) δ -65.77 (s). HRMS Calcd. For $C_{28}H_{26}F_3N_2O_3$ ($[M+H]^+$): 495.1890, found: 495.1877. The product was analyzed by HPLC to determine the enantiomeric excess: 97% ee (Chiralpak IE-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 17.95 and 21.08 min.



4l

Ethyl (*R*,*E*)-3-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-6-(thiophen-2-yl)-3-(trifluoromethyl)hex-5-enoate:

Yellow oil; 90% yield; $[\alpha]^{25}_{D}$ = 170.6 (*c* 3.27, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.65 (dd, *J* = 7.4, 0.7 Hz, 1H), 7.41 (td, *J* = 7.7, 1.3 Hz, 1H), 7.13 – 7.02 (m, 2H), 6.90 (dt, *J* = 12.4, 3.4 Hz, 2H), 6.78 (d, *J* = 7.8 Hz, 1H), 6.58 (d, *J* = 15.5 Hz, 1H), 5.97 (ddd, *J* = 15.4, 8.2, 1.1 Hz, 1H), 4.05 – 3.93 (m, 3H), 3.27 – 3.14 (m, 4H), 3.11 – 2.97 (m, 2H), 1.07 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.5, 157.8, 155.1, 145.9, 142.0, 133.4, 127.7, 127.2, 127.0 (q, *J* = 286.2 Hz), 125.3, 124.1, 123.5, 123.2, 122.9, 122.2, 108.5, 67.9 (q, *J* = 25.0 Hz), 60.6, 37.3, 35.7, 26.2, 13.8. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.68 (s). HRMS Calcd. For $C_{22}H_{22}F_3N_2O_3S$ ($[M+H]^+$): 451.1298, found: 459.1285. The product was analyzed by HPLC to determine the enantiomeric excess: 94% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 9.26 and 12.61 min.

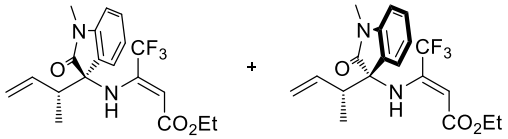


4m

Ethyl (*R*,*E*)-6-(furan-2-yl)-3-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-3-(trifluoromethyl)hex-5-enoate:

Yellow oil; 81% yield; $[\alpha]^{25}_{D}$ = 35.9 (*c* 2.29, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.65 (dd, *J* = 7.4, 0.7 Hz, 1H), 7.41 (td, *J* = 7.7, 1.3 Hz, 1H), 7.29 (d, *J* = 1.5 Hz, 1H), 7.08 (td, *J* = 7.6, 0.8 Hz, 1H), 6.79 (d, *J* = 7.8 Hz, 1H), 6.36 – 6.30 (m, 2H), 6.15 (d, *J* = 3.2 Hz, 1H), 6.07 (dt, *J* = 14.8, 7.2 Hz, 1H), 4.06 – 3.91 (m, 3H), 3.31 – 3.17 (m, 4H), 3.12 – 2.97 (m, 2H), 1.07 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.5, 157.7, 155.0, 152.5, 146.0, 141.8, 133.4, 127.0 (q, *J* = 286.4 Hz), 123.5, 123.2, 122.8, 122.1, 121.9, 111.1, 108.4, 107.4, 67.8 (q, *J* = 25.0 Hz), 60.5, 37.3, 35.7, 26.2, 13.8. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.57 (s). HRMS Calcd. For

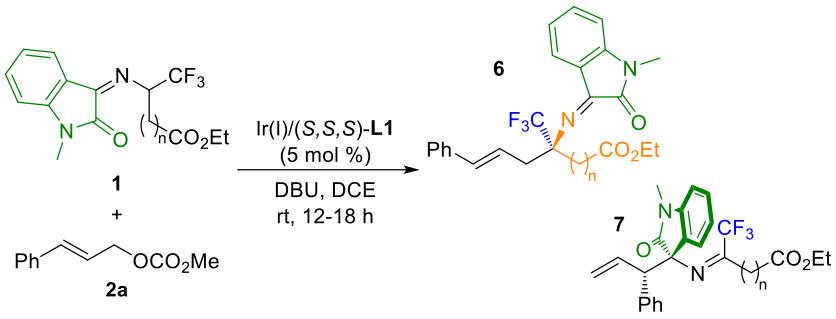
$C_{22}H_{22}F_3N_2O_4$ ([M+H]$^+$): 435.1526, found: 435.1516. The product was analyzed by HPLC to determine the enantiomeric excess: 85% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 9.39 and 14.25 min.



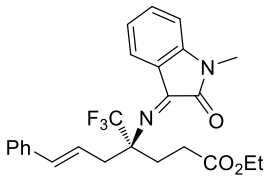
5n (minor + major)

Ethyl (*Z*)-3-(((*R*/*S*)-3-((*R*)-but-3-en-2-yl)-1-methyl-2-oxoindolin-3-yl)amino)-4,4,4-trifluorobut-2-enoate:

Yellow oil; 88% yield; $[\alpha]^{25}_D$ = -31.0 (*c* 2.45, CH_2Cl_2). Minor: ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.87 (s, 1H), 7.38 – 7.30 (m, 1H), 7.20 (dd, *J* = 6.7, 4.0 Hz, 1H), 7.11 – 7.03 (m, 1H), 6.81 (d, *J* = 7.9 Hz, 1H), 5.54 – 5.05 (m, 4H), 4.28 – 4.14 (m, 2H), 3.15 (s, 3H), 2.95 – 2.75 (m, 1H), 1.30 (t, *J* = 6.8, 3H), 1.12 (d, *J* = 6.8 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.9, 169.2, 146.9 (q, *J* = 33.0 Hz), 143.7, 135.7, 129.4, 127.7, 124.2, 122.4, 119.6 (q, *J* = 277.8 Hz), 118.8 , 107.9, 92.2 (q, *J* = 6.5 Hz), 67.1, 60.2, 48.6, 26.0, 14.4, 14.2. ^{19}F NMR (376 MHz, $CDCl_3$) δ -65.83 (s). Major: ^{1}H NMR (400 MHz, $CDCl_3$) δ 8.84 (s, 1H), 7.37 – 7.30 (m, 1H), 7.24 – 7.17 (m, 1H), 7.10 – 7.03 (m, 1H), 6.84 (d, *J* = 7.8 Hz, 1H), 5.93 – 5.77 (m, 1H), 5.56 – 5.03 (m, 3H), 4.30 – 4.12 (m, 2H), 3.20 (s, 3H), 2.94 – 2.76 (m, 1H), 1.29 (t, *J* = 7.2 Hz, 3H), 0.74 (d, *J* = 6.7 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 176.3, 168.9, 146.4 (q, *J* = 32.9 Hz), 143.8, 135.4, 129.4, 127.0, 124.7, 122.4, 120.1, 119.6 (q, *J* = 277.8 Hz), 108.0, 92.2 (q, *J* = 6.5 Hz), 67.0, 60.1, 47.9, 26.1, 14.4, 14.3. ^{19}F NMR (376 MHz, $CDCl_3$) δ -66.05 (s). HRMS Calcd. For $C_{19}H_{22}F_3N_2O_3$ ([M+H]$^+$): 383.1577, found: 383.1563. The product was analyzed by HPLC to determine the enantiomeric excess: Major: 89% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 7.26 and 10.79 min; Minor: 81% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 6.25 and 12.00 min.



In a 25 mL nitrogen-filled dry Schlenk tube, $[Ir(COD)Cl]_2$ (3.3 mg, 0.005 mmol), phosphoramidite ligand (*S,S,S*)-**L1** (5.6 mg, 0.01 mmol), degassed THF (0.5 mL) and degassed propylamine (0.5 mL) were added. After stirring at 50 °C for 30 mins, the reaction was concentrated via rotary evaporation under reduced pressure to give the iridium complex as a pale yellow solid[6]. Then, **1** (0.20 mmol), cinnamyl carbonate **2a**(0.22 mmol), DBU (0.2mmol) and dry DCE (2 mL) was added into the nitrogen-refilled Schlenk tube. Once starting material was consumed (monitored by TLC), the reaction mixture was concentrated via rotary evaporation under reduced pressure, and then purified by chromatography on silica gel (PE / EA = 5:1) to give corresponding products **6** and **7**.

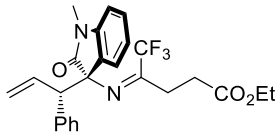


6a

Ethyl (*S*,*E*)-4-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-7-phenyl-4-(trifluoromethyl)hept-6-enoate:

Yellow oil; 44% yield; $[\alpha]^{25}_{D}$ = 179.2 (*c* 0.61, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.61 (d, *J* = 7.3 Hz, 1H), 7.41 (td, *J* = 7.7, 1.0 Hz, 1H), 7.29 – 7.21 (m, 4H), 7.20 – 7.13 (m, 1H), 7.08 (t, *J* = 7.4 Hz, 1H), 6.77 (d, *J* = 7.8 Hz, 1H), 6.39 (d, *J* = 15.7 Hz, 1H), 6.19 – 6.03 (m, 1H), 4.11 – 3.99 (m, 2H), 3.32 (dd, *J* = 14.5, 7.6 Hz, 1H), 3.20 (s,3H), 3.15 – 2.98 (m, 2H), 2.57 – 2.40 (m, 2H), 2.32 – 2.17 (m, 1H), 1.19 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 172.8, 157.2, 154.5, 146.0, 137.3, 133.9, 133.4, 128.4, 127.2, 126.2, 126.1 (q, *J* = 284.3 Hz), 124.2, 123.4, 122.9, 122.1, 108.4, 68.9 (q, *J* = 23.9 Hz),, 60.5, 37.0, 29.4, 27.8, 26.2, 14.1. ^{19}F

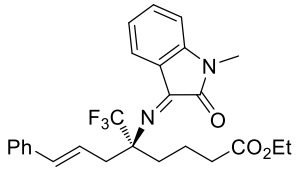
NMR (376 MHz, $CDCl_3$) δ -74.82 (s). HRMS Calcd. For $C_{25}H_{26}F_3N_2O_3$ ($[M+H]^+$): 459.1890, found: 459.1879. The product was analyzed by HPLC to determine the enantiomeric excess: 90% ee (Chiralpak ID-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 244 nm); t_r = 9.98 and 12.34 min.



7a

Ethyl (*Z*)-5,5,5-trifluoro-4-(((*S*)-1-methyl-2-oxo-3-((*S*)-1-phenylallyl)indolin-3-yl)imino)pentanoate:

Yellow oil; 35% yield; $[\alpha]^{25}_D$ = 47.5 (*c* 1.03, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.32 (td, *J* = 7.6, 1.6 Hz, 1H), 7.20 – 6.95 (m, 5H), 6.78 – 6.69 (m, 2H), 6.65 (d, *J* = 7.8 Hz, 1H), 6.63 – 6.53 (m, 1H), 5.41 – 5.07 (m, 2H), 4.07 (d, *J* = 6.9 Hz, 1H), 3.99 (q, *J* = 7.1 Hz, 2H), 2.76 (s, 3H), 2.45 – 2.27 (m, 1H), 2.11 (dd, *J* = 9.5, 7.2 Hz, 2H), 2.02 – 1.88 (m, 1H), 1.16 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.4, 171.2, 160.5 (q, *J* = 32.6 Hz), 143.2, 136.7, 135.4, 129.7, 129.5, 128.9, 127.5, 127.2, 124.7, 122.8, 119.5 (q, *J* = 281.6 Hz), 119.3, 108.5, 72.1, 60.8, 58.0, 28.6, 25.9, 25.8, 14.1. ^{19}F NMR (376 MHz, $CDCl_3$) δ -71.32 (s). HRMS Calcd. For $C_{25}H_{26}F_3N_2O_3$ ($[M+H]^+$): 459.1890, found: 459.1876. The product was analyzed by HPLC to determine the enantiomeric excess: 94% ee (Chiralpak IE-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 304 nm); t_r = 6.29 and 7.58 min.

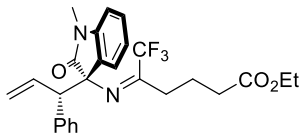


6b

Ethyl (*S*,*E*)-5-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-8-phenyl-5-(trifluoromethyl)oct-7-enoate:

Yellow oil; 45% yield; $[\alpha]^{25}_D$ = 31.7 (*c* 0.57, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.62 (d, *J* = 7.2 Hz, 1H), 7.40 (dt, *J* = 7.8, 3.9 Hz, 1H), 7.32 – 7.21 (m, 4H), 7.18 (dd, *J* = 6.1, 2.4 Hz,

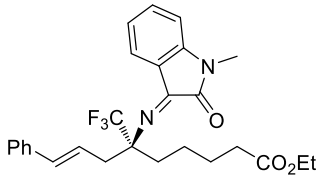
1H), 7.08 (t, *J* = 7.5 Hz, 1H), 6.77 (d, *J* = 7.8 Hz, 1H), 6.38 (d, *J* = 15.7 Hz, 1H), 6.20 – 6.02 (m, 1H), 4.16 – 4.01 (m, 2H), 3.28 (dd, *J* = 14.5, 7.5 Hz, 1H), 3.19 (s, 3H), 3.07 (dd, *J* = 14.5, 7.5 Hz, 1H), 2.67 (t, *J* = 11.5 Hz, 1H), 2.31 – 2.18 (m, 2H), 2.18 – 2.08 (m, 1H), 1.90 – 1.72 (m, 1H), 1.63 – 1.45 (m, 1H), 1.21 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 173.2, 157.2, 153.9, 145.8, 137.4, 133.7, 133.2, 128.4, 127.9 (q, *J* = 287.1 Hz), 127.2, 126.2, 124.5, 123.4, 122.9, 122.2, 108.4, 69.5 (q, *J* = 24.2 Hz), 58.3, 37.1, 34.6, 32.5, 26.2, 19.8, 8.2. ^{19}F NMR (376 MHz, $CDCl_3$) δ -74.64 (s). HRMS Calcd. For $C_{26}H_{28}F_3N_2O_3$ ($[M+H]^+$): 473.2047, found: 473.2038. The product was analyzed by HPLC to determine the enantiomeric excess: 93% ee (Chiralpak AS-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 250 nm); t_r = 6.80 and 9.42 min.



7b

Ethyl (*Z*)-6,6,6-trifluoro-5-(((*S*)-1-methyl-2-oxo-3-((*S*)-1-phenylallyl)indolin-3-yl)imino)hexanoate:

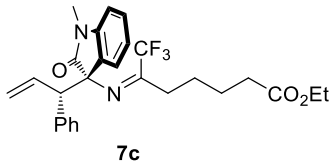
Yellow oil; 37% yield; $[\alpha]^{25}_D$ = 28.0 (*c* 4.56, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.37 – 7.28 (m, 1H), 7.20 – 6.97 (m, 5H), 6.76 – 6.68 (m, 2H), 6.65 (d, *J* = 7.8 Hz, 1H), 6.62 – 6.51 (m, 1H), 5.24 (ddt, *J* = 73.7, 17.2, 1.5 Hz, 2H), 4.08 (d, *J* = 6.8 Hz, 1H), 4.05 – 3.94 (m, 2H), 2.76 (s, 3H), 1.98 – 1.75 (m, 4H), 1.73 – 1.55 (m, 2H), 1.17 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.2, 172.0, 161.6 (q, *J* = 32.3 Hz), 143.1, 136.8, 135.4, 129.6, 129.5, 129.1, 127.5, 127.2, 124.8, 122.7, 119.5 (q, *J* = 282.1 Hz), 119.3, 108.3, 72.1, 60.4, 58.3, 34.0, 30.6, 25.7, 20.0, 14.1. ^{19}F NMR (376 MHz, $CDCl_3$) δ -70.84 (s). HRMS Calcd. For $C_{26}H_{28}F_3N_2O_3$ ($[M+H]^+$): 473.2047, found: 473.2037. The product was analyzed by HPLC to determine the enantiomeric excess: 95% ee (Chiralpak AS-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 210 nm); t_r = 4.37 and 4.70 min.



6c

Ethyl (*S*,*E*)-6-(((*Z*)-1-methyl-2-oxoindolin-3-ylidene)amino)-9-phenyl-6-(trifluoromethyl)non-8-enoate:

Yellow oil; 44% yield; $[\alpha]^{25}_{D}$ = 78.8 (*c* 1.09, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.62 (d, *J* = 7.0 Hz, 1H), 7.40 (td, *J* = 7.7, 0.9 Hz, 1H), 7.26 (dd, *J* = 19.2, 4.9 Hz, 4H), 7.20 – 7.13 (m, 1H), 7.08 (t, *J* = 7.5 Hz, 1H), 6.77 (d, *J* = 7.8 Hz, 1H), 6.38 (d, *J* = 15.7 Hz, 1H), 6.20 – 6.02 (m, 1H), 4.05 (q, *J* = 7.1 Hz, 2H), 3.35 – 3.24 (m, 1H), 3.20 (s, 3H), 3.12 – 3.02 (m, 1H), 2.71 – 2.57 (m, 1H), 2.24 (t, *J* = 7.4 Hz, 2H), 2.20 – 2.04 (m, 1H), 1.62 – 1.45 (m, 4H), 1.19 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 173.5, 157.2, 153.7, 145.8, 137.4, 133.6, 133.2, 128.4, 127.9 (q, *J* = 286.8 Hz), 127.2, 126.2, 124.6, 123.4, 122.9, 122.2, 108.4, 69.6 (q, *J* = 23.9 Hz), 60.2, 37.1, 34.1, 32.8, 26.2, 25.5, 23.7, 14.2. ^{19}F NMR (376 MHz, $CDCl_3$) δ -74.65 (s). HRMS Calcd. For $C_{27}H_{30}F_3N_2O_3$ ($[M+H]^+$): 487.2203, found: 487.2193. The product was analyzed by HPLC to determine the enantiomeric excess: 90% ee (Chiralpak IE-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 254 nm); t_r = 8.52 and 9.34 min.



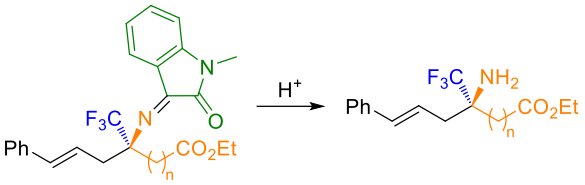
7c

Ethyl (*Z*)-7,7,7-trifluoro-6-(((*S*)-1-methyl-2-oxo-3-((*S*)-1-phenylallyl)indolin-3-yl)imino)heptanoate:

Yellow oil; 36% yield; $[\alpha]^{25}_{D}$ = 31.9 (*c* 1.61, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.33 (td, *J* = 7.8, 1.8 Hz, 1H), 7.19 – 6.96 (m, 5H), 6.78 – 6.50 (m, 4H), 5.38 – 5.07 (m, 2H), 4.12 – 3.96 (m, 3H), 2.76 (s, 3H), 1.97 (t, *J* = 7.6 Hz, 2H), 1.91 – 1.69 (m, 2H), 1.44 – 1.02 (m, 5H), 0.98 – 0.72 (m, 2H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 175.2, 172.9, 161.6 (q, *J* = 32.1 Hz), 143.1, 136.8, 135.4, 129.6, 129.5, 129.2, 127.5, 127.2, 124.9, 122.7, 119.5 (q, *J* = 283.2 Hz), 119.3, 108.2, 72.1, 60.3, 58.3, 33.5, 31.1, 25.7, 25.2, 24.1, 14.2. ^{19}F NMR (376 MHz, $CDCl_3$) δ -70.86

(s). HRMS Calcd. For $C_{27}H_{30}F_3N_2O_3$ ([M+H]$^+$): 487.2203, found: 487.2193. The product was analyzed by HPLC to determine the enantiomeric excess: 97% ee (Chiralpak AD-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 220 nm); t_r = 4.92 and 7.21 min.

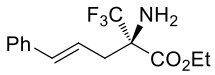
5. Synthetic transformations



3a, n = 0
4a, n = 1

8
9

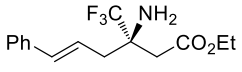
To a 10 mL vial, **3a** or **4a** (0.4 mmol) was diluted in 1 ml MeOH, then NH_2OH•OAc (0.5 mmol) was added. After stirring for 3 hours, the solvent was removed by rotary evaporation, **8** or **9** were obtained by chromatography on silica gel (PE / EA = 20 : 1) as colorless oil.



8

Ethyl (*S*,*E*)-2-amino-5-phenyl-2-(trifluoromethyl)pent-4-enoate:

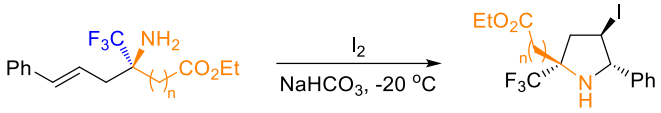
Colorless oil; 80% yield; $[\alpha]^{25}_D$ = 11.3 (*c* 3.80, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.49 – 7.05 (m, 5H), 6.56 (d, *J* = 15.8 Hz, 1H), 6.15 – 5.96 (m, 1H), 4.31 (q, *J* = 7.1 Hz, 2H), 2.98 (dd, *J* = 13.8, 7.1 Hz, 1H), 2.65 (dd, *J* = 13.8, 7.8 Hz, 1H), 1.94 (s, 2H), 1.32 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 168.9, 136.4, 136.2, 128.6, 127.9, 126.4, 124.9 (q, *J* = 286.5 Hz), 121.1, 64.3 (q, *J* = 26.9 Hz), 36.7, 14.1. ^{19}F NMR (376 MHz, $CDCl_3$) δ -77.10 (s). HRMS Calcd. For $C_{14}H_{17}F_3NO_2$ ([M+H]$^+$): 288.1143, found: 288.1130. As the product could not be split by HPLC, the enantiomeric excess was determined as 95% base on products **3a** and **12**.



9

Ethyl (*S*,*E*)-3-amino-6-phenyl-3-(trifluoromethyl)hex-5-enoate:

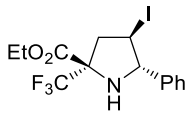
Colorless oil; 86% yield; $[\alpha]^{25}_D$ = -1.5 (*c* 3.88, CH_2Cl_2). ^1H NMR (400 MHz, $CDCl_3$) δ 7.45 – 7.15 (m, 5H), 6.52 (d, *J* = 15.8 Hz, 1H), 6.32 – 6.10 (m, 1H), 4.15 (qd, *J* = 7.1, 1.5 Hz, 2H), 2.74 – 2.50 (m, 4H), 1.26 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 170.1, 136.8, 135.3, 128.6, 127.7, 127.1 (q, *J* = 287.1 Hz), 126.3, 122.5, 61.0, 58.3 (q, *J* = 25.9 Hz), 38.9, 38.3, 14.1. ^{19}F NMR (376 MHz, $CDCl_3$) δ -79.49 (s). HRMS Calcd. For $C_{15}H_{19}F_3NO_2$ ($[M+H]^+$): 302.1362, found: 302.1352. The product was analyzed by HPLC to determine the enantiomeric excess: 91% ee (Chiralpak AD-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 250 nm); t_r = 9.83 and 12.00 min.



8
9

10
11

To a 5 mL vial equipped with stirrer bar were added **8** or **9** (0.2 mmol), I_2 (0.6 mmol) and CH_3CN (1 mL). $NaHCO_3$ was added to the mixture and stirred at -20 °C for 12 h. Once the start material was disappeared, the mixture was quenched by addition of CH_2Cl_2 (5 mL) and saturated $Na_2S_2O_3$ (5 mL), and the aqueous layer was extracted with additional portions of CH_2Cl_2. The combined organic layers were combined, concentrated, purified by flash chromatography on silica gel (PE / EA = 5:1) to give the desired product **10** or **11** as brown oil.

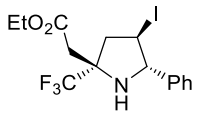


10

Ethyl (2*R*,4*R*,5*S*)-4-iodo-5-phenyl-2-(trifluoromethyl)pyrrolidine-2-carboxylate:

Colorless oil; 81% yield; $[\alpha]^{25}_D$ = 12.5 (*c* 0.83, CH_2Cl_2). ^1H NMR (400 MHz, $CDCl_3$) δ 7.50 – 7.29 (m, 5H), 4.55 – 4.21 (m, 3H), 3.86 – 3.69 (m, 1H), 3.24 (s, 1H), 3.04 (dd, *J* = 13.8, 6.9 Hz, 1H), 2.73 (dd, *J* = 13.7, 12.4 Hz, 1H), 1.37 (t, *J* = 7.1 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.7, 137.2, 129.0, 128.9, 127.3, 124.6 (q, *J* = 283.9 Hz), 73.4, 71.1 (q, *J* = 29.7 Hz), 63.6, 44.0, 24.0, 14.0. ^{19}F NMR (376 MHz, $CDCl_3$) δ -76.30 (s). HRMS Calcd. For $C_{14}H_{16}F_3INO_2$ ($[M+H]^+$): 414.0172, found: 414.0157. The product was analyzed by HPLC to determine the

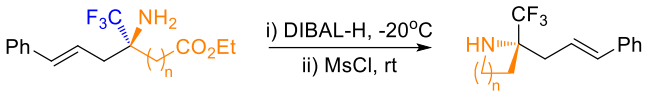
enantiomeric excess: 95% ee (Chiralpak IE-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 220 nm); t_r = 4.19 and 4.54 min.



11

Ethyl 2-((2*S*,4*R*,5*S*)-4-iodo-5-phenyl-2-(trifluoromethyl)pyrrolidin-2-yl)acetate:

Colorless oil; 86% yield; $[\alpha]^{25}_D$ = -1.9 (*c* 1.87, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.53 – 7.41 (m, 2H), 7.41 – 7.30 (m, 3H), 4.38 (d, *J* = 10.2 Hz, 1H), 4.31 – 4.18 (m, 2H), 3.96 (dd, *J* = 18.8, 10.4 Hz, 1H), 2.95 – 2.55 (m, 5H), 1.31 (t, *J* = 7.2 Hz, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 169.9, 137.7, 128.7, 128.6, 127.0 (q, *J* = 291.5 Hz), 127.3, 73.0, 65.7 (q, *J* = 27.6 Hz), 61.4, 43.5, 38.0, 38.0, 25.5, 14.2. ^{19}F NMR (376 MHz, $CDCl_3$) δ -80.33 (s), -80.57 (s). HRMS Calcd. For $C_{15}H_{18}F_3INO_2$ ($[M+H]^+$): 428.0329, found: 428.0317. The product was analyzed by HPLC to determine the enantiomeric excess: 91% ee (Chiralpak OD-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 210 nm); t_r = 4.38 and 4.62 min.

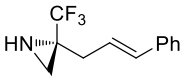


8
9

12
13

8 or **9** (0.4 mmol) was added to a 25 ml nitrogen-filled dry shlenk tube, followed by THF. Under -20 ℃, DIBAL-H (1.0 mmol) was added dropwised. After stirring for 2 hours at room temprature, the reaction was quenched by cold NaOH aq (1 M, 10 ml), and the aqueous layer was extracted with additional portions of CH_2Cl_2. The combined organic layers were combined, concentrated and purified by flash chromatography on silica gel (PE / EA = 5 : 1). The crude product, CH_2Cl_2 (2 mL) and Et_3N (, 0.5 mmol) were added to a 25-mL vial,. After stirring for 5 mins under 0 ℃, MsCl (0.4 mmol) was added via a microsyringe, then the reaction was allowed to react for overnight at rt. Once the starting material was consumed (monitored by TLC), the reaction mixture was concentrated via rotary evaporation under reduced pressure,

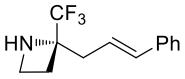
and then purified by flash chromatography on Al_2O_3 (PE / EA = 10 : 1) to give **12** or **13** as colorless oil.



12

(*R*)-2-cinnamyl-2-(trifluoromethyl)aziridine:

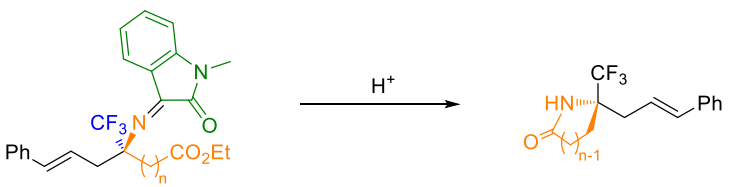
Colorless oil; 85% yield; $[\alpha]^{25}_D$ = 0.4 (*c* 1.03, CH_2Cl_2). ^{1}H NMR (400 MHz, DMSO) δ 7.42 (d, *J* = 7.4 Hz, 2H), 7.33 (t, *J* = 7.4 Hz, 2H), 7.24 (t, *J* = 7.1 Hz, 1H), 6.55 (d, *J* = 15.8 Hz, 1H), 6.38 – 6.14 (m, 1H), 2.70 (d, *J* = 7.0 Hz, 2H), 2.12 (t, *J* = 8.2 Hz, 1H), 1.91 (d, *J* = 9.7 Hz, 1H), 1.78 (d, *J* = 7.9 Hz, 1H). ^{13}C NMR (101 MHz, DMSO) δ 137.1, 133.6, 129.1, 127.9, 126.9 (q, *J* = 277.4 Hz), 126.6, 124.2, 37.9 (q, *J* = 33.2 Hz), 33.5, 26.8. ^{19}F NMR (376 MHz, $CDCl_3$) δ -70.54 (s). HRMS Calcd. For $C_{12}H_{13}F_3N$ ([M+H]$^+$): 228.0995, found: 228.0989. The product was analyzed by HPLC to determine the enantiomeric excess: 92% ee (Chiralpak AD-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 254 nm); t_r = 6.34 and 8.35 min.



13

(*R*)-2-cinnamyl-2-(trifluoromethyl)azetidine:

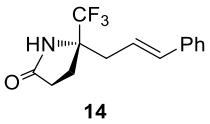
Colorless oil; 80% yield; $[\alpha]^{25}_D$ = -32.2 (*c* 0.64, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.56 – 7.09 (m, 5H), 6.60 (d, *J* = 15.7 Hz, 1H), 6.48 – 6.24 (m, 1H), 3.63 – 3.34 (m, 2H), 2.77 – 2.42 (m, 4H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 135.2, 128.7, 127.7,126.8 (q, *J* = 283.4 Hz) 126.3, 122.4, 65.3 (q, *J* = 28.6 Hz), 41.3, 37.7, 24.6. ^{19}F NMR (376 MHz, $CDCl_3$) δ -81.85 (s). HRMS Calcd. For $C_{13}H_{15}F_3N$ ([M+H]$^+$): 242.1151, found: 242.1149. The product was analyzed by HPLC to determine the enantiomeric excess: 90% ee (Chiralpak AD-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 250 nm); t_r = 5.70 and 13.34 min.



6a, n = 2
6b, n = 3

14
15

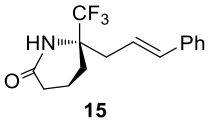
To a 10 mL vial, **6a** or **6b** (0.4 mmol) was diluted in 1 ml MeOH, then NH_2OH•OAc (0.5 mmol) was added. After stirring for 3 hours, the solvent was removed by rotary evaporation, **14** or **15** were obtained by chromatography on silica gel (PE / EA = 20 : 1) as colorless oil.



14

(*R*)-4-cinnamyl-4-(trifluoromethyl)azetidin-2-one:

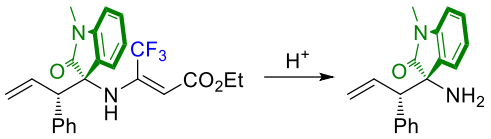
Colorless oil; 80% yield; $[\alpha]^{25}_D$ = -14.0 (*c* 0.73, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.42 – 7.19 (m, 5H), 6.89 (s, 1H), 6.55 (d, *J* = 15.8 Hz, 1H), 6.18 – 6.00 (m, 1H), 2.77 (ddd, *J* = 14.4, 6.2, 1.4 Hz, 1H), 2.64 – 2.43 (m, 2H), 2.43 – 2.25 (m, 2H), 2.21 – 2.04 (m, 1H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 178.0, 136.4, 136.3, 128.7, 128.0, 126.5 (q, *J* = 285.7 Hz), 126.4, 120.7, 64. 0 (q, *J* = 27.9 Hz), 37.4, 29.7, 25.5. ^{19}F NMR (376 MHz, $CDCl_3$) δ -80.14 (s). HRMS Calcd. For $C_{14}H_{15}F_3NO$ ($[M+H]^+$): 270.1100, found: 270.1094. The product was analyzed by HPLC to determine the enantiomeric excess: 90% ee (Chiralpak AD-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 250 nm); t_r = 10.20 and 14.62 min.



15

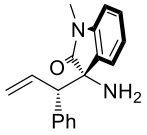
(*S*)-5-cinnamyl-5-(trifluoromethyl)pyrrolidin-2-one:

Colorless oil; 86% yield; $[\alpha]^{25}_D$ = -52.9 (*c* 0.75, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.38 – 7.28 (m, 4H), 7.28 – 7.23 (m, 1H), 6.65 (brs, 1H), 6.52 (d, *J* = 15.8 Hz, 1H), 6.21 – 5.99 (m, 1H), 2.68 (dd, *J* = 14.2, 5.8 Hz, 1H), 2.55 (dd, *J* = 14.3, 8.7 Hz, 1H), 2.44 – 2.22 (m, 2H), 2.16 – 2.01 (m, 1H), 2.01 – 1.71 (m, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 173.0, 136.5, 136.2, 128.7, 127.9, 126.4, 126.3 (q, *J* = 287.1 Hz), 121.0, 60.2 (q, *J* = 26.4 Hz), 39.6, 30.7, 25.8, 17.5. ^{19}F NMR (376 MHz, $CDCl_3$) δ -78.81 (s). HRMS Calcd. For $C_{15}H_{17}F_3NO$ ($[M+H]^+$): 284.1257, found: 284.1251. The product was analyzed by HPLC to determine the enantiomeric excess: 93% ee (Chiralpak AD-H, *i*-propanol/hexane = 5/95, flow rate 1.0 mL/min, λ = 250 nm); t_r = 12.31 and 16.10 min.



5a **16**

Branched allylation product **5a** (0.2 mmol) was added to a 10 mL vial, then (+)-CSA (0.3 mmol) deluted in 1 mL MeOH was added to the vial. After stirring for 3 hours, the solvent was removed by rotary evaporation and **16** was obtained by chromatography on silica gel (PE / EA / Et_3N = 5 : 1: 1) as colorless oil.



16

(*S*)-3-amino-1-methyl-3-((*S*)-1-phenylallyl)indolin-2-one:

Yellow oil; 86% yield; $[\alpha]^{25}_D$ = 3.9 (*c* 3.66, CH_2Cl_2). ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.44 (dd, *J* = 7.4, 0.8 Hz, 1H), 7.34 – 7.26 (m, 1H), 7.18 – 6.96 (m, 4H), 6.75 – 6.64 (m, 2H), 6.56 (d, *J* = 7.8 Hz, 1H), 6.43 (ddd, *J* = 17.0, 10.1, 9.2 Hz, 1H), 5.43 – 5.19 (m, 2H), 3.69 (d, *J* = 9.1 Hz, 1H), 2.74 (s, 3H). ^{13}C NMR (101 MHz, $CDCl_3$) δ 178.9, 143.7, 137.6, 135.1, 129.9, 129.2, 128.4, 127.6, 127.0, 124.4, 122.4, 119.6, 108.0, 64.6, 58.7, 25.6. HRMS Calcd. For $C_{18}H_{19}N_2O$ ($[M+H]^+$): 279.1492, found: 279.1489. The product was analyzed by HPLC to determine the enantiomeric excess: 98% ee (Chiralpak OD-H, *i*-propanol/hexane = 40/60, flow rate 1.0 mL/min, λ = 220 nm); t_r = 5.53 and 5.96 min.

6. References

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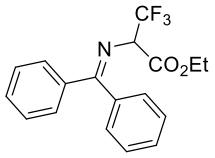
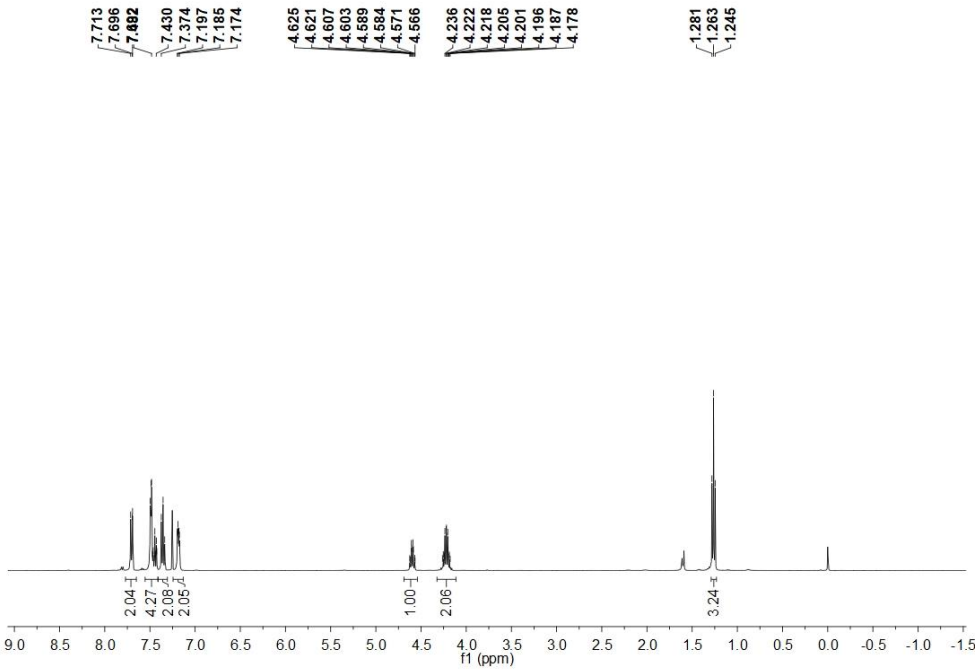
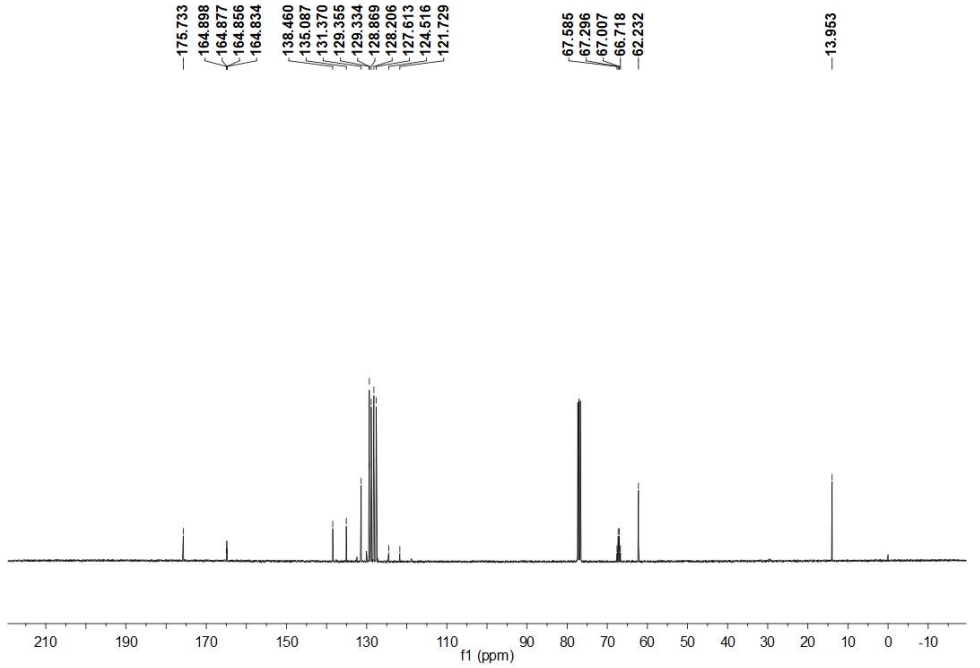
7. NMR spectra



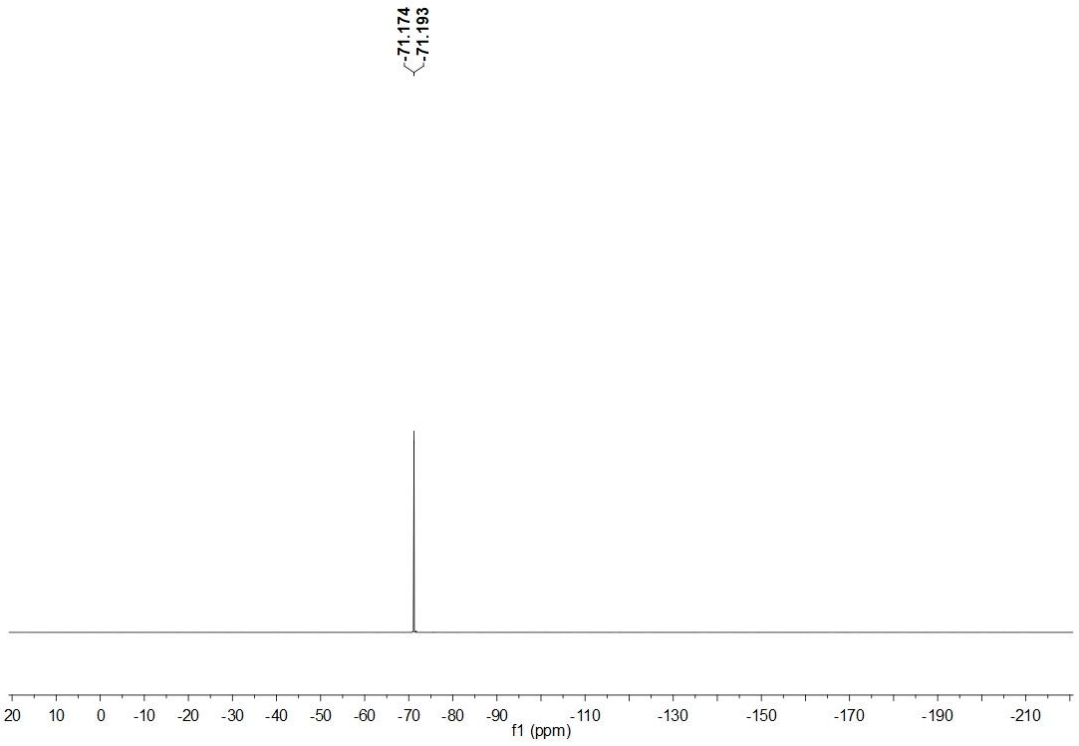
1a



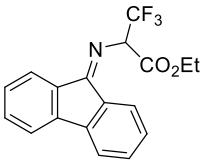
^{1}H NMR (400 MHz, $CDCl_3$)



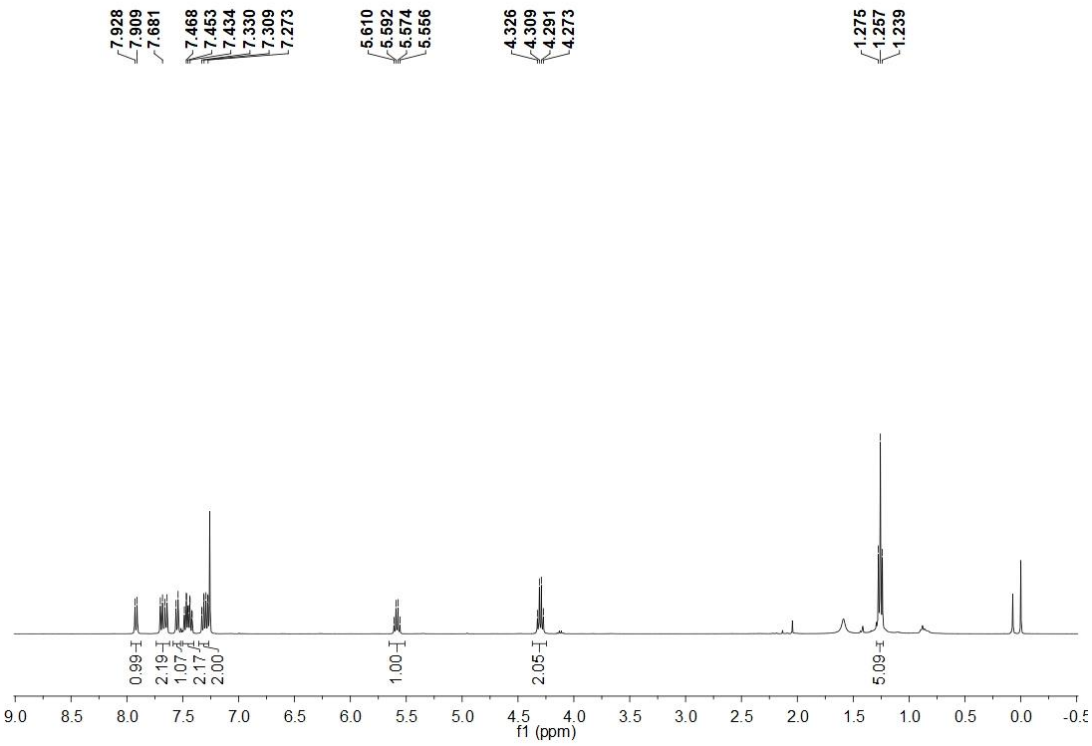
^{13}C NMR (101 MHz, $CDCl_3$)



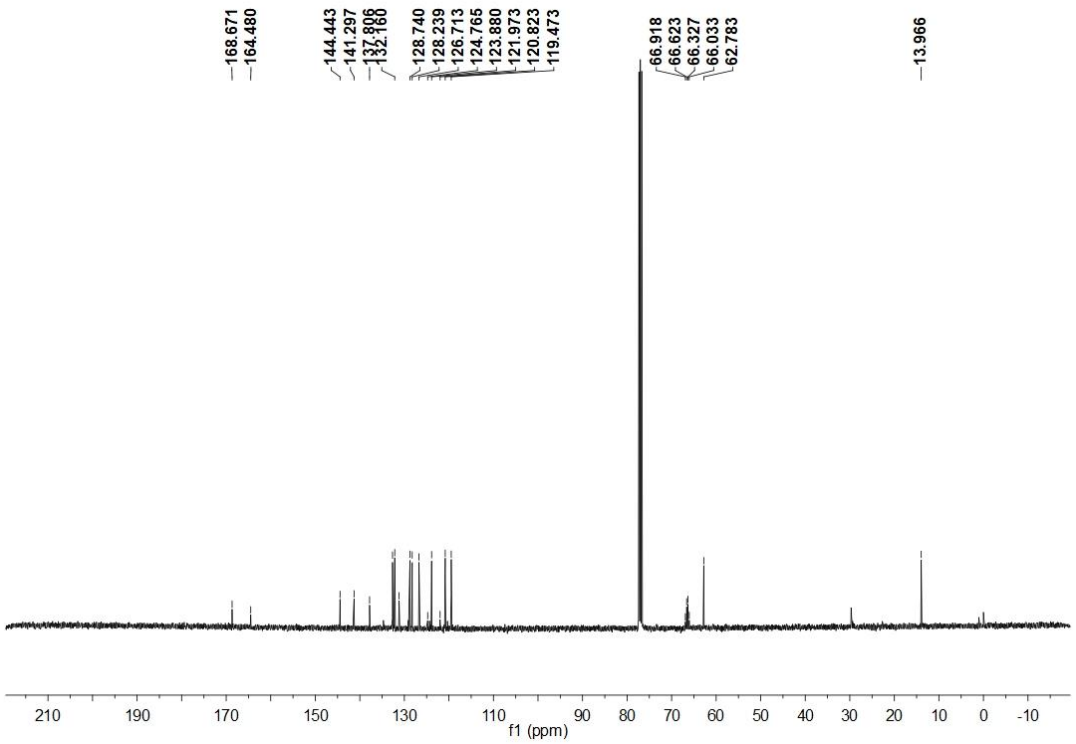
^{19}F NMR (376 MHz, $CDCl_3$)



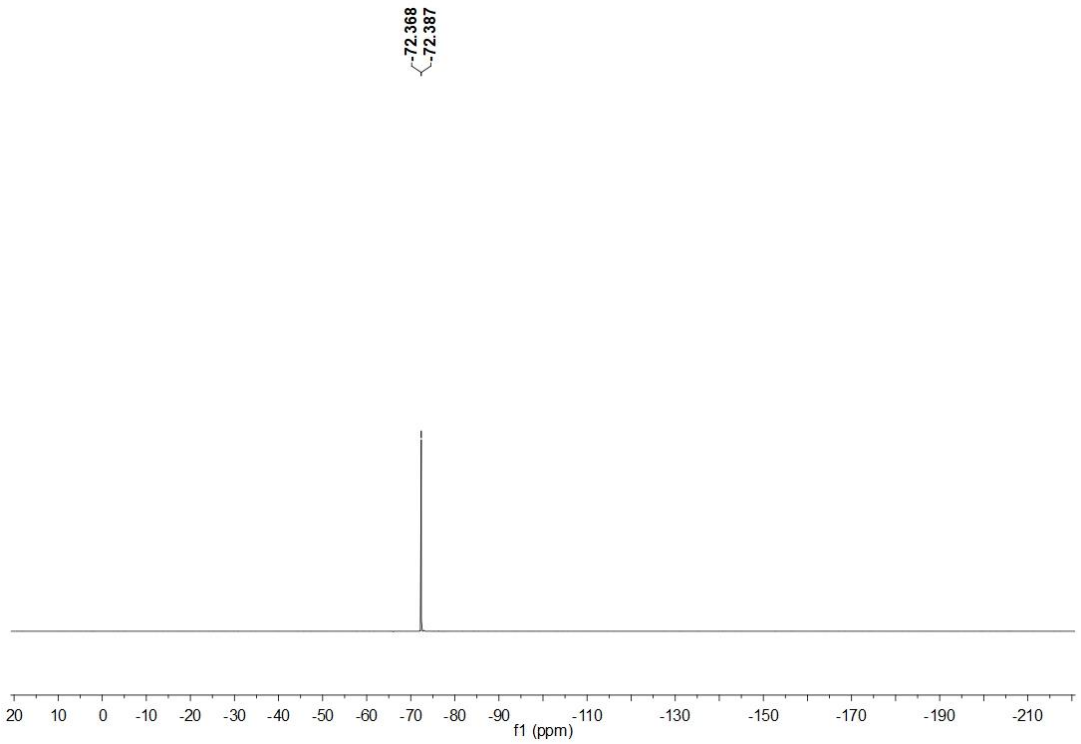
1b



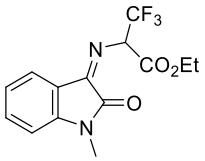
^{1}H NMR (400 MHz, $CDCl_3$)



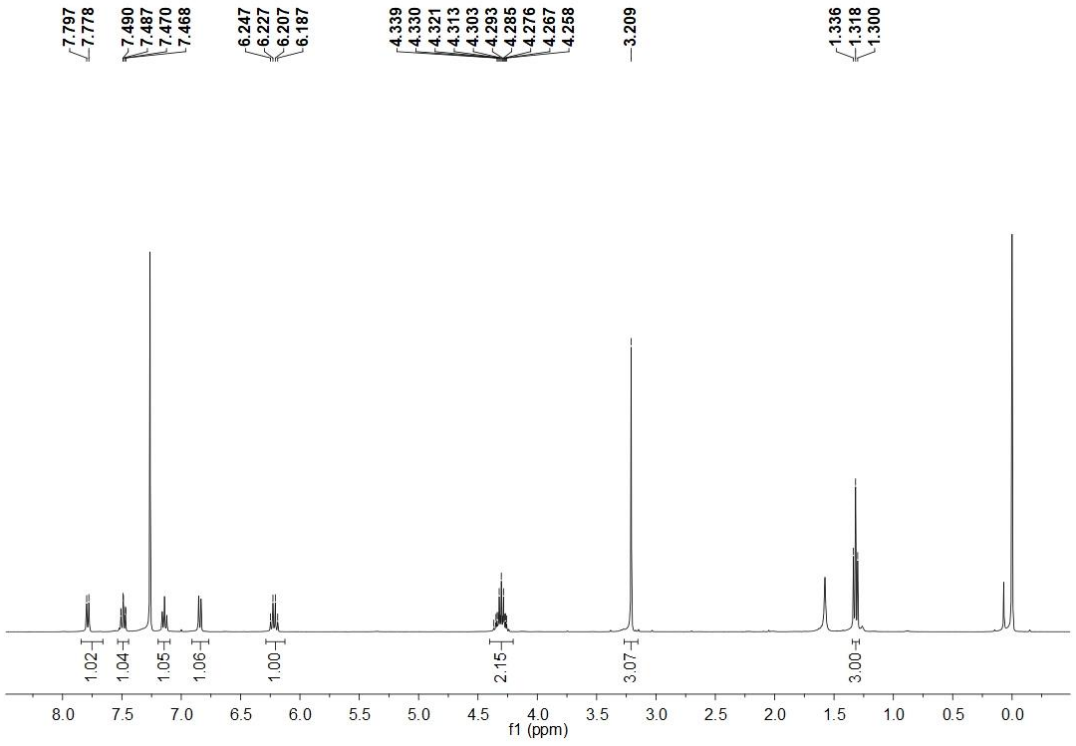
^{13}C NMR (101 MHz, $CDCl_3$)



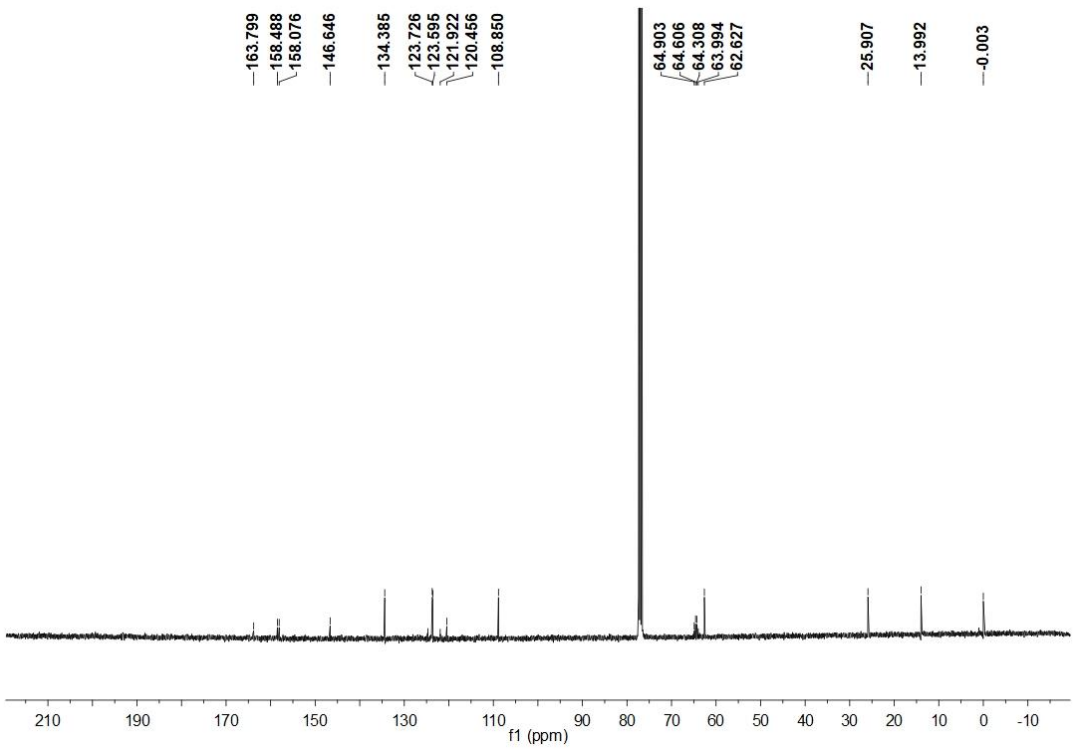
^{19}F NMR (376 MHz, $CDCl_3$)



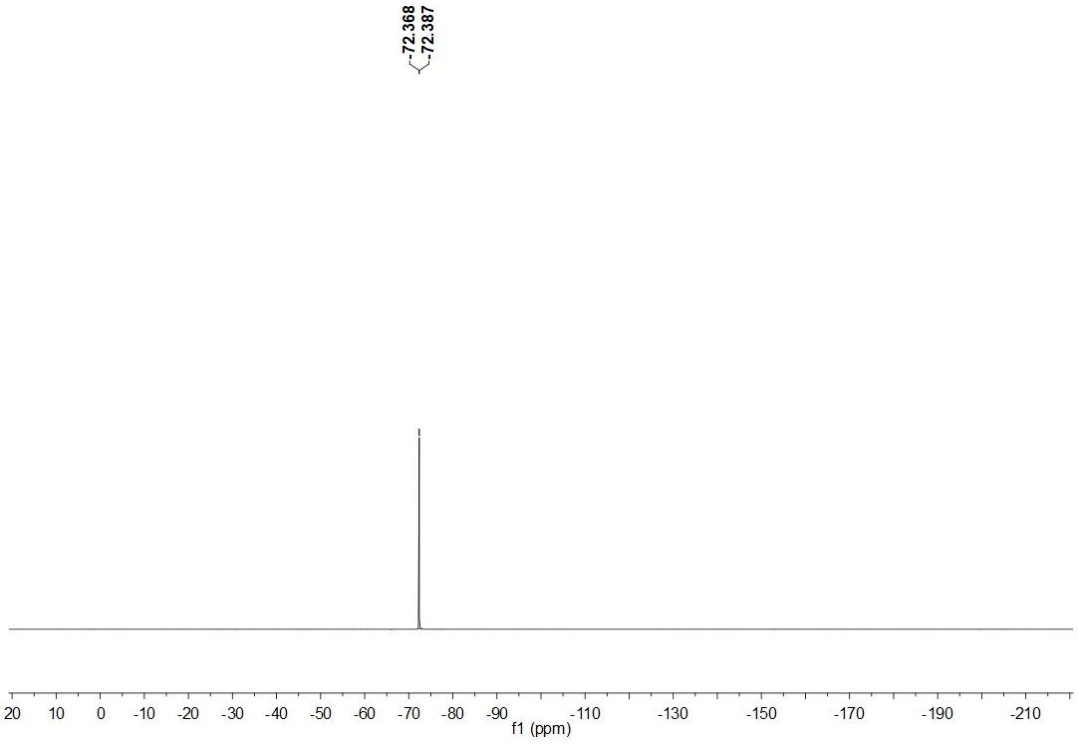
1c



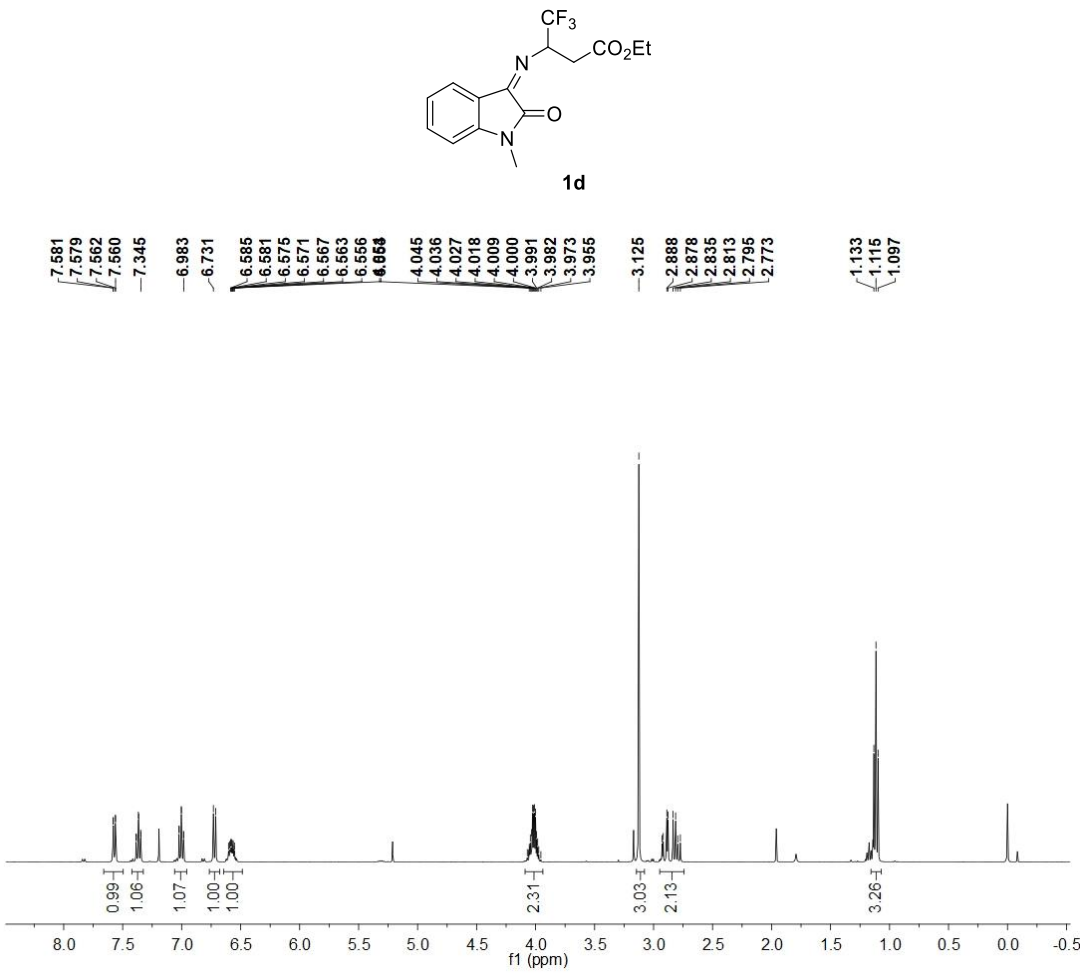
^{1}H NMR (400 MHz, $CDCl_3$)



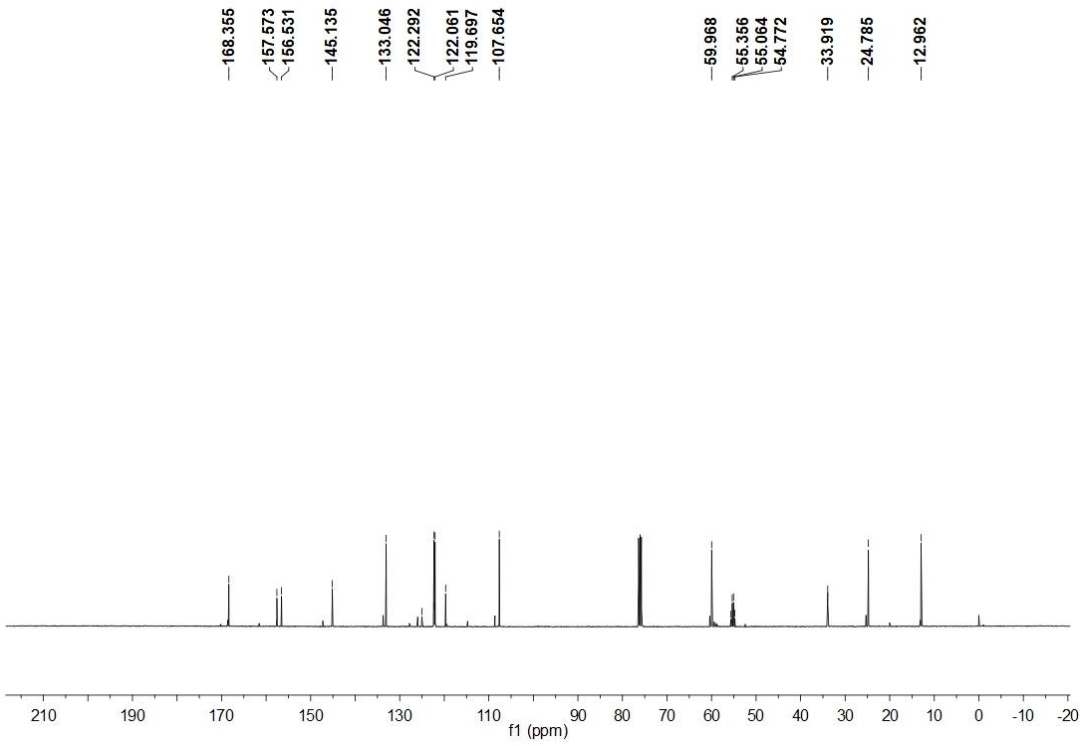
^{13}C NMR (101 MHz, $CDCl_3$)



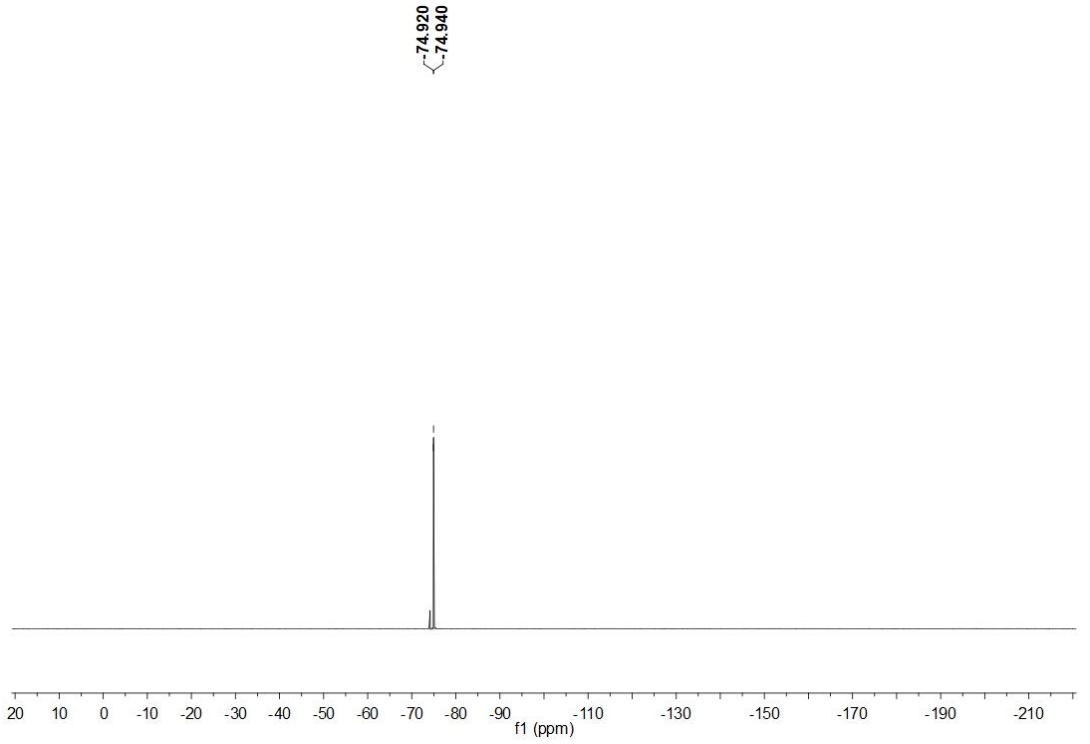
^{19}F NMR (376 MHz, $CDCl_3$)



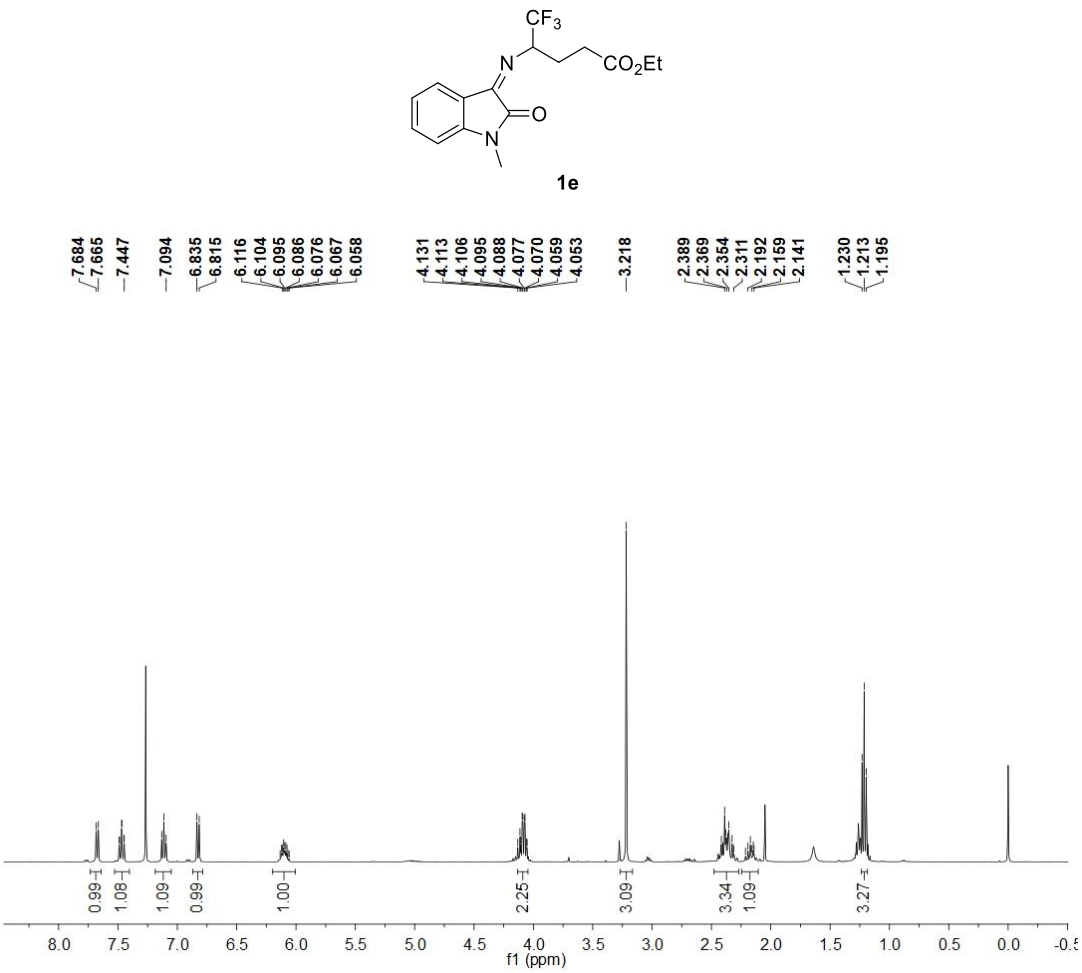
^{1}H NMR (400 MHz, $CDCl_3$)



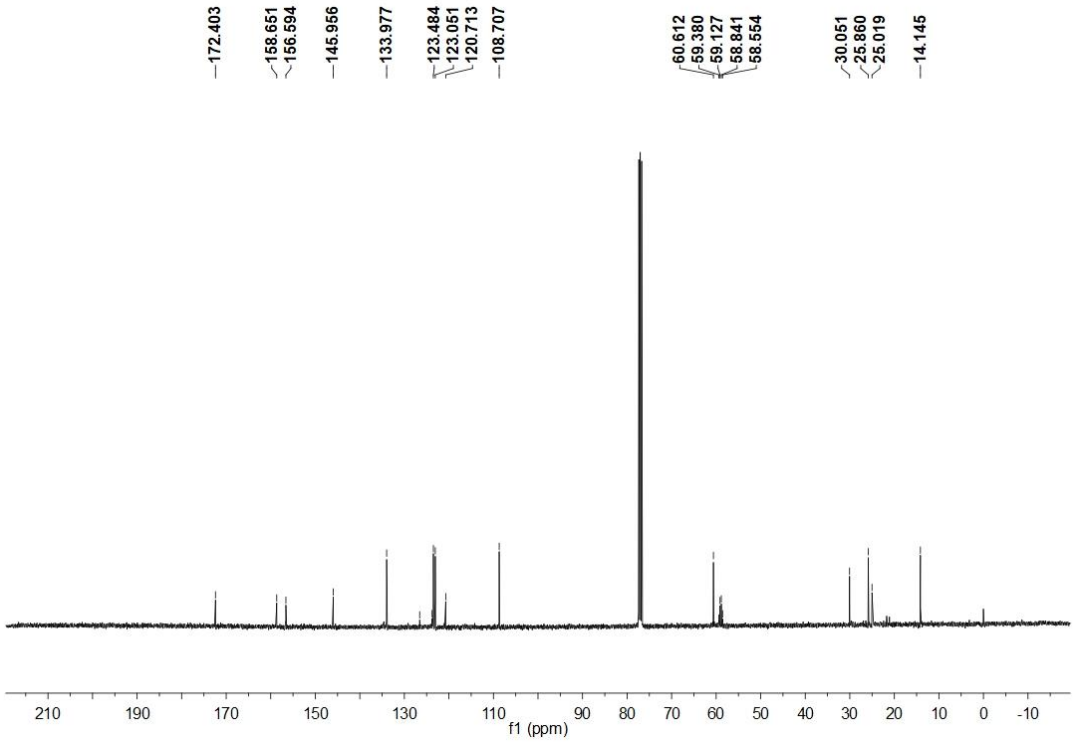
^{13}C NMR (101 MHz, $CDCl_3$)



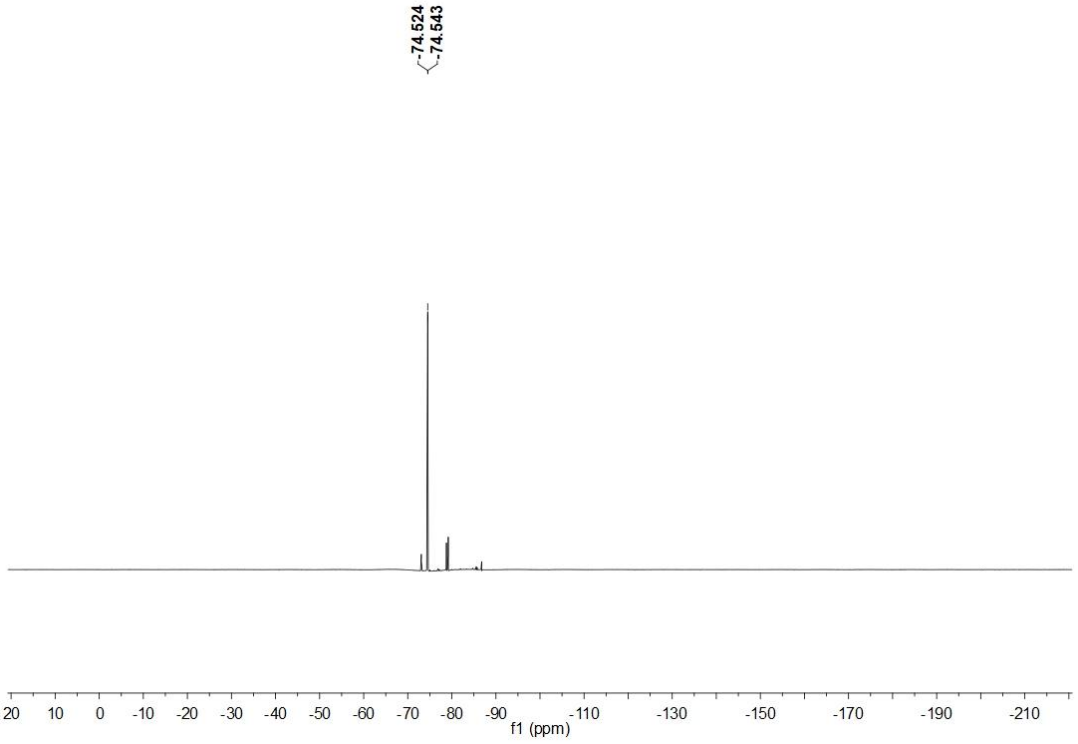
^{19}F NMR (376 MHz, $CDCl_3$)



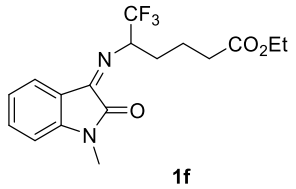
^{1}H NMR (400 MHz, $CDCl_3$)



^{13}C NMR (101 MHz, $CDCl_3$)



^{19}F NMR (376 MHz, $CDCl_3$)



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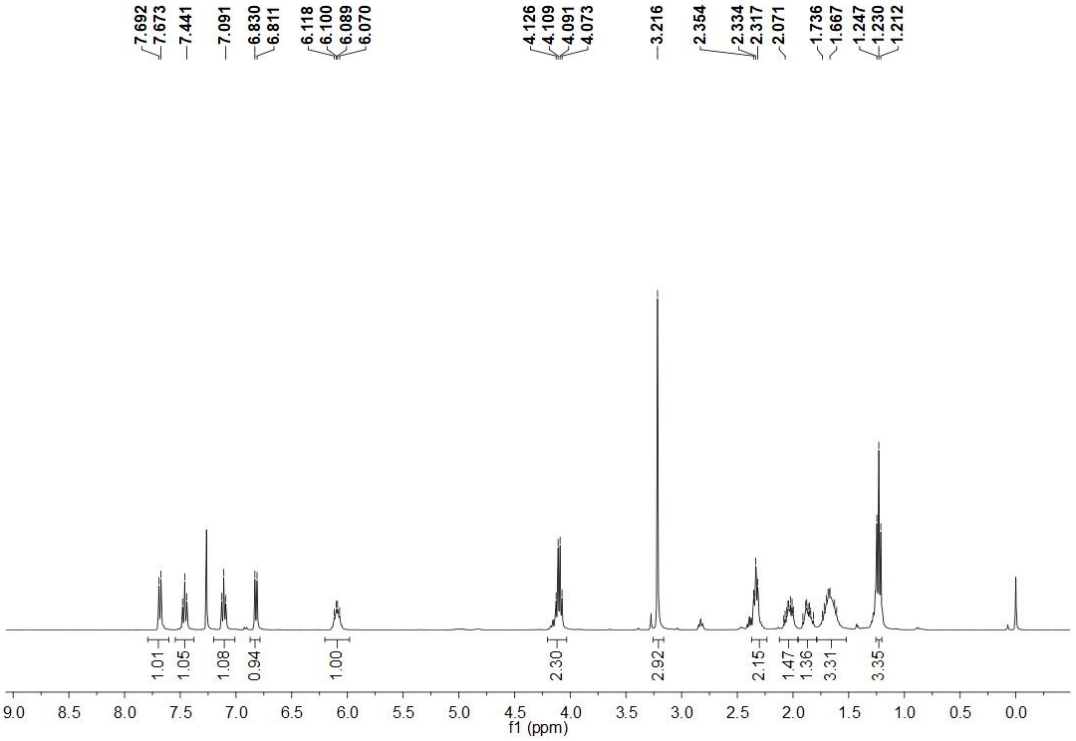
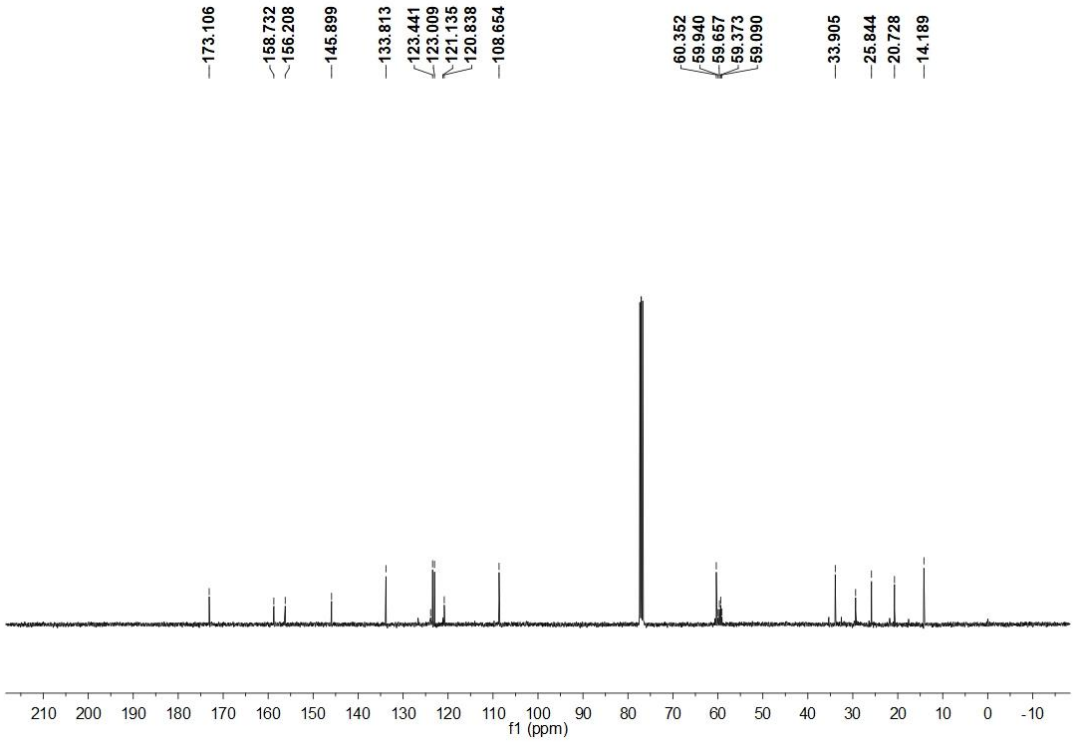
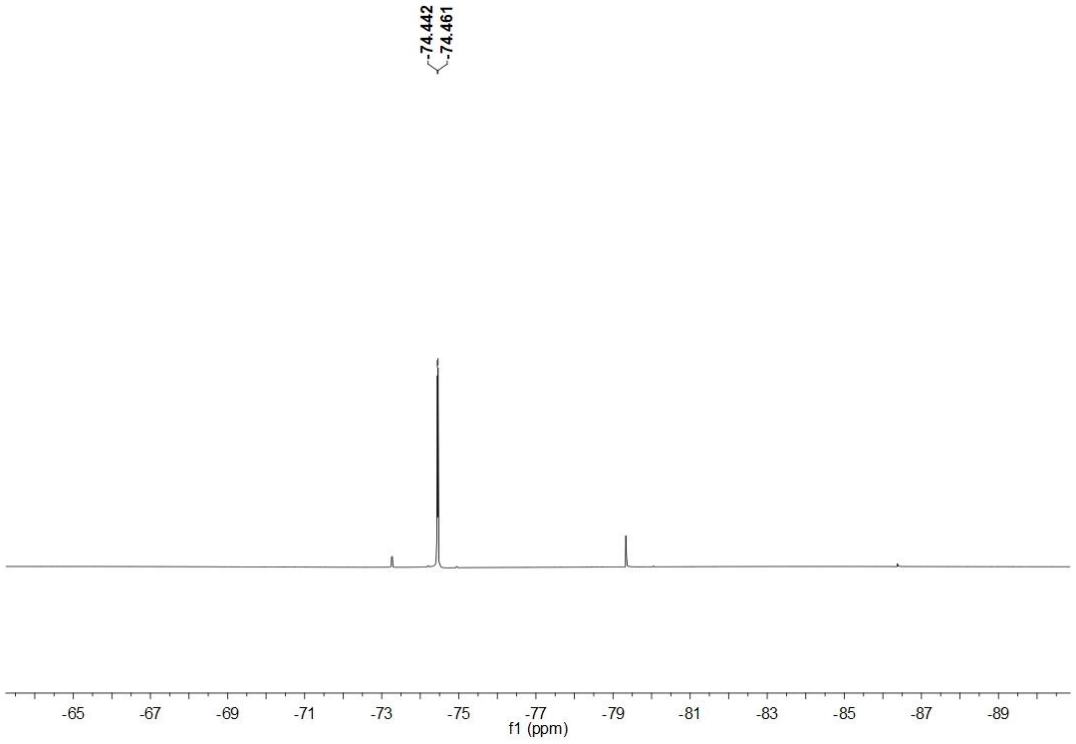


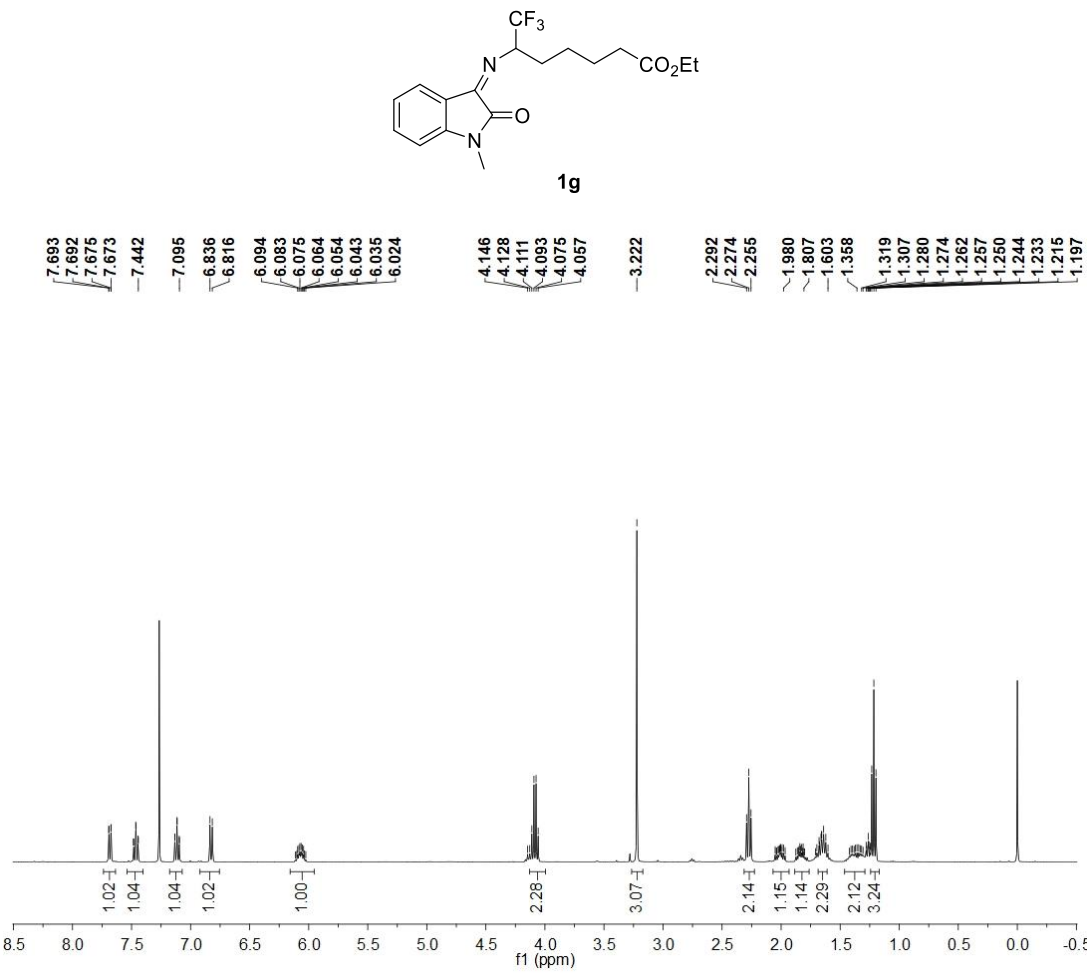
^{1}H NMR (400 MHz, $CDCl_3$)



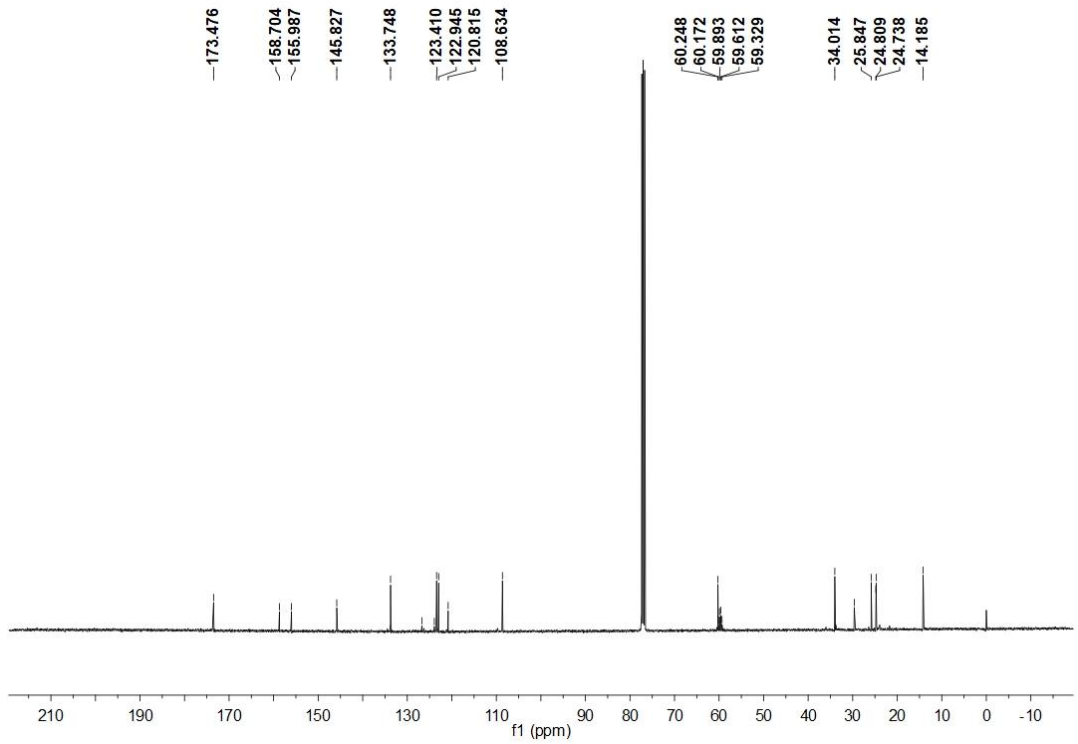
^{13}C NMR (101 MHz, $CDCl_3$)



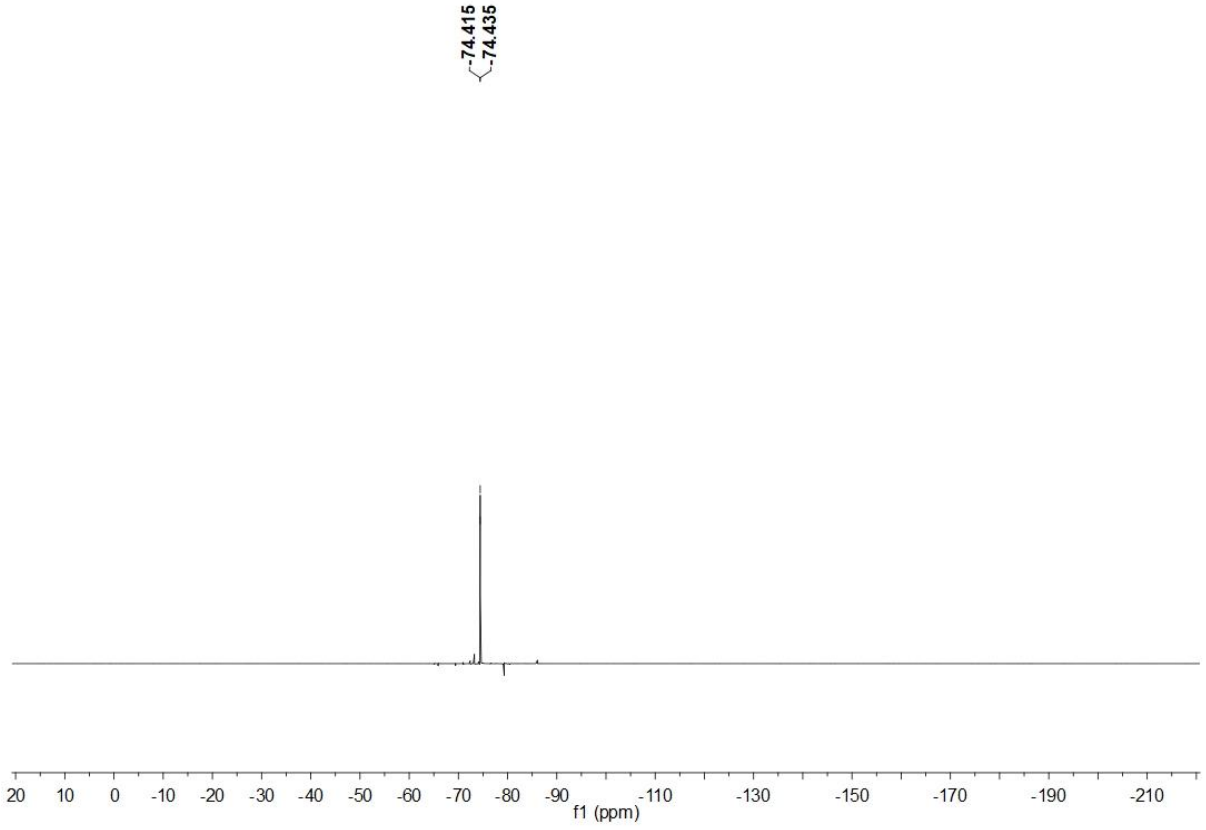
^{19}F NMR (376 MHz, $CDCl_3$)



^{1}H NMR (400 MHz, $CDCl_3$)

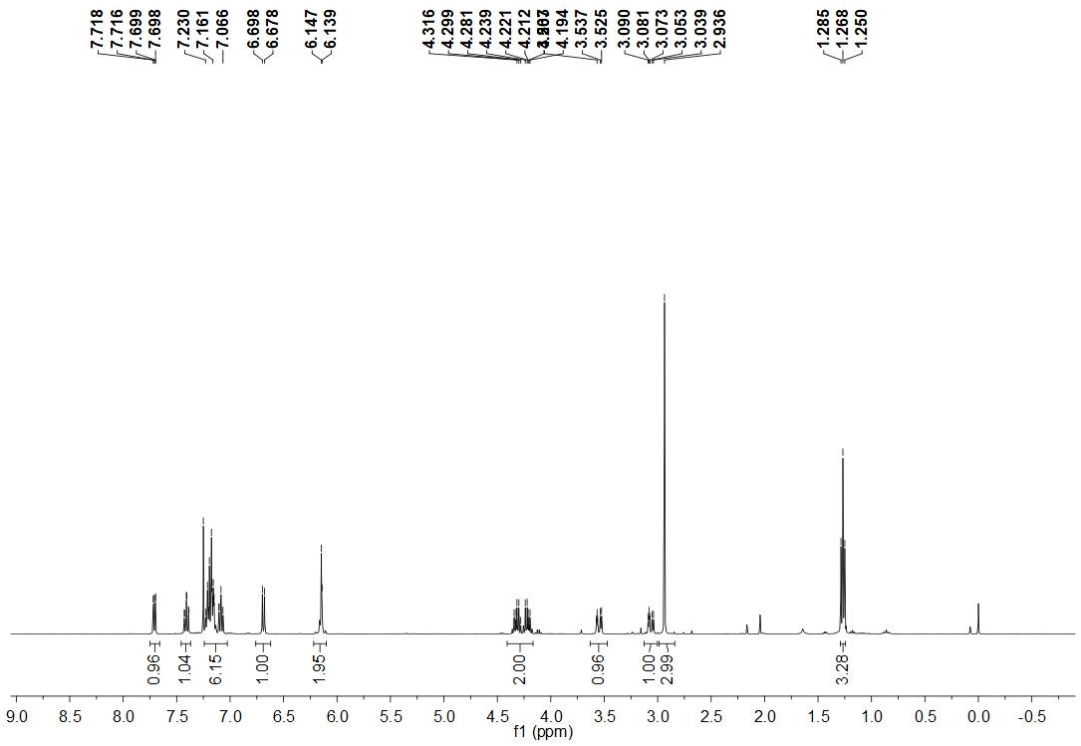


^{13}C NMR (101 MHz, $CDCl_3$)

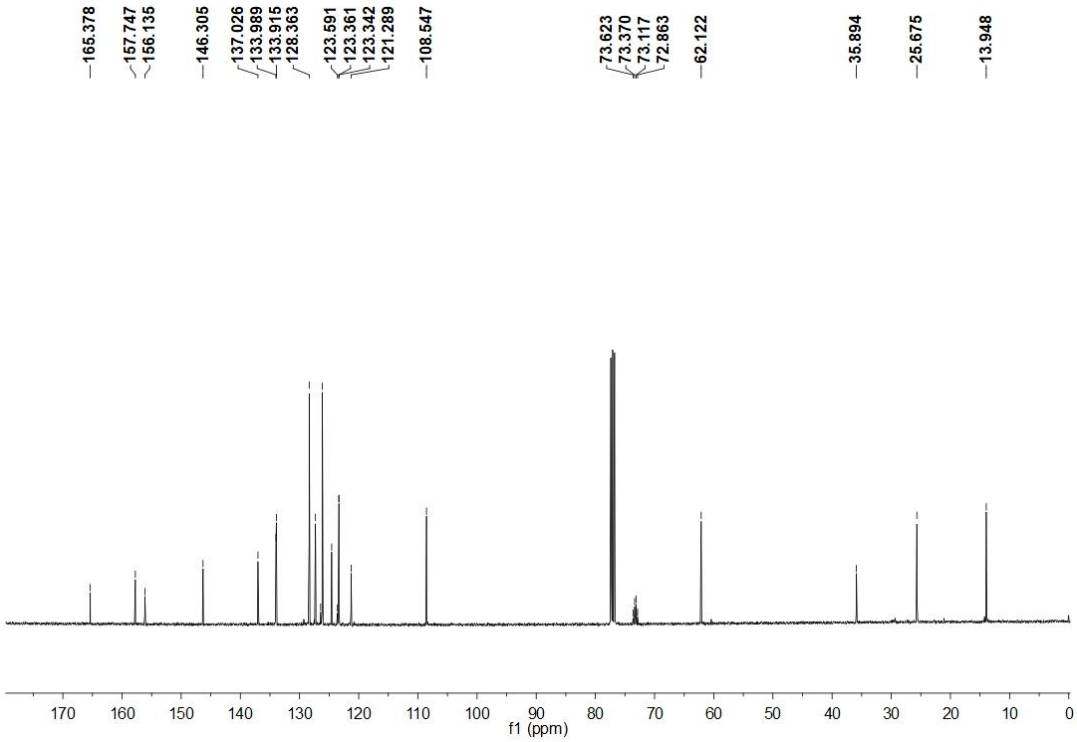


^{19}F NMR (376 MHz, $CDCl_3$)

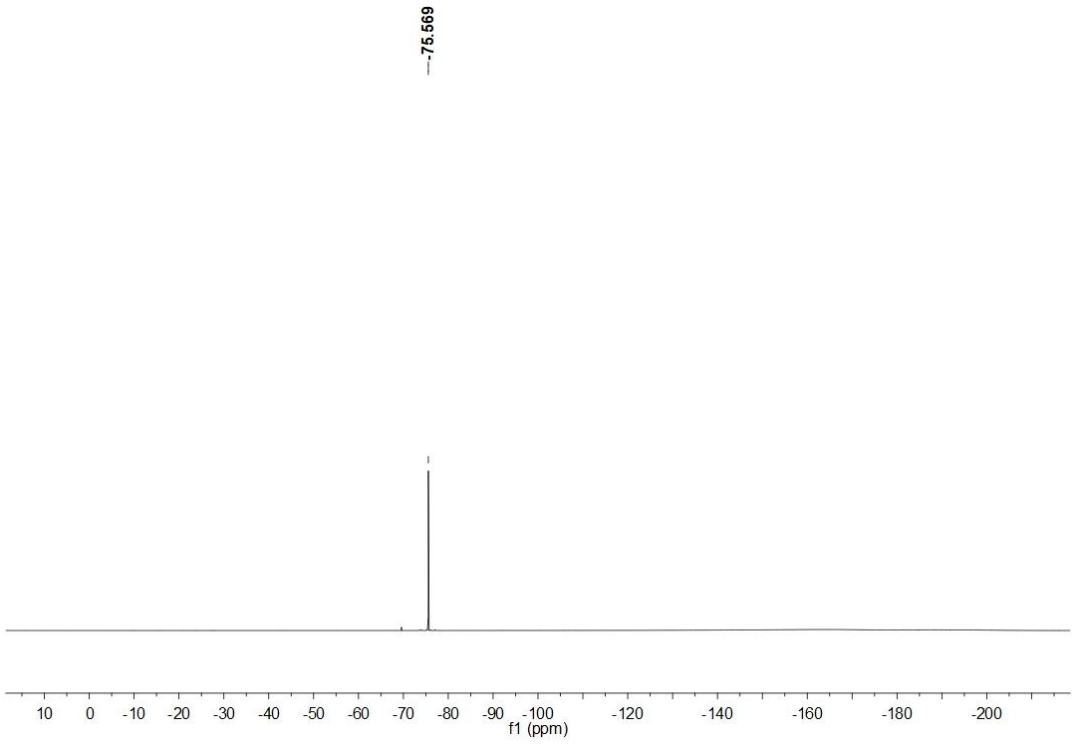
(*R*)-3a



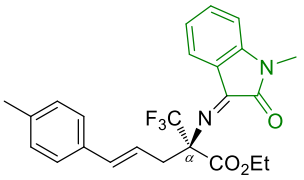
^{1}H NMR (400 MHz, $CDCl_3$)



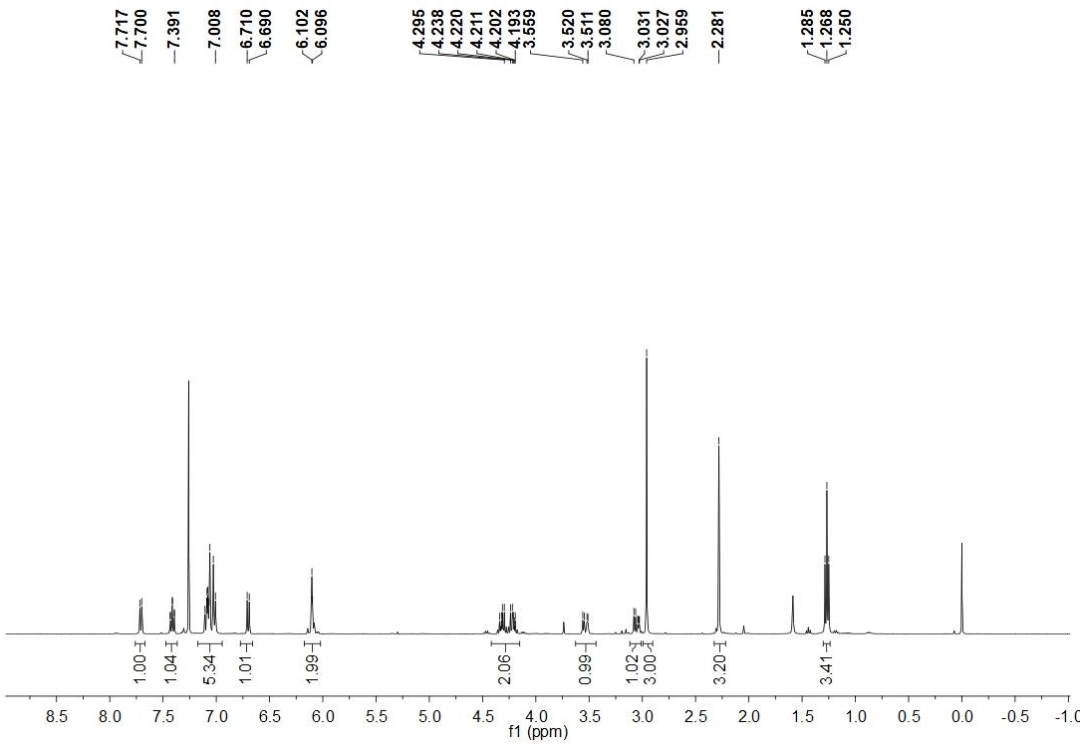
^{13}C NMR (101 MHz, $CDCl_3$)



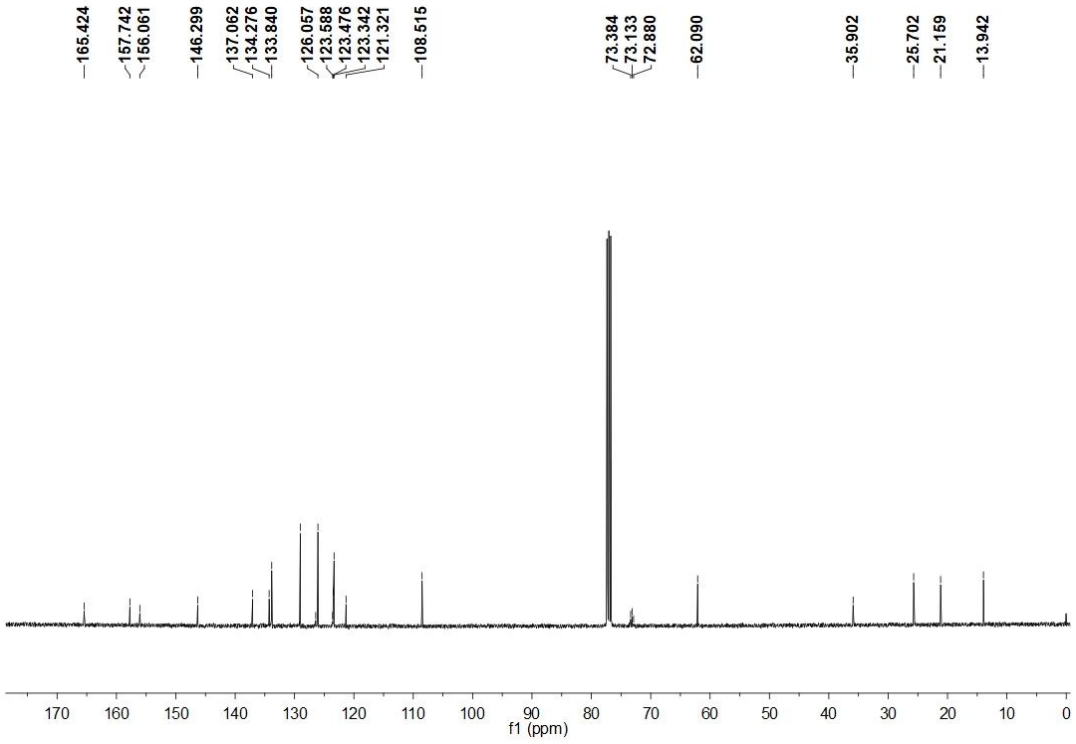
^{19}F NMR (376 MHz, $CDCl_3$)



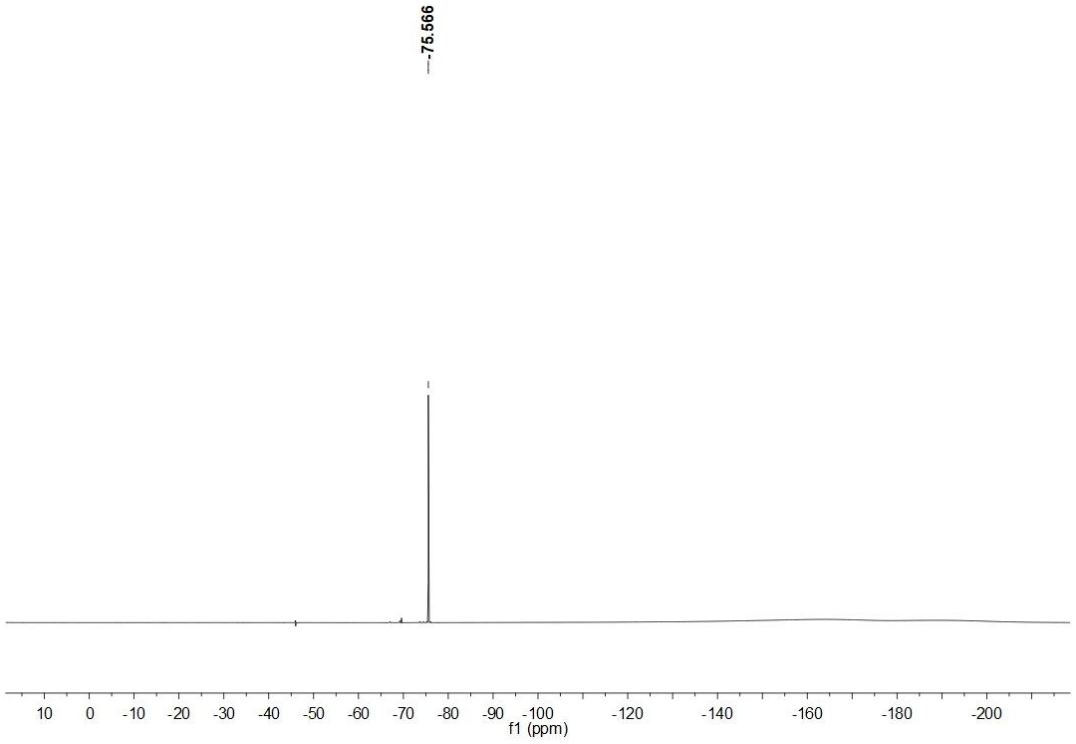
(*R*)-3b



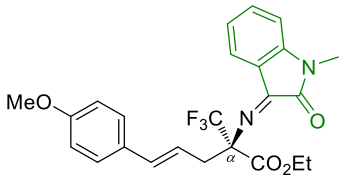
^{1}H NMR (400 MHz, $CDCl_3$)



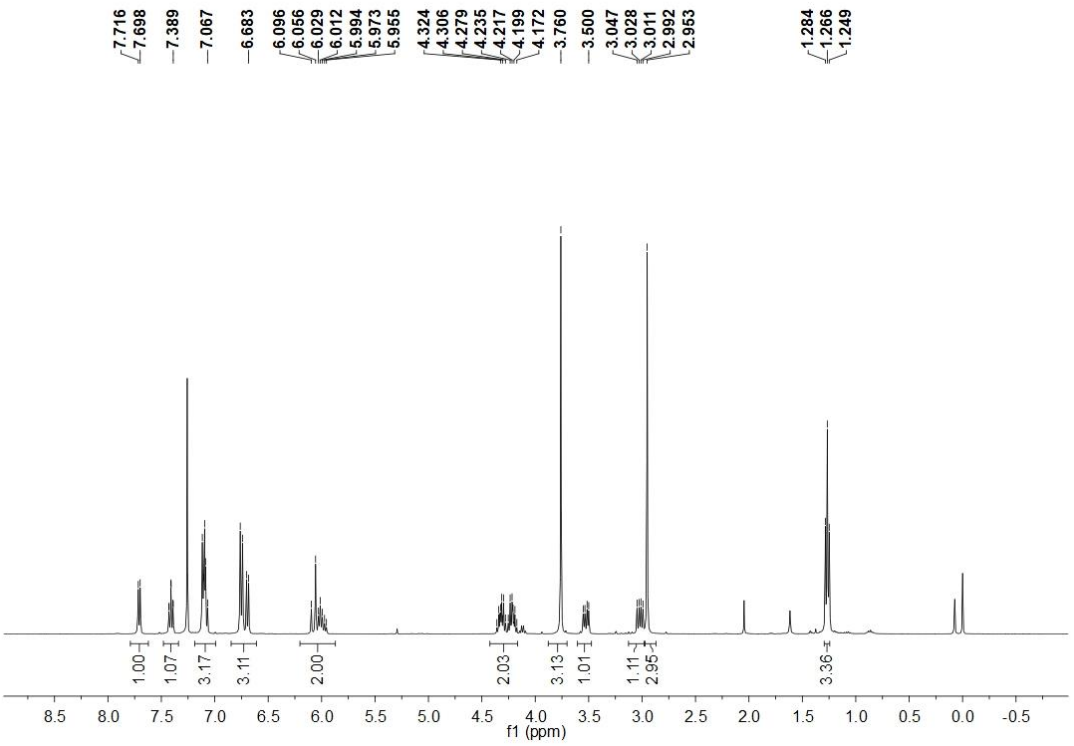
^{13}C NMR (101 MHz, $CDCl_3$)



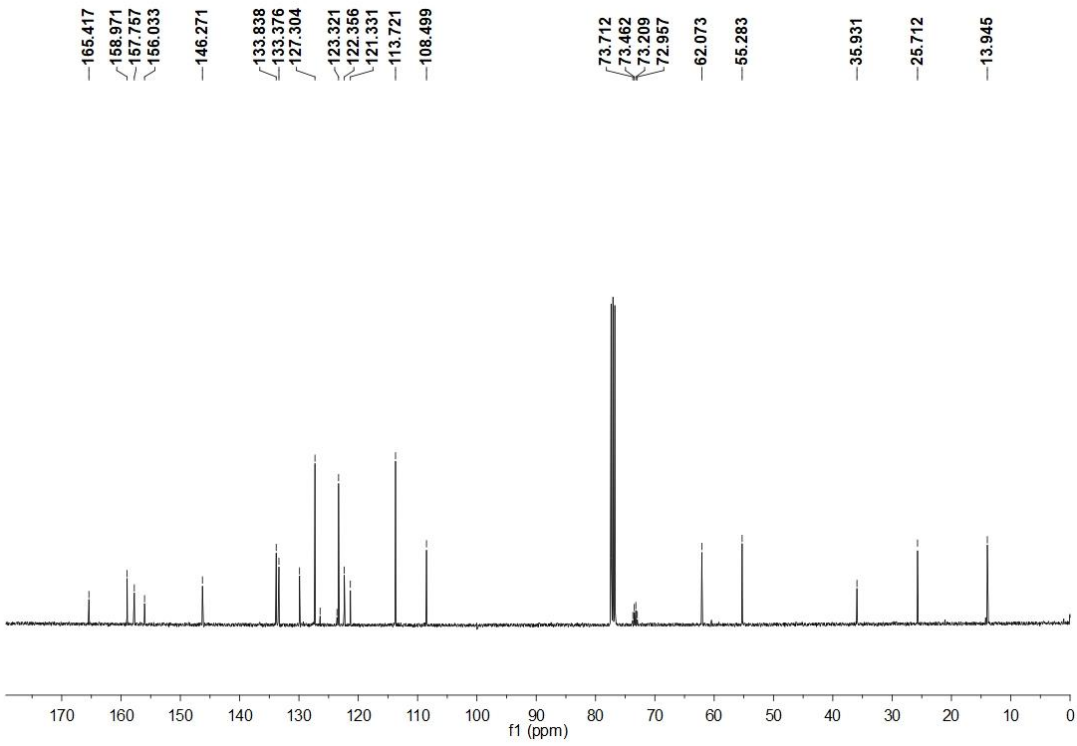
^{19}F NMR (376 MHz, $CDCl_3$)



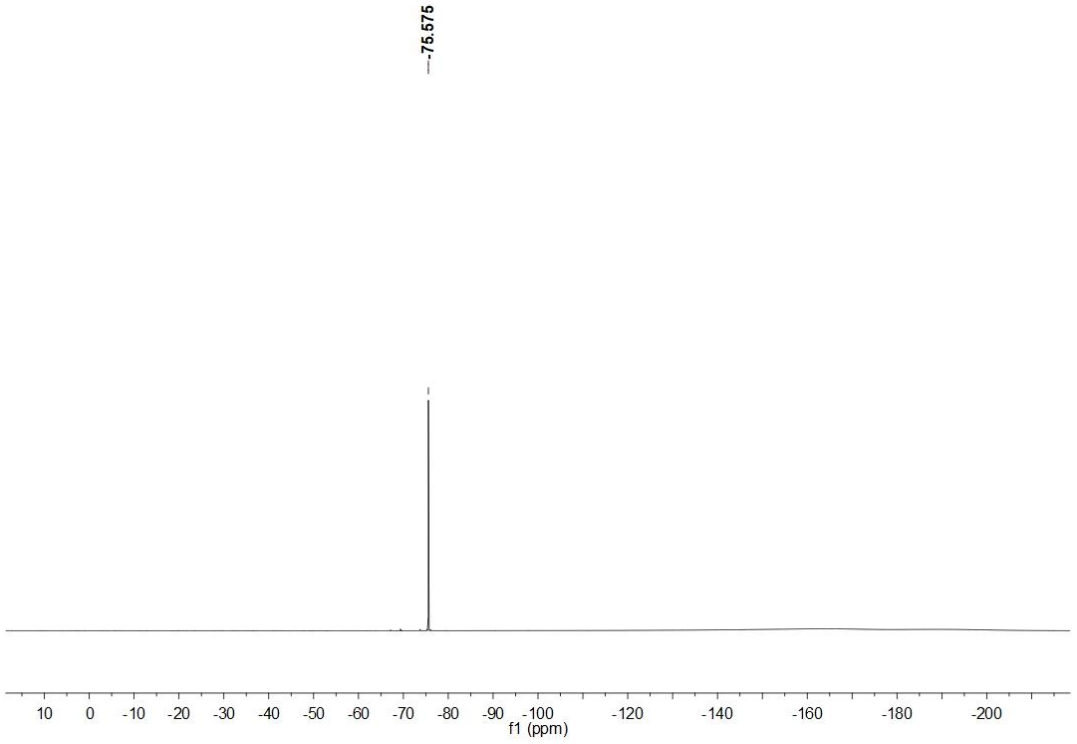
(*R*)-3c



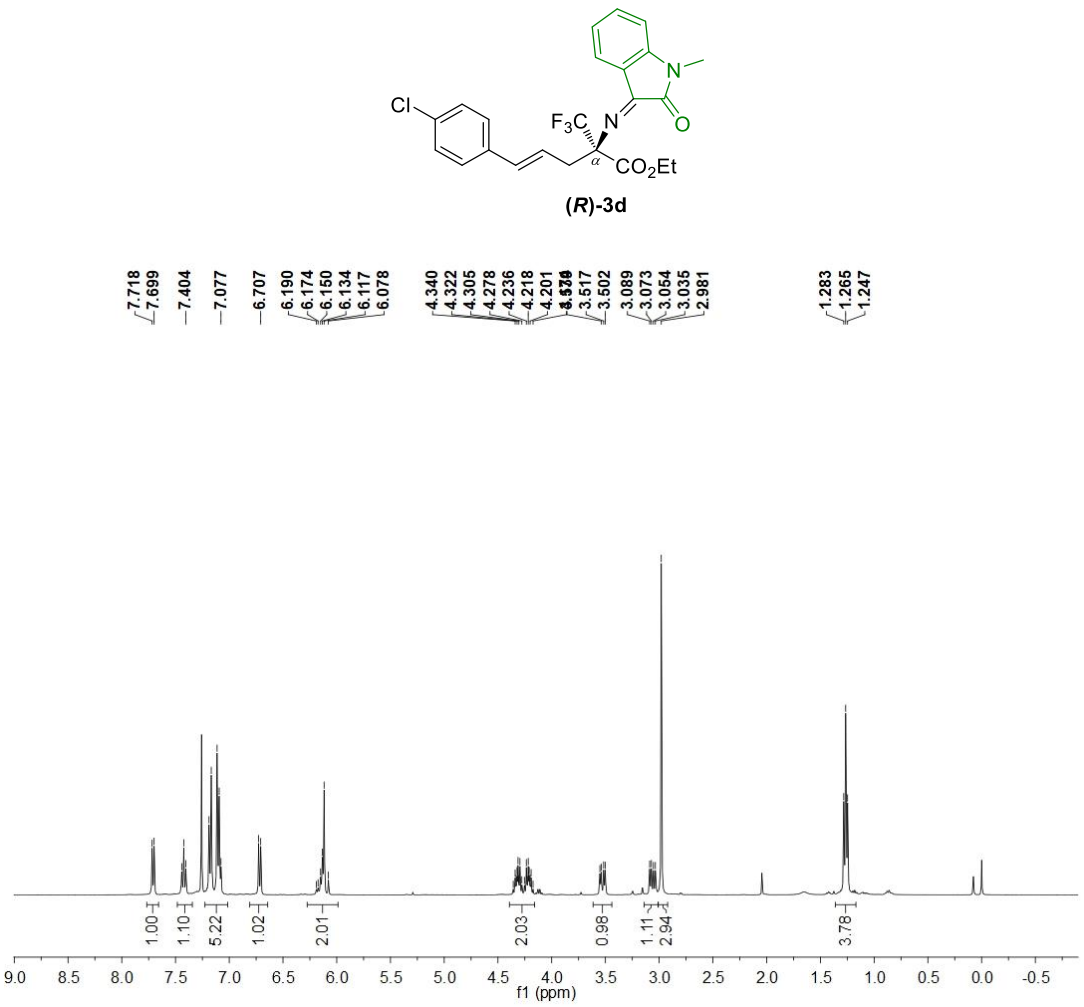
^{1}H NMR (400 MHz, $CDCl_3$)



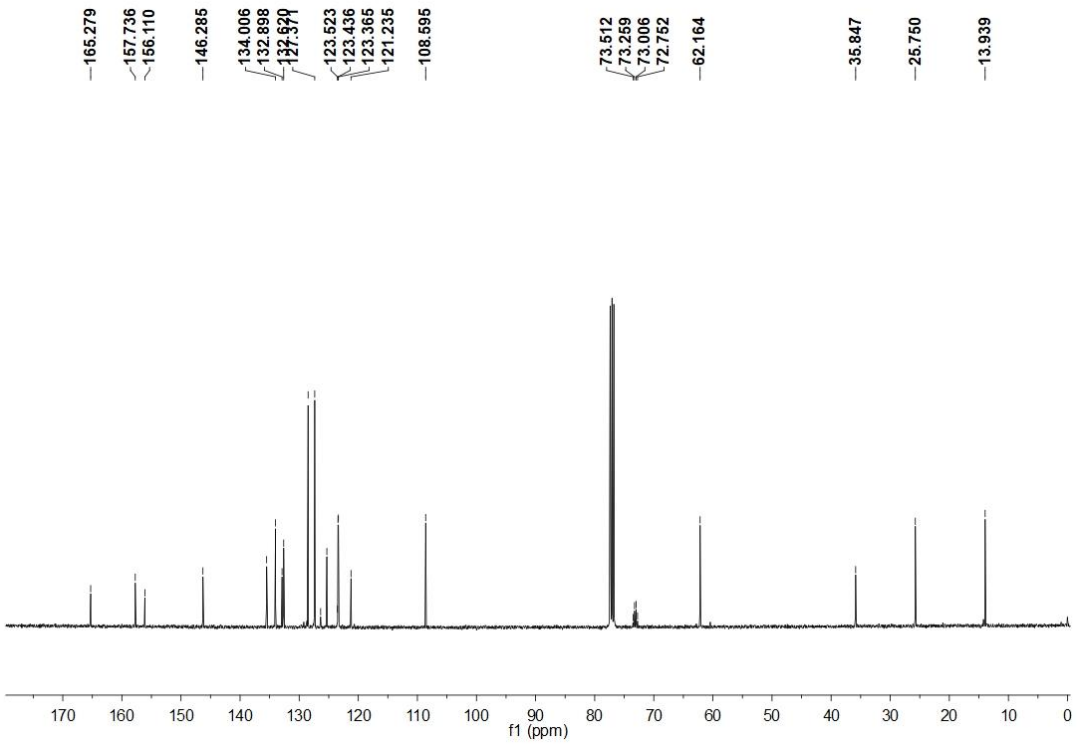
^{13}C NMR (101 MHz, $CDCl_3$)



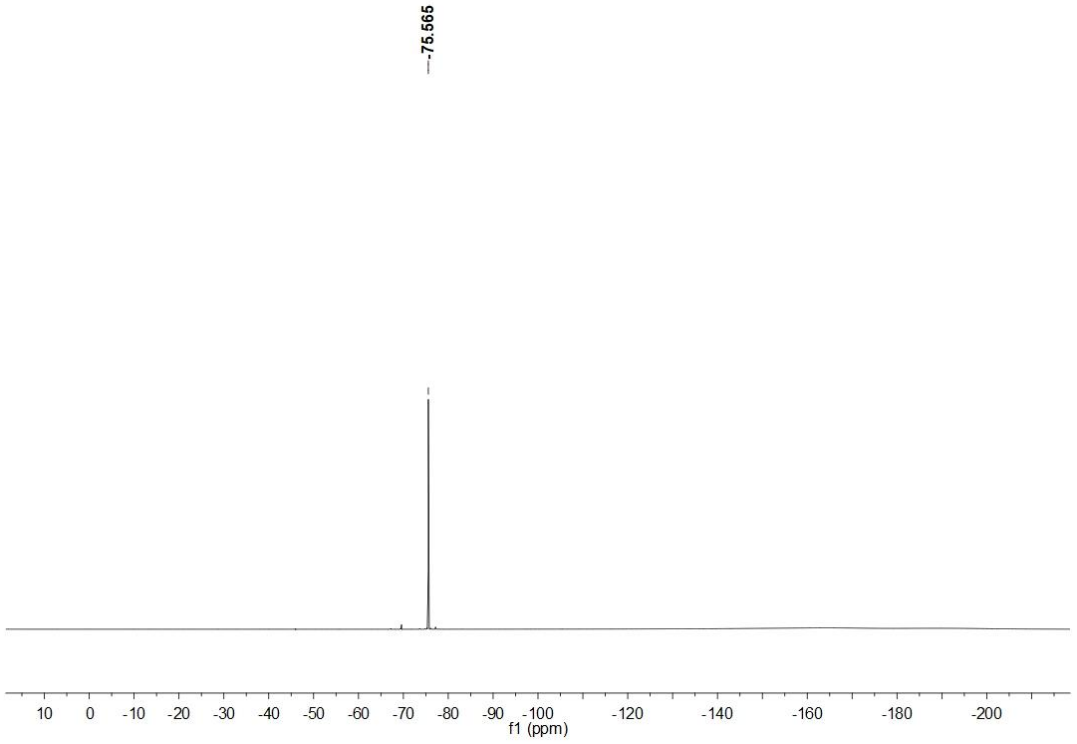
^{19}F NMR (376 MHz, $CDCl_3$)



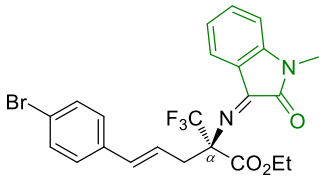
^{1}H NMR (400 MHz, $CDCl_3$)



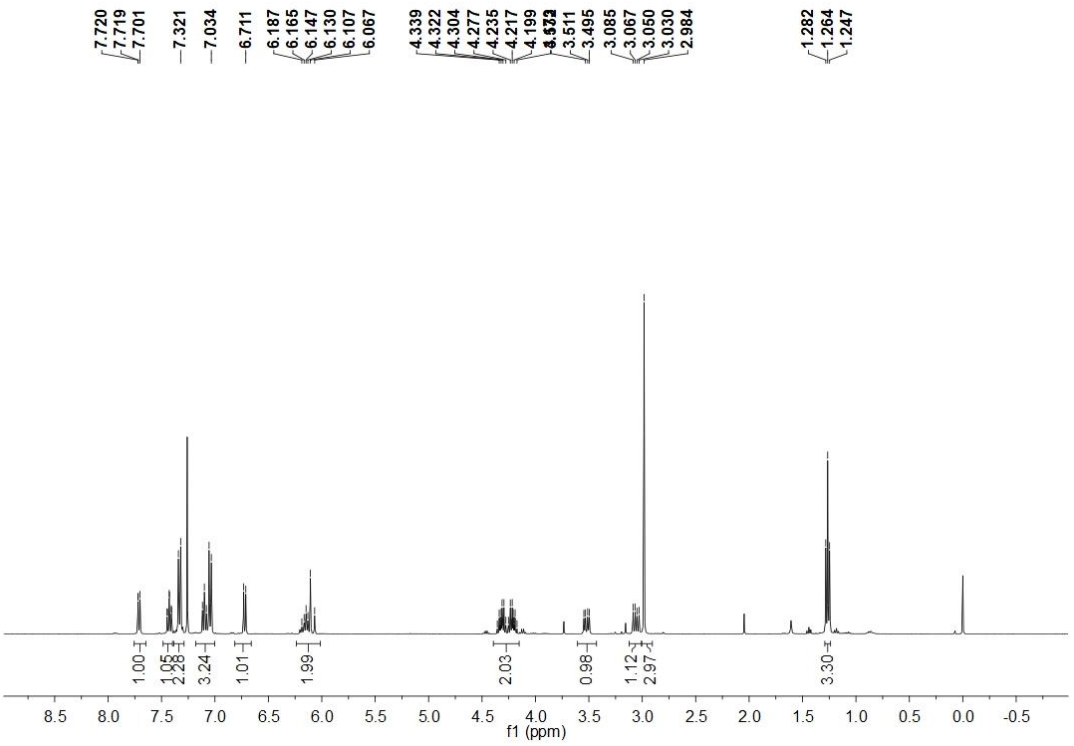
^{13}C NMR (101 MHz, $CDCl_3$)



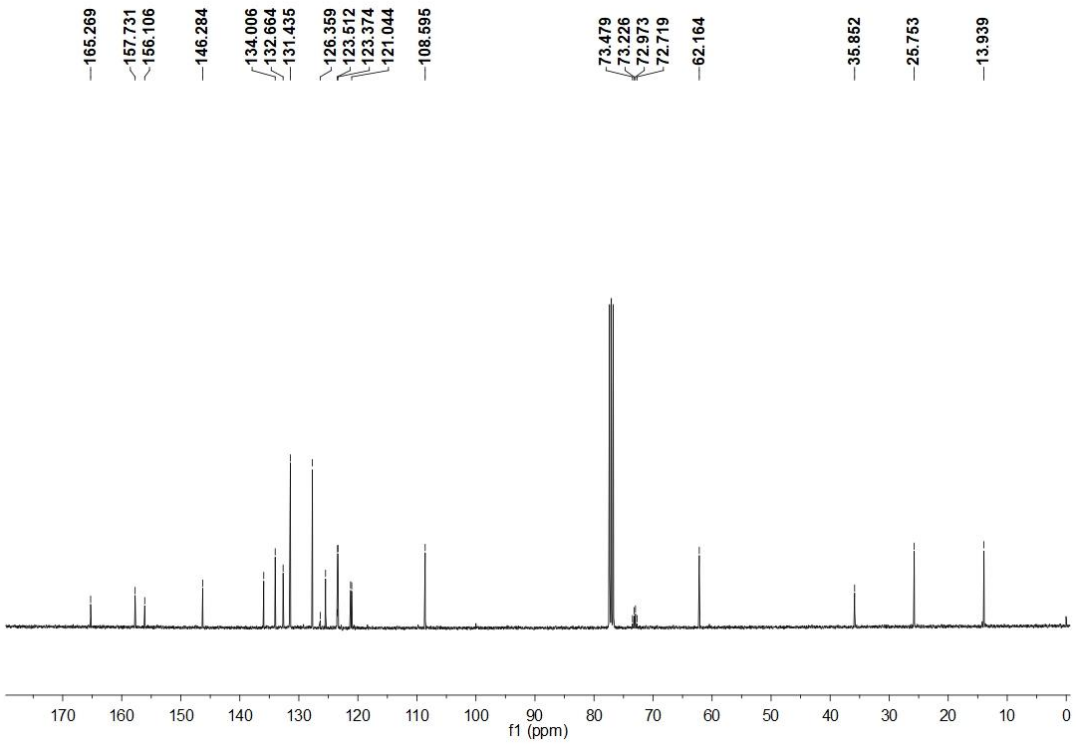
^{19}F NMR (376 MHz, $CDCl_3$)



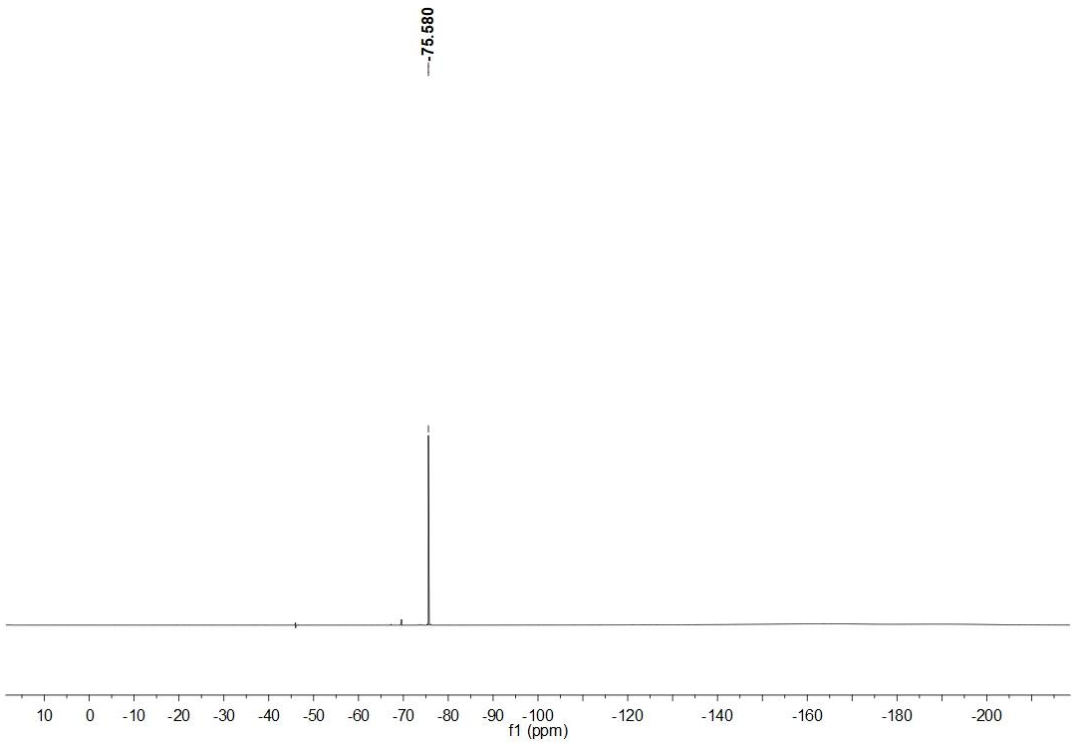
(*R*)-3e



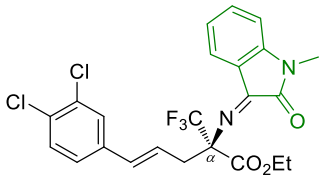
^{1}H NMR (400 MHz, $CDCl_3$)



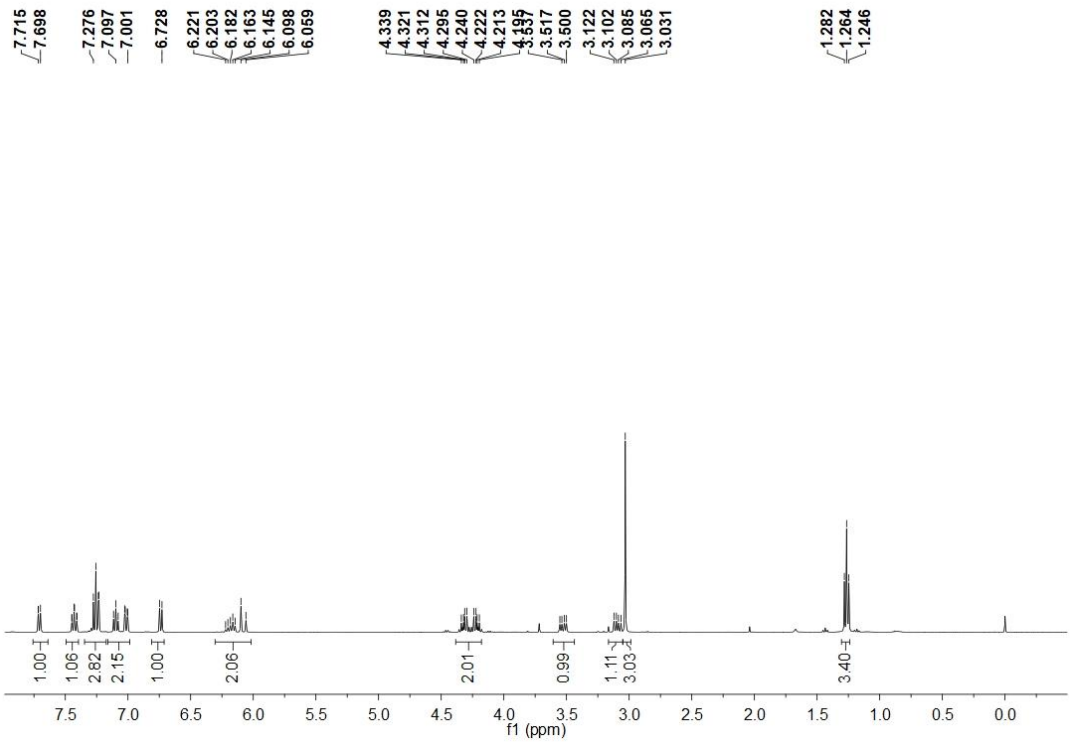
^{13}C NMR (101 MHz, $CDCl_3$)



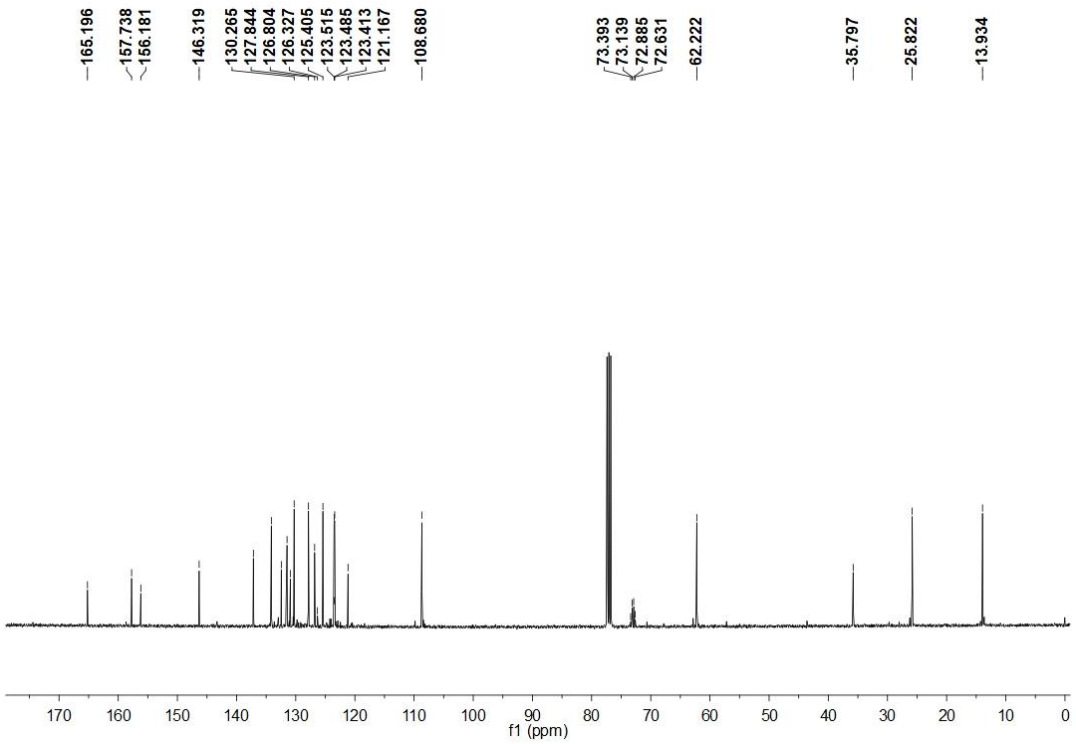
^{19}F NMR (376 MHz, $CDCl_3$)



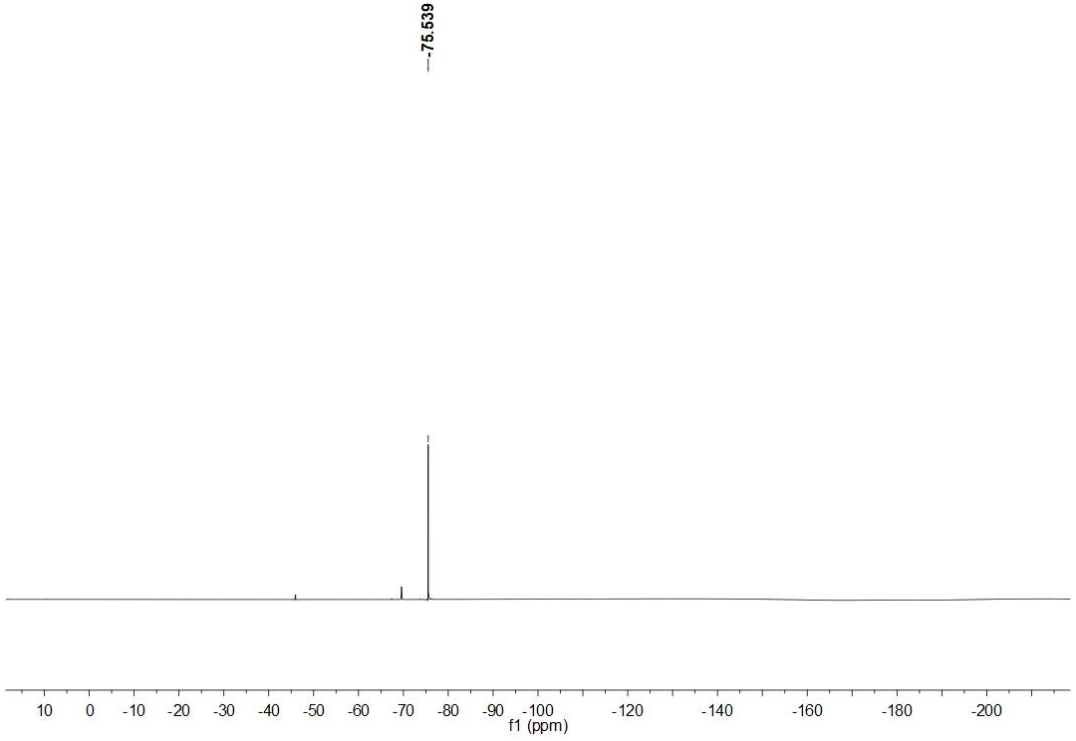
(*R*)-3f



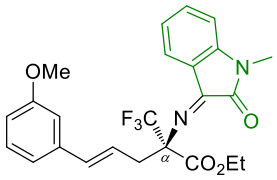
^{1}H NMR (400 MHz, $CDCl_3$)



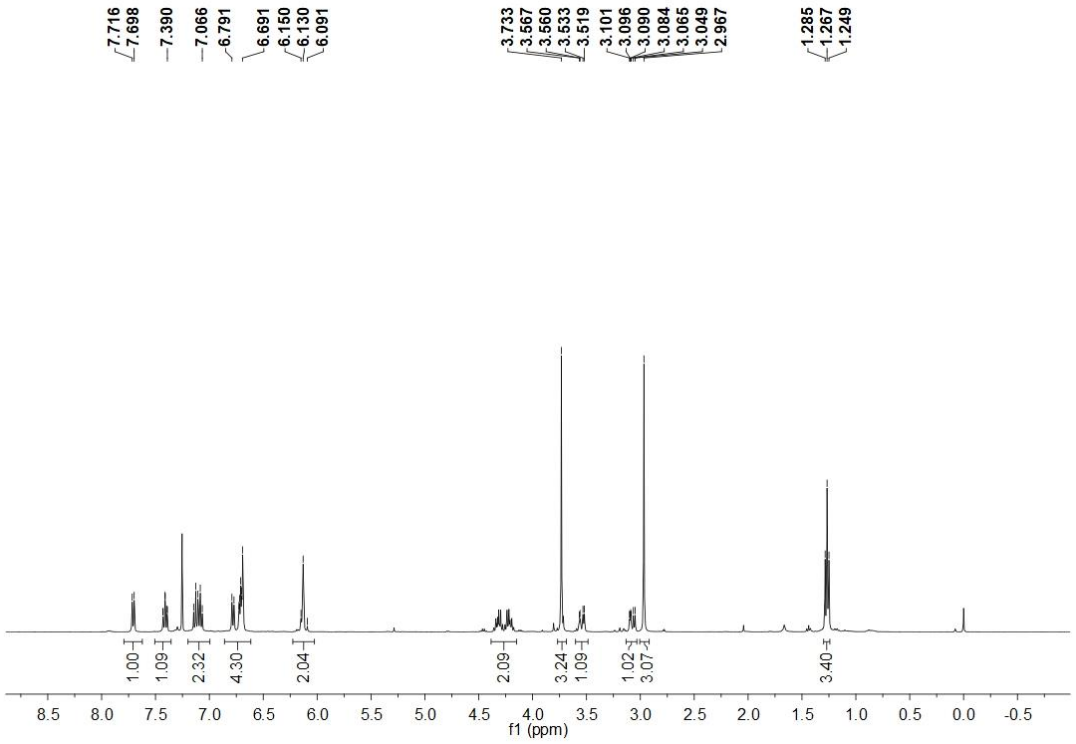
^{13}C NMR (101 MHz, $CDCl_3$)



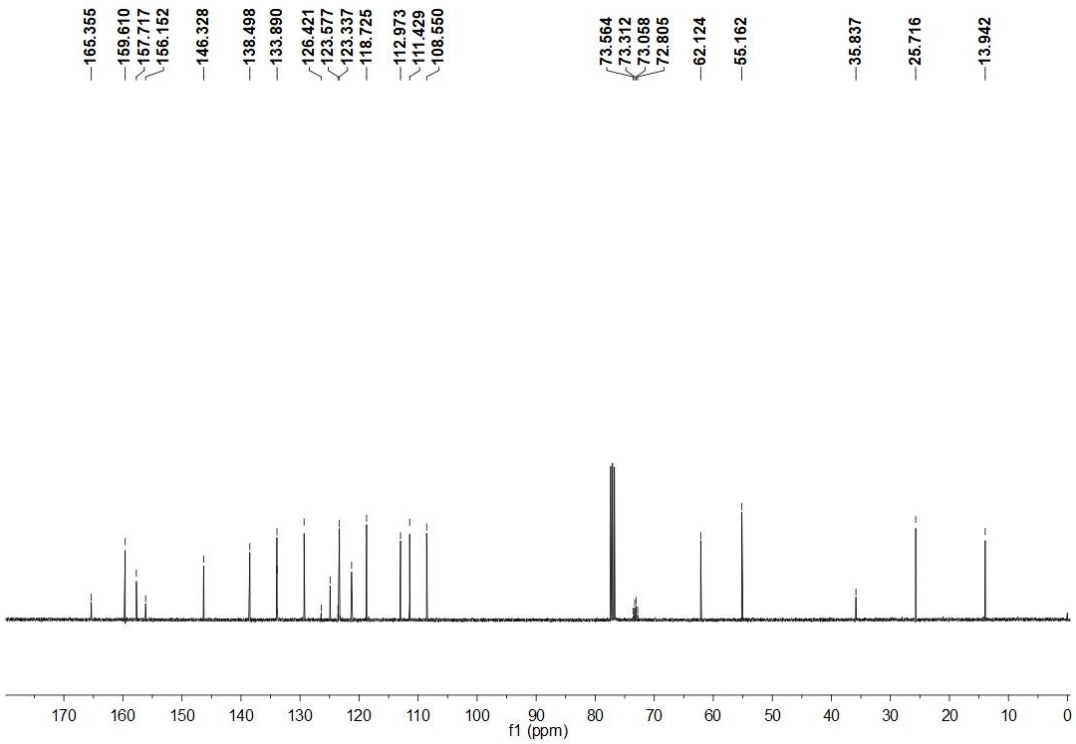
^{19}F NMR (376 MHz, $CDCl_3$)



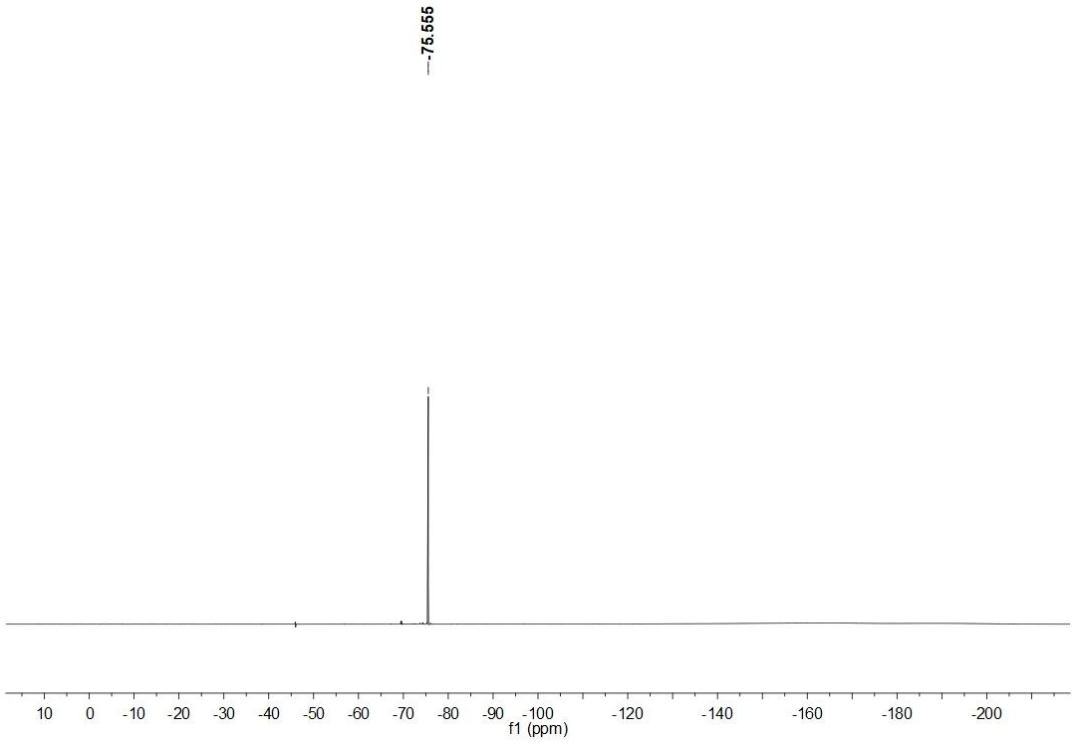
(*R*)-3g



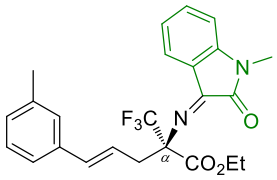
^{1}H NMR (400 MHz, $CDCl_3$)



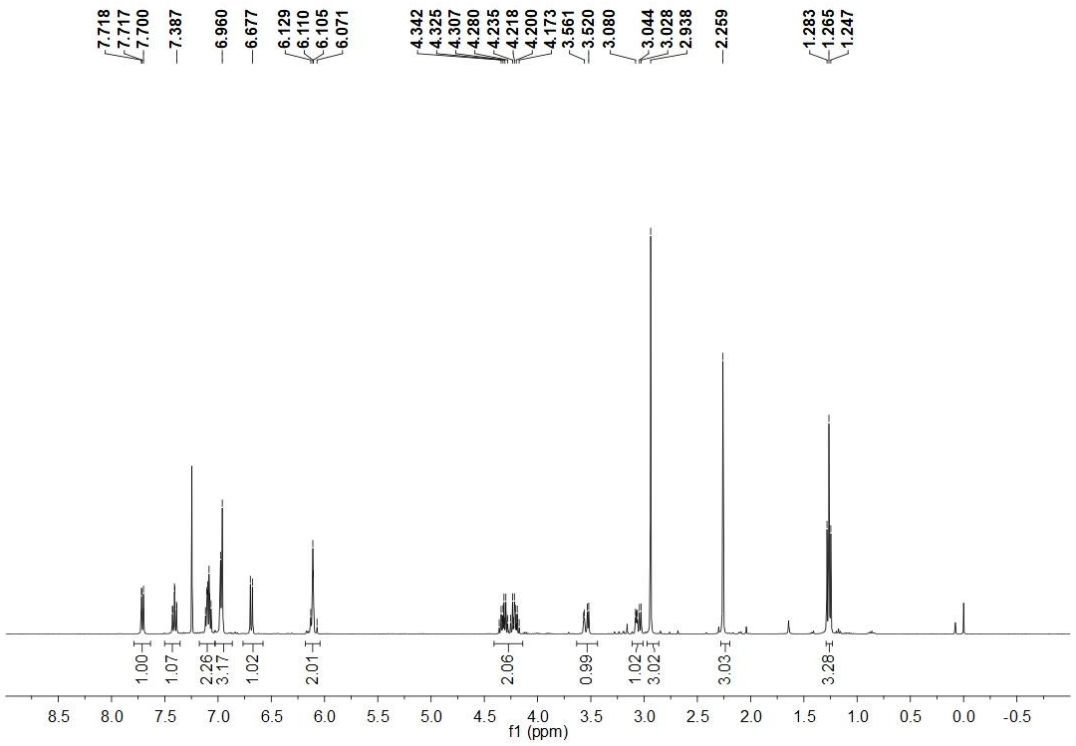
^{13}C NMR (101 MHz, $CDCl_3$)



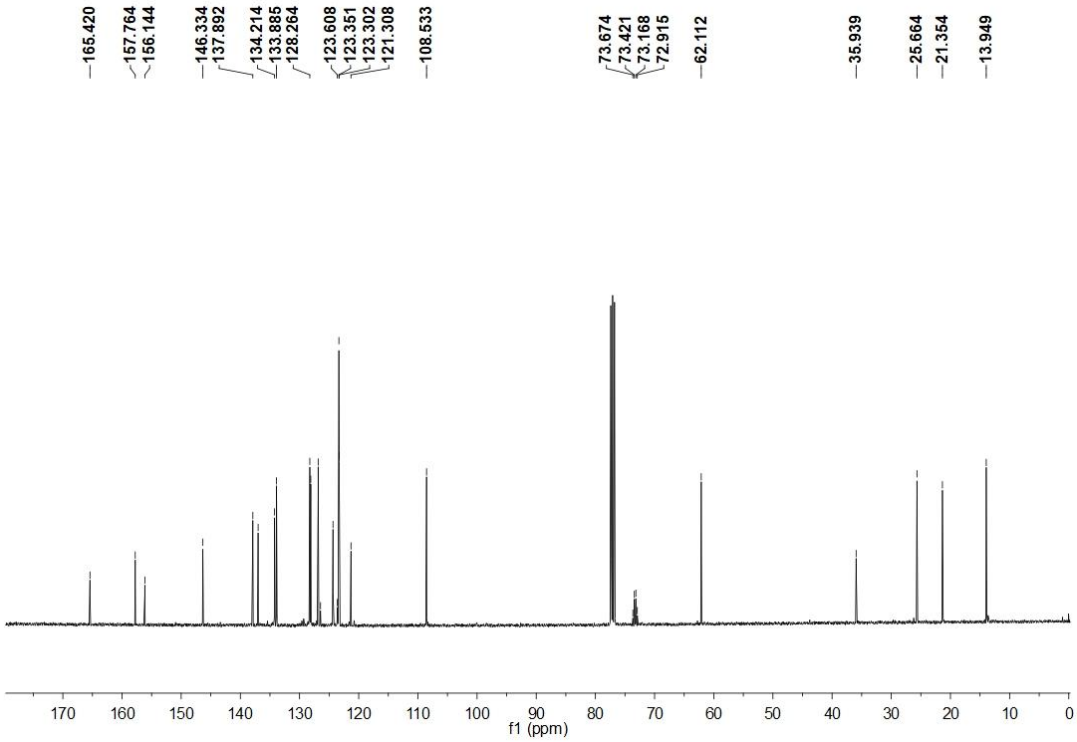
^{19}F NMR (376 MHz, $CDCl_3$)



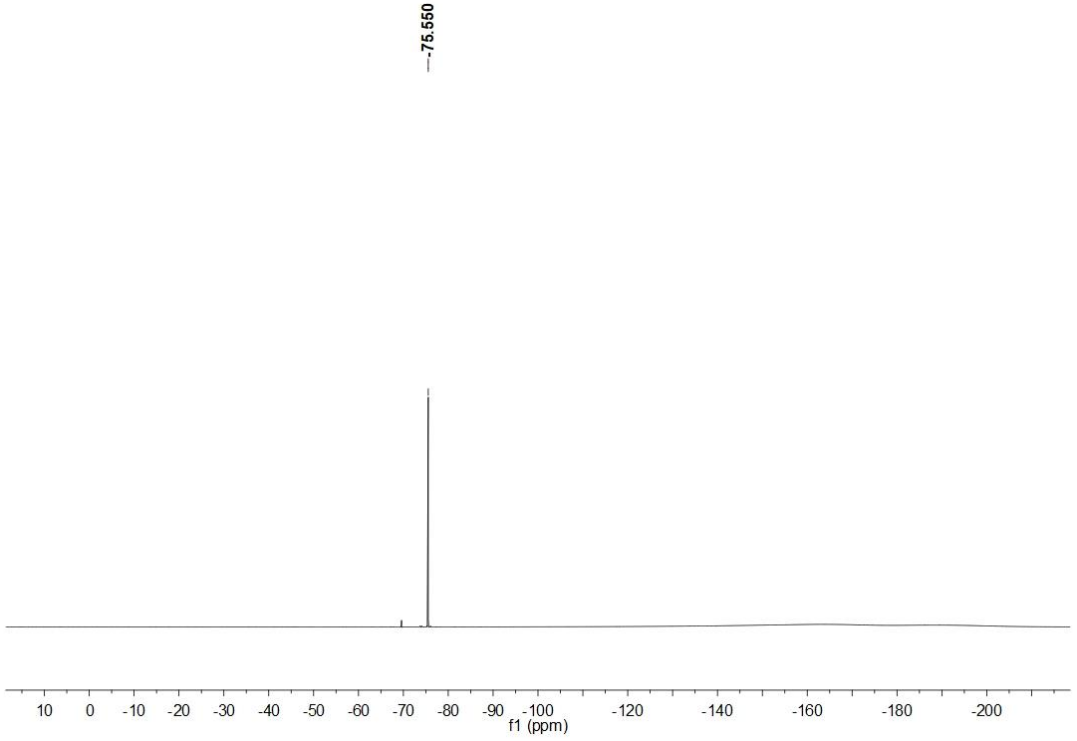
(*R*)-3h



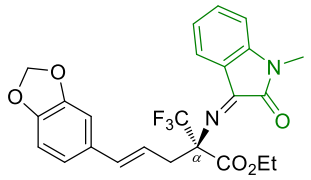
^{1}H NMR (400 MHz, $CDCl_3$)



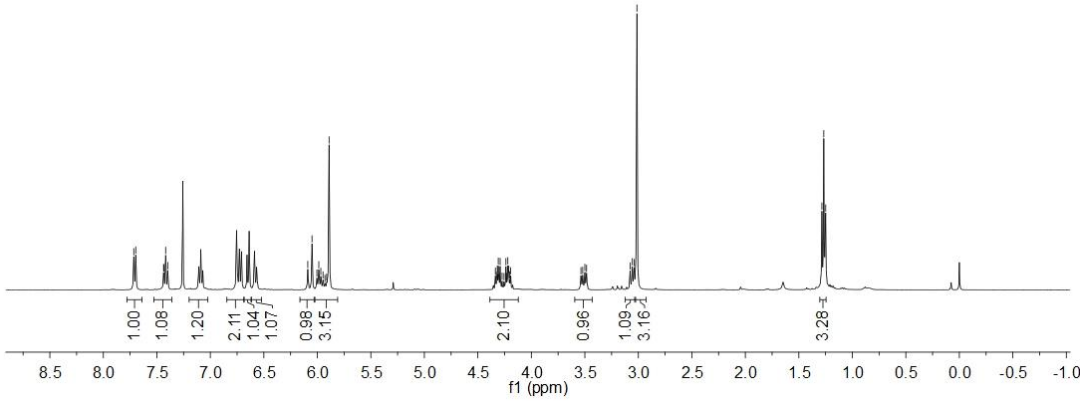
^{13}C NMR (101 MHz, $CDCl_3$)



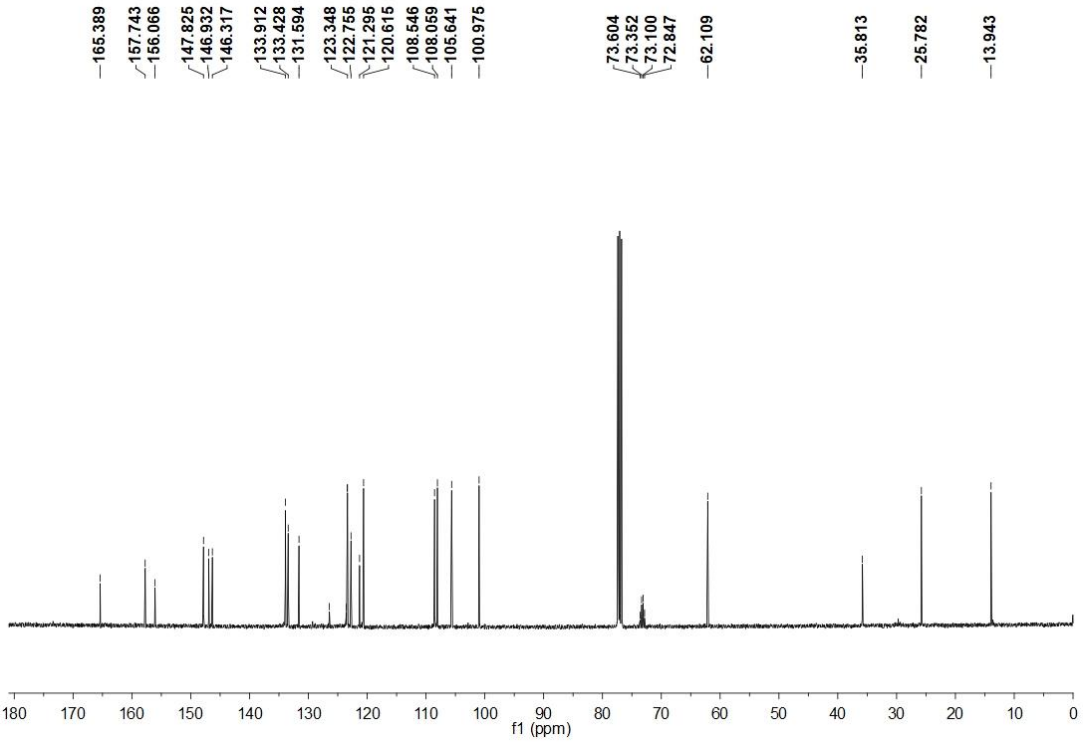
^{19}F NMR (376 MHz, $CDCl_3$)



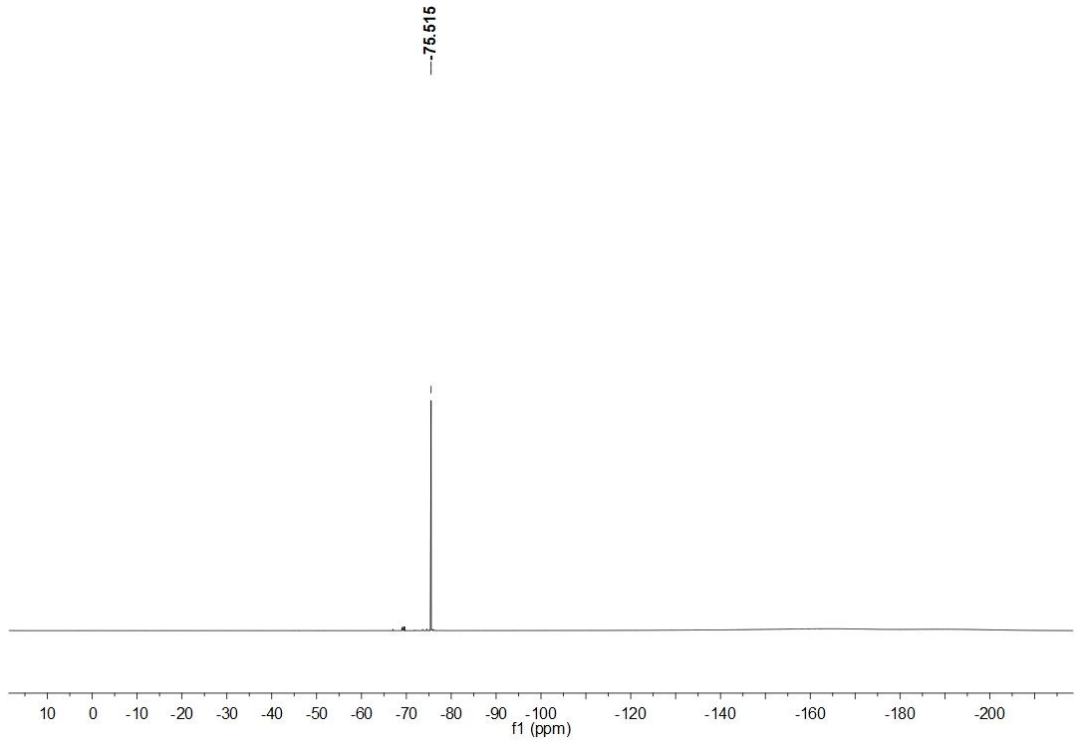
(*R*)-3i



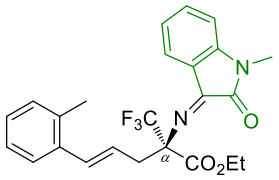
^{1}H NMR (400 MHz, $CDCl_3$)



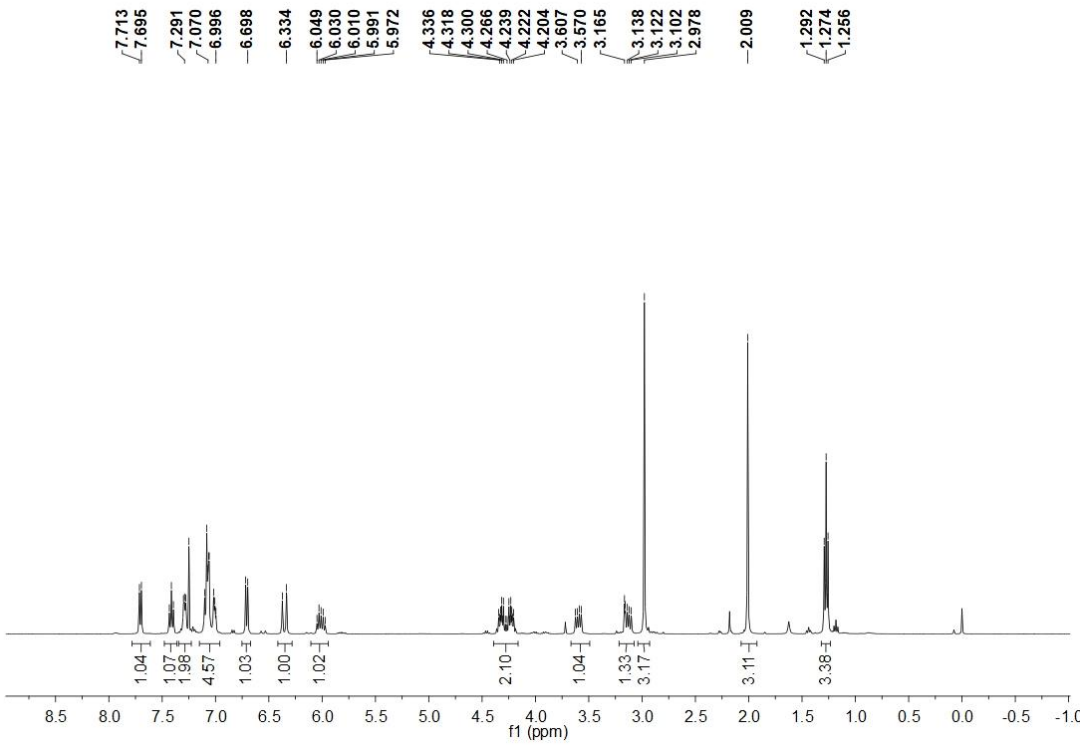
^{13}C NMR (101 MHz, $CDCl_3$)



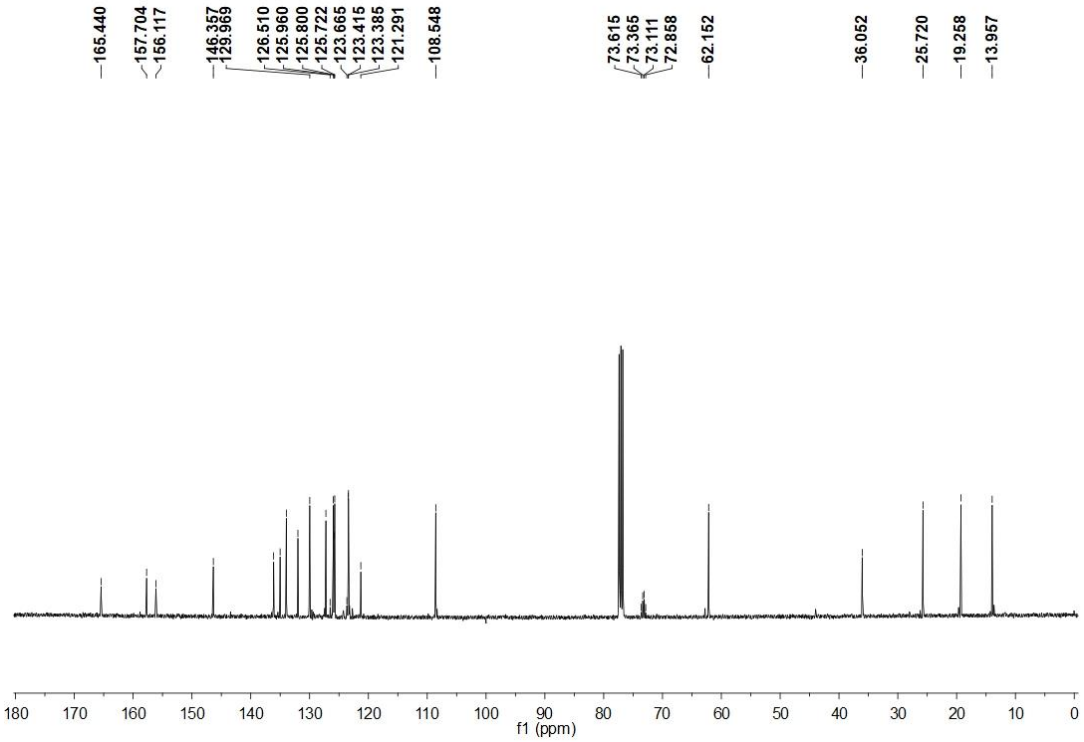
^{19}F NMR (376 MHz, $CDCl_3$)



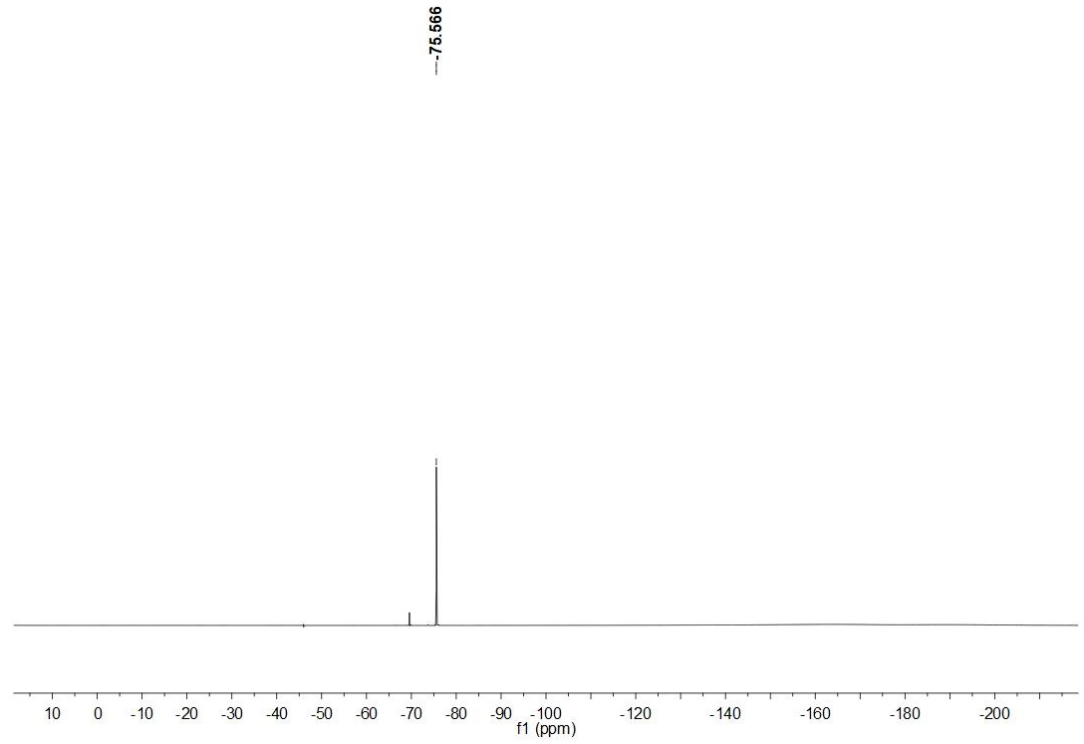
(*R*)-3j



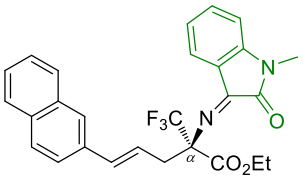
^{1}H NMR (400 MHz, $CDCl_3$)



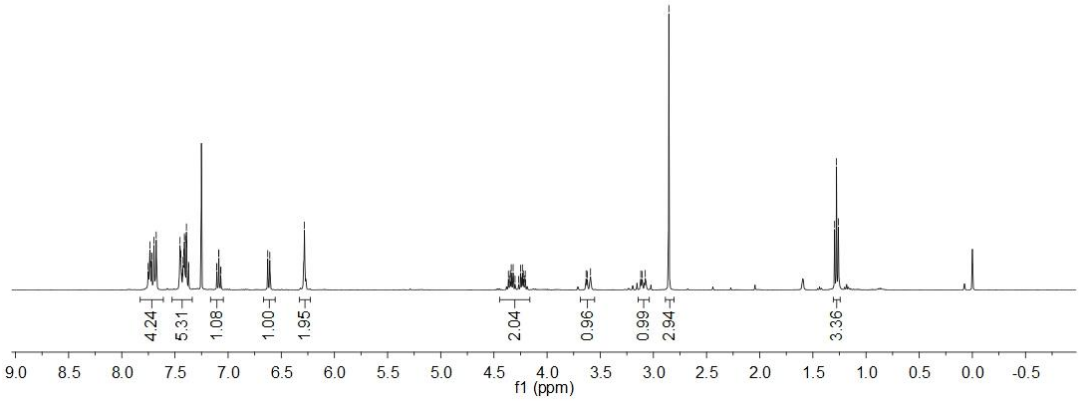
^{13}C NMR (101 MHz, $CDCl_3$)



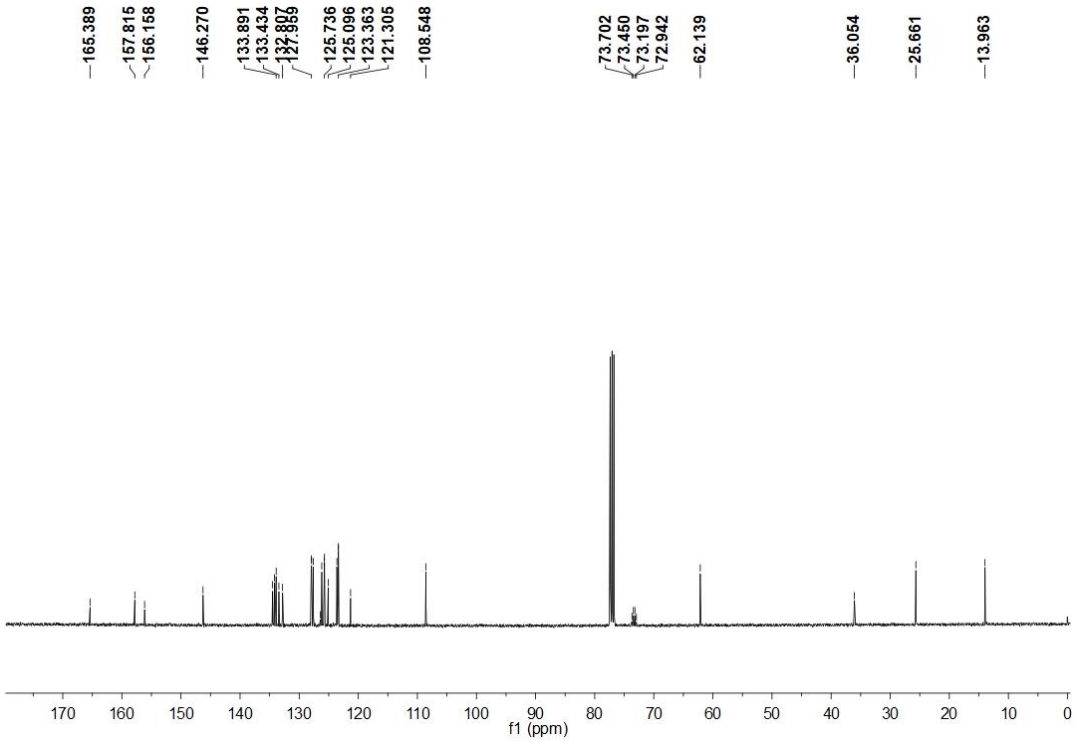
^{19}F NMR (376 MHz, $CDCl_3$)



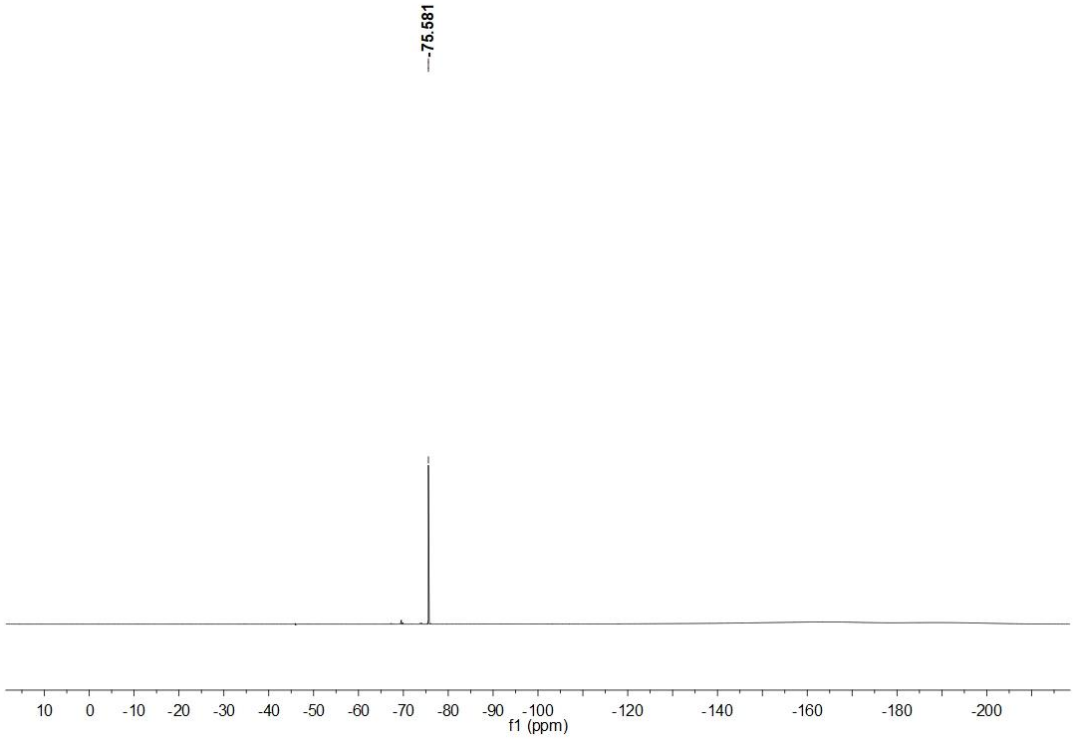
(*R*)-3k



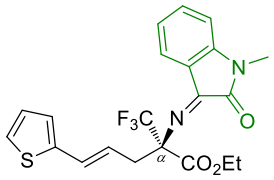
^{1}H NMR (400 MHz, $CDCl_3$)



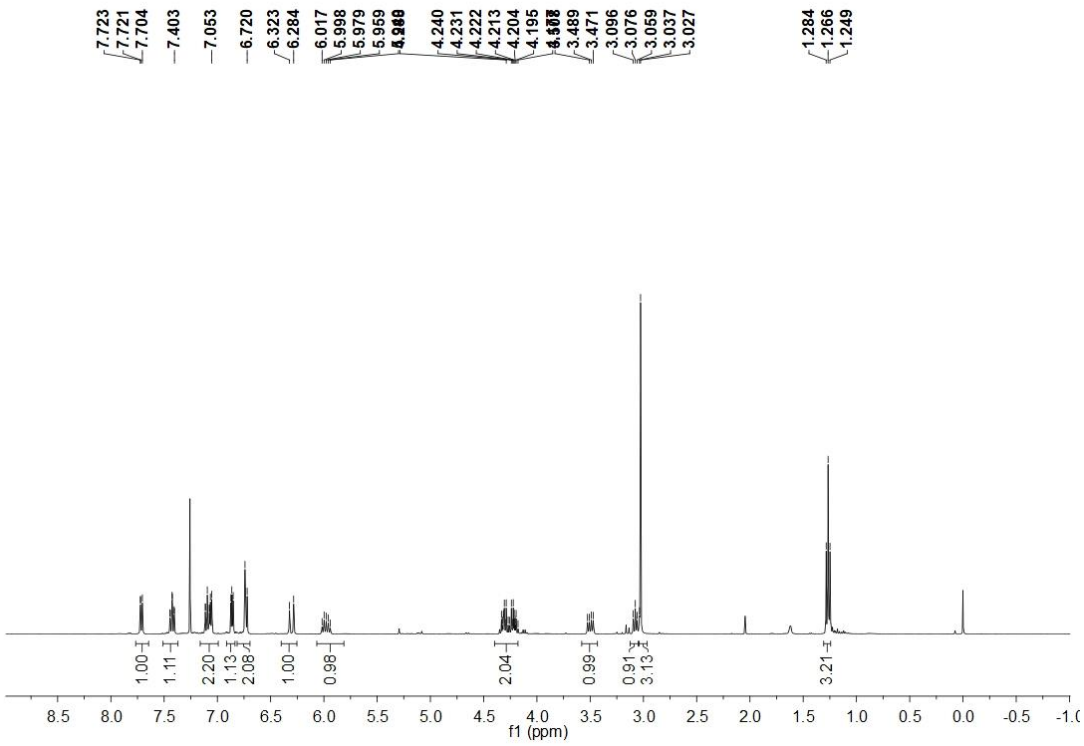
^{13}C NMR (101 MHz, $CDCl_3$)



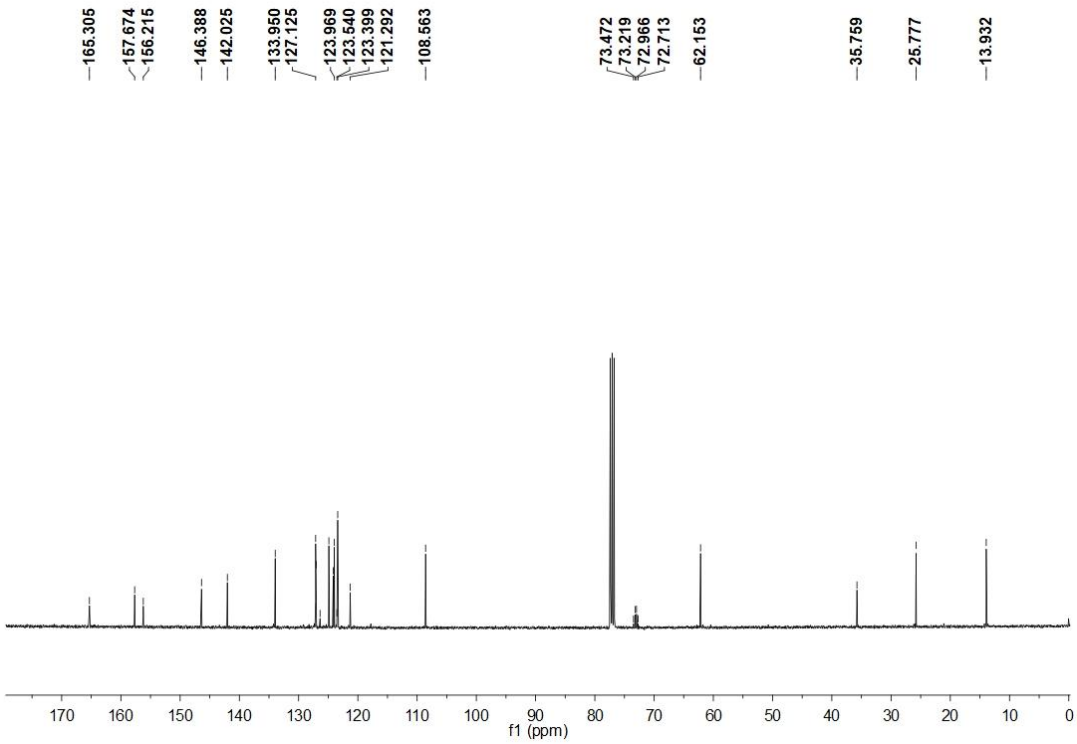
^{19}F NMR (376 MHz, $CDCl_3$)



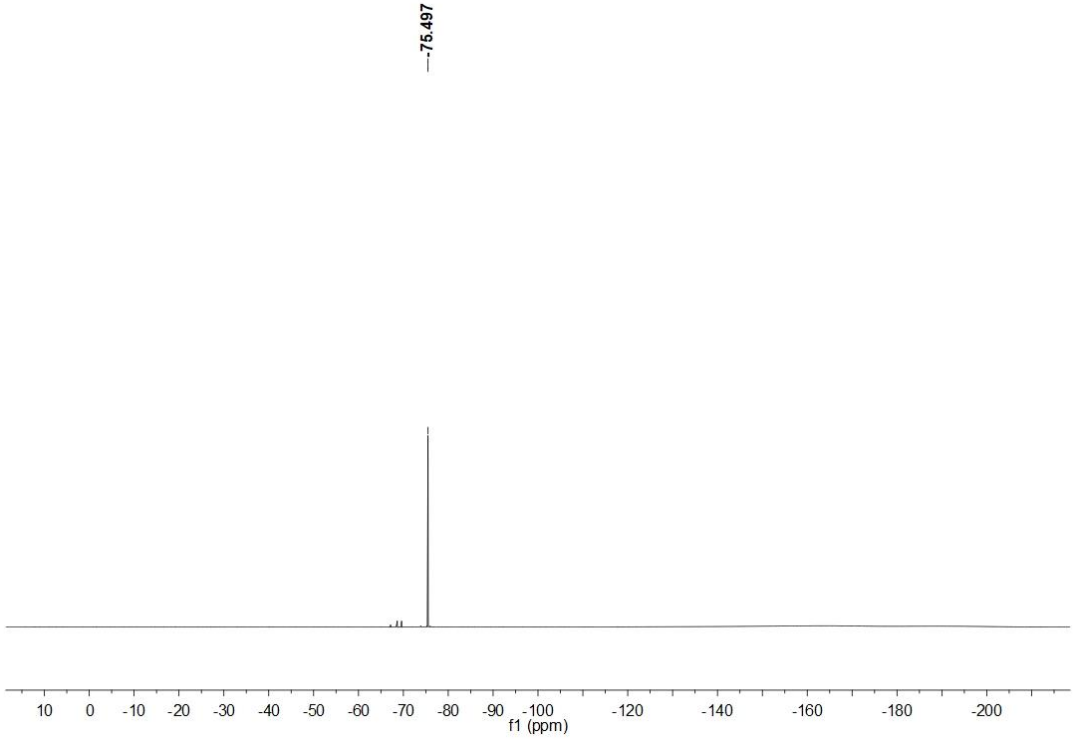
(*R*)-3l



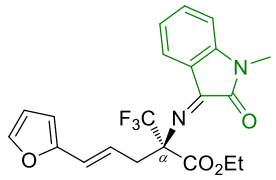
^{1}H NMR (400 MHz, $CDCl_3$)



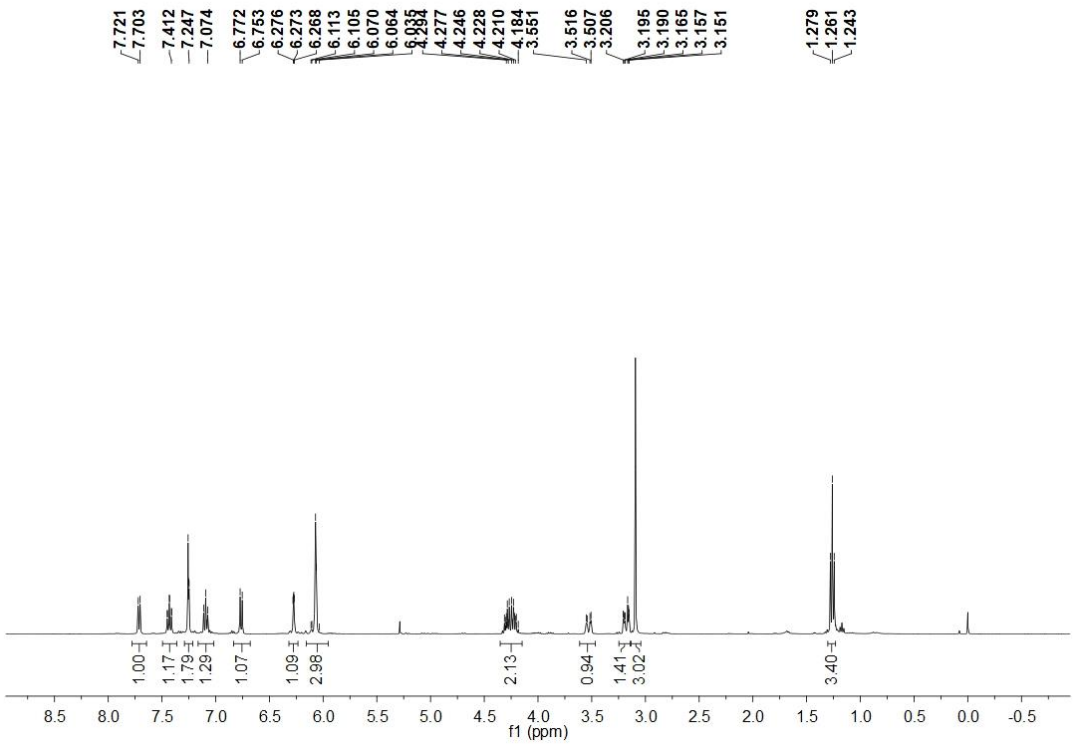
^{13}C NMR (101 MHz, $CDCl_3$)



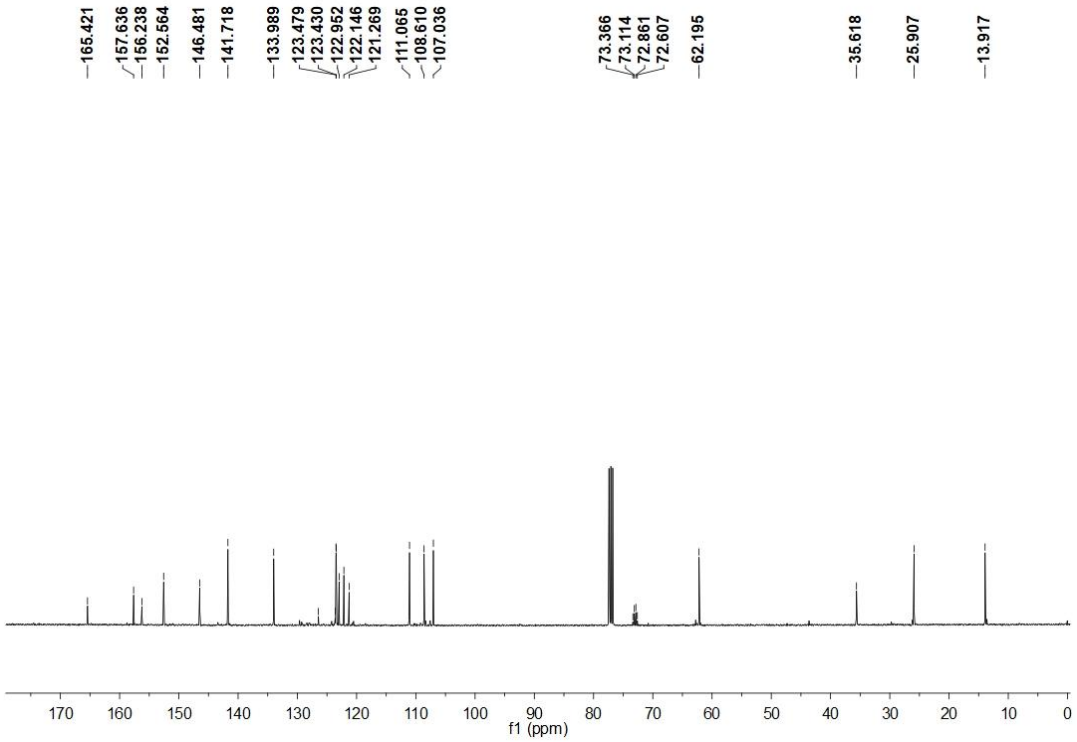
^{19}F NMR (376 MHz, $CDCl_3$)



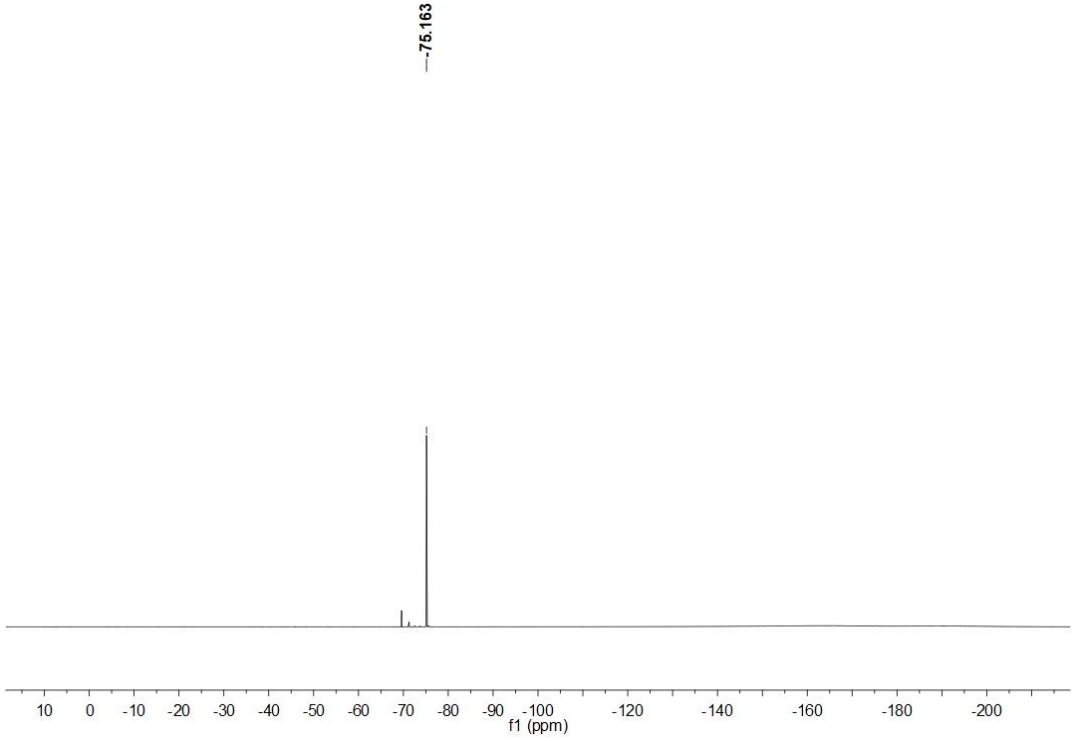
(*R*)-3m



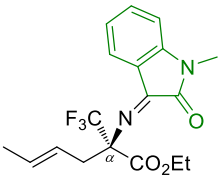
^{1}H NMR (400 MHz, $CDCl_3$)



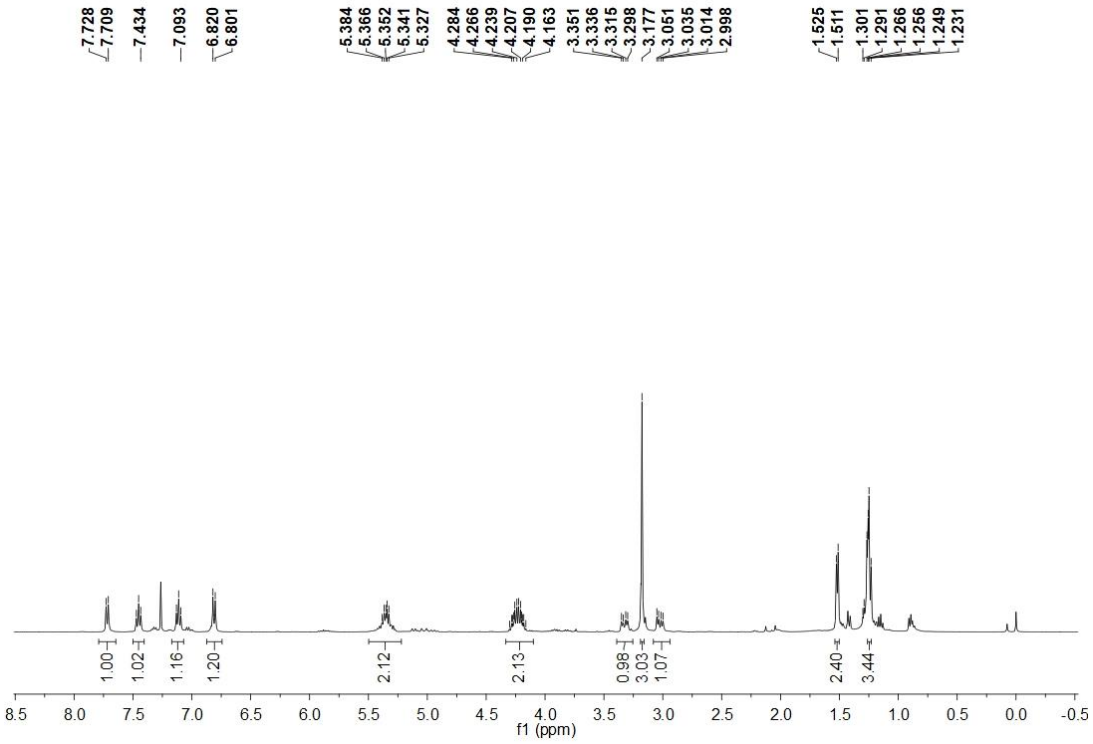
^{13}C NMR (101 MHz, $CDCl_3$)



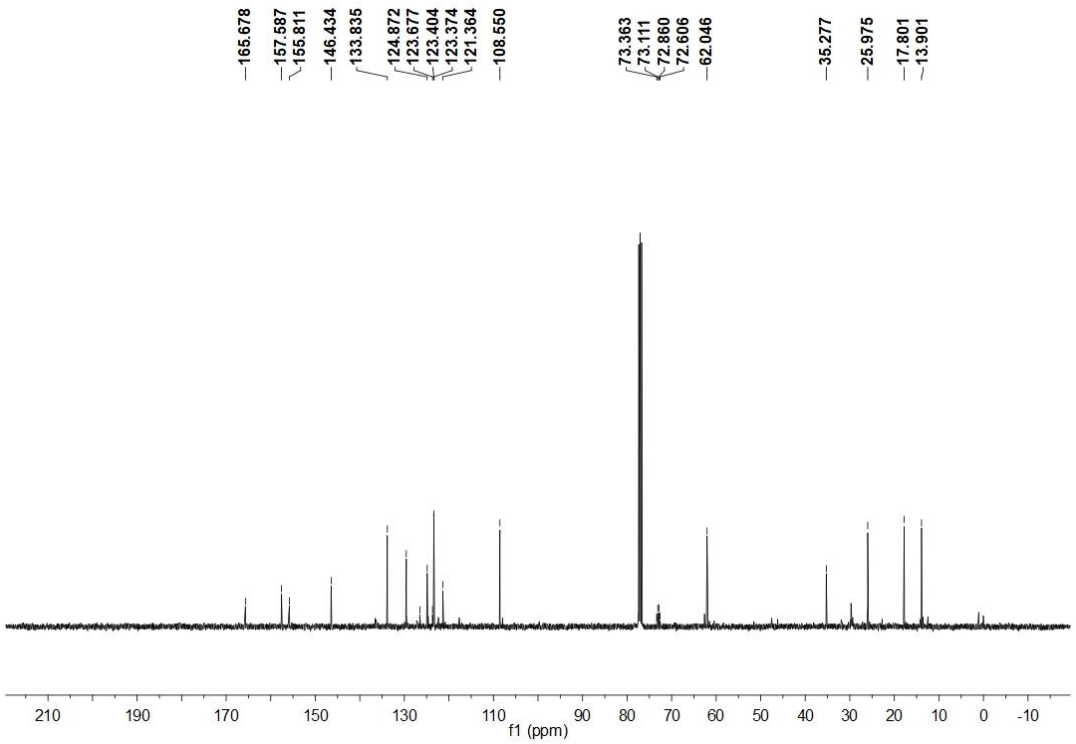
^{19}F NMR (376 MHz, $CDCl_3$)



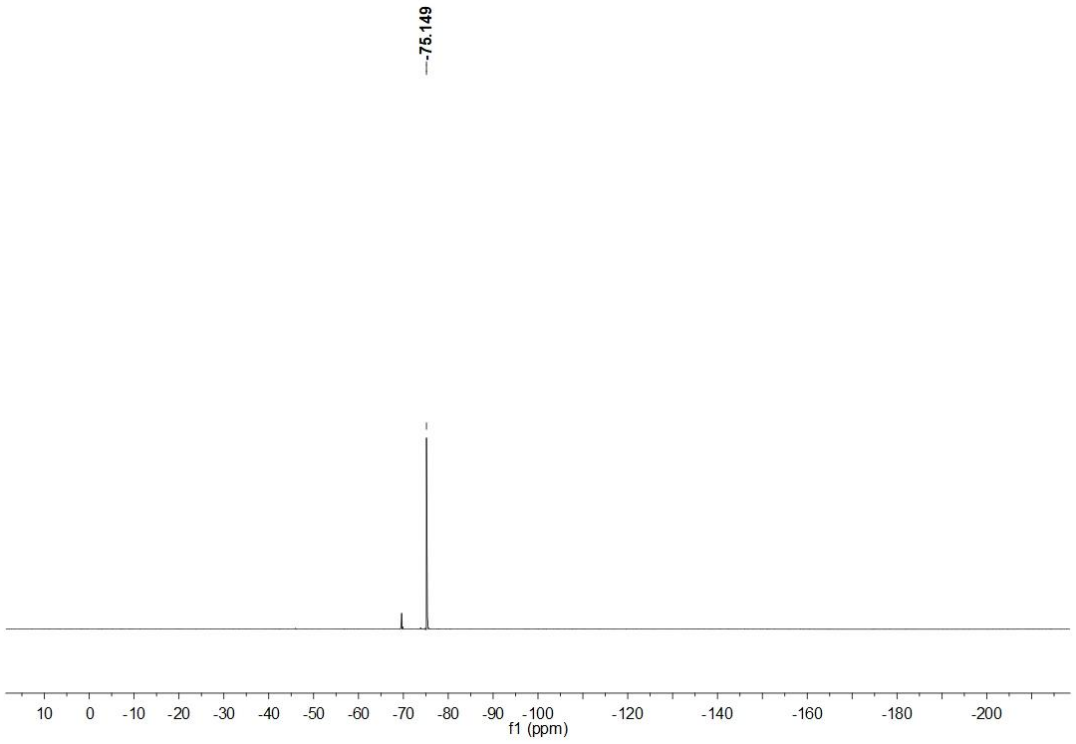
(*R*)-3n



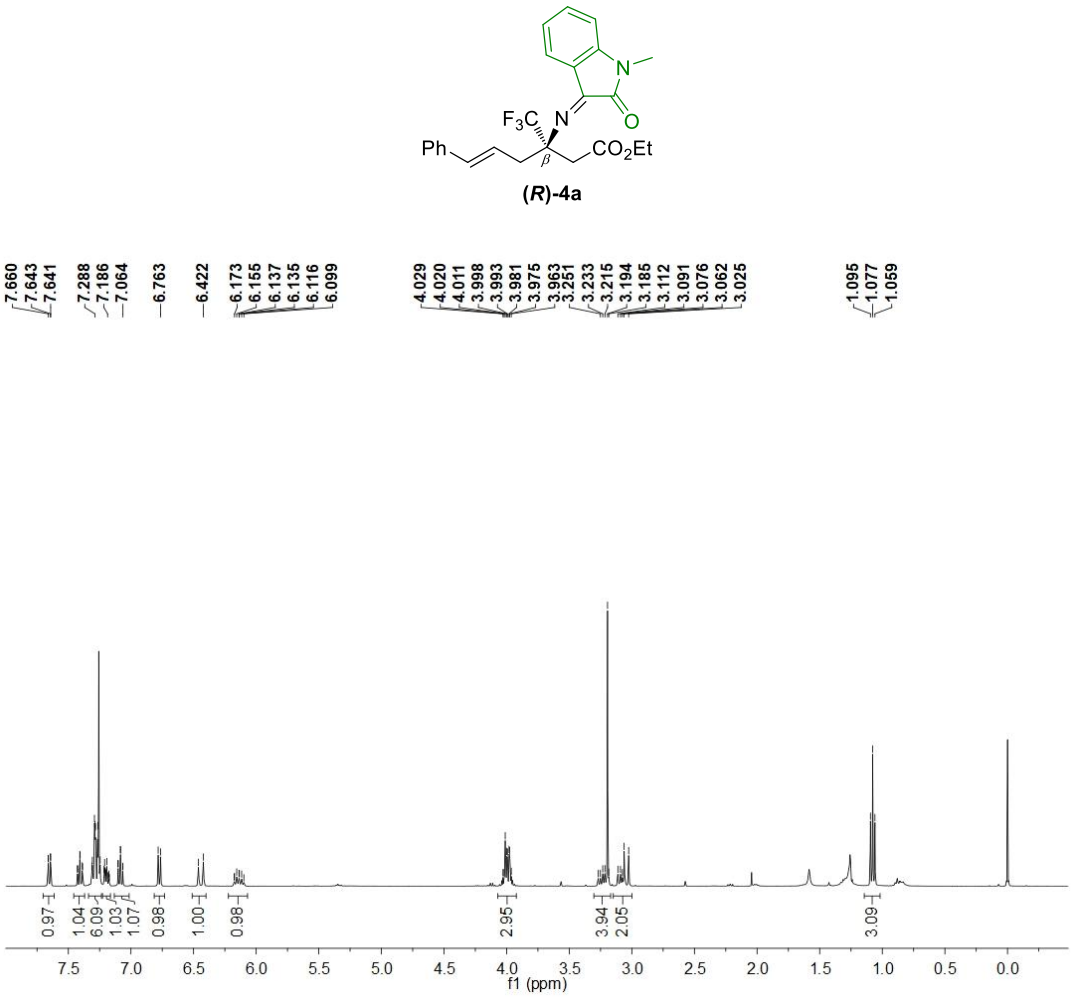
^{1}H NMR (400 MHz, $CDCl_3$)



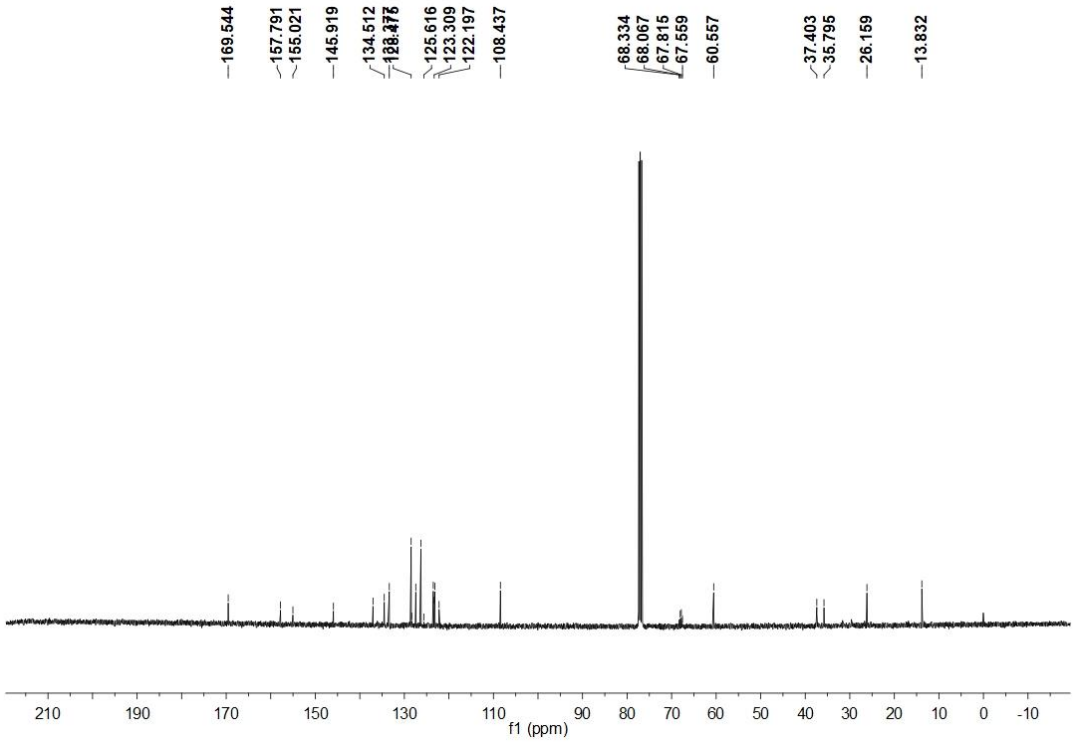
^{13}C NMR (101 MHz, $CDCl_3$)



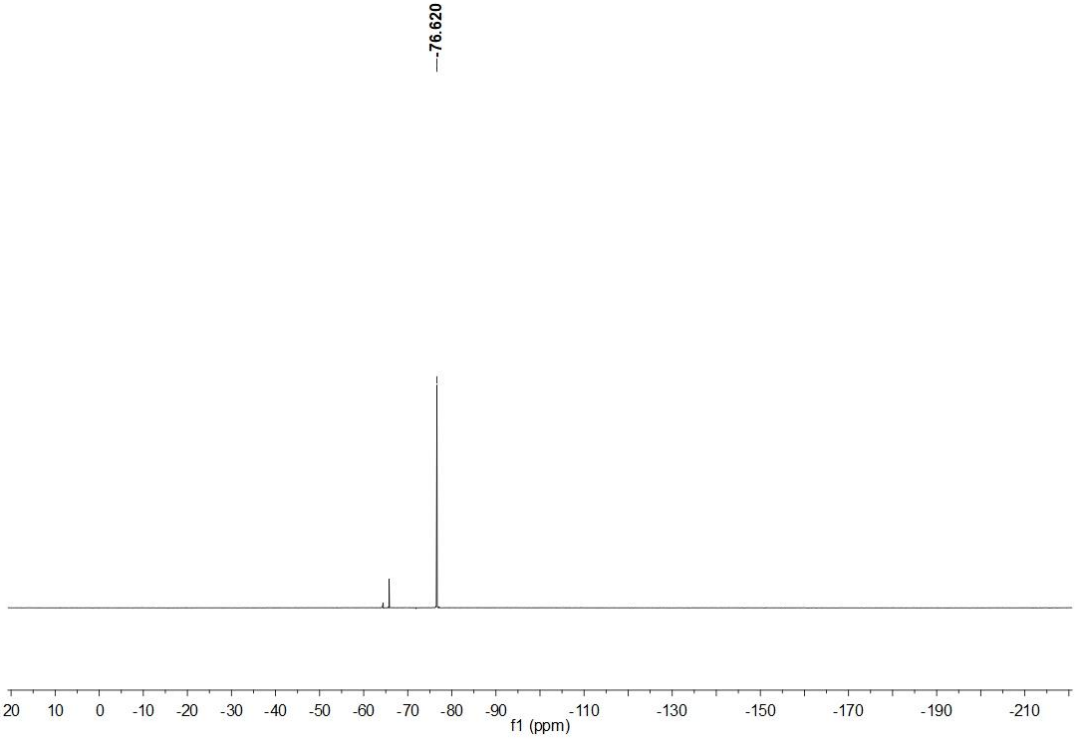
^{19}F NMR (376 MHz, $CDCl_3$)



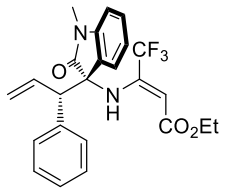
^{1}H NMR (400 MHz, $CDCl_3$)



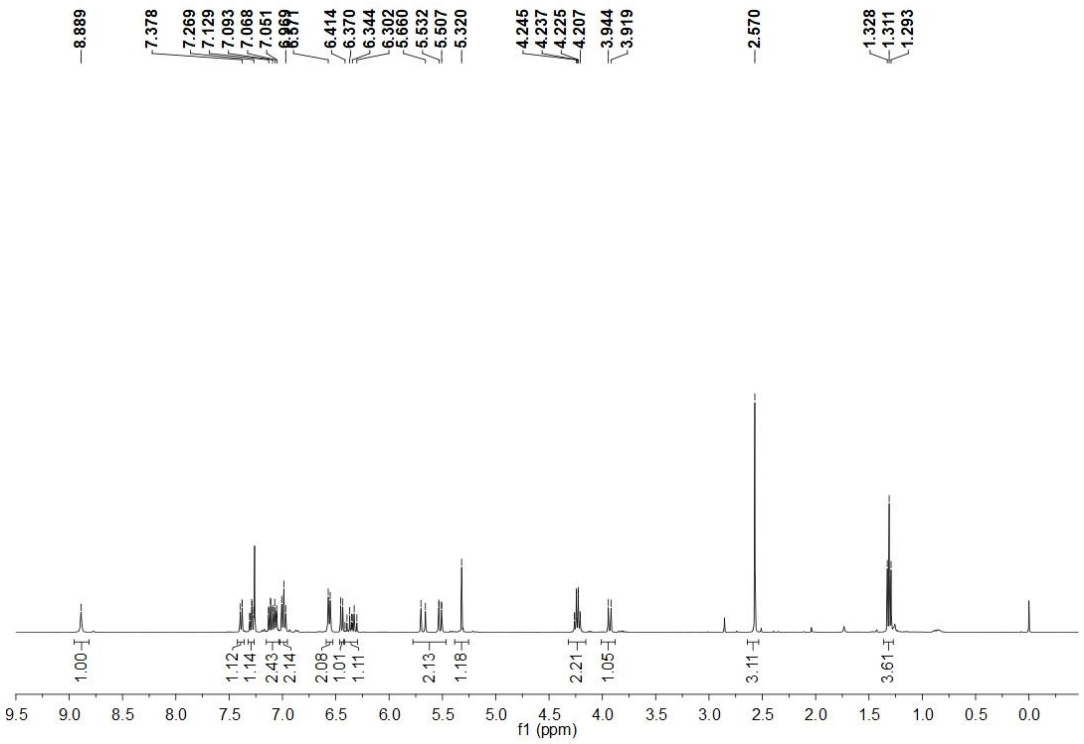
^{13}C NMR (101 MHz, $CDCl_3$)



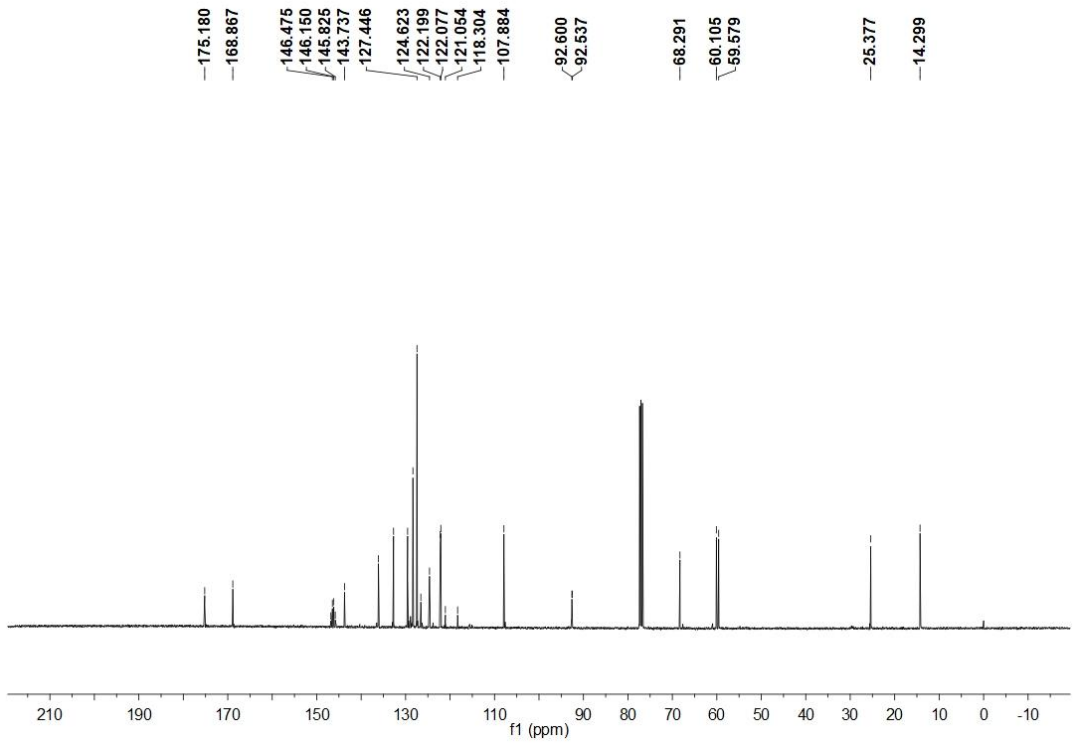
^{19}F NMR (376 MHz, $CDCl_3$)



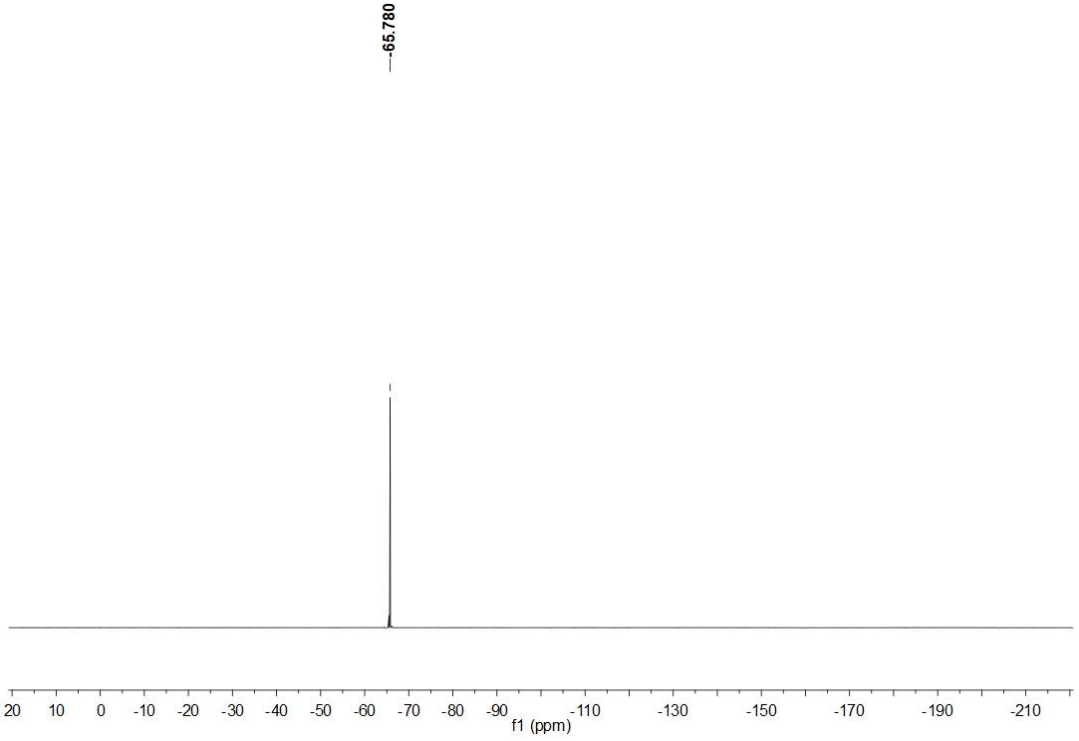
(*S*,*S*)-5a



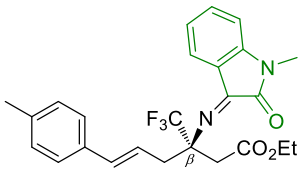
^{1}H NMR (400 MHz, $CDCl_3$)



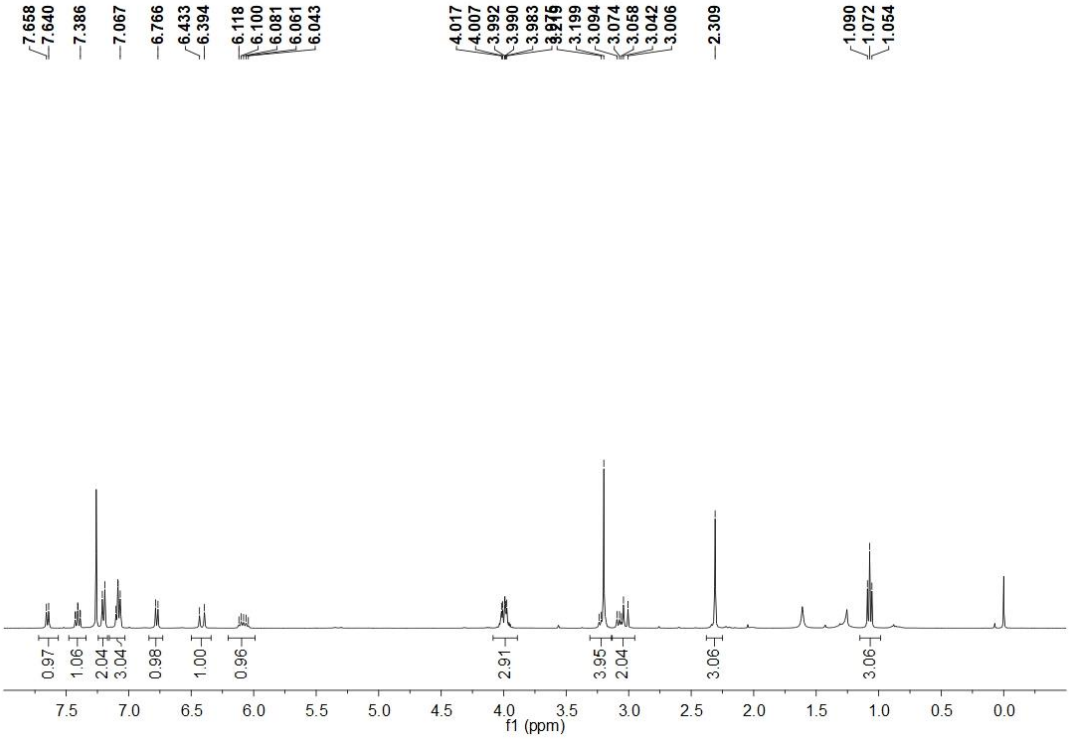
^{13}C NMR (101 MHz, $CDCl_3$)



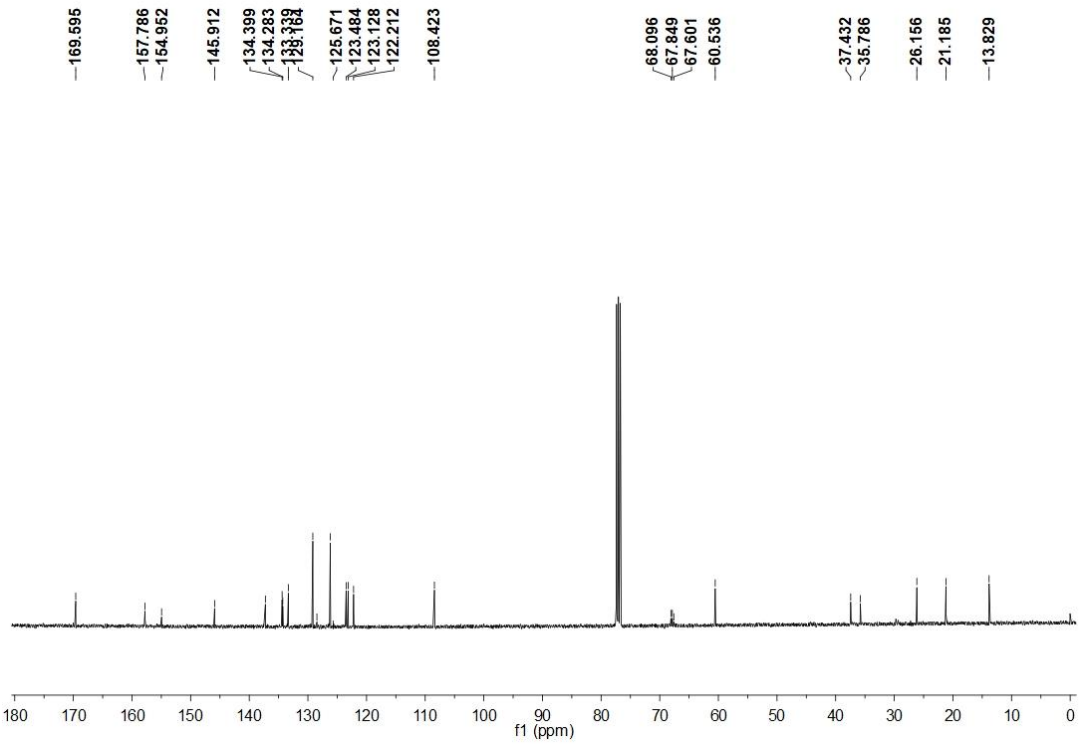
^{19}F NMR (376 MHz, $CDCl_3$)



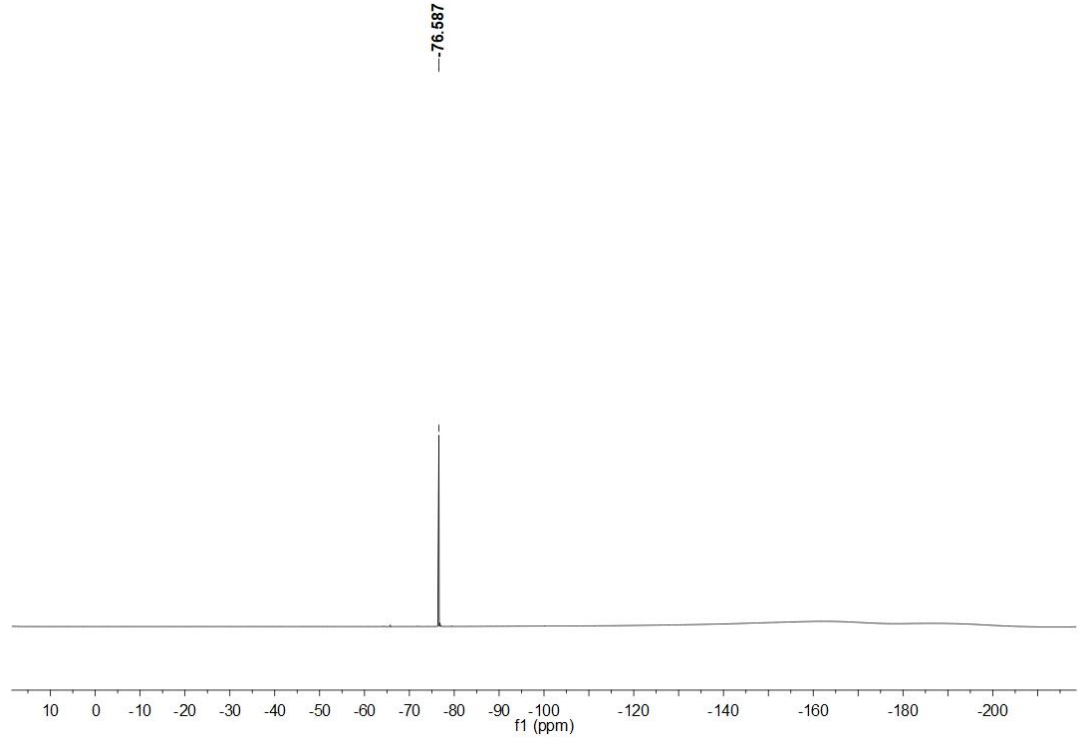
(*R*)-4b



^{1}H NMR (400 MHz, $CDCl_3$)

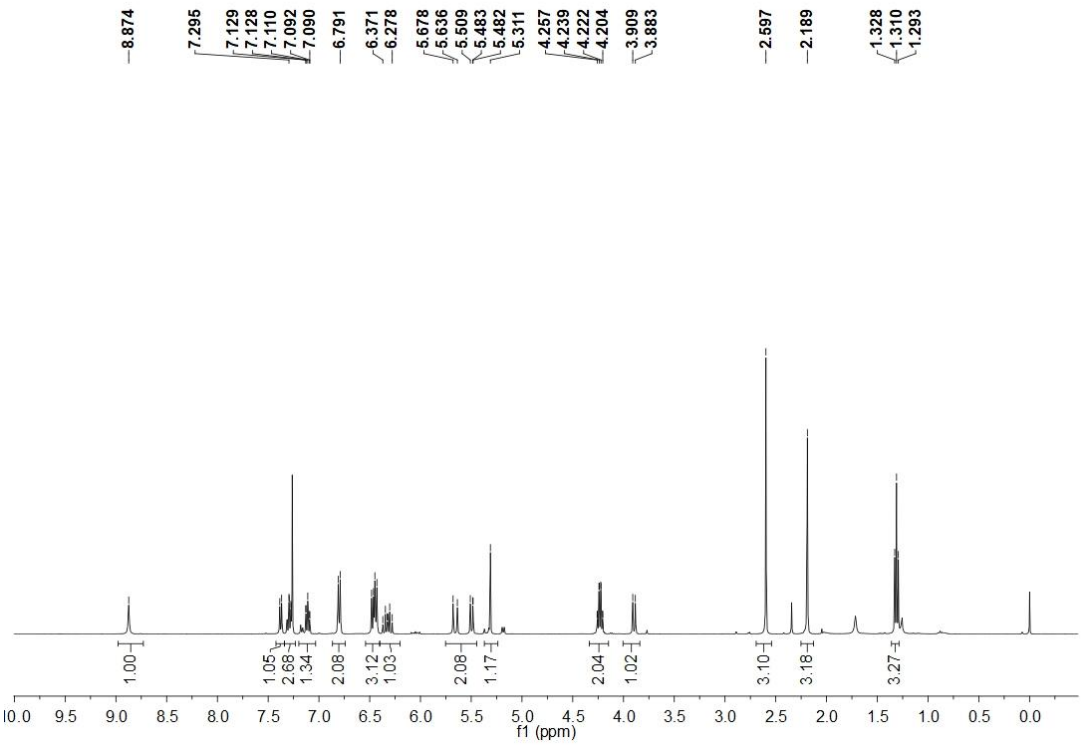


^{13}C NMR (101 MHz, $CDCl_3$)

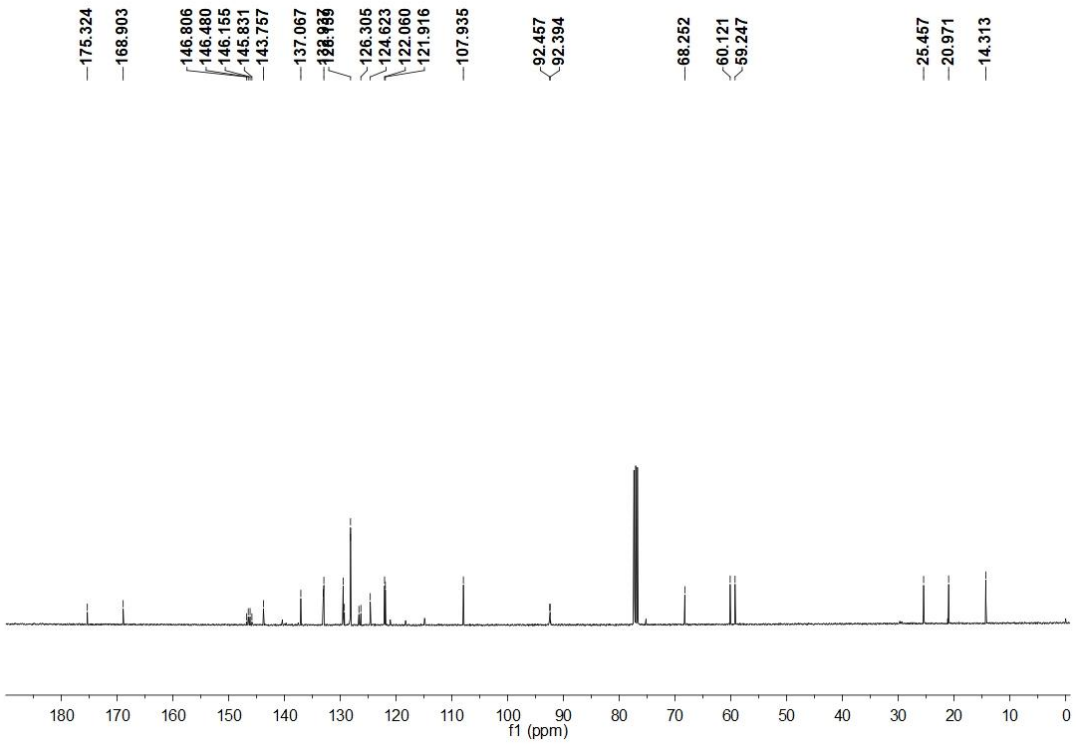


^{19}F NMR (376 MHz, $CDCl_3$)

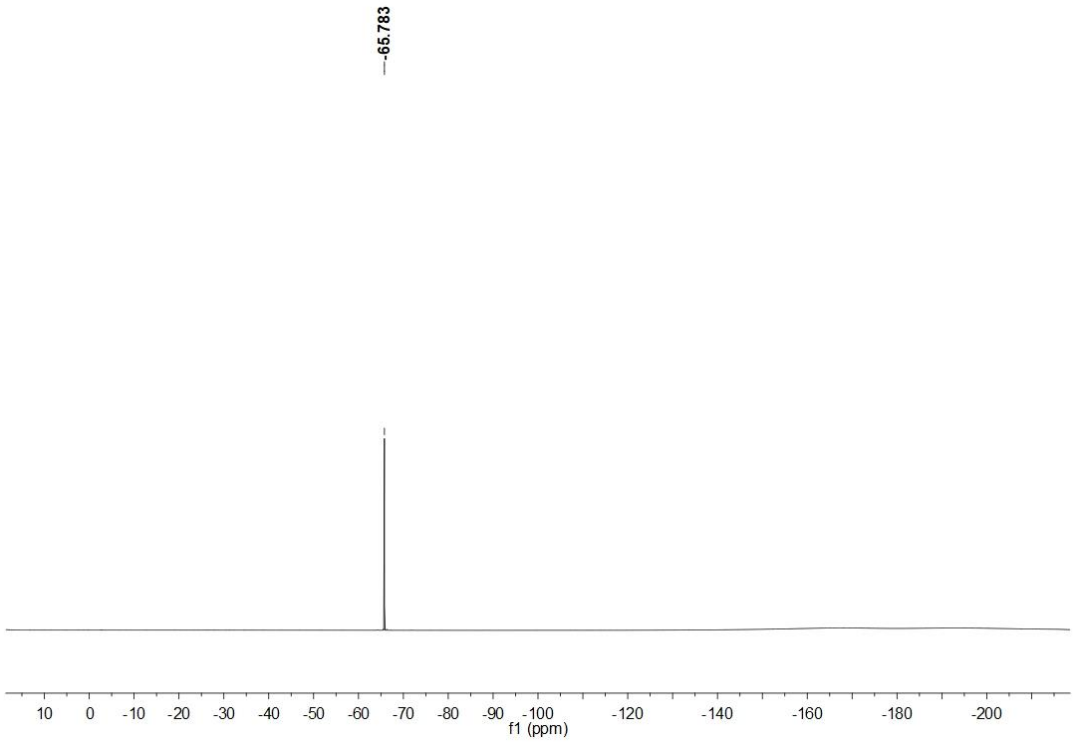
(*S*,*S*)-5b



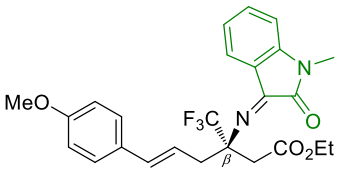
^{1}H NMR (400 MHz, $CDCl_3$)



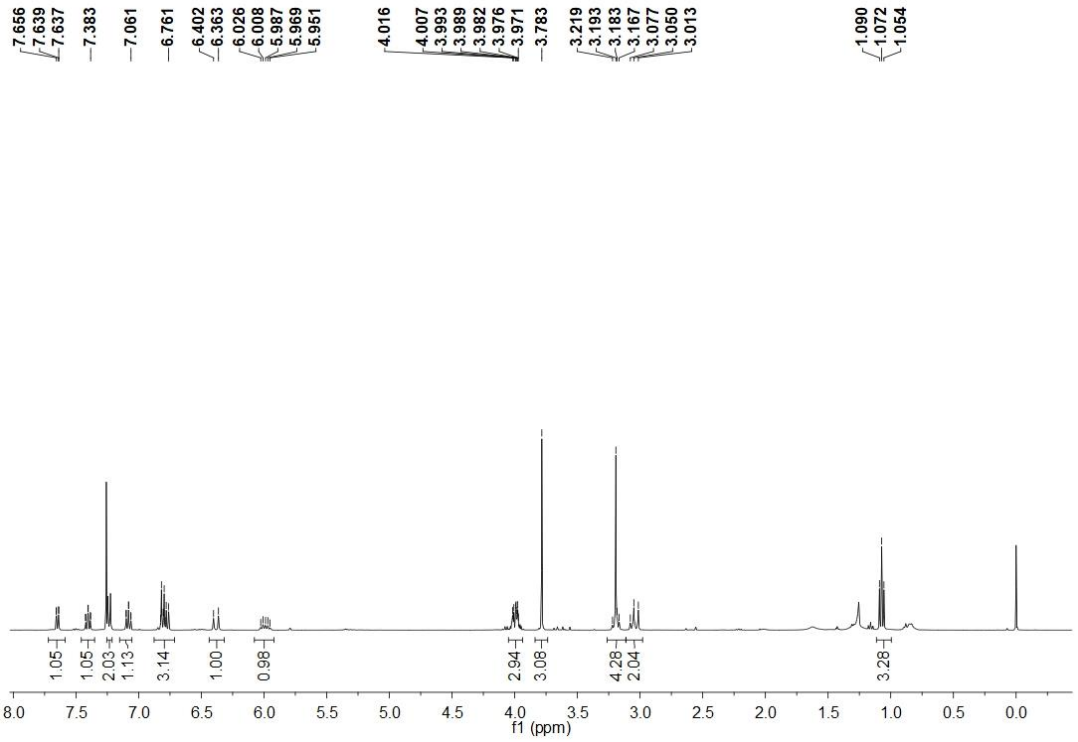
^{13}C NMR (101 MHz, $CDCl_3$)



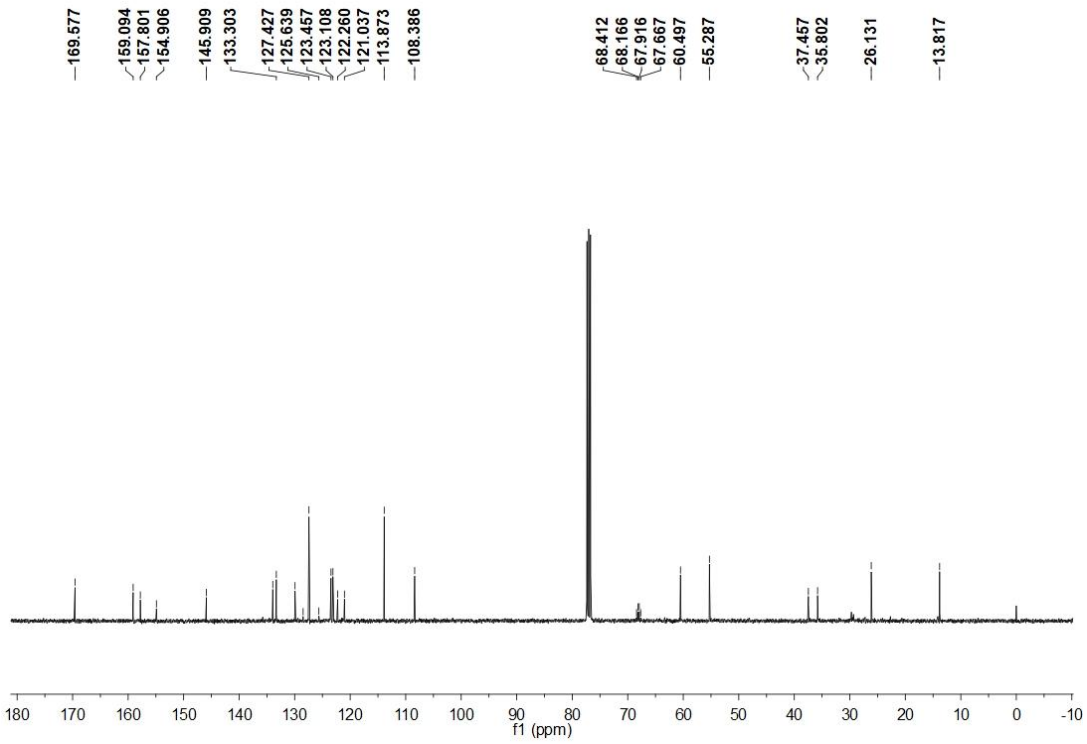
^{19}F NMR (376 MHz, $CDCl_3$)



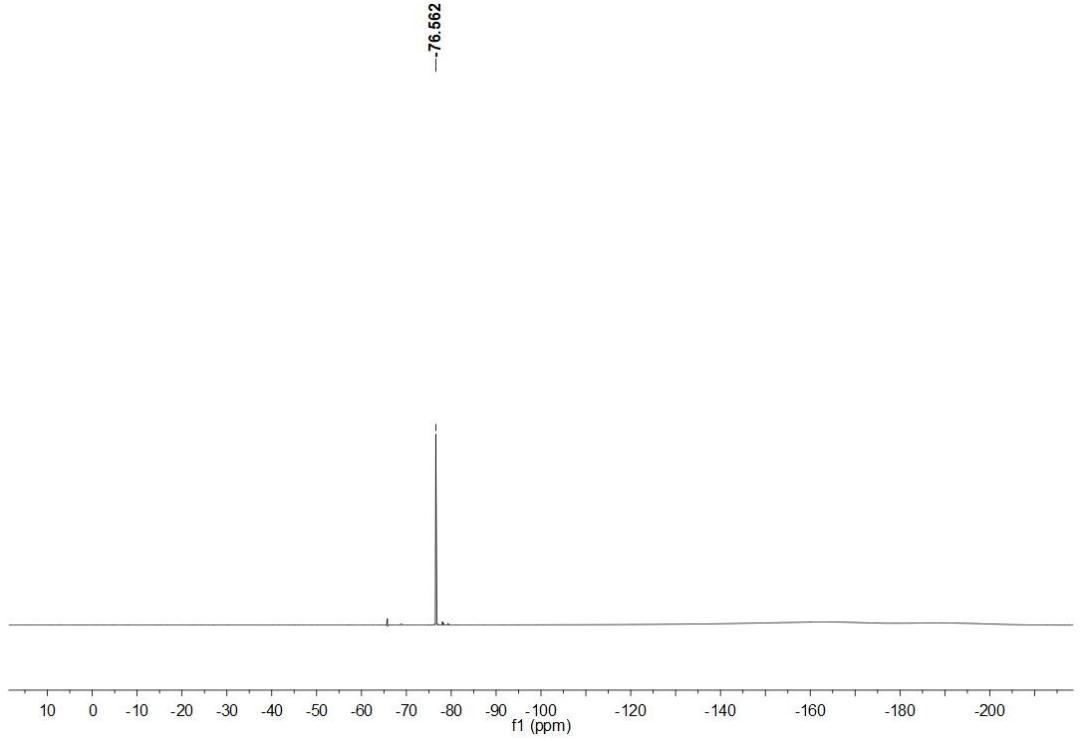
(*R*)-4c



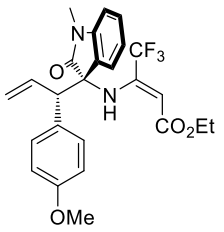
^{1}H NMR (400 MHz, $CDCl_3$)



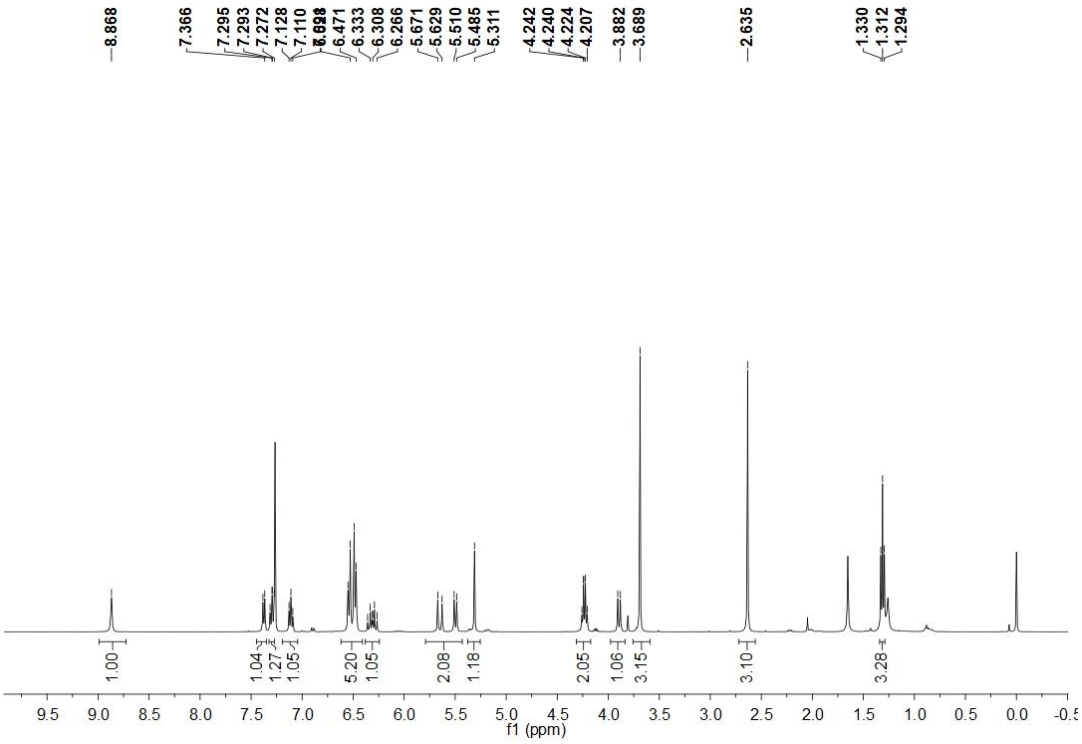
^{13}C NMR (101 MHz, $CDCl_3$)



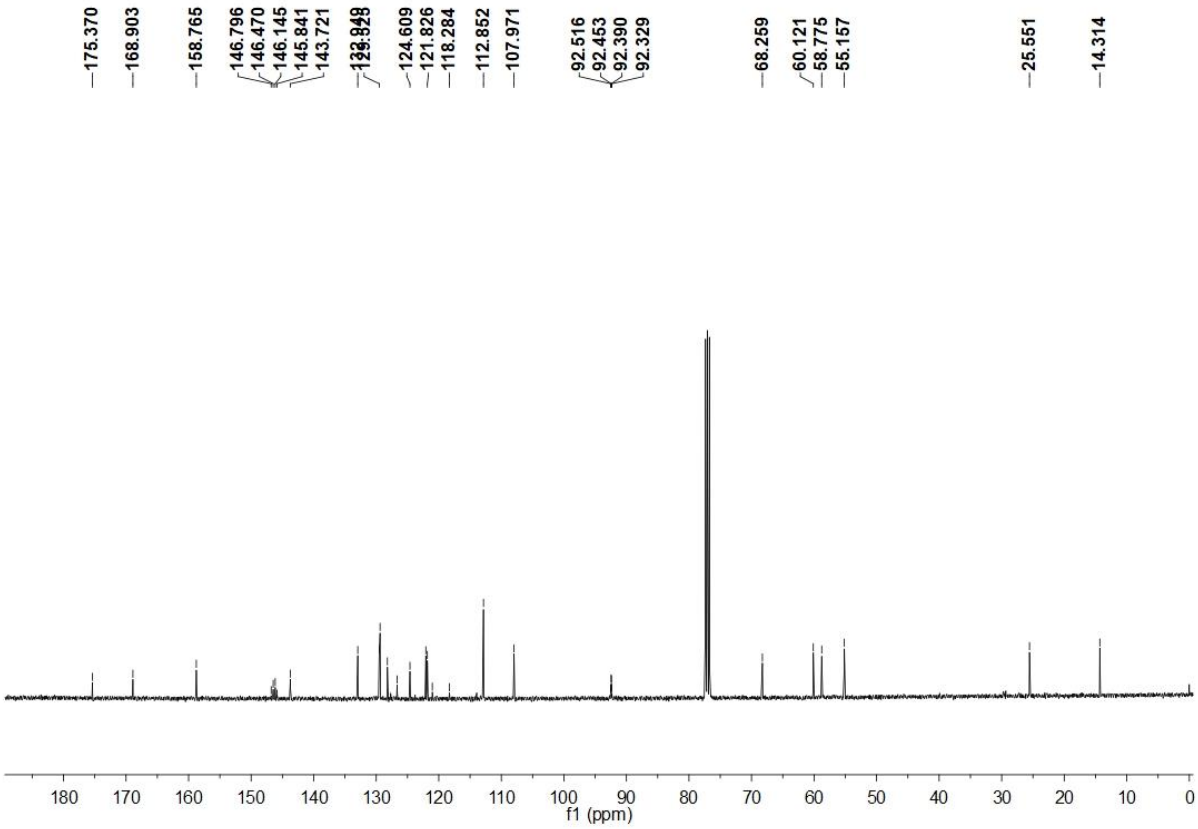
^{19}F NMR (376 MHz, $CDCl_3$)



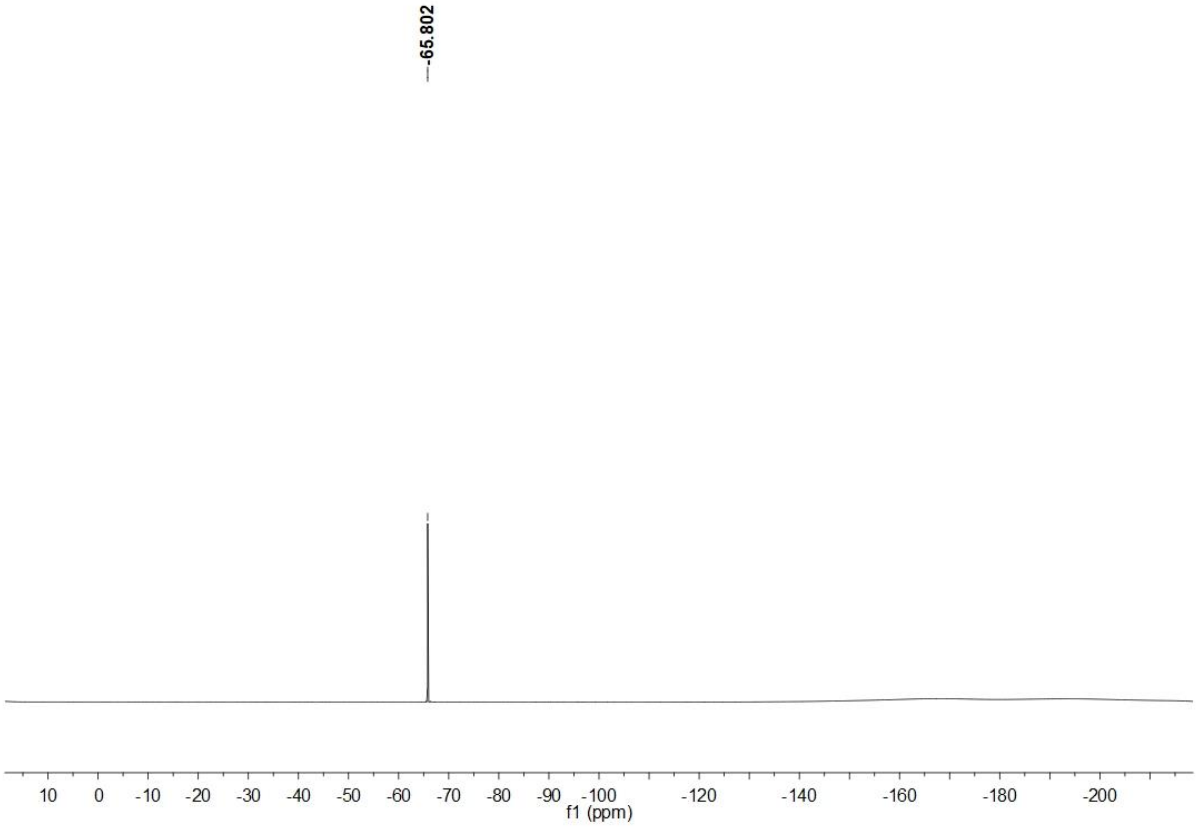
(*S*,*S*)-5c



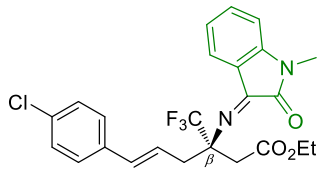
^{1}H NMR (400 MHz, $CDCl_3$)



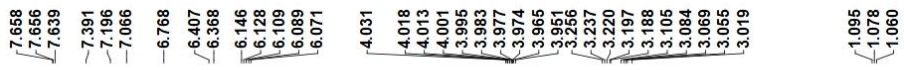
^{13}C NMR (101 MHz, $CDCl_3$)

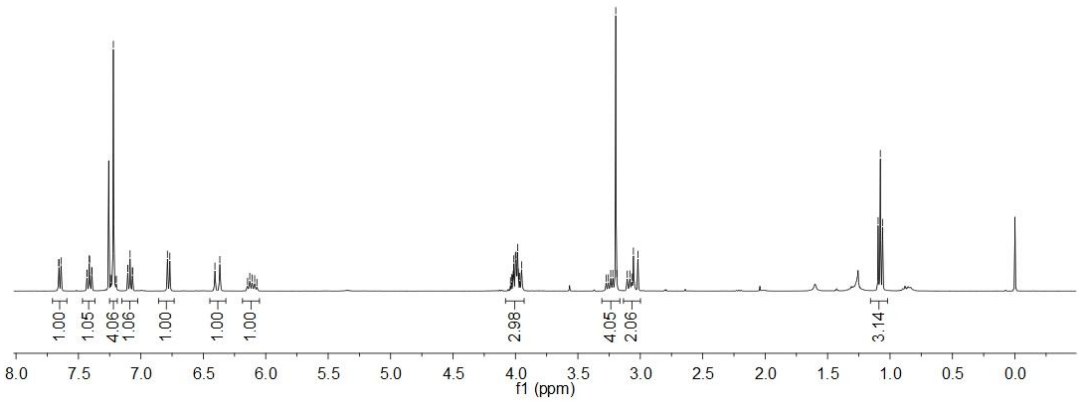


^{19}F NMR (376 MHz, $CDCl_3$)

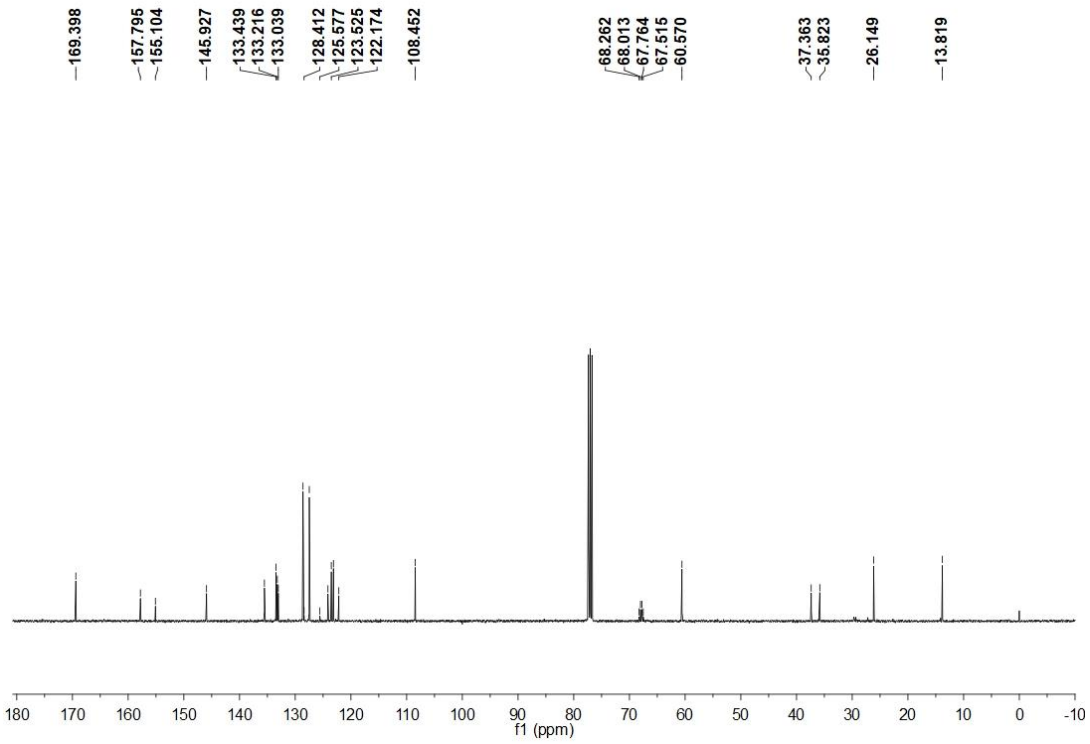


(*R*)-4d

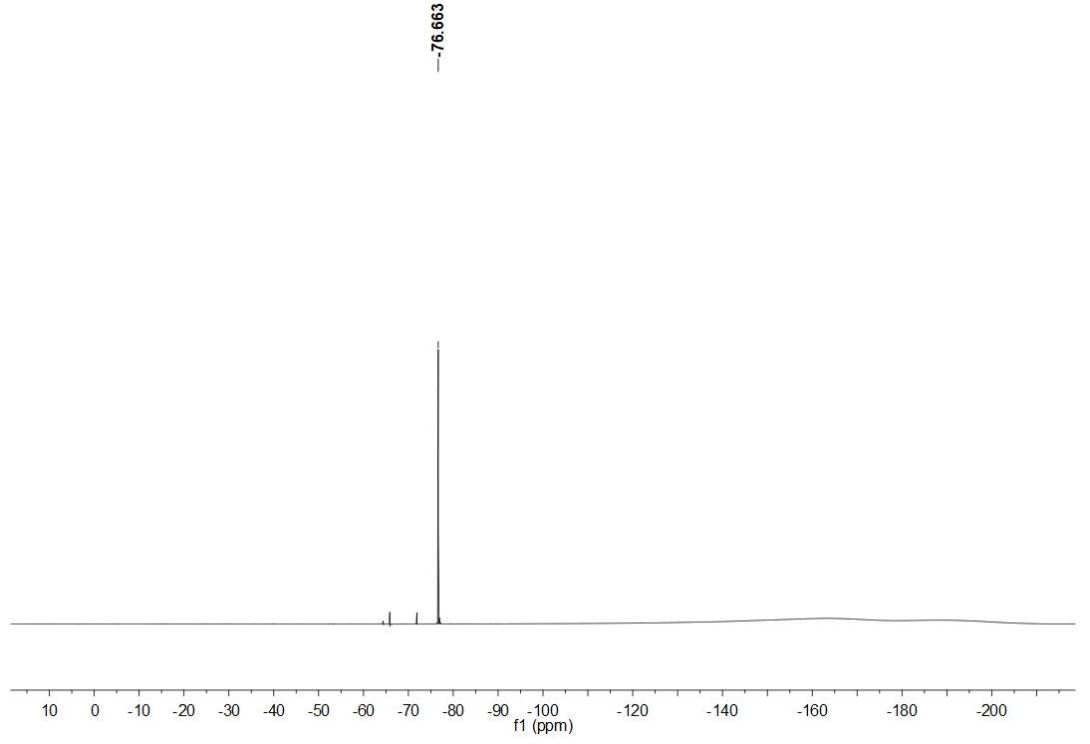




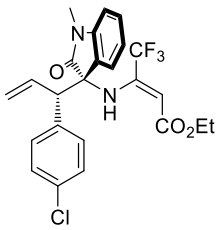
^{1}H NMR (400 MHz, $CDCl_3$)



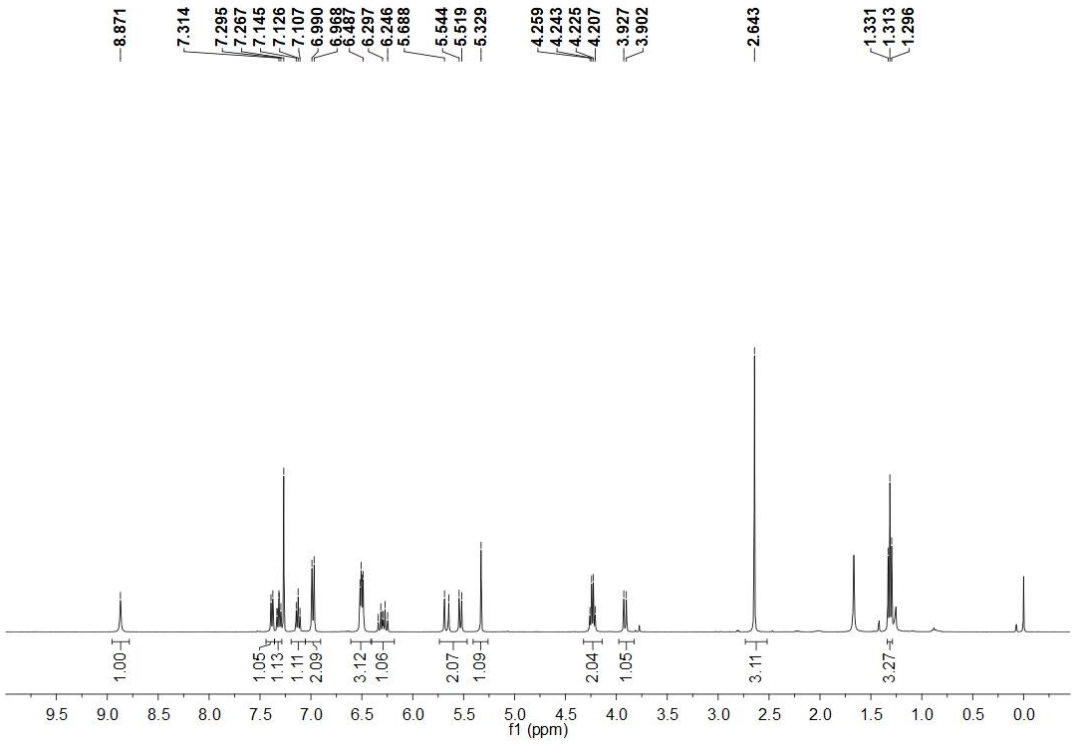
^{13}C NMR (101 MHz, $CDCl_3$)



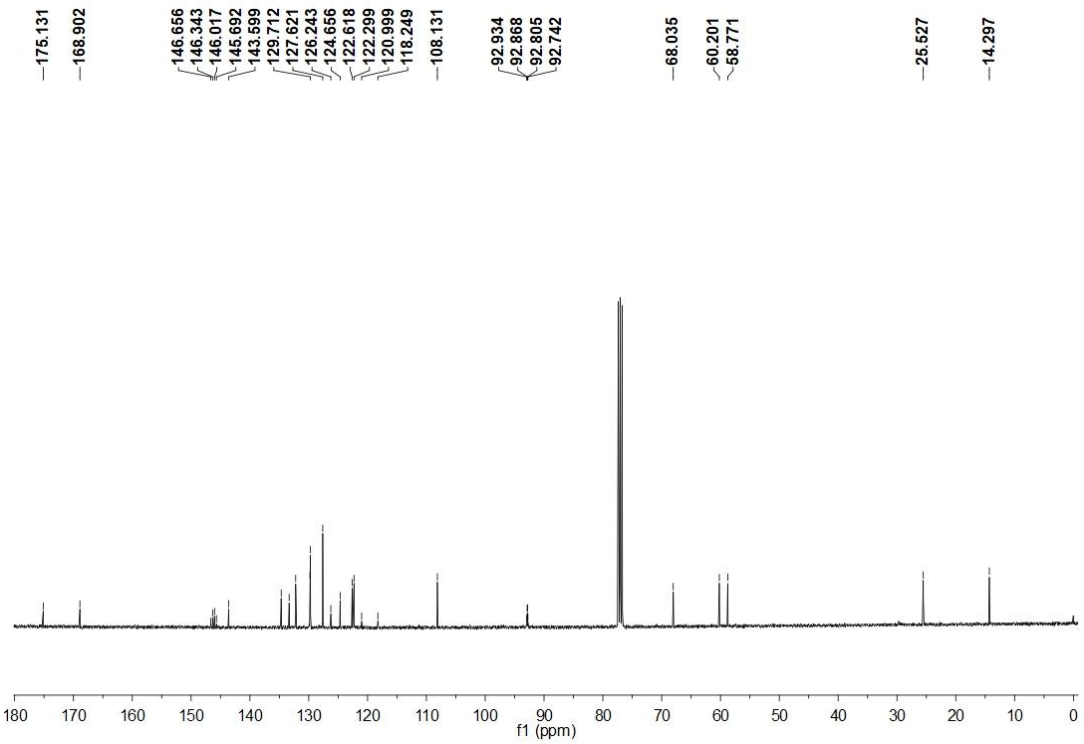
^{19}F NMR (376 MHz, $CDCl_3$)



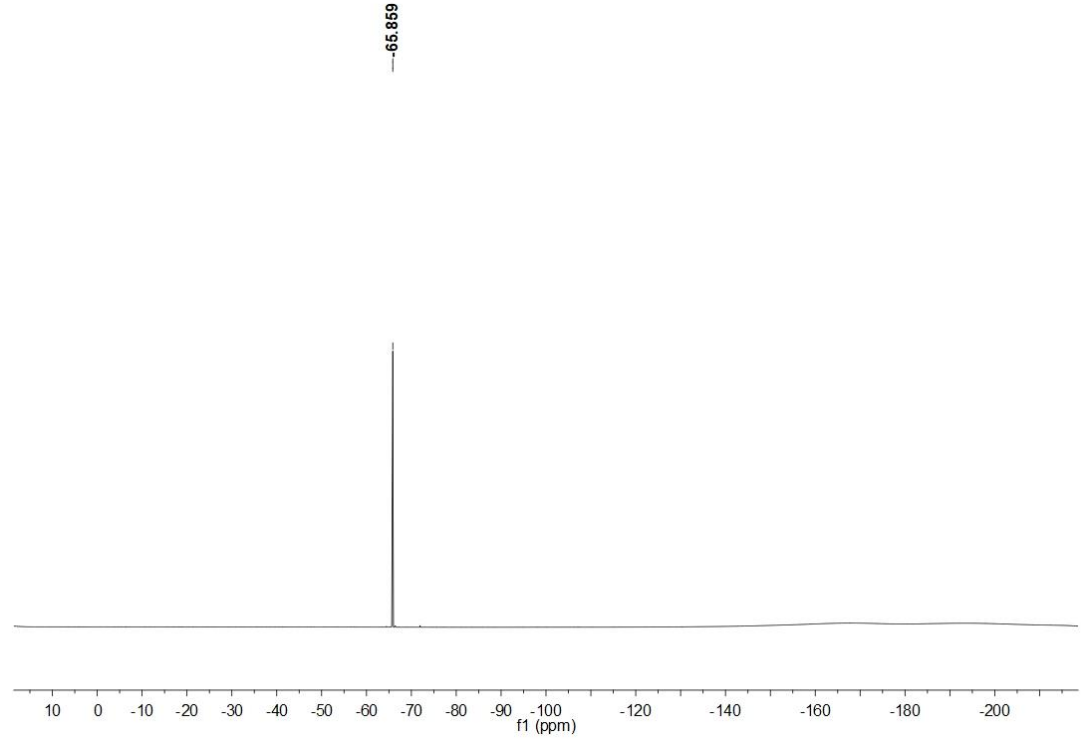
(*S*,*S*)-5d



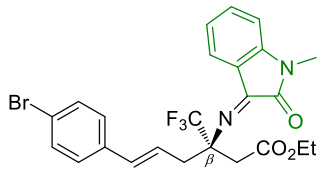
^{1}H NMR (400 MHz, $CDCl_3$)



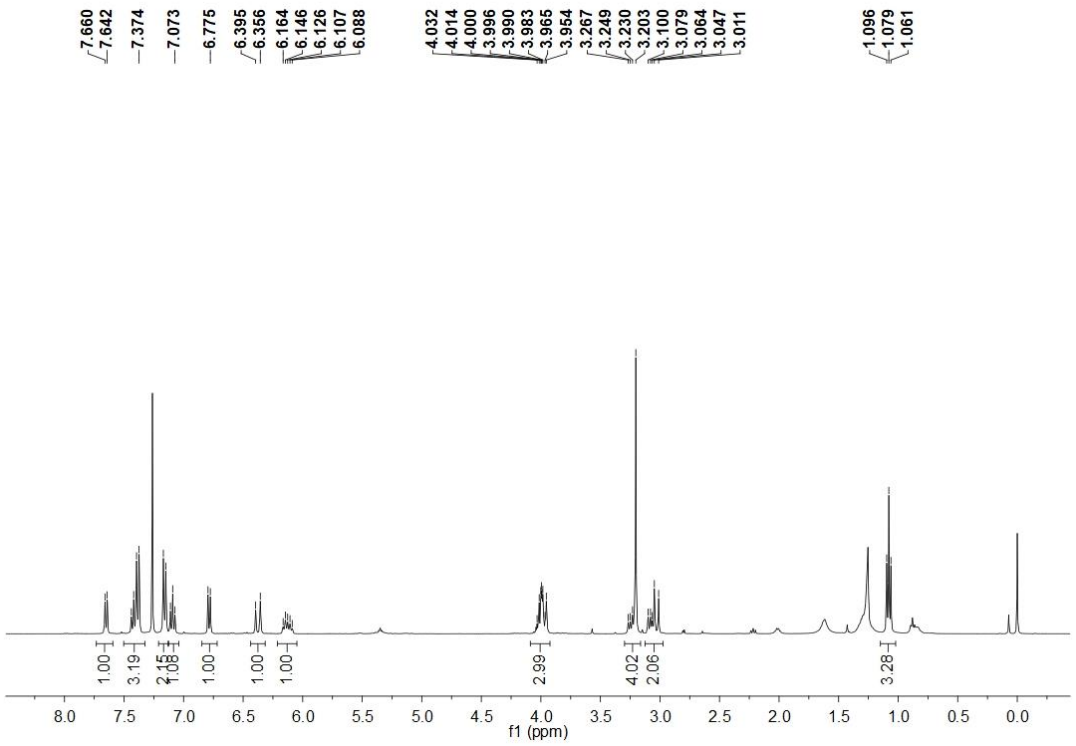
^{13}C NMR (101 MHz, $CDCl_3$)



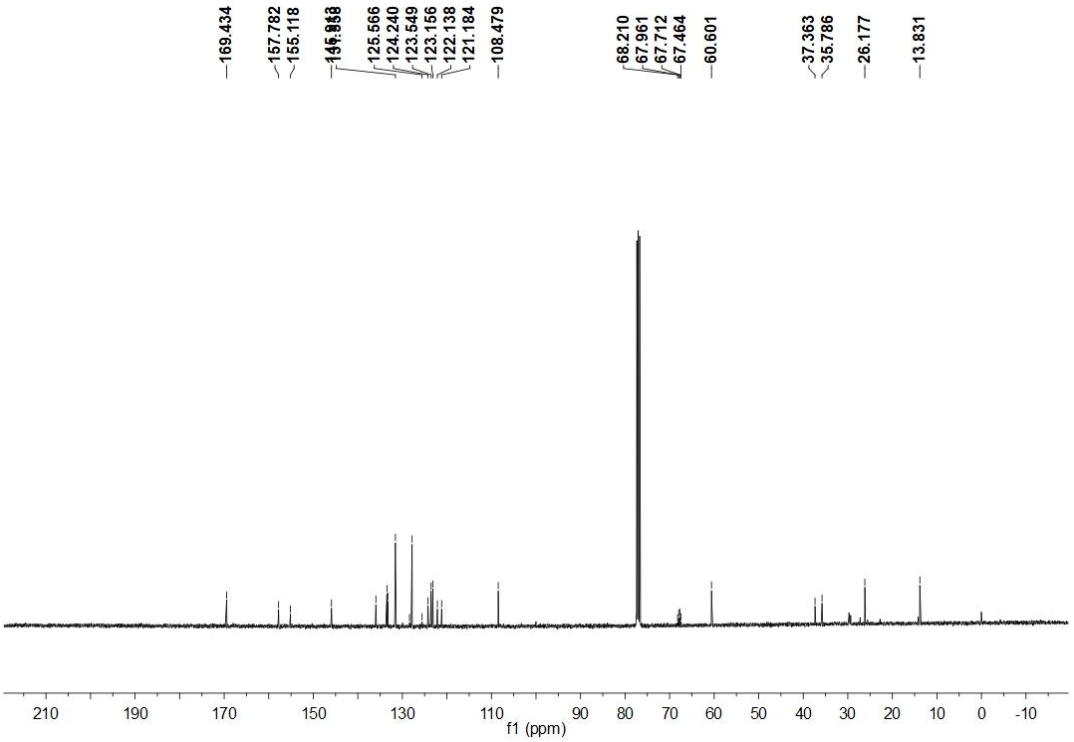
^{19}F NMR (376 MHz, $CDCl_3$)



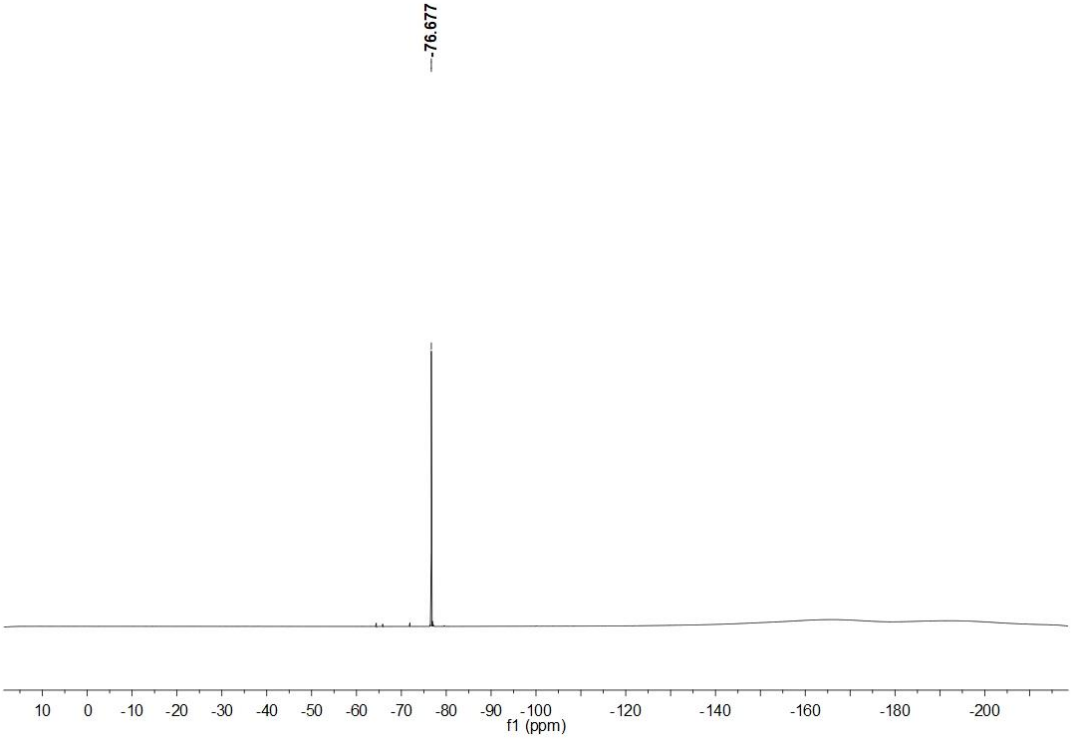
(*R*)-4e



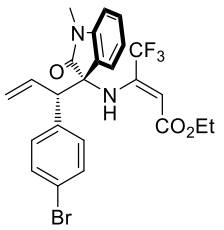
^{1}H NMR (400 MHz, $CDCl_3$)



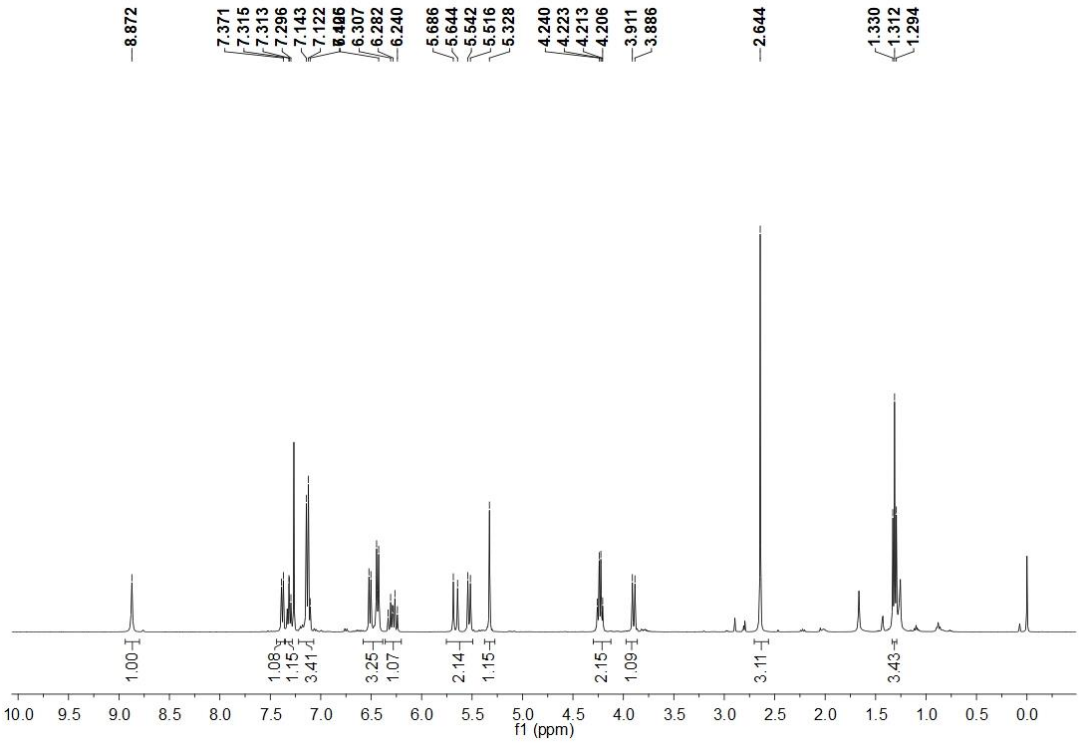
^{13}C NMR (101 MHz, $CDCl_3$)



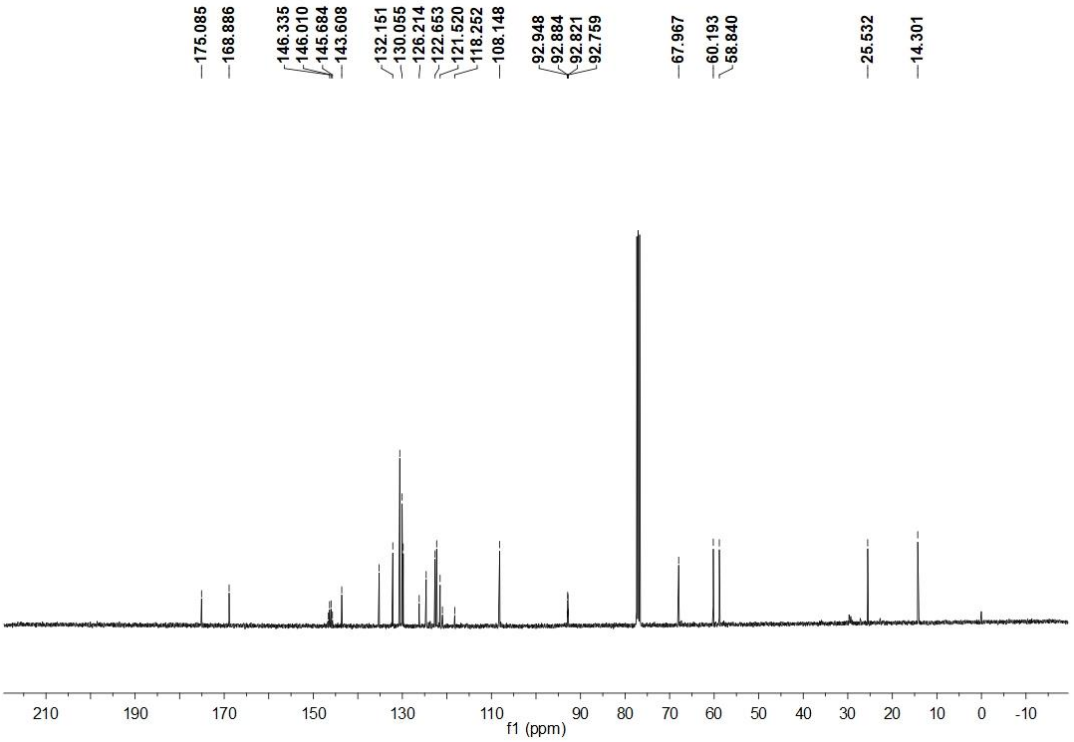
^{19}F NMR (376 MHz, $CDCl_3$)



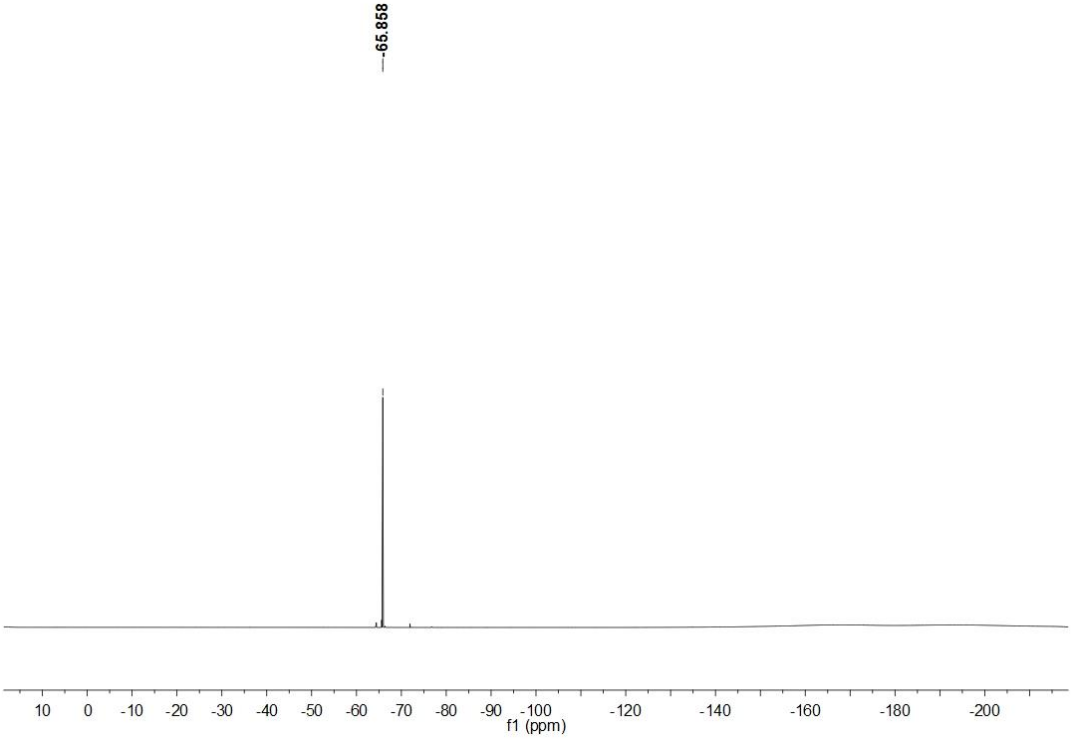
(*S*,*S*)-5e



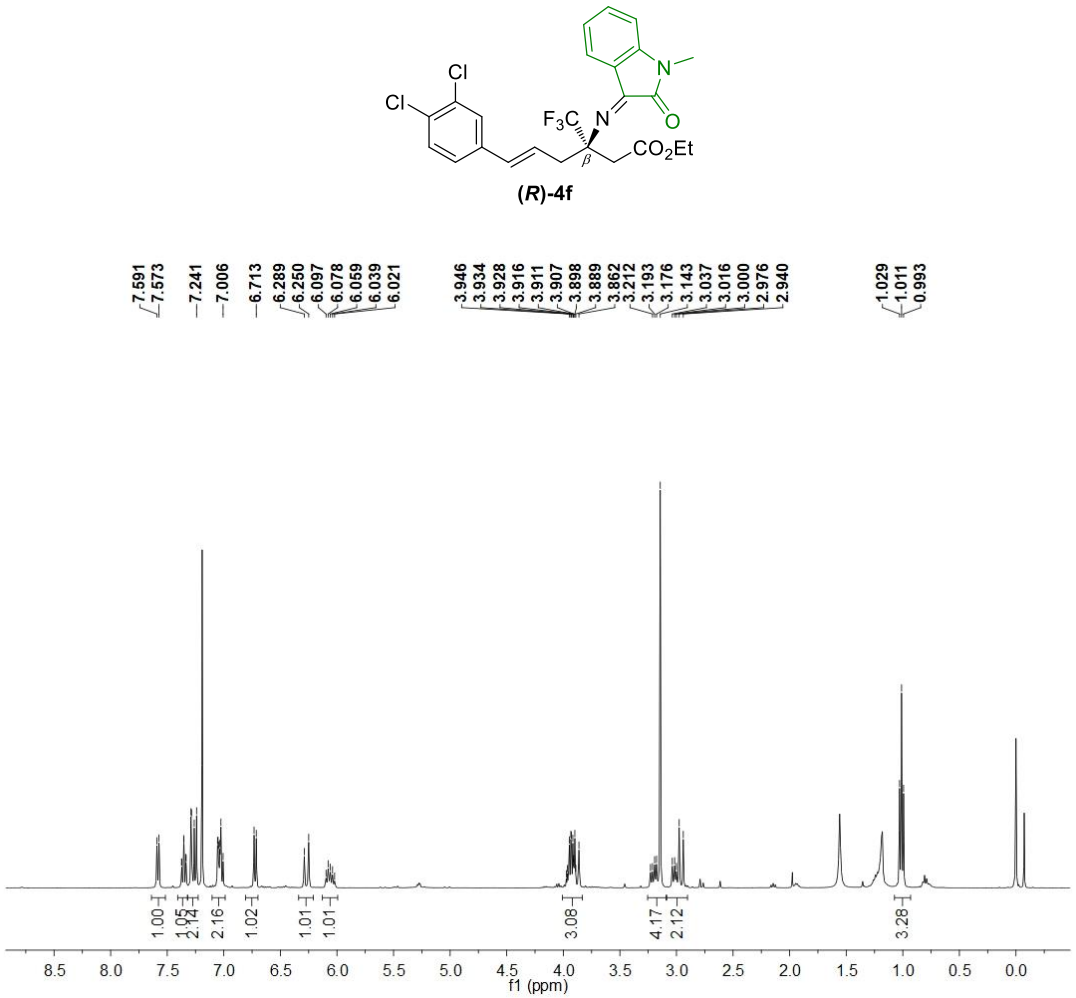
^{1}H NMR (400 MHz, $CDCl_3$)



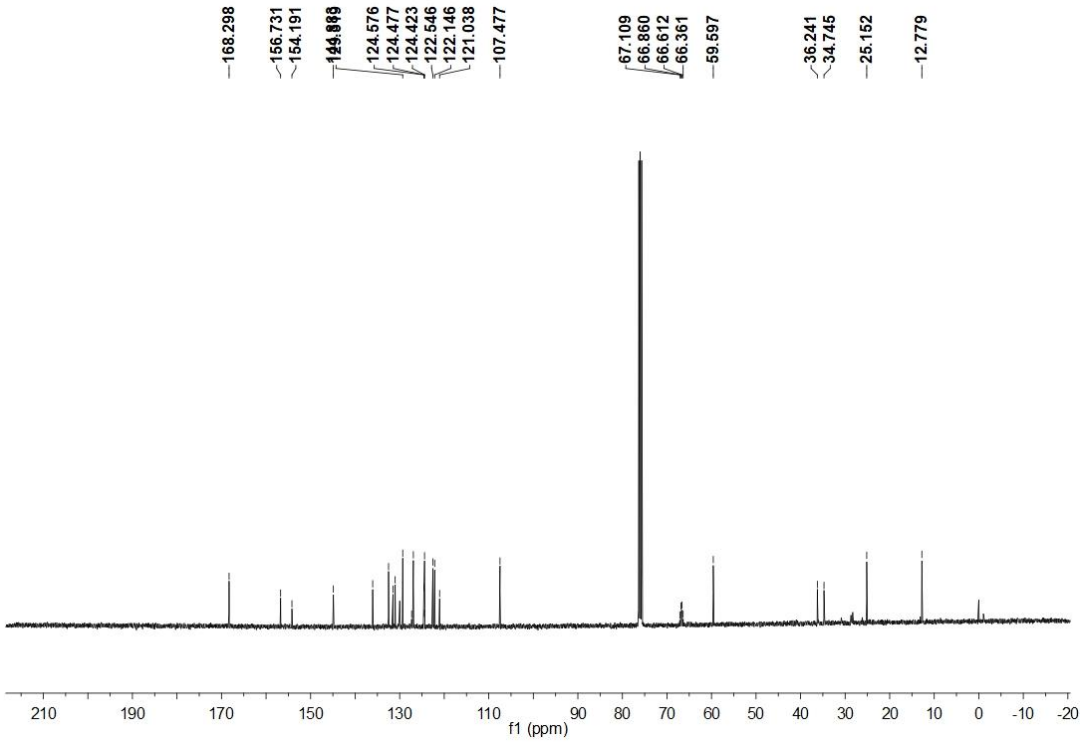
^{13}C NMR (101 MHz, $CDCl_3$)



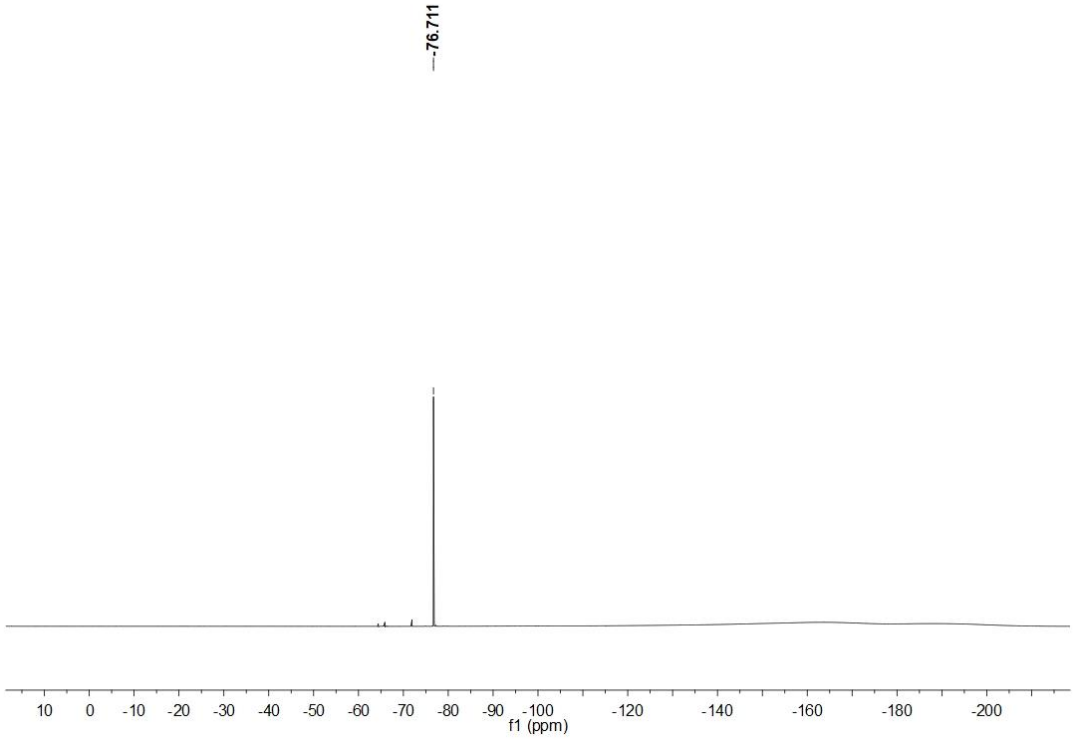
^{19}F NMR (376 MHz, $CDCl_3$)



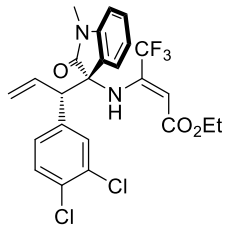
^{1}H NMR (400 MHz, $CDCl_3$)



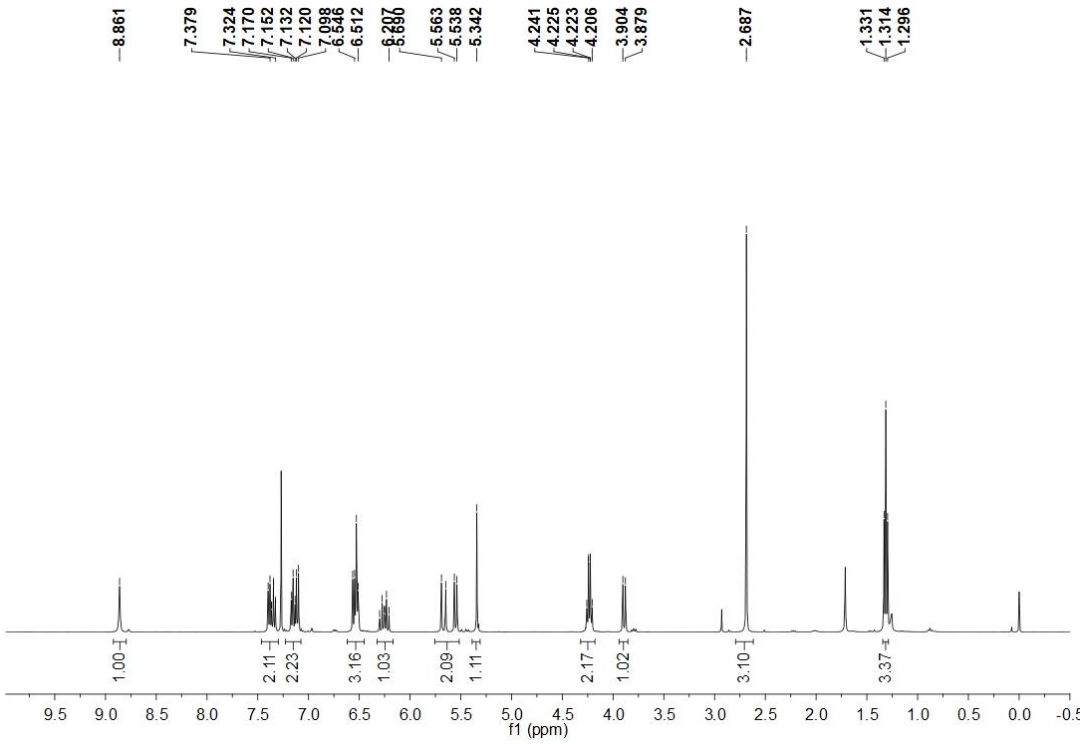
^{13}C NMR (101 MHz, $CDCl_3$)



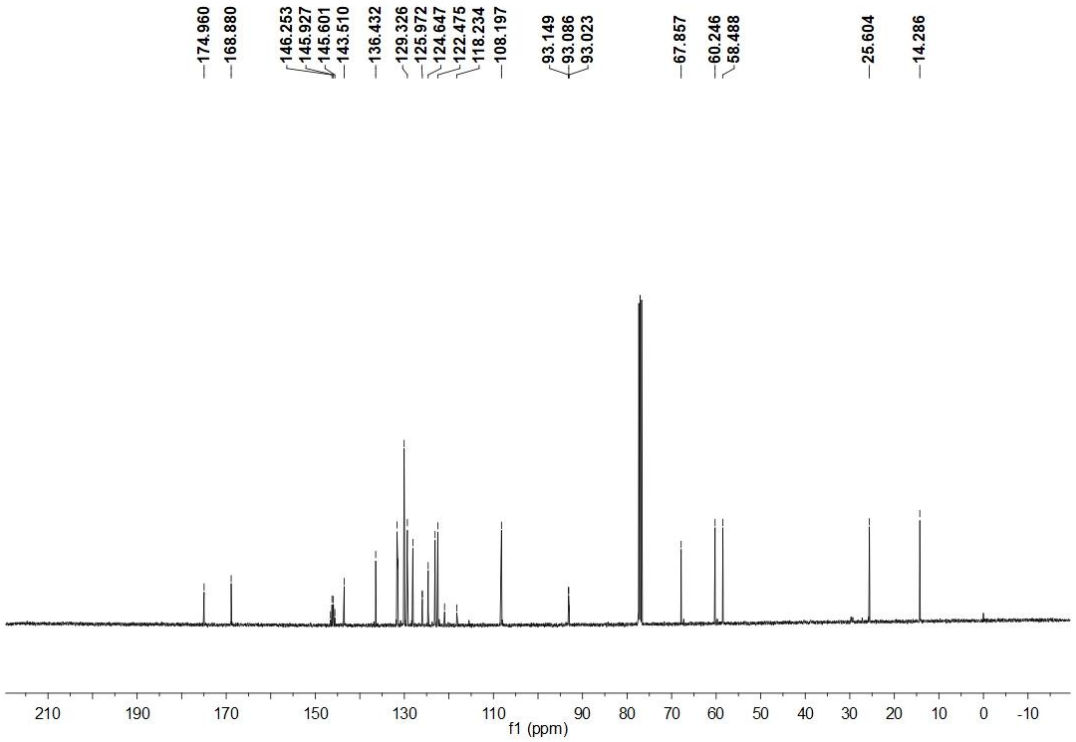
^{19}F NMR (376 MHz, $CDCl_3$)



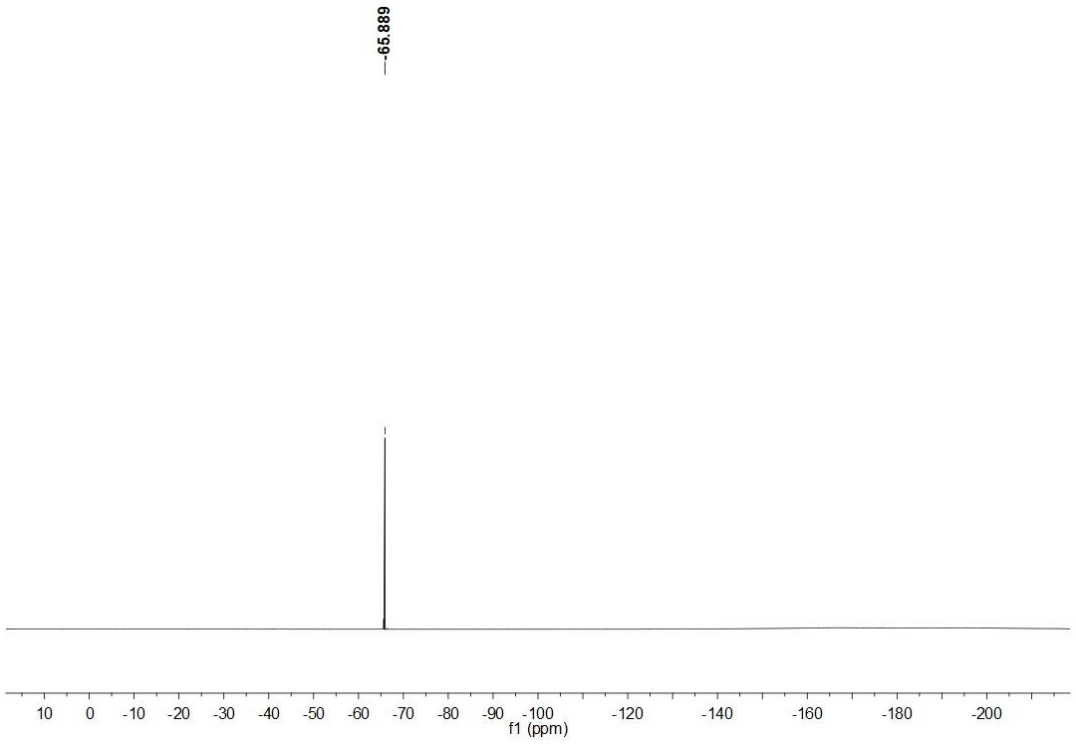
(*S*,*S*)-5f



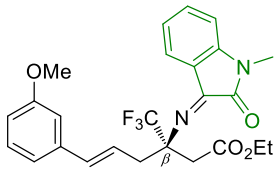
^{1}H NMR (400 MHz, $CDCl_3$)



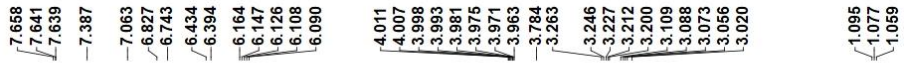
^{13}C NMR (101 MHz, $CDCl_3$)

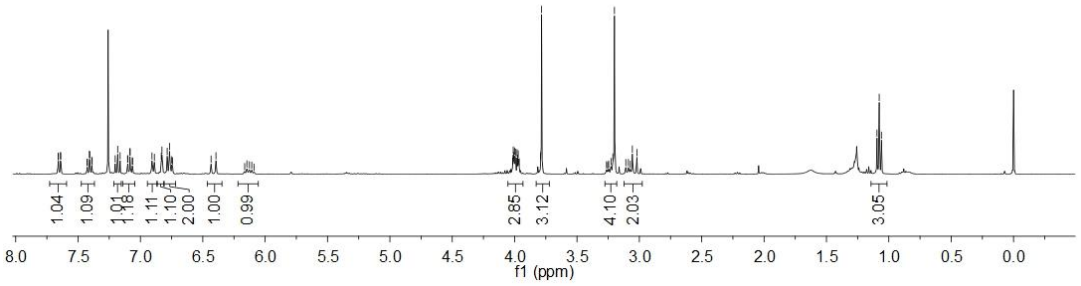


^{19}F NMR (376 MHz, $CDCl_3$)

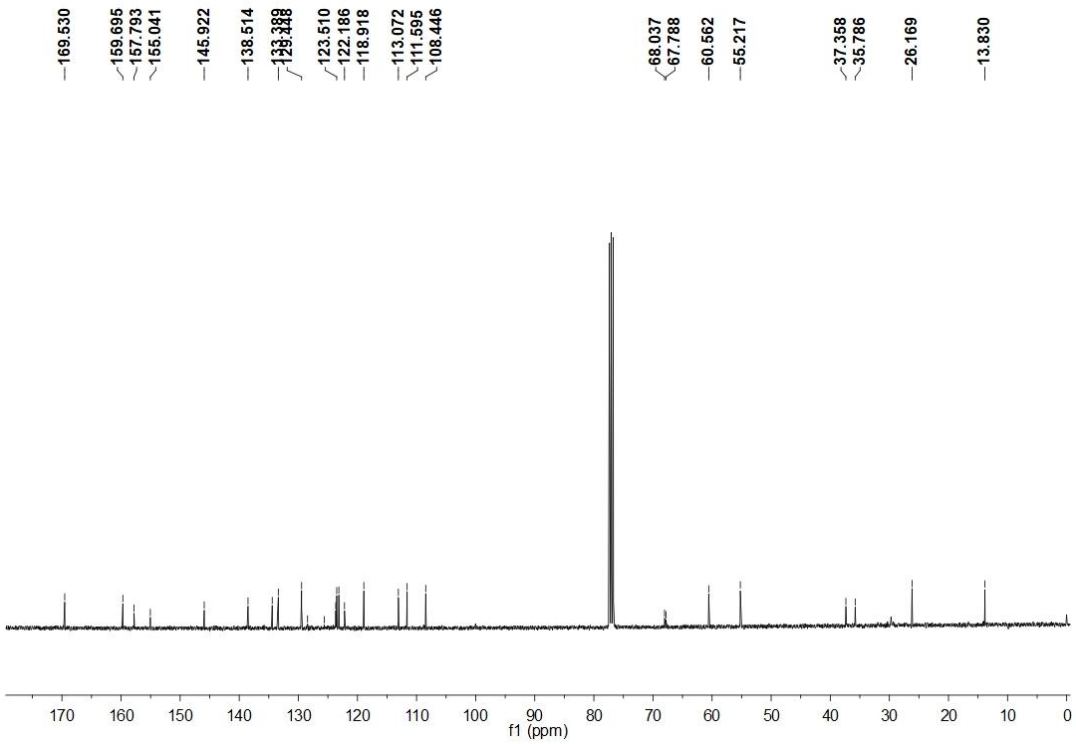


(*R*)-4g

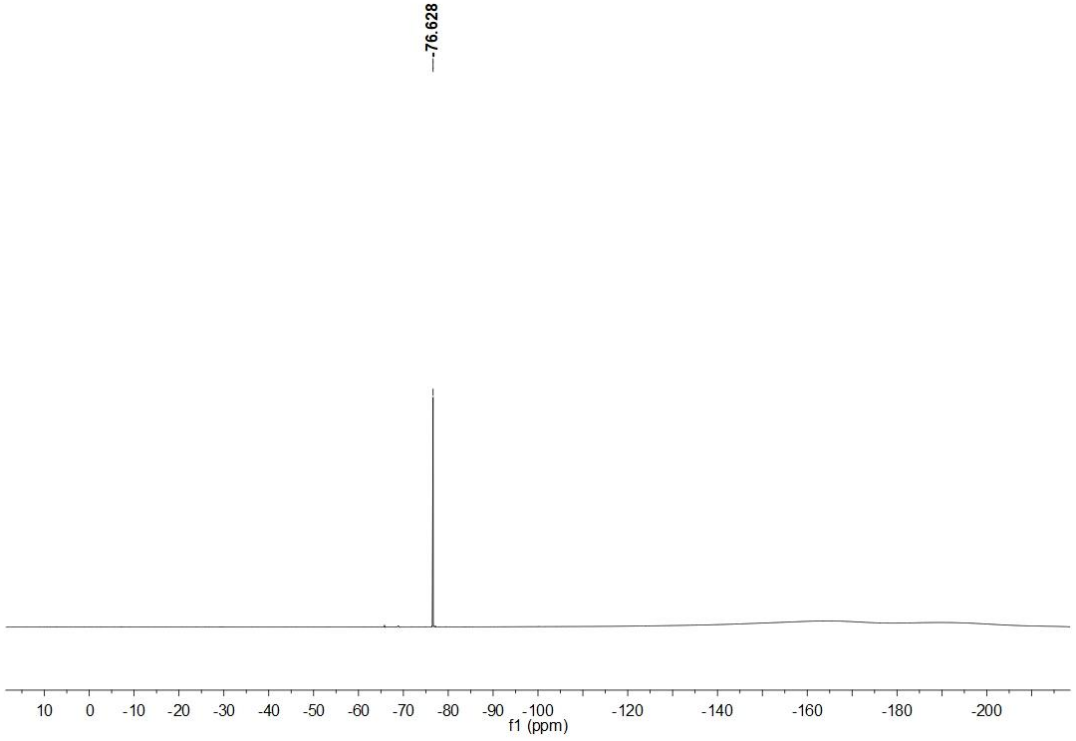




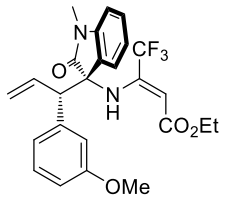
^{1}H NMR (400 MHz, $CDCl_3$)



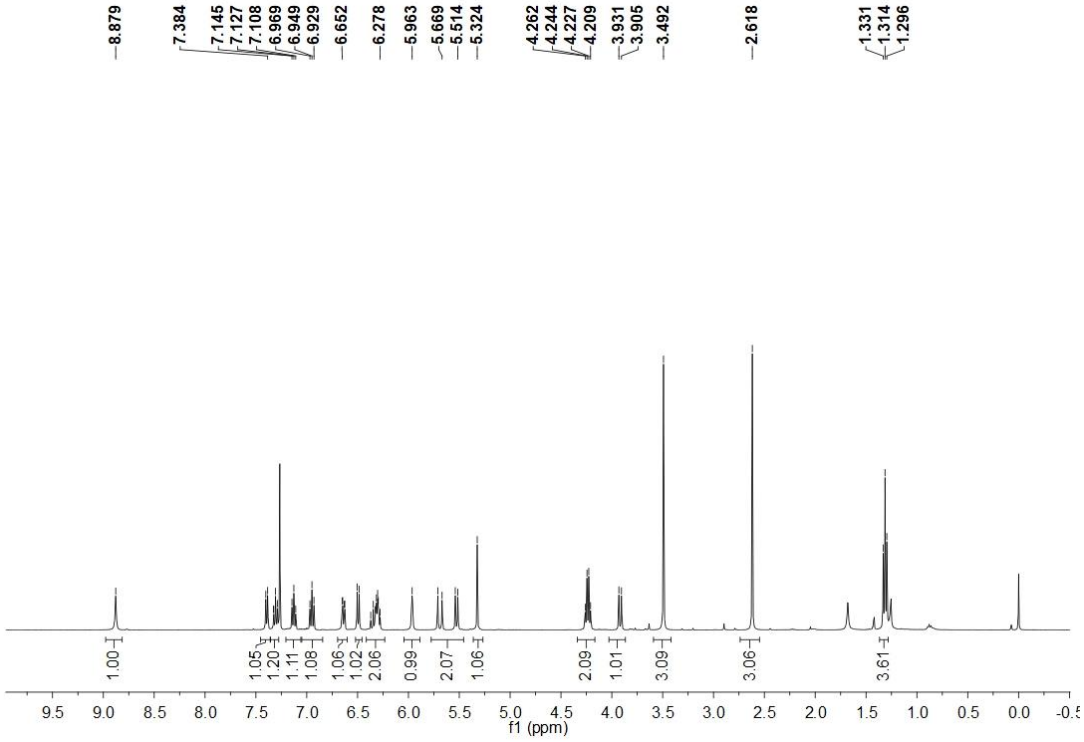
^{13}C NMR (101 MHz, $CDCl_3$)



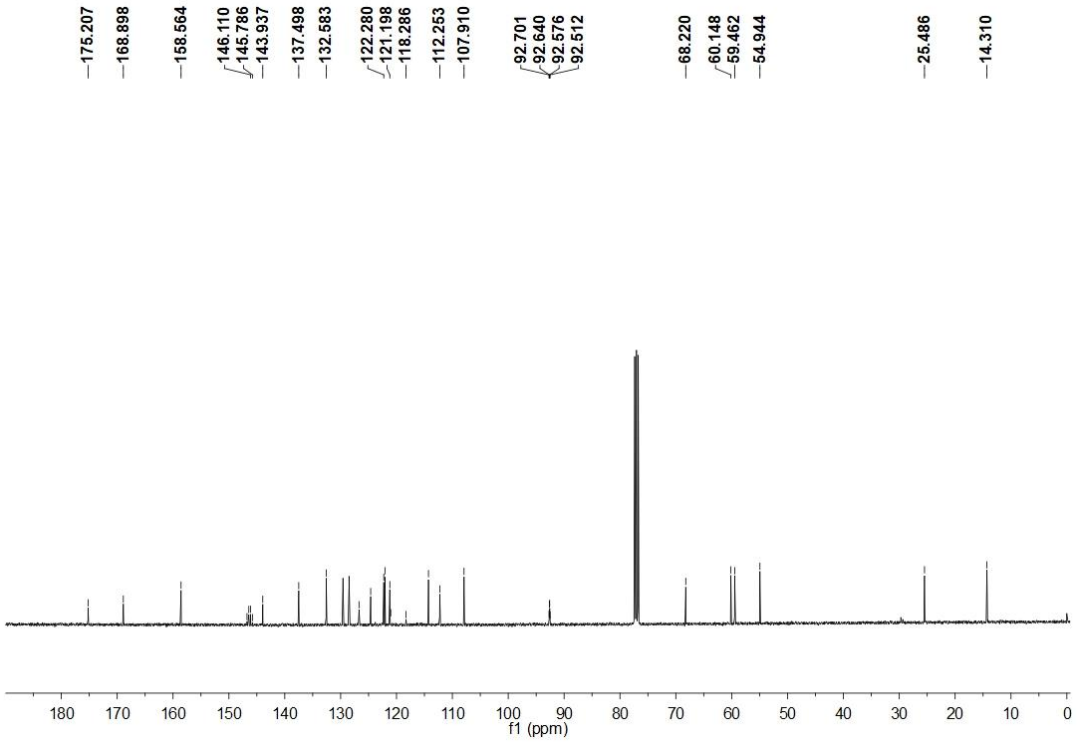
^{19}F NMR (376 MHz, $CDCl_3$)



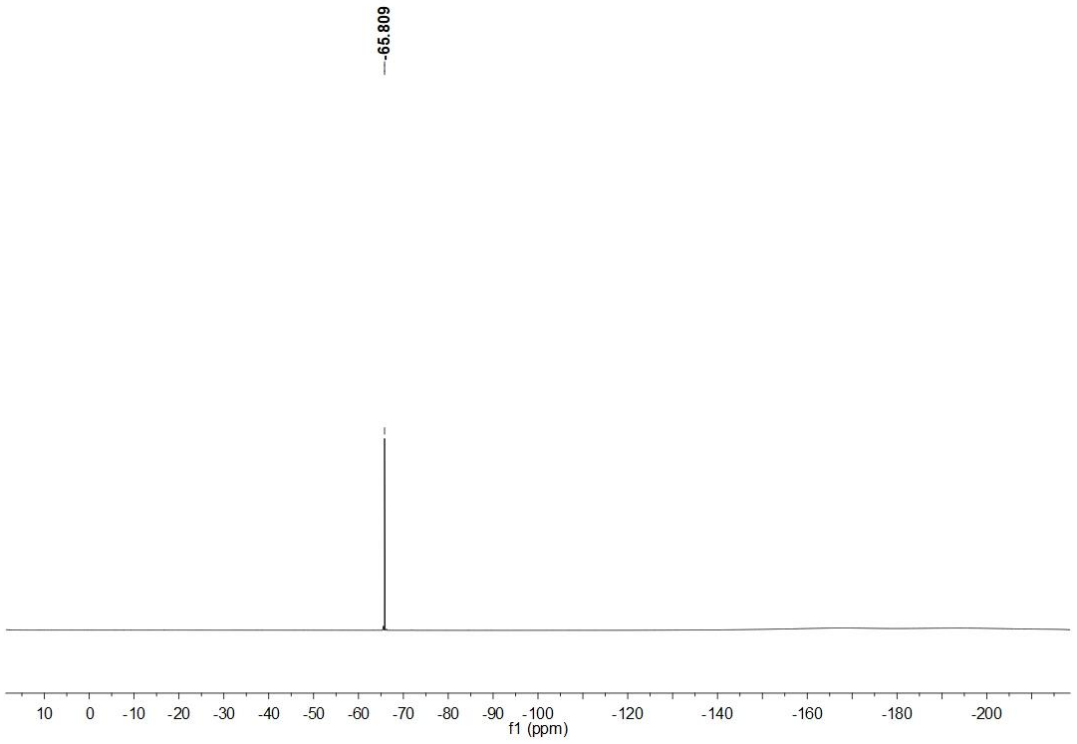
(*S*,*S*)-5g



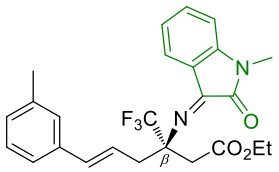
^{1}H NMR (400 MHz, $CDCl_3$)



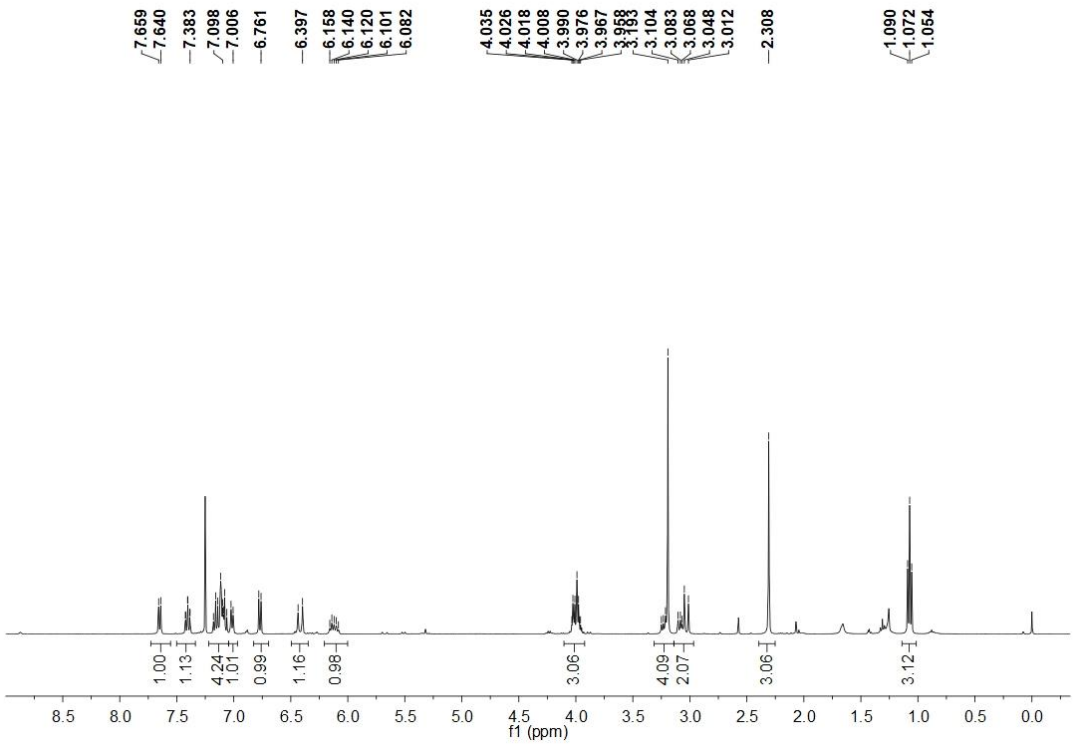
^{13}C NMR (101 MHz, $CDCl_3$)



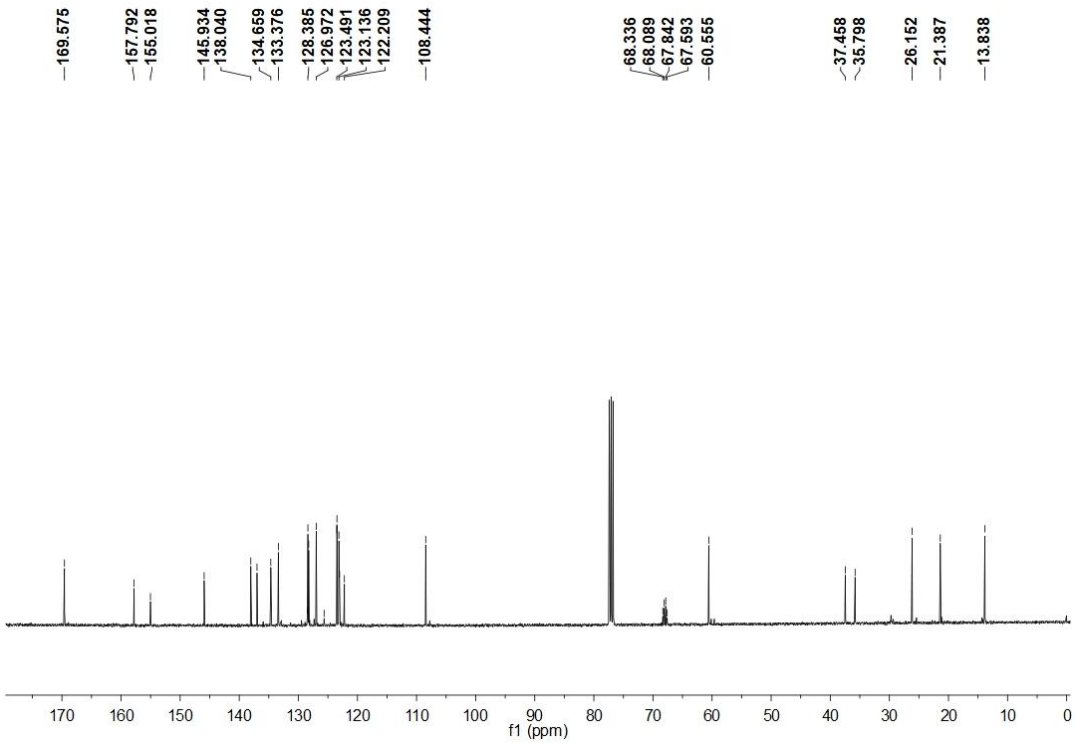
^{19}F NMR (376 MHz, $CDCl_3$)



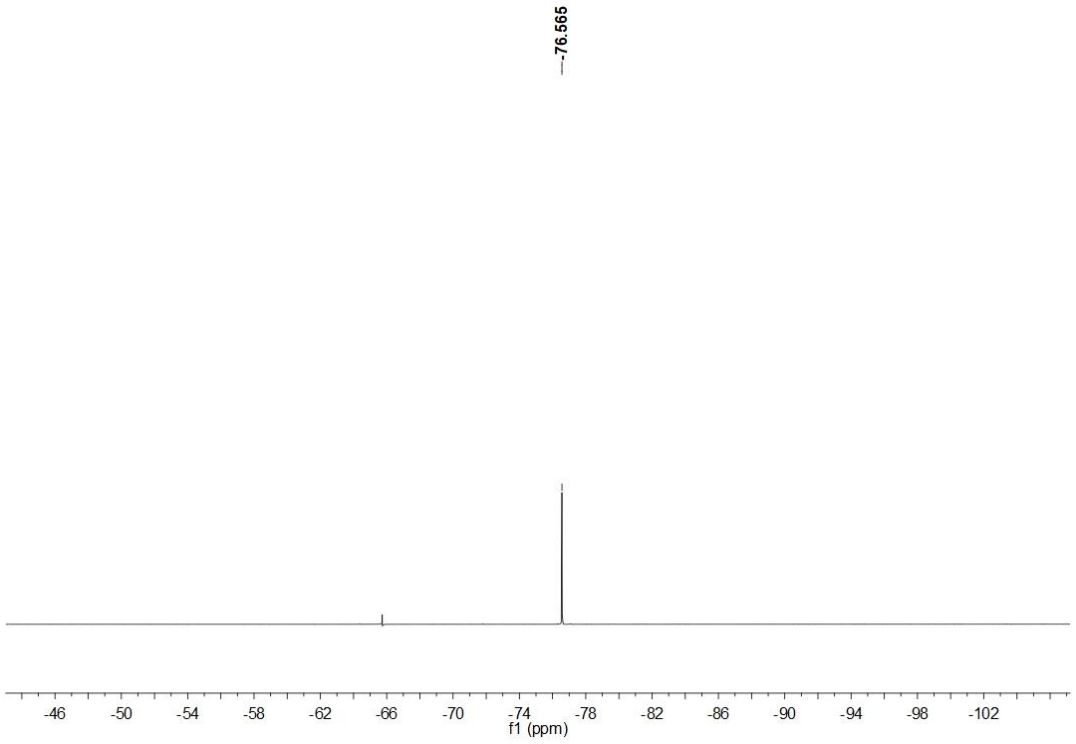
(*R*)-4h



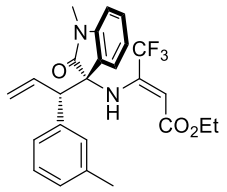
^{1}H NMR (400 MHz, $CDCl_3$)



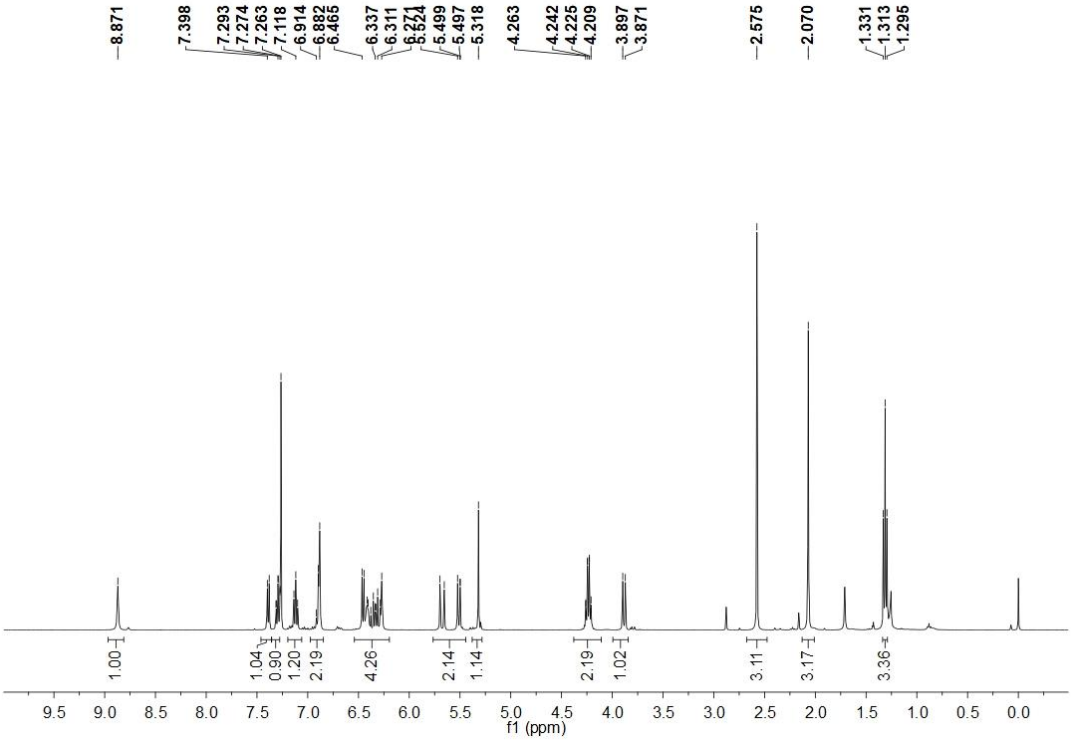
^{13}C NMR (101 MHz, $CDCl_3$)



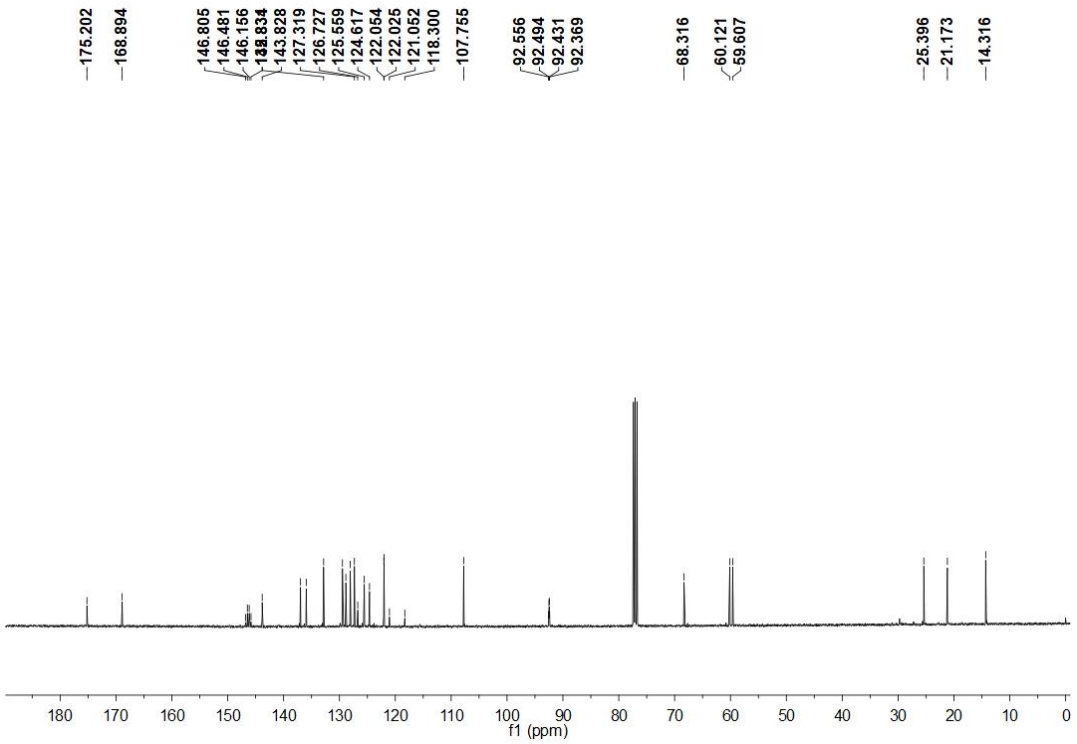
^{19}F NMR (376 MHz, $CDCl_3$)



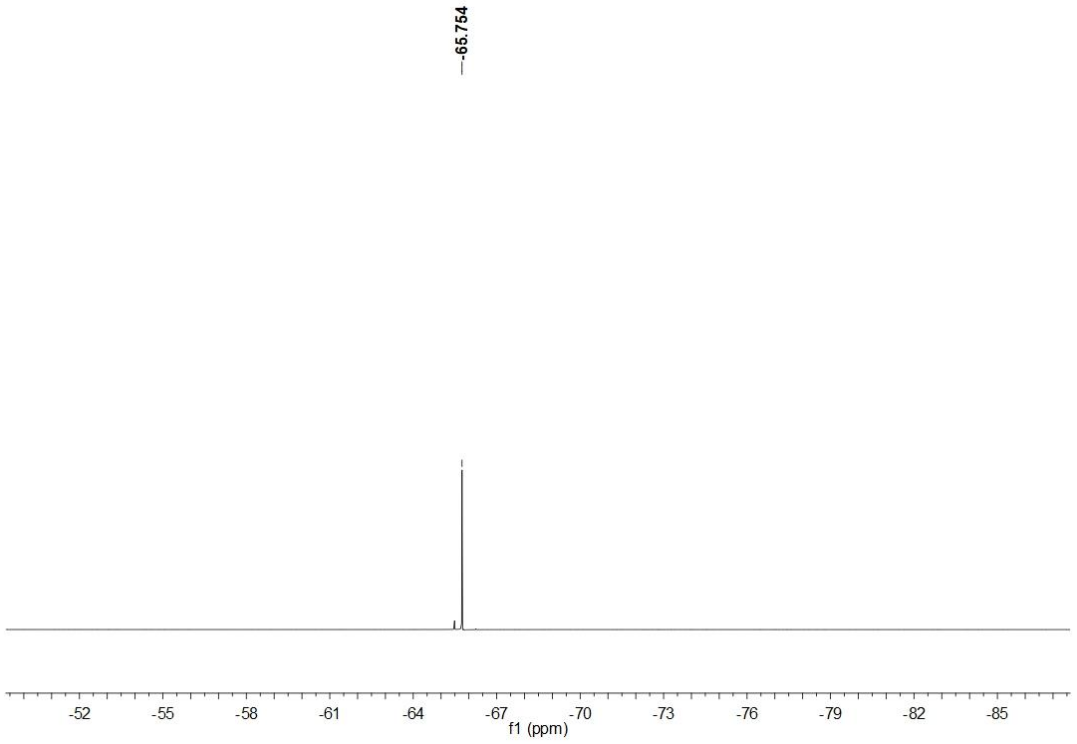
(*S*,*S*)-5h



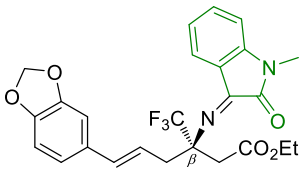
^{1}H NMR (400 MHz, $CDCl_3$)



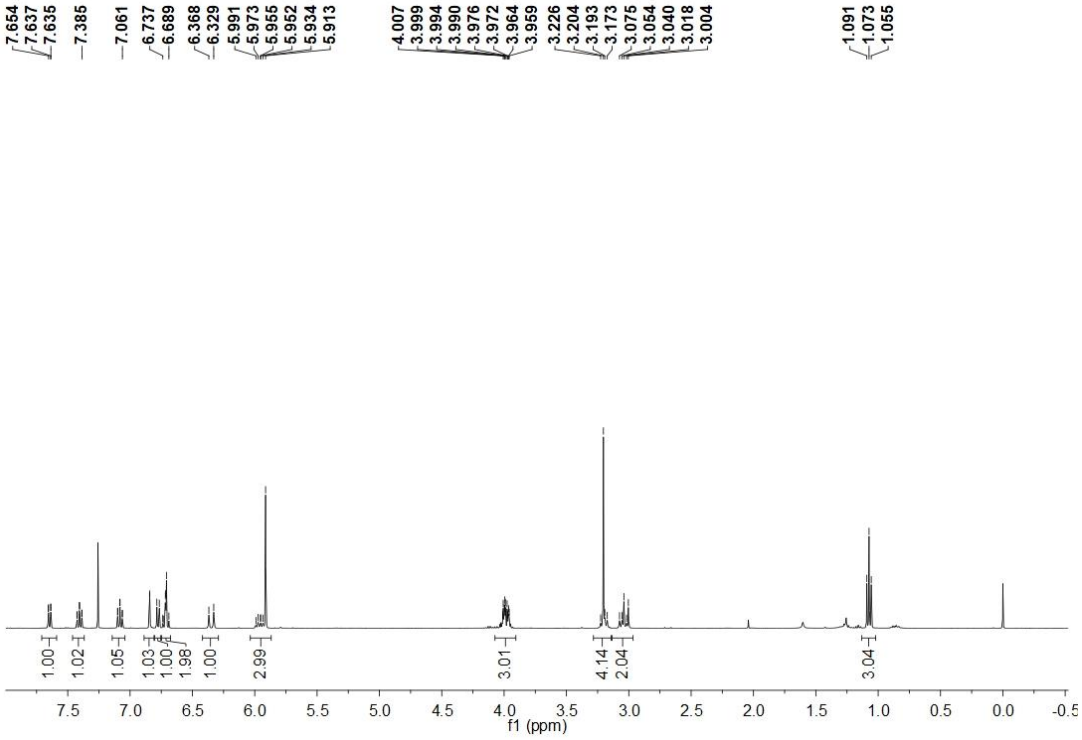
^{13}C NMR (101 MHz, $CDCl_3$)



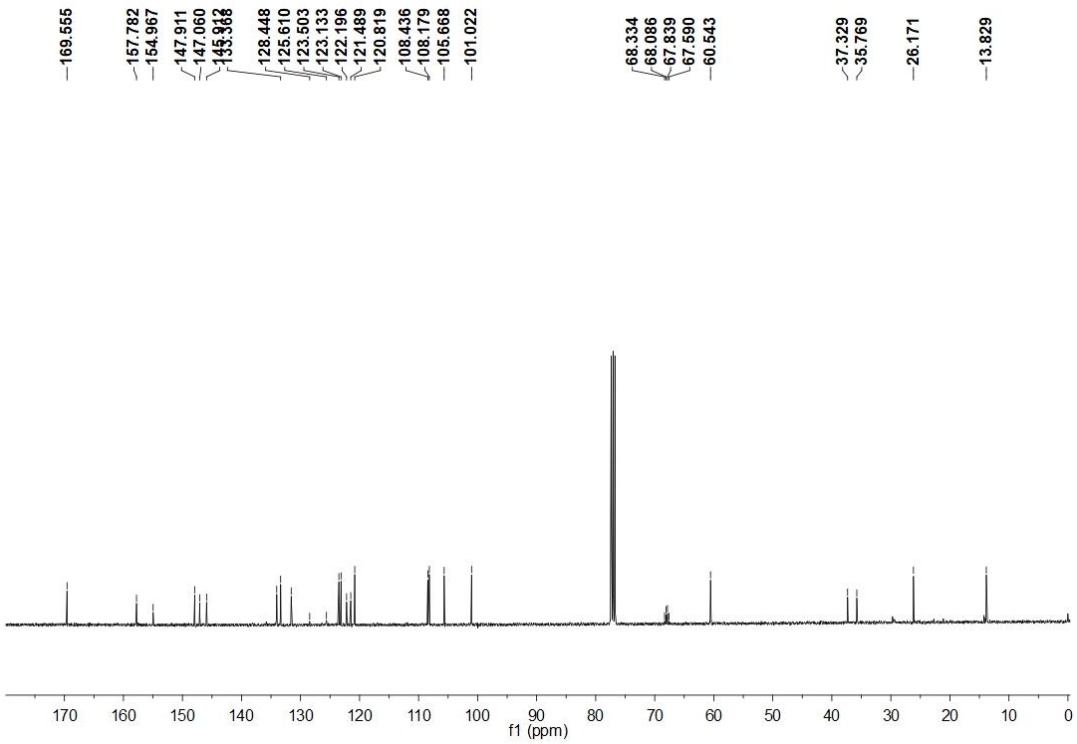
^{19}F NMR (376 MHz, $CDCl_3$)



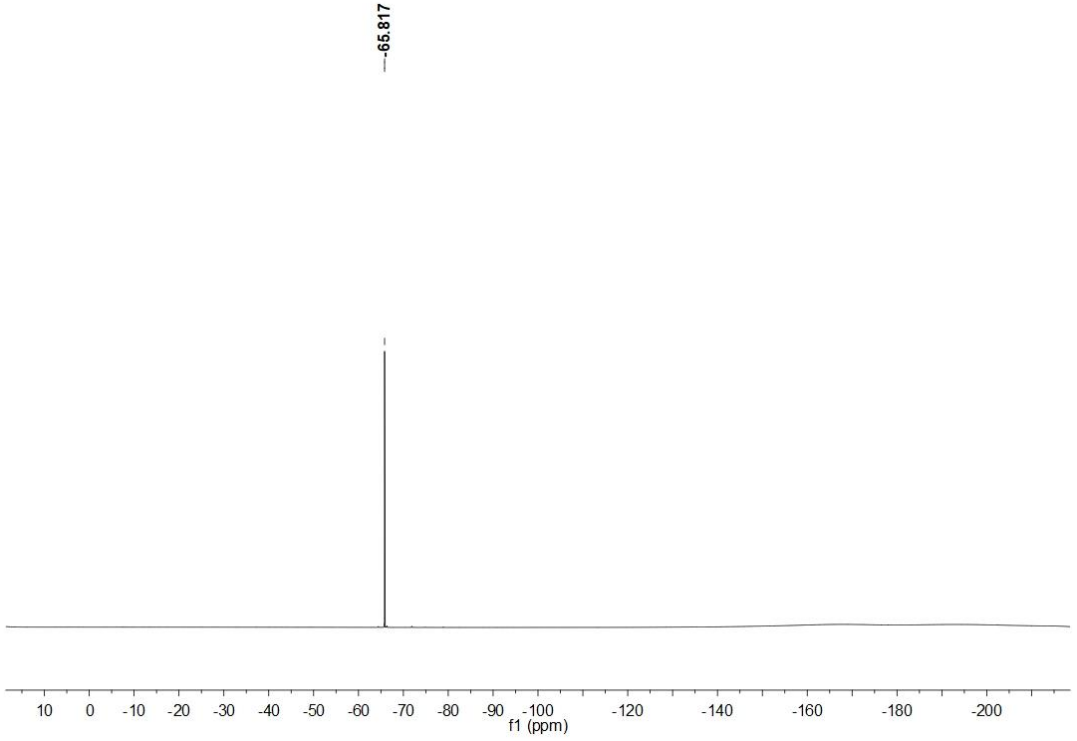
(*R*)-4i



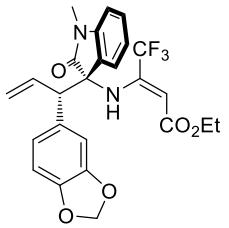
^{1}H NMR (400 MHz, $CDCl_3$)



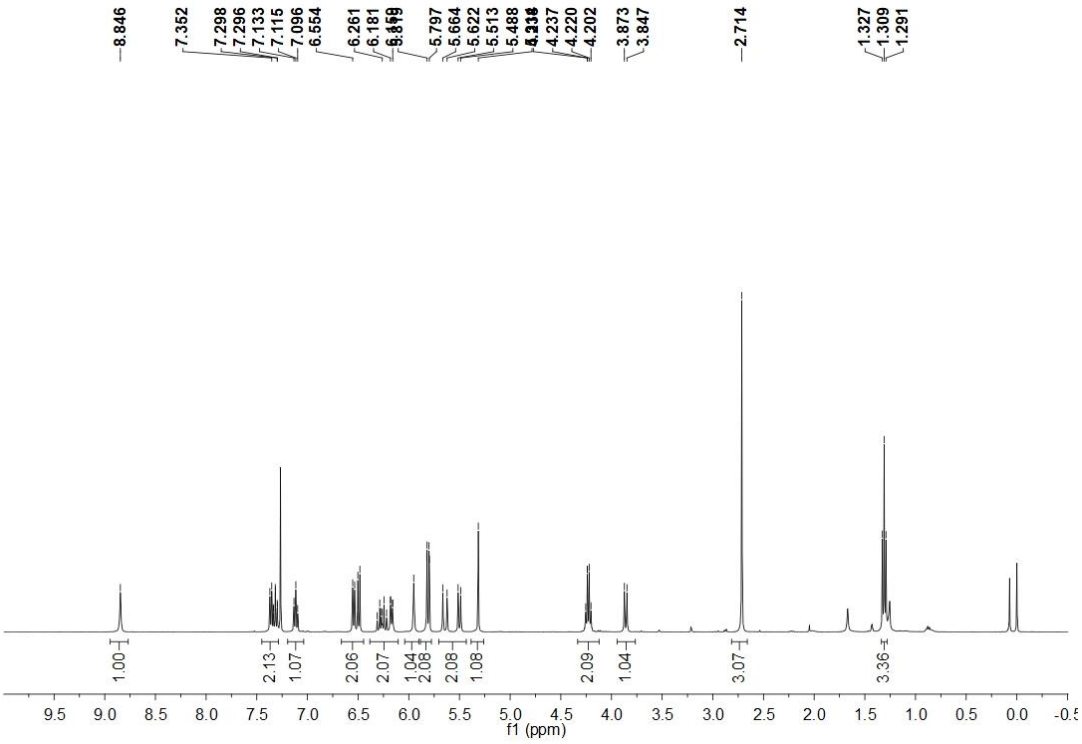
^{13}C NMR (101 MHz, $CDCl_3$)



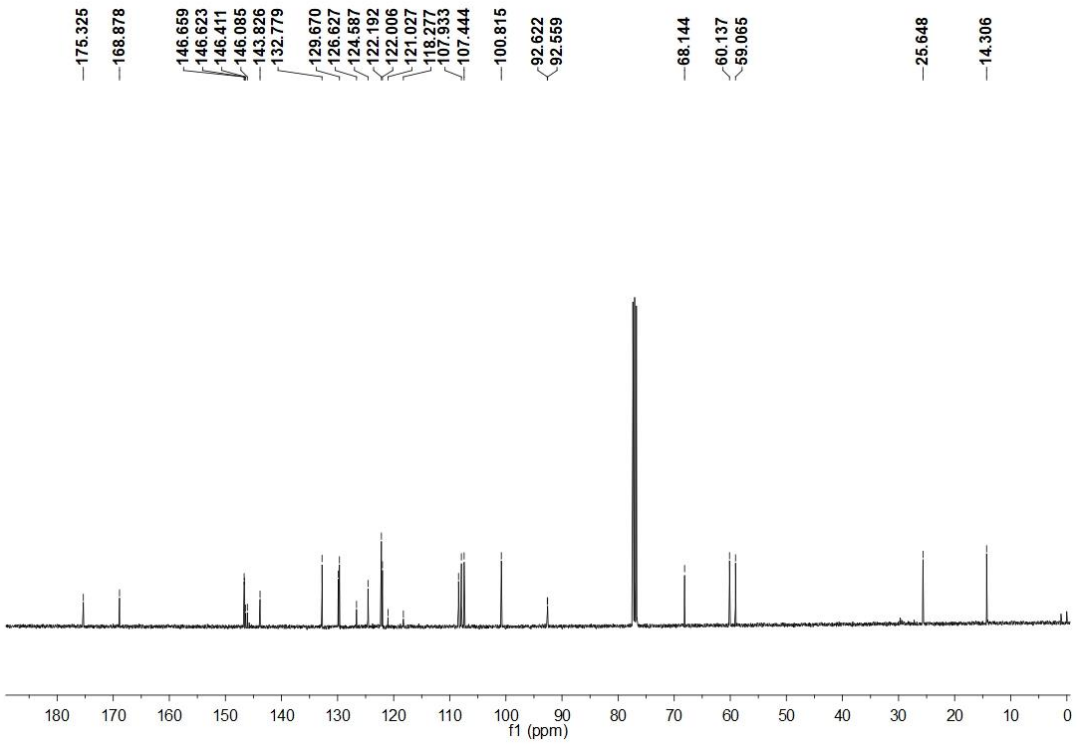
^{19}F NMR (376 MHz, $CDCl_3$)



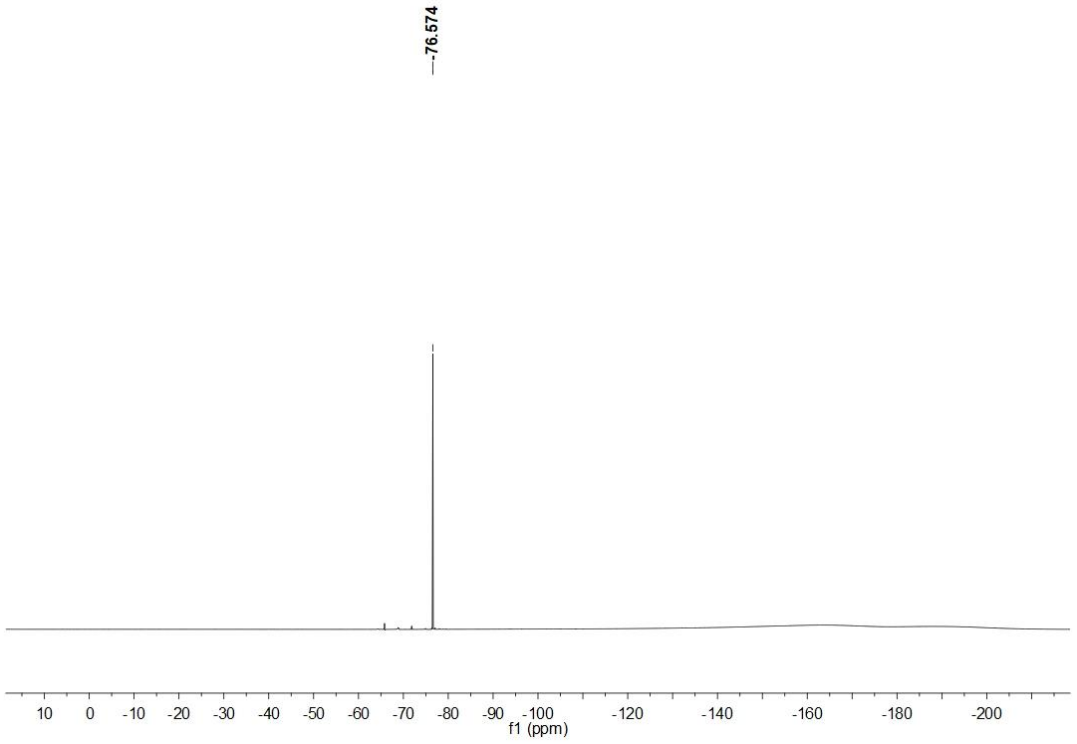
(*S*,*S*)-5i



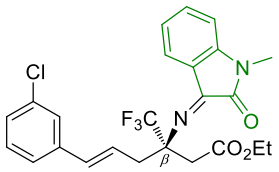
^{1}H NMR (400 MHz, $CDCl_3$)



^{13}C NMR (101 MHz, $CDCl_3$)



^{19}F NMR (376 MHz, $CDCl_3$)



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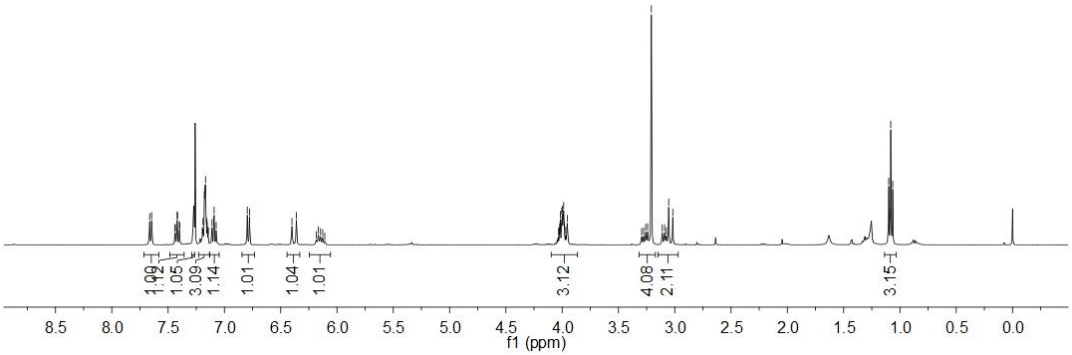

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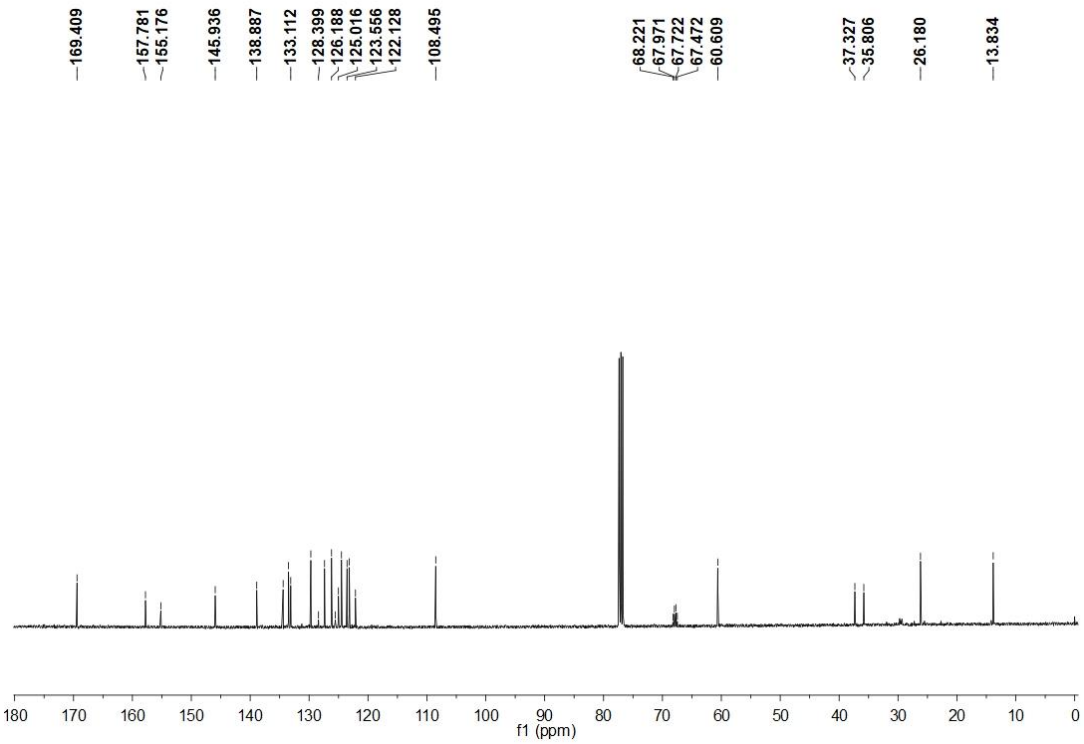
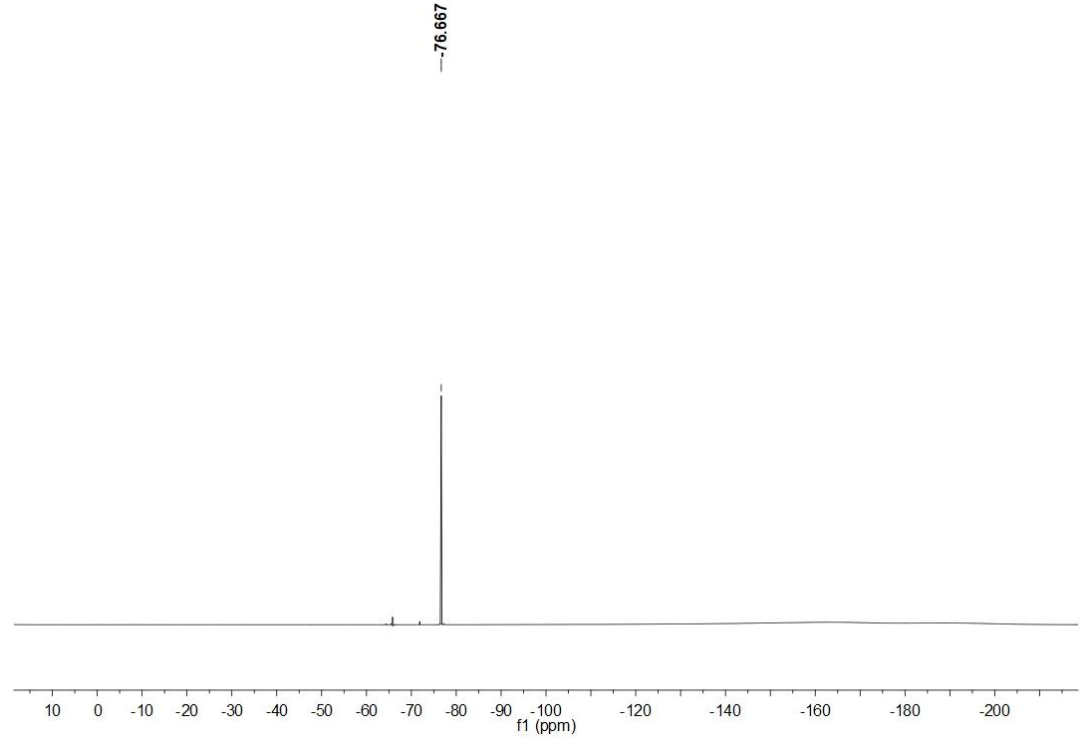
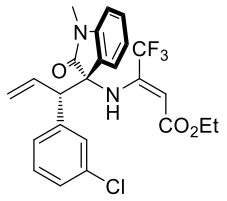


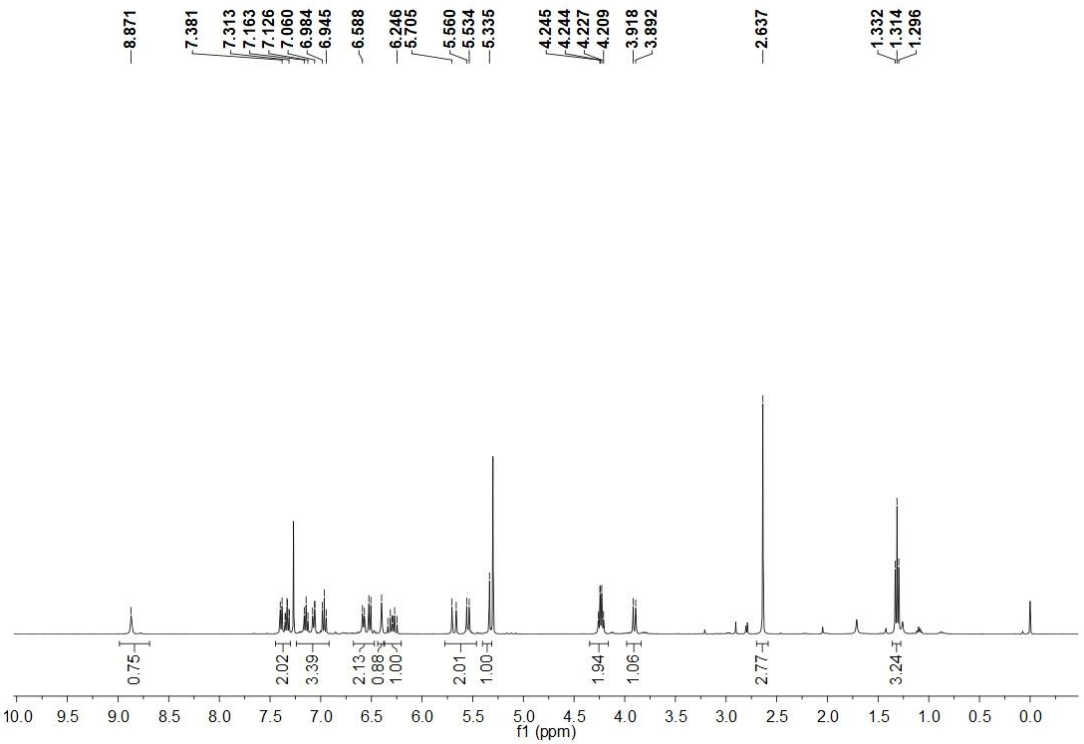
^{13}C NMR (101 MHz, $CDCl_3$)



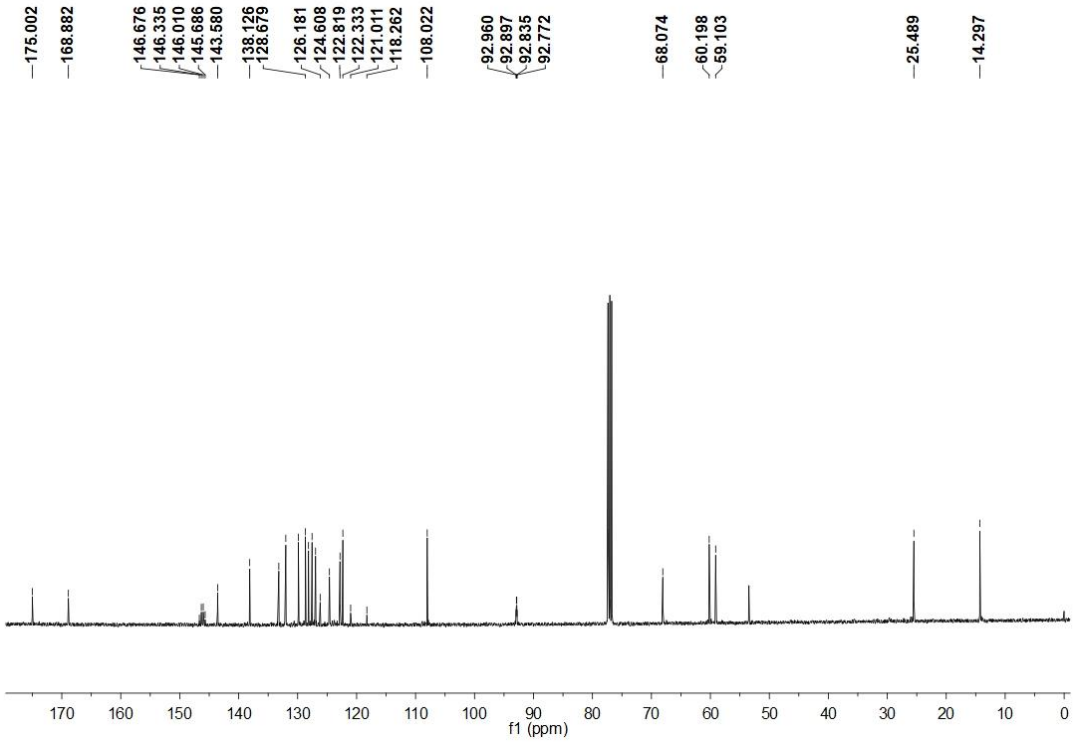
^{19}F NMR (376 MHz, $CDCl_3$)



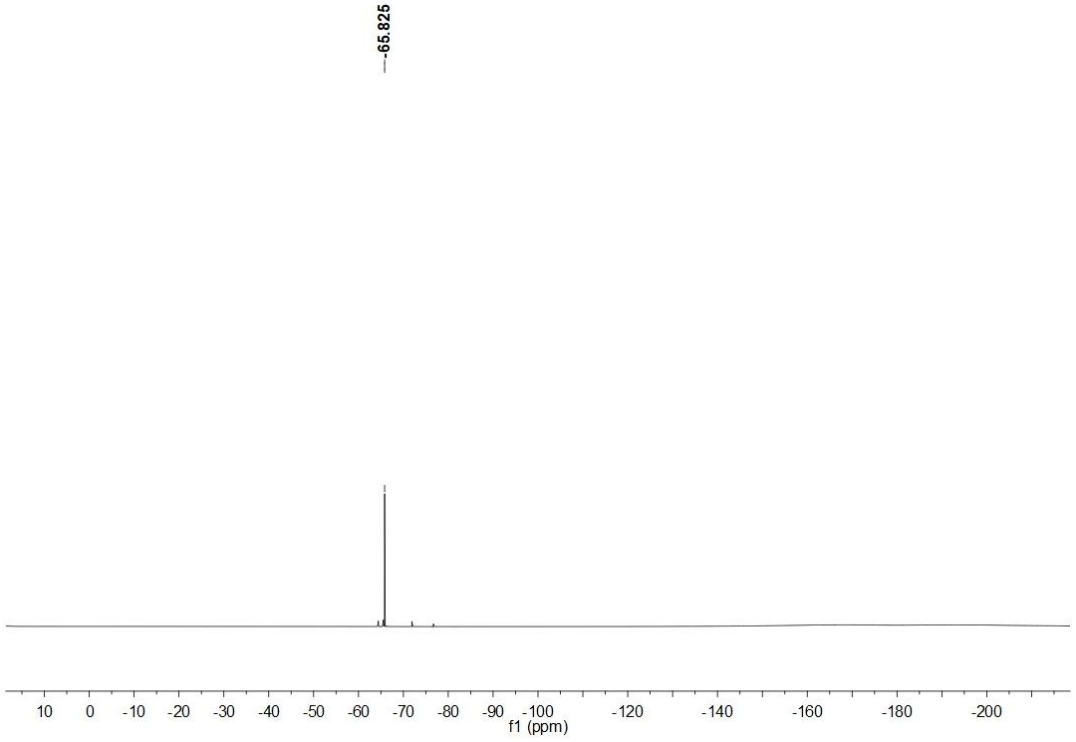
(*S*,*S*)-5j



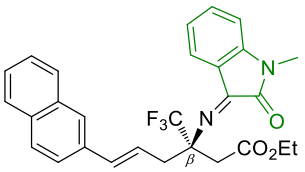
^{1}H NMR (400 MHz, $CDCl_3$)



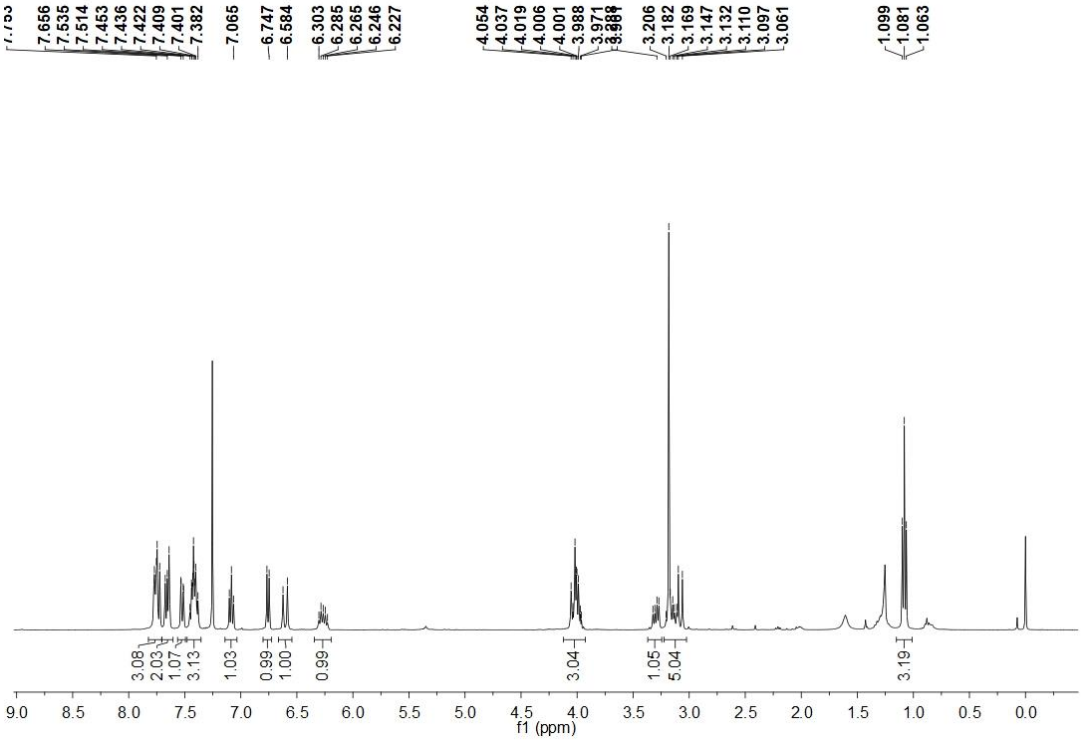
^{13}C NMR (101 MHz, $CDCl_3$)



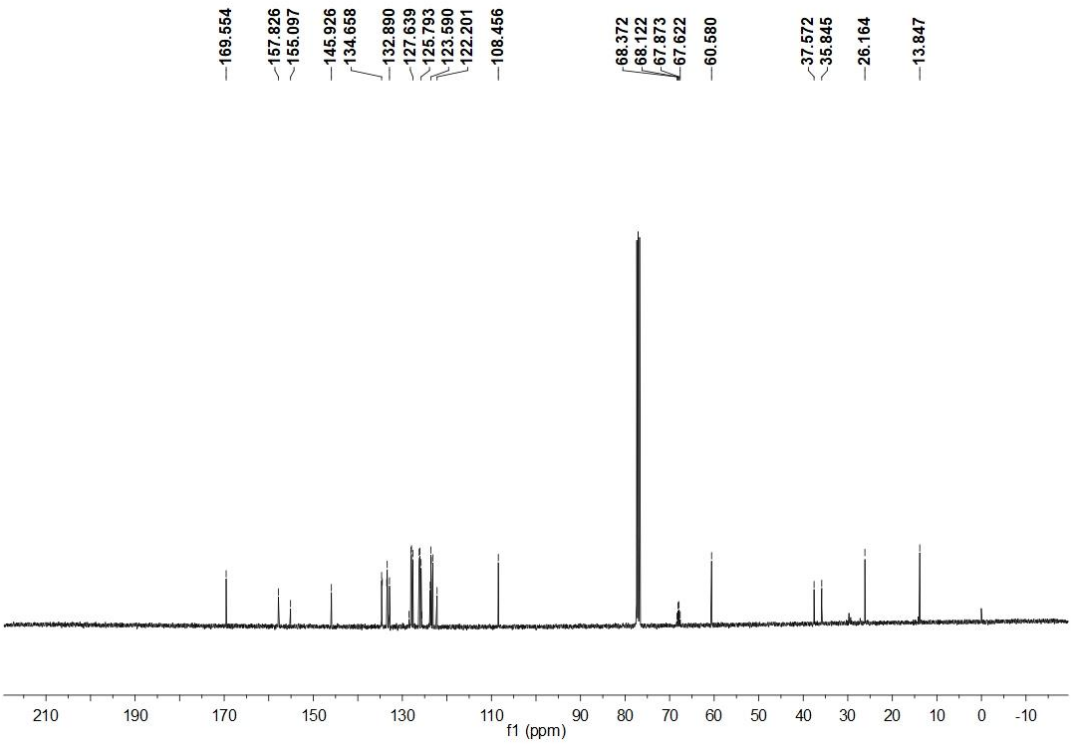
^{19}F NMR (376 MHz, $CDCl_3$)



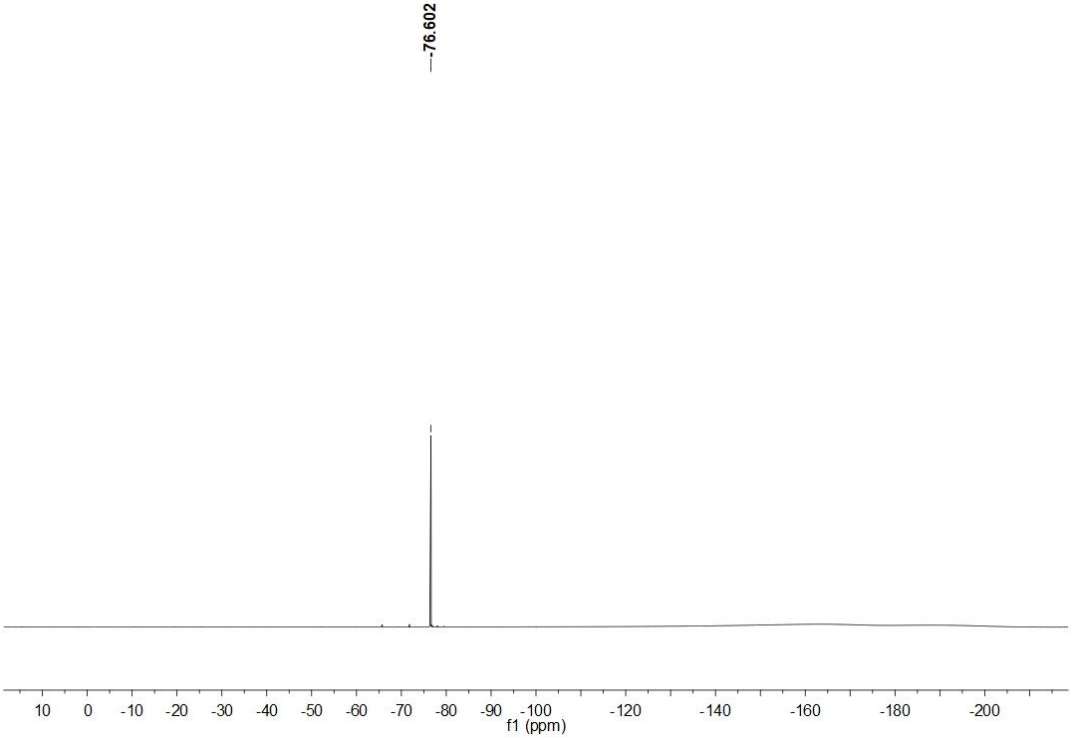
(*R*)-4k



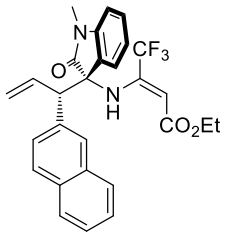
^{1}H NMR (400 MHz, $CDCl_3$)



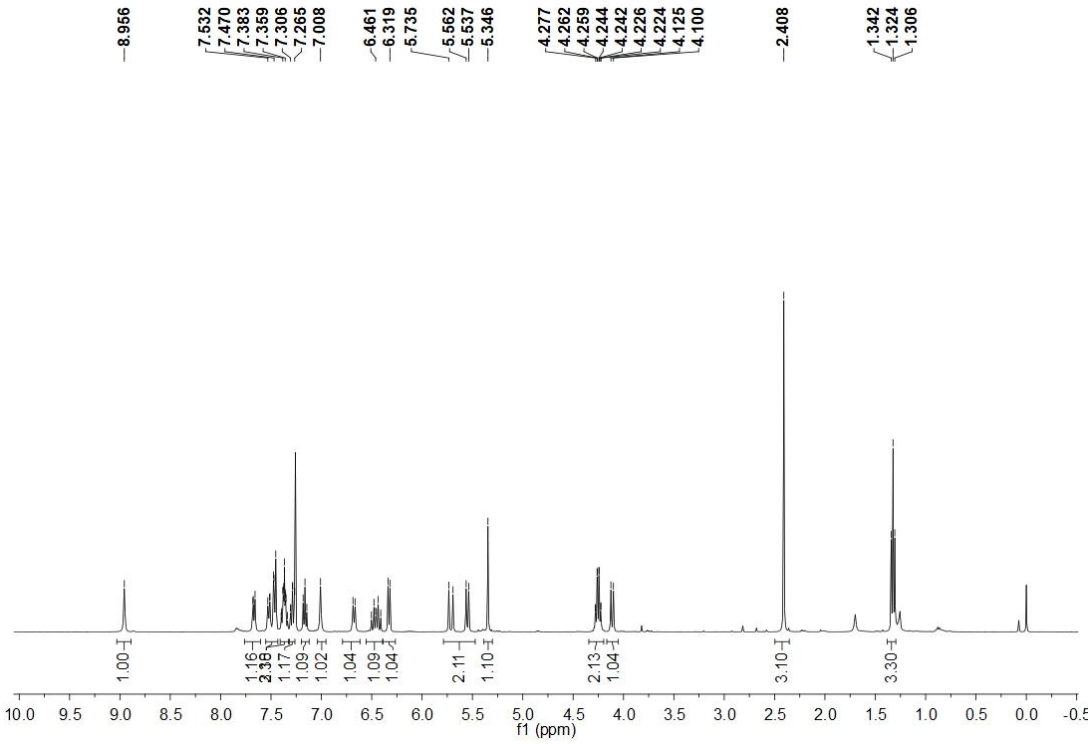
^{13}C NMR (101 MHz, $CDCl_3$)



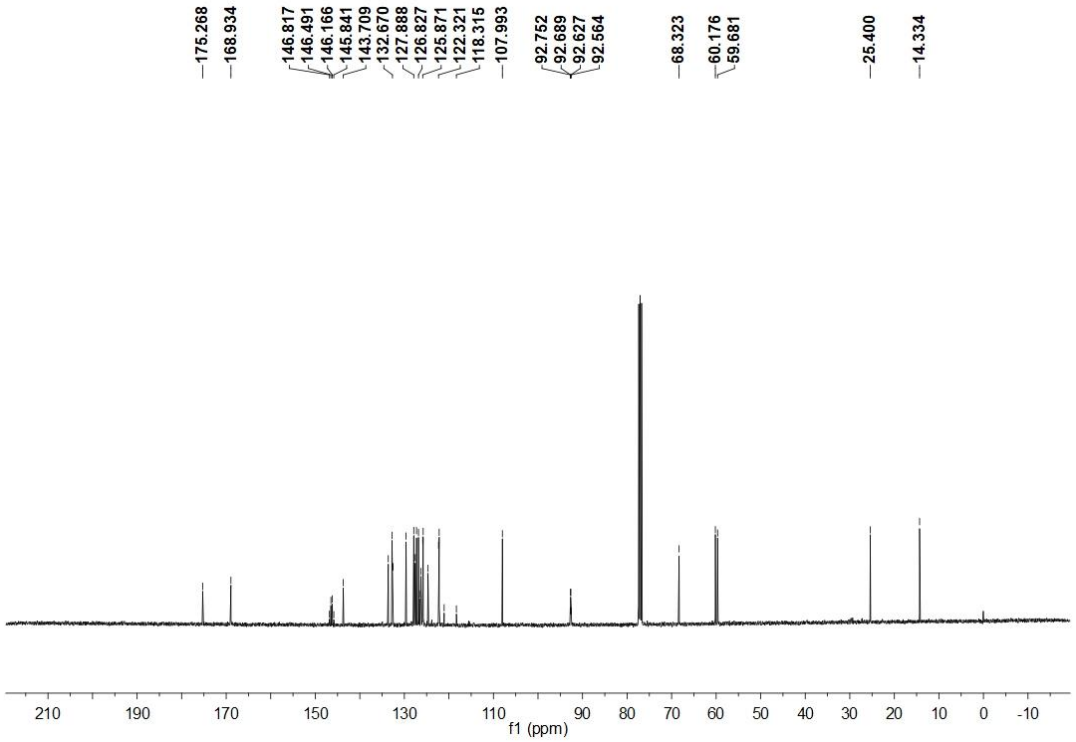
^{19}F NMR (376 MHz, $CDCl_3$)



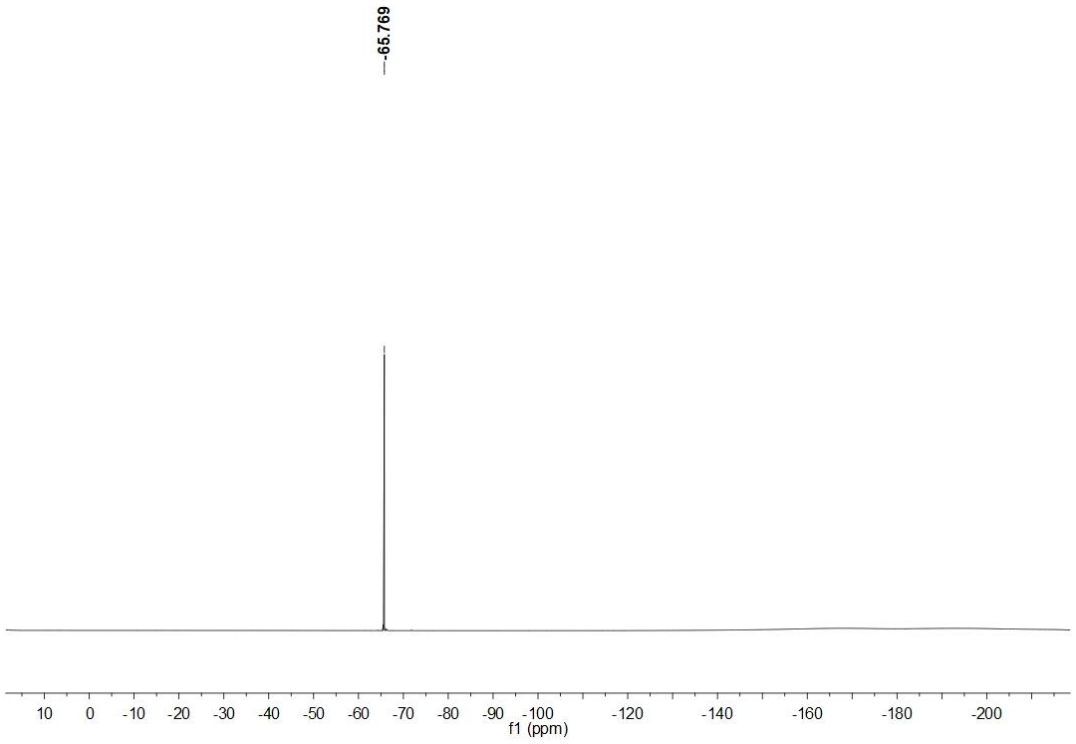
(*S*,*S*)-5k



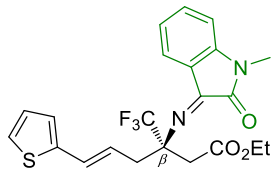
^{1}H NMR (400 MHz, $CDCl_3$)



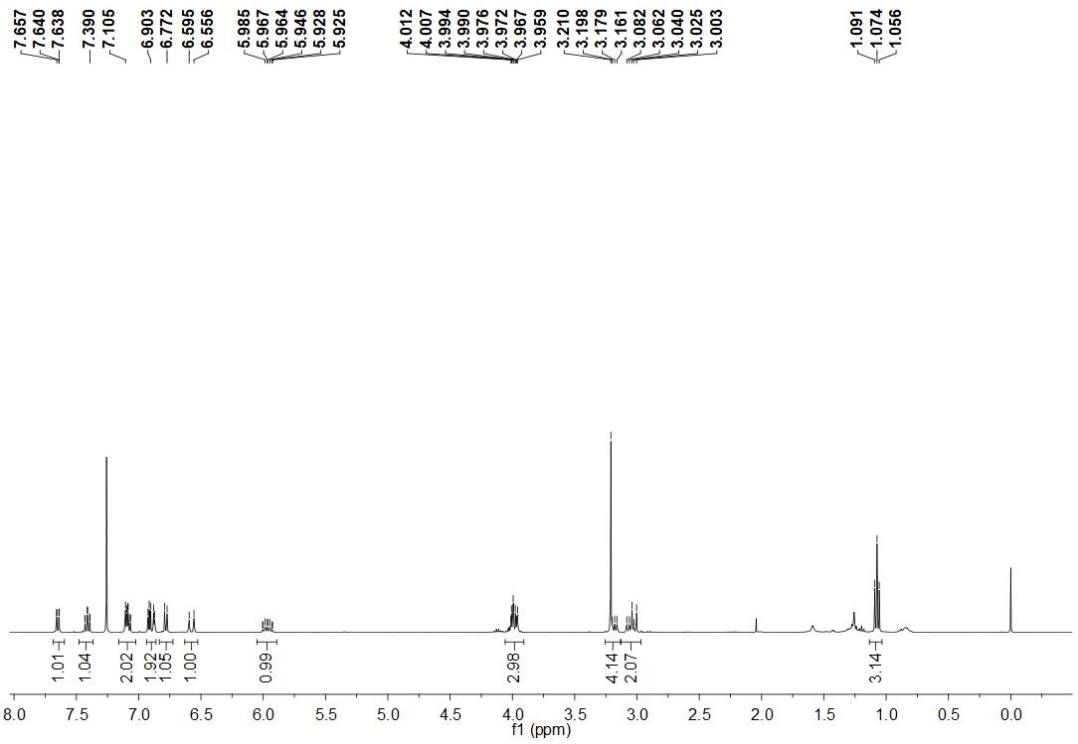
^{13}C NMR (101 MHz, $CDCl_3$)



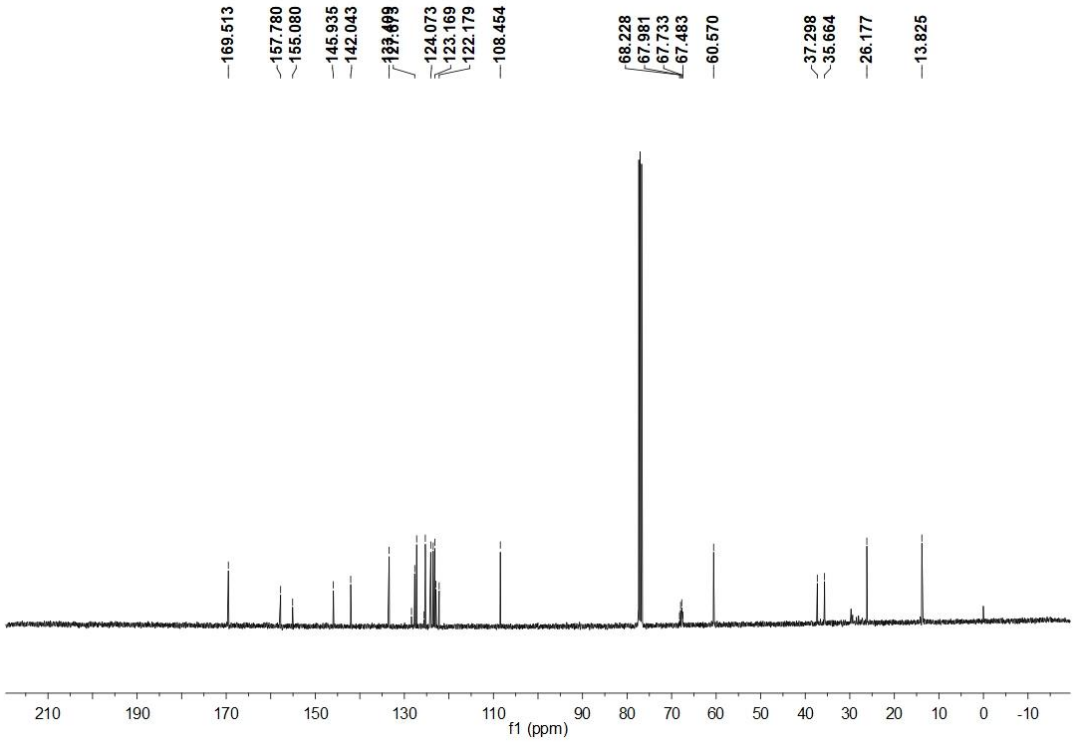
^{19}F NMR (376 MHz, $CDCl_3$)



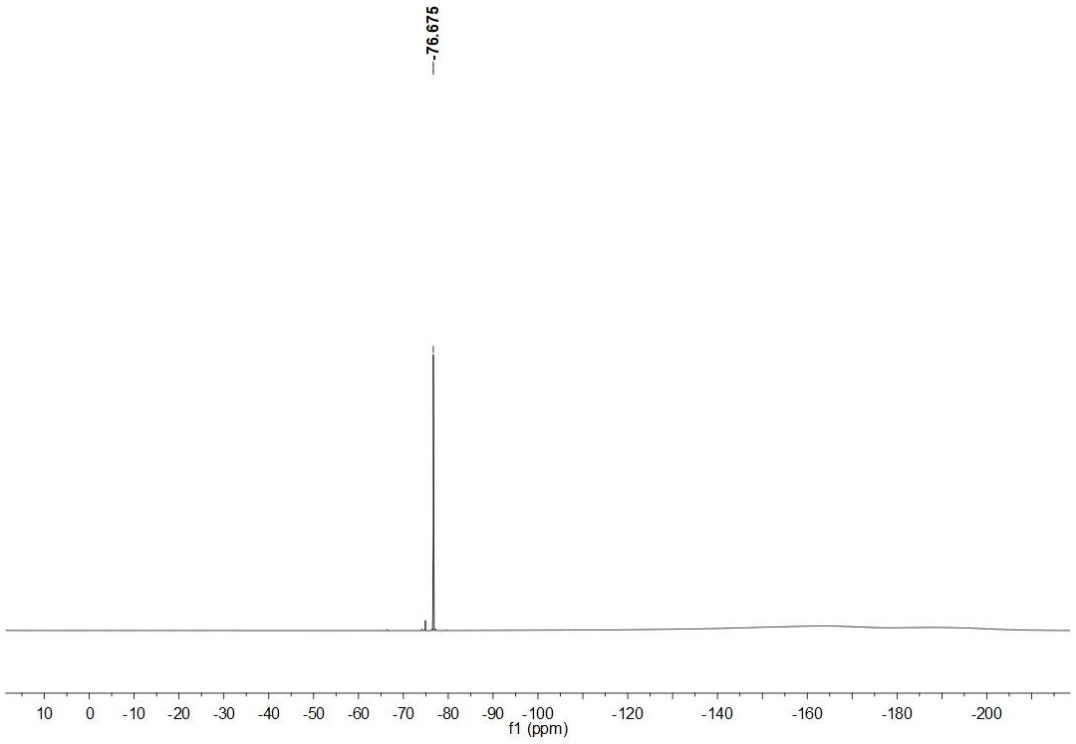
(*R*)-4l



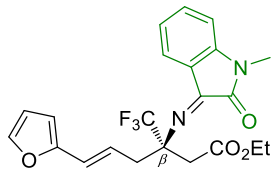
^{1}H NMR (400 MHz, $CDCl_3$)



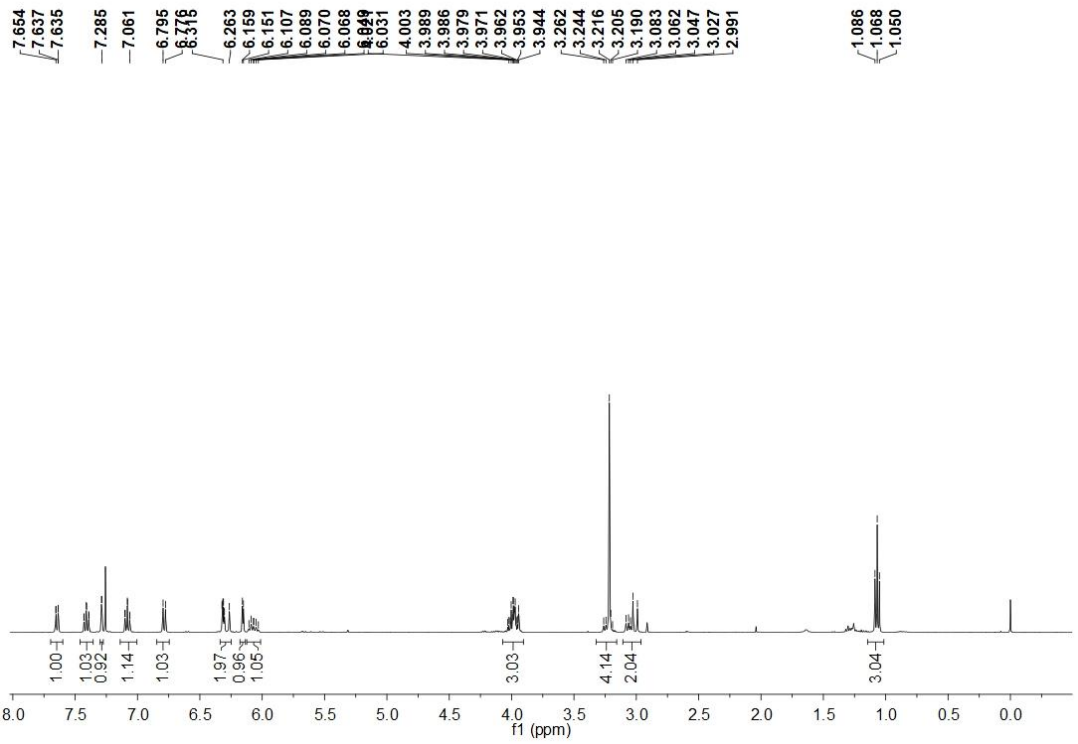
^{13}C NMR (101 MHz, $CDCl_3$)



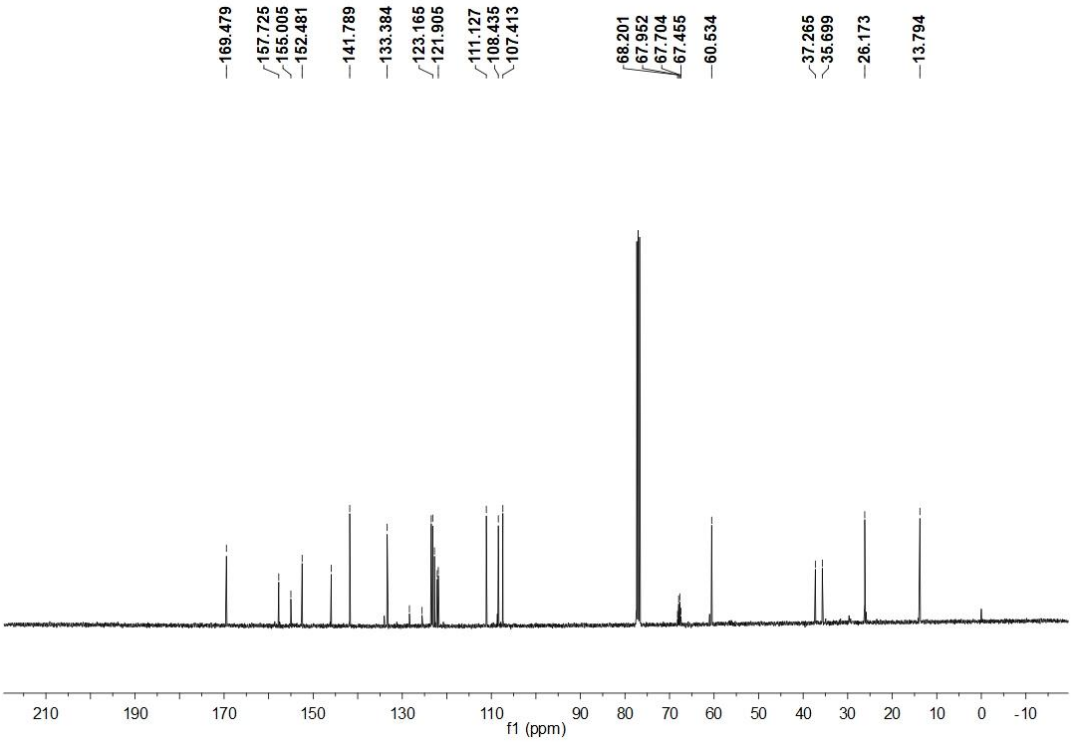
^{19}F NMR (376 MHz, $CDCl_3$)



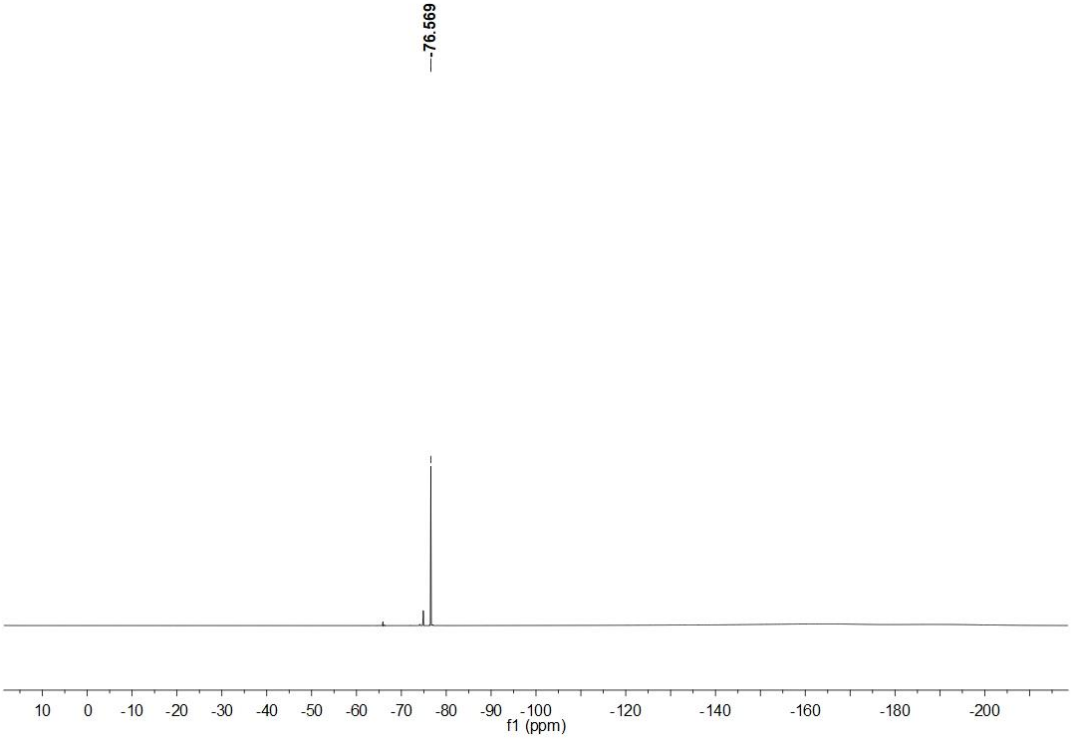
(*R*)-4m



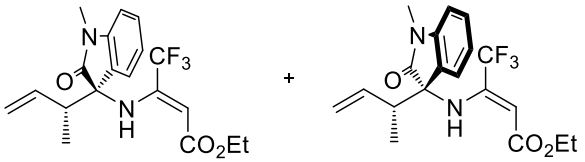
^{1}H NMR (400 MHz, $CDCl_3$)



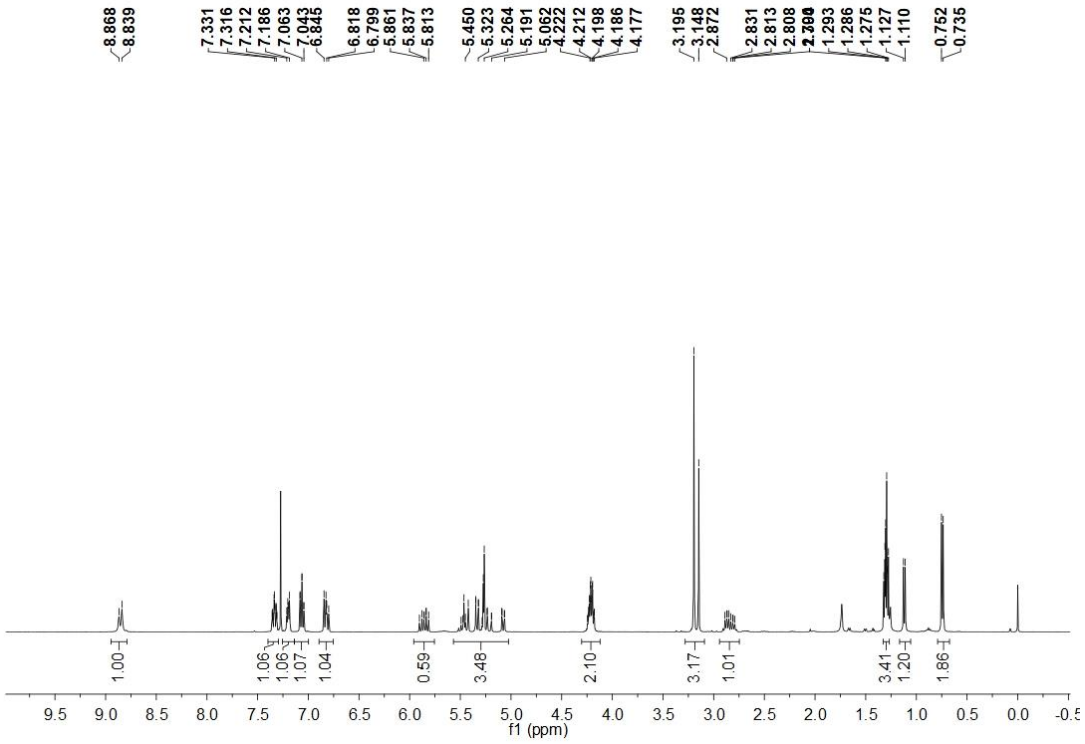
^{13}C NMR (101 MHz, $CDCl_3$)



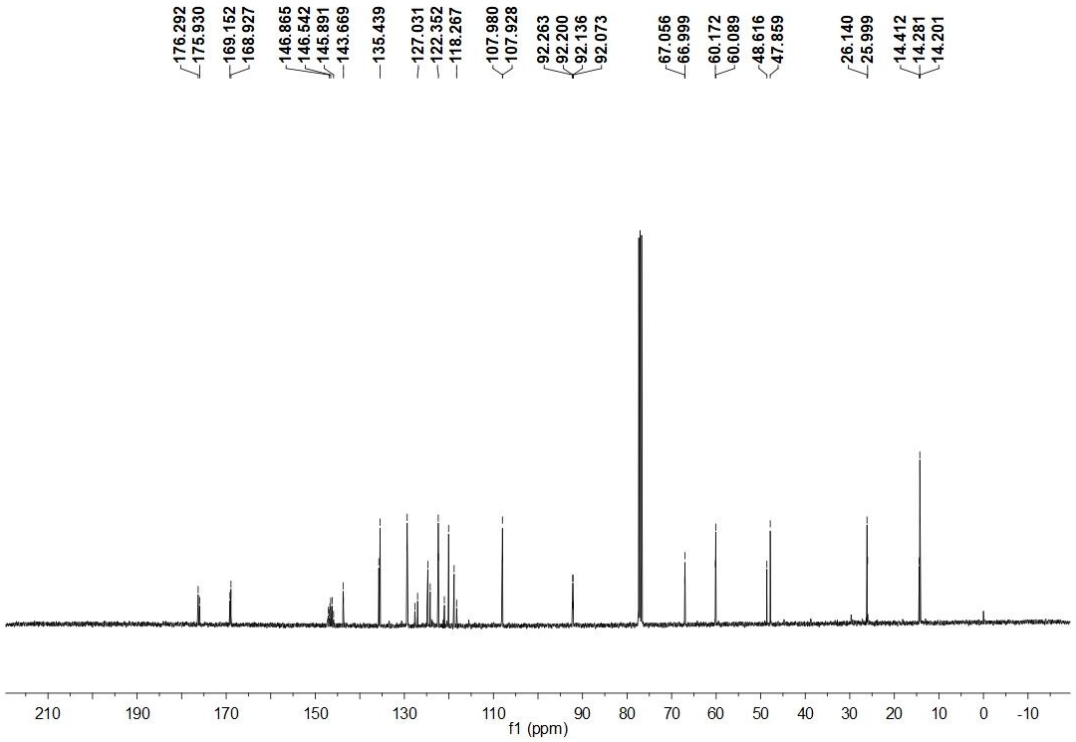
^{19}F NMR (376 MHz, $CDCl_3$)



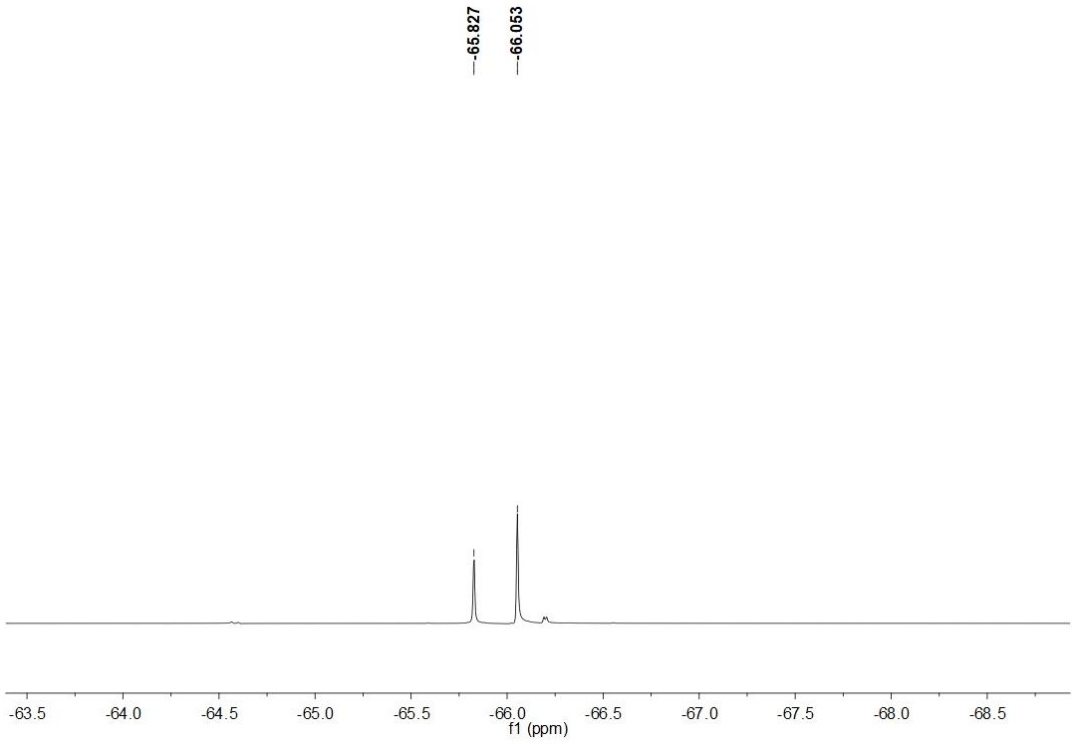
5n (minor + major)



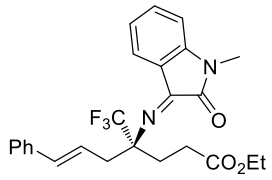
^{1}H NMR (400 MHz, $CDCl_3$)



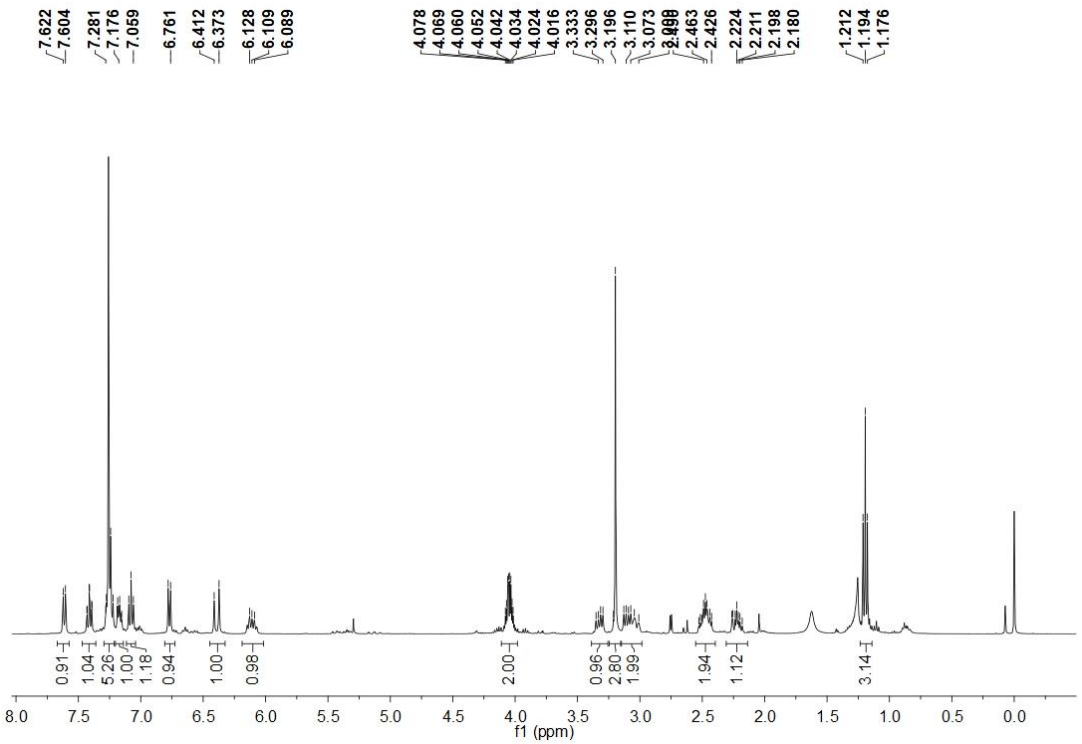
^{13}C NMR (101 MHz, $CDCl_3$)



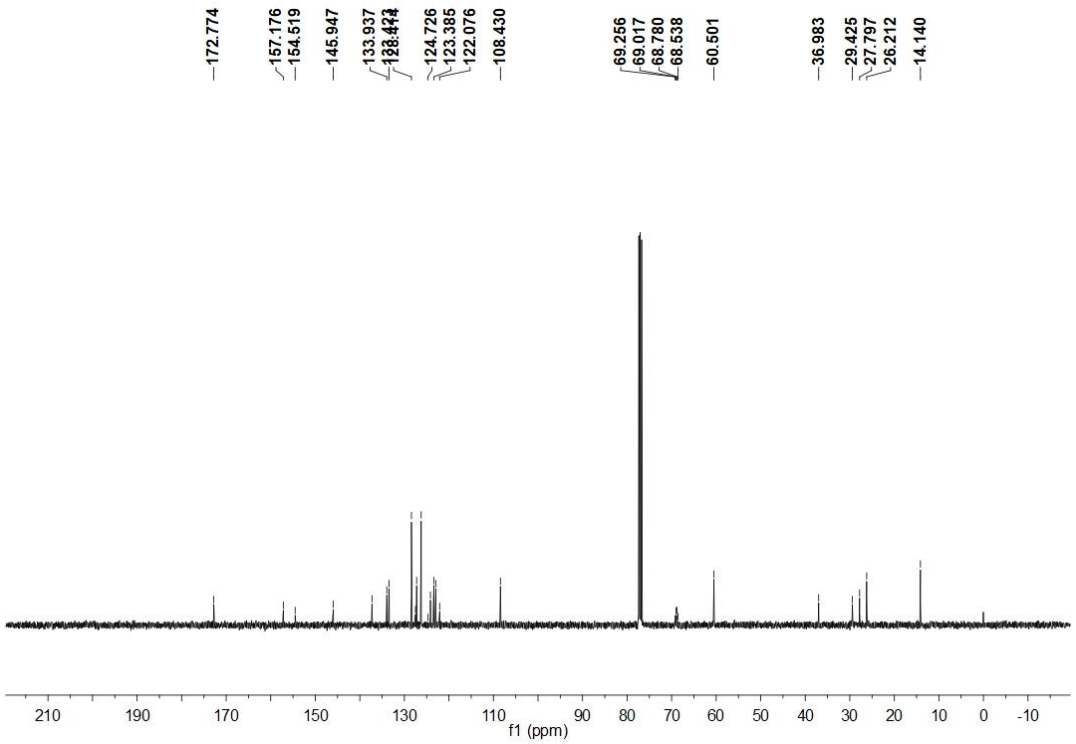
^{19}F NMR (376 MHz, $CDCl_3$)



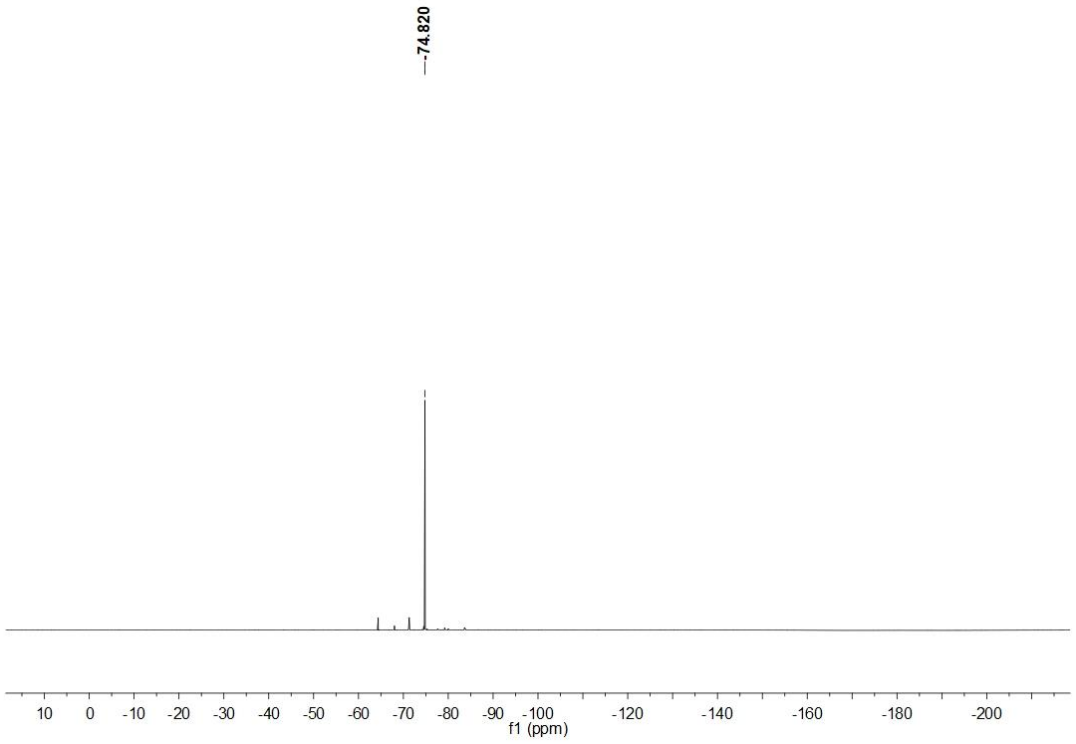
(*S*)-6a



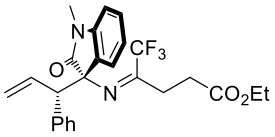
^{1}H NMR (400 MHz, $CDCl_3$)



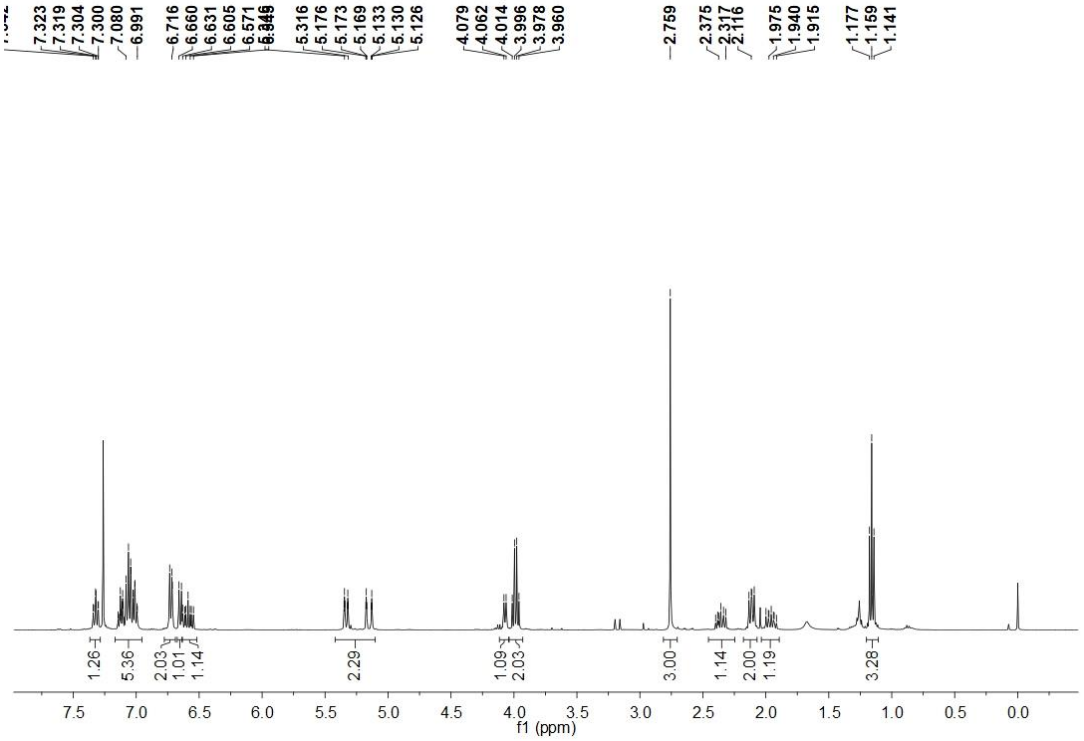
^{13}C NMR (101 MHz, $CDCl_3$)



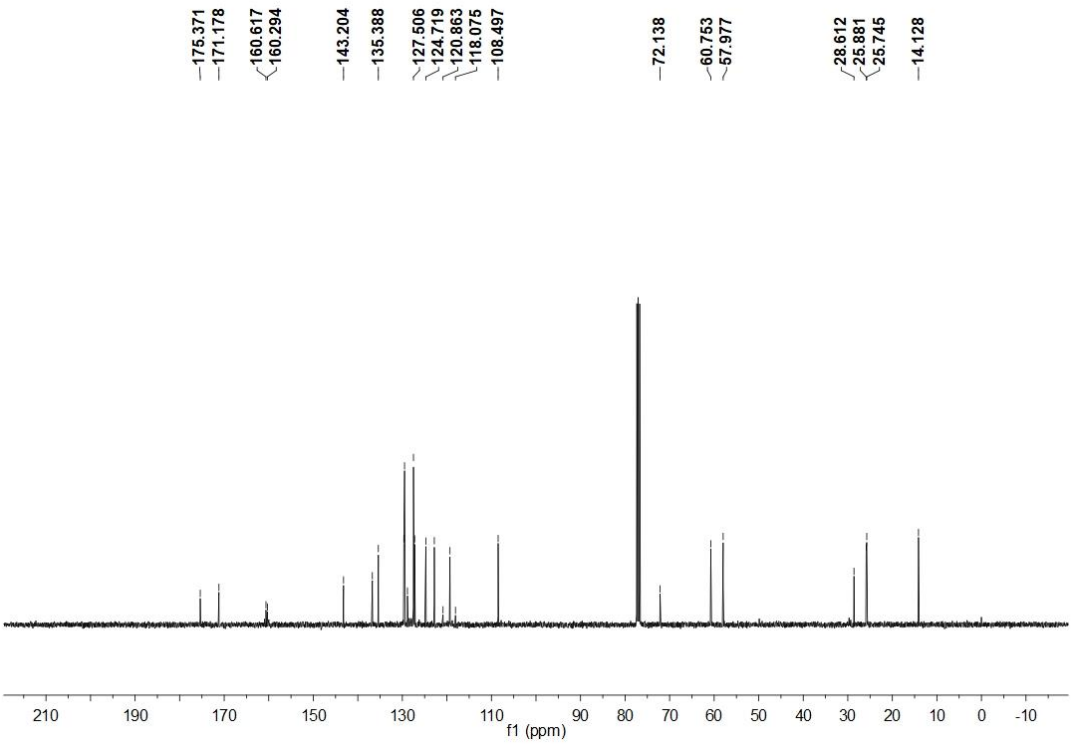
^{19}F NMR (376 MHz, $CDCl_3$)



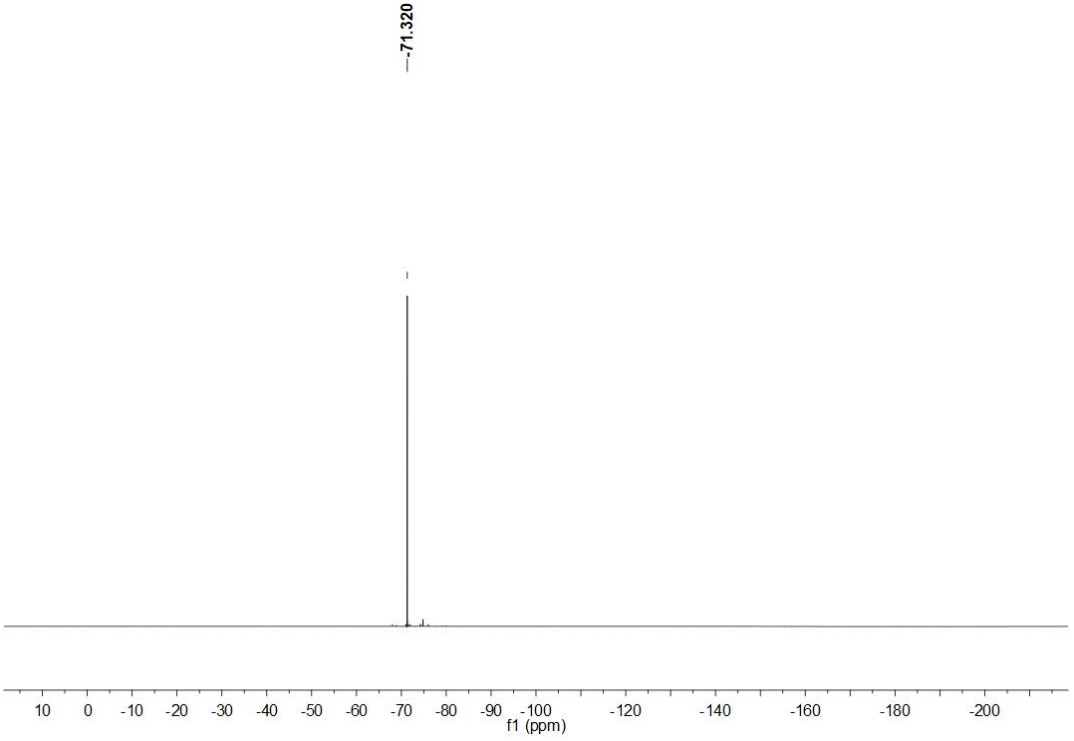
(*S*,*S*)-7a



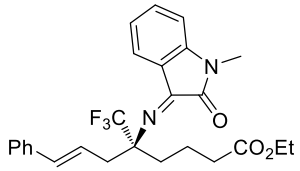
^{1}H NMR (400 MHz, $CDCl_3$)



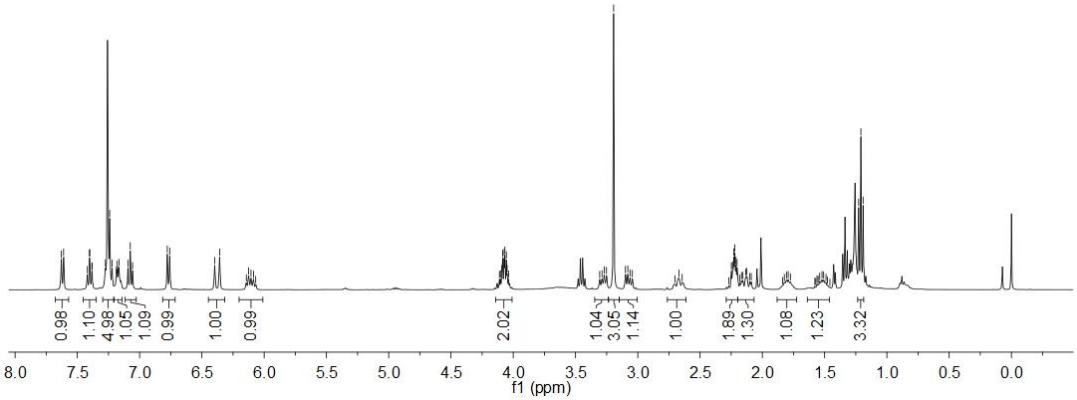
^{13}C NMR (101 MHz, $CDCl_3$)



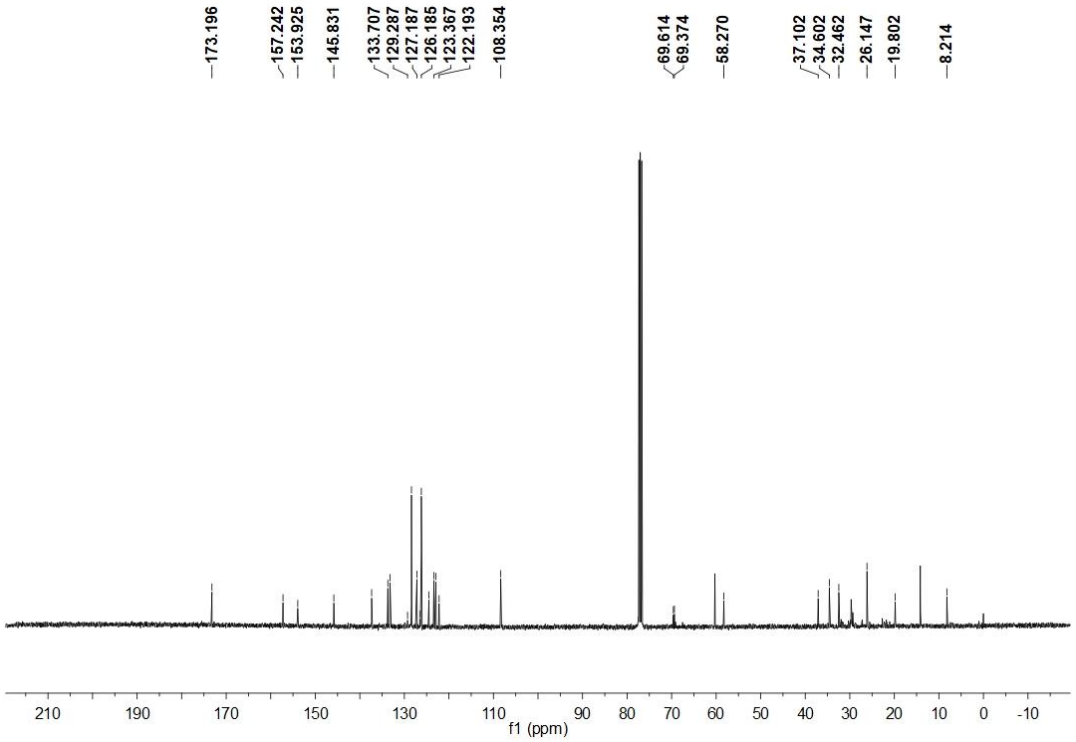
^{19}F NMR (376 MHz, $CDCl_3$)



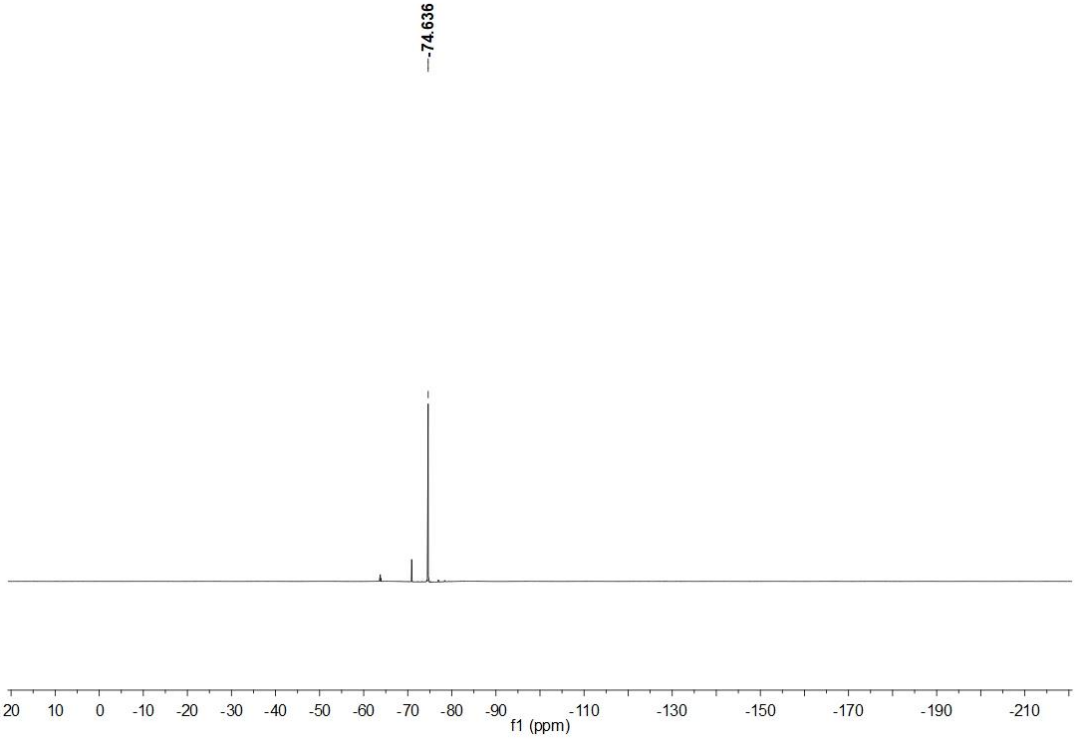
(*S*)-6b



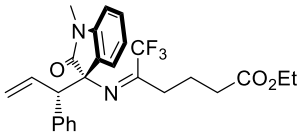
^{1}H NMR (400 MHz, $CDCl_3$)



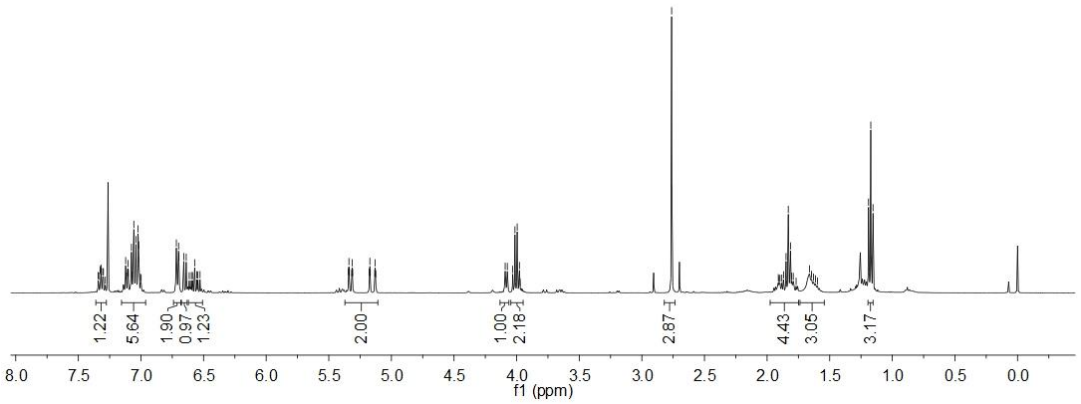
^{13}C NMR (101 MHz, $CDCl_3$)



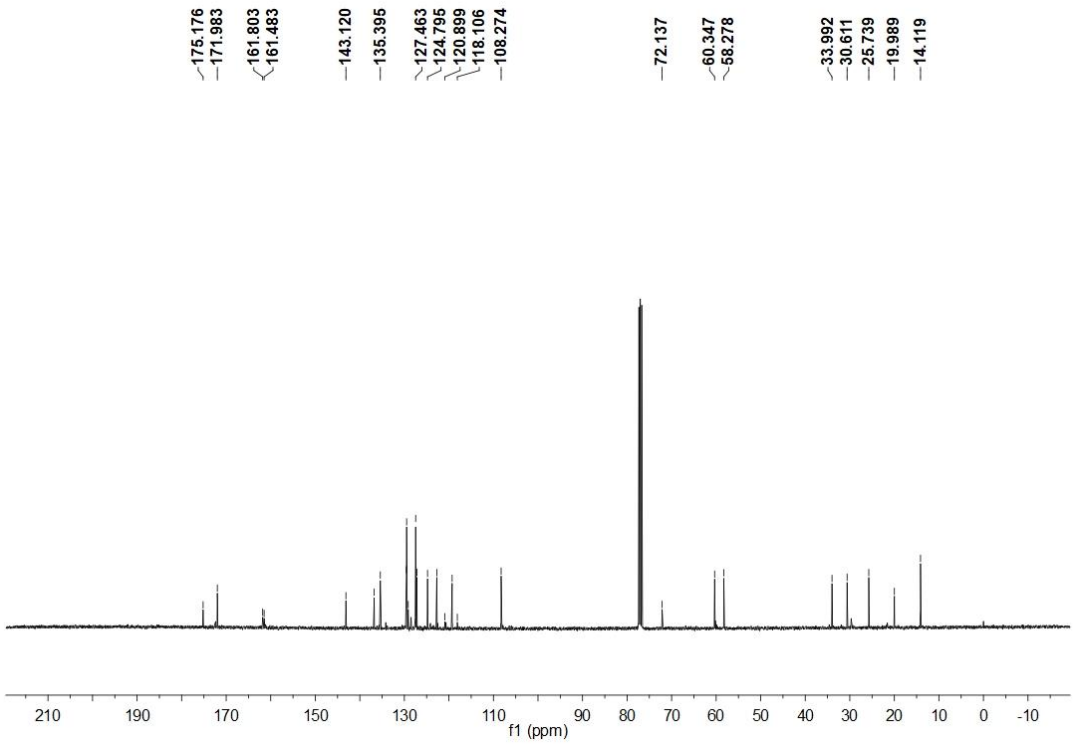
^{19}F NMR (376 MHz, $CDCl_3$)



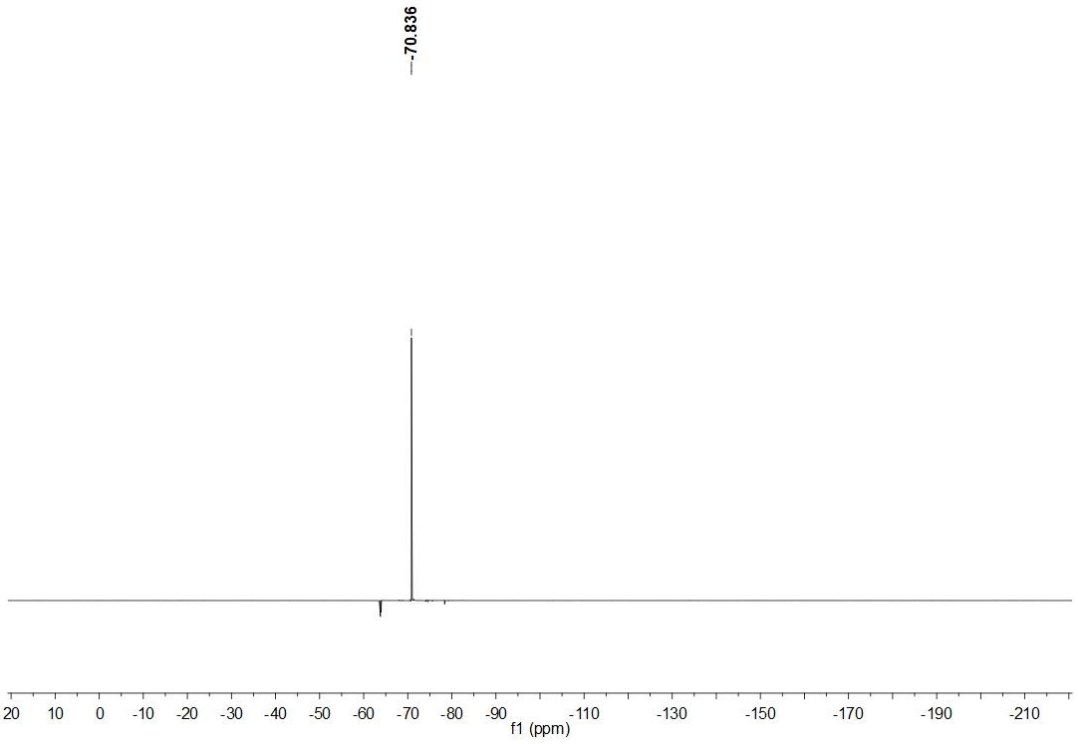
(*S*,*S*)-7b



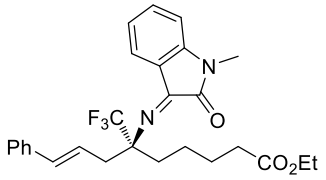
^{1}H NMR (400 MHz, $CDCl_3$)



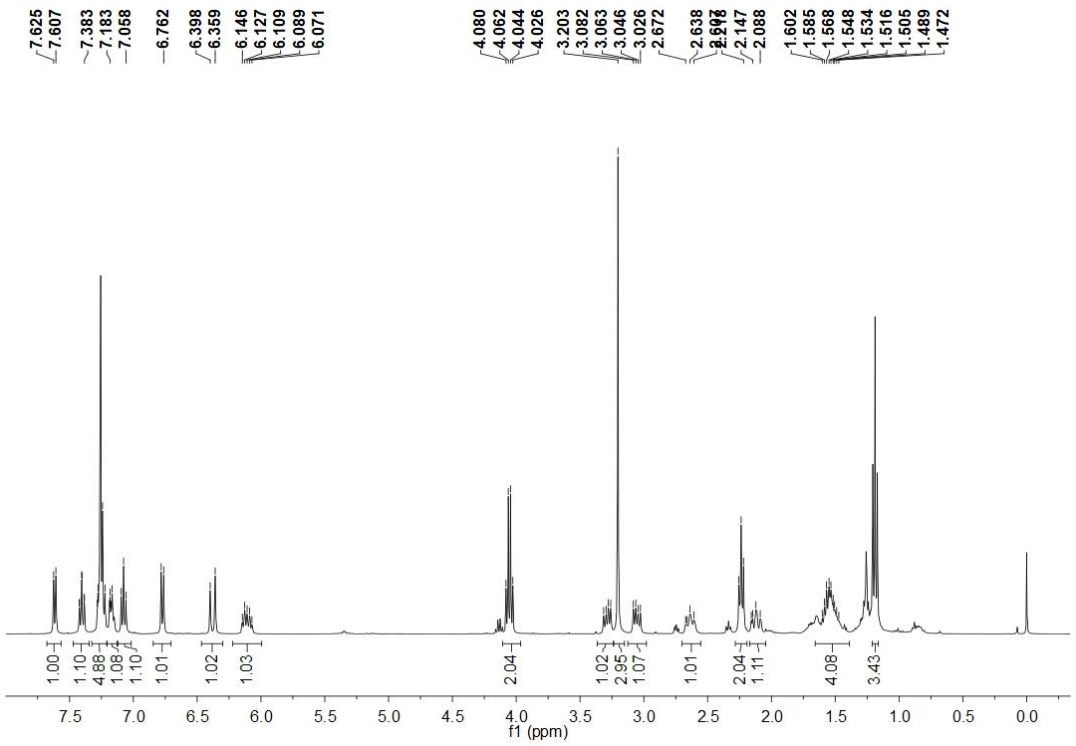
^{13}C NMR (101 MHz, $CDCl_3$)



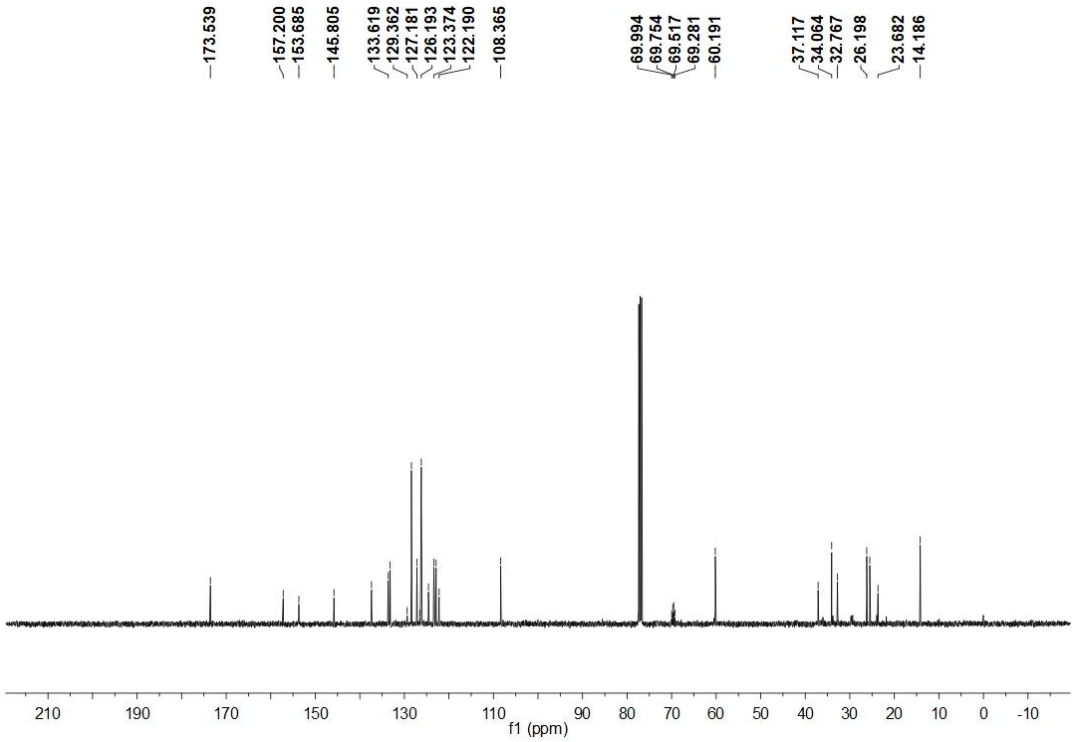
^{19}F NMR (376 MHz, $CDCl_3$)



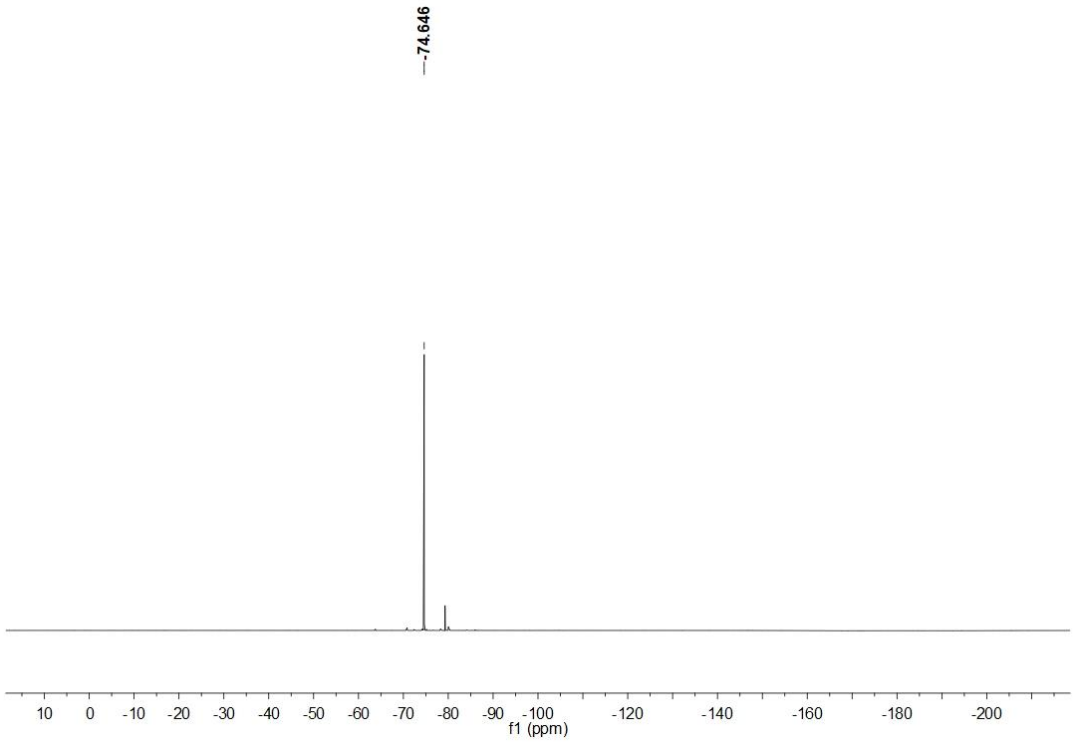
(*S*)-6c



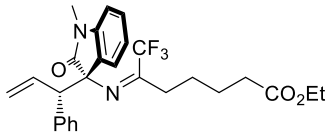
^{1}H NMR (400 MHz, $CDCl_3$)



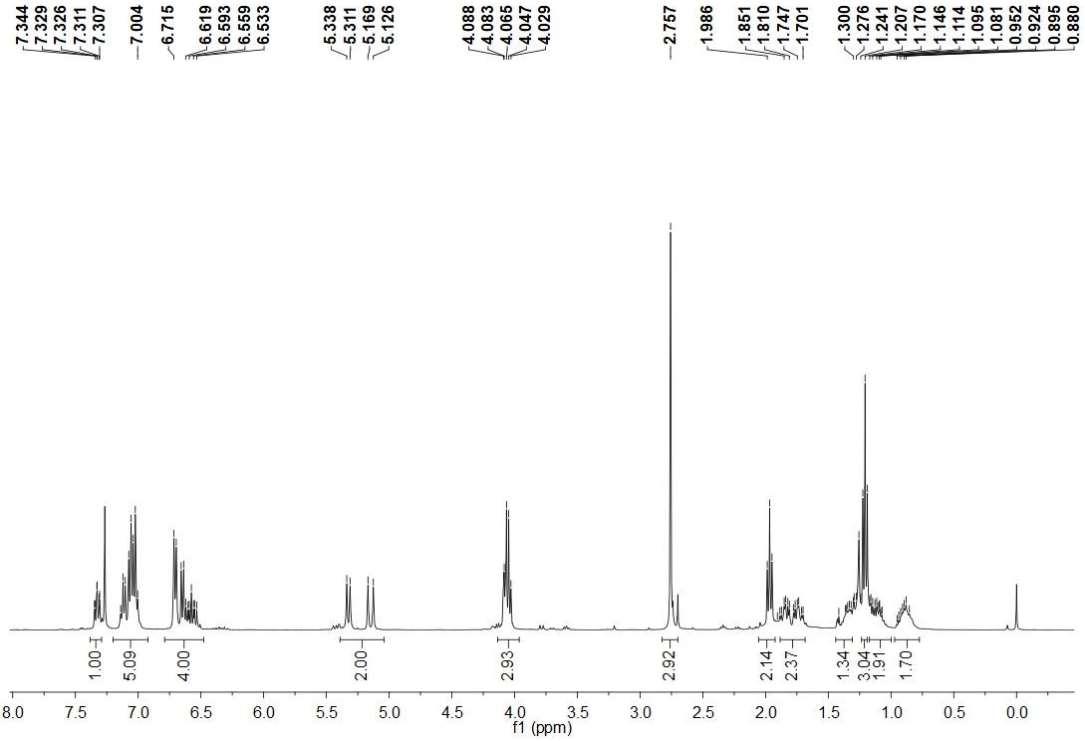
^{13}C NMR (101 MHz, $CDCl_3$)



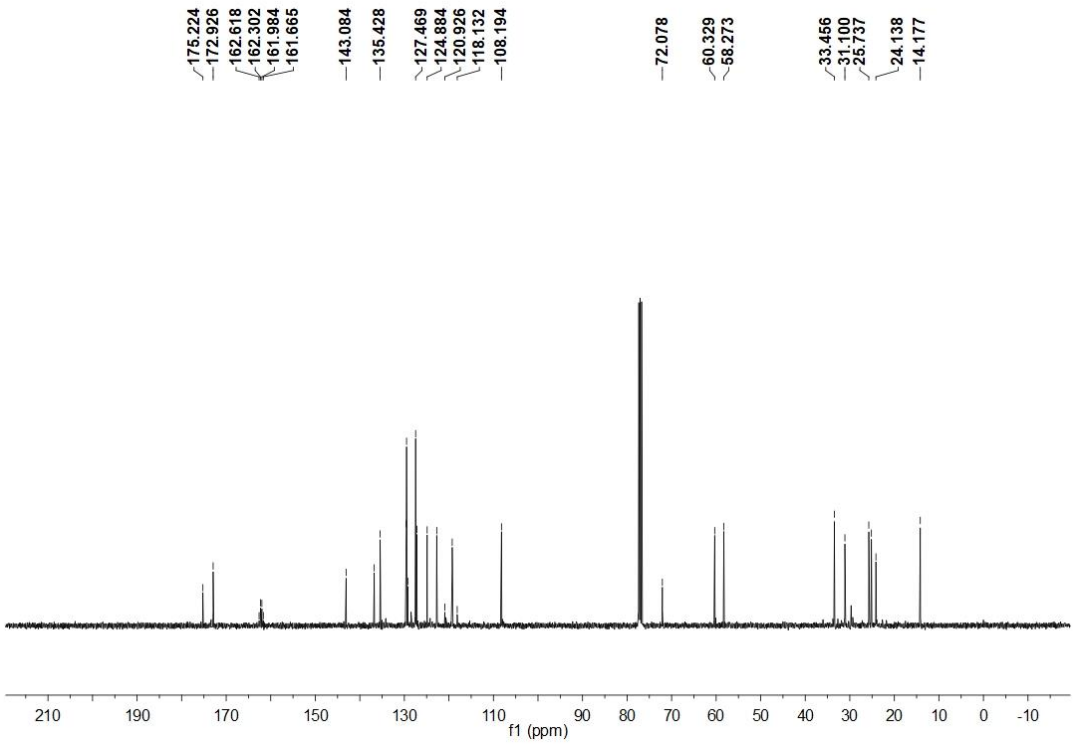
^{19}F NMR (376 MHz, $CDCl_3$)



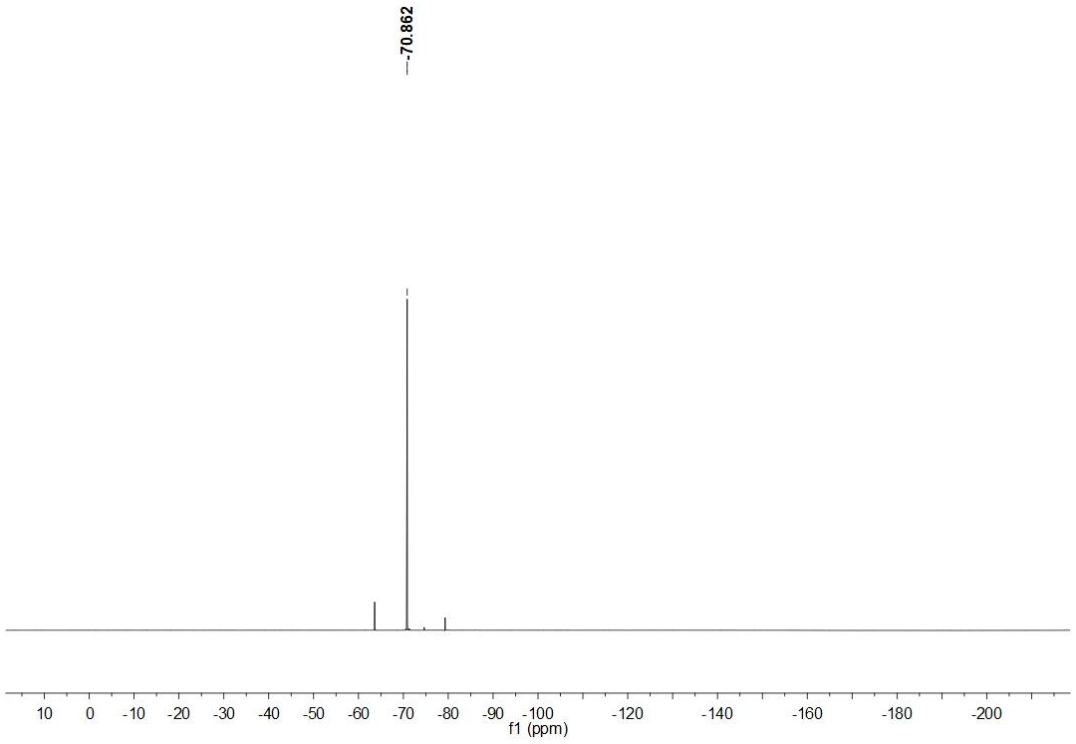
(*S*,*S*)-7c



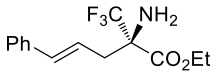
^{1}H NMR (400 MHz, $CDCl_3$)



^{13}C NMR (101 MHz, $CDCl_3$)



^{19}F NMR (376 MHz, $CDCl_3$)



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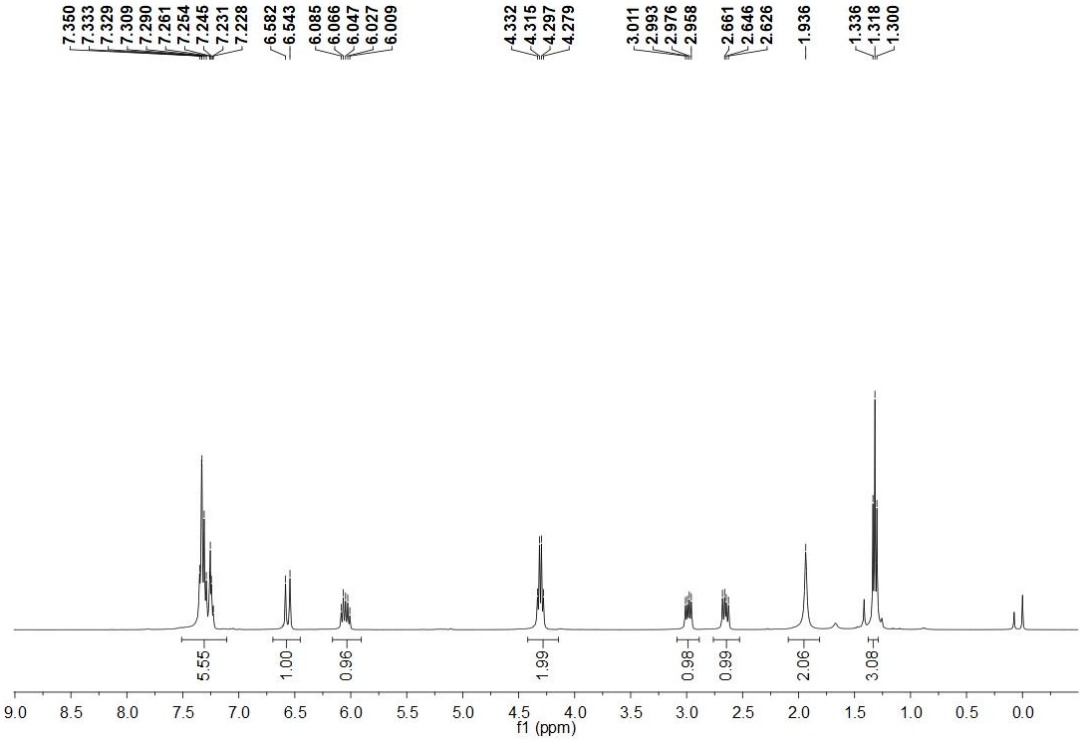
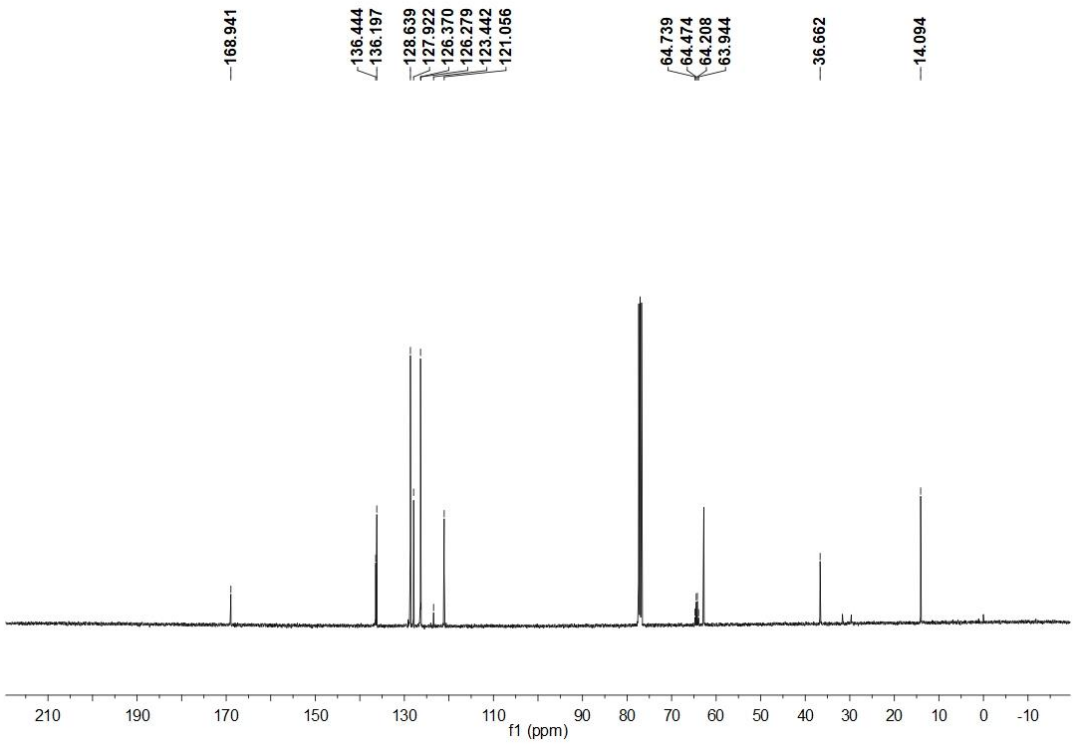


^{1}H NMR (400 MHz, $CDCl_3$)



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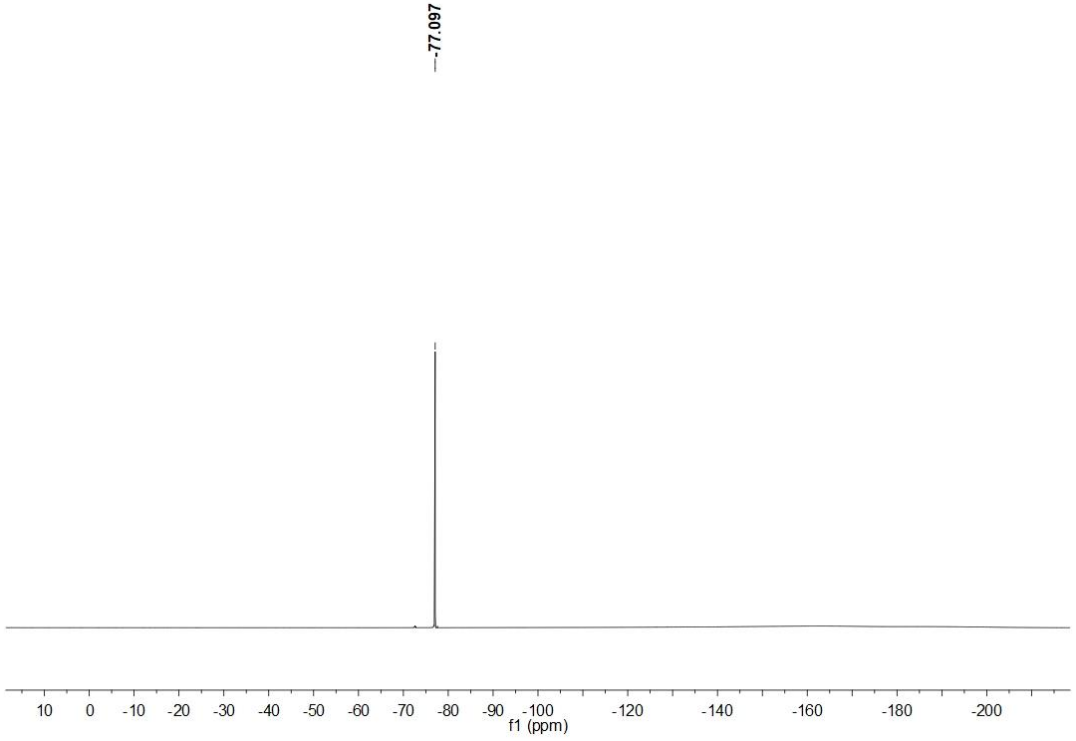
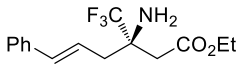


^{19}F NMR (376 MHz, $CDCl_3$)



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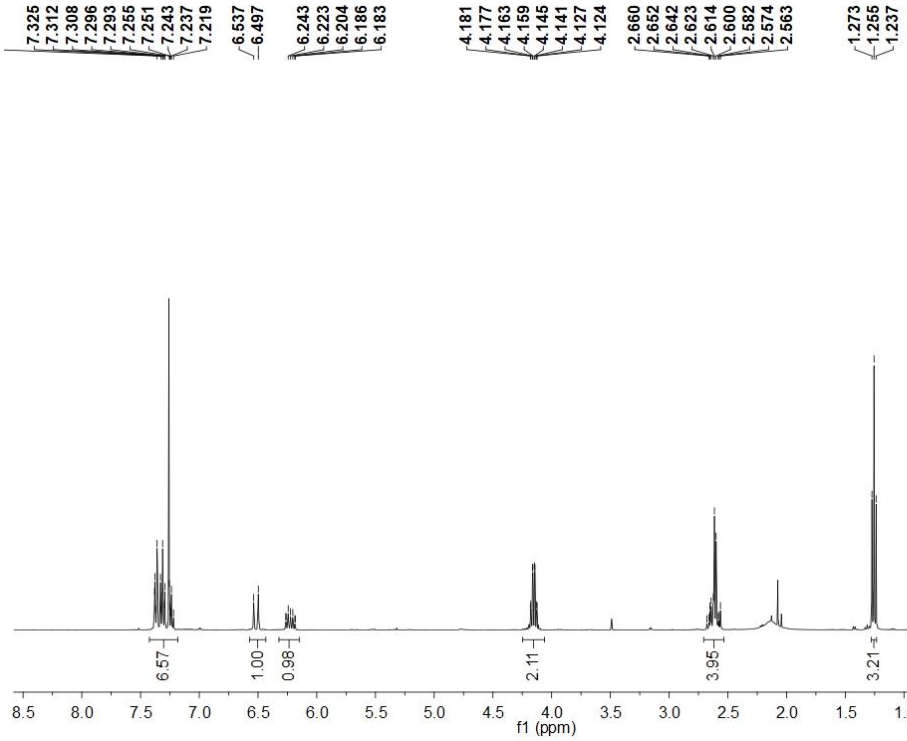
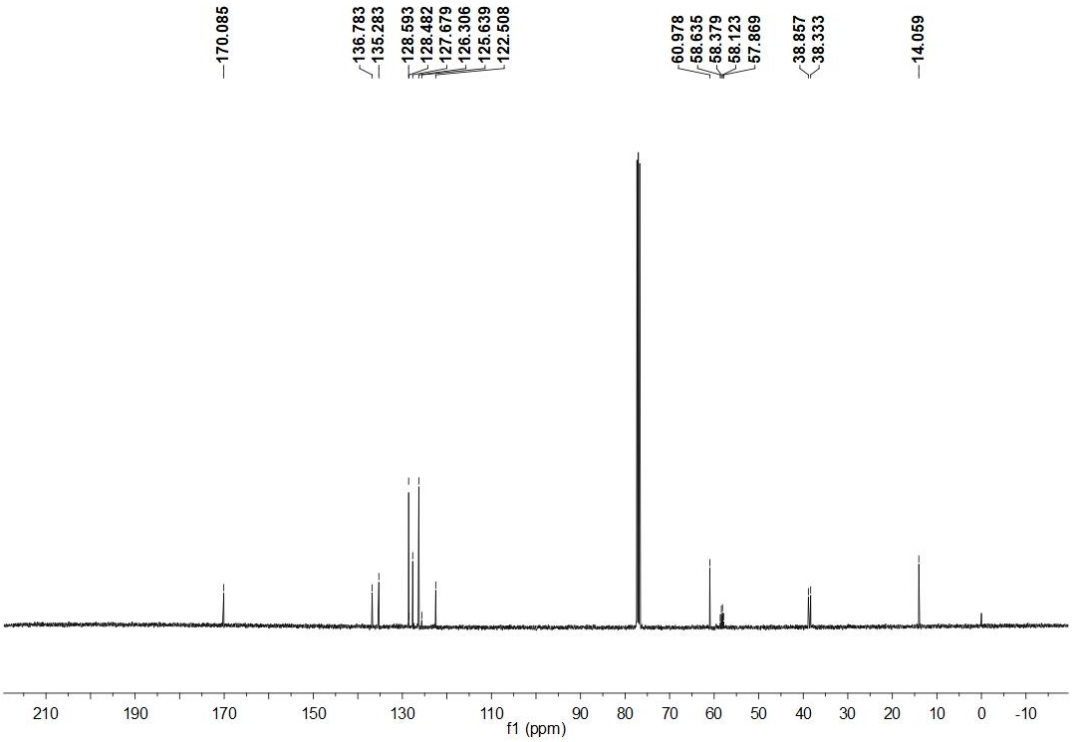
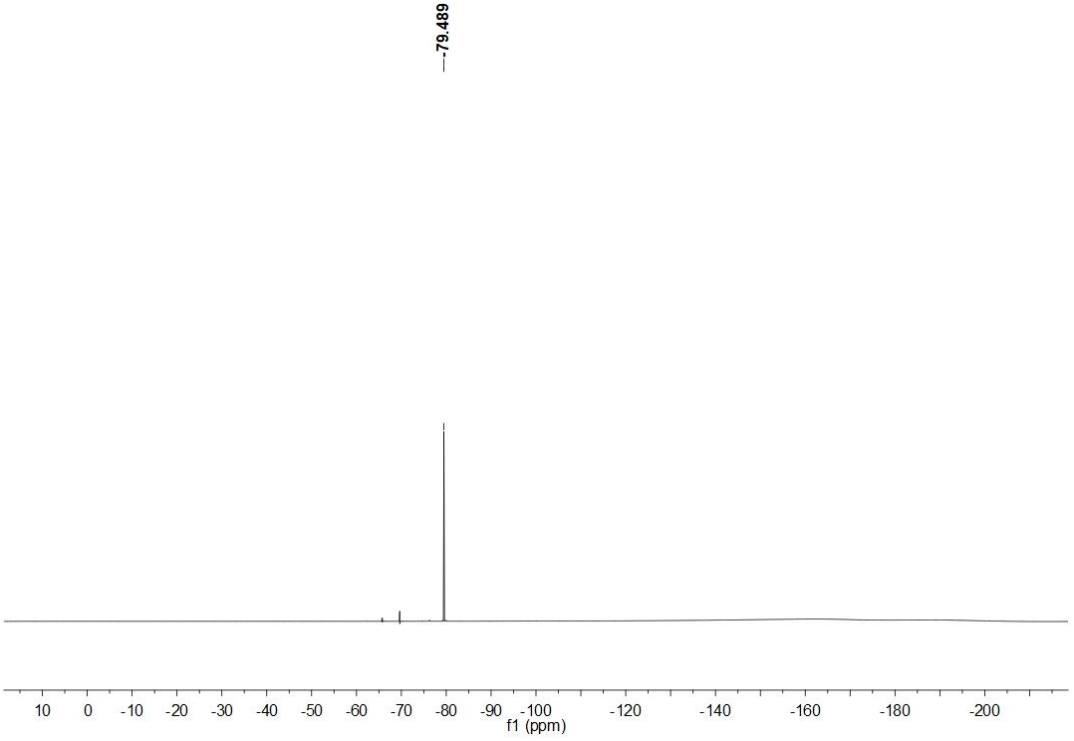


^{1}H NMR (400 MHz, $CDCl_3$)

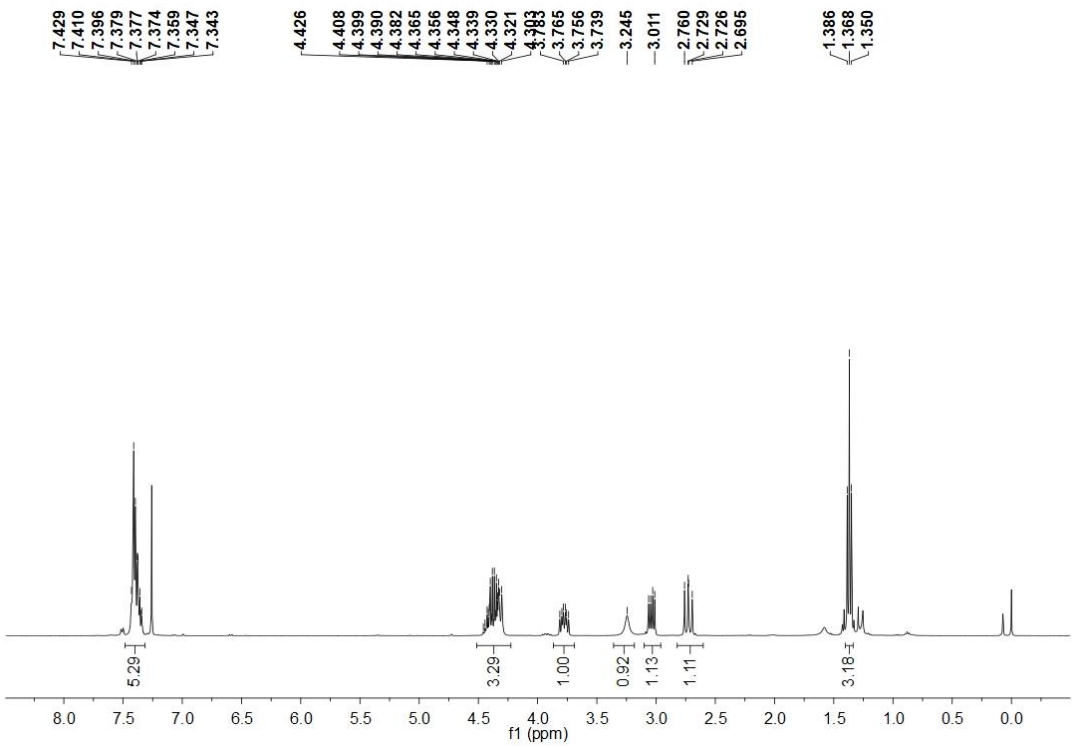


^{13}C NMR (101 MHz, $CDCl_3$)

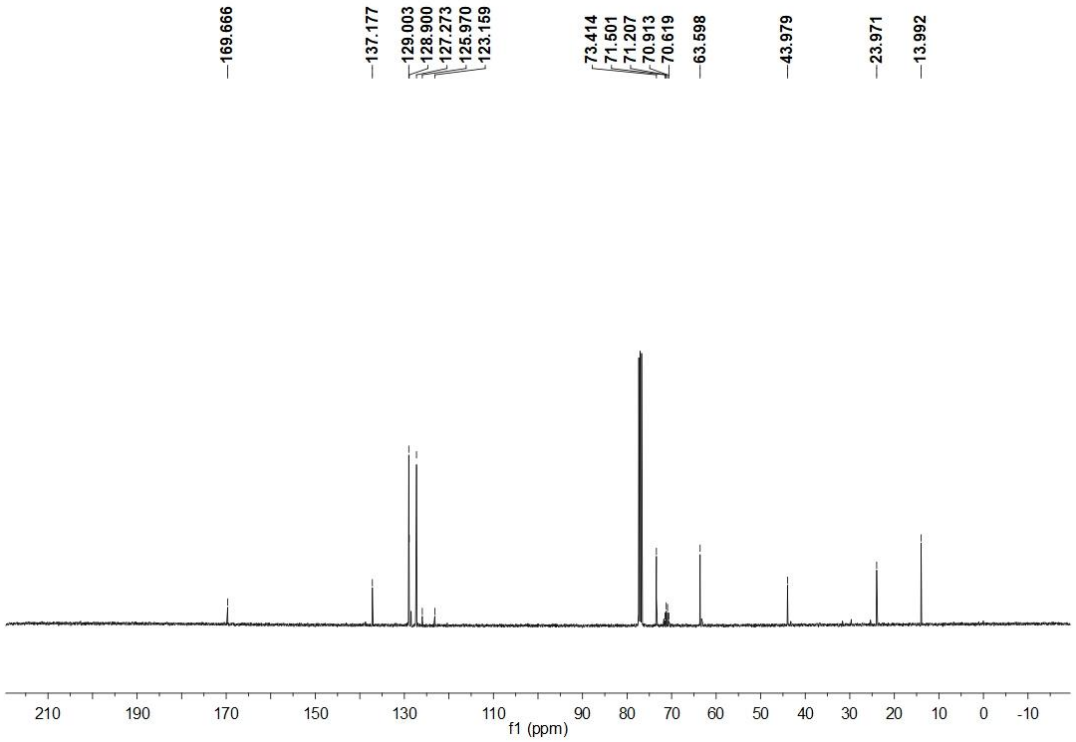


^{19}F NMR (376 MHz, $CDCl_3$)

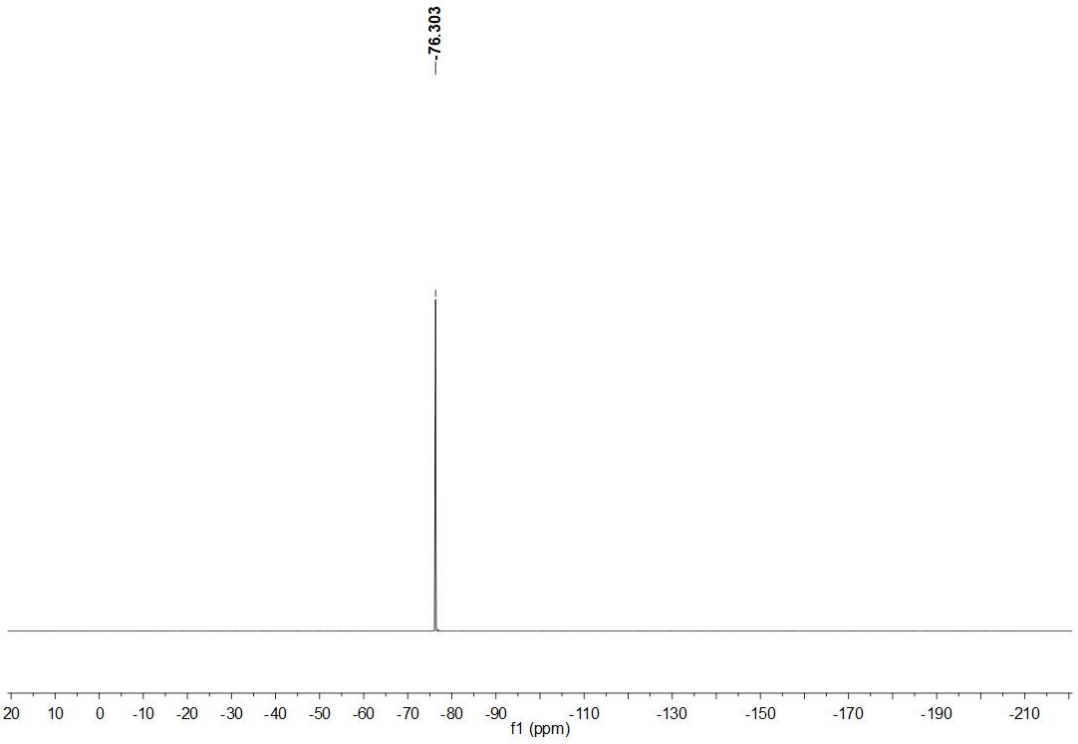
10



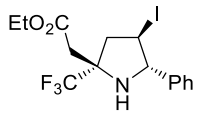
^{1}H NMR (400 MHz, $CDCl_3$)



^{13}C NMR (101 MHz, $CDCl_3$)



^{19}F NMR (376 MHz, $CDCl_3$)



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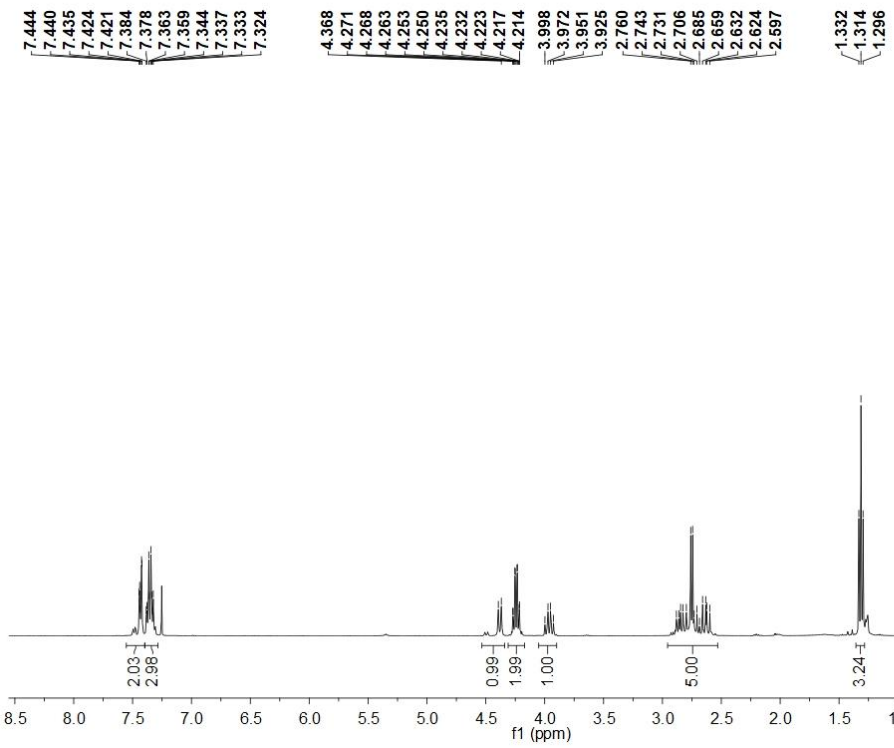
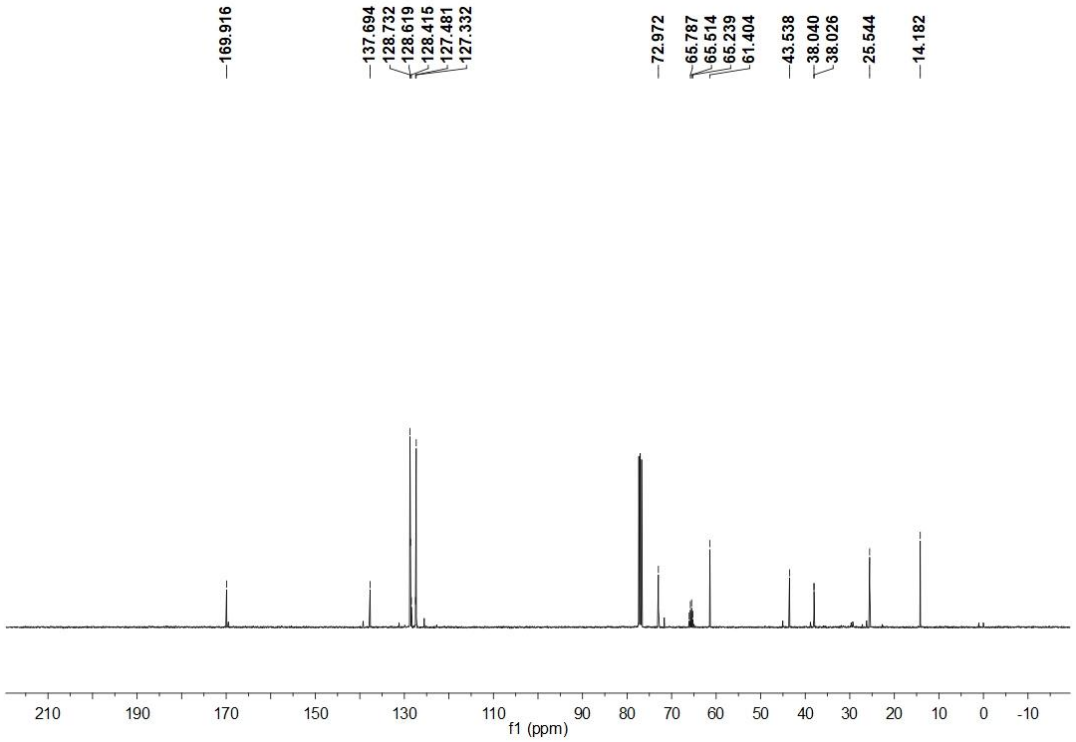
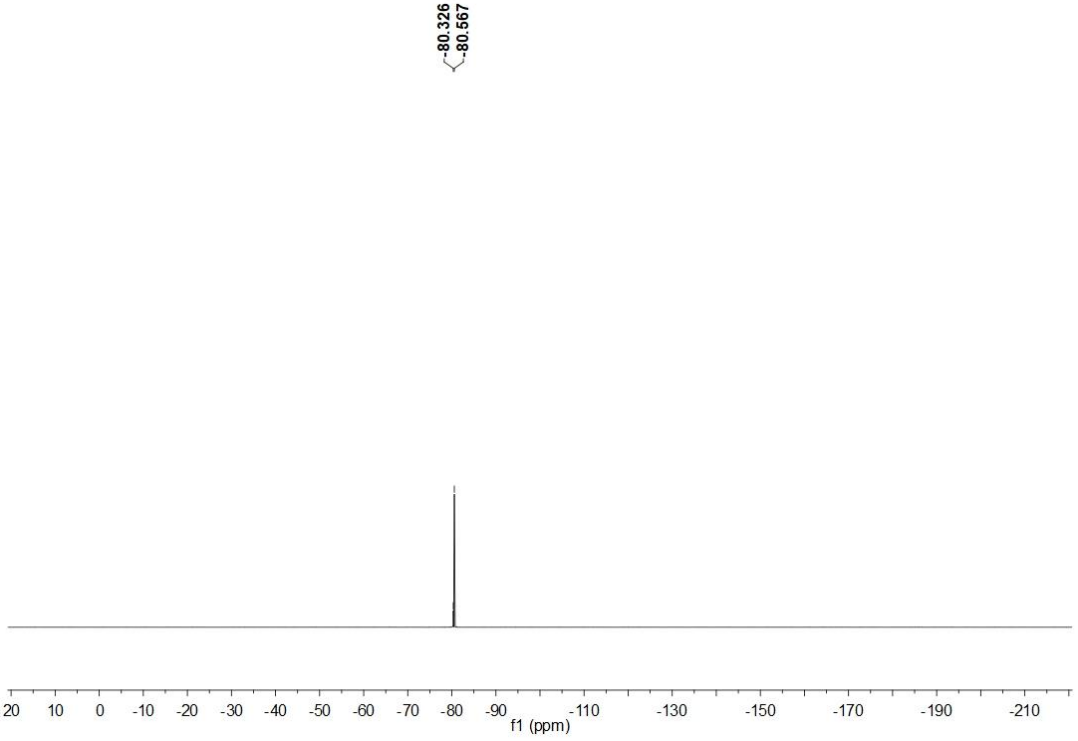


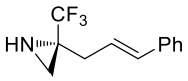
^{1}H NMR (400 MHz, $CDCl_3$)



^{13}C NMR (101 MHz, $CDCl_3$)



^{19}F NMR (376 MHz, $CDCl_3$)



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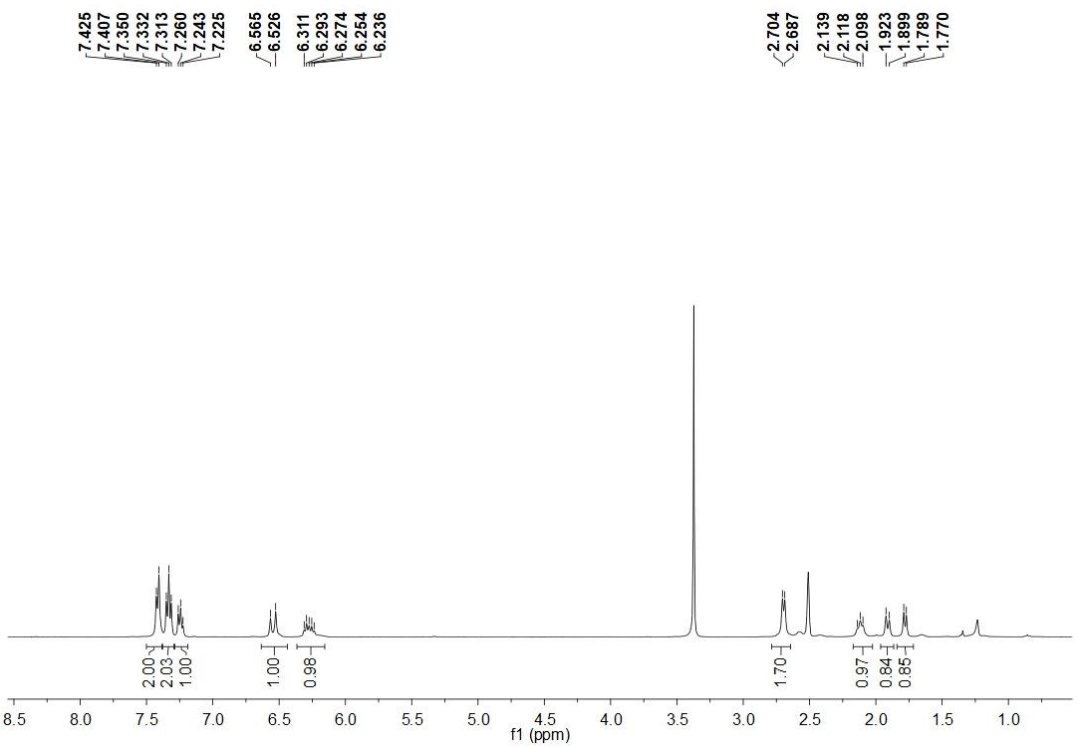
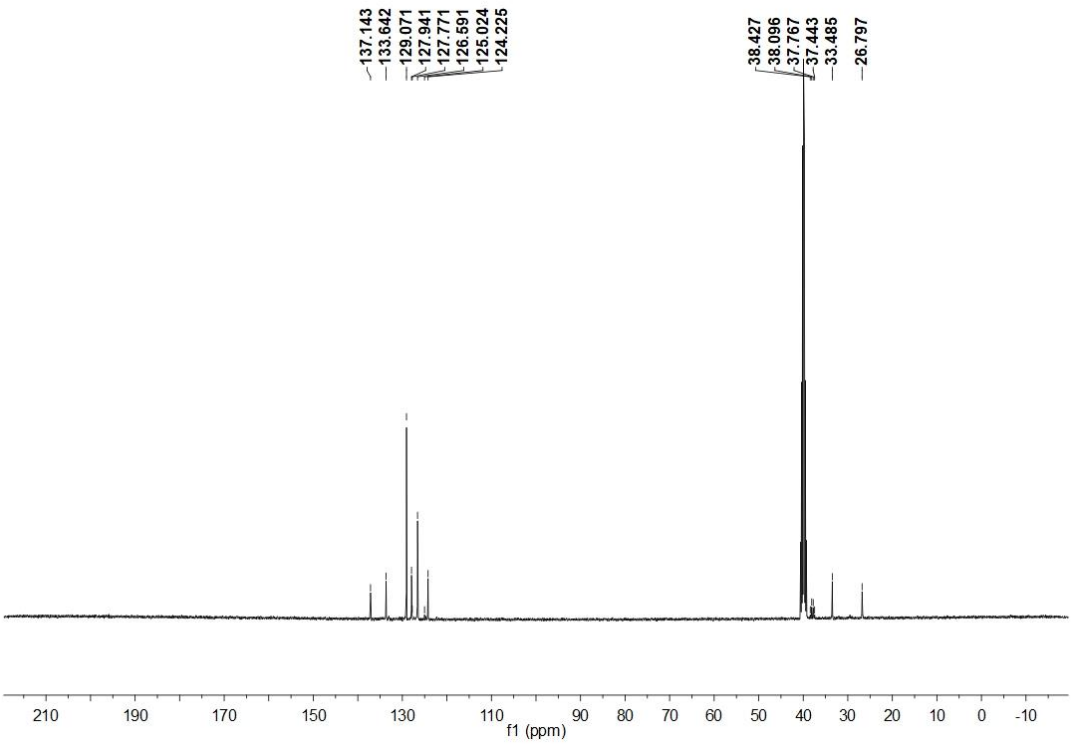
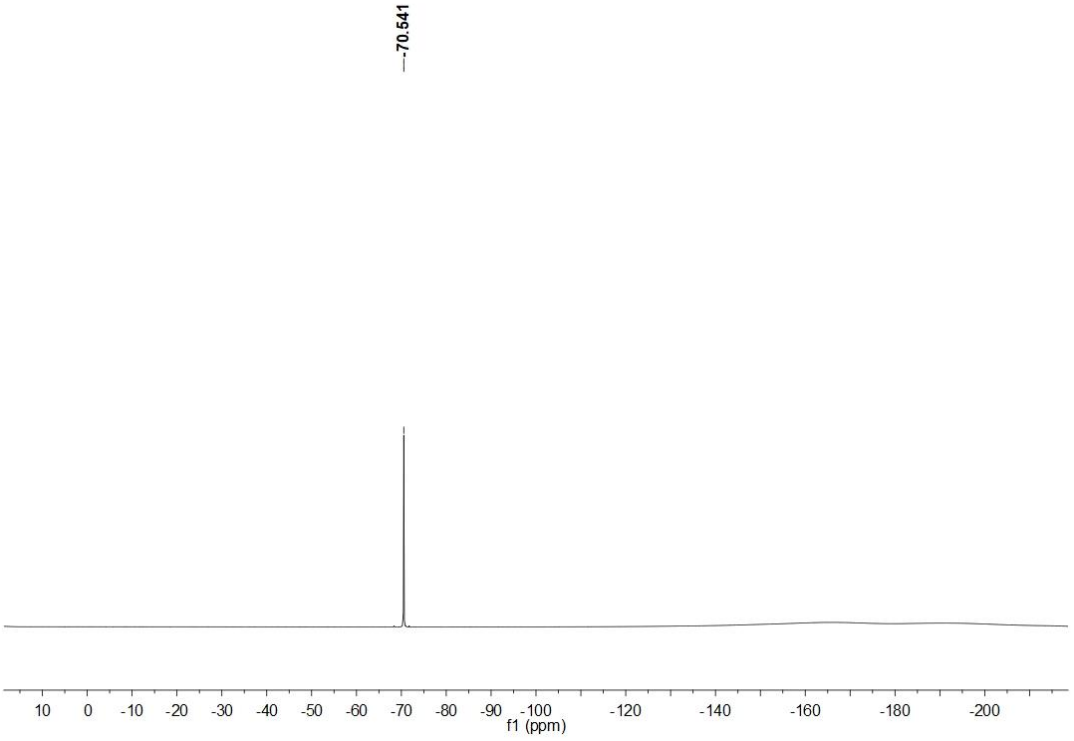


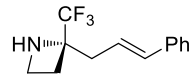
^{1}H NMR (400 MHz, DMSO)



^{13}C NMR (101 MHz, DMSO)



^{19}F NMR (376 MHz, $CDCl_3$)



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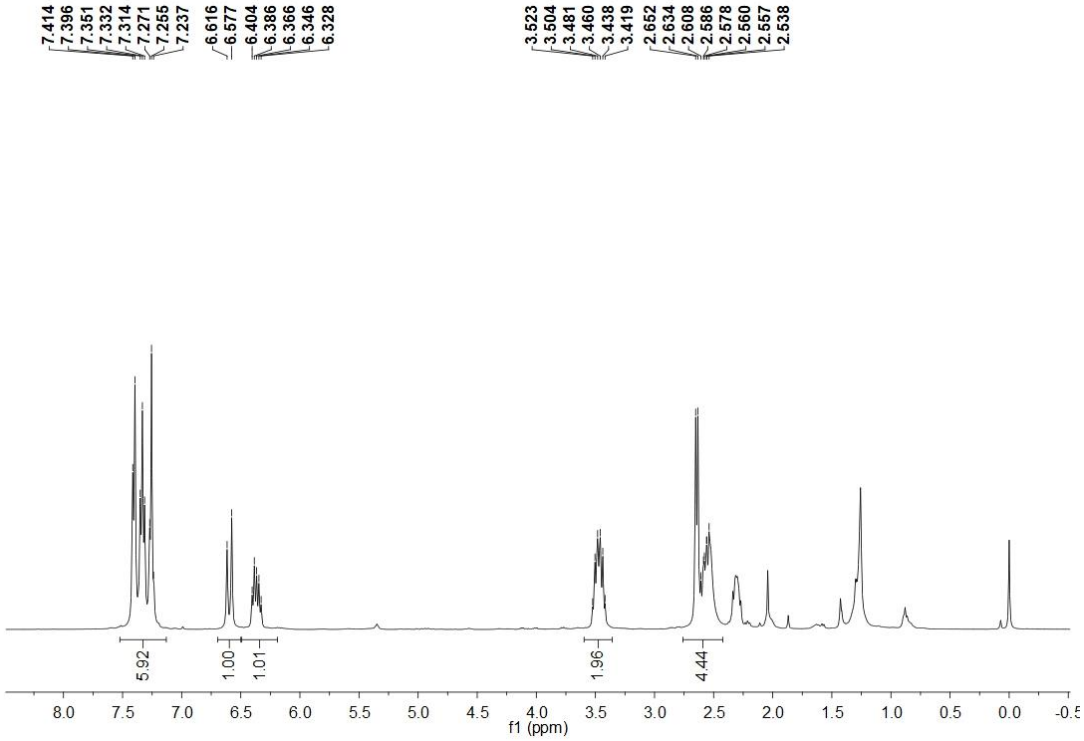
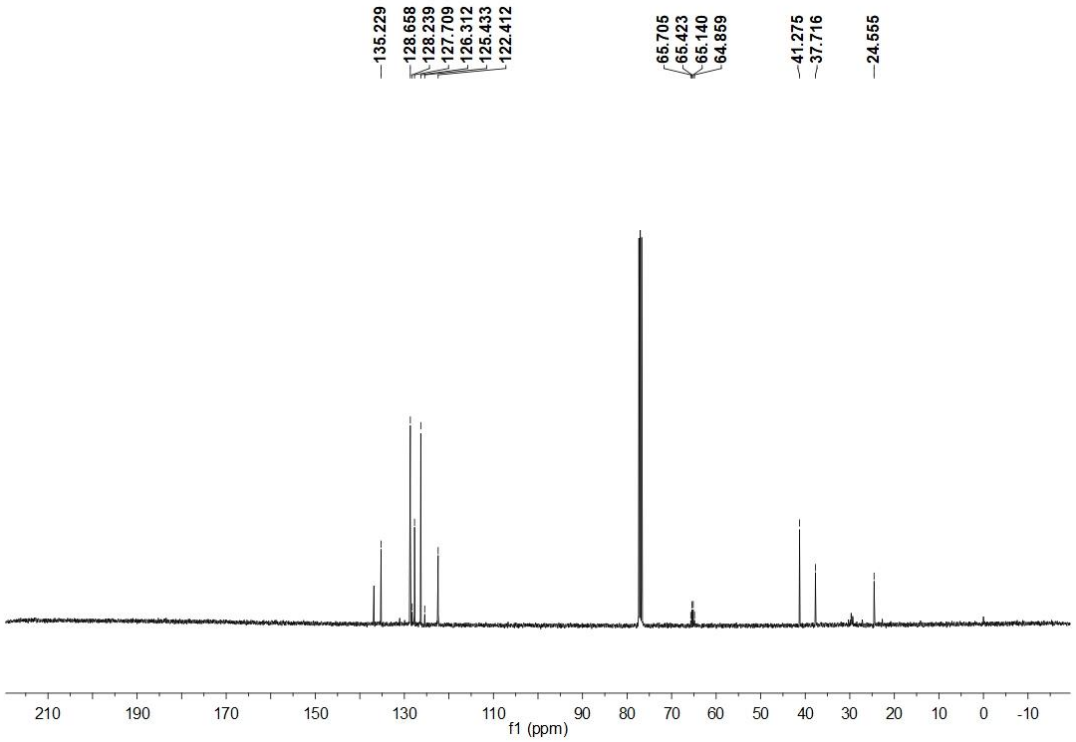
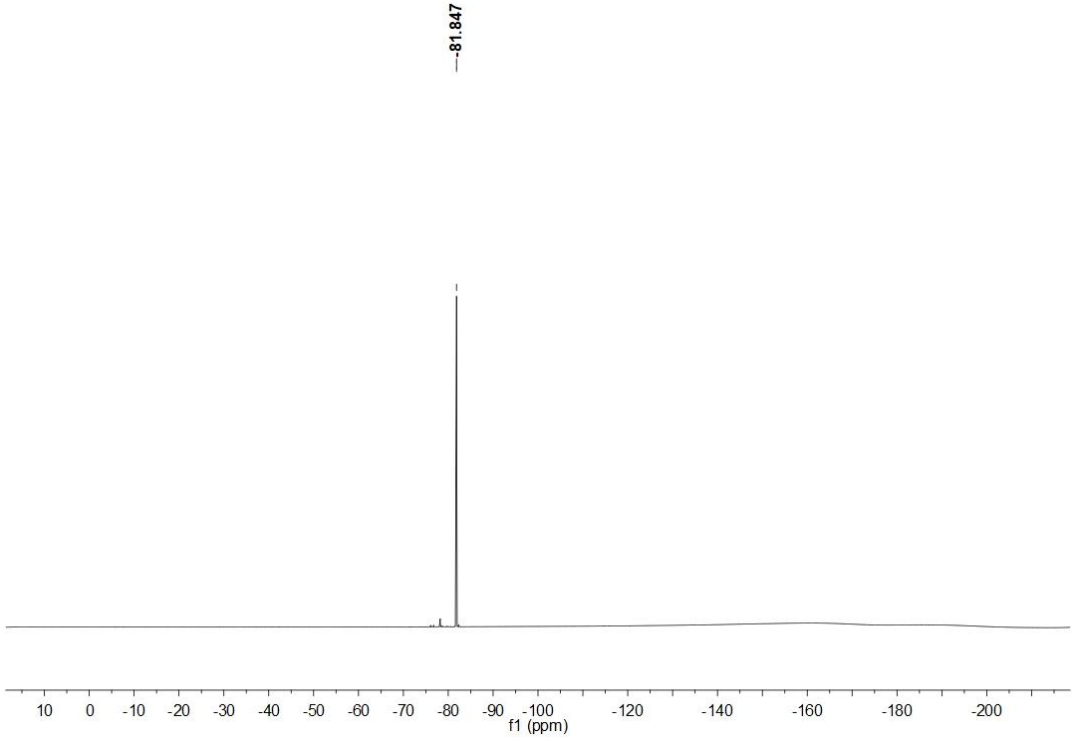


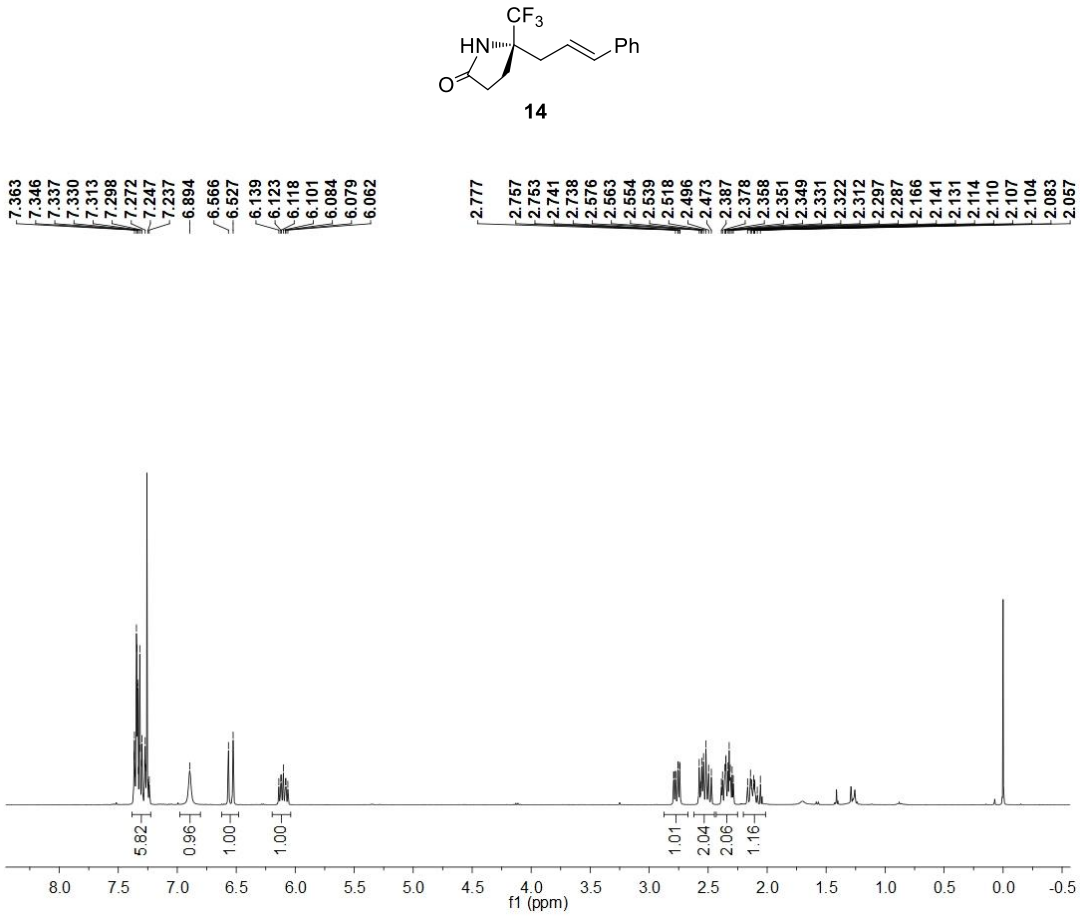
^{1}H NMR (400 MHz, $CDCl_3$)



^{13}C NMR (101 MHz, $CDCl_3$)



^{19}F NMR (376 MHz, $CDCl_3$)



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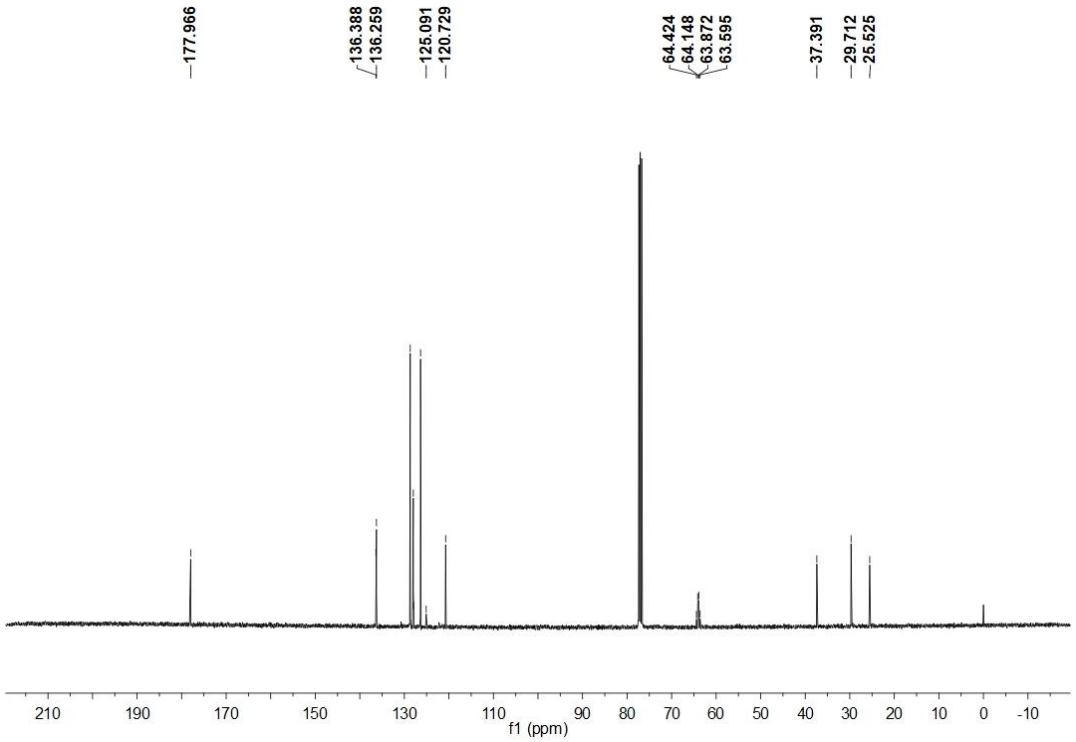
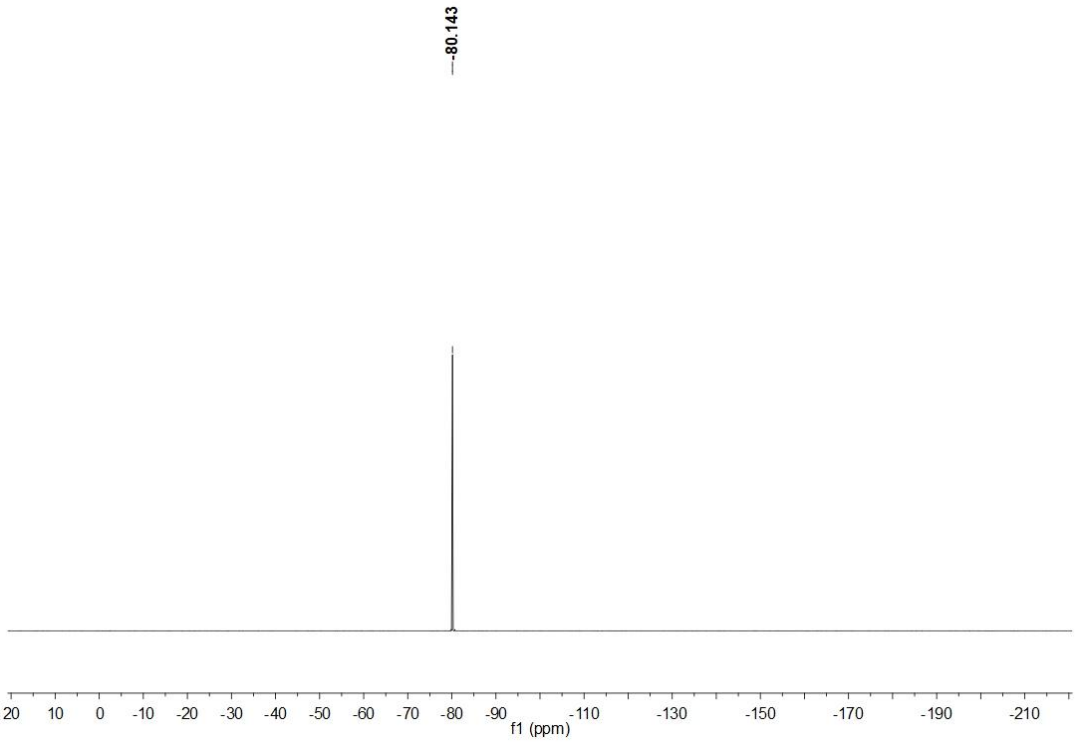
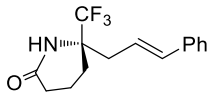


^{13}C NMR (101 MHz, $CDCl_3$)



^{19}F NMR (376 MHz, $CDCl_3$)



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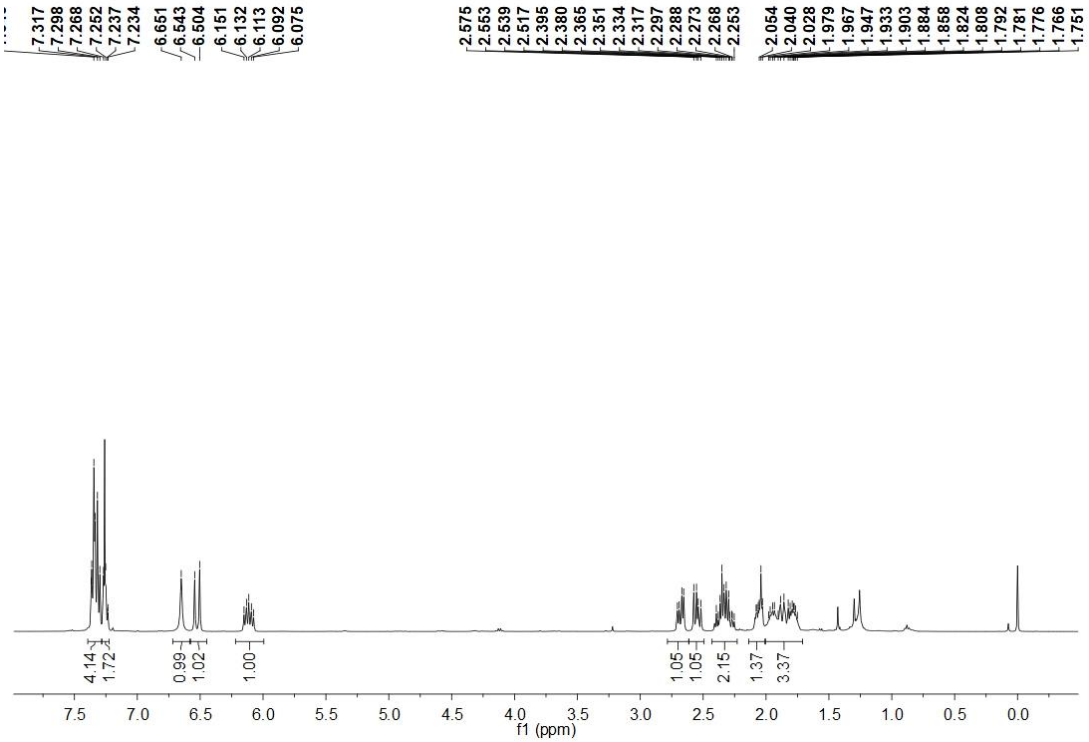
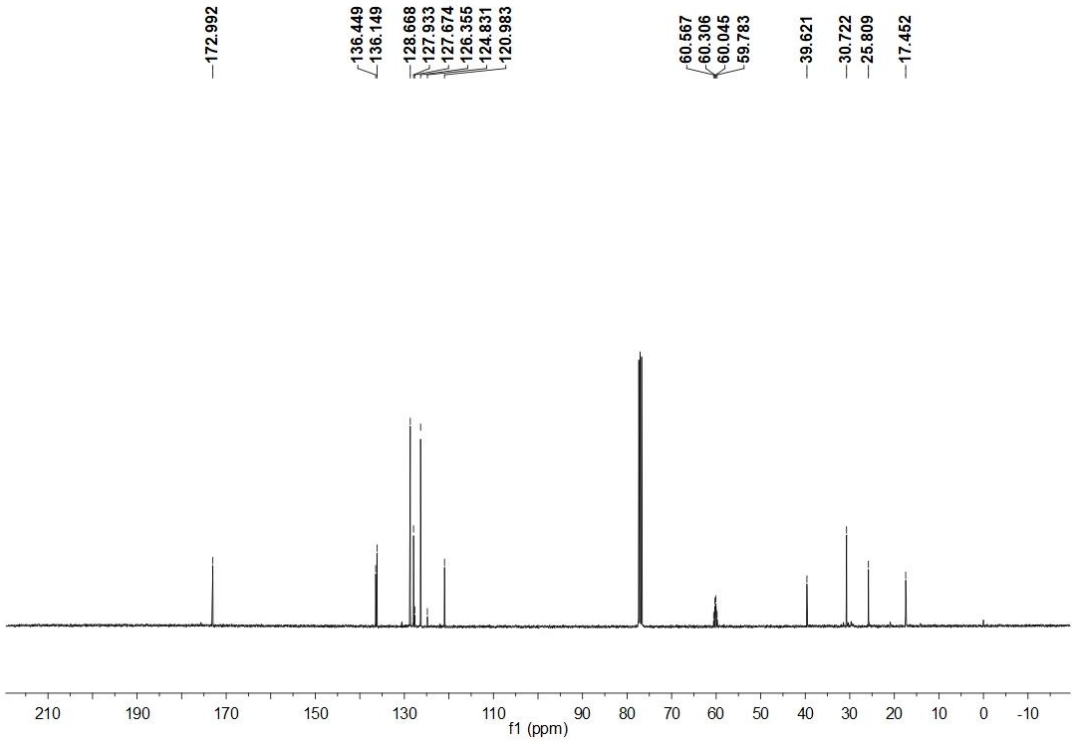
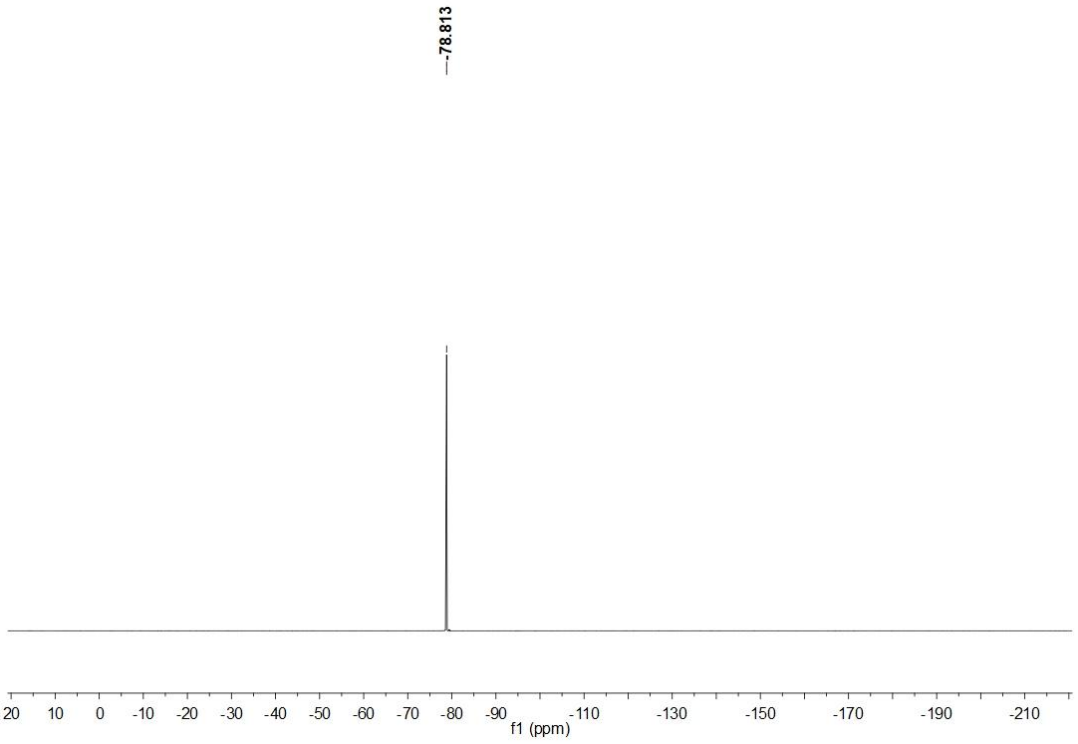


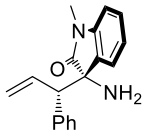
^{1}H NMR (400 MHz, $CDCl_3$)



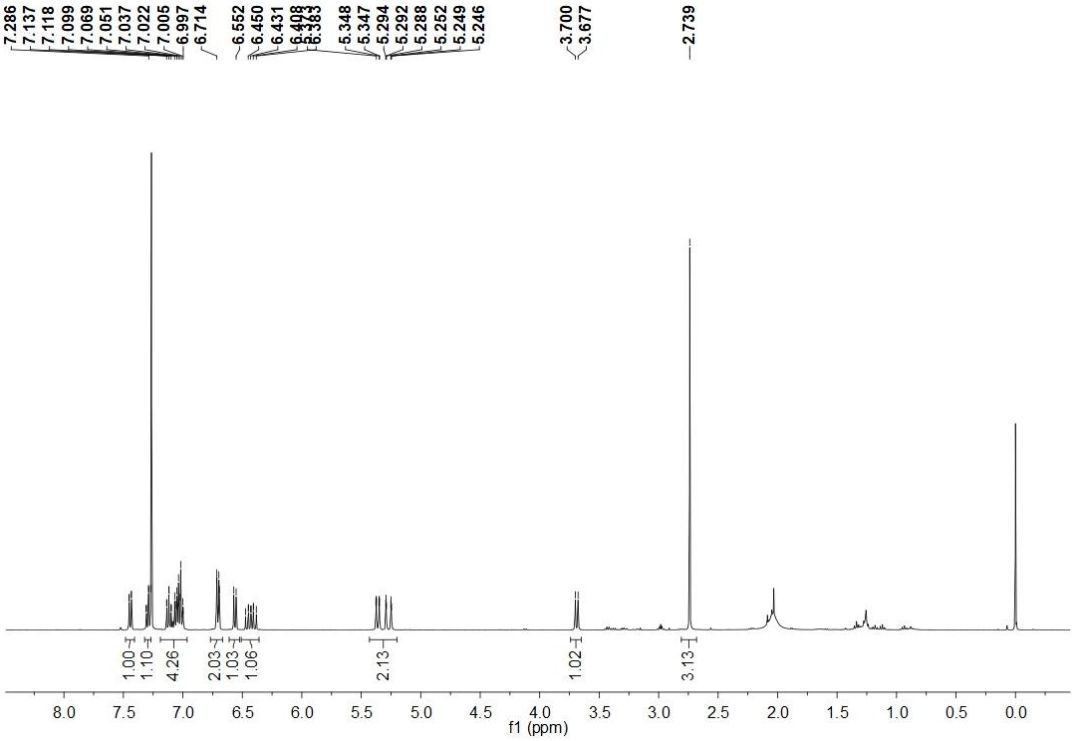
^{13}C NMR (101 MHz, $CDCl_3$)



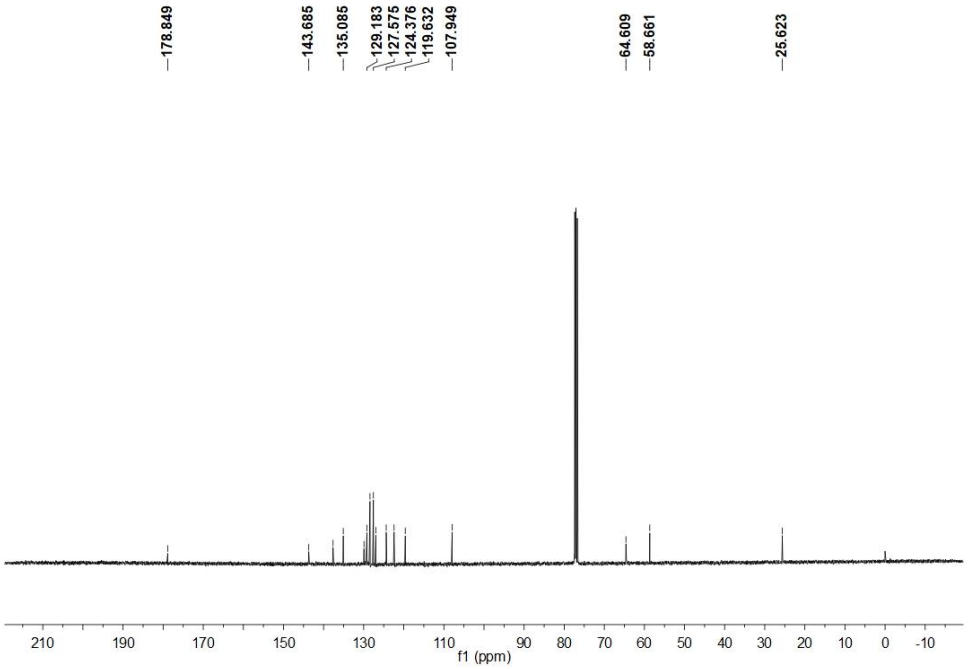
^{19}F NMR (376 MHz, $CDCl_3$)



16

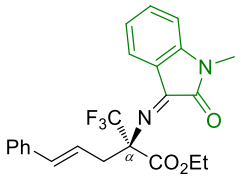


^{1}H NMR (400 MHz, $CDCl_3$)



^{13}C NMR (101 MHz, $CDCl_3$)

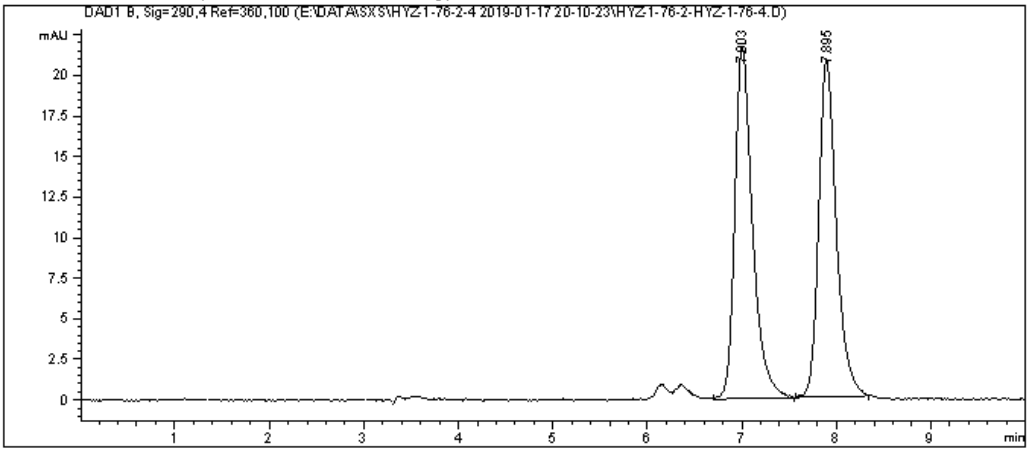
8. HPLC spectra.



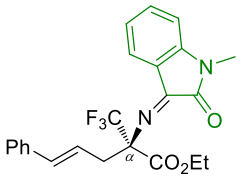
(*Rac*)-3a

Data File E:\DATA\SXS\HYZ-1-76-2-4 2019-01-17 20-10-23\HYZ-1-76-2-HYZ-1-76-4.D
Sample Name: SXS-7-100-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   1
    Acq. Instrument : 1260                           Location :   61
    Injection Date  : 1/17/2019 8:11:45 PM               Inj :   1
                                                   Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-1-76-2-4 2019-01-17 20-10-23\ID-95-5-2UL-10MIN.M
    Last changed    : 1/17/2019 8:10:23 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\HYZ-1-76-2-4 2019-01-17 20-10-23\ID-95-5-2UL-10MIN.M (Sequence
                      Method)
    Last changed    : 6/10/2019 11:13:48 AM by SYSTEM
                      (modified after loading)
```



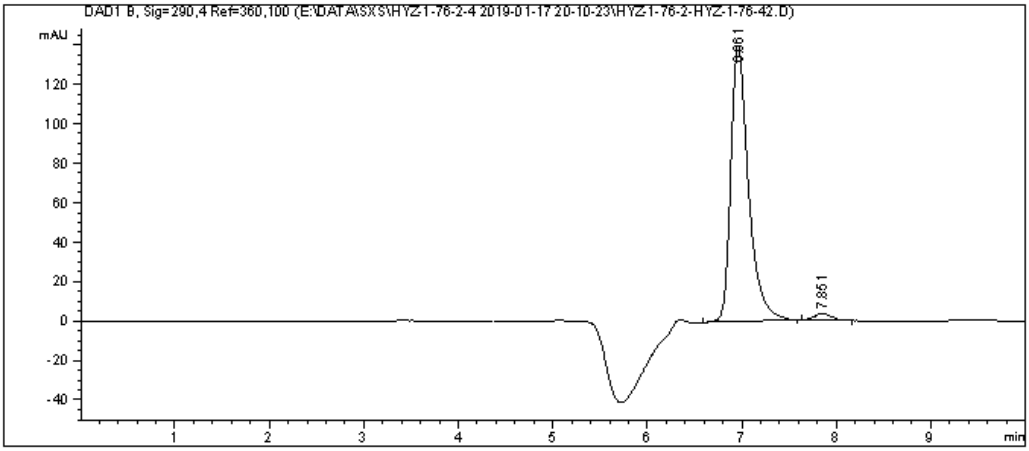

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 B, Sig=290,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   7.003 BB    0.1888  282.12271   21.68419  51.1552
       2   7.895 BB    0.1928  269.38104   20.71021  48.8448

    Totals :                    551.50375   42.39440

    ======================================================================
                              *** End of Report ***
```



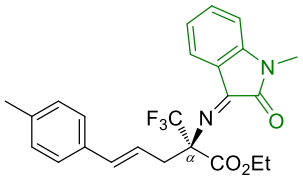
(*R*)-3a

Data File E:\DATA\SXS\HYZ-1-76-2-4 2019-01-17 20-10-23\HYZ-1-76-2-HYZ-1-76-42.D
Sample Name: HYZ-1-76-4

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   3
    Acq. Instrument : 1260                          Location :   63
    Injection Date  : 1/17/2019 8:34:37 PM               Inj :   1
                                                   Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-1-76-2-4 2019-01-17 20-10-23\ID-95-5-2UL-10MIN.M
    Last changed    : 1/17/2019 8:10:23 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\HYZ-1-76-2-4 2019-01-17 20-10-23\ID-95-5-2UL-10MIN.M (Sequence
                      Method)
    Last changed    : 6/10/2019 11:13:48 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



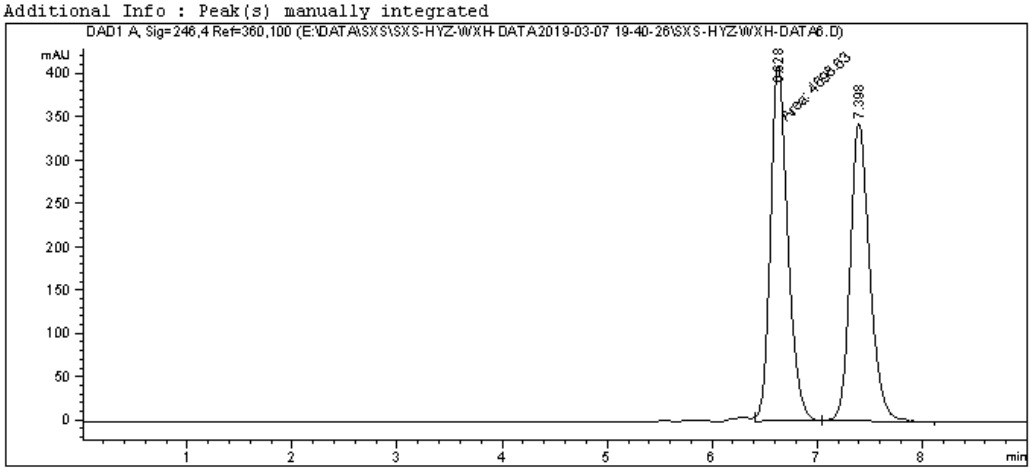

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 B, Sig=290,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.961 BB    0.1946 1815.27893  139.69020  97.8370
       2   7.851 BB    0.1615   40.13247    3.28609   2.1630

    Totals :                  1855.41140  142.97629

    ======================================================================
                            *** End of Report ***
```



(*Rac*)-3b

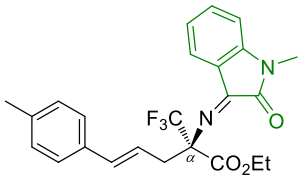
Data File E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\SXS-HYZ-WXH-DATA6.D
Sample Name: WXH-1-36-RAC

```
    ====================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   7
    Acq. Instrument : 1260                           Location :   98
    Injection Date  : 3/7/2019 8:55:59 PM                 Inj :   1
                                                  Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 3/7/2019 9:05:00 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 6/10/2019 11:17:16 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.628 FM    0.1910 4698.62793  410.04541  51.4246
       2   7.398 BB    0.1946 4438.29053  343.76877  48.5754

    Totals :                   9136.91846  753.81418


    ====================================================================
                            *** End of Report ***
```

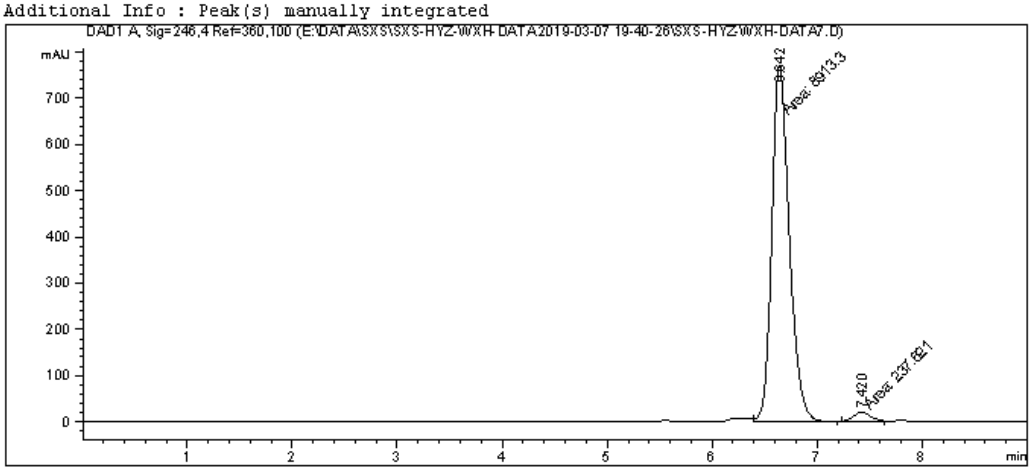
1260 6/10/2019 11:17:19 AM SYSTEM



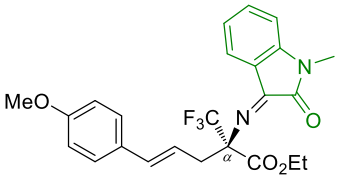
(*R*)-3b

Data File E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\SXS-HYZ-WXH-DATA7.D
Sample Name: WXH-1-37-OPTICAL

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   8
    Acq. Instrument : 1260                           Location :   99
    Injection Date  : 3/7/2019 9:06:29 PM                Inj :   1
                                                 Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 3/7/2019 9:05:00 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 6/10/2019 11:17:16 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



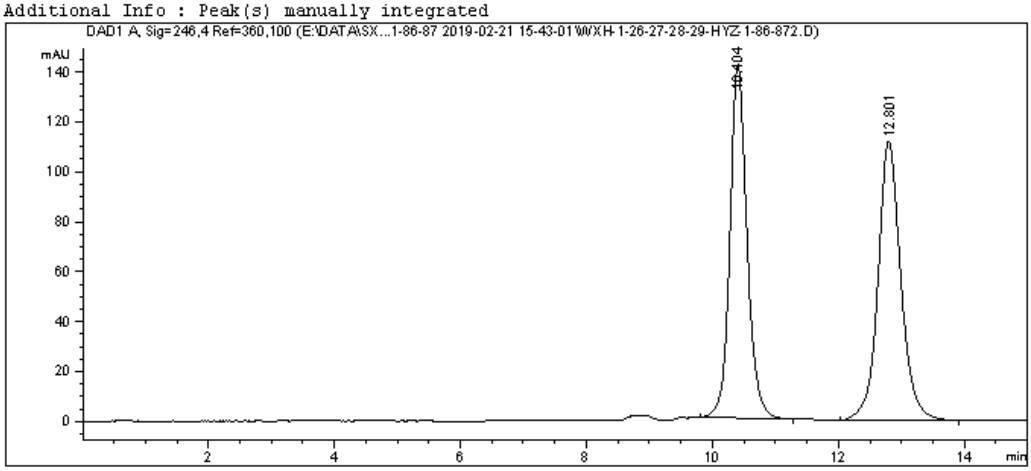

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.642 FM    0.1928 8913.29688  770.32428  97.4033
       2   7.420 MM    0.2006  237.62108   19.74346   2.5967

    Totals :                   9150.91795  790.06774


    ======================================================================
                            *** End of Report ***
```



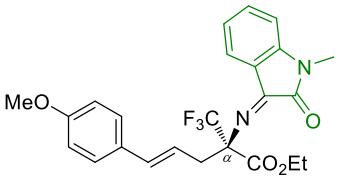
(*Rac*)-3c

Data File E:\DATA\SX...29-HYZ-1-86-87 2019-02-21 15-43-01\WXH-1-26-27-28-29-HYZ-1-86-872.D
Sample Name: WXH-1-28-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   3
    Acq. Instrument : 1260                          Location :   94
    Injection Date  : 2/21/2019 4:07:22 PM               Inj :   1
                                                   Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-26-27-28-29-HYZ-1-86-87 2019-02-21 15-43-01\ID-95-5-2UL-
                      10MIN-246NM.M
    Last changed    : 2/21/2019 4:14:59 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-26-27-28-29-HYZ-1-86-87 2019-02-21 15-43-01\ID-95-5-2UL-
                      10MIN-246NM.M (Sequence Method)
    Last changed    : 6/10/2019 3:03:14 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



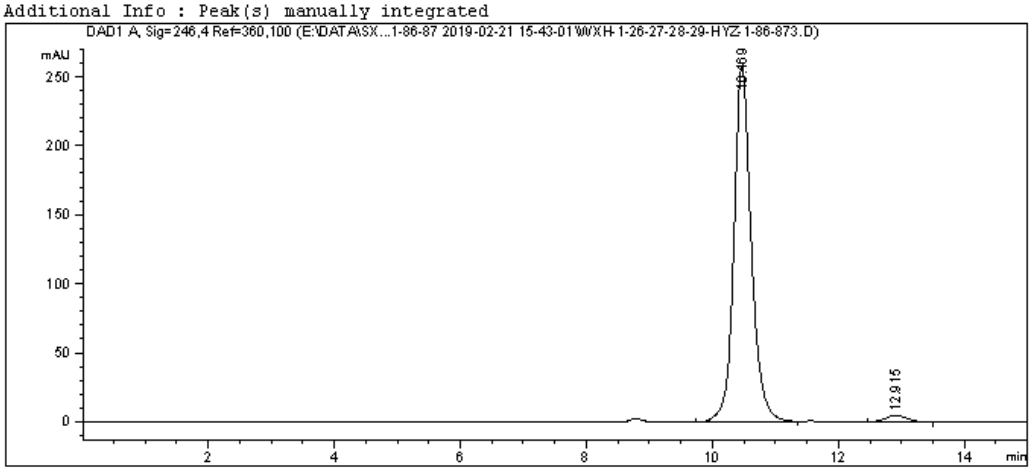

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  10.404 BB    0.2871 2664.42847  141.23149  48.5906
       2  12.801 BB    0.3722 2818.99194  111.78217  51.4094

    Totals :                  5483.42041  253.01366


    ======================================================================
                           *** End of Report ***

1260 6/10/2019 3:03:16 PM SYSTEM                              Page 1 of 1
```



(*R*)-3c

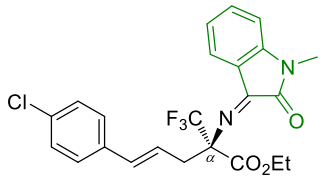
Data File E:\DATA\SX...29-HYZ-1-86-87 2019-02-21 15-43-01\WXH-1-26-27-28-29-HYZ-1-86-873.D
Sample Name: WXH-1-29

```
    ==================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   4
    Acq. Instrument : 1260                           Location :   95
    Injection Date  : 2/21/2019 4:23:47 PM               Inj :   1
                                                  Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-26-27-28-29-HYZ-1-86-87 2019-02-21 15-43-01\ID-95-5-2UL-
                      10MIN-246NM.M
    Last changed    : 2/21/2019 4:14:59 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\WXH-1-26-27-28-29-HYZ-1-86-87 2019-02-21 15-43-01\ID-95-5-2UL-
                      10MIN-246NM.M (Sequence Method)
    Last changed    : 6/10/2019 3:03:14 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  10.469 BB    0.2879 4948.39697  257.88126  97.8166
       2  12.915 BB    0.2873  110.45599    4.64660   2.1834

    Totals :                  5058.85296  262.52786


    ==================================================================
                          *** End of Report ***
```

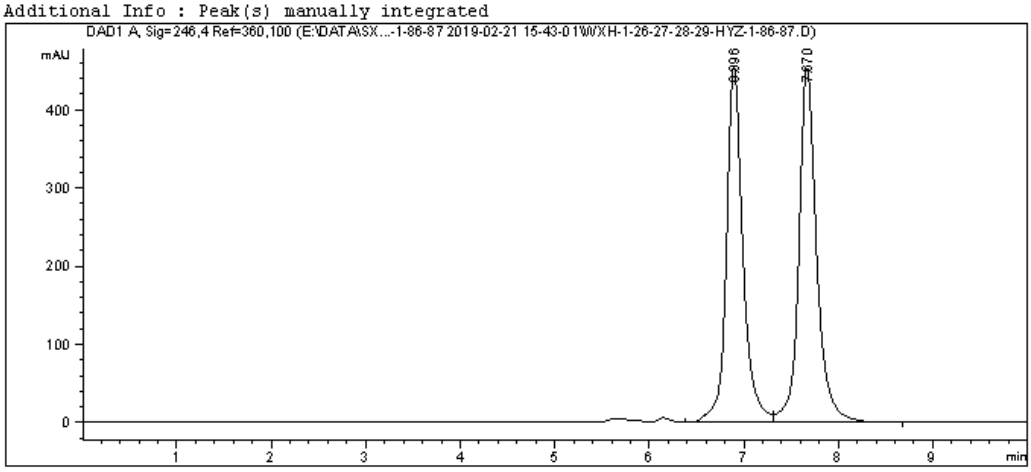
1260 6/10/2019 3:04:23 PM SYSTEM



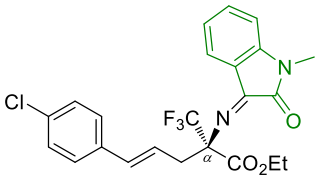
(*Rac*)-3d

Data File E:\DATA\SX...-29-HYZ-1-86-87 2019-02-21 15-43-01\WXH-1-26-27-28-29-HYZ-1-86-87.D
Sample Name: WXH-1-26-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   1
    Acq. Instrument : 1260                          Location :   92
    Injection Date  : 2/21/2019 3:44:31 PM               Inj :   1
                                                  Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-26-27-28-29-HYZ-1-86-87 2019-02-21 15-43-01\ID-95-5-2UL-
                      10MIN-246NM.M
    Last changed    : 2/21/2019 3:43:01 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\WXH-1-26-27-28-29-HYZ-1-86-87 2019-02-21 15-43-01\ID-95-5-2UL-
                      10MIN-246NM.M (Sequence Method)
    Last changed    : 6/10/2019 3:10:30 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



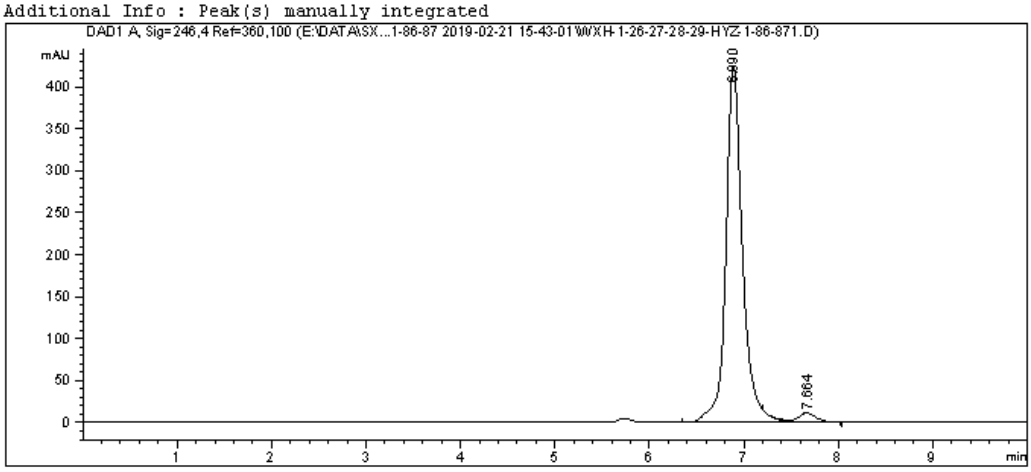

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.896 BV    0.1804 5526.26953  455.90915  48.2099
       2   7.670 VB    0.1939 5936.67139  453.07962  51.7901

    Totals :                   1.14629e4   908.98877


    ======================================================================
                           *** End of Report ***
```



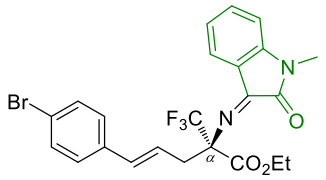
(*R*)-3d

Data File E:\DATA\SX...29-HYZ-1-86-87 2019-02-21 15-43-01\WXH-1-26-27-28-29-HYZ-1-86-871.D
Sample Name: WXH-1-27

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   2
    Acq. Instrument : 1260                          Location :   93
    Injection Date  : 2/21/2019 3:56:01 PM               Inj :   1
                                                 Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-26-27-28-29-HYZ-1-86-87 2019-02-21 15-43-01\ID-95-5-2UL-
                      10MIN-246NM.M
    Last changed    : 2/21/2019 3:43:01 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\WXH-1-26-27-28-29-HYZ-1-86-87 2019-02-21 15-43-01\ID-95-5-2UL-
                      10MIN-246NM.M (Sequence Method)
    Last changed    : 6/10/2019 3:10:30 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



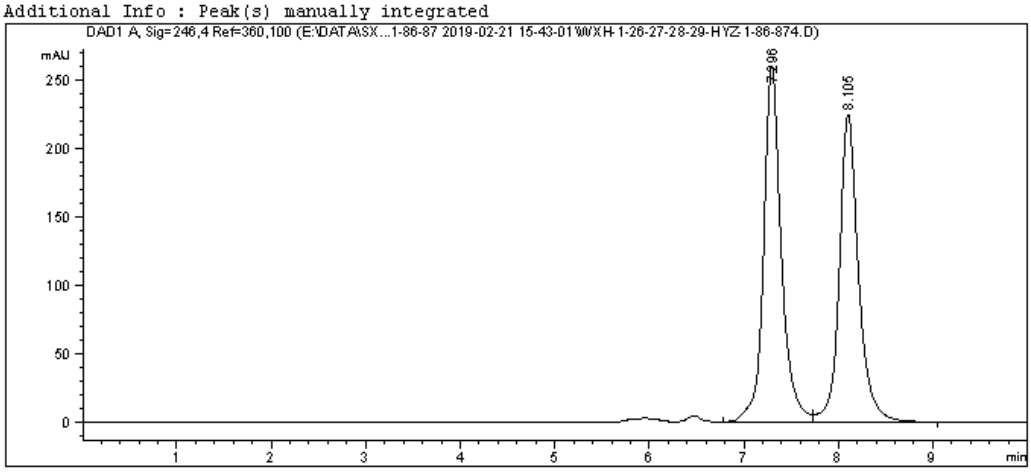

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.890 BV R  0.1811 5175.88965  424.87024  97.2750
       2   7.664 VB E  0.1933  144.99506   10.75722   2.7250

    Totals :                  5320.88470  435.62746


    ======================================================================
                            *** End of Report ***
```



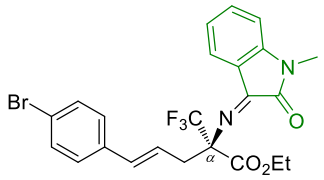
(*Rac*)-3e

Data File E:\DATA\SX...29-HYZ-1-86-87 2019-02-21 15-43-01\WXH-1-26-27-28-29-HYZ-1-86-874.D
Sample Name: HYZ-1-87-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                       Seq. Line :   5
    Acq. Instrument : 1260                         Location :   96
    Injection Date  : 2/21/2019 4:40:14 PM              Inj :   1
                                                  Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-26-27-28-29-HYZ-1-86-87 2019-02-21 15-43-01\ID-95-5-2UL-
                      10MIN-246NM.M
    Last changed    : 2/21/2019 4:48:25 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-26-27-28-29-HYZ-1-86-87 2019-02-21 15-43-01\ID-95-5-2UL-
                      10MIN-246NM.M (Sequence Method)
    Last changed    : 6/10/2019 3:16:45 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



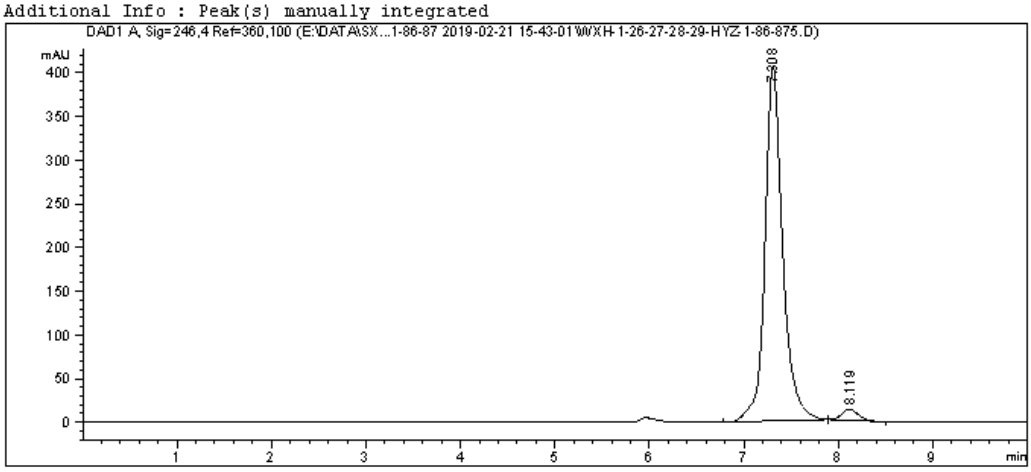

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   7.296 BV    0.1936 3399.89331  259.92700  51.6246
       2   8.105 VB    0.2103 3185.90552  224.88237  48.3754

    Totals :                   6585.79883  484.80937


    ======================================================================
                           *** End of Report ***
```



(*R*)-3e

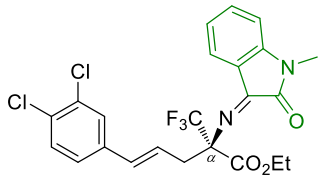
Data File E:\DATA\SX...29-HYZ-1-86-87 2019-02-21 15-43-01\WXH-1-26-27-28-29-HYZ-1-86-875.D
Sample Name: HYZ-1-86

```
    ==================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   6
    Acq. Instrument : 1260                           Location :   97
    Injection Date  : 2/21/2019 4:51:36 PM               Inj :   1
                                                   Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-26-27-28-29-HYZ-1-86-87 2019-02-21 15-43-01\ID-95-5-2UL-
                      10MIN-246NM.M
    Last changed    : 2/21/2019 4:48:25 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\WXH-1-26-27-28-29-HYZ-1-86-87 2019-02-21 15-43-01\ID-95-5-2UL-
                      10MIN-246NM.M (Sequence Method)
    Last changed    : 6/10/2019 3:16:45 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   7.308 BB    0.1951 5296.31787  406.24579  97.2235
       2   8.119 BB    0.1863  151.25160   12.39908   2.7765

    Totals :                   5447.56947  418.64487


    ==================================================================
                          *** End of Report ***
```

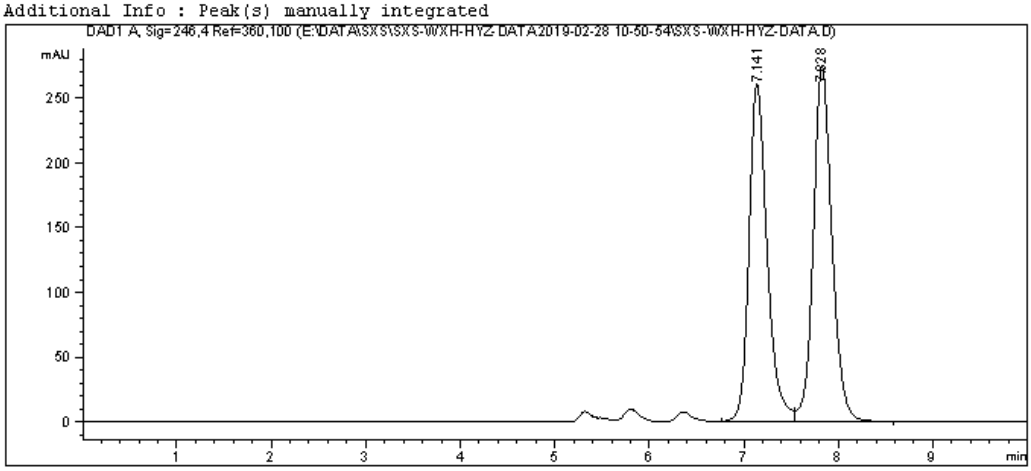
1260 6/10/2019 3:17:34 PM SYSTEM



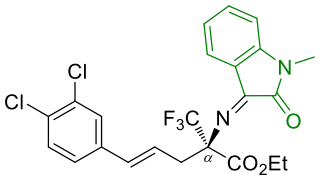
(*Rac*)-3f

Data File E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\SXS-WXH-HYZ-DATA.D
Sample Name: HYZ-1-93-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   1
    Acq. Instrument : 1260                           Location :   99
    Injection Date  : 2/28/2019 10:52:34 AM              Inj :   1
                                                  Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 2/28/2019 10:50:55 AM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 6/10/2019 3:12:45 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



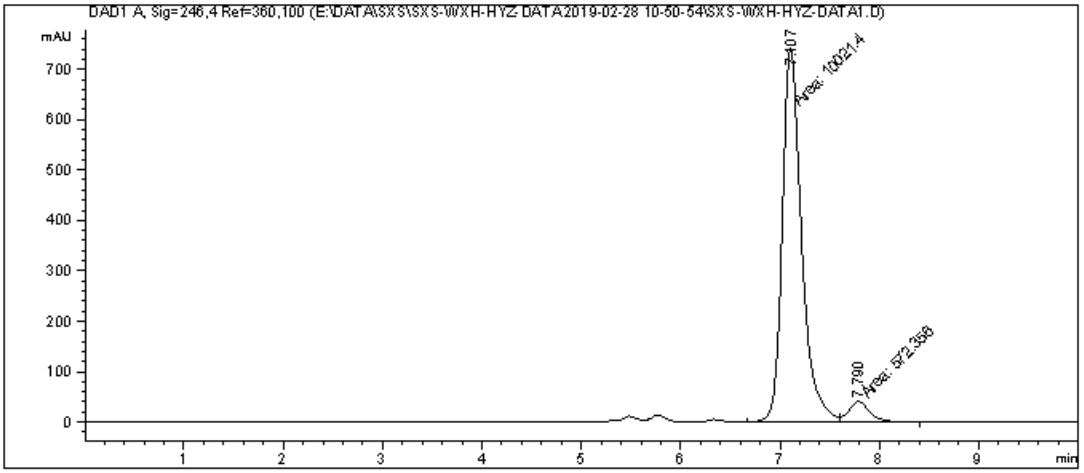

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   7.141 BV    0.2015 3467.88086  260.15796  48.0477
       2   7.828 VB    0.2063 3749.70264  274.63828  51.9523

    Totals :                   7217.58350  534.79623


    ======================================================================
                               *** End of Report ***
```



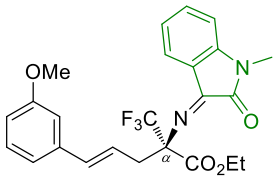
(*R*)-3f

Data File E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\SXS-WXH-HYZ-DATA1.D
Sample Name: HYZ-1-92-OPTICAL

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                             Location :   98
    Injection Date  : 2/28/2019 11:03:56 AM                 Inj :   1
                                                    Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 2/28/2019 10:50:55 AM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 7/23/2020 7:29:50 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



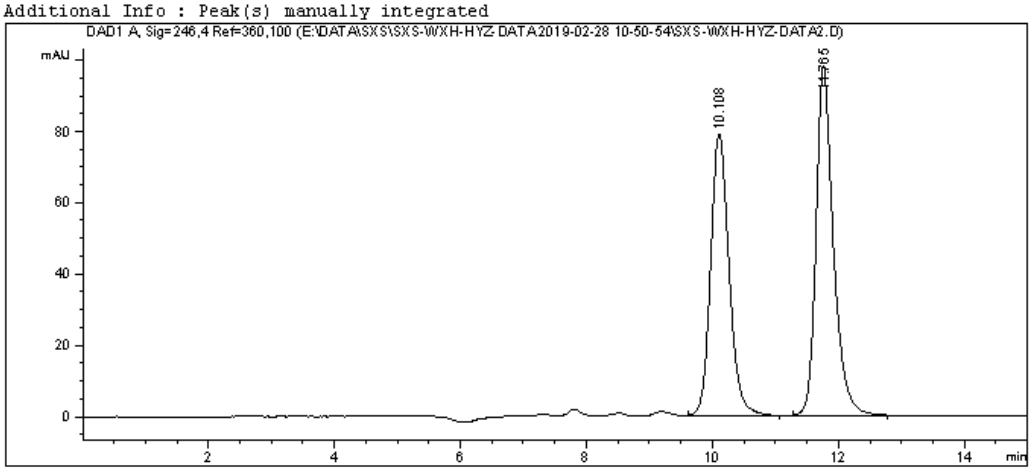

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   7.107 MF    0.2251 1.00214e4   741.88147  94.5973
       2   7.790 FM    0.2372  572.35626   40.22356   5.4027

    Totals :                   1.05938e4   782.10503

    ======================================================================
                            *** End of Report ***
```



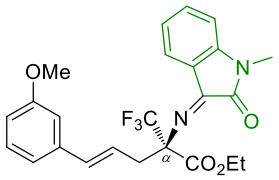
(*Rac*)-3g

Data File E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\SXS-WXH-HYZ-DATA2.D
Sample Name: HYZ-1-91-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   3
    Acq. Instrument : 1260                           Location :   88
    Injection Date  : 2/28/2019 11:15:16 AM              Inj :   1
                                                   Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 2/28/2019 11:24:50 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 6/10/2019 3:06:32 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



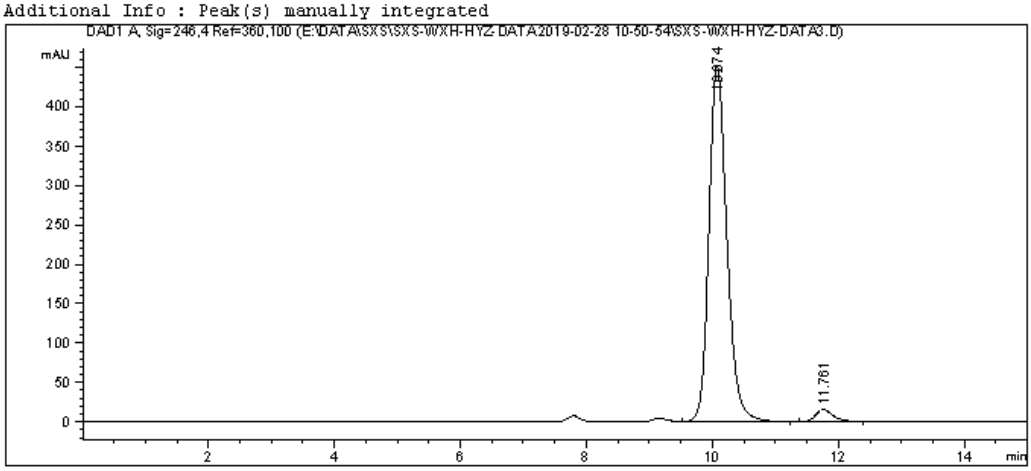

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  10.108 BB    0.3035 1596.68396   78.78055  46.1271
       2  11.765 BB    0.2793 1864.80676   97.85699  53.8729

    Totals :                  3461.49072  176.63754


    ======================================================================
                            *** End of Report ***
```



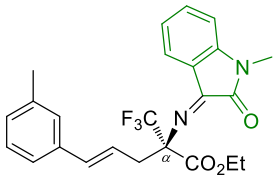
(*R*)-3g

Data File E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\SXS-WXH-HYZ-DATA3.D
Sample Name: HYZ-1-90-OPTICAL

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   4
    Acq. Instrument : 1260                           Location :   87
    Injection Date  : 2/28/2019 11:31:39 AM              Inj :   1
                                                  Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 2/28/2019 11:24:50 AM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 6/10/2019 3:06:32 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



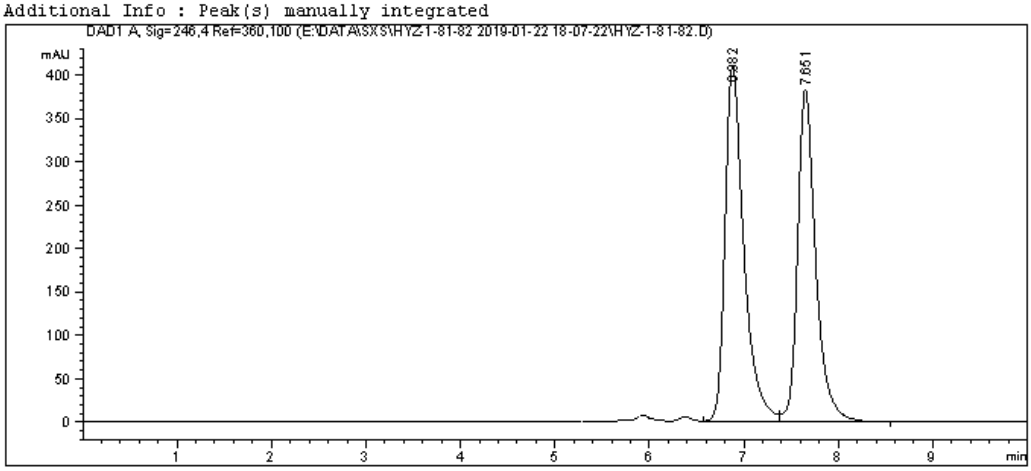

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  10.074 BB    0.3027 8924.87109  451.36310  96.8467
       2  11.761 BB    0.2466  290.58960   15.72202   3.1533

    Totals :                  9215.46069  467.08511


    ======================================================================
                            *** End of Report ***
```



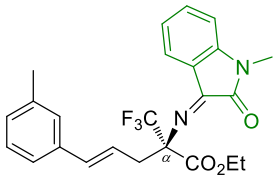
(*Rac*)-3h

Data File E:\DATA\SXS\HYZ-1-81-82 2019-01-22 18-07-22\HYZ-1-81-82.D
Sample Name: HYZ-1-81-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   1
    Acq. Instrument : 1260                           Location :   61
    Injection Date  : 1/22/2019 6:08:47 PM               Inj :   1
                                                 Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-1-81-82 2019-01-22 18-07-22\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 1/22/2019 6:07:23 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\HYZ-1-81-82 2019-01-22 18-07-22\ID-95-5-2UL-10MIN-246NM.M (
                      Sequence Method)
    Last changed    : 6/10/2019 11:21:21 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



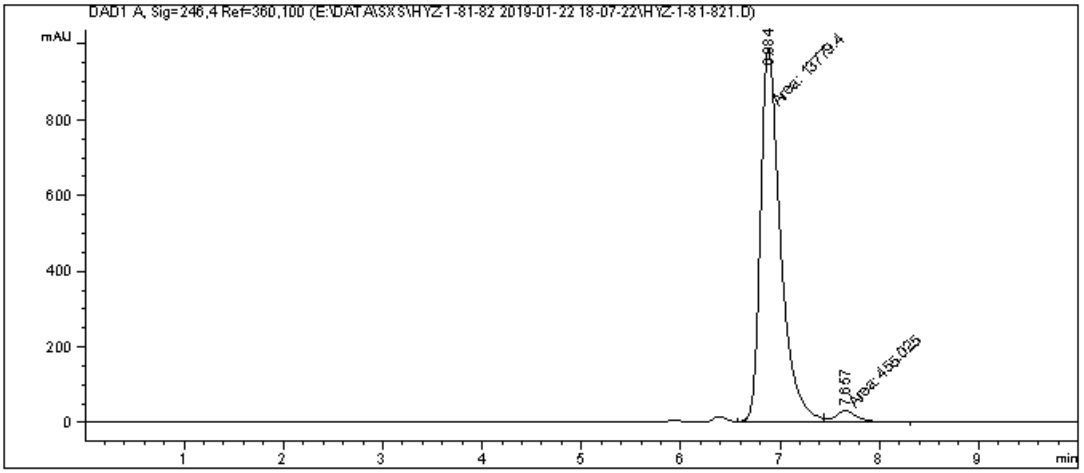

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.882 VV    0.2072 5667.21582  410.24457  52.5967
       2   7.651 VB    0.2008 5107.63477  382.52240  47.4033

    Totals :                   1.07749e4   792.76697


    ======================================================================
                               *** End of Report ***
```



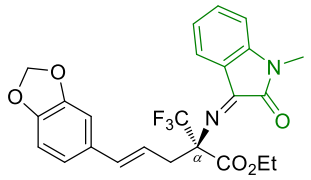
(*R*)-3h

Data File E:\DATA\SXS\HYZ-1-81-82 2019-01-22 18-07-22\HYZ-1-81-821.D
Sample Name: HYZ-1-82

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                              Location :   62
    Injection Date  : 1/22/2019 6:20:11 PM                  Inj :   1
                                                    Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-1-81-82 2019-01-22 18-07-22\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 1/22/2019 6:07:23 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\HYZ-1-81-82 2019-01-22 18-07-22\ID-95-5-2UL-10MIN-246NM.M (
                      Sequence Method)
    Last changed    : 7/23/2020 7:26:49 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



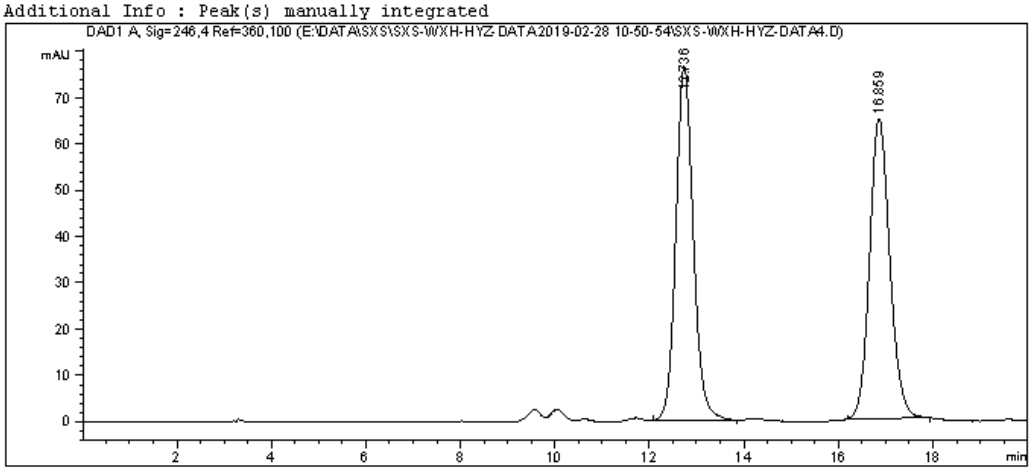

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.884 MF    0.2326 1.37794e4   987.38055  96.8033
       2   7.657 FM    0.2499  455.02499   30.34300   3.1967

    Totals :                  1.42344e4  1017.72355


    ======================================================================
                            *** End of Report ***
```



(*Rac*)-3i

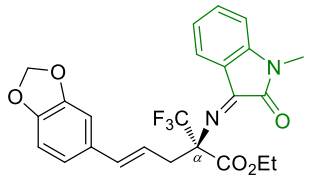
Data File E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\SXS-WXH-HYZ-DATA4.D
Sample Name: WXH-1-33-RAC

```
    ==================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   5
    Acq. Instrument : 1260                           Location :   62
    Injection Date  : 2/28/2019 11:48:05 AM              Inj :   1
                                                  Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 2/28/2019 12:04:02 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 6/10/2019 3:06:32 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  12.736 BB    0.3761 1954.90601   76.51831  50.3728
       2  16.859 BB    0.4172 1925.96765   64.90964  49.6272

    Totals :                  3880.87366  141.42795


    ==================================================================
                          *** End of Report ***
```

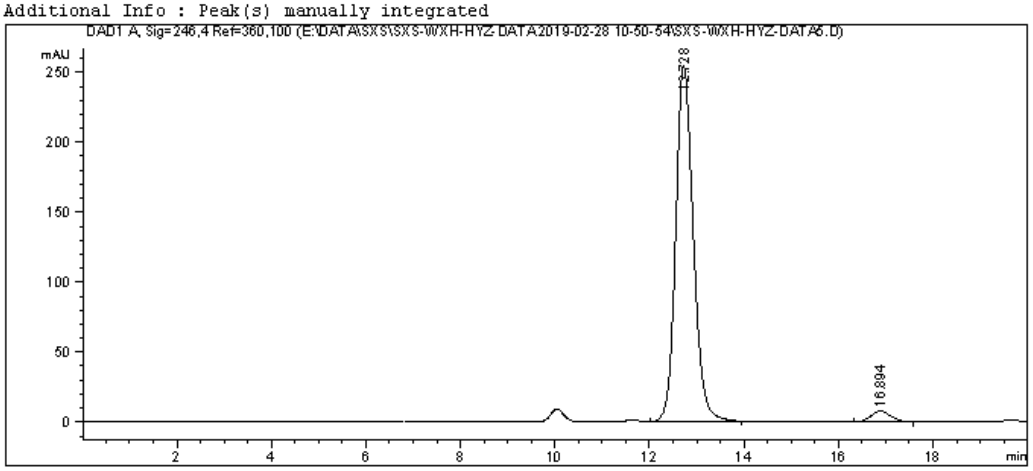
1260 6/10/2019 3:08:36 PM SYSTEM



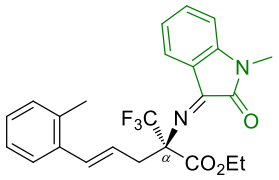
(*R*)-3i

Data File E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\SXS-WXH-HYZ-DATA5.D
Sample Name: WXH-1-34-OPTICAL

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   6
    Acq. Instrument : 1260                           Location :   63
    Injection Date  : 2/28/2019 12:09:33 PM             Inj :   1
                                                  Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 2/28/2019 12:04:02 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 6/10/2019 3:06:32 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



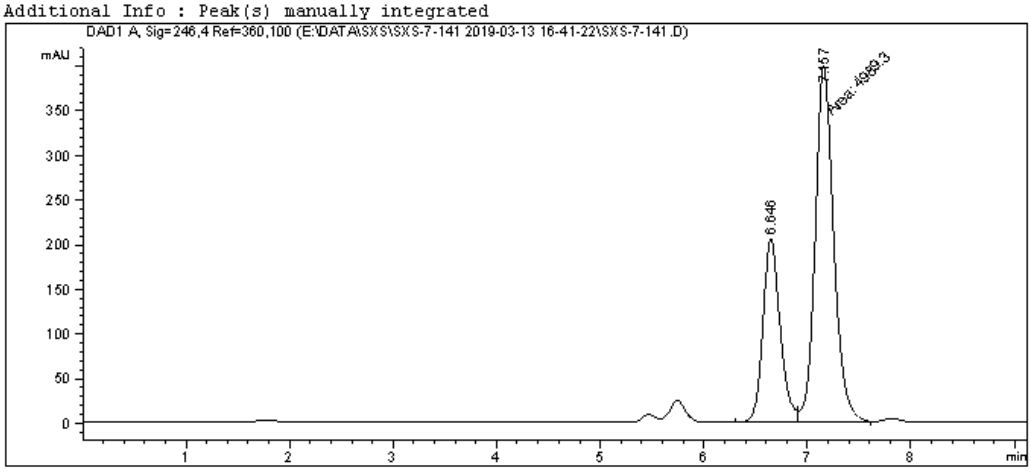

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  12.728 BB    0.3916 6553.11670  254.36826  96.7753
       2  16.894 BB    0.3414  218.36043    7.59565   3.2247

    Totals :                  6771.47713  261.96391


    ======================================================================
                           *** End of Report ***
```



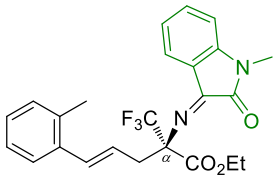
(*Rac*)-3j

Data File E:\DATA\SXS\SXS-7-141 2019-03-13 16-41-22\SXS-7-141.D
Sample Name: HYZ-1-105-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   1
    Acq. Instrument : 1260                           Location :   93
    Injection Date  : 3/13/2019 4:42:43 PM               Inj :   1
                                                  Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-7-141 2019-03-13 16-41-22\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 3/13/2019 4:51:51 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-7-141 2019-03-13 16-41-22\ID-95-5-2UL-10MIN-246NM.M (
                      Sequence Method)
    Last changed    : 6/10/2019 2:59:05 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



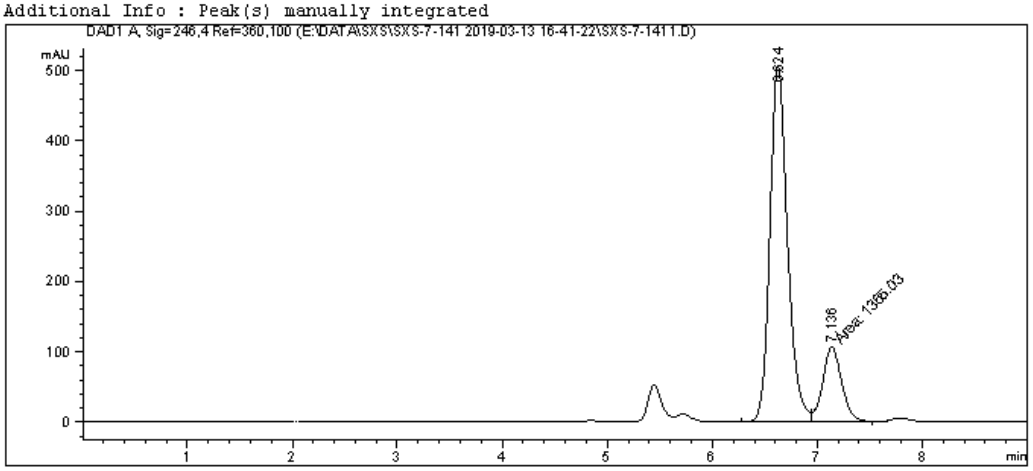

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.646 BV    0.1748 2380.62061  206.04167  32.3019
       2   7.157 MF    0.2079 4989.29590  399.88989  67.6981

    Totals :                   7369.91650  605.93156


    ======================================================================
                           *** End of Report ***
```



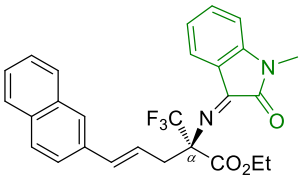
(*R*)-3j

Data File E:\DATA\SXS\SXS-7-141 2019-03-13 16-41-22\SXS-7-141l.D
Sample Name: SXS-7-141-OPTICAL

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   2
    Acq. Instrument : 1260                           Location :   94
    Injection Date  : 3/13/2019 4:53:14 PM               Inj :   1
                                                  Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-7-141 2019-03-13 16-41-22\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 3/13/2019 4:51:51 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-7-141 2019-03-13 16-41-22\ID-95-5-2UL-10MIN-246NM.M (
                      Sequence Method)
    Last changed    : 6/10/2019 2:59:05 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



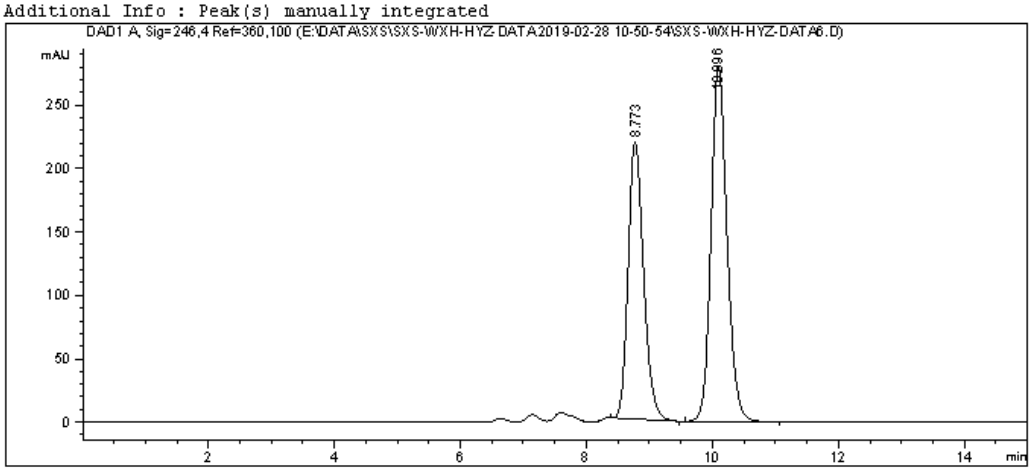

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.624 BV    0.1769 5914.72314  507.58609  81.2489
       2   7.136 MF    0.2114 1365.03442  107.62630  18.7511

    Totals :                   7279.75757  615.21239


    ======================================================================
                            *** End of Report ***
```



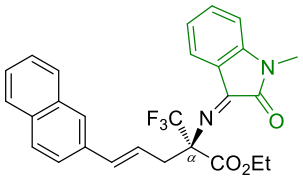
(*Rac*)-3k

Data File E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\SXS-WXH-HYZ-DATA6.D
Sample Name: WXH-1-30-RAC

```
    ====================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   7
    Acq. Instrument : 1260                           Location :   92
    Injection Date  : 2/28/2019 12:30:51 PM              Inj :   1
                                                   Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 2/28/2019 12:44:00 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 6/10/2019 3:18:52 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



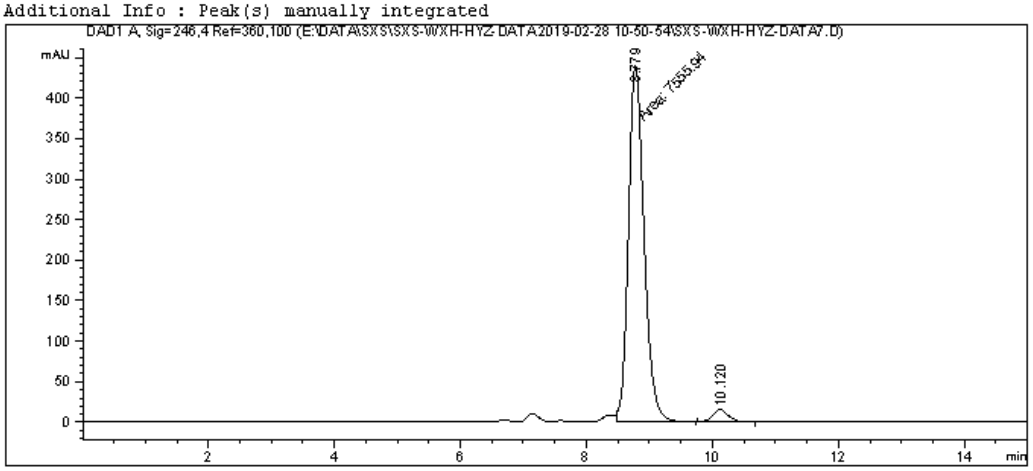

```
    ====================================================================
                            Area Percent Report
    ====================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   8.773 BB    0.2606 3720.31616  218.55667  42.8843
       2  10.096 BB    0.2690 4954.91895  280.65497  57.1157

    Totals :                  8675.23511  499.21164


    ====================================================================
                            *** End of Report ***
```



(*R*)-3k

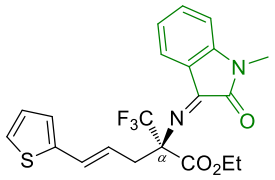
Data File E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\SXS-WXH-HYZ-DATA7.D
Sample Name: WXH-1-31-OPTICAL

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   8
    Acq. Instrument : 1260                              Location :   93
    Injection Date  : 2/28/2019 12:47:15 PM                 Inj :   1
                                                    Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 2/28/2019 12:44:00 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-WXH-HYZ-DATA 2019-02-28 10-50-54\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 6/10/2019 3:18:52 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   8.779 FM    0.2866 7555.93945  439.41483  96.7045
       2  10.120 BB    0.2418  257.49146   14.80967   3.2955

    Totals :                  7813.43091  454.22449


    ======================================================================
                            *** End of Report ***
```

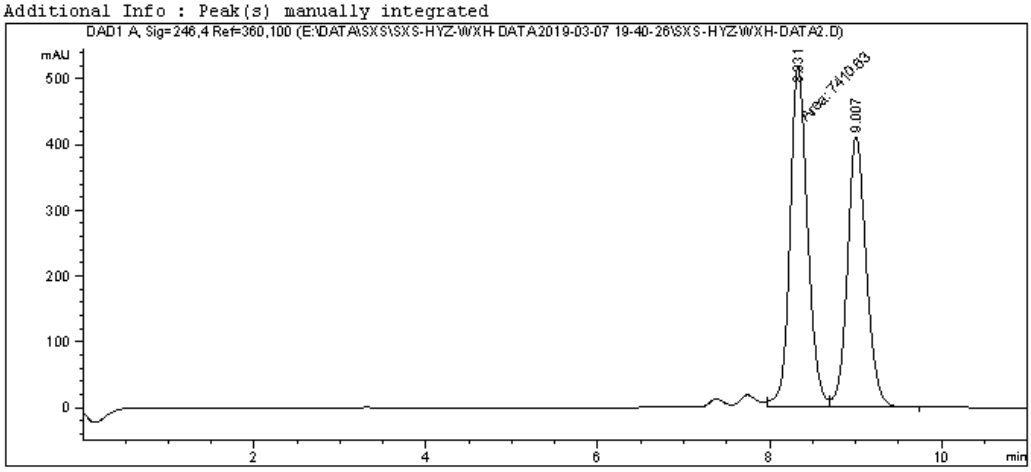
1260 6/10/2019 3:19:58 PM SYSTEM



(*Rac*)-3l

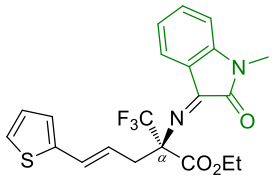
Data File E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\SXS-HYZ-WXH-DATA2.D
Sample Name: HYZ-1-96-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                       Seq. Line :   3
    Acq. Instrument : 1260                          Location :   94
    Injection Date  : 3/7/2019 8:04:06 PM               Inj :   1
                                                  Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 3/7/2019 8:14:40 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 6/10/2019 3:21:20 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   8.331 FM    0.2378 7410.62891  519.43036  53.9934
       2   9.007 VB    0.2358 6314.44287  411.94699  46.0066

    Totals :                   1.3725le4   931.37735


    ======================================================================
                            *** End of Report ***
```

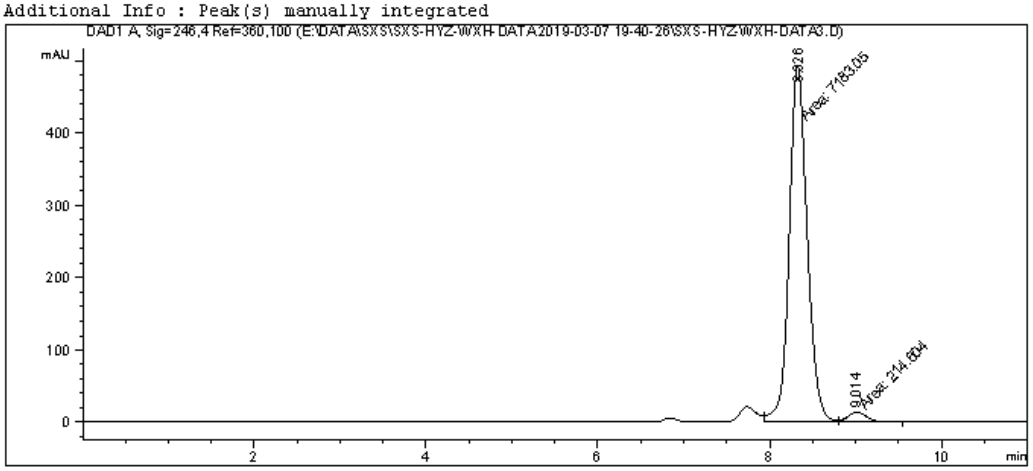
1260 6/10/2019 3:23:22 PM SYSTEM



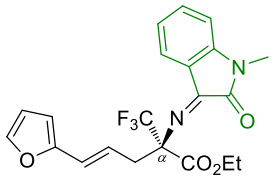
(*R*)-3l

Data File E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\SXS-HYZ-WXH-DATA3.D
Sample Name: HYZ-1-95-OPTICAL

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   4
    Acq. Instrument : 1260                           Location :   95
    Injection Date  : 3/7/2019 8:16:32 PM                Inj :   1
                                                 Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 3/7/2019 8:14:40 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 6/10/2019 3:21:20 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



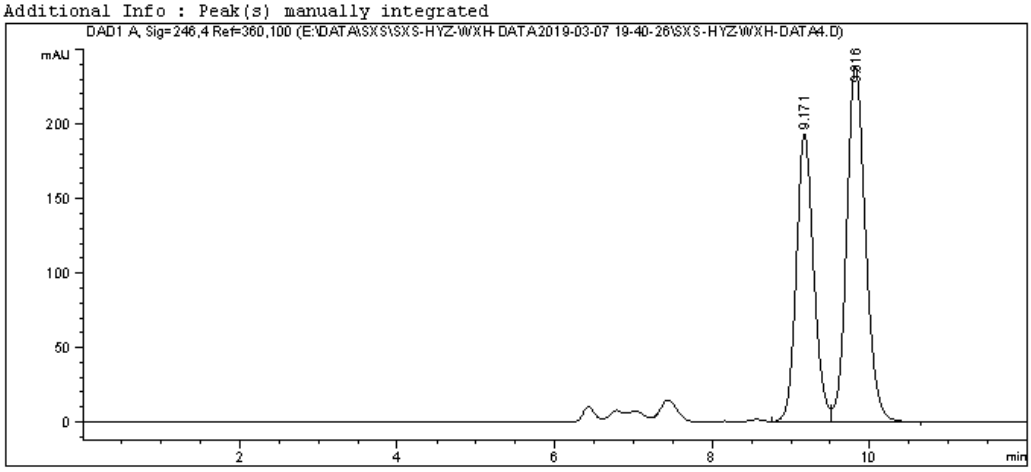

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   8.326 MF    0.2425 7183.05420  493.71936  97.0990
       2   9.014 FM    0.2570  214.60448   13.91687   2.9010

    Totals :                   7397.65868  507.63623


    ======================================================================
                            *** End of Report ***
```



(*Rac*)-3m

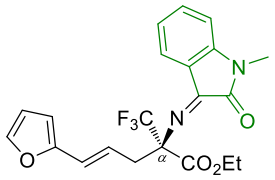
Data File E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\SXS-HYZ-WXH-DATA4.D
Sample Name: HYZ-1-100-RAC

```
    ====================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   5
    Acq. Instrument : 1260                           Location :   96
    Injection Date  : 3/7/2019 8:29:04 PM                Inj :   1
                                                 Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 3/7/2019 8:41:05 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 6/10/2019 3:21:20 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   9.171 BV    0.2328 2950.79272  192.59013  42.6344
       2   9.816 VB    0.2540 3970.36499  238.74599  57.3656

    Totals :                   6921.15771  431.33612


    ====================================================================
                            *** End of Report ***
```

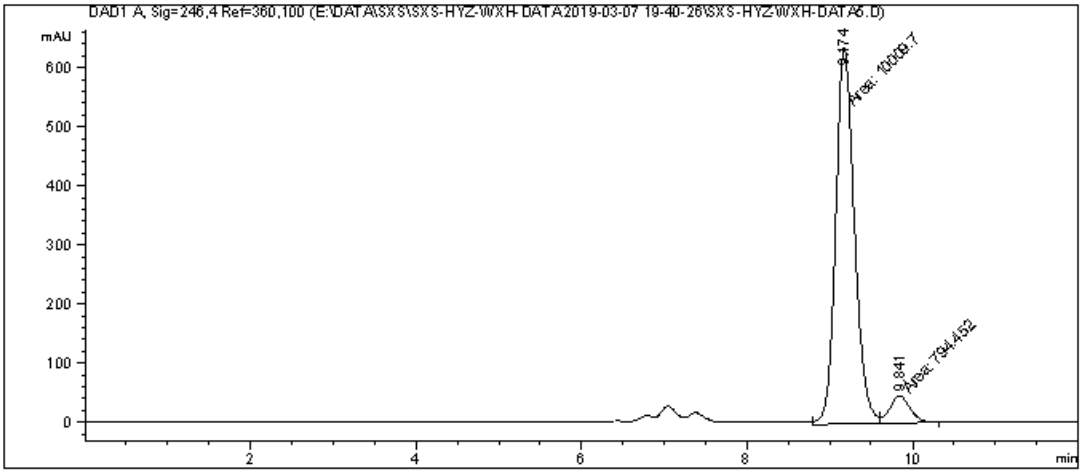
1260 6/10/2019 3:21:23 PM SYSTEM



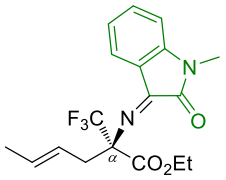
(*R*)-3m

Data File E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\SXS-HYZ-WXH-DATA5.D
Sample Name: HYZ-1-99-OPTICAL

```
    ==================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   6
    Acq. Instrument : 1260                             Location :   97
    Injection Date  : 3/7/2019 8:42:29 PM                   Inj :   1
                                                    Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 3/7/2019 8:41:05 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-HYZ-WXH-DATA 2019-03-07 19-40-26\ID-95-5-2UL-10MIN-246NM.M
                      (Sequence Method)
    Last changed    : 7/23/2020 7:23:18 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



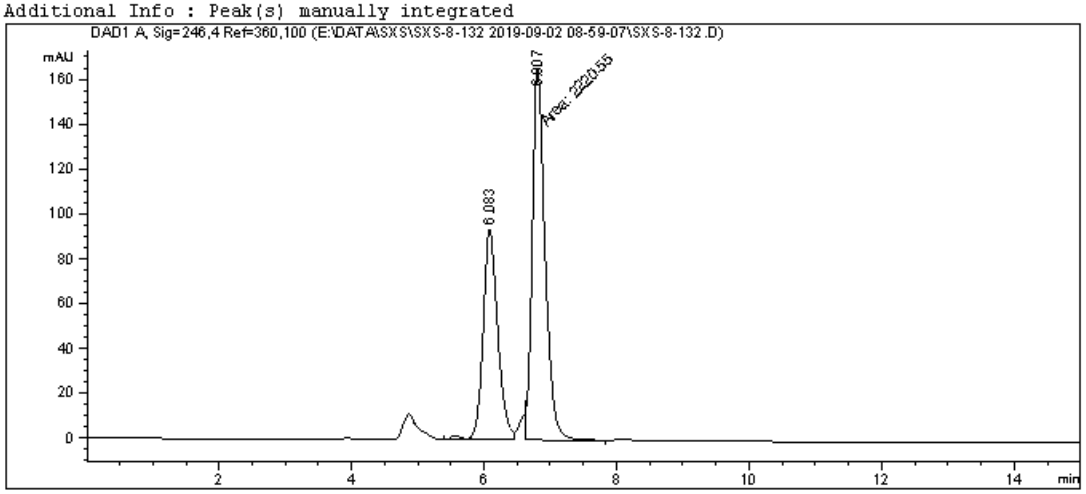

```
    ==================================================================
                          Area Percent Report
    ==================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   9.174 MF    0.2622 1.00097e4   636.30359  92.6468
       2   9.841 FM    0.2858  794.45215   46.32913   7.3532

    Totals :                   1.08042e4   682.63272


    ==================================================================
                          *** End of Report ***
```



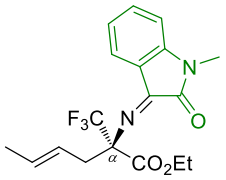
(*Rac*)-3n

Data File E:\DATA\SXS\SXS-8-132 2019-09-02 08-59-07\SXS-8-132.D
Sample Name: SXS-8-140-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   94
    Injection Date  : 9/2/2019 9:00:33 AM                  Inj :   1
                                                     Inj Volume : 1.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-132 2019-09-02 08-59-07\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 9/2/2019 8:59:50 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-8-132 2019-09-02 08-59-07\ID-95-5-2UL-10MIN-246NM.M (
                      Sequence Method)
    Last changed    : 5/1/2020 8:37:08 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



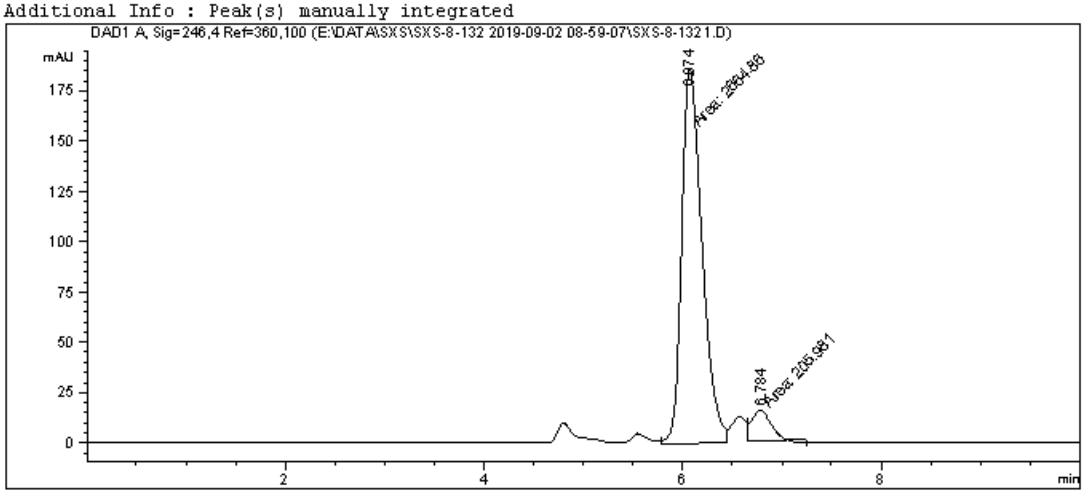

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.083 VV R  0.2266 1440.52869   94.10809  39.3472
       2   6.807 FM    0.2231 2220.54590  165.88333  60.6528

    Totals :                   3661.07458  259.99142


    ======================================================================
                            *** End of Report ***
```



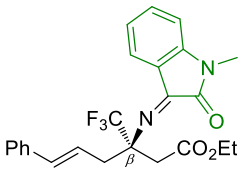
(*R*)-3n

Data File E:\DATA\SXS\SXS-8-132 2019-09-02 08-59-07\SXS-8-132l.D
Sample Name: SXS-8-132-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                            Location :   95
    Injection Date  : 9/2/2019 9:16:50 AM                 Inj :   1
                                                    Inj Volume : 1.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-132 2019-09-02 08-59-07\ID-95-5-2UL-10MIN-246NM.M
    Last changed    : 9/2/2019 9:24:50 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-8-132 2019-09-02 08-59-07\ID-95-5-2UL-10MIN-246NM.M (
                      Sequence Method)
    Last changed    : 5/4/2020 4:23:33 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



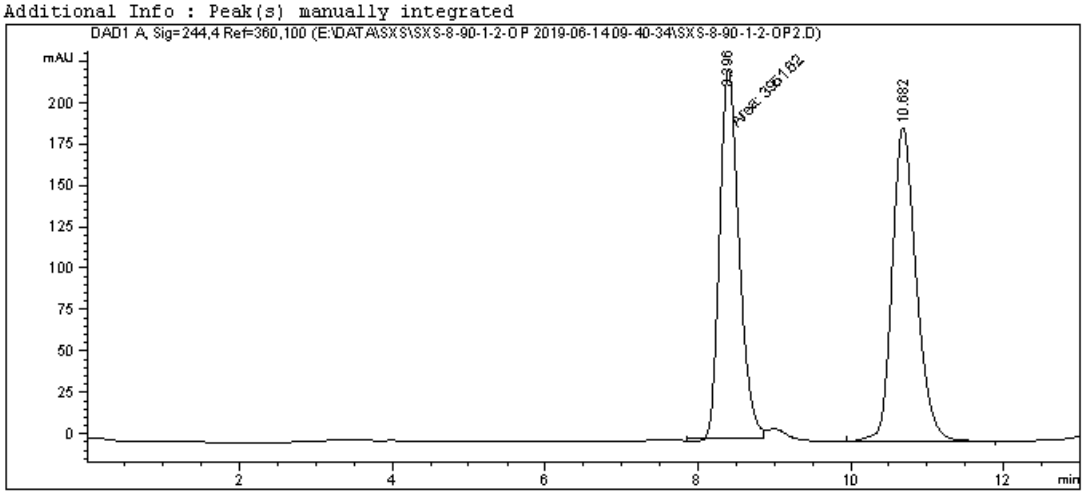

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=246,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.074 MF    0.2381 2664.85962  186.51056  92.8251
       2   6.784 FM    0.2213  205.98106   15.51311   7.1749

    Totals :                   2870.84068  202.02367


    ======================================================================
                            *** End of Report ***
```



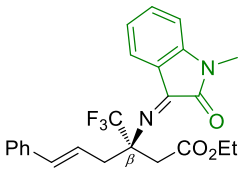
(*Rac*)-4a

Data File E:\DATA\SXS\SXS-8-90-1-2-OP 2019-06-14 09-40-34\SXS-8-90-1-2-OP2.D
Sample Name: SXS-8-79-2-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   3
    Acq. Instrument : 1260                              Location :   94
    Injection Date  : 6/14/2019 10:20:55 AM                 Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-90-1-2-OP 2019-06-14 09-40-34\IDH-95-5-244NM-15MIN-3UL-1.
                      OML.M
    Last changed    : 6/14/2019 10:32:31 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-8-90-1-2-OP 2019-06-14 09-40-34\IDH-95-5-244NM-15MIN-3UL-1.
                      OML.M (Sequence Method)
    Last changed    : 4/30/2020 8:28:52 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



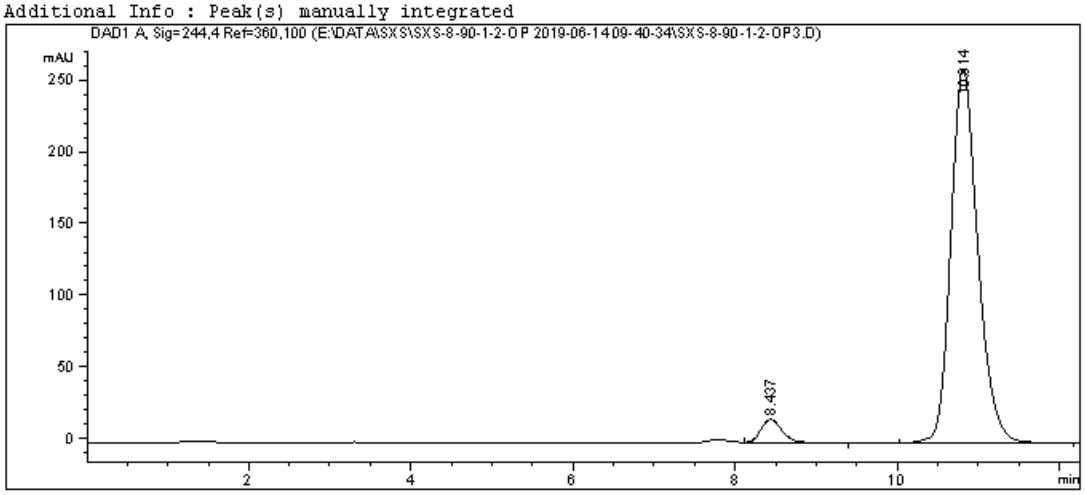

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   8.396 MF    0.2946 3951.61890  223.58913  48.7994
       2  10.682 BB    0.3356 4146.05713  189.21996  51.2006

    Totals :                  8097.67603  412.80908


    ======================================================================
                              *** End of Report ***
```



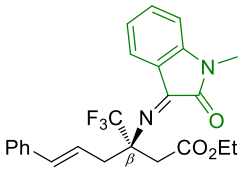
(*R*)-4a

Data File E:\DATA\SXS\SXS-8-90-1-2-OP 2019-06-14 09-40-34\SXS-8-90-1-2-OP3.D
Sample Name: SXS-8-90-2-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   4
    Acq. Instrument : 1260                            Location :   95
    Injection Date  : 6/14/2019 10:35:29 AM               Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-90-1-2-OP 2019-06-14 09-40-34\IDH-95-5-244NM-15MIN-3UL-1.
                      OML.M
    Last changed    : 6/14/2019 10:47:44 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-8-90-1-2-OP 2019-06-14 09-40-34\IDH-95-5-244NM-15MIN-3UL-1.
                      OML.M (Sequence Method)
    Last changed    : 4/30/2020 8:29:11 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



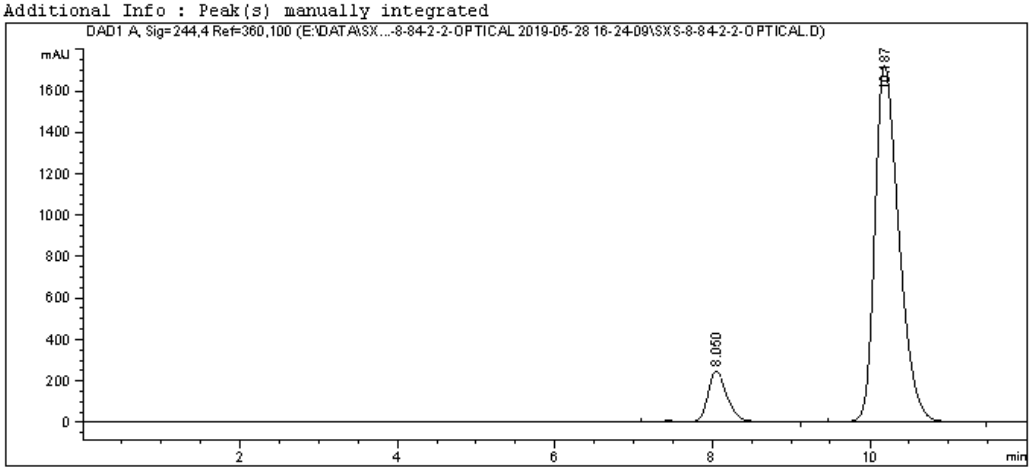

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   8.437 BB    0.2812  300.07535   16.42327   4.7236
       2  10.814 BB    0.3534 6052.56787  261.10449  95.2764

    Totals :                  6352.64322  277.52776


    ======================================================================
                              *** End of Report ***
```



(*R*)-**4a** in Scheme S1a

Data File E:\DATA\SXS\SXS-8-84-2-2-OPTICAL 2019-05-28 16-24-09\SXS-8-84-2-2-OPTICAL.D
Sample Name: SXS-8-84-2-2-OPTICAL

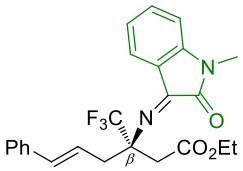
```
    ========================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   1
    Acq. Instrument : 1260                           Location :   92
    Injection Date  : 5/28/2019 4:25:39 PM               Inj :   1
                                                   Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-84-2-2-OPTICAL 2019-05-28 16-24-09\IDH-95-5-244NM-15MIN-
                      3UL-1.0ML.M
    Last changed    : 5/28/2019 4:36:53 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-8-84-2-2-OPTICAL 2019-05-28 16-24-09\IDH-95-5-244NM-15MIN-
                      3UL-1.0ML.M (Sequence Method)
    Last changed    : 9/15/2020 9:55:46 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   8.050 VB R  0.2551 4291.62012  248.43687  10.4996
       2  10.187 BB    0.3258 3.65825e4  1722.53345  89.5004

    Totals :                  4.0874le4  1970.97032

    ========================================================================
                            *** End of Report ***
```

1260 9/15/2020 9:55:49 AM SYSTEM

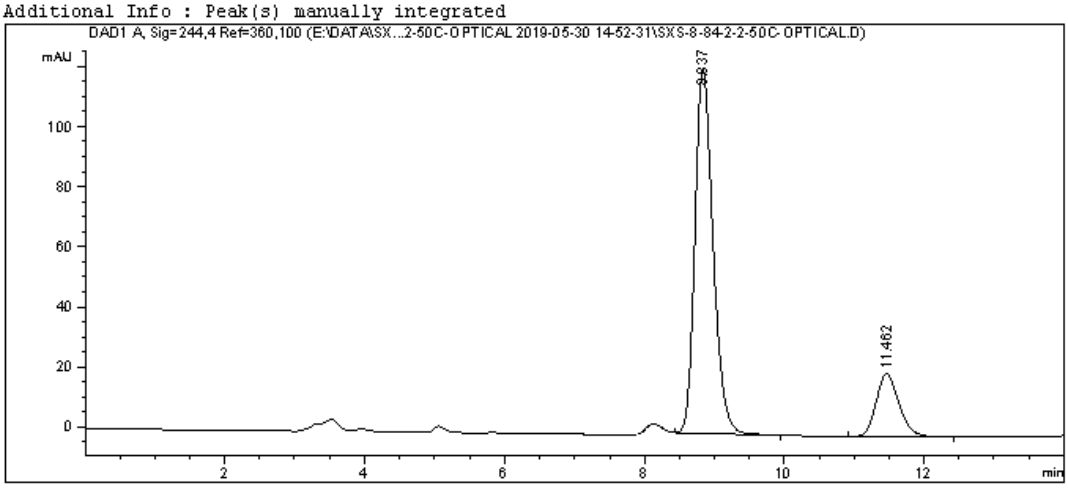
Page 1 of 1



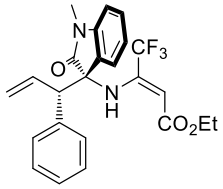
(*S*)-**4a** in Scheme S1b

Data File E:\DATA\SX...8-84-2-2-50C-OPTICAL 2019-05-30 14-52-31\SXS-8-84-2-2-50C-OPTICAL.D
Sample Name: SXS-8-84-2-2--50COPTICAL

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   92
    Injection Date  : 5/30/2019 2:53:59 PM                 Inj :   1
                                                     Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-84-2-2-50C-OPTICAL 2019-05-30 14-52-31\IDH-95-5-244NM-
                      15MIN-3UL-1.0ML.M
    Last changed    : 5/30/2019 3:06:21 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-8-84-2-2-50C-OPTICAL 2019-05-30 14-52-31\IDH-95-5-244NM-
                      15MIN-3UL-1.0ML.M (Sequence Method)
    Last changed    : 9/15/2020 9:49:58 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



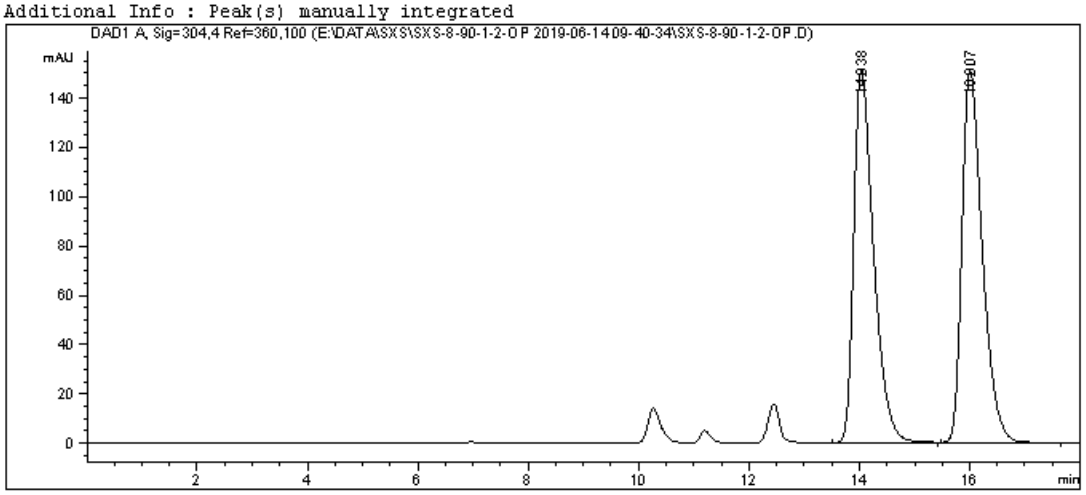

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   8.837 BB    0.2745 2185.88843  121.75075  82.0538
       2  11.462 BB    0.3435  478.08057   21.00443  17.9462

    Totals :                  2663.96899  142.75518


    ======================================================================
                           *** End of Report ***

1260 9/15/2020 9:50:00 AM SYSTEM                          Page 1 of 1
```



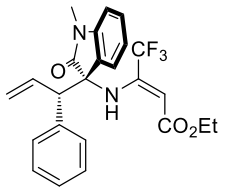
(*Rac*)-5a

Data File E:\DATA\SXS\SXS-8-90-1-2-OP 2019-06-14 09-40-34\SXS-8-90-1-2-OP.D
Sample Name: SXS-8-79-1-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                            Location :   92
    Injection Date  : 6/14/2019 9:42:03 AM                 Inj :   1
                                                   Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-90-1-2-OP 2019-06-14 09-40-34\IEH-95-5-304NM-3UL-10MIN1.
                      OML.M
    Last changed    : 6/14/2019 9:59:55 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-8-90-1-2-OP 2019-06-14 09-40-34\IEH-95-5-304NM-3UL-10MIN1.
                      OML.M (Sequence Method)
    Last changed    : 4/30/2020 8:27:32 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



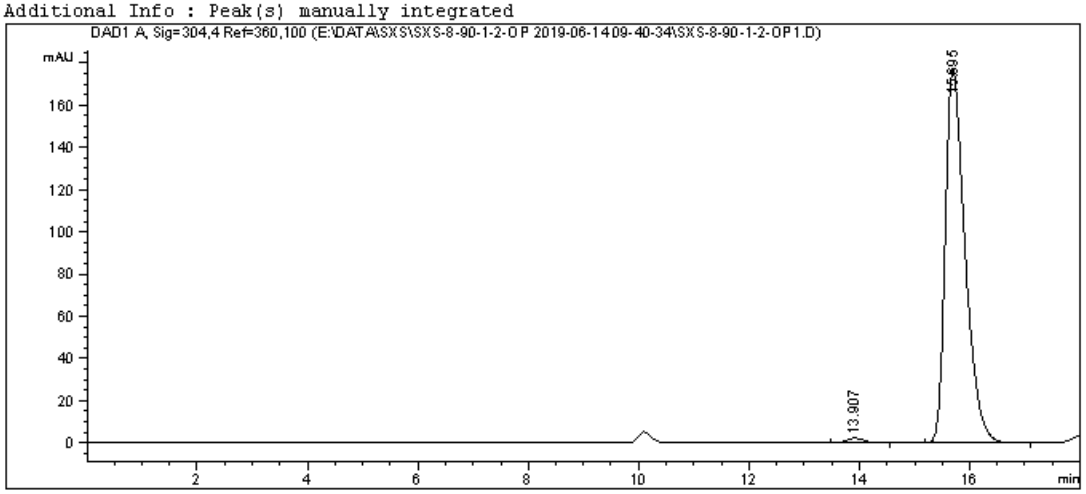

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  14.038 BB    0.3748 3781.72363  151.69434  49.4431
       2  16.007 BB    0.3881 3866.91797  150.83446  50.5569

    Totals :                  7648.64160  302.52879

    ======================================================================
                              *** End of Report ***
```



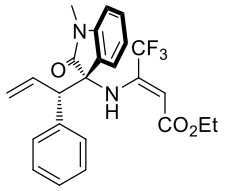
(*S*,*S*)-5a

Data File E:\DATA\SXS\SXS-8-90-1-2-OP 2019-06-14 09-40-34\SXS-8-90-1-2-OP1.D
Sample Name: SXS-8-90-1-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                            Location :   93
    Injection Date  : 6/14/2019 10:01:28 AM               Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-90-1-2-OP 2019-06-14 09-40-34\IEH-95-5-304NM-3UL-10MIN1.
                      OML.M
    Last changed    : 6/14/2019 9:59:55 AM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-8-90-1-2-OP 2019-06-14 09-40-34\IEH-95-5-304NM-3UL-10MIN1.
                      OML.M (Sequence Method)
    Last changed    : 4/30/2020 8:27:54 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



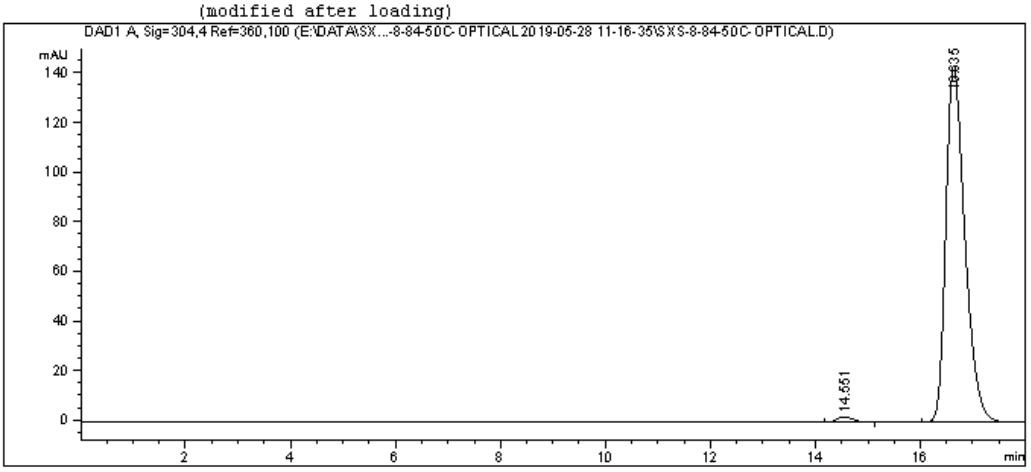

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  13.907 BB    0.2727   52.85106    2.36488   1.1803
       2  15.695 BB    0.3747 4424.86768  177.57552  98.8197

    Totals :                  4477.71873  179.94039


    ======================================================================
                            *** End of Report ***
```



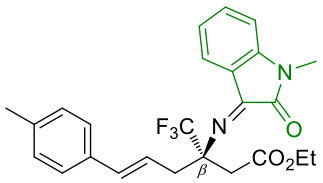
(***S*,*S*)-5a** in Scheme S1a

Data File E:\DATA\SXS\SXS-8-84-50C-OPTICAL 2019-05-28 11-16-35\SXS-8-84-50C-OPTICAL.D
Sample Name: SXS-8-84-1-2-OPTICAL

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   1
    Acq. Instrument : 1260                           Location :   92
    Injection Date  : 5/28/2019 11:18:03 AM              Inj :   1
                                                  Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-84-50C-OPTICAL 2019-05-28 11-16-35\IEH-95-5-304NM-3UL-
                      10MIN1.0ML.M
    Last changed    : 5/28/2019 11:35:35 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-8-84-50C-OPTICAL 2019-05-28 11-16-35\IEH-95-5-304NM-3UL-
                      10MIN1.0ML.M (Sequence Method)
    Last changed    : 9/15/2020 9:59:43 AM by SYSTEM
                      (modified after loading)
```



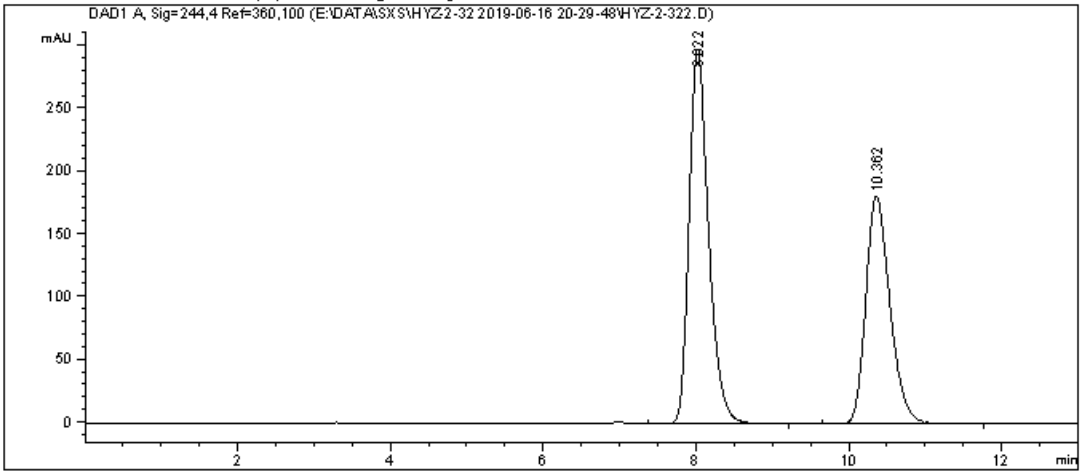

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  14.551 BB    0.2658   47.50323    2.14105   1.2937
       2  16.635 BBA   0.3834 3624.48267  143.61610  98.7063

    Totals :                  3671.98590  145.75715


    ======================================================================
                            *** End of Report ***
```



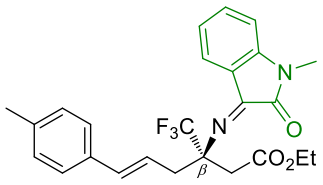
(*Rac*)-4b

Data File E:\DATA\SXS\HYZ-2-32 2019-06-16 20-29-48\HYZ-2-322.D
Sample Name: HYZ-2-32-2-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   3
    Acq. Instrument : 1260                           Location :   94
    Injection Date  : 6/16/2019 9:14:28 PM               Inj :   1
                                                   Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-2-32 2019-06-16 20-29-48\IDH-95-5-244NM-15MIN-3UL-1.0ML.M
    Last changed    : 6/16/2019 9:26:56 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\HYZ-2-32 2019-06-16 20-29-48\IDH-95-5-244NM-15MIN-3UL-1.0ML.M (
                      Sequence Method)
    Last changed    : 4/30/2020 8:35:05 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



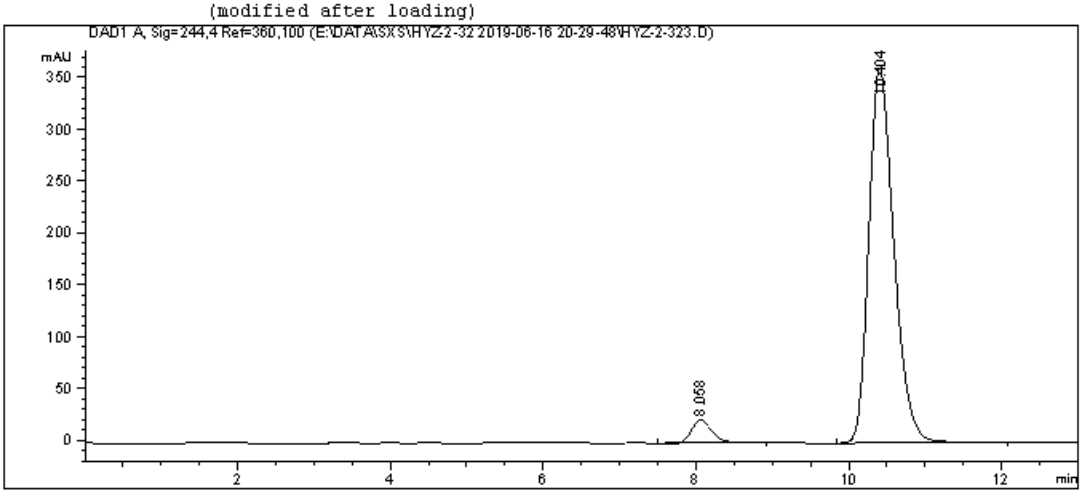

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   8.022 BB    0.2705 5300.97363  298.07462  57.0207
       2  10.362 BB    0.3358 3995.60962  181.53757  42.9793

    Totals :                  9296.58325  479.61218


    ======================================================================
                            *** End of Report ***
```



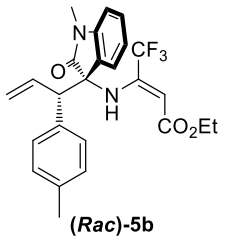
(*R*)-4b

Data File E:\DATA\SXS\HYZ-2-32 2019-06-16 20-29-48\HYZ-2-323.D
Sample Name: HYZ-2-32-2-2-OP

```
==========================================================================
Acq. Operator   : SYSTEM                          Seq. Line :   4
Acq. Instrument : 1260                           Location :   95
Injection Date  : 6/16/2019 9:28:56 PM               Inj :   1
                                                Inj Volume : 3.000 µl
Acq. Method     : E:\DATA\SXS\HYZ-2-32 2019-06-16 20-29-48\IDH-95-5-244NM-15MIN-3UL-1.0ML.M
Last changed    : 6/16/2019 9:26:56 PM by SYSTEM
Analysis Method : E:\DATA\SXS\HYZ-2-32 2019-06-16 20-29-48\IDH-95-5-244NM-15MIN-3UL-1.0ML.M (
                  Sequence Method)
Last changed    : 4/30/2020 8:35:14 PM by SYSTEM
                  (modified after loading)
```



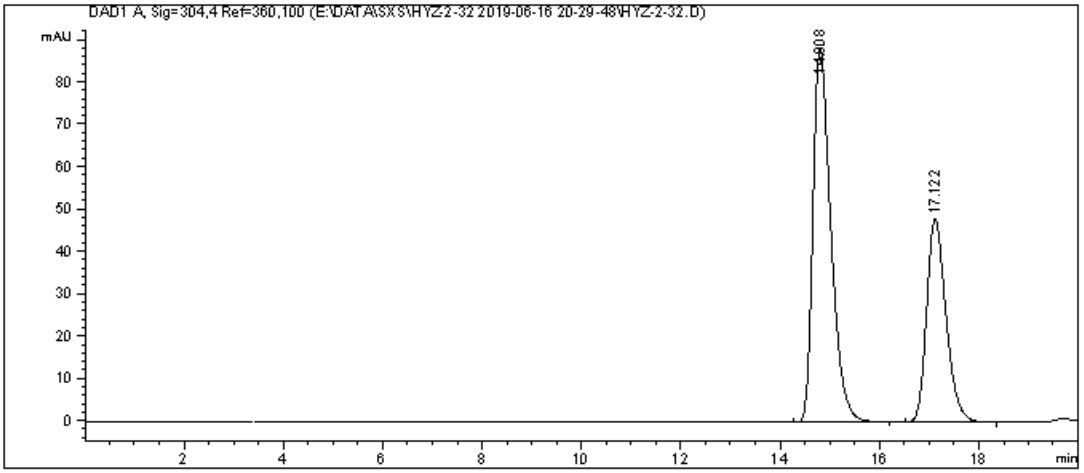

```
==========================================================================
                        Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=244,4 Ref=360,100

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   8.058 BB    0.2776  410.42096   22.31108   4.7618
   2  10.404 BB    0.3483 8208.53906  361.03186  95.2382

Totals :                  8618.96002  383.34294


==========================================================================
                        *** End of Report ***
```



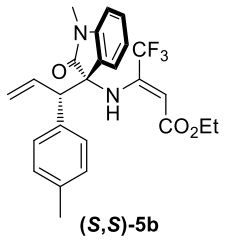
(*Rac*)-5b

Data File E:\DATA\SXS\HYZ-2-32 2019-06-16 20-29-48\HYZ-2-32.D
Sample Name: HYZ-2-32-1-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   92
    Injection Date  : 6/16/2019 8:31:22 PM                 Inj :   1
                                                     Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-2-32 2019-06-16 20-29-48\IEH-95-5-304NM-3UL-10MIN1.0ML.M
    Last changed    : 6/16/2019 8:49:36 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\HYZ-2-32 2019-06-16 20-29-48\IEH-95-5-304NM-3UL-10MIN1.0ML.M (
                      Sequence Method)
    Last changed    : 4/30/2020 8:34:31 PM by SYSTEM
                      (modified after loading)
```



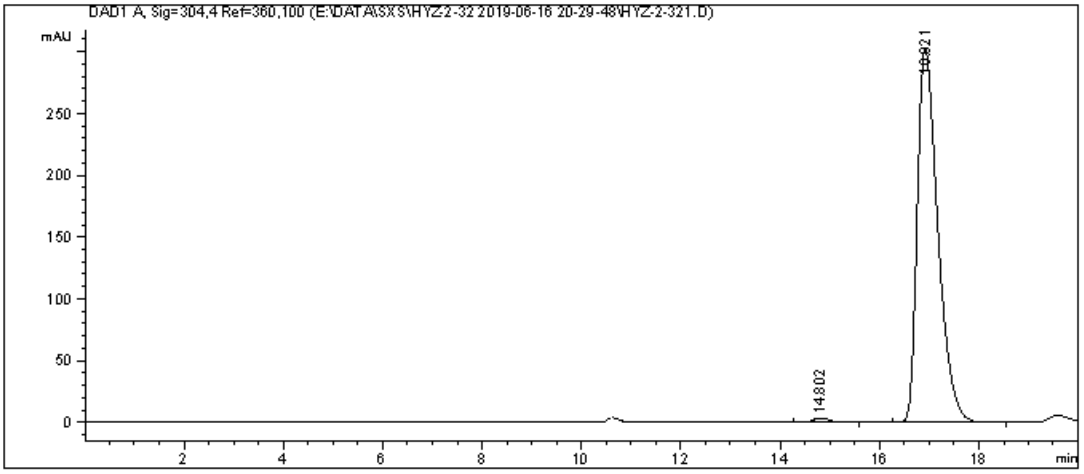

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  14.808 BB    0.3807 2220.17041   88.49577  63.0421
       2  17.122 BB    0.4112 1301.55359   48.02158  36.9579

    Totals :                  3521.72400  136.51735


    ======================================================================
                            *** End of Report ***
```



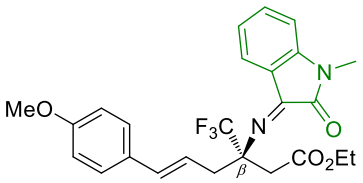
(*S*,*S*)-5b

Data File E:\DATA\SXS\HYZ-2-32 2019-06-16 20-29-48\HYZ-2-321.D
Sample Name: HYZ-2-32-1-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                             Location :   93
    Injection Date  : 6/16/2019 8:52:53 PM                 Inj :   1
                                                     Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-2-32 2019-06-16 20-29-48\IEH-95-5-304NM-3UL-10MIN1.0ML.M
    Last changed    : 6/16/2019 8:49:36 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\HYZ-2-32 2019-06-16 20-29-48\IEH-95-5-304NM-3UL-10MIN1.0ML.M (
                      Sequence Method)
    Last changed    : 4/30/2020 8:34:42 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



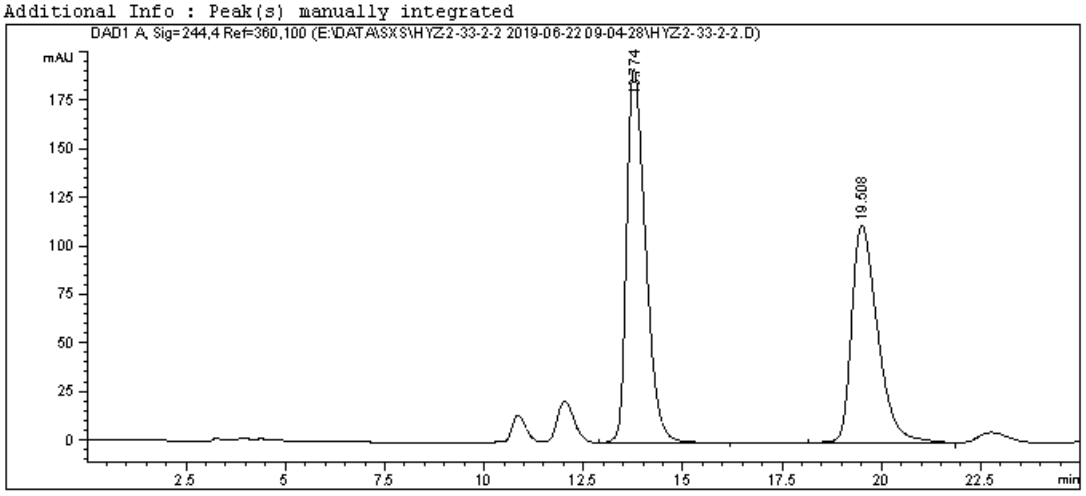

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  14.802 BB    0.3185   88.69089    3.40902   1.0080
       2  16.921 BB    0.4424 8709.64160  302.98923  98.9920

    Totals :                  8798.33249  306.39825


    ======================================================================
                            *** End of Report ***
```



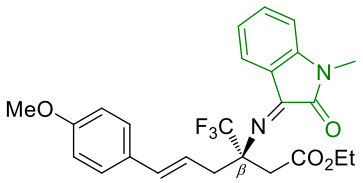
(*Rac*)-4c

Data File E:\DATA\SXS\HYZ-2-33-2-2 2019-06-22 09-04-28\HYZ-2-33-2-2.D
Sample Name: HYZ-2-33-2-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   94
    Injection Date  : 6/22/2019 9:05:57 AM                 Inj :   1
                                                     Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-2-33-2-2 2019-06-22 09-04-28\IDH-95-5-244NM-15MIN-3UL-1.0ML
                      .M
    Last changed    : 6/22/2019 9:06:14 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\HYZ-2-33-2-2 2019-06-22 09-04-28\IDH-95-5-244NM-15MIN-3UL-1.0ML
                      .M (Sequence Method)
    Last changed    : 4/30/2020 8:41:30 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



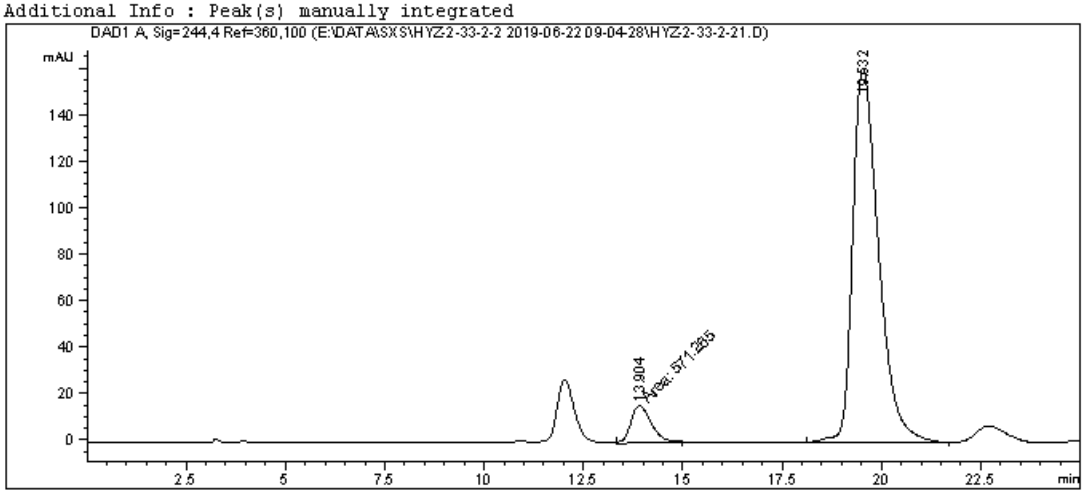

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  13.774 BB    0.5050 6376.47705  192.74495  55.3308
       2  19.508 BB    0.6911 5147.79785  112.44548  44.6692

    Totals :                  1.15243e4   305.19043

    ======================================================================
                              *** End of Report ***
```



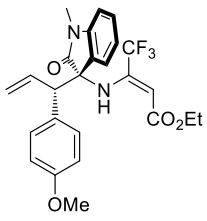
(*R*)-4c

Data File E:\DATA\SXS\HYZ-2-33-2-2 2019-06-22 09-04-28\HYZ-2-33-2-21.D
Sample Name: SXS-8-91-2-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   2
    Acq. Instrument : 1260                          Location :   95
    Injection Date  : 6/22/2019 9:32:27 AM               Inj :   1
                                                   Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-2-33-2-2 2019-06-22 09-04-28\IDH-95-5-244NM-15MIN-3UL-1.0ML
                      .M
    Last changed    : 6/22/2019 9:06:14 AM by SYSTEM
    Analysis Method : E:\DATA\SXS\HYZ-2-33-2-2 2019-06-22 09-04-28\IDH-95-5-244NM-15MIN-3UL-1.0ML
                      .M (Sequence Method)
    Last changed    : 4/30/2020 8:41:30 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



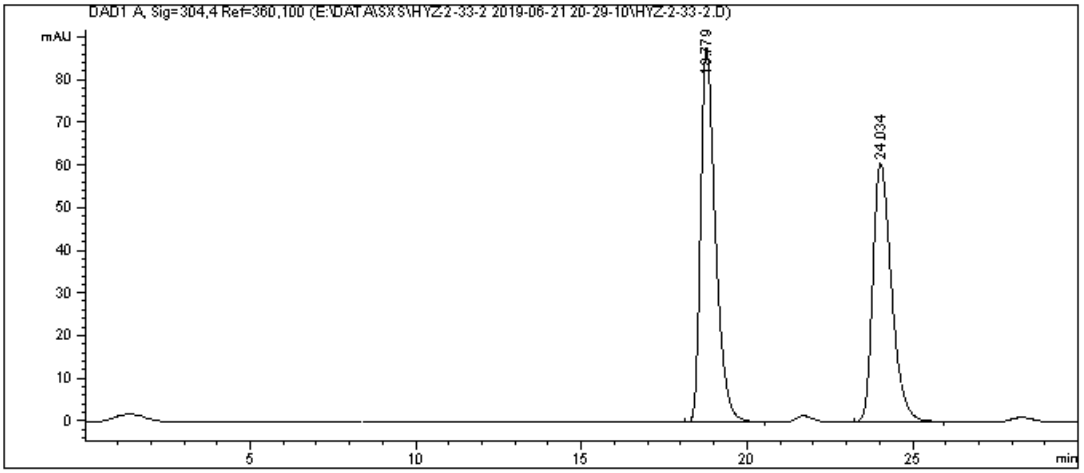

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  13.904 MM    0.5943  571.26471   16.02067   7.2850
       2  19.532 BB    0.6896 7270.39355  160.76343  92.7150

    Totals :                  7841.65826  176.78410

    ======================================================================
                           *** End of Report ***
```



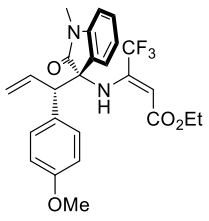
(*Rac*)-5c

Data File E:\DATA\SXS\HYZ-2-33-2 2019-06-21 20-29-10\HYZ-2-33-2.D
Sample Name: HYZ-2-33-1-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   92
    Injection Date  : 6/21/2019 8:30:33 PM                 Inj :   1
                                                     Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-2-33-2 2019-06-21 20-29-10\IEH-95-5-304NM-3UL-10MIN1.0ML.M
    Last changed    : 6/21/2019 8:31:05 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\HYZ-2-33-2 2019-06-21 20-29-10\IEH-95-5-304NM-3UL-10MIN1.0ML.M
                      (Sequence Method)
    Last changed    : 4/30/2020 8:39:29 PM by SYSTEM
                      (modified after loading)
```



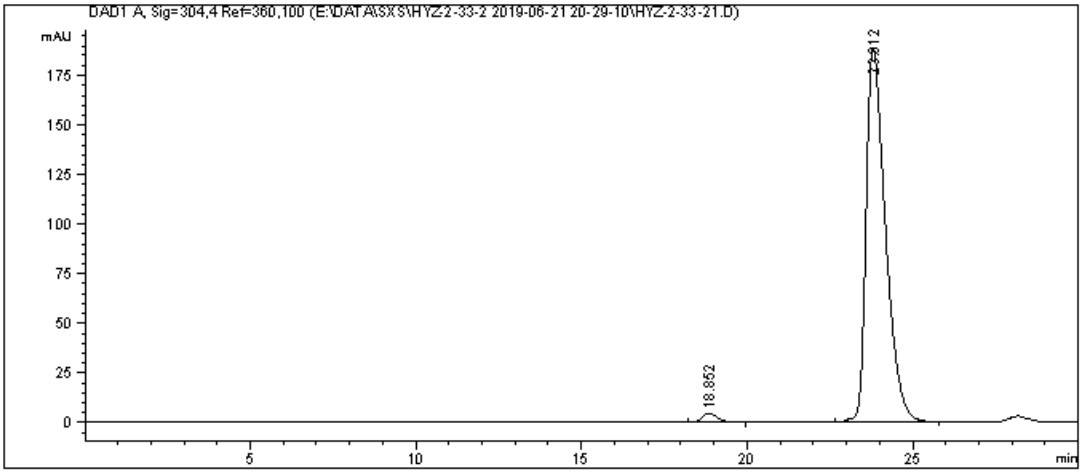

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  18.779 BB    0.4696 2733.75073   87.72095  53.6228
       2  24.034 BB    0.5865 2364.36206   60.56184  46.3772

    Totals :                  5098.11279  148.28279


    ======================================================================
                            *** End of Report ***
```



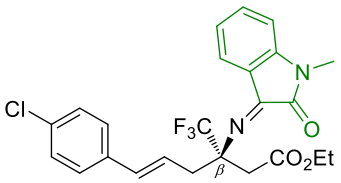
(*S*,*S*)-5c

Data File E:\DATA\SXS\HYZ-2-33-2 2019-06-21 20-29-10\HYZ-2-33-21.D
Sample Name: SXS-8-91-1-2-OP

```
    ========================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                            Location :   93
    Injection Date  : 6/21/2019 9:01:55 PM                 Inj :   1
                                                   Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-2-33-2 2019-06-21 20-29-10\IEH-95-5-304NM-3UL-10MIN1.0ML.M
    Last changed    : 6/21/2019 8:31:05 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\HYZ-2-33-2 2019-06-21 20-29-10\IEH-95-5-304NM-3UL-10MIN1.0ML.M
                      (Sequence Method)
    Last changed    : 4/30/2020 8:39:41 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



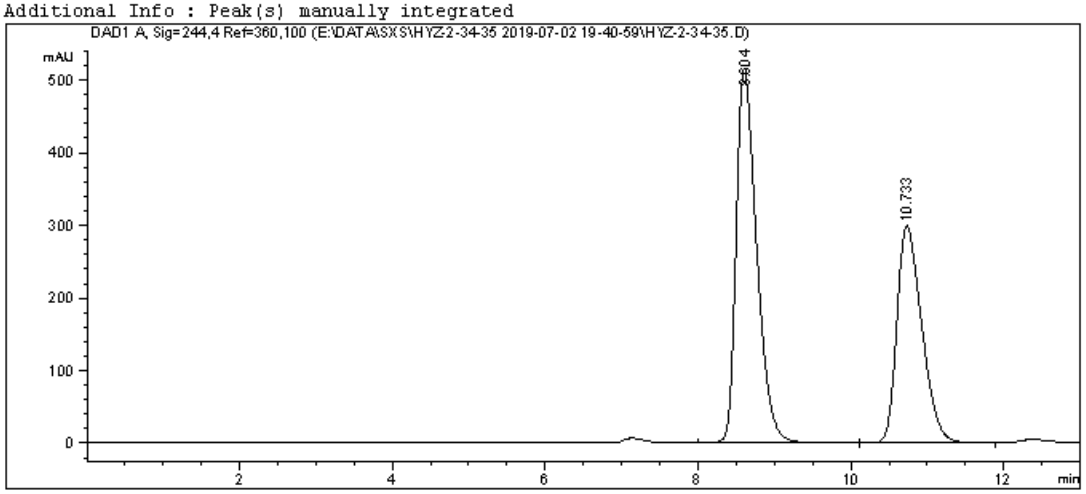

```
    ========================================================================
                            Area Percent Report
    ========================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  18.852 BB    0.3760  146.05141    4.58102   1.8771
       2  23.812 BB    0.5933 7634.82666  188.58466  98.1229

    Totals :                  7780.87807  193.16568


    ========================================================================
                            *** End of Report ***
```



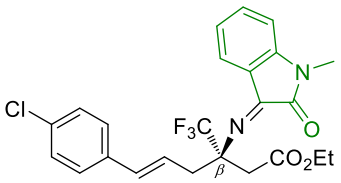
(*Rac*)-4d

Data File E:\DATA\SXS\HYZ-2-34-35 2019-07-02 19-40-59\HYZ-2-34-35.D
Sample Name: HYZ-2-34-2-2-RAC

```
======================================================================
Acq. Operator   : SYSTEM                        Seq. Line :   1
Acq. Instrument : 1260                           Location :   92
Injection Date  : 7/2/2019 7:42:26 PM                Inj :   1
                                                Inj Volume : 5.000 µl
Acq. Method     : E:\DATA\CC\HYZ-2-34-35 2019-07-02 19-40-59\IDH-95-5-244NM-15MIN-3UL-1.0ML.M
Last changed    : 7/2/2019 7:54:37 PM by SYSTEM
                  (modified after loading)
Analysis Method : E:\DATA\SXS\HYZ-2-34-35 2019-07-02 19-40-59\IDH-95-5-244NM-15MIN-3UL-1.0ML.
                  M (Sequence Method)
Last changed    : 4/30/2020 8:43:16 PM by SYSTEM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```



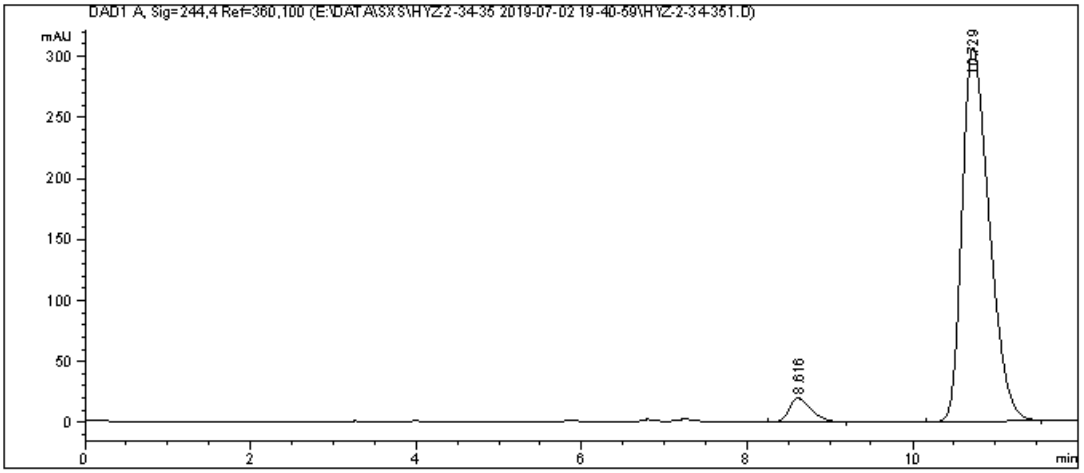

```
======================================================================
                        Area Percent Report
======================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=244,4 Ref=360,100

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   8.604 BB    0.2804 9567.85449  515.94238  58.5417
   2  10.733 BB    0.3491 6775.80029  299.28949  41.4583

Totals :                  1.63437e4   815.23187

======================================================================
                        *** End of Report ***
```



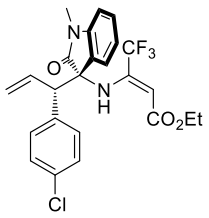
(*R*)-4d

Data File E:\DATA\SXS\HYZ-2-34-35 2019-07-02 19-40-59\HYZ-2-34-351.D
Sample Name: HYZ-2-35-2-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                              Location :   93
    Injection Date  : 7/2/2019 7:56:53 PM                   Inj :   1
                                                    Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\CC\HYZ-2-34-35 2019-07-02 19-40-59\IDH-95-5-244NM-15MIN-3UL-1.0ML.M
    Last changed    : 7/2/2019 7:54:37 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\HYZ-2-34-35 2019-07-02 19-40-59\IDH-95-5-244NM-15MIN-3UL-1.0ML.
                      M (Sequence Method)
    Last changed    : 5/4/2020 4:18:43 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



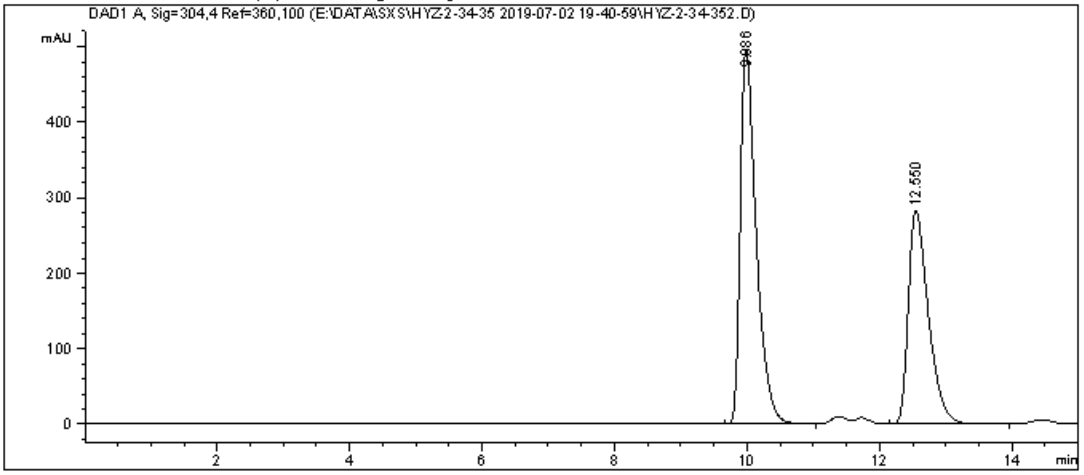

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   8.616 BB    0.2676  345.49841   19.14194   4.7224
       2  10.729 BB    0.3489 6970.69727  305.90475  95.2776

    Totals :                  7316.19568  325.04669

    ======================================================================
                            *** End of Report ***
```



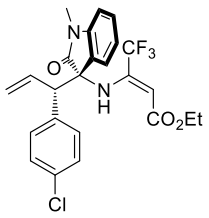
(*Rac*)-5d

Data File E:\DATA\SXS\HYZ-2-34-35 2019-07-02 19-40-59\HYZ-2-34-352.D
Sample Name: HYZ-2-34-1-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   3
    Acq. Instrument : 1260                             Location :   94
    Injection Date  : 7/2/2019 8:11:22 PM                  Inj :   1
                                                     Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\CC\HYZ-2-34-35 2019-07-02 19-40-59\IEH-95-5-304NM-3UL-10MIN1.0ML.M
    Last changed    : 7/2/2019 8:24:48 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\HYZ-2-34-35 2019-07-02 19-40-59\IEH-95-5-304NM-3UL-10MIN1.0ML.M
                      (Sequence Method)
    Last changed    : 4/30/2020 8:43:43 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



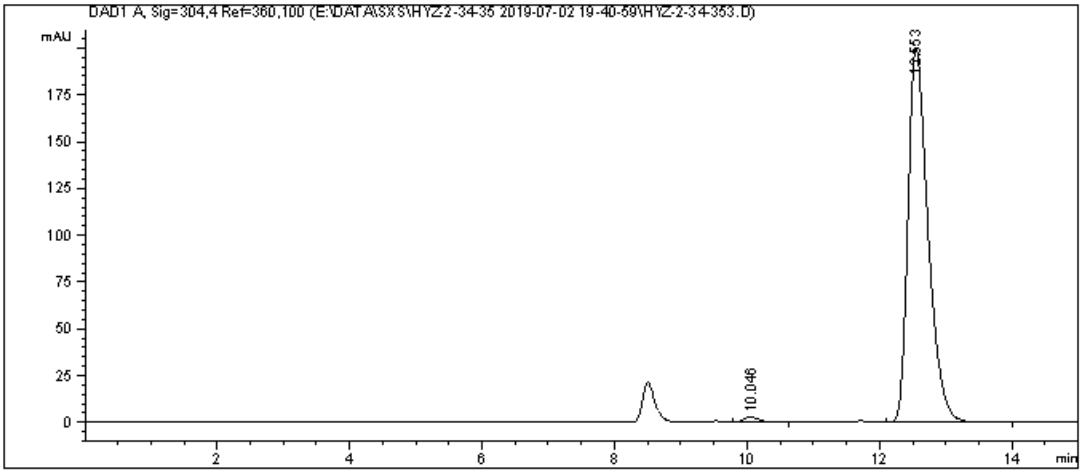

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   9.986 BB    0.2515 8309.56641  495.89734  58.2888
       2  12.550 BB    0.3185 5946.28955  282.55365  41.7112

    Totals :                  1.42559e4   778.45099

    ======================================================================
                           *** End of Report ***
```



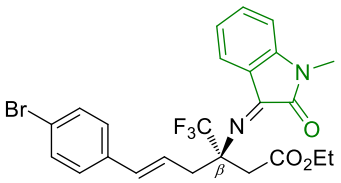
(*S*,*S*)-5d

Data File E:\DATA\SXS\HYZ-2-34-35 2019-07-02 19-40-59\HYZ-2-34-353.D
Sample Name: HYZ-2-35-1-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   4
    Acq. Instrument : 1260                             Location :   95
    Injection Date  : 7/2/2019 8:27:48 PM                  Inj :   1
                                                     Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\CC\HYZ-2-34-35 2019-07-02 19-40-59\IEH-95-5-304NM-3UL-10MIN1.0ML.M
    Last changed    : 7/2/2019 8:24:48 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\HYZ-2-34-35 2019-07-02 19-40-59\IEH-95-5-304NM-3UL-10MIN1.0ML.M
                      (Sequence Method)
    Last changed    : 4/30/2020 8:43:43 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



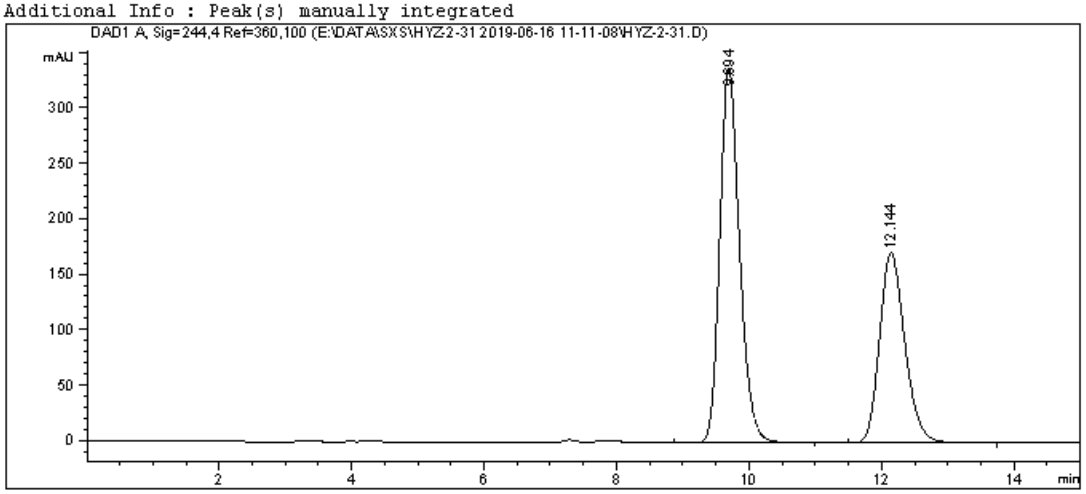

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  10.046 BB    0.2417   49.73006    3.09045   1.1670
       2  12.553 BB    0.3184 4211.69238  200.20502  98.8330

    Totals :                  4261.42244  203.29547


    ======================================================================
                           *** End of Report ***
```



(*Rac*)-4e

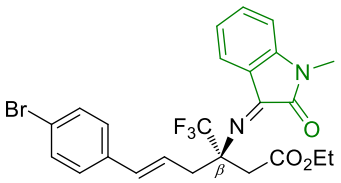
Data File E:\DATA\SXS\HYZ-2-31 2019-06-16 11-11-08\HYZ-2-31.D
Sample Name: HYZ-2-31-2-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   1
    Acq. Instrument : 1260                           Location :   92
    Injection Date  : 6/16/2019 11:12:34 AM              Inj :   1
                                                   Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-2-31 2019-06-16 11-11-08\IDH-95-5-244NM-15MIN-3UL-1.0ML.M
    Last changed    : 6/16/2019 11:25:32 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\HYZ-2-31 2019-06-16 11-11-08\IDH-95-5-244NM-15MIN-3UL-1.0ML.M (
                      Sequence Method)
    Last changed    : 4/30/2020 8:46:30 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   9.694 BB    0.3165 7021.87744  337.77728  60.6076
       2  12.144 BB    0.4072 4563.92627  171.62692  39.3924

    Totals :                  1.15858e4   509.40421

    ======================================================================
                            *** End of Report ***
```

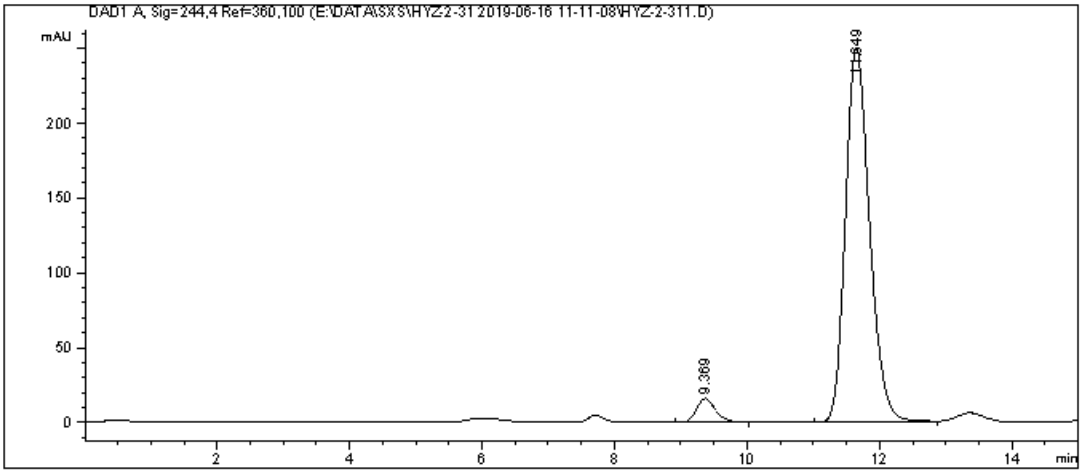
1260 4/30/2020 8:46:32 PM SYSTEM



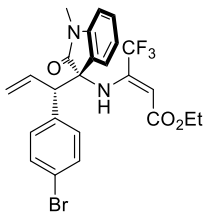
(*R*)-4e

Data File E:\DATA\SXS\HYZ-2-31 2019-06-16 11-11-08\HYZ-2-311.D
Sample Name: HYZ-2-31-2-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                              Location :   93
    Injection Date  : 6/16/2019 11:29:01 AM                  Inj :   1
                                                     Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-2-31 2019-06-16 11-11-08\IDH-95-5-244NM-15MIN-3UL-1.0ML.M
    Last changed    : 6/16/2019 11:25:32 AM by SYSTEM
    Analysis Method : E:\DATA\SXS\HYZ-2-31 2019-06-16 11-11-08\IDH-95-5-244NM-15MIN-3UL-1.0ML.M (
                      Sequence Method)
    Last changed    : 4/30/2020 8:46:30 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



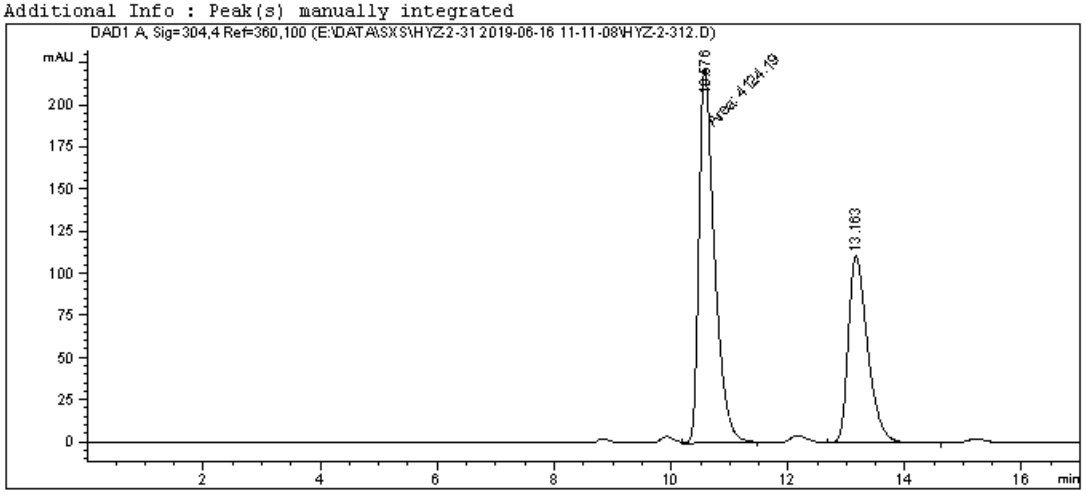

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   9.369 BB    0.3037  318.22021   15.88726   4.8175
       2  11.649 BB    0.3879 6287.26465  249.59384  95.1825

    Totals :                  6605.48486  265.48110

    ======================================================================
                            *** End of Report ***
```



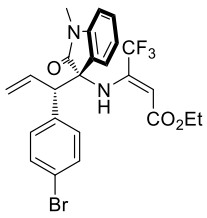
(*Rac*)-5e

Data File E:\DATA\SXS\HYZ-2-31 2019-06-16 11-11-08\HYZ-2-312.D
Sample Name: HYZ-2-31-1-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   3
    Acq. Instrument : 1260                             Location :   94
    Injection Date  : 6/16/2019 11:45:32 AM                 Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-2-31 2019-06-16 11-11-08\IEH-95-5-304NM-3UL-10MIN1.0ML.M
    Last changed    : 6/16/2019 12:01:44 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\HYZ-2-31 2019-06-16 11-11-08\IEH-95-5-304NM-3UL-10MIN1.0ML.M (
                      Sequence Method)
    Last changed    : 4/30/2020 8:46:52 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



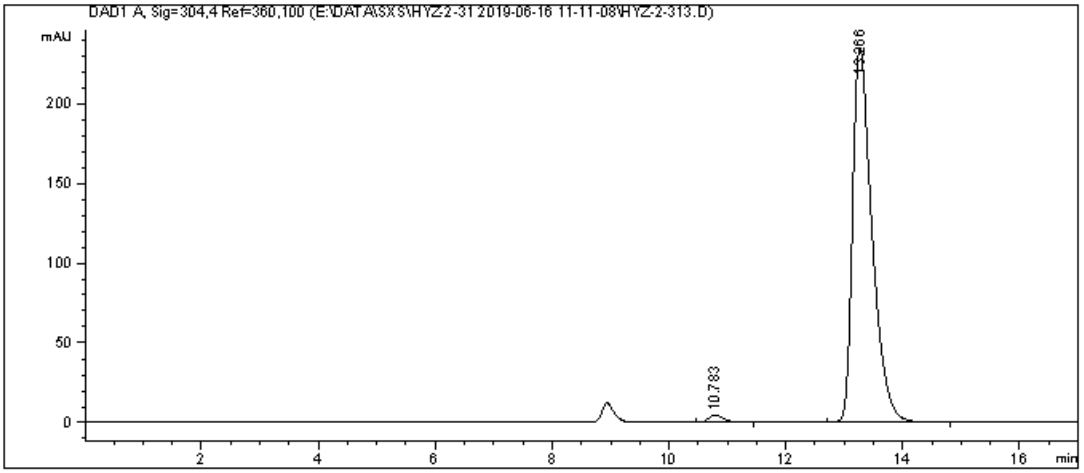

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  10.576 MM    0.3093 4124.19238  222.23091  61.7878
       2  13.163 BB    0.3470 2550.57690  111.05286  38.2122

    Totals :                  6674.76929  333.28377


    ======================================================================
                            *** End of Report ***
```



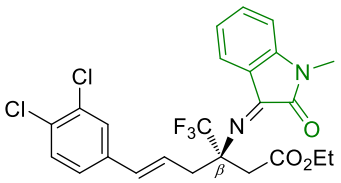
(*S*,*S*)-5e

Data File E:\DATA\SXS\HYZ-2-31 2019-06-16 11-11-08\HYZ-2-313.D
Sample Name: HYZ-2-31-1-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   4
    Acq. Instrument : 1260                              Location :   95
    Injection Date  : 6/16/2019 12:04:10 PM                 Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-2-31 2019-06-16 11-11-08\IEH-95-5-304NM-3UL-10MIN1.0ML.M
    Last changed    : 6/16/2019 12:01:44 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\HYZ-2-31 2019-06-16 11-11-08\IEH-95-5-304NM-3UL-10MIN1.0ML.M (
                      Sequence Method)
    Last changed    : 4/30/2020 8:46:52 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



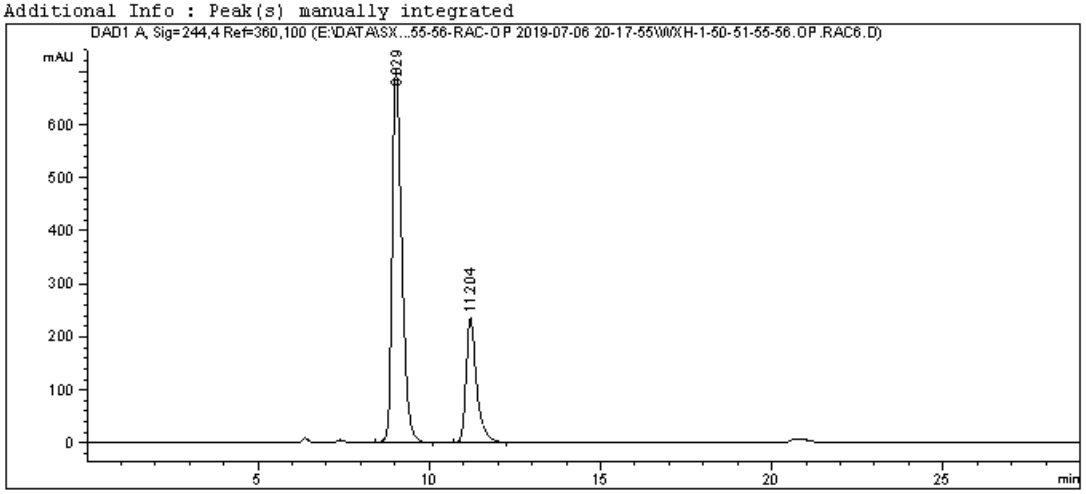

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  10.783 BB    0.2683   87.39605    4.69143   1.5810
       2  13.266 BB    0.3471 5440.58154  235.02042  98.4190

    Totals :                  5527.97759  239.71184


    ======================================================================
                            *** End of Report ***
```



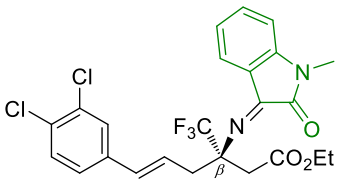
(*Rac*)-4f

Data File E:\DATA\SX...-50-51-55-56-RAC-OP 2019-07-06 20-17-55\WXH-1-50-51-55-56.OP.RAC6.D
Sample Name: WXH-1-56-2-RAC

```
==========================================================================
Acq. Operator   : SYSTEM                          Seq. Line :   7
Acq. Instrument : 1260                           Location :   67
Injection Date  : 7/6/2019 10:49:02 PM               Inj :   1
                                                Inj Volume : 5.000 µl
Acq. Method     : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IDH-95-5-244NM-
                  15MIN-3UL-1.0ML.M
Last changed    : 7/6/2019 9:13:47 PM by SYSTEM
Analysis Method : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IDH-95-5-244NM-
                  15MIN-3UL-1.0ML.M (Sequence Method)
Last changed    : 5/1/2020 7:53:59 AM by SYSTEM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```



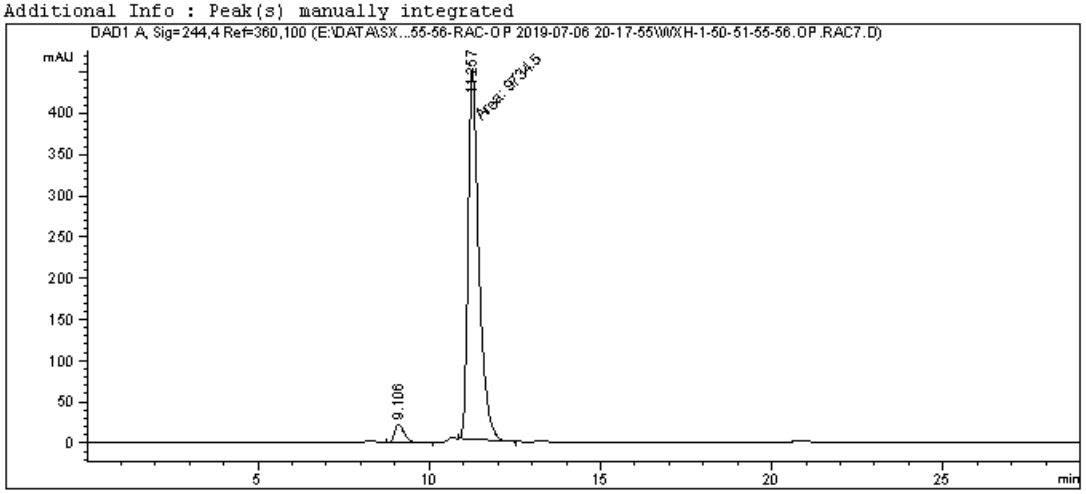

```
==========================================================================
                        Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=244,4 Ref=360,100

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   9.029 BB    0.2918 1.36943e4   704.37726  73.4490
   2  11.204 BB    0.3193 4950.35596  234.49988  26.5510

Totals :                  1.86447e4   938.87714

==========================================================================
                        *** End of Report ***
```



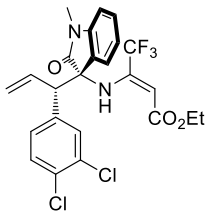
(*R*)-4f

Data File E:\DATA\SX...-50-51-55-56-RAC-OP 2019-07-06 20-17-55\WXH-1-50-51-55-56.OP.RAC7.D
Sample Name: WXH-1-55-2-OP

```
==========================================================================
Acq. Operator   : SYSTEM                          Seq. Line :   8
Acq. Instrument : 1260                            Location :   68
Injection Date  : 7/6/2019 11:19:31 PM                 Inj :   1
                                                 Inj Volume : 5.000 µl
Acq. Method     : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IDH-95-5-244NM-
                  15MIN-3UL-1.0ML.M
Last changed    : 7/6/2019 9:13:47 PM by SYSTEM
Analysis Method : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IDH-95-5-244NM-
                  15MIN-3UL-1.0ML.M (Sequence Method)
Last changed    : 5/1/2020 7:53:59 AM by SYSTEM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```



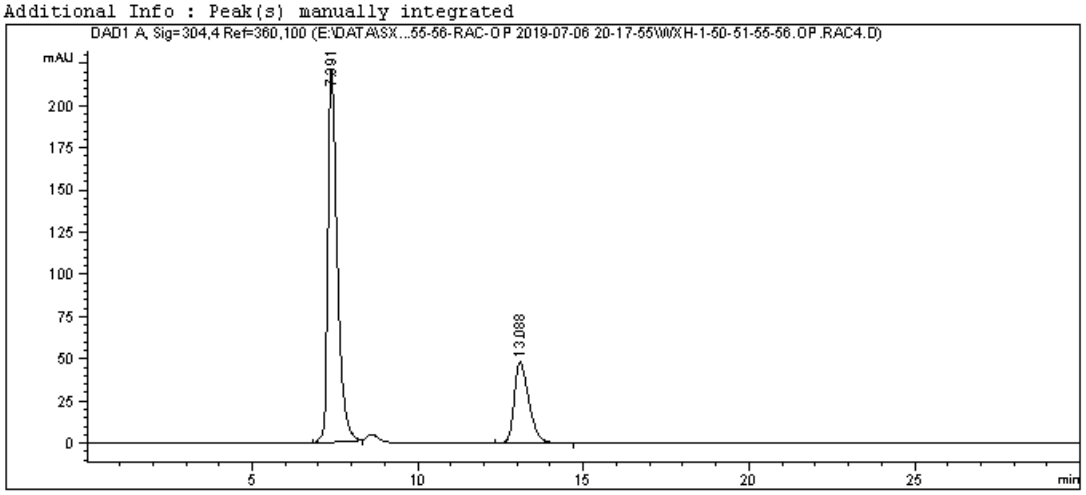

```
==========================================================================
                        Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=244,4 Ref=360,100

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   9.106 BB    0.2891  432.42712   22.41537   4.2533
   2  11.257 MM    0.3610 9734.50195  449.41144  95.7467

Totals :                  1.01669e4   471.82680


==========================================================================
                        *** End of Report ***
```



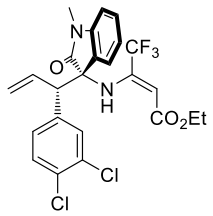
(*Rac*)-5f

Data File E:\DATA\SX...-50-51-55-56-RAC-OP 2019-07-06 20-17-55\WXH-1-50-51-55-56.OP.RAC4.D
Sample Name: WXH-1-56-1-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   5
    Acq. Instrument : 1260                            Location :   65
    Injection Date  : 7/6/2019 9:45:50 PM                 Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IEH-95-5-304NM-3UL
                      -10MIN1.OML.M
    Last changed    : 7/6/2019 9:46:22 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IEH-95-5-304NM-3UL
                      -10MIN1.OML.M (Sequence Method)
    Last changed    : 5/1/2020 7:53:20 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



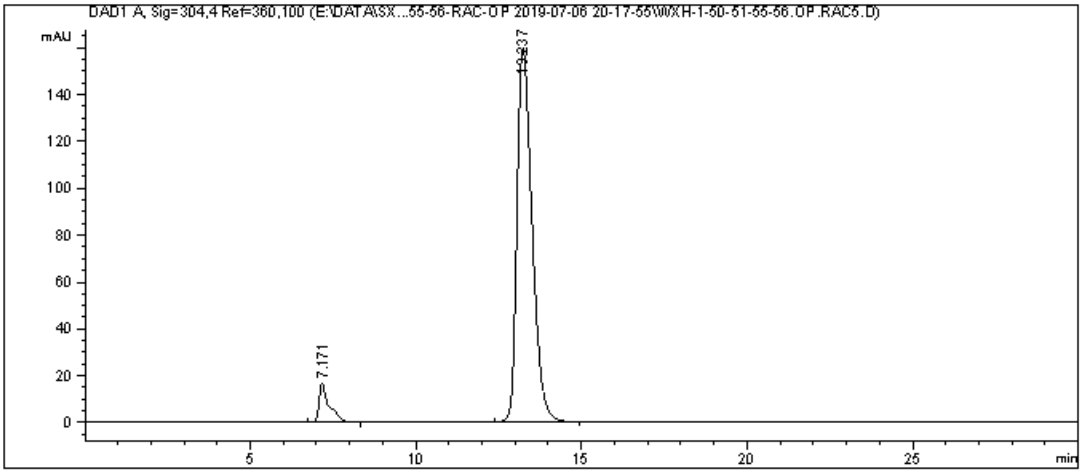

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   7.391 BB    0.2926 4332.46924  221.11816  74.3098
       2  13.088 BB    0.4596 1497.80762   48.32800  25.6902

    Totals :                  5830.27686  269.44616


    ======================================================================
                              *** End of Report ***
```



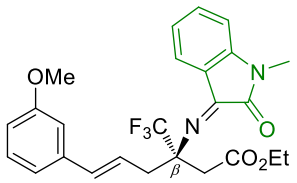
(*S*,*S*)-5f

Data File E:\DATA\SX...-50-51-55-56-RAC-OP 2019-07-06 20-17-55\WXH-1-50-51-55-56.OP.RAC5.D
Sample Name: WXH-1-55-1-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   6
    Acq. Instrument : 1260                              Location :   66
    Injection Date  : 7/6/2019 10:17:24 PM                  Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IEH-95-5-304NM-3UL
                      -10MIN1.OML.M
    Last changed    : 7/6/2019 9:46:22 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IEH-95-5-304NM-3UL
                      -10MIN1.OML.M (Sequence Method)
    Last changed    : 5/4/2020 4:12:23 PM by SYSTEM
                      (modified after loading)
```



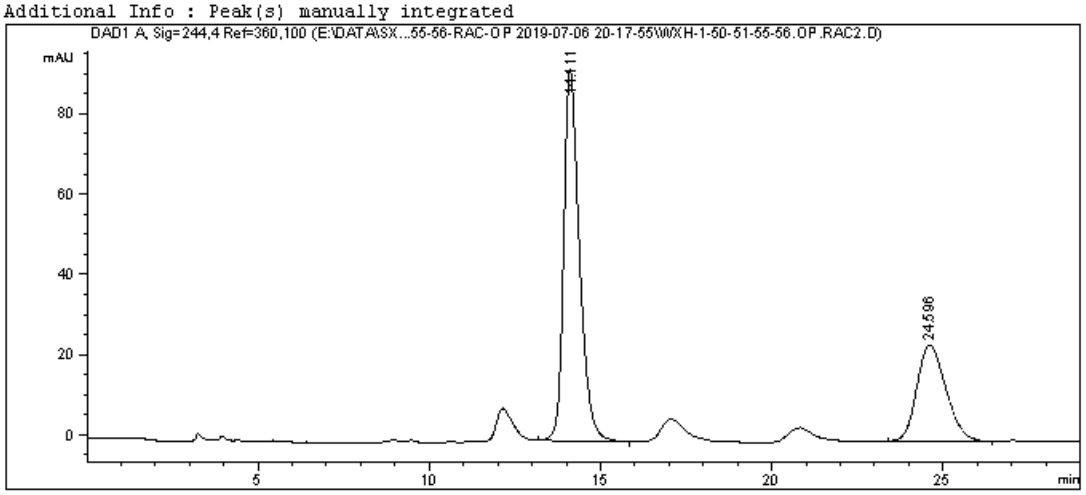

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   7.171 BB    0.3104  363.64688   16.61030   6.7233
       2  13.237 BB    0.4833 5045.13184  159.79453  93.2767

    Totals :                  5408.77872  176.40483

    ======================================================================
                            *** End of Report ***
```



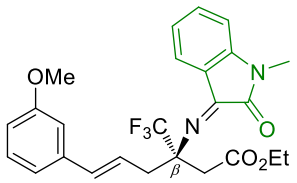
(*Rac*)-4g

Data File E:\DATA\SX...-50-51-55-56-RAC-OP 2019-07-06 20-17-55\WXH-1-50-51-55-56.OP.RAC2.D
Sample Name: WXH-1-51-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   3
    Acq. Instrument : 1260                              Location :   54
    Injection Date  : 7/6/2019 8:44:45 PM                   Inj :   1
                                                    Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IDH-95-5-244NM-
                      15MIN-3UL-1.0ML.M
    Last changed    : 7/6/2019 9:12:00 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IDH-95-5-244NM-
                      15MIN-3UL-1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 7:52:38 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



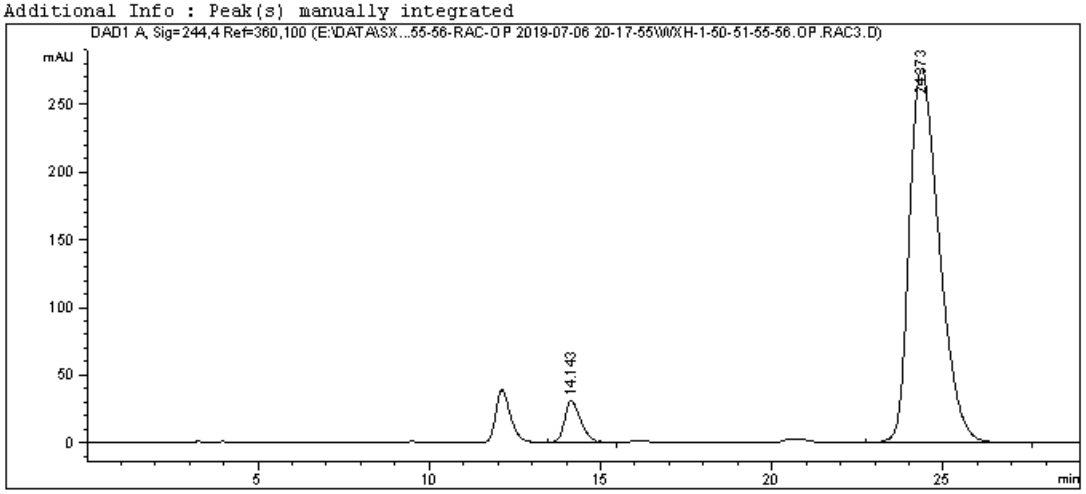

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  14.111 BB    0.4753 2955.53857   92.62830  67.6364
       2  24.596 BB    0.7770 1414.20789   23.91185  32.3636

    Totals :                  4369.74646  116.54014

    ======================================================================
                              *** End of Report ***
```



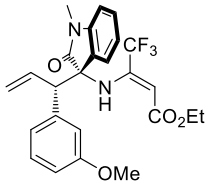
(*R*)-4g

Data File E:\DATA\SX...-50-51-55-56-RAC-OP 2019-07-06 20-17-55\WXH-1-50-51-55-56.OP.RAC3.D
Sample Name: WXH-1-50-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   4
    Acq. Instrument : 1260                              Location :   55
    Injection Date  : 7/6/2019 9:15:16 PM                   Inj :   1
                                                    Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IDH-95-5-244NM-
                      15MIN-3UL-1.0ML.M
    Last changed    : 7/6/2019 9:12:00 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IDH-95-5-244NM-
                      15MIN-3UL-1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 7:52:38 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



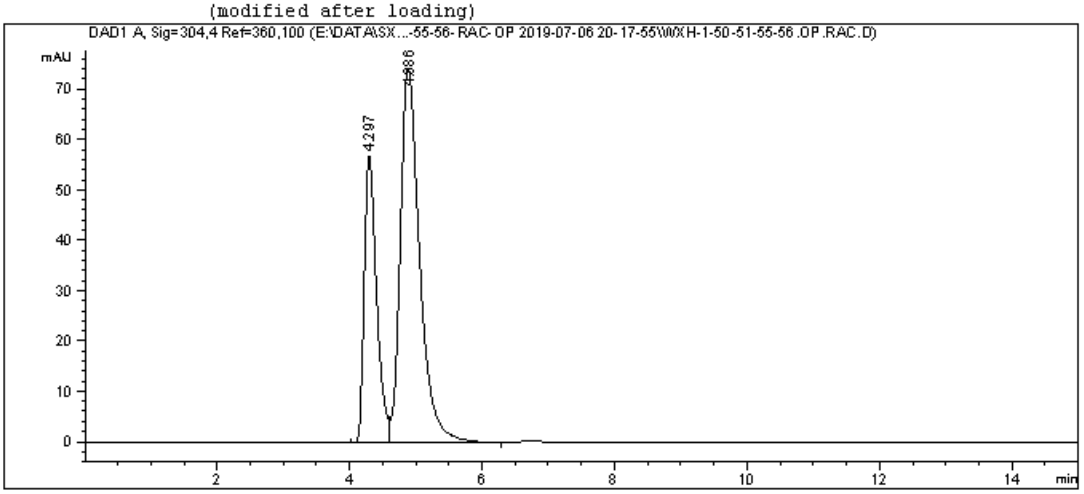

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  14.143 BB    0.4882 1010.66052   30.77180   5.7045
       2  24.373 BB    0.9271 1.67061e4   276.42056  94.2955

    Totals :                  1.77168e4   307.19236


    ======================================================================
                           *** End of Report ***
```



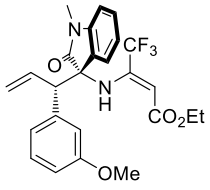
(*Rac*)-5g

Data File E:\DATA\SX...1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\WXH-1-50-51-55-56.OP.RAC.D
Sample Name: WXH-1-51-1-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                              Location :   52
    Injection Date  : 7/6/2019 8:19:39 PM                    Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IEH-95-5-304NM-3UL
                      -10MIN1.0ML.M
    Last changed    : 7/6/2019 8:34:03 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IEH-95-5-304NM-3UL
                      -10MIN1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 7:49:41 AM by SYSTEM
                      (modified after loading)
```



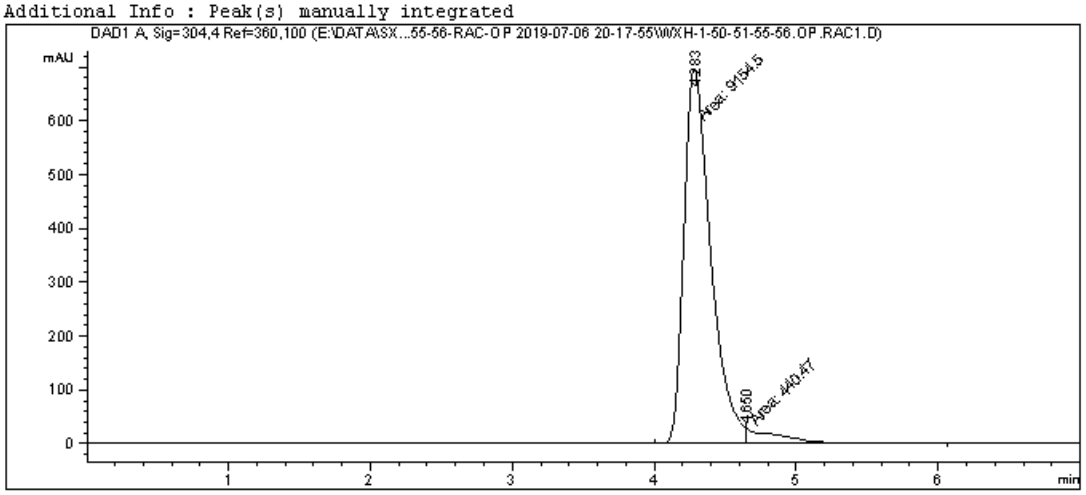

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   4.297 BV    0.1964  739.41687   56.96014  32.8402
       2   4.886 VB    0.3063 1512.14050   74.35287  67.1598

    Totals :                   2251.55737  131.31300


    ======================================================================
                              *** End of Report ***
```



(*S*,*S*)-5g

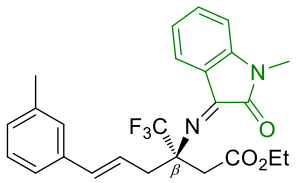
Data File E:\DATA\SX...-50-51-55-56-RAC-OP 2019-07-06 20-17-55\WXH-1-50-51-55-56.OP.RAC1.D
Sample Name: WXH-1-50-1-OP

```
    ==================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                             Location :   53
    Injection Date  : 7/6/2019 8:36:14 PM                   Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IEH-95-5-304NM-3UL
                      -10MIN1.0ML.M
    Last changed    : 7/6/2019 8:41:57 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-50-51-55-56-RAC-OP 2019-07-06 20-17-55\IEH-95-5-304NM-3UL
                      -10MIN1.0ML.M (Sequence Method)
    Last changed    : 5/4/2020 4:15:51 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   4.283 MF    0.2190 9154.50293  696.55969  95.4094
       2   4.650 FM    0.2604  440.47015   28.19441   4.5906

    Totals :                   9594.97308  724.75410


    ==================================================================
                            *** End of Report ***
```

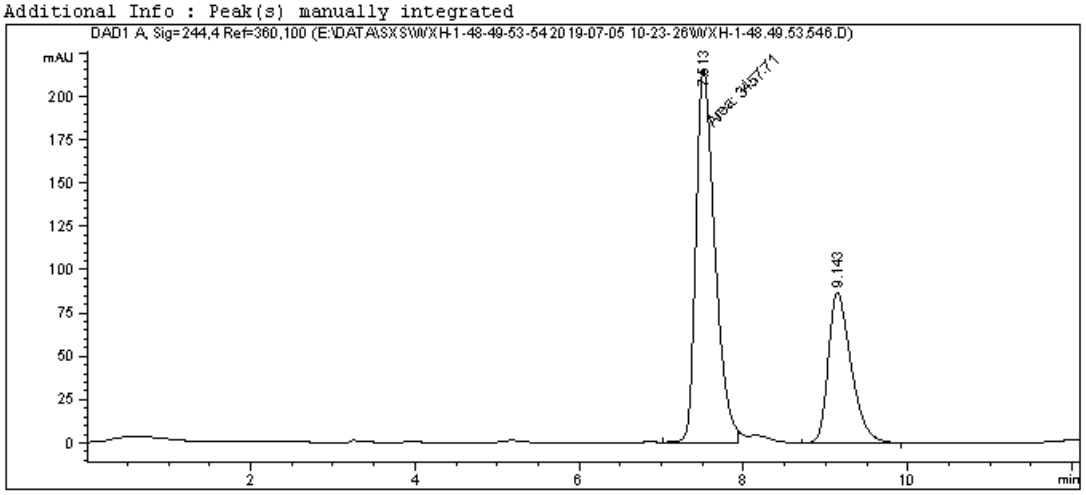
1260 5/4/2020 4:15:54 PM SYSTEM



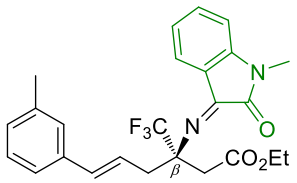
(*Rac*)-4h

Data File E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\WXH-1-48.49.53.546.D
Sample Name: WXH-1-54-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   7
    Acq. Instrument : 1260                              Location :   98
    Injection Date  : 7/5/2019 1:13:40 PM                    Inj :   1
                                                     Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\IDH-95-5-244NM-15MIN-3UL-
                      1.0ML.M
    Last changed    : 7/5/2019 1:25:46 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\IDH-95-5-244NM-15MIN-3UL-
                      1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 8:19:04 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



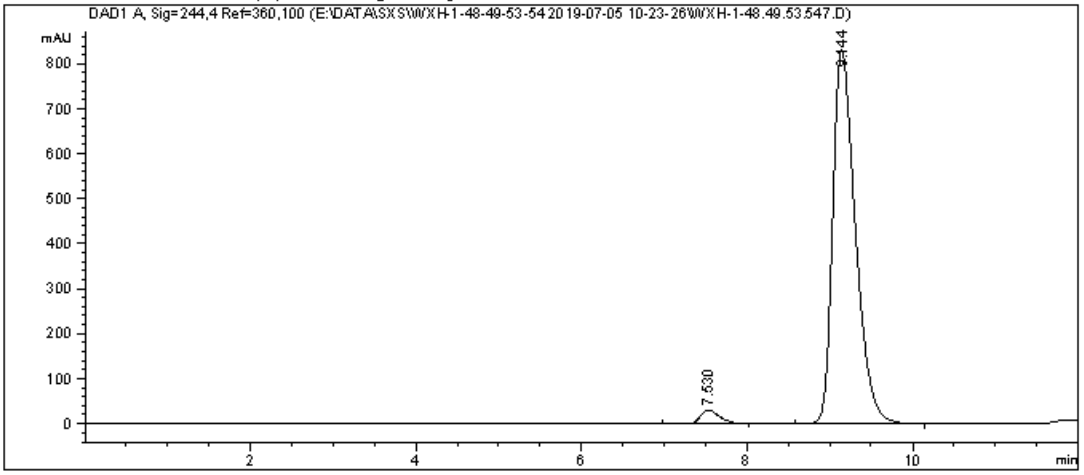

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   7.513 MF    0.2672 3457.71387  215.65173  67.3110
       2   9.143 BB    0.2910 1679.20581   87.07627  32.6890

    Totals :                   5136.91968  302.72800


    ======================================================================
                              *** End of Report ***
```



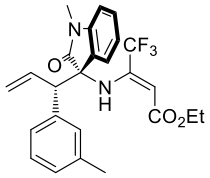
(*R*)-4h

Data File E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\WXH-1-48.49.53.547.D
Sample Name: WXH-1-53-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   8
    Acq. Instrument : 1260                          Location :   99
    Injection Date  : 7/5/2019 1:27:22 PM               Inj :   1
                                                   Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\IDH-95-5-244NM-15MIN-3UL-
                      1.0ML.M
    Last changed    : 7/5/2019 1:25:46 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\IDH-95-5-244NM-15MIN-3UL-
                      1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 8:19:04 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



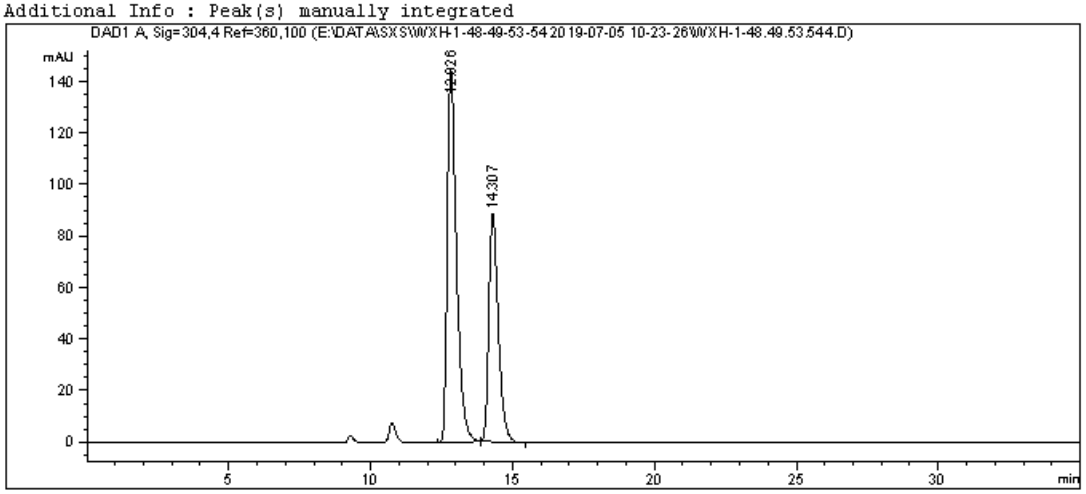

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   7.530 VB R  0.2437  499.46942   30.73034   3.0523
       2   9.144 BB    0.2923 1.58644e4   832.49640  96.9477

    Totals :                   1.63638e4   863.22674


    ======================================================================
                           *** End of Report ***
```



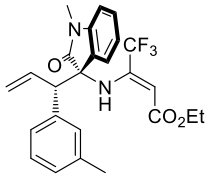
(*Rac*)-5h

Data File E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\WXH-1-48.49.53.544.D
Sample Name: WXH-1-54-1-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   5
    Acq. Instrument : 1260                            Location :   96
    Injection Date  : 7/5/2019 12:18:40 PM                 Inj :   1
                                                     Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\IEH-95-5-304NM-3UL-10MIN1
                      .OML.M
    Last changed    : 7/5/2019 11:41:22 AM by SYSTEM
    Analysis Method : E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\IEH-95-5-304NM-3UL-10MIN1
                      .OML.M (Sequence Method)
    Last changed    : 5/1/2020 8:18:40 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



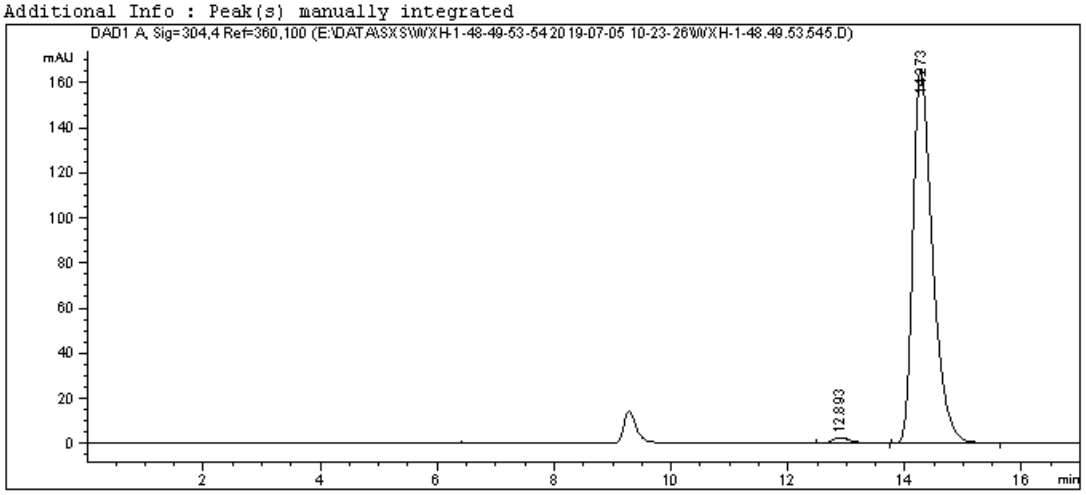

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  12.826 BB    0.3367 3256.01929  145.13724  61.4996
       2  14.307 BB    0.3504 2038.35474   88.26463  38.5004

    Totals :                  5294.37402  233.40187


    ======================================================================
                              *** End of Report ***
```



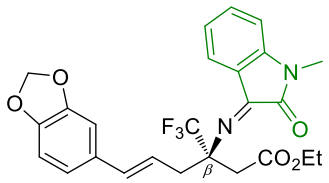
(*S*,*S*)-5h

Data File E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\WXH-1-48.49.53.545.D
Sample Name: WXH-1-53-1-OP

```
    ==================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   6
    Acq. Instrument : 1260                           Location :   97
    Injection Date  : 7/5/2019 12:55:06 PM               Inj :   1
                                                   Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\IEH-95-5-304NM-3UL-10MIN1
                      .OML.M
    Last changed    : 7/5/2019 1:11:43 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\IEH-95-5-304NM-3UL-10MIN1
                      .OML.M (Sequence Method)
    Last changed    : 5/1/2020 8:18:40 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



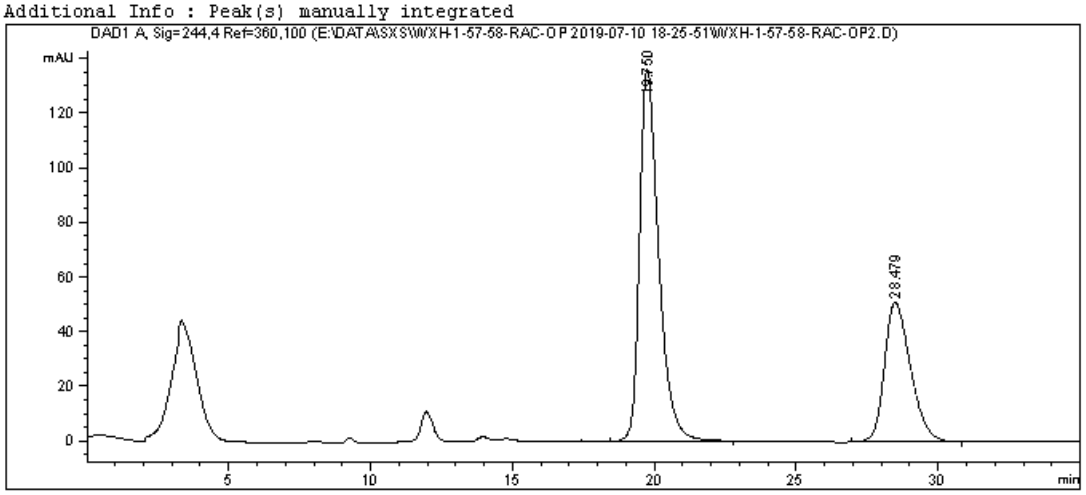

```
    ==================================================================
                          Area Percent Report
    ==================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  12.893 BB    0.2722   56.45864    2.48379   1.4376
       2  14.273 BB    0.3542 3870.89941  165.88258  98.5624

    Totals :                  3927.35806  168.36638


    ==================================================================
                          *** End of Report ***

1260 5/1/2020 8:18:49 AM SYSTEM                          Page 1 of 1
```



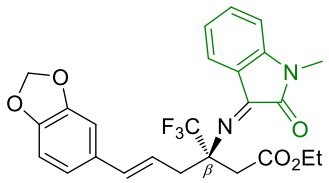
(*Rac*)-4i

Data File E:\DATA\SXS\WXH-1-57-58-RAC-OP 2019-07-10 18-25-51\WXH-1-57-58-RAC-OP2.D
Sample Name: WXH-1-58-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   3
    Acq. Instrument : 1260                             Location :   13
    Injection Date  : 7/10/2019 7:36:08 PM                 Inj :   1
                                                     Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-57-58-RAC-OP 2019-07-10 18-25-51\IDH-95-5-244NM-15MIN-3UL
                      -1.0ML.M
    Last changed    : 7/10/2019 7:40:14 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-57-58-RAC-OP 2019-07-10 18-25-51\IDH-95-5-244NM-15MIN-3UL
                      -1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 8:01:57 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



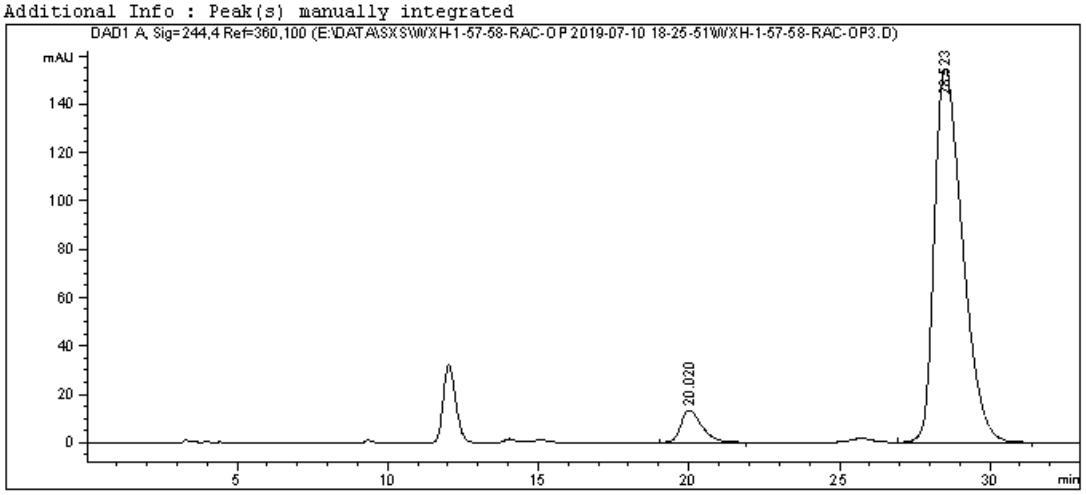

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  19.750 BB    0.6983 6397.48926  136.38509  66.1765
       2  28.479 BB    0.8655 3269.81909   51.10051  33.8235

    Totals :                  9667.30835  187.48559


    ======================================================================
                              *** End of Report ***
```



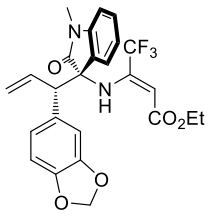
(*R*)-4i

Data File E:\DATA\SXS\WXH-1-57-58-RAC-OP 2019-07-10 18-25-51\WXH-1-57-58-RAC-OP3.D
Sample Name: WXH-1-57-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   4
    Acq. Instrument : 1260                           Location :   14
    Injection Date  : 7/10/2019 8:12:38 PM               Inj :   1
                                                   Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-57-58-RAC-OP 2019-07-10 18-25-51\IDH-95-5-244NM-15MIN-3UL
                      -1.0ML.M
    Last changed    : 7/10/2019 8:45:36 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-57-58-RAC-OP 2019-07-10 18-25-51\IDH-95-5-244NM-15MIN-3UL
                      -1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 8:01:57 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



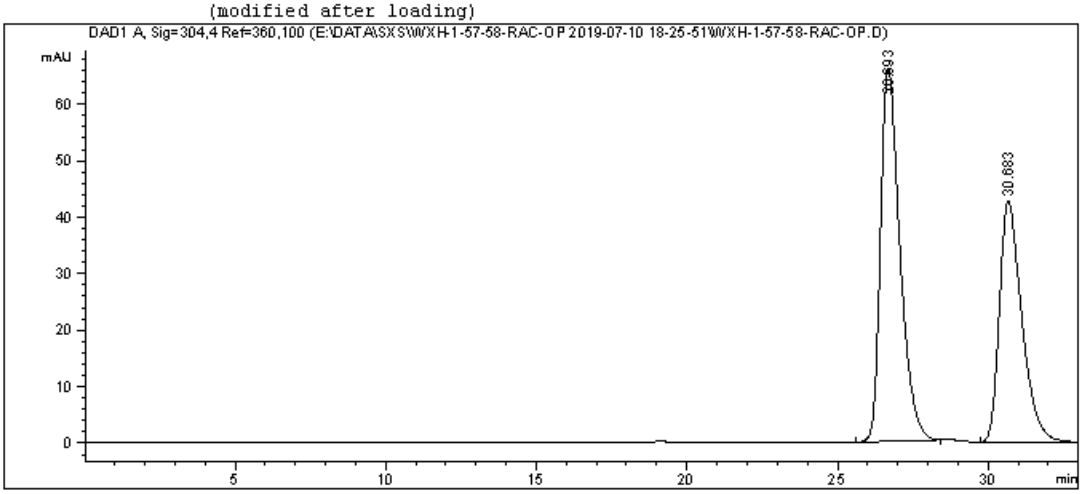

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  20.020 BB    0.6215  656.34778   13.46885   6.1171
       2  28.523 BB    0.9490 1.00734e4   154.64183  93.8829

    Totals :                  1.07297e4   168.11068

    ======================================================================
                              *** End of Report ***
```



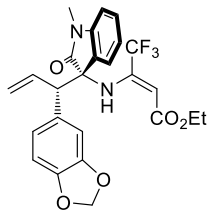
(*Rac*)-5i

Data File E:\DATA\SXS\WXH-1-57-58-RAC-OP 2019-07-10 18-25-51\WXH-1-57-58-RAC-OP.D
Sample Name: WXH-1-58-1-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                            Location :   11
    Injection Date  : 7/10/2019 6:27:16 PM                 Inj :   1
                                                   Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-57-58-RAC-OP 2019-07-10 18-25-51\IEH-95-5-304NM-3UL-
                      10MIN1.0ML.M
    Last changed    : 7/10/2019 6:59:10 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-57-58-RAC-OP 2019-07-10 18-25-51\IEH-95-5-304NM-3UL-
                      10MIN1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 8:01:35 AM by SYSTEM
                      (modified after loading)
```



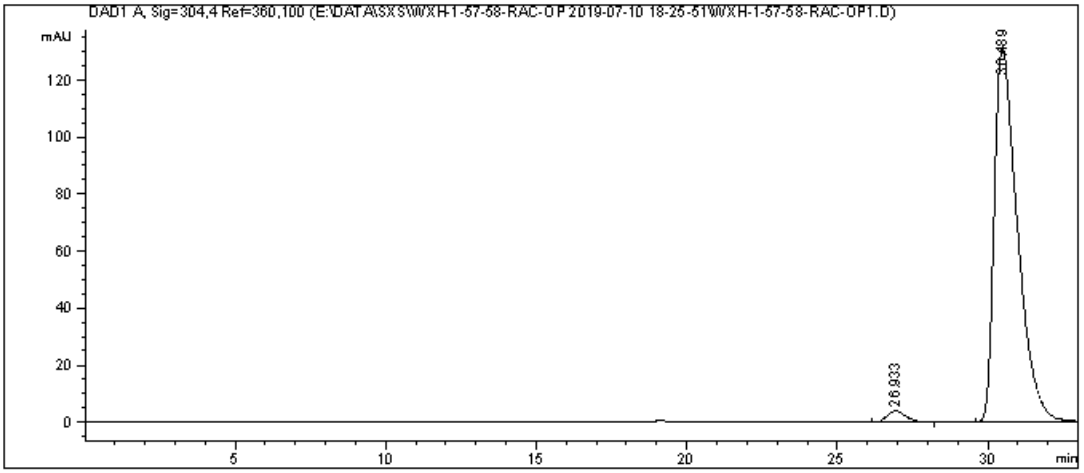

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  26.693 BB    0.6525 2957.78296   66.04889  57.3746
       2  30.683 BBA   0.7198 2197.42676   42.66912  42.6254

    Totals :                  5155.20972  108.71801

    ======================================================================
                            *** End of Report ***
```



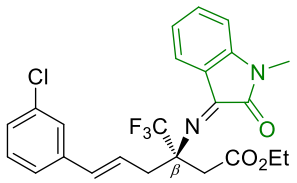
(*S*,*S*)-5i

Data File E:\DATA\SXS\WXH-1-57-58-RAC-OP 2019-07-10 18-25-51\WXH-1-57-58-RAC-OP1.D
Sample Name: WXH-1-57-1-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                              Location :   12
    Injection Date  : 7/10/2019 7:01:41 PM                  Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-57-58-RAC-OP 2019-07-10 18-25-51\IEH-95-5-304NM-3UL-
                      10MIN1.0ML.M
    Last changed    : 7/10/2019 6:59:10 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\WXH-1-57-58-RAC-OP 2019-07-10 18-25-51\IEH-95-5-304NM-3UL-
                      10MIN1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 8:01:35 AM by SYSTEM
                      (modified after loading)
```



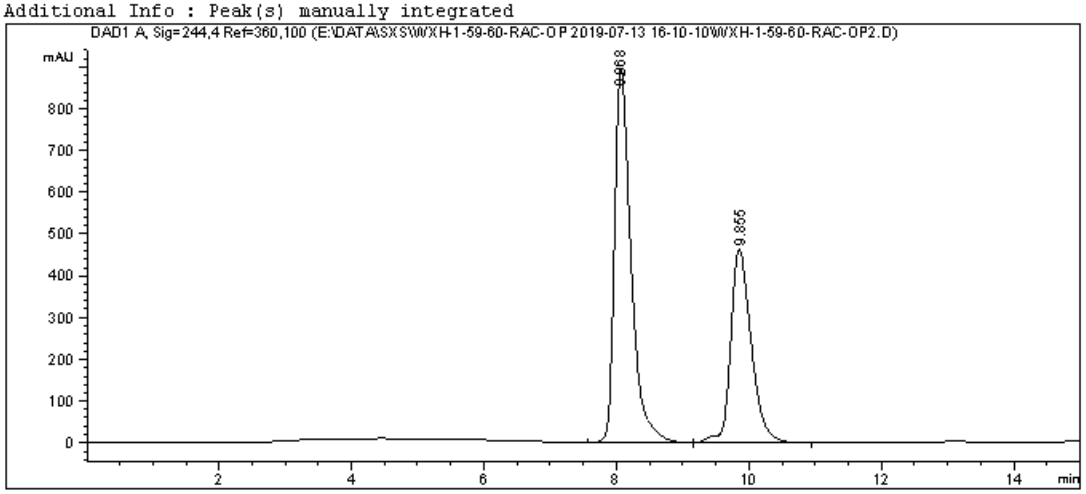

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  26.933 BB    0.5178  176.21460    4.00124   2.4461
       2  30.489 BBA   0.7773 7027.54932  131.11972  97.5539

    Totals :                  7203.76392  135.12096

    ======================================================================
                           *** End of Report ***
```



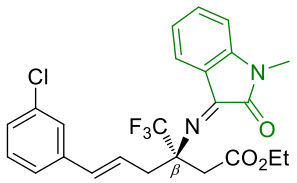
(*Rac*)-4j

Data File E:\DATA\SXS\WXH-1-59-60-RAC-OP 2019-07-13 16-10-10\WXH-1-59-60-RAC-OP2.D
Sample Name: WXH-1-60-2-RAC

```
==================================================================
Acq. Operator   : SYSTEM                        Seq. Line :   3
Acq. Instrument : 1260                           Location :   33
Injection Date  : 7/13/2019 5:14:41 PM               Inj :   1
                                                Inj Volume : 5.000 µl
Acq. Method     : E:\DATA\SXS\WXH-1-59-60-RAC-OP 2019-07-13 16-10-10\IDH-95-5-244NM-15MIN-3UL
                  -1.0ML.M
Last changed    : 7/13/2019 4:10:16 PM by SYSTEM
Analysis Method : E:\DATA\SXS\WXH-1-59-60-RAC-OP 2019-07-13 16-10-10\IDH-95-5-244NM-15MIN-3UL
                  -1.0ML.M (Sequence Method)
Last changed    : 5/1/2020 8:06:41 AM by SYSTEM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
```



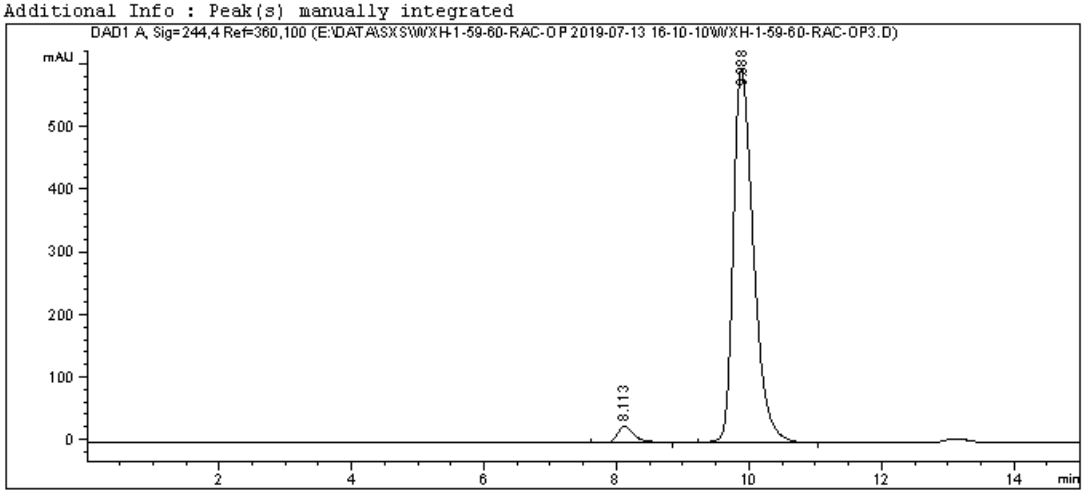

```
==================================================================
                      Area Percent Report
==================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: DAD1 A, Sig=244,4 Ref=360,100

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1   8.068 BB    0.2624 1.55235e4   894.97412  60.8736
   2   9.855 BB    0.3294 9977.70801  463.03397  39.1264

Totals :                  2.55012e4  1358.00809

==================================================================
                         *** End of Report ***
```



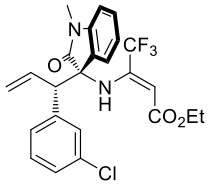
(*R*)-4j

Data File E:\DATA\SXS\WXH-1-59-60-RAC-OP 2019-07-13 16-10-10\WXH-1-59-60-RAC-OP3.D
Sample Name: WXH-1-59-2-OP-1

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   4
    Acq. Instrument : 1260                           Location :   34
    Injection Date  : 7/13/2019 5:31:09 PM               Inj :   1
                                                   Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-59-60-RAC-OP 2019-07-13 16-10-10\IDH-95-5-244NM-15MIN-3UL
                      -1.0ML.M
    Last changed    : 7/13/2019 4:10:16 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\WXH-1-59-60-RAC-OP 2019-07-13 16-10-10\IDH-95-5-244NM-15MIN-3UL
                      -1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 8:06:41 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



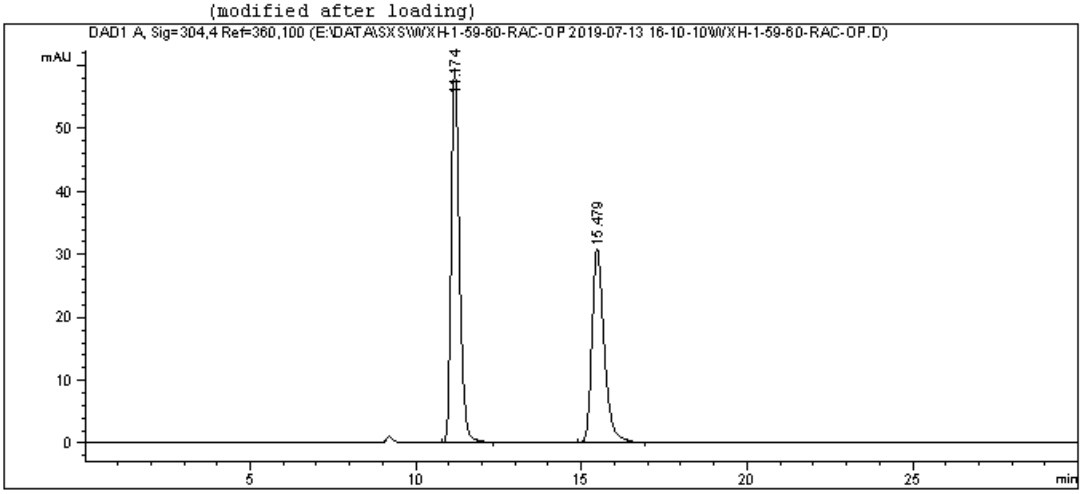

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   8.113 BB    0.2642  455.55429   25.77220   3.4733
       2   9.888 BB    0.3229 1.26604e4   598.28912  96.5267

    Totals :                   1.31160e4   624.06132


    ======================================================================
                              *** End of Report ***
```



(*Rac*)-5j

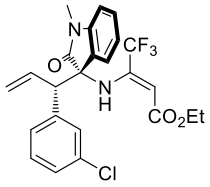
Data File E:\DATA\SXS\WXH-1-59-60-RAC-OP 2019-07-13 16-10-10\WXH-1-59-60-RAC-OP.D
Sample Name: WXH-1-60-1-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   31
    Injection Date  : 7/13/2019 4:11:44 PM                 Inj :   1
                                                     Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-59-60-RAC-OP 2019-07-13 16-10-10\IEH-95-5-304NM-3UL-
                      10MIN1.0ML.M
    Last changed    : 7/13/2019 4:11:54 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-59-60-RAC-OP 2019-07-13 16-10-10\IEH-95-5-304NM-3UL-
                      10MIN1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 8:06:19 AM by SYSTEM
                      (modified after loading)
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  11.174 BB    0.2676 1038.12683   59.47274  56.7270
       2  15.479 BB    0.3829  791.91187   30.70556  43.2730

    Totals :                  1830.03870   90.17830

    ======================================================================
                              *** End of Report ***
```

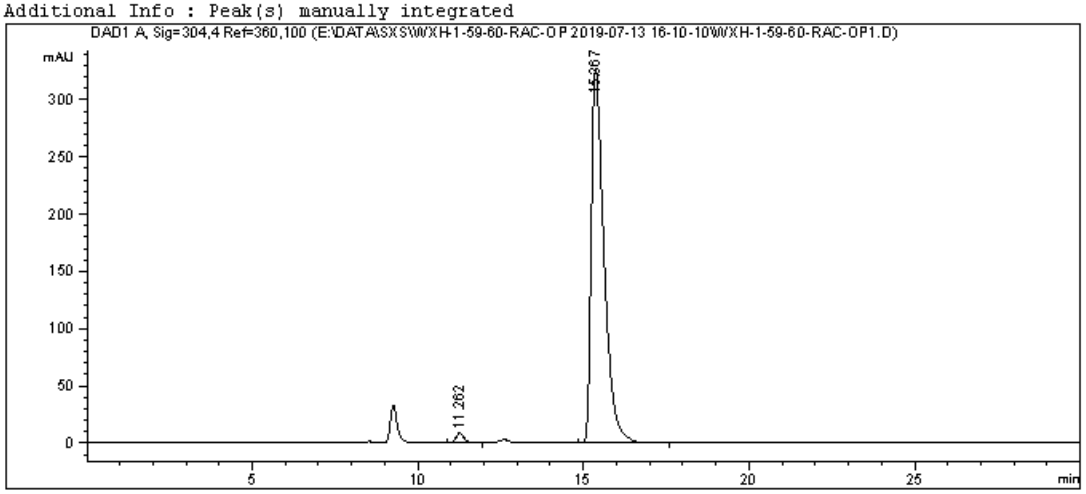
1260 5/1/2020 8:06:22 AM SYSTEM



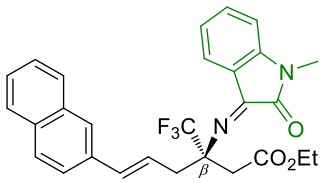
(*S*,*S*)-5j

Data File E:\DATA\SXS\WXH-1-59-60-RAC-OP 2019-07-13 16-10-10\WXH-1-59-60-RAC-OP1.D
Sample Name: WXH-1-59-1-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                              Location :   32
    Injection Date  : 7/13/2019 4:43:08 PM                  Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-59-60-RAC-OP 2019-07-13 16-10-10\IEH-95-5-304NM-3UL-
                      10MIN1.0ML.M
    Last changed    : 7/13/2019 4:11:54 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\WXH-1-59-60-RAC-OP 2019-07-13 16-10-10\IEH-95-5-304NM-3UL-
                      10MIN1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 8:06:19 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



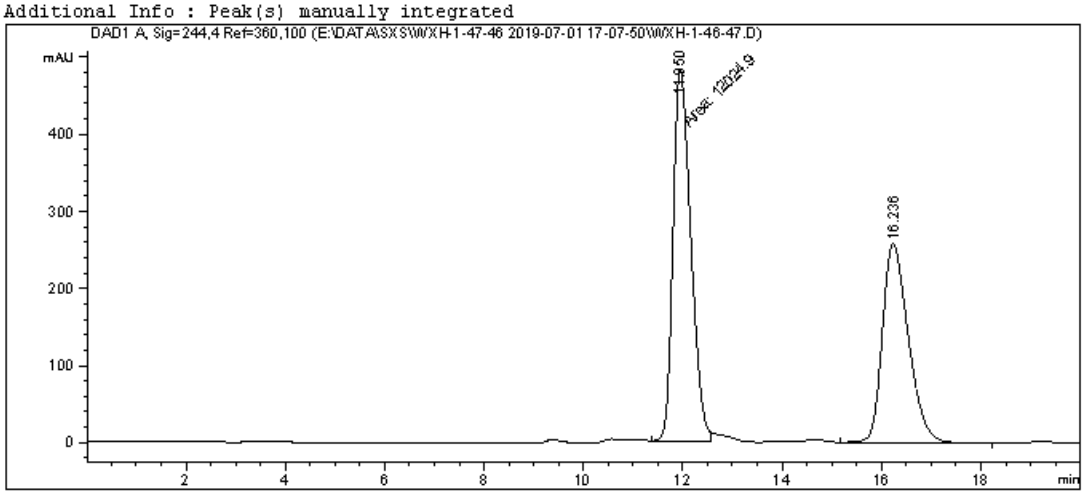

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  11.262 BB    0.2586  148.20619    8.66217   1.6492
       2  15.367 BB    0.4032 8838.26563  327.17953  98.3508

    Totals :                   8986.47182  335.84170

    ======================================================================
                              *** End of Report ***
```



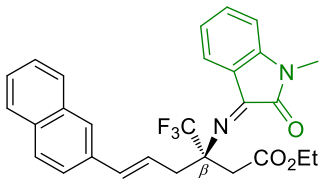
(*Rac*)-4k

Data File E:\DATA\SXS\WXH-1-47-46 2019-07-01 17-07-50\WXH-1-46-47.D
Sample Name: WXH-1-47-2-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   94
    Injection Date  : 7/1/2019 5:09:20 PM                  Inj :   1
                                                     Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\WHM\WXH-1-47-46 2019-07-01 17-07-50\IDH-95-5-244NM-15MIN-3UL-1.0ML.
                      M
    Last changed    : 7/1/2019 5:20:38 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-47-46 2019-07-01 17-07-50\IDH-95-5-244NM-15MIN-3UL-1.0ML.
                      M (Sequence Method)
    Last changed    : 5/1/2020 10:25:00 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



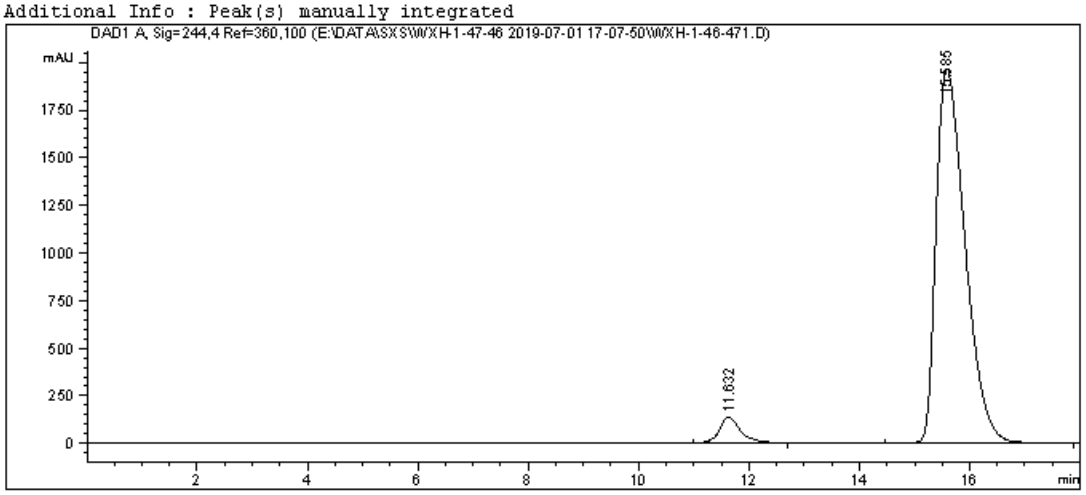

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  11.950 MF    0.4154 1.20249e4   482.44287  56.0731
       2  16.236 BB    0.5580 9420.13477  257.97562  43.9269

    Totals :                  2.14450e4   740.41849

    ======================================================================
                              *** End of Report ***
```



(*R*)-4k

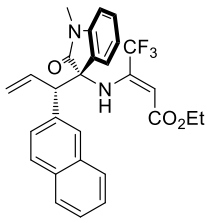
Data File E:\DATA\SXS\WXH-1-47-46 2019-07-01 17-07-50\WXH-1-46-471.D
Sample Name: WXH-1-46-2-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                            Location :   95
    Injection Date  : 7/1/2019 5:30:45 PM                  Inj :   1
                                                   Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\WHM\WXH-1-47-46 2019-07-01 17-07-50\IDH-95-5-244NM-15MIN-3UL-1.0ML.
                      M
    Last changed    : 7/1/2019 5:48:14 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-47-46 2019-07-01 17-07-50\IDH-95-5-244NM-15MIN-3UL-1.0ML.
                      M (Sequence Method)
    Last changed    : 5/1/2020 8:10:49 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  11.632 BB    0.4005 3804.52930  138.92293   5.0384
       2  15.585 BB    0.5745 7.17058e4  1966.00439  94.9616

    Totals :                  7.55103e4  2104.92732


    ======================================================================
                              *** End of Report ***
```

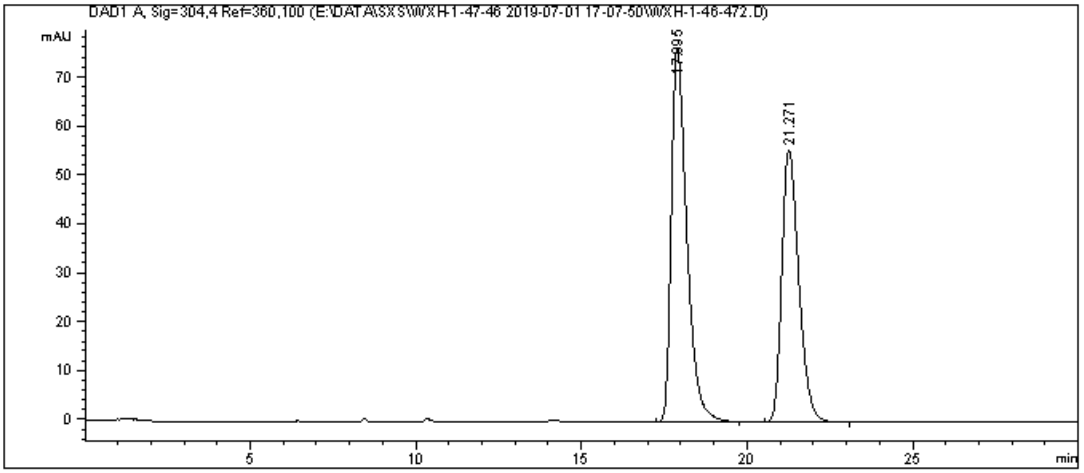
1260 5/1/2020 8:10:57 AM SYSTEM



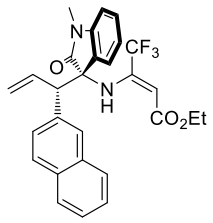
(*Rac*)-5k

Data File E:\DATA\SXS\WXH-1-47-46 2019-07-01 17-07-50\WXH-1-46-472.D
Sample Name: WXH-1-47-1-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   3
    Acq. Instrument : 1260                            Location :   92
    Injection Date  : 7/1/2019 5:50:17 PM                 Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\WHM\WXH-1-47-46 2019-07-01 17-07-50\IEH-95-5-304NM-3UL-10MIN1.0ML.M
    Last changed    : 7/1/2019 6:05:22 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-47-46 2019-07-01 17-07-50\IEH-95-5-304NM-3UL-10MIN1.0ML.M
                      (Sequence Method)
    Last changed    : 5/1/2020 8:11:11 AM by SYSTEM
                      (modified after loading)
```



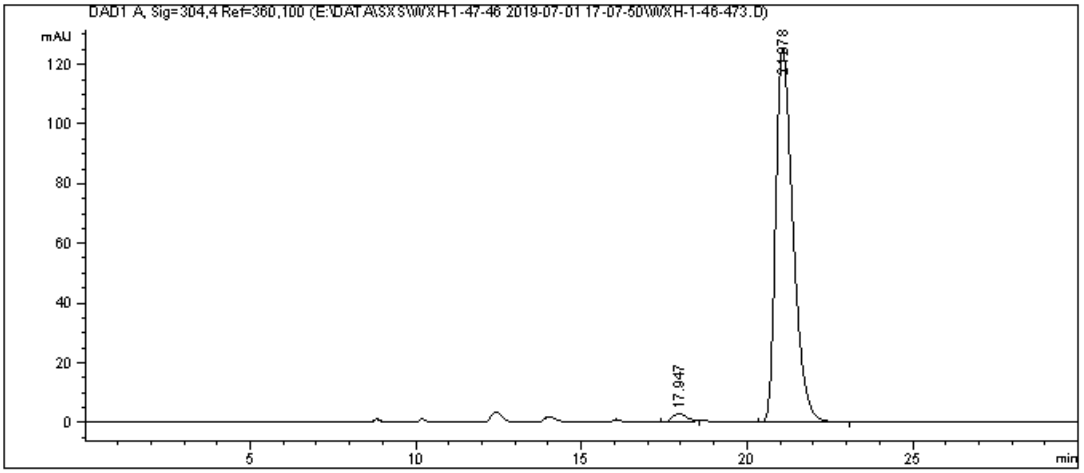

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  17.895 BB    0.4906 2492.41821   76.41087  55.6613
       2  21.271 BB    0.5353 1985.41235   55.63591  44.3387

    Totals :                  4477.83057  132.04678


    ======================================================================
                           *** End of Report ***
```



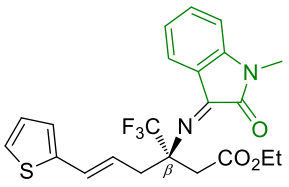
(*S*,*S*)-5k

Data File E:\DATA\SXS\WXH-1-47-46 2019-07-01 17-07-50\WXH-1-46-473.D
Sample Name: WXH-1-46-1-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   4
    Acq. Instrument : 1260                            Location :   93
    Injection Date  : 7/1/2019 6:21:48 PM                 Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\WHM\WXH-1-47-46 2019-07-01 17-07-50\IEH-95-5-304NM-3UL-10MIN1.0ML.M
    Last changed    : 7/1/2019 6:05:22 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\WXH-1-47-46 2019-07-01 17-07-50\IEH-95-5-304NM-3UL-10MIN1.0ML.M
                      (Sequence Method)
    Last changed    : 5/1/2020 8:11:11 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



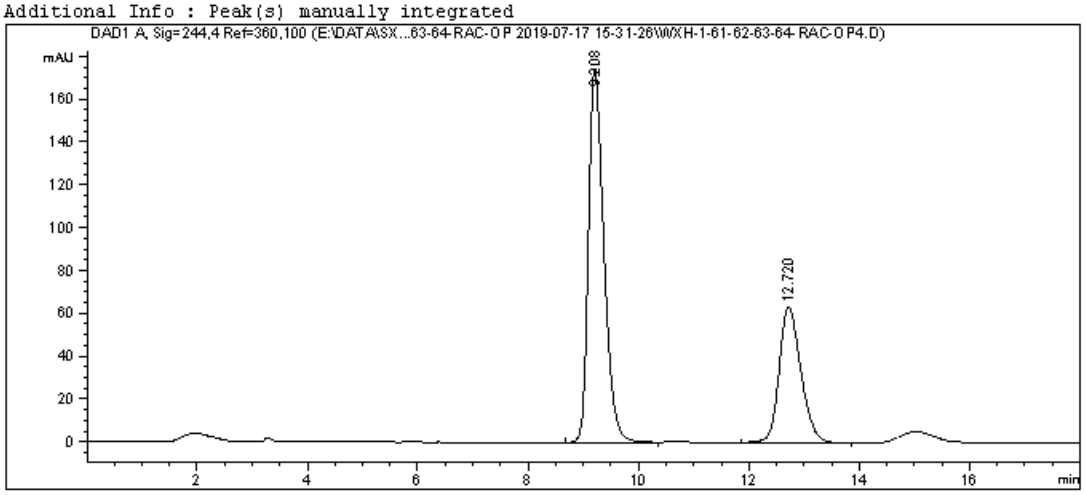

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  17.947 BB    0.3477   80.49585    2.76442   1.7330
       2  21.078 BB    0.5531 4564.34473  125.55520  98.2670

    Totals :                  4644.84058  128.31962

    ======================================================================
                            *** End of Report ***
```



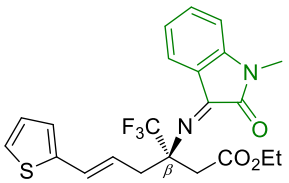
(*Rac*)-4l

Data File E:\DATA\SX...-61-62-63-64-RAC-OP 2019-07-17 15-31-26\WXH-1-61-62-63-64-RAC-OP4.D
Sample Name: WXH-1-64-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   5
    Acq. Instrument : 1260                             Location :   45
    Injection Date  : 7/17/2019 4:47:06 PM                 Inj :   1
                                                     Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-61-62-63-64-RAC-OP 2019-07-17 15-31-26\IDH-95-5-244NM-
                      15MIN-3UL-1.0ML.M
    Last changed    : 7/17/2019 5:04:11 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-61-62-63-64-RAC-OP 2019-07-17 15-31-26\IDH-95-5-244NM-
                      15MIN-3UL-1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 8:24:49 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



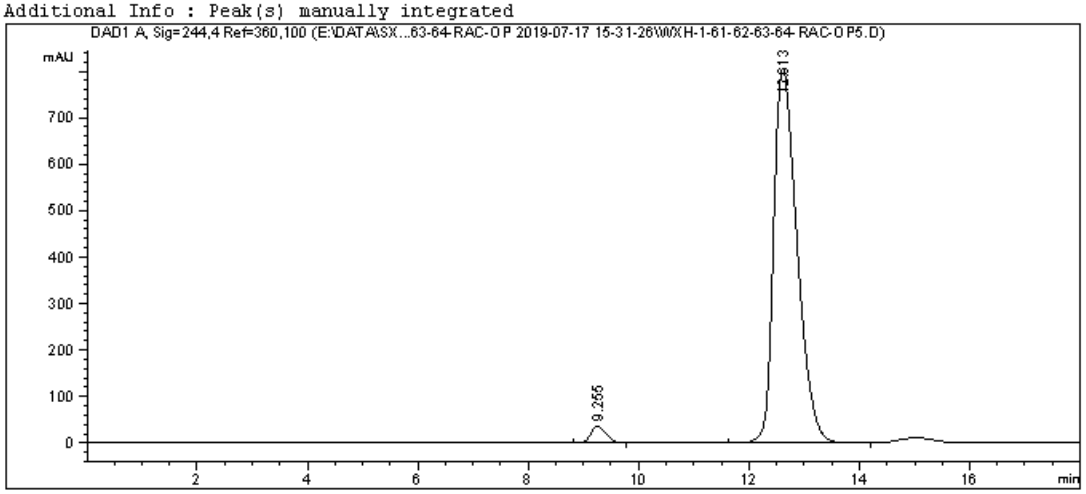

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   9.208 BB    0.2966 3405.18237  174.55240  66.1137
       2  12.720 BB    0.4185 1745.31531   63.73630  33.8863

    Totals :                  5150.49768  238.28870

    ======================================================================
                              *** End of Report ***
```



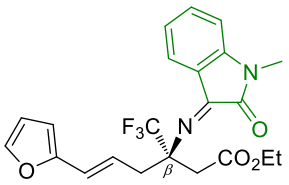
(*R*)-4l

Data File E:\DATA\SX...-61-62-63-64-RAC-OP 2019-07-17 15-31-26\WXH-1-61-62-63-64-RAC-OP5.D
Sample Name: WXH-1-63-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   6
    Acq. Instrument : 1260                            Location :   46
    Injection Date  : 7/17/2019 5:06:37 PM                 Inj :   1
                                                   Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-61-62-63-64-RAC-OP 2019-07-17 15-31-26\IDH-95-5-244NM-
                      15MIN-3UL-1.0ML.M
    Last changed    : 7/17/2019 5:04:11 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\WXH-1-61-62-63-64-RAC-OP 2019-07-17 15-31-26\IDH-95-5-244NM-
                      15MIN-3UL-1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 8:24:49 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



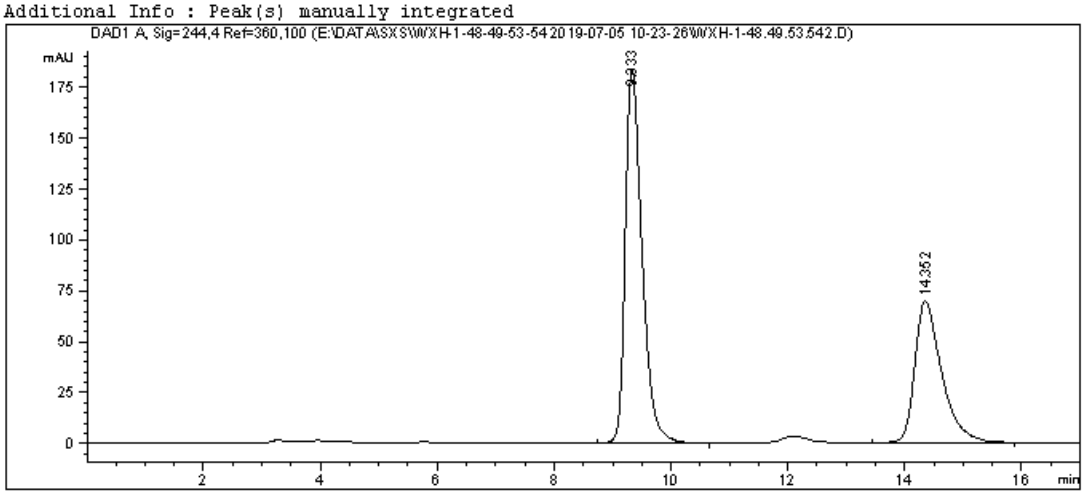

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   9.255 BB    0.2880  709.63965   37.28816   2.8989
       2  12.613 BB    0.4573 2.37696e4   805.39691  97.1011

    Totals :                  2.44793e4   842.68507


    ======================================================================
                              *** End of Report ***
```



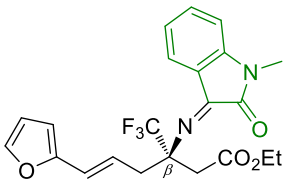
(***Rac***)-4m

Data File E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\WXH-1-48.49.53.542.D
Sample Name: WXH-1-49-2-RAC

```
    ==================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   3
    Acq. Instrument : 1260                          Location :   94
    Injection Date  : 7/5/2019 11:42:45 AM               Inj :   1
                                                   Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\IDH-95-5-244NM-15MIN-3UL-
                      1.0ML.M
    Last changed    : 7/5/2019 11:58:10 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\IDH-95-5-244NM-15MIN-3UL-
                      1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 8:18:08 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



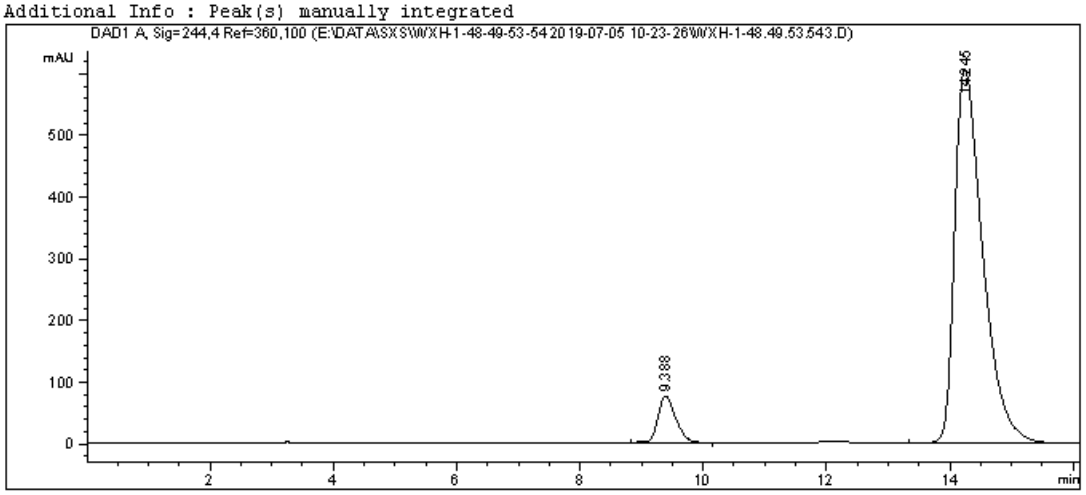

```
    ==================================================================
                          Area Percent Report
    ==================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   9.333 BB    0.2998 3673.32935  184.06982  62.2240
       2  14.352 BB    0.4702 2230.06812   69.71275  37.7760

    Totals :                  5903.39746  253.78257


    ==================================================================
                          *** End of Report ***
```



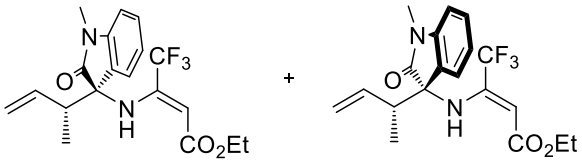
(*R*)-4m

Data File E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\WXH-1-48.49.53.543.D
Sample Name: WXH-1-48-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   4
    Acq. Instrument : 1260                            Location :   95
    Injection Date  : 7/5/2019 12:01:07 PM                 Inj :   1
                                                    Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\IDH-95-5-244NM-15MIN-3UL-
                      1.0ML.M
    Last changed    : 7/5/2019 12:17:14 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\WXH-1-48-49-53-54 2019-07-05 10-23-26\IDH-95-5-244NM-15MIN-3UL-
                      1.0ML.M (Sequence Method)
    Last changed    : 5/1/2020 8:18:08 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



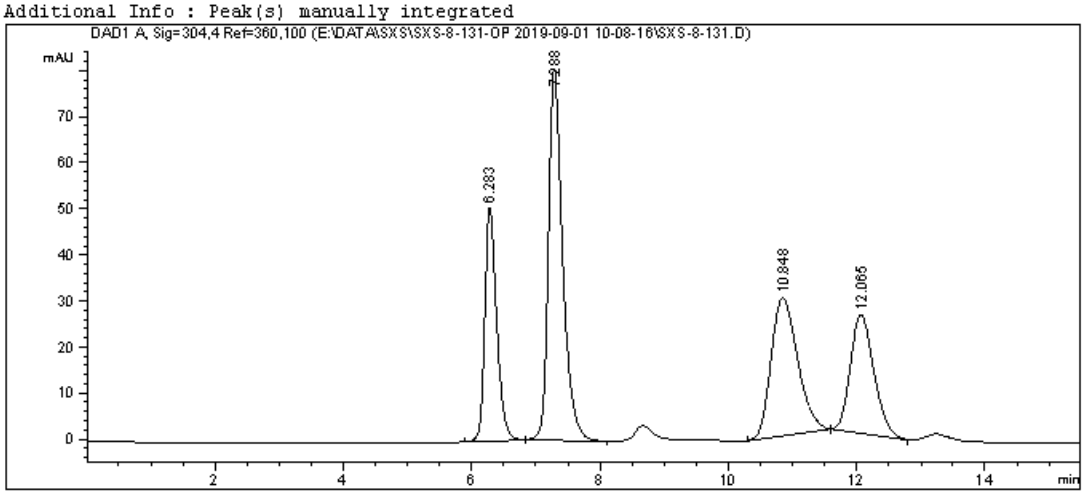

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   9.388 BB    0.3105 1553.29333   75.97486   7.4579
       2  14.245 BBA   0.4811 1.92742e4   607.58411  92.5421

    Totals :                  2.08275e4   683.55897

    ======================================================================
                              *** End of Report ***
```



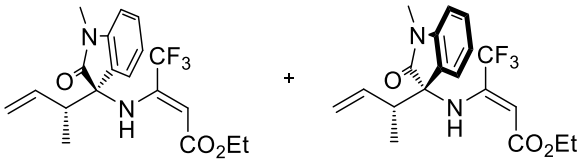
5n (minor + major)

Data File E:\DATA\SXS\SXS-8-131-OP 2019-09-01 10-08-16\SXS-8-131.D
Sample Name: WXH-1-62-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                            Location :   92
    Injection Date  : 9/1/2019 10:09:43 AM                 Inj :   1
                                                     Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-131-OP 2019-09-01 10-08-16\IDH-95-5-304NM-3UL-10MIN1.0ML.
                      M
    Last changed    : 9/1/2019 10:25:13 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-8-131-OP 2019-09-01 10-08-16\IDH-95-5-304NM-3UL-10MIN1.0ML.
                      M (Sequence Method)
    Last changed    : 5/1/2020 8:28:14 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



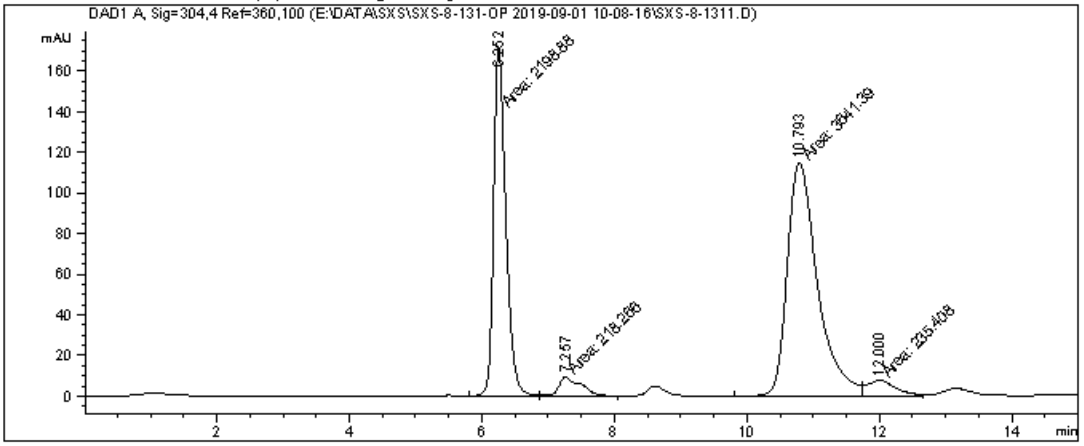

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.283 BB    0.1959  651.82239   50.74536  19.1742
       2   7.288 BB    0.2284 1232.36560   80.59422  36.2515
       3  10.848 BB    0.4295  860.33588   29.92016  25.3078
       4  12.065 BB    0.3803  654.96112   25.78964  19.2665

    Totals :                  3399.48499  187.04937
```



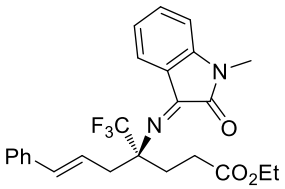
5n (minor + major)

Data File E:\DATA\SXS\SXS-8-131-OP 2019-09-01 10-08-16\SXS-8-1311.D
Sample Name: SXS-8-131-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                            Location :   93
    Injection Date  : 9/1/2019 10:26:39 AM                 Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-131-OP 2019-09-01 10-08-16\IDH-95-5-304NM-3UL-10MIN1.0ML.
                      M
    Last changed    : 9/1/2019 10:25:13 AM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-8-131-OP 2019-09-01 10-08-16\IDH-95-5-304NM-3UL-10MIN1.0ML.
                      M (Sequence Method)
    Last changed    : 7/23/2020 6:46:18 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



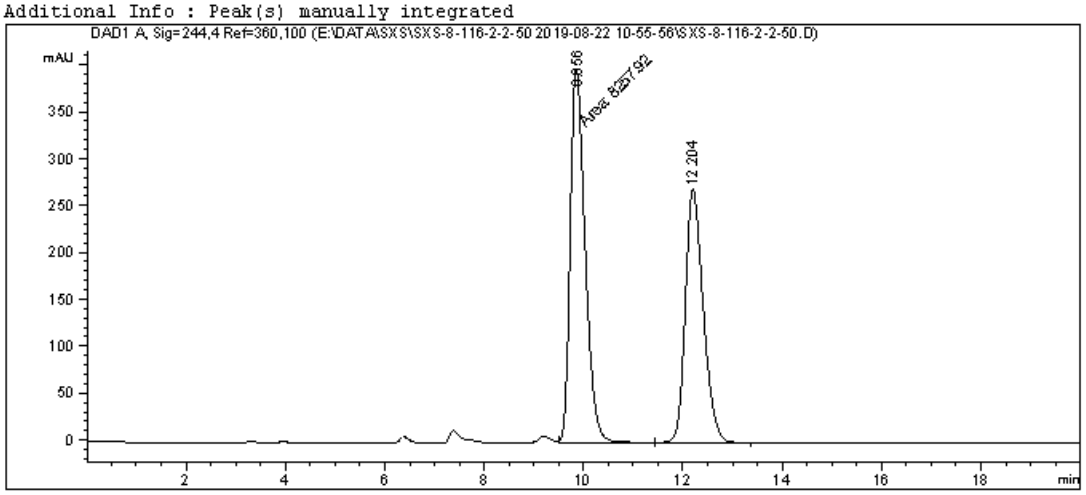

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.252 MF    0.2141 2198.88013  171.20700  34.9364
       2   7.257 FM    0.3870  218.26619    9.40071   3.4679
       3  10.793 FM    0.5288 3641.39038  114.76892  57.8555
       4  12.000 FM    0.5141  235.40793    7.63218   3.7402

    Totals :                  6293.94463  303.00882

    ======================================================================
                              *** End of Report ***
```



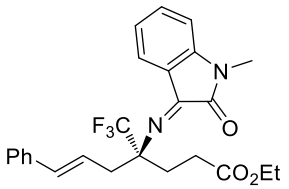
(*Rac*)-6a

Data File E:\DATA\SXS\SXS-8-116-2-2-50 2019-08-22 10-55-56\SXS-8-116-2-2-50.D
Sample Name: SXS-8-116-2-2-50

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   63
    Injection Date  : 8/22/2019 10:57:27 AM                 Inj :   1
                                                    Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-116-2-2-50 2019-08-22 10-55-56\IDH-95-5-244NM-30MIN-3UL-1
                      .OML.M
    Last changed    : 8/22/2019 10:56:26 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-8-116-2-2-50 2019-08-22 10-55-56\IDH-95-5-244NM-30MIN-3UL-1
                      .OML.M (Sequence Method)
    Last changed    : 5/1/2020 8:39:55 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



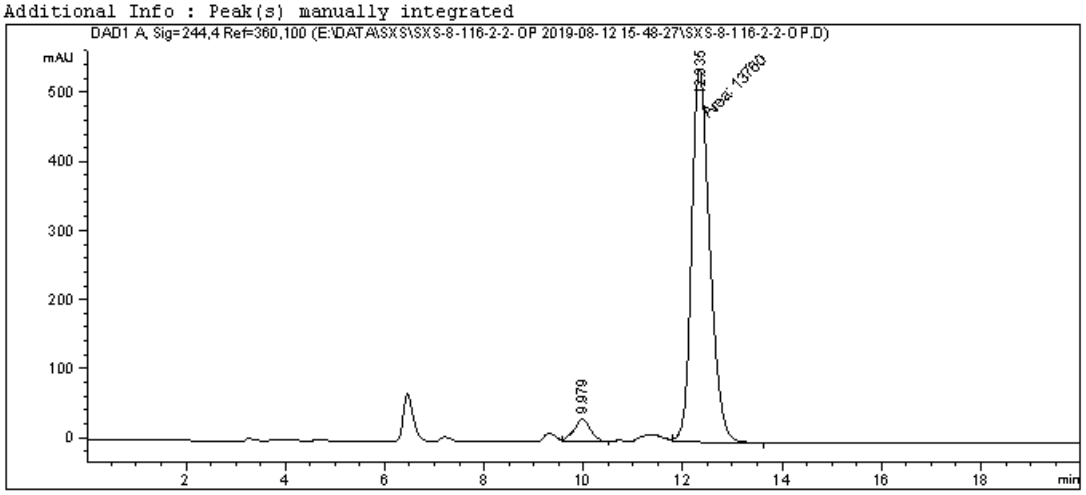

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   9.856 FM    0.3455 8257.92480  398.30194  54.9006
       2  12.204 BB    0.3792 6783.67188  269.91629  45.0994

    Totals :                  1.50416e4   668.21823

    ======================================================================
                              *** End of Report ***
```



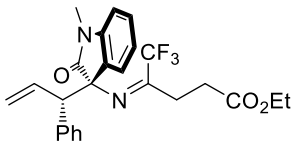
(*S*)-6a

Data File E:\DATA\SXS\SXS-8-116-2-2-OP 2019-08-12 15-48-27\SXS-8-116-2-2-OP.D
Sample Name: SXS-8-116-2-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   63
    Injection Date  : 8/12/2019 3:50:01 PM                  Inj :   1
                                                    Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-116-2-2-OP 2019-08-12 15-48-27\IDH-95-5-244NM-30MIN-3UL-1
                      .OML.M
    Last changed    : 8/12/2019 3:49:35 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-8-116-2-2-OP 2019-08-12 15-48-27\IDH-95-5-244NM-30MIN-3UL-1
                      .OML.M (Sequence Method)
    Last changed    : 5/1/2020 8:39:33 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



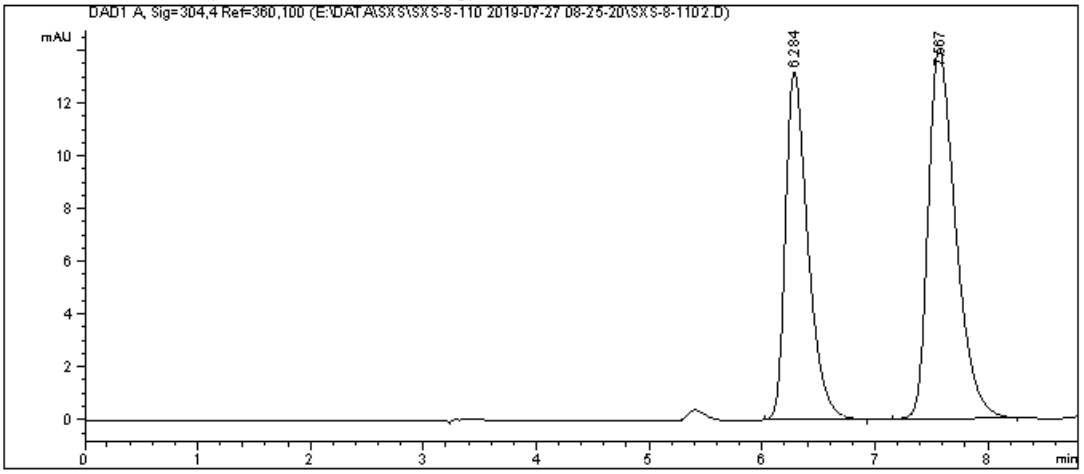

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=244,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   9.979 VB    0.3426  766.76849   32.70149   5.2783
       2  12.335 FM    0.4238 1.37600e4   541.08447  94.7217

    Totals :                  1.45268e4   573.78596

    ======================================================================
                              *** End of Report ***

1260 5/1/2020 8:39:36 AM SYSTEM                                Page 1 of 1
```



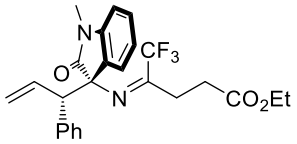
(*Rac*)-7a

Data File E:\DATA\SXS\SXS-8-110 2019-07-27 08-25-20\SXS-8-1102.D
Sample Name: WXH-1-69-1-2-RAC

```
    ====================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   3
    Acq. Instrument : 1260                           Location :   94
    Injection Date  : 7/27/2019 9:29:34 AM               Inj :   1
                                                   Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-110 2019-07-27 08-25-20\IEH-95-5-304NM-3UL-30MIN1.0ML.M
    Last changed    : 7/27/2019 8:25:21 AM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-8-110 2019-07-27 08-25-20\IEH-95-5-304NM-3UL-30MIN1.0ML.M (
                      Sequence Method)
    Last changed    : 5/4/2020 4:07:02 PM by SYSTEM
                      (modified after loading)
```



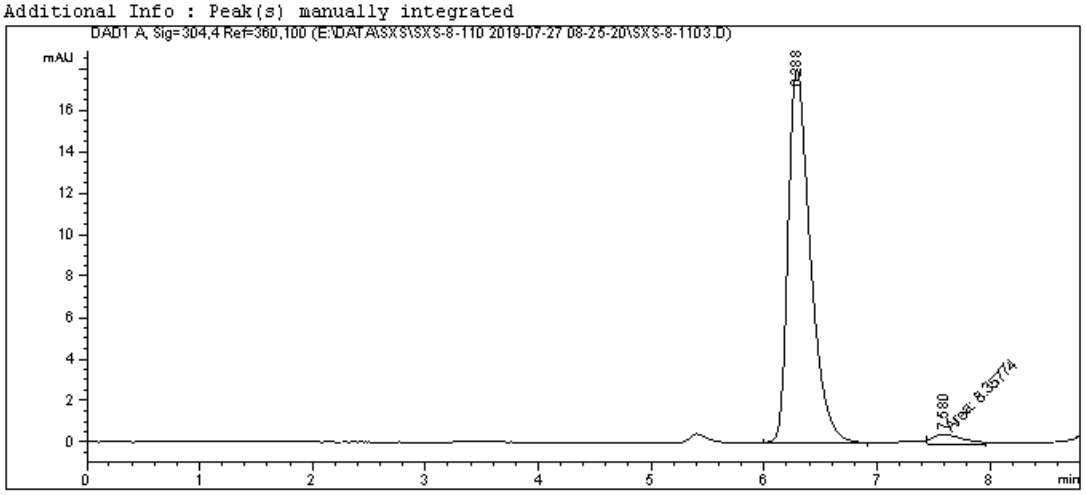

```
    ====================================================================
                           Area Percent Report
    ====================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.284 BB    0.2069  181.77576   13.17869  43.2828
       2   7.567 BB    0.2518  238.19666   14.04922  56.7172

    Totals :                    419.97241   27.22791


    ====================================================================
                             *** End of Report ***
```



(*S*,*S*)-7a

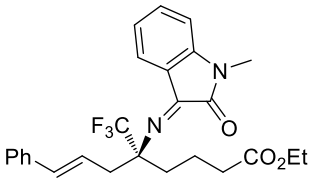
Data File E:\DATA\SXS\SXS-8-110 2019-07-27 08-25-20\SXS-8-1103.D
Sample Name: SXS-8-110-1-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   4
    Acq. Instrument : 1260                             Location :   95
    Injection Date  : 7/27/2019 10:00:59 AM                 Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-110 2019-07-27 08-25-20\IEH-95-5-304NM-3UL-30MIN1.0ML.M
    Last changed    : 7/27/2019 8:25:21 AM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-8-110 2019-07-27 08-25-20\IEH-95-5-304NM-3UL-30MIN1.0ML.M (
                      Sequence Method)
    Last changed    : 5/4/2020 4:07:02 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=304,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.288 BB    0.2047  245.20273   18.02160  96.7038
       2   7.580 MM    0.3017    8.35774 4.61753e-1   3.2962

    Totals :                   253.56047   18.48335


    ======================================================================
                              *** End of Report ***
```

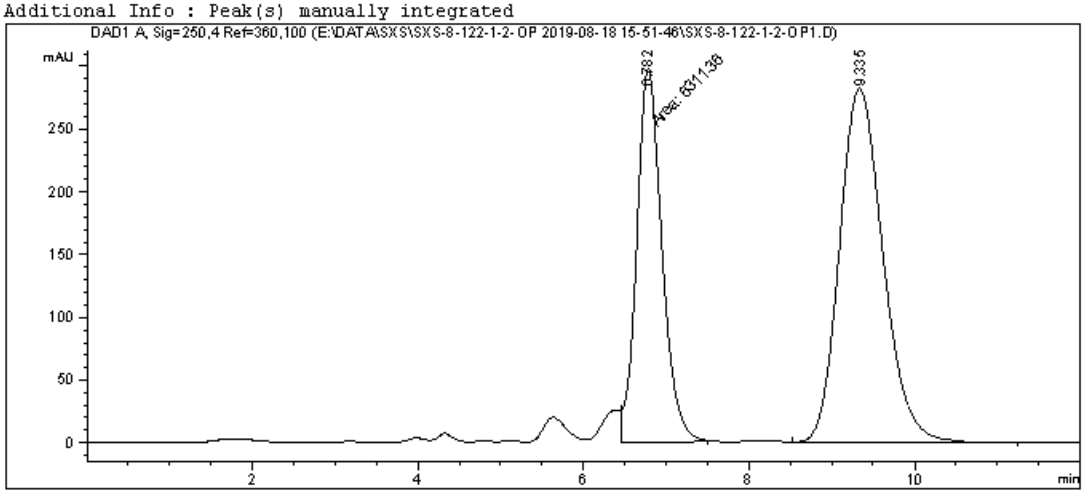
1260 5/4/2020 4:07:09 PM SYSTEM



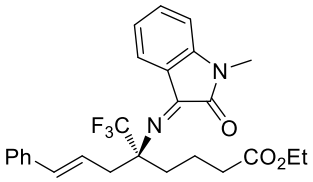
(*Rac*)-6b

Data File E:\DATA\SXS\SXS-8-122-1-2-OP 2019-08-18 15-51-46\SXS-8-122-1-2-OP1.D
Sample Name: SXS-8-115-1-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                             Location :   92
    Injection Date  : 8/18/2019 4:06:49 PM                  Inj :   1
                                                    Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-122-1-2-OP 2019-08-18 15-51-46\ASH-95-5250NM-1.0ML-5uL-
                      10MIN.M
    Last changed    : 8/18/2019 3:58:43 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-8-122-1-2-OP 2019-08-18 15-51-46\ASH-95-5250NM-1.0ML-5uL-
                      10MIN.M (Sequence Method)
    Last changed    : 5/1/2020 8:49:30 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



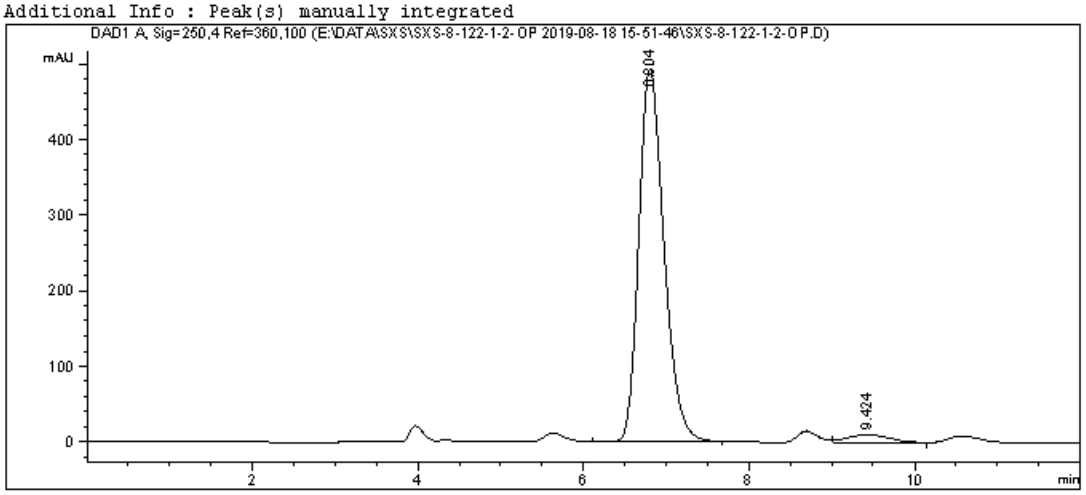

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=250,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.782 FM    0.3526 6311.35889  298.32635  38.0827
       2   9.335 BB    0.5526 1.02614e4   281.96475  61.9173

    Totals :                   1.65728e4   580.29111

    ======================================================================
                              *** End of Report ***
```



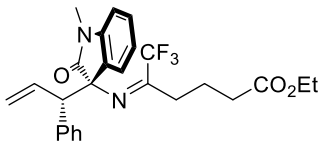
(*S*)-6b

Data File E:\DATA\SXS\SXS-8-122-1-2-OP 2019-08-18 15-51-46\SXS-8-122-1-2-OP.D
Sample Name: SXS-8-122-1-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   100
    Injection Date  : 8/18/2019 3:53:26 PM                  Inj :   1
                                                    Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-122-1-2-OP 2019-08-18 15-51-46\ASH-95-5250NM-1.0ML-5uL-
                      10MIN.M
    Last changed    : 8/18/2019 3:58:43 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-8-122-1-2-OP 2019-08-18 15-51-46\ASH-95-5250NM-1.0ML-5uL-
                      10MIN.M (Sequence Method)
    Last changed    : 5/1/2020 8:49:30 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



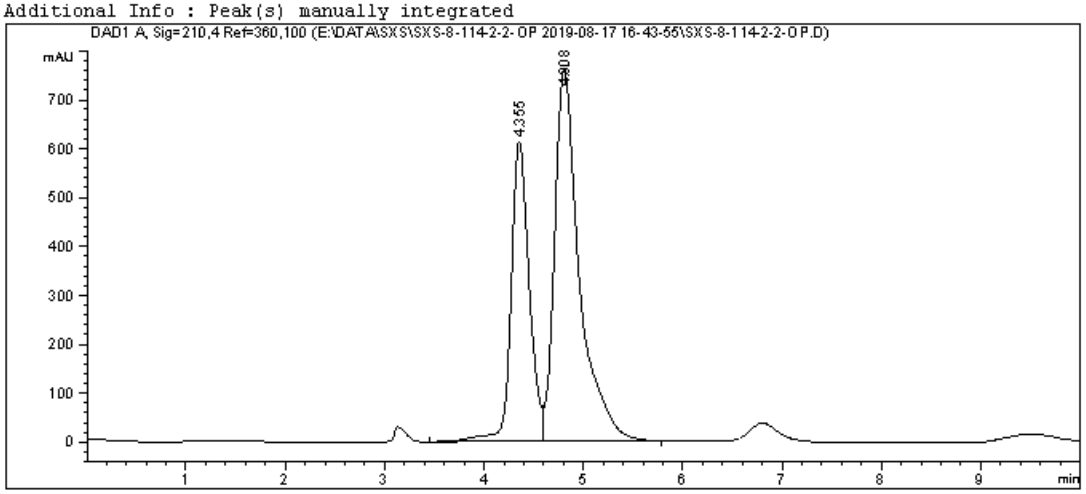

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=250,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.804 BB    0.3239 1.03979e4   493.23367  96.4223
       2   9.424 VB    0.4266  385.80493   11.12383   3.5777

    Totals :                   1.07837e4   504.35750

    ======================================================================
                              *** End of Report ***
```



(*Rac*)-7b

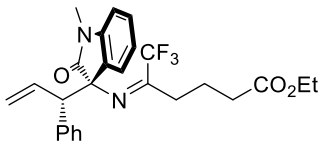
Data File E:\DATA\SXS\SXS-8-114-2-2-OP 2019-08-17 16-43-55\SXS-8-114-2-2-OP.D
Sample Name: SXS-8-115-2-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   94
    Injection Date  : 8/17/2019 4:45:20 PM                 Inj :   1
                                                   Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-114-2-2-OP 2019-08-17 16-43-55\ASH-95-5-210NM-1.0ML-5uL-
                      10MIN.M
    Last changed    : 8/17/2019 4:43:56 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-8-114-2-2-OP 2019-08-17 16-43-55\ASH-95-5-210NM-1.0ML-5uL-
                      10MIN.M (Sequence Method)
    Last changed    : 5/1/2020 8:54:28 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=210,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   4.355 BV    0.1919 7771.95166  612.90350  36.9750
       2   4.808 VB    0.2557 1.32475e4   762.38702  63.0250

    Totals :                   2.10195e4  1375.29053


    ======================================================================
                              *** End of Report ***
```

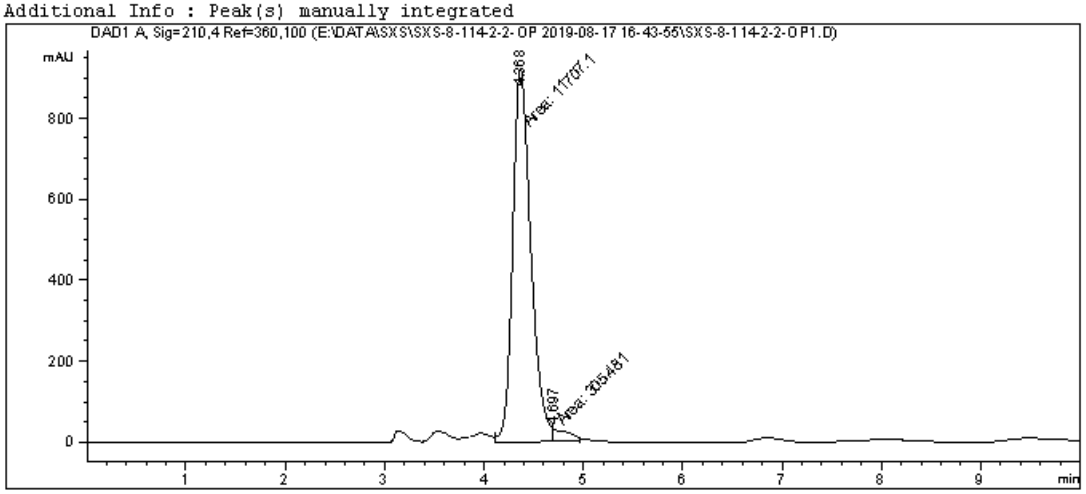
1260 5/1/2020 8:54:35 AM SYSTEM



(*S*,*S*)-7b

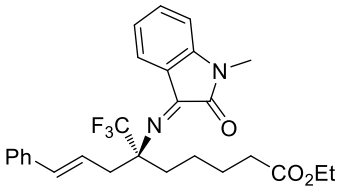
Data File E:\DATA\SXS\SXS-8-114-2-2-OP 2019-08-17 16-43-55\SXS-8-114-2-2-OP1.D
Sample Name: SXS-8-114-2-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                              Location :   95
    Injection Date  : 8/17/2019 4:56:53 PM                  Inj :   1
                                                    Inj Volume : 5.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-114-2-2-OP 2019-08-17 16-43-55\ASH-95-5-210NM-1.0ML-5uL-
                      10MIN.M
    Last changed    : 8/17/2019 4:43:56 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-8-114-2-2-OP 2019-08-17 16-43-55\ASH-95-5-210NM-1.0ML-5uL-
                      10MIN.M (Sequence Method)
    Last changed    : 5/1/2020 8:54:28 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=210,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   4.368 MF    0.2116 1.17071e4   921.96661  97.4570
       2   4.697 FM    0.1677  305.48102   30.36709   2.5430

    Totals :                   1.20126e4   952.33371


    ======================================================================
                            *** End of Report ***
```

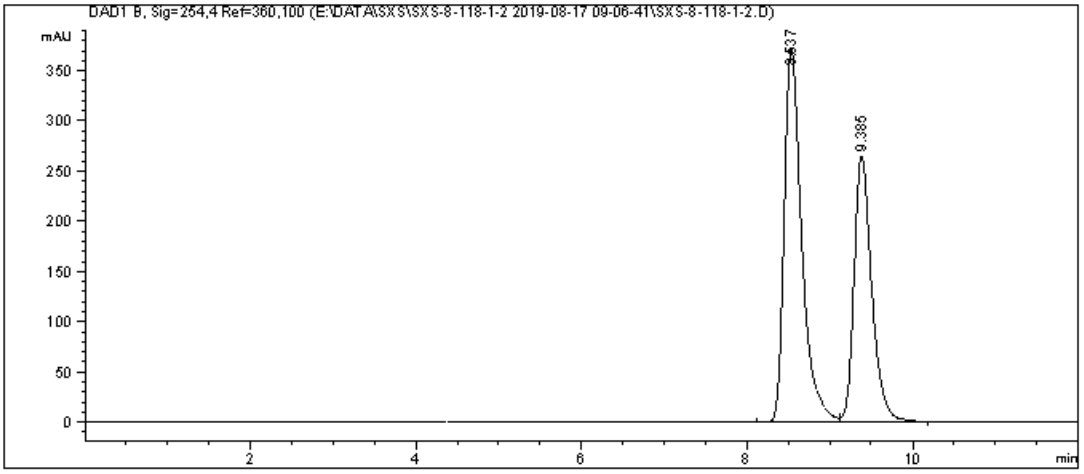
1260 5/1/2020 8:54:32 AM SYSTEM



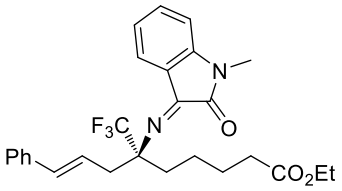
(*Rac*)-6c

Data File E:\DATA\SXS\SXS-8-118-1-2 2019-08-17 09-06-41\SXS-8-118-1-2.D
Sample Name: SXS-8-119-1-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   96
    Injection Date  : 8/17/2019 9:08:12 AM                  Inj :   1
                                                     Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-118-1-2 2019-08-17 09-06-41\IE-95-5-3UL-15MIN-254NM.M
    Last changed    : 8/17/2019 9:18:33 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-8-118-1-2 2019-08-17 09-06-41\IE-95-5-3UL-15MIN-254NM.M (
                      Sequence Method)
    Last changed    : 5/1/2020 8:46:30 AM by SYSTEM
                      (modified after loading)
```



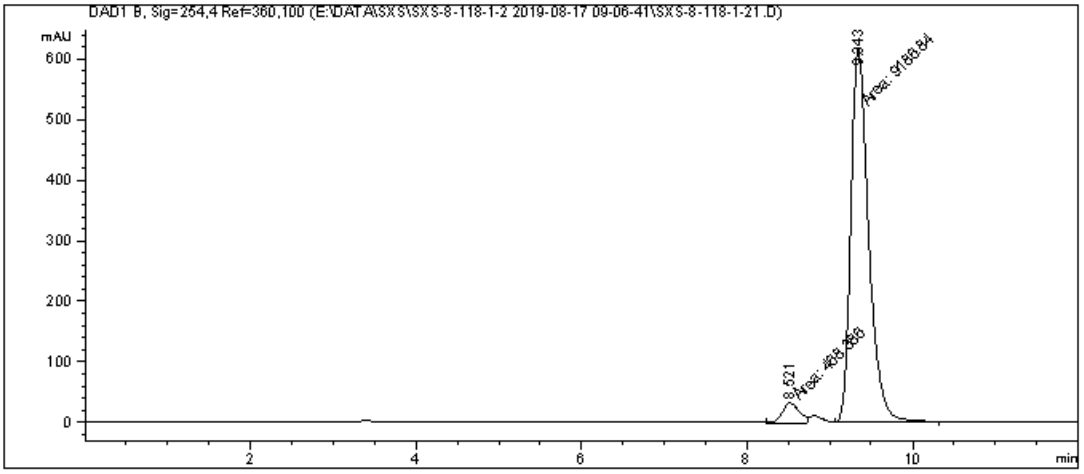

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 B, Sig=254,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   8.537 BV    0.2219 5491.24463  372.75156  58.4058
       2   9.385 VB    0.2231 3910.64111  265.02716  41.5942

    Totals :                   9401.88574  637.77872


    ======================================================================
                            *** End of Report ***
```



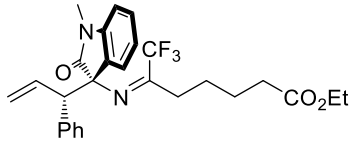
(*S*)-6c

Data File E:\DATA\SXS\SXS-8-118-1-2 2019-08-17 09-06-41\SXS-8-118-1-21.D
Sample Name: SXS-8-118-1-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                           Location :   97
    Injection Date  : 8/17/2019 9:21:40 AM                Inj :   1
                                                   Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-118-1-2 2019-08-17 09-06-41\IE-95-5-3UL-15MIN-254NM.M
    Last changed    : 8/17/2019 9:18:33 AM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-8-118-1-2 2019-08-17 09-06-41\IE-95-5-3UL-15MIN-254NM.M (
                      Sequence Method)
    Last changed    : 5/1/2020 8:46:30 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



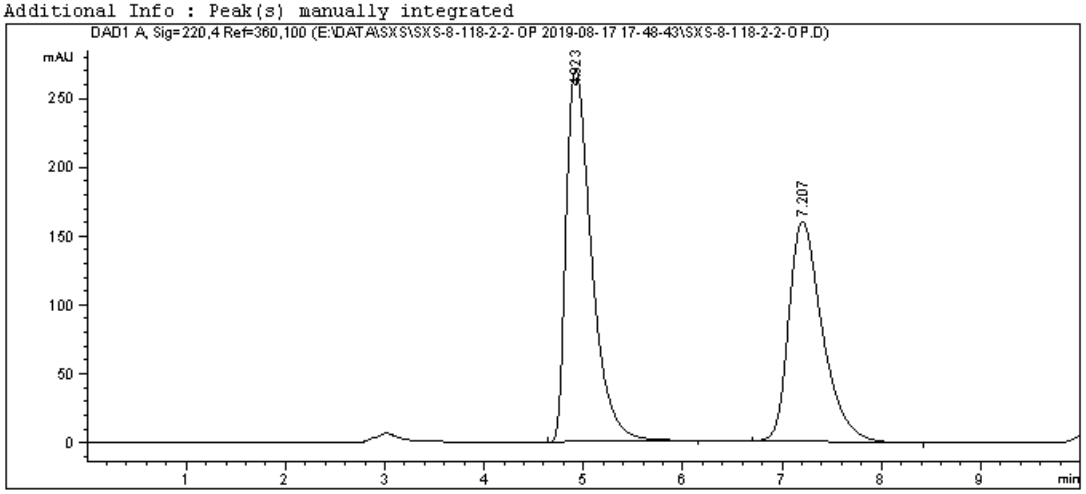

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 B, Sig=254,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   8.521 MF    0.2383  468.38580   32.76171   4.8511
       2   9.343 FM    0.2479 9186.84082  617.76624  95.1489

    Totals :                   9655.22662  650.52795


    ======================================================================
                            *** End of Report ***
```



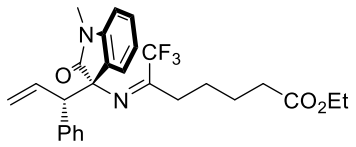
(*Rac*)-7c

Data File E:\DATA\SXS\SXS-8-118-2-2-OP 2019-08-17 17-48-43\SXS-8-118-2-2-OP.D
Sample Name: SXS-8-119-2-2-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                            Location :   98
    Injection Date  : 8/17/2019 5:50:16 PM                 Inj :   1
                                                   Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-118-2-2-OP 2019-08-17 17-48-43\ADH-95-5-220NM-3UL-1.0ML-
                      10MIN.M
    Last changed    : 8/17/2019 5:48:44 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-8-118-2-2-OP 2019-08-17 17-48-43\ADH-95-5-220NM-3UL-1.0ML-
                      10MIN.M (Sequence Method)
    Last changed    : 5/1/2020 8:44:48 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



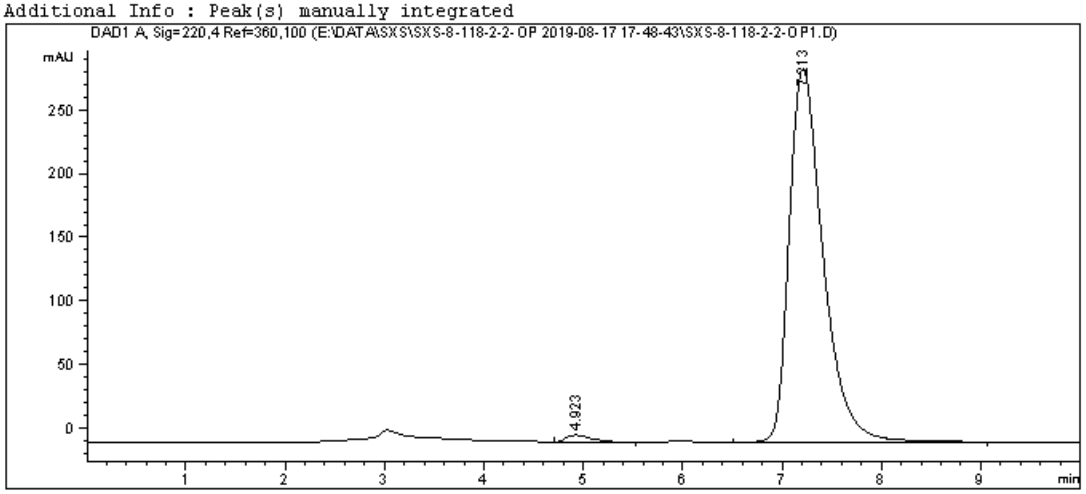

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=220,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   4.923 BB    0.2727 4805.70361  271.19501  56.1714
       2   7.207 BB    0.3585 3749.72949  159.96295  43.8286

    Totals :                   8555.43311  431.15796


    ======================================================================
                            *** End of Report ***

1260 5/1/2020 8:44:51 AM SYSTEM                              Page 1 of 1
```



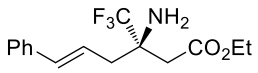
(*S*,*S*)-7c

Data File E:\DATA\SXS\SXS-8-118-2-2-OP 2019-08-17 17-48-43\SXS-8-118-2-2-OP1.D
Sample Name: SXS-8-118-2-2-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                             Location :   99
    Injection Date  : 8/17/2019 6:01:48 PM                 Inj :   1
                                                   Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-118-2-2-OP 2019-08-17 17-48-43\ADH-95-5-220NM-3UL-1.0ML-
                      10MIN.M
    Last changed    : 8/17/2019 5:48:44 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-8-118-2-2-OP 2019-08-17 17-48-43\ADH-95-5-220NM-3UL-1.0ML-
                      10MIN.M (Sequence Method)
    Last changed    : 5/1/2020 8:44:48 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



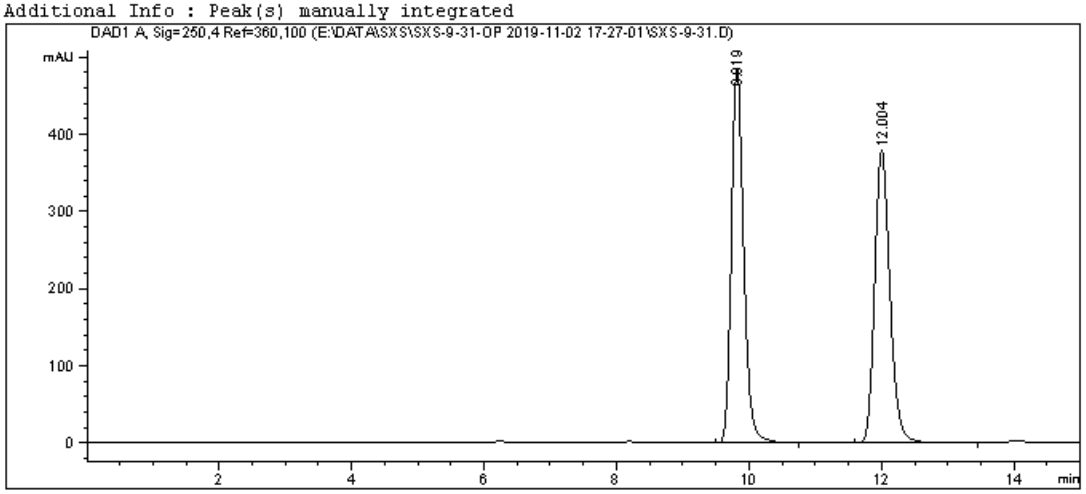

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=220,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   4.923 BB    0.2498   94.48800    5.46221   1.3309
       2   7.213 BB    0.3627 7005.08936  294.26187  98.6691

    Totals :                   7099.57735  299.72408


    ======================================================================
                              *** End of Report ***
```



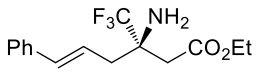
(*Rac*)-9

Data File E:\DATA\SXS\SXS-9-31-OP 2019-11-02 17-27-01\SXS-9-31.D
Sample Name: SXS-9-37-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   1
    Acq. Instrument : 1260                          Location :   21
    Injection Date  : 11/2/2019 5:28:29 PM               Inj :   1
                                                  Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-9-31-OP 2019-11-02 17-27-01\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M
    Last changed    : 11/2/2019 5:27:02 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-9-31-OP 2019-11-02 17-27-01\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M (Sequence Method)
    Last changed    : 5/1/2020 12:56:04 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



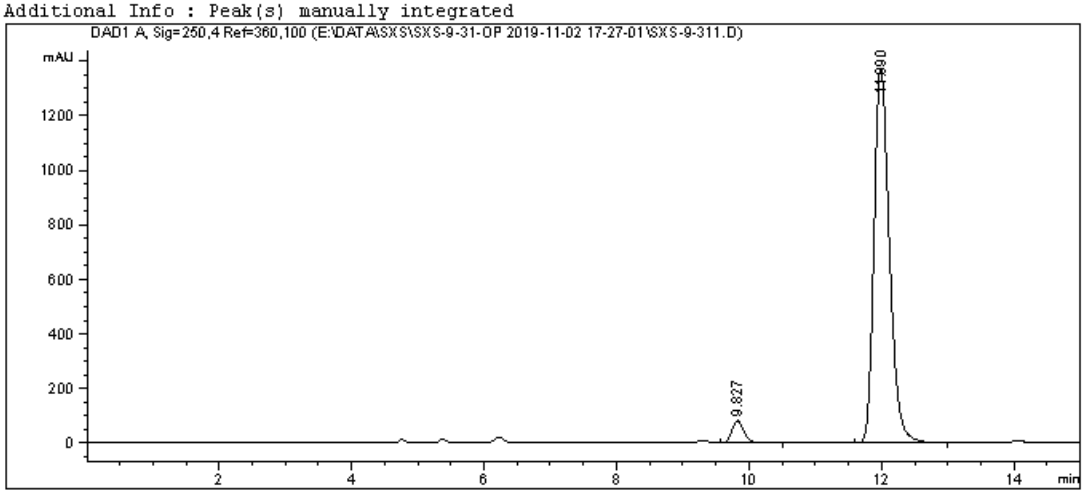

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=250,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   9.819 BB    0.1993 6284.14014  484.58743  50.9466
       2  12.004 BB    0.2456 6050.62158  378.39807  49.0534

    Totals :                  1.23348e4   862.98550


    ======================================================================
                            *** End of Report ***
```



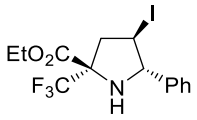
(*R*)-9

Data File E:\DATA\SXS\SXS-9-31-OP 2019-11-02 17-27-01\SXS-9-311.D
Sample Name: SXS-9-31-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   2
    Acq. Instrument : 1260                          Location :   22
    Injection Date  : 11/2/2019 5:44:53 PM               Inj :   1
                                                  Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-9-31-OP 2019-11-02 17-27-01\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M
    Last changed    : 11/2/2019 5:27:02 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-9-31-OP 2019-11-02 17-27-01\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M (Sequence Method)
    Last changed    : 5/1/2020 12:56:04 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



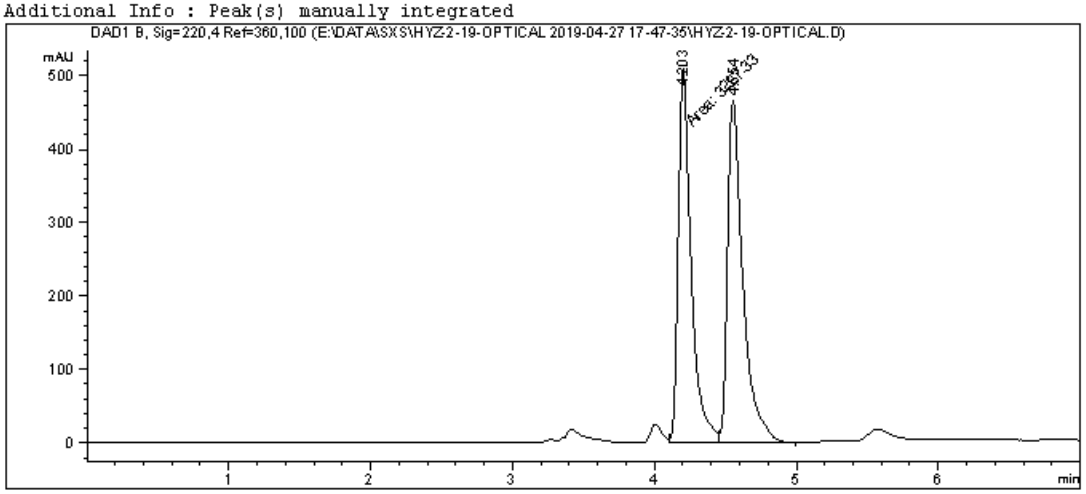

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=250,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   9.827 VB    0.1988 1044.92651   80.81761   4.5115
       2  11.990 BB    0.2480 2.21166e4  1372.34082  95.4885

    Totals :                  2.31615e4  1453.15843


    ======================================================================
                            *** End of Report ***
```



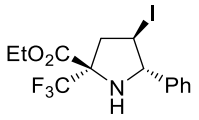
(*Rac*)-10

Data File E:\DATA\SXS\HYZ-2-19-OPTICAL 2019-04-27 17-47-35\HYZ-2-19-OPTICAL.D
Sample Name: SXS-8-23-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   61
    Injection Date  : 4/27/2019 5:49:02 PM                 Inj :   1
                                                   Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-2-19-OPTICAL 2019-04-27 17-47-35\IE-95-5-3UL-10MIN-220NM.M
    Last changed    : 4/27/2019 5:55:33 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\HYZ-2-19-OPTICAL 2019-04-27 17-47-35\IE-95-5-3UL-10MIN-220NM.M
                      (Sequence Method)
    Last changed    : 5/1/2020 12:35:52 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



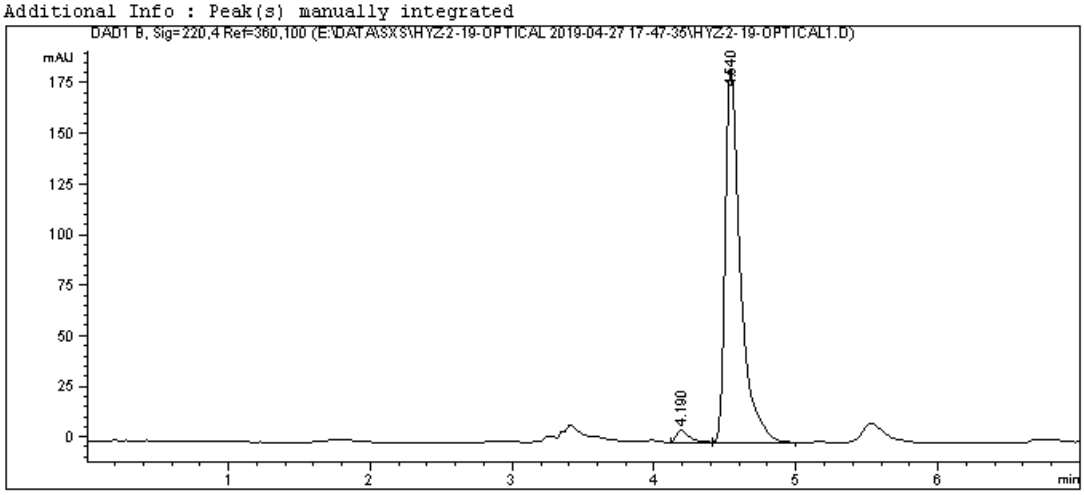

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 B, Sig=220,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   4.203 FM    0.1055 3227.33203  509.95090  47.8618
       2   4.554 VB    0.1111 3515.68848  465.70276  52.1382

    Totals :                   6743.02051  975.65366


    ======================================================================
                            *** End of Report ***

1260 5/1/2020 12:35:55 PM SYSTEM                          Page 1 of 1
```



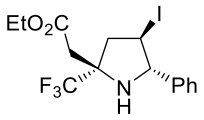
(2*R*,4*R*,5*S*)-10

Data File E:\DATA\SXS\HYZ-2-19-OPTICAL 2019-04-27 17-47-35\HYZ-2-19-OPTICAL1.D
Sample Name: HYZ-2-19

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                            Location :   62
    Injection Date  : 4/27/2019 5:57:33 PM                 Inj :   1
                                                   Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\HYZ-2-19-OPTICAL 2019-04-27 17-47-35\IE-95-5-3UL-10MIN-220NM.M
    Last changed    : 4/27/2019 5:55:33 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\HYZ-2-19-OPTICAL 2019-04-27 17-47-35\IE-95-5-3UL-10MIN-220NM.M
                      (Sequence Method)
    Last changed    : 5/1/2020 12:35:52 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



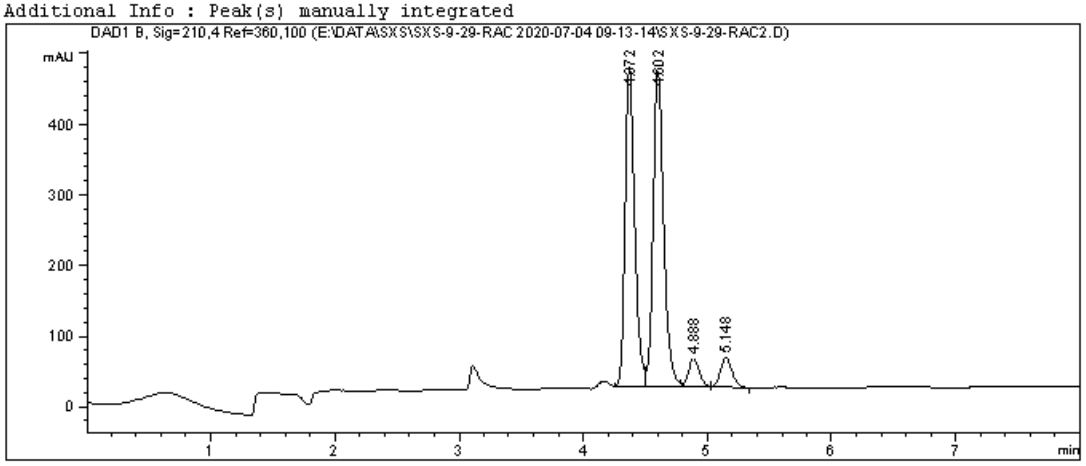

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 B, Sig=220,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   4.190 BV R  0.0925   35.84158    5.76666   2.5321
       2   4.540 VV R  0.1112 1379.62354  184.63724  97.4679

    Totals :                   1415.46512  190.40390


    ======================================================================
                            *** End of Report ***
```



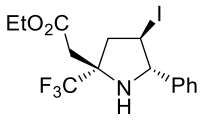
(*Rac*)-11

Data File E:\DATA\SXS\SXS-9-29-RAC 2020-07-04 09-13-14\SXS-9-29-RAC2.D
Sample Name: SXS-9-29-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   3
    Acq. Instrument : 1260                             Location :   51
    Injection Date  : 7/4/2020 9:33:24 AM                   Inj :   1
                                                    Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-9-29-RAC 2020-07-04 09-13-14\ODH-95-5-10MIN-210NM-2UL.M
    Last changed    : 7/4/2020 9:40:10 AM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-9-29-RAC 2020-07-04 09-13-14\ODH-95-5-10MIN-210NM-2UL.M (
                      Sequence Method)
    Last changed    : 7/6/2020 9:27:17 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



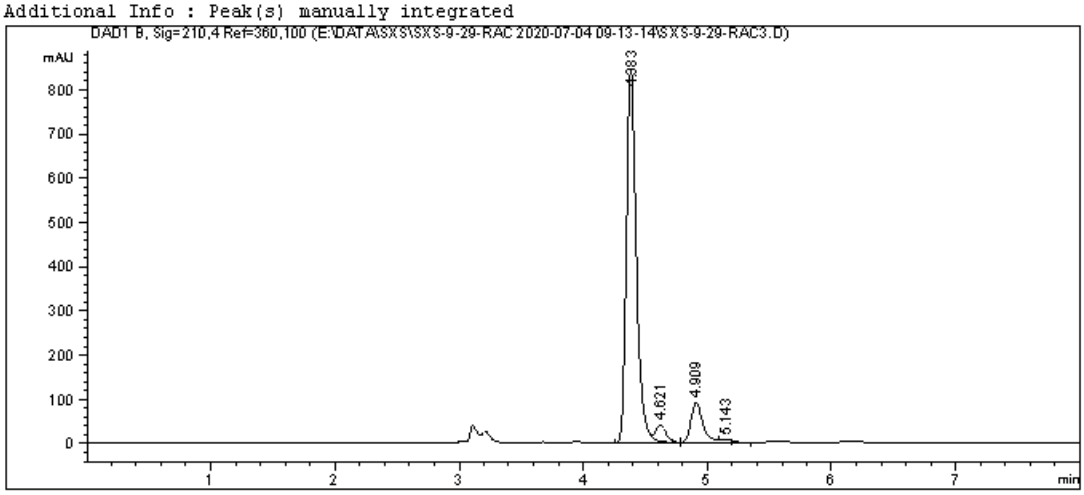

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 B, Sig=210,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   4.372 BV    0.0815 2419.70532  452.02850  43.6499
       2   4.602 VV R  0.0898 2623.63086  445.05792  47.3286
       3   4.888 VB E  0.0907  230.66451   39.75111   4.1610
       4   5.148 BB    0.0998  269.43930   41.45179   4.8605

    Totals :                   5543.43999  978.28933


    ======================================================================
                            *** End of Report ***

1260 7/6/2020 9:27:20 AM SYSTEM                          Page 1 of 1
```



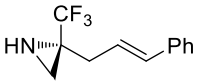
(2*S*,4*R*,5*S*)-11

Data File E:\DATA\SXS\SXS-9-29-RAC 2020-07-04 09-13-14\SXS-9-29-RAC3.D
Sample Name: SXS-9-30-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   4
    Acq. Instrument : 1260                              Location :   52
    Injection Date  : 7/4/2020 9:42:14 AM                    Inj :   1
                                                    Inj Volume : 2.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-9-29-RAC 2020-07-04 09-13-14\ODH-95-5-10MIN-210NM-2UL.M
    Last changed    : 7/4/2020 9:40:10 AM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-9-29-RAC 2020-07-04 09-13-14\ODH-95-5-10MIN-210NM-2UL.M (
                      Sequence Method)
    Last changed    : 7/6/2020 9:25:16 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



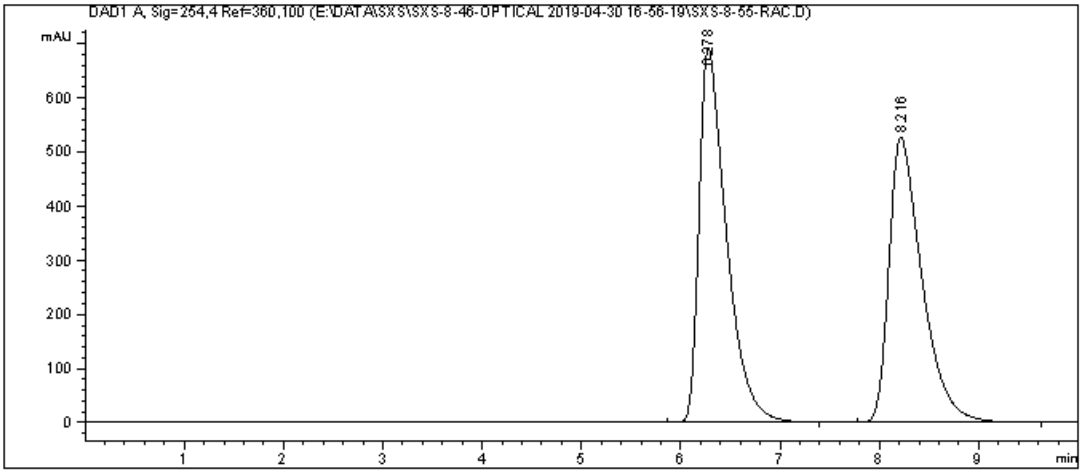

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 B, Sig=210,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   4.383 BV R  0.0839 4705.48633  845.35559  84.4534
       2   4.621 VB E  0.0853  216.01894   38.00503   3.8771
       3   4.909 BV R  0.1050  644.61780   90.55572  11.5695
       4   5.143 VB E  0.0529    5.57411    1.41605   0.1000

    Totals :                  5571.69717  975.33239


    ======================================================================
                            *** End of Report ***

1260 7/6/2020 9:25:19 AM SYSTEM                          Page 1 of 1
```



(*Rac*)-12

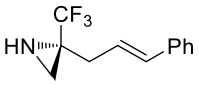
Data File E:\DATA\SXS\SXS-8-46-OPTICAL 2019-04-30 16-56-19\SXS-8-55-RAC.D
Sample Name: SXS-8-55-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                       Seq. Line :   1
    Acq. Instrument : 1260                          Location :   61
    Injection Date  : 4/30/2019 4:57:46 PM               Inj :   1
                                                  Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-46-OPTICAL 2019-04-30 16-56-19\ADH-95-5-254NM-1.0ML-10MIN
                      .M
    Last changed    : 4/30/2019 4:56:20 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-8-46-OPTICAL 2019-04-30 16-56-19\ADH-95-5-254NM-1.0ML-10MIN
                      .M (Sequence Method)
    Last changed    : 5/1/2020 12:54:01 PM by SYSTEM
                      (modified after loading)
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=254,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   6.278 BB    0.2698 1.32179e4   691.98663  52.0476
       2   8.216 BV R  0.3354 1.21779e4   527.35168  47.9524

    Totals :                   2.53958e4  1219.33832

    ======================================================================
                           *** End of Report ***
```

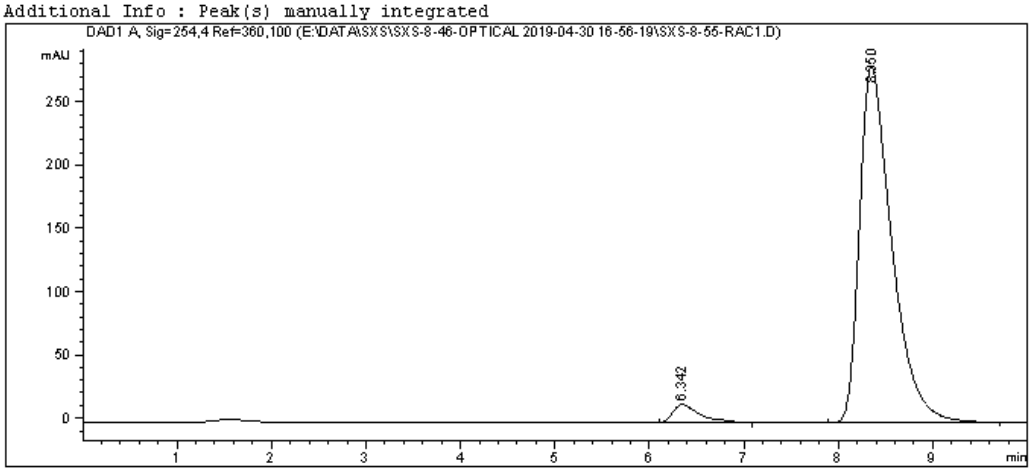
1260 5/1/2020 12:54:05 PM SYSTEM



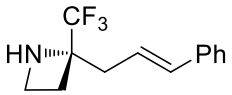
(*R*)-12

Data File E:\DATA\SXS\SXS-8-46-OPTICAL 2019-04-30 16-56-19\SXS-8-55-RAC1.D
Sample Name: SXS-8-46-OPTICAL

```
    ======================================================================
    Acq. Operator   : SYSTEM                        Seq. Line :   2
    Acq. Instrument : 1260                          Location :   62
    Injection Date  : 4/30/2019 5:09:13 PM               Inj :   1
                                                  Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-8-46-OPTICAL 2019-04-30 16-56-19\ADH-95-5-254NM-1.0ML-10MIN
                      .M
    Last changed    : 4/30/2019 4:56:20 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-8-46-OPTICAL 2019-04-30 16-56-19\ADH-95-5-254NM-1.0ML-10MIN
                      .M (Sequence Method)
    Last changed    : 7/14/2020 4:29:40 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



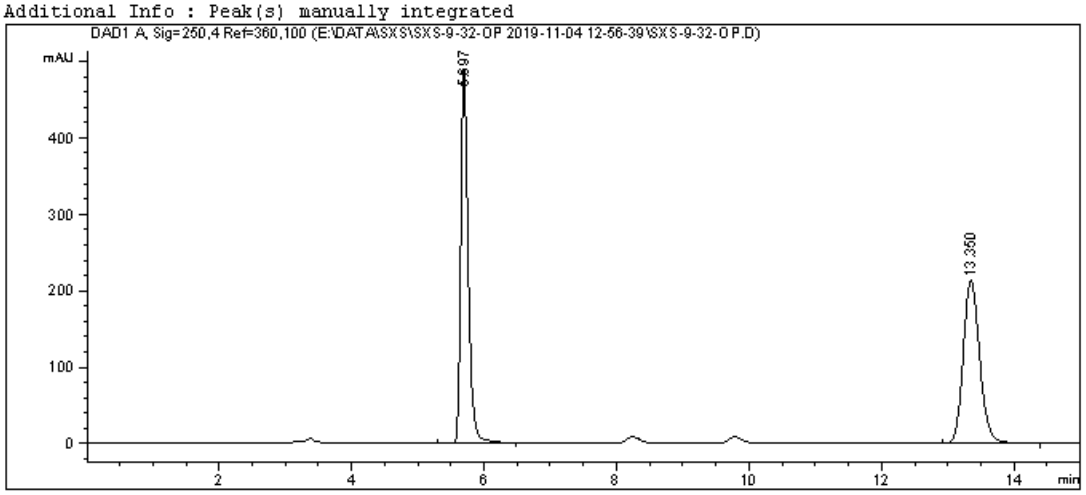

```
    ======================================================================
                           Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=254,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]        %
    ----|-------|----|-------|----------|----------|--------|
       1   6.342 BB    0.2436  278.75262   14.16148   4.0001
       2   8.350 VV R  0.3379 6689.97021  281.87564  95.9999

    Totals :                   6968.72284  296.03712


    ======================================================================
                           *** End of Report ***

1260 7/14/2020 4:29:43 PM SYSTEM                              Page 1 of 1
```



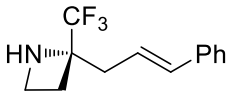
(*Rac*)-13

Data File E:\DATA\SXS\SXS-9-32-OP 2019-11-04 12-56-39\SXS-9-32-OP.D
Sample Name: SXS-9-42-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   25
    Injection Date  : 11/4/2019 12:58:11 PM                 Inj :   1
                                                    Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-9-32-OP 2019-11-04 12-56-39\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M
    Last changed    : 11/4/2019 1:12:36 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-9-32-OP 2019-11-04 12-56-39\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M (Sequence Method)
    Last changed    : 5/1/2020 12:57:46 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



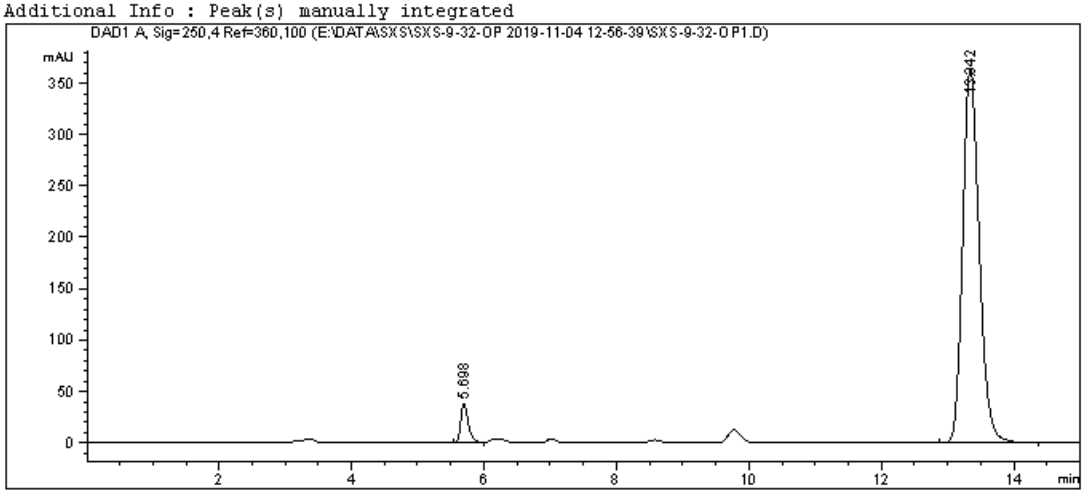

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=250,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   5.697 VB R  0.1189 3860.21265  490.29669  51.1500
       2  13.350 BB    0.2665 3686.63257  213.42300  48.8500

    Totals :                  7546.84521  703.71970

    ======================================================================
                              *** End of Report ***
```



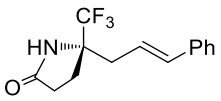
(*R*)-13

Data File E:\DATA\SXS\SXS-9-32-OP 2019-11-04 12-56-39\SXS-9-32-OP1.D
Sample Name: SXS-9-32-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                             Location :   26
    Injection Date  : 11/4/2019 1:14:39 PM                 Inj :   1
                                                     Inj Volume : 3.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-9-32-OP 2019-11-04 12-56-39\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M
    Last changed    : 11/4/2019 1:12:36 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-9-32-OP 2019-11-04 12-56-39\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M (Sequence Method)
    Last changed    : 5/1/2020 12:57:46 PM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



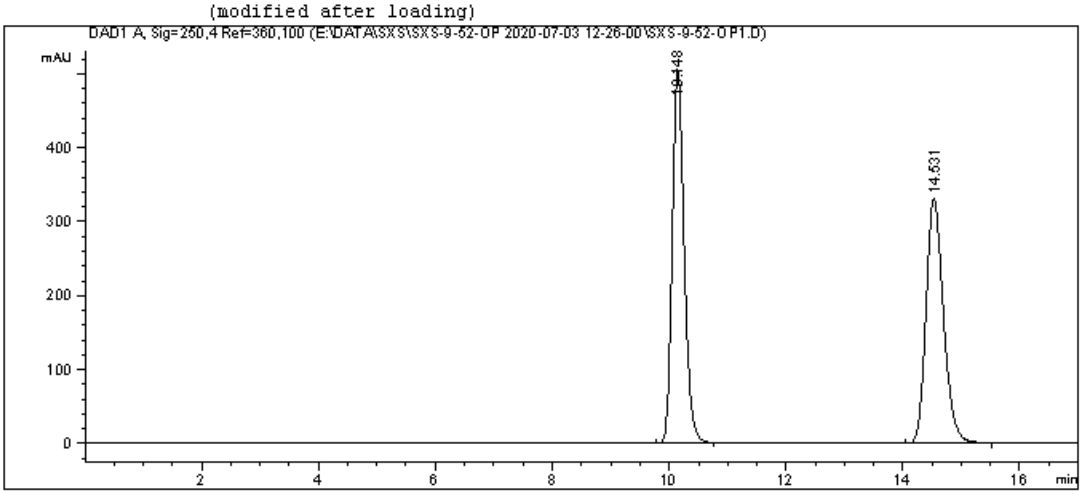

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=250,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   5.698 BB    0.1194  298.15326   37.65704   4.5043
       2  13.342 BB    0.2663 6321.12256  364.60516  95.4957

    Totals :                   6619.27582  402.26221

    ======================================================================
                            *** End of Report ***
```



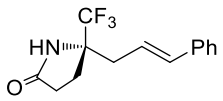
(*Rac*)-14

Data File E:\DATA\SXS\SXS-9-52-OP 2020-07-03 12-26-00\SXS-9-52-OP1.D
Sample Name: SXS-9-50-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                             Location :   53
    Injection Date  : 7/3/2020 12:46:00 PM                  Inj :   1
                                                    Inj Volume : 1.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-9-52-OP 2020-07-03 12-26-00\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M
    Last changed    : 7/3/2020 12:44:04 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-9-52-OP 2020-07-03 12-26-00\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M (Sequence Method)
    Last changed    : 7/6/2020 9:37:07 AM by SYSTEM
                      (modified after loading)
```



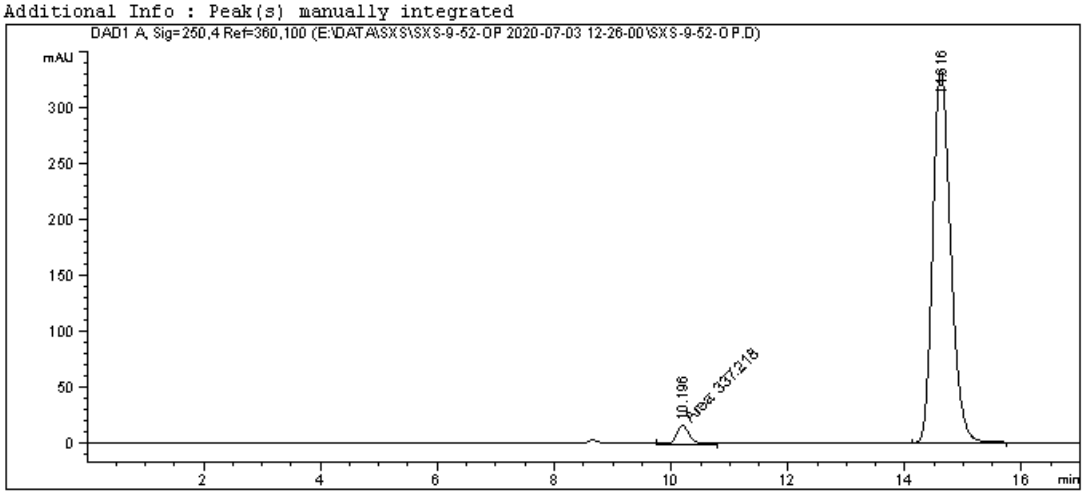

```
    ======================================================================
                            Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=250,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  10.148 BB    0.2170 7156.46777  506.06458  51.1195
       2  14.531 BB    0.3170 6843.02051  331.23206  48.8805

    Totals :                  1.39995e4   837.29663

    ======================================================================
                            *** End of Report ***
```



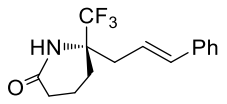
(*S*)-14

Data File E:\DATA\SXS\SXS-9-52-OP 2020-07-03 12-26-00\SXS-9-52-OP.D
Sample Name: SXS-9-52-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   54
    Injection Date  : 7/3/2020 12:27:31 PM                 Inj :   1
                                                     Inj Volume : 1.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-9-52-OP 2020-07-03 12-26-00\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M
    Last changed    : 7/3/2020 12:44:04 PM by SYSTEM
                      (modified after loading)
    Analysis Method : E:\DATA\SXS\SXS-9-52-OP 2020-07-03 12-26-00\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M (Sequence Method)
    Last changed    : 7/6/2020 9:37:07 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



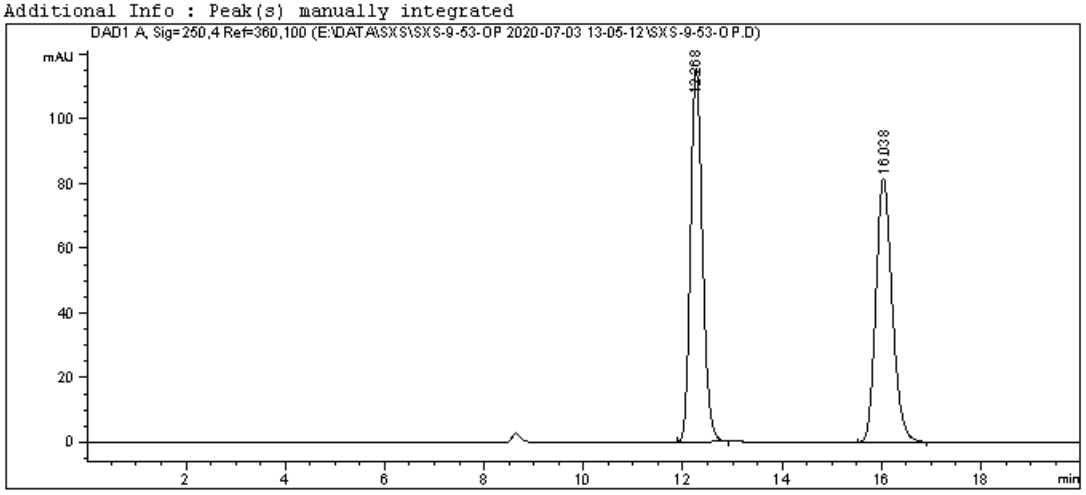

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=250,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  10.196 MM    0.3096  337.21811   18.15332   4.5183
       2  14.616 BB    0.3263 7126.15186  334.88138  95.4817

    Totals :                  7463.36996  353.03470


    ======================================================================
                              *** End of Report ***
```



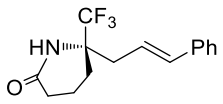
(*Rac*)-15

Data File E:\DATA\SXS\SXS-9-53-OP 2020-07-03 13-05-12\SXS-9-53-OP.D
Sample Name: SXS-9-54-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   55
    Injection Date  : 7/3/2020 1:06:40 PM                  Inj :   1
                                                    Inj Volume : 1.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-9-53-OP 2020-07-03 13-05-12\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M
    Last changed    : 7/3/2020 1:05:12 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-9-53-OP 2020-07-03 13-05-12\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M (Sequence Method)
    Last changed    : 7/6/2020 9:42:17 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



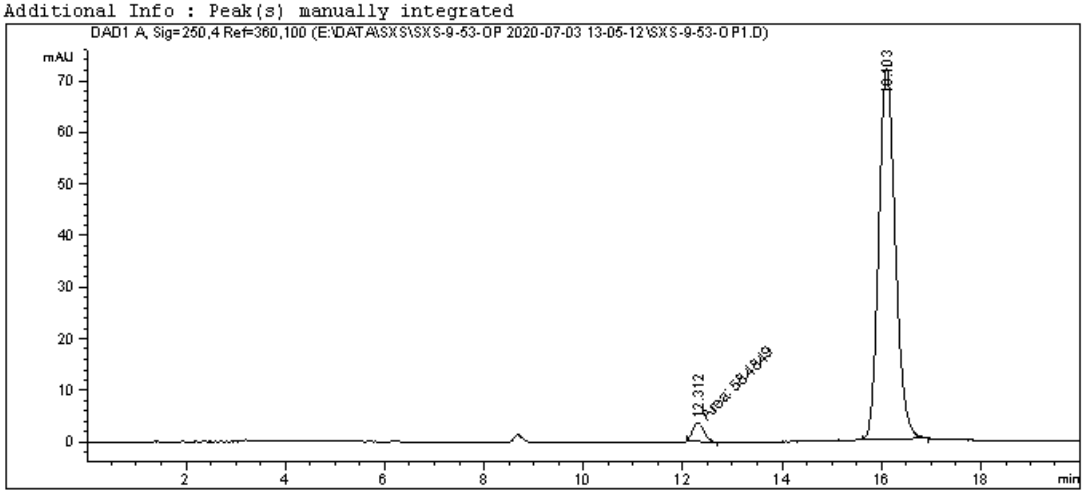

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=250,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  12.268 BB    0.2584 1923.20532  115.44690  50.9204
       2  16.038 BB    0.3437 1853.67712   81.37844  49.0796

    Totals :                  3776.88245  196.82534

    ======================================================================
                              *** End of Report ***
```



(*S*)-15

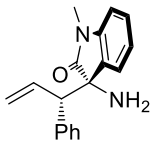
Data File E:\DATA\SXS\SXS-9-53-OP 2020-07-03 13-05-12\SXS-9-53-OP1.D
Sample Name: SXS-9-53-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   2
    Acq. Instrument : 1260                            Location :   56
    Injection Date  : 7/3/2020 1:28:06 PM                  Inj :   1
                                                    Inj Volume : 1.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-9-53-OP 2020-07-03 13-05-12\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M
    Last changed    : 7/3/2020 1:05:12 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-9-53-OP 2020-07-03 13-05-12\ADH-95-5-250NM-3UL-15MIN-1.0ML.
                      M (Sequence Method)
    Last changed    : 7/6/2020 9:42:25 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=250,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1  12.312 MM    0.2649   58.48491    3.68020   3.4119
       2  16.103 BB    0.3441 1655.64734   71.76904  96.5881

    Totals :                  1714.13224   75.44924

    ======================================================================
                              *** End of Report ***
```

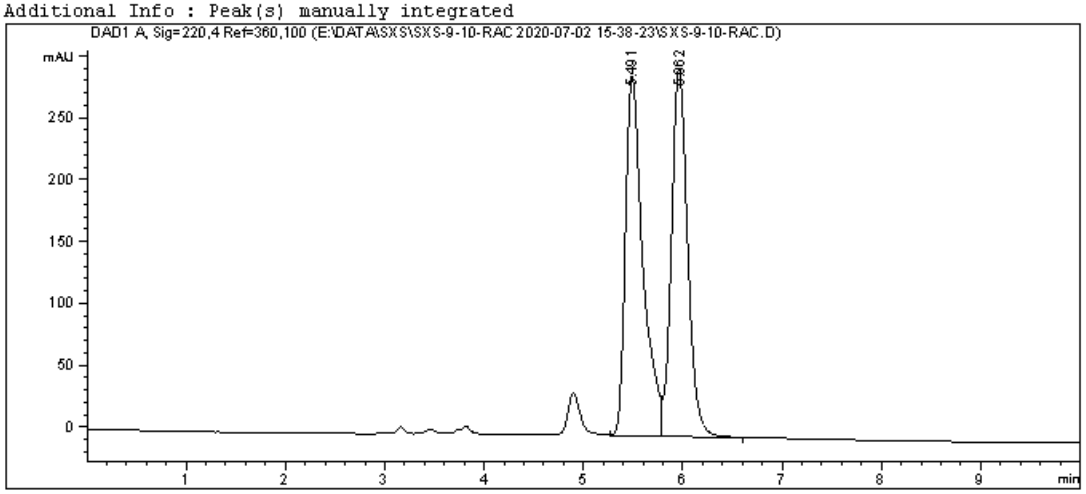
1260 7/6/2020 9:42:27 AM SYSTEM



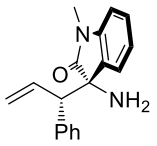
(*Rac*)-16

Data File E:\DATA\SXS\SXS-9-10-RAC 2020-07-02 15-38-23\SXS-9-10-RAC.D
Sample Name: SXS-9-10-RAC

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   61
    Injection Date  : 7/2/2020 3:39:48 PM                  Inj :   1
                                                    Inj Volume : 1.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-9-10-RAC 2020-07-02 15-38-23\ODH-60-40-1ML-1uL-10MIN-220NM.
                      M
    Last changed    : 7/2/2020 3:38:24 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-9-10-RAC 2020-07-02 15-38-23\ODH-60-40-1ML-1uL-10MIN-220NM.
                      M (Sequence Method)
    Last changed    : 7/6/2020 9:20:12 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```



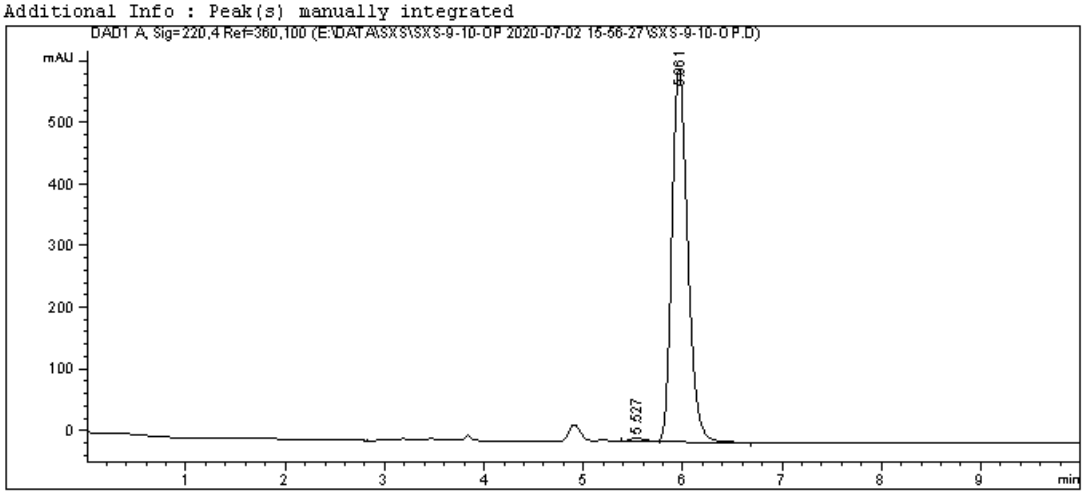

```
    ======================================================================
                              Area Percent Report
    ======================================================================

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=220,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   5.491 VV    0.1820 3563.22925  290.66959  51.5135
       2   5.962 VB    0.1736 3353.85498  297.30090  48.4865

    Totals :                   6917.08423  587.97049


    ======================================================================
                              *** End of Report ***

1260 7/6/2020 9:20:14 AM SYSTEM                              Page 1 of 1
```



(*S*)-16

Data File E:\DATA\SXS\SXS-9-10-OP 2020-07-02 15-56-27\SXS-9-10-OP.D
Sample Name: SXS-9-10-OP

```
    ======================================================================
    Acq. Operator   : SYSTEM                          Seq. Line :   1
    Acq. Instrument : 1260                             Location :   62
    Injection Date  : 7/2/2020 3:57:48 PM                  Inj :   1
                                                   Inj Volume : 1.000 µl
    Acq. Method     : E:\DATA\SXS\SXS-9-10-OP 2020-07-02 15-56-27\ODH-60-40-1ML-1uL-10MIN-220NM.M
    Last changed    : 7/2/2020 3:56:28 PM by SYSTEM
    Analysis Method : E:\DATA\SXS\SXS-9-10-OP 2020-07-02 15-56-27\ODH-60-40-1ML-1uL-10MIN-220NM.M
                      (Sequence Method)
    Last changed    : 7/6/2020 9:19:45 AM by SYSTEM
                      (modified after loading)
    Additional Info : Peak(s) manually integrated
```




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

    Sorted By             :      Signal
    Multiplier            :      1.0000
    Dilution              :      1.0000
    Do not use Multiplier & Dilution Factor with ISTDs


    Signal 1: DAD1 A, Sig=220,4 Ref=360,100

    Peak RetTime Type  Width     Area      Height     Area
      #   [min]        [min]   [mAU*s]     [mAU]       %
    ----|-------|----|-------|----------|----------|--------|
       1   5.527 BV E  0.1334   68.22499    6.15243   1.0095
       2   5.961 VV R  0.1709 6690.36621  605.48254  98.9905

    Totals :                  6758.59120  611.63497


    ======================================================================
                            *** End of Report ***
```