Supporting Information

Organocatalytic Enantioselective *aza*-Henry reaction of Ketimines Derived from Isatins: Access to Optically Active 3-Aminooxindoles

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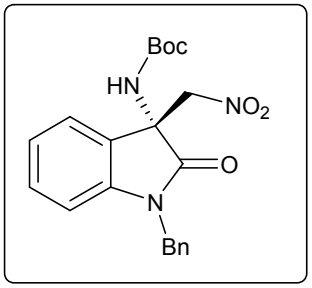
General Note

All reactions were performed in oven-dried glassware. All solvents and commercially available chemical were used without further purification. The molecular sieves were activated at 200 ˚C for 2 hours in an oven. The column chromatography was carried out on a column packed with silica gel 60-120. ^{1}H NMR spectra were recorded in $CDCl_3$ on a BRUKER AVANCE III (500 MHz), JNM-ECS400 (400 MHz), BRUKER AVANCE II (400 MHz) and JEOL (300 MHz) spectrometer. ^{13}C NMR spectra were recorded in $CDCl_3$ on BRUKER AVANCE III (125 MHz), JNM- ECS400 (100 MHz), BRUKER AVANCE II (100 MHz) and JEOL (75 MHz). Chemical shifts (δ) are expressed in ppm downfield from internal TMS. MS were recorded on micrOTOF-Q II 10356 Mass Spectrometer. Optical rotation was determined with AUTOPOL IV polarimeter at 25 ˚C using sodium D light. HPLC analyses were performed on a Shimadzu LC-20AD using Daicel Chiralpak OD-H, IA, IB and AS-H columns.

General Procedure

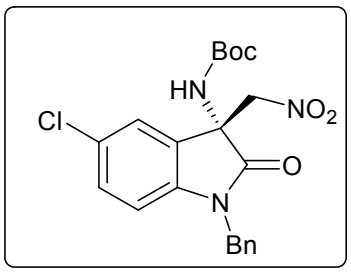
To the solution of ketimines derived from isatins (0.1 mmol), nitroalkane (0.25 mmol), 4Å MS (50 mg) in 0.3 mL of THF, the catalyst BnCPN (**VI**, 20 mol%) was added at 25 °C. The reaction mixture was stirred for 24 hours and the progress of the reaction was monitored at regular intervals by thin layer chromatography (tlc). After the completion of reaction, the crude reaction mixture was purified by column chromatography on silica gel (mesh 60–120) using hexane–ethyl acetate (1:1) as eluent. The enantiomeric excess of the purified **3** were determined using Diacel Chiralpak columns. The racemic standards were prepared using triethylamine (20 mol%) as a catalyst.

***(R)-tert*-Butyl 1-benzyl-3-(nitromethyl)-2-oxoindolin-3-ylcarbamate (3a)**



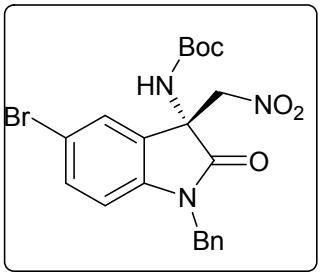
Orange oil; 80% yield; $[\alpha]_{20}^{D}$= -6.79 (*c* 0.25, $CHCl_3$); 84% ee; HPLC [Chiralpak OD-H, hexane/*i*-PrOH, 90:10, 1 mL/min, 254 nm, t_R = 16.3 min (major) and t_R = 29.3 min (minor)]; ^{1}H NMR (500 MHz, $CDCl_3$) δ 7.28-7.76 (m, 8H), 6.65 (d, J = 10.0 Hz, 1H), 5.94 (s, 1H), 4.90-5.04 (m, 3H), 4.69 (d, J = 15.0 Hz, 1H), 1.41 (s, 9H); ^{13}C NMR (125 MHz, $CDCl_3$) δ 28.13, 44.56, 59.91, 77.80, 81.32, 109.9, 123.5, 124.5, 125.8, 127.4, 127.9, 128.9, 130.3, 135.0, 142.5, 153.7, 172.8; HRMS calcd. for $C_{21}H_{23}N_3O_5$ $[M+Na]^+$ 404.1263; found 404.1233.

***(R)-tert*-Butyl 1-benzyl-5-chloro-3-(nitromethyl)-2-oxoindolin-3-ylcarbamate (3b)**



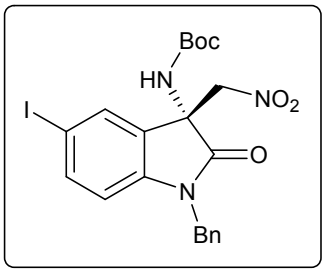
Yellow semi-solid; yield 74%; $[\alpha]_{20}^{D}$= -8.79 (c 0.25, $CHCl_3$); 67% ee; [Chiralpak OD-H, hexane/i-PrOH, 90:10, 1 mL/min, 254 nm, t_R = 8.83 min (minor) and t_R = 9.38 min (major)]; ^{1}H NMR (500 MHz, $CDCl_3$) δ 7.23-7.48 (m, 7H), 6.70 (d, J = 10.0 Hz, 1H), 5.93 (s, 1H), 4.90-5.05 (m, 3H), 4.69 (d, *J* = 15.0 Hz, 1H), 1.41 (s, 9H); ^{13}C NMR (125 MHz, $CDCl_3$) δ 28.15, 44.69, 59.81, 77.46, 81.68, 111.0, 125.1, 127.3, 128.0, 129.0, 130.3, 134.6, 141.1, 172.5; HRMS calcd. for $C_{21}H_{22}ClN_3O_5$ $[M+Na]^+$ 454.1146; found 454.1167.

***(R)-tert*-Butyl 1-benzyl-5-bromo-3-(nitromethyl)-2-oxoindolin-3-ylcarbamate (3c)**



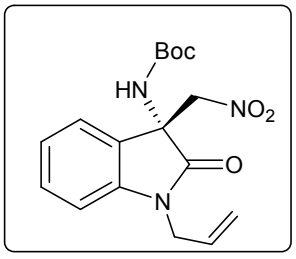
Orange semi-solid; 79% yield; $[\alpha]_{20}^{D}$ = - 9.19 (c 0.25, $CHCl_3$); 73% ee; HPLC [Chiralpak OD-H, hexane/i-PrOH, 90:10, 1 mL/min, 254 nm, t_R = 13.6 min (minor) and t_R = 15.6 min (major)]; ^{1}H NMR (500 MHz, $CDCl_3$) δ 7.28-7.61 (m, 7H), 6.65 (d, J = 10.0 Hz, 1H), 5.94 (s, 1H), 4.90-5.04 (m, 3H), 4.68 (d, J = 15.0 Hz, 1H), 1.41 (s, 9H); ^{13}C NMR (125 MHz, $CDCl_3$) δ 28.15, 44.66, 59.74, 77.47, 81.70, 111.5, 116.2, 127.3, 127.7, 127.8, 128.1, 129.0, 133.2, 134.5, 141.6, 153.7, 172.4; HRMS calcd. for $C_{21}H_{22}BrN_3O_5$ $[M+Na]^+$ 498.0635; found 498.0664.

***(R)-tert*-Butyl 1-benzyl-5-iodo-3-(nitromethyl)-2-oxoindolin-3-ylcarbamate (3d)**



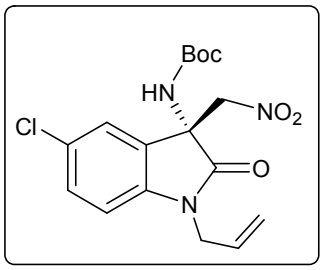
Yellow semi solid; yield 77%; $[\alpha]_{20}^{D}$= - 8.79 (c 0.25, $CHCl_3$); 72% ee; [Chiralpak OD-H, hexane/i-PrOH, 90:10, 1 mL/min, 254 nm, t_R = 13.6 min (minor) and t_R = 23.8 min (major)]; ^{1}H NMR (300 MHz, $CDCl_3$) δ 7.28-7.74 (m, 7H), 6.55 (d, J= 9.0 Hz, 1H), 5.95 (s, 1H), 4.87-5.04 (m, 3H), 4.66 (d, J = 12.0 Hz, 1H), 1.41 (s, 9H); ^{13}C NMR (125 MHz, $CDCl_3$) δ 28.16, 44.61, 59.56, 77.51, 81.70, 86.02, 112.0, 127.3, 128.1, 128.9, 133.1, 134.5, 139.2, 142.2, 153.7, 172.2; HRMS calcd. for $C_{21}H_{22}IN_3O_5$ $[M+Na]^+$ 546.0496; found 546.0545.

***(R)-tert*-Butyl 1-allyl-3-(nitromethyl)-2-oxoindolin-3-ylcarbamate (3e)**



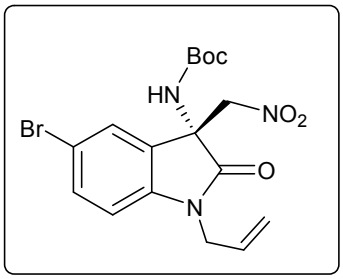
Yellow semi solid; yield 73%; $[\alpha]_{20}^{D}$= - 6.79 (c 0.25, $CHCl_3$); 70% ee; [Chiralpak OD-H, hexane/i-PrOH, 90:10, 1 mL/min, 254 nm, t_R = 12.6 min (minor) and t_R = 13.9 min (major)]; ^{1}H NMR (500 MHz, $CDCl_3$) δ 7.28-7.63 (m, 3H), 6.80 (d, J = 5.0 Hz, 1H), 5.81-5.87 (m, 2H), 5.31-5.38 (m, 2H), 5.01 (d, J = 15.0 Hz, 1H), 4.66 (d, J = 15.0 Hz, 1H), 4.32-4.44 (m, 2H), 1.40 (s, 9H) ; ^{13}C NMR (125 MHz, $CDCl_3$) δ 28.12, 43.03, 59.77, 77.76, 81.24, 109.8, 118.3, 123.4, 130.3, 130.7, 142.6, 172.5; HRMS calcd. for $C_{17}H_{21}N_3O_5$ $[M + Na]^+$ 370.1378; found 370.1389.

***(R)-tert*-Butyl 1-allyl-5-chloro-3-(nitromethyl)-2-oxoindolin-3-ylcarbamate (3f)**



Yellow oil; yield 76%; $[\alpha]_{20}^{D}$= - 9.03 (c 0.25, $CHCl_3$); 76% ee; [Chiralpak OD-H, hexane/i-PrOH, 90:10, 1 mL/min, 254 nm, t_R = 9.67 min (major) and t_R = 10.5 min (minor)]; ^{1}H NMR (500 MHz, $CDCl_3$) δ 7.28-7.51 (m, 2H), 6.84 (d, J = 10.0 Hz, 1H), 5.83-5.86 (m, 2H), 5.29-5.38 (m, 2H), 5.02 (d, J = 15.0 Hz, 1H), 4.66 (d, J = 10.0 Hz, 1H), 4.32-4.47 (m, 2H), 1.40 (s, 9H); ^{13}C NMR (125 MHz, $CDCl_3$) δ 28.13, 43.14, 59.66, 77.41, 81.62, 110.9, 118.5, 125.2, 127.4, 128.9, 130.3, 141.2, 153.7, 172.2; HRMS calcd. for $C_{17}H_{20}ClN_3O_5$ $[M + Na]^+$ 404.0984; found 404.0996.

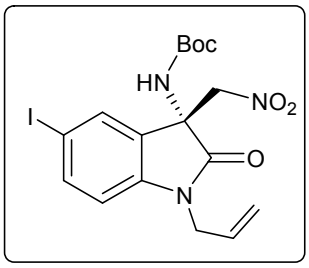
***(R)-tert*-Butyl 1-allyl-5-bromo-3-(nitromethyl)-2-oxoindolin-3-ylcarbamate (3g)**



White solid; yield 77%; $[\alpha]_{20}^{D}$= - 9.99 (c 0.25, $CHCl_3$); 73% ee; [Chiralpak OD-H, hexane/i-PrOH, 90:10, 1 mL/min, 254 nm, t_R = 12.4 min (minor) and t_R = 13.5 min (major)]; ^{1}H NMR (300 MHz, $CDCl_3$) δ 7.46-7.60 (m, 2H), 6.78 (d, J= 8.4 Hz, 1H), 5.79-5.85 (m, 2H), 5.28 (d, J= 11.1 Hz, 2H), 4.98 (d, J= 12.3 Hz, 1H), 4.63 (d, J= 12.6 Hz, 1H), 4.29-4.47 (m, 2H), 1.37 (s, 9H); ^{13}C NMR (125 MHz, $CDCl_3$) δ 28.13, 43.14, 59.66, 77.41, 81.61,

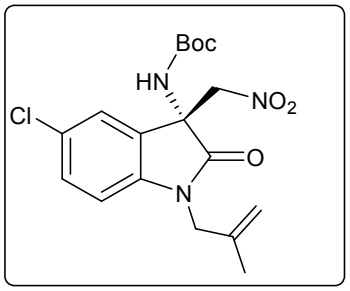
110.9, 118.5, 125.2, 127.4, 128.9, 130.3, 141.2, 153.7, 172.2; HRMS calcd. for $C_{17}H_{20}BrN_3O_5$ $[M + Na]^+$ 448.0479; found 448.0502

***(R)-tert*-Butyl 1-allyl-5-iodo-3-(nitromethyl)-2-oxoindolin-3-ylcarbamate (3h)**



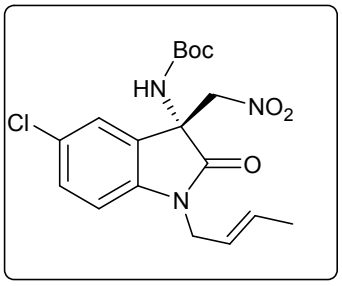
Yellow oil; yield 78%; $[\alpha]_{20}^{D}$= - 7.99 (c 0.25, $CHCl_3$); 89% ee; HPLC [Chiralpak IB, hexane/i-PrOH, 90:10, 1 mL/min, 254 nm, t_R = 10.1 min (minor) and t_R =15.4 min (major)]; ^{1}H NMR (300 MHz, $CDCl_3$) δ 7.26-7.75 (m, 2H), 6.67 (d, J= 9.0 Hz, 1H), 5.79-5.87 (m, 2H), 5.25-5.77 (m, 2H), 4.95 (d, J = 12.0 Hz, 1H), 4.61 (d, J= 12.0 Hz, 1H), 4.28-4.44 (m, 2H), 1.37 (s, 9H); ^{13}C NMR (125 MHz, $CDCl_3$) δ 28.13, 43.05, 50.90, 59.41, 77.46, 81.64, 85.89, 111.9, 118.5, 128.0, 130.3, 133.2, 139.2, 142.4, 171.8; HRMS calcd. for $C_{17}H_{20}IN_3O_5$ $[M+Na]^+$ 496.0345; found 496.0370

***(R)-tert*-Butyl 5-chloro-1-(2-methylallyl)-3-(nitromethyl)-2-oxoindolin-3-ylcarbamate (3i)**



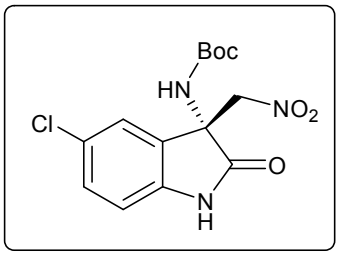
Yellow oil; yield 71%; $[\alpha]_{20}^{D}$= - 11.6 (c 0.25, $CHCl_3$); 75% ee; HPLC [Chiralpak OD-H, hexane/i-PrOH, 90:10, 1 mL/min, 254 nm, t_R = 7.34 min (minor) and t_R = 8.24 min (major)]; ^{1}H NMR (300 MHz, $CDCl_3$) δ 7.26-7.47 (m, 2H), 6.83 (d, J= 9.0 Hz, 1H), 5.85 (s, 1H), 4.93-4.98 (m, 3H), 4.63 (d, J= 12.0 Hz, 1H), 4.21-4.38 (m, 2H), 1.77 (s, 3H), 1.37 (s, 9H); ^{13}C NMR (125 MHz, $CDCl_3$) δ19.90, 28.13, 46.78, 50.90, 59.71, 77.43, 81.61, 111.0, 113.5, 125.1, 127.4, 128.9, 130.3, 138.2, 141.4, 172.2; HRMS calcd. for $C_{18}H_{22}ClN_3O_5$ $[M+Na]^+$ 418.1140; found 418.1156

***(R)-tert*-Butyl 1-((E)-but-2-enyl)-5-chloro-3-(nitromethyl)-2-oxoindolin-3-ylcarbamate (3j)**



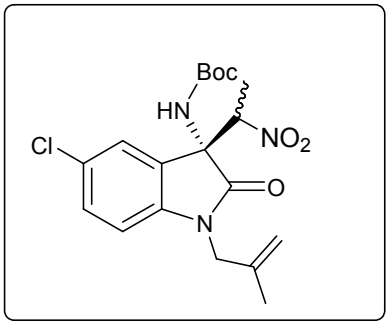
Yellow oil; yield 70%; $[\alpha]_{20}^{D}$= - 7.13 (c 0.25, $CHCl_3$); 79% ee; [Chiralpak IB, hexane/i-PrOH, 90:10, 1 mL/min, 254 nm, t_R = 6.24 min (minor) and t_R = 6.91 min (major)]; ^{1}H NMR (500 MHz, $CDCl_3$) δ 7.32-7.50 (m, 2H), 6.85 (d, J= 10.0 Hz, 1H), 5.85 (s, 1H), 4.97-5.01 (m, 3H), 4.66 (d, J= 15.0 Hz, 1H), 4.33 (dd, J= 55.0 Hz, J= 15.0 Hz, 2H), 1.80 (s, 3H), 1.40 (s, 9H); ^{13}C NMR (100 MHz, $CDCl_3$) δ 20.05, 28.26, 46.89, 59.83, 81.74, 111.2, 113.7, 125.2, 127.5, 129.1, 130.5, 138.4, 141.5, 153.8, 172.5; HRMS calcd. for $C_{18}H_{22}ClN_3O_5$ $[M+Na]^+$ 418.1140; found 418.1149

(*R*)-*tert*-Butyl 5-chloro-3-(nitromethyl)-2-oxoindolin-3-ylcarbamate (3k)



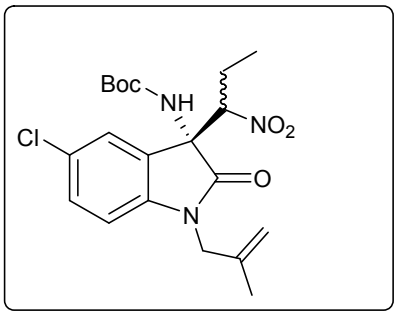
Yellow oil; yield 68% ; $[\alpha]_{20}^{D}$= + 21.4 (c 0.25, $CHCl_3$); 74% ee; HPLC [Chiralpak IA, hexane/i-PrOH, 9:1, 1 mL/min, 254 nm, t_R = 11.3 min (major) and t_R = 15.6 min (minor)]; ^{1}H NMR (300 MHz, $CDCl_3$) δ 8.48 (s, 1H), 7.26-7.31 (m, 2H), 6.83 (d, J= 8.4 Hz, 1H), 6.19 (s, 1H), 4.75 (dd, J= 58.8 Hz and J= 12.6 Hz, 2H), 1.38 (s, 9H); ^{13}C NMR (100 MHz, $CDCl_3$) δ 22.69, 44.00, 55.81, 80.71, 110.5, 112.0, 133.1, 114.8, 115.3, 118.1, 121.6, 127.9, 128.1, 128.9, 129.0, 134.6, 135.3, 136.1, 144.6, 172.0, 183.6; HRMS calcd. for $C_{14}H_{16}ClN_3O_5$ $[M+Na]^+$ 364.0671; found 364.0686

3(*R*),*1'*(*R/S*)-*tert*-Butyl 5-chloro-1-(2-methylallyl)-3-(1'-nitroethyl)-2-oxoindolin-3-ylcarbamate (3l)



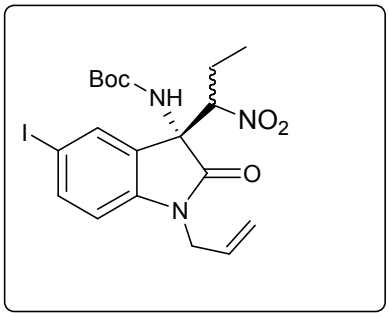
Brown solid; yield 75%; $[\alpha]_{20}^{D}$= - 9.19 (c 0.25, $CHCl_3$); dr 72:28; [Chiralpak IA, hexane/i-PrOH, 90:10, 1 mL/min, 254 nm, ee = 80% of major diastereomer and ee = 82% of minor diastereomer, t_R = 5.60 min (major) , t_R = 8.56 min (major) and t_R = 6.31 min (minor), t_R = 16.3 min (minor)]; ^{1}H NMR (500 MHz, $CDCl_3$) δ 6.82-7.39 (m, 3H), 6.09 (d, J= 25.0 Hz, 1H), 5.00-5.06 (m, 3H), 4.31 (dd, J= 65.0 Hz, J= 20.0 Hz, 2H), 1.74-1.81 (m, 3H), 1.58 (s, 3H), 1.35 (s, 9H); ^{13}C NMR (125 MHz, $CDCl_3$) δ 13.19, 20.13, 28.11, 46.68, 62.61, 81.33, 84.56, 110.6, 113.3, 113.6, 123.6, 124.8, 128.7, 130.1, 130.2, 138.5, 142.4, 172.9; HRMS calcd. for $C_{19}H_{24}ClN_3O_5$ $[M+Na]^+$ 432.1297; found 432.1300.

3(*R*),*1'*(*R/S*)-*tert*-Butyl-5-chloro-1-(2-methylallyl)-3-(1'-nitropropyl)-2-oxoindolin-3-ylcarbamate (3m)



Yellow semi-solid; yield 75%; dr 55:45, [Chiralpak IA, hexane/i-PrOH, 90:10, 1 mL/min, 210 nm, ee = 56% of major diastereomer and ee = 45% of minor diastereomer, t_R = 4.72 min (major) , t_R = 6.79 min (major) and t_R = 5.16 min (minor), t_R = 8.62 min (minor)]; [^{1}H NMR (300 MHz, $CDCl_3$) δ 7.10-7.30 (m, 2H), 6.80 (d, J= 12.3 Hz, 1H), 6.11 (s, 1H), 4.78-4.98 (m, 3H), 4.77-4.82 (m, 1H), 4.27 (dd, J= 33.8 Hz and J= 15.6 Hz, 2H), 2.16-2.42 (m, 2H), 1.78 (s, 3H), 1.33 (s, 9H), 0.94 (t, J= 14.4 Hz, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ 10.63, 20.70, 28.08, 46.65, 62.43, 81.40, 91.74, 92.81, 110.7, 112.4, 113.3, 113.6, 123.3, 125.3, 128.6, 128.8, 130.1, 138.4, 141.0, 142.0, 153.4, 171.9, 173.2.

3(*R*),*1'*(*R/S*)-*tert*-Butyl 1-allyl-5-iodo-3-(1'-nitropropyl)-2-oxoindolin-3-ylcarbamate (3n)



Yellow semi-solid; yield 80%; dr 54:46, [Chiralpak IA, hexane/i-PrOH, 90:10, 1 mL/min, 208 nm, ee = 64% of major diastereomer, t_R = 6.15 min (major), t_R = 7.63 min (minor); and ee = 67% of minor diastereomer, t_R = 10.6 min (major) t_R = 12.5 min (minor)]; ^{1}H NMR (500 MHz,$CDCl_3$) δ 7.37-7.68 (m, 3H), 6.66-6.73 (m, 1H), 6.10 (s, 1H), 5.82-5.84 (m, 1H), 5.28-5.40 (m, 2H), 4.27-4.44 (m, 3H), 2.15-2.42 (m, 2H), 1.41 (s, 9H), 0.94-0.99 (m, 3H); ^{13}C NMR (100 MHz, $CDCl_3$) δ 10.57, 20.59, 29.71, 43.09, 62.18, 81.46, 85.79, 91.78, 92.62, 111.5, 113.1, 118.7, 119.1, 130.4, 130.6, 131.5, 133.5, 133.9, 138.9, 142.0, 142.9, 153.0, 172.5.

==== Shimadzu LCsolution Analysis Report ====

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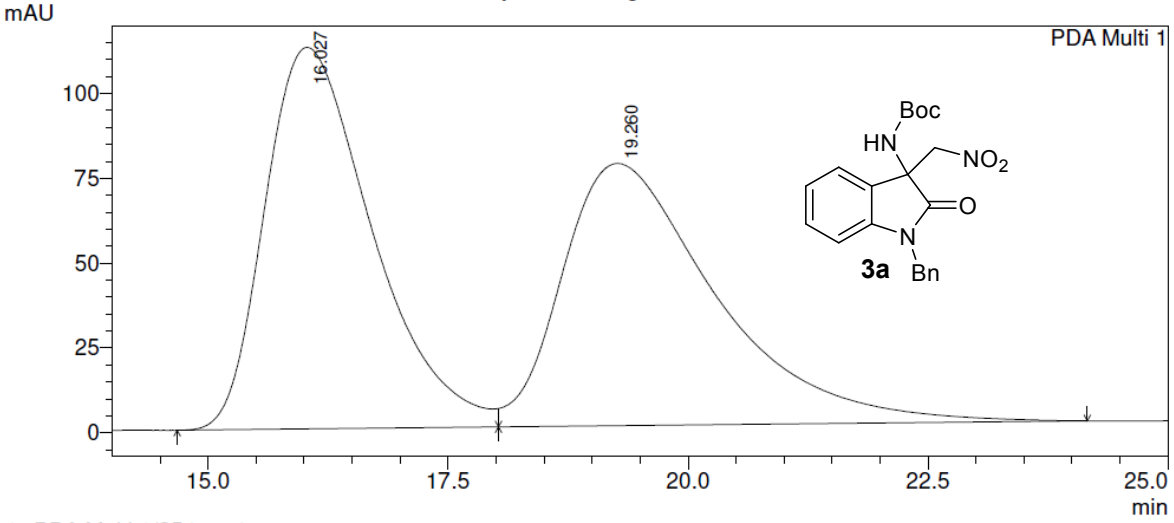

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PDA Ch1 254nm 4nm

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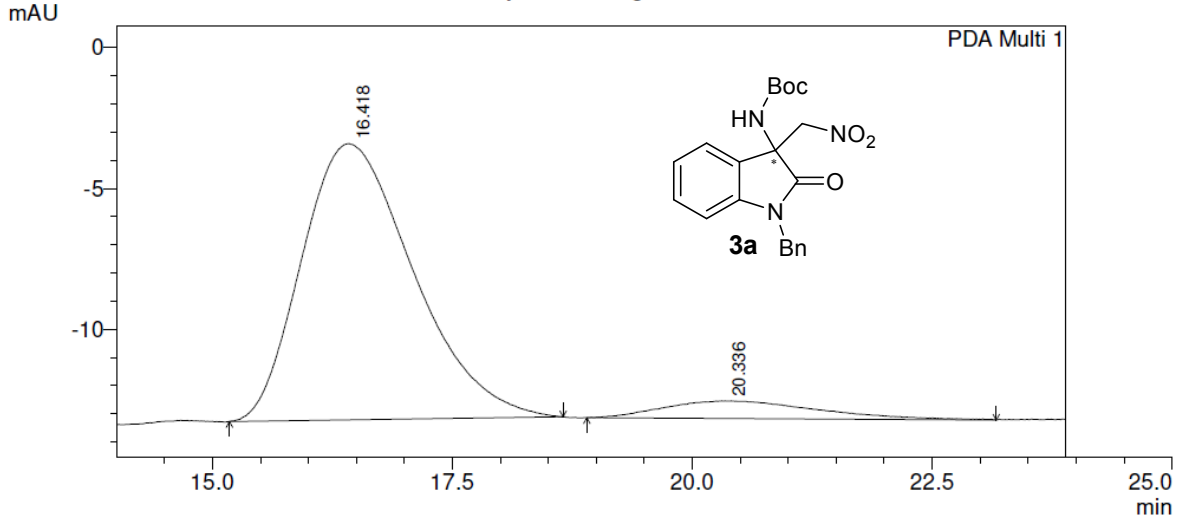


1 PDA Multi 1/254nm 4nm

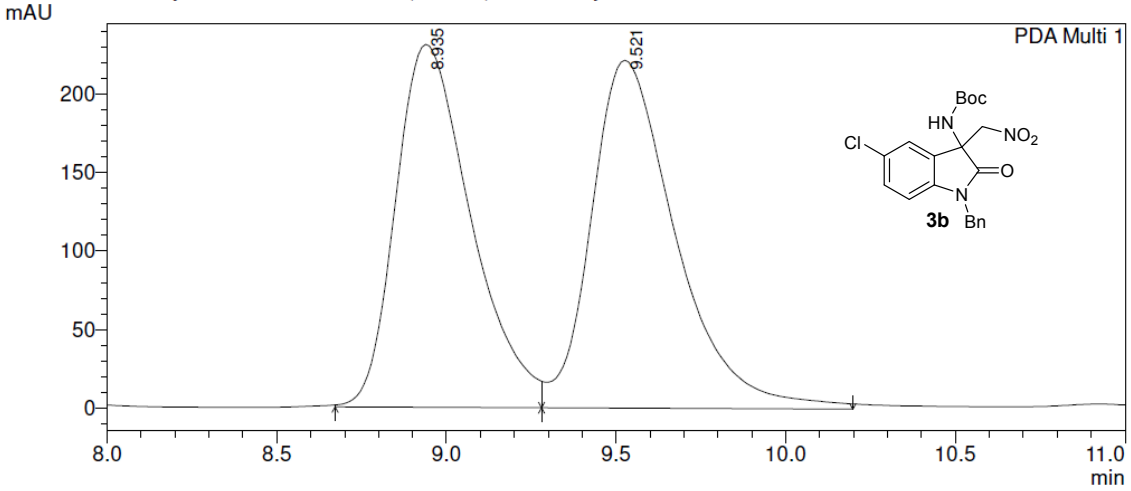
PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	16.418	792913	9812	91.932	93.996
2	20.336	69589	627	8.068	6.004
Total		862501	10439	100.000	100.000

==== Shimadzu LCsolution Analysis Report ====

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\Cl-N-benzyllisschffbase+CH3NO2, ODH,1ml,10% chiral0004.lcd



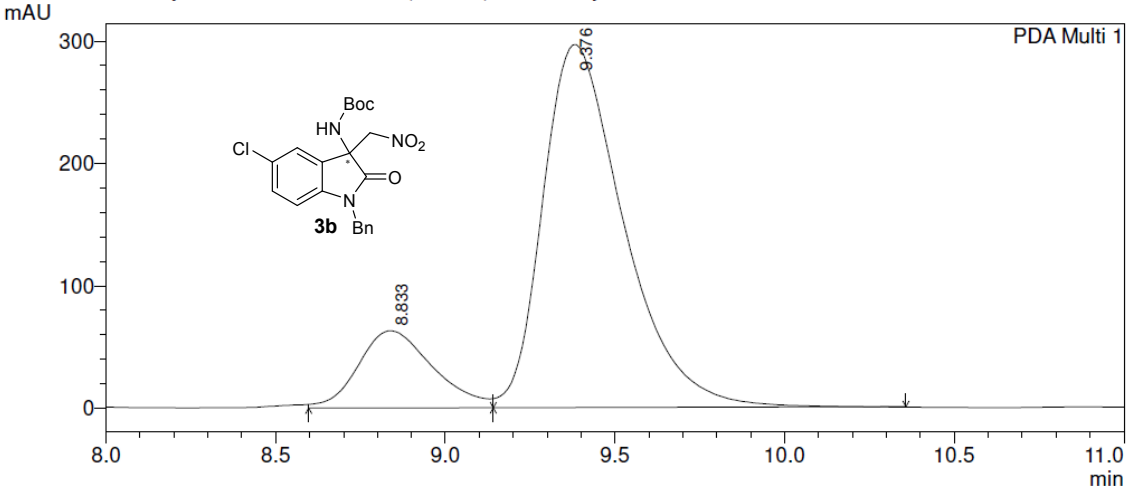
1 PDA Multi 1/254nm 4nm

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	8.935	3559077	230949	48.156	51.054
2	9.521	3831598	221410	51.844	48.946
Total		7390675	452359	100.000	100.000

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\Cl-N-benzyllisschffbase+CH3NO2, ODH,1ml,10% chiral0005.lcd



1 PDA Multi 1/254nm 4nm

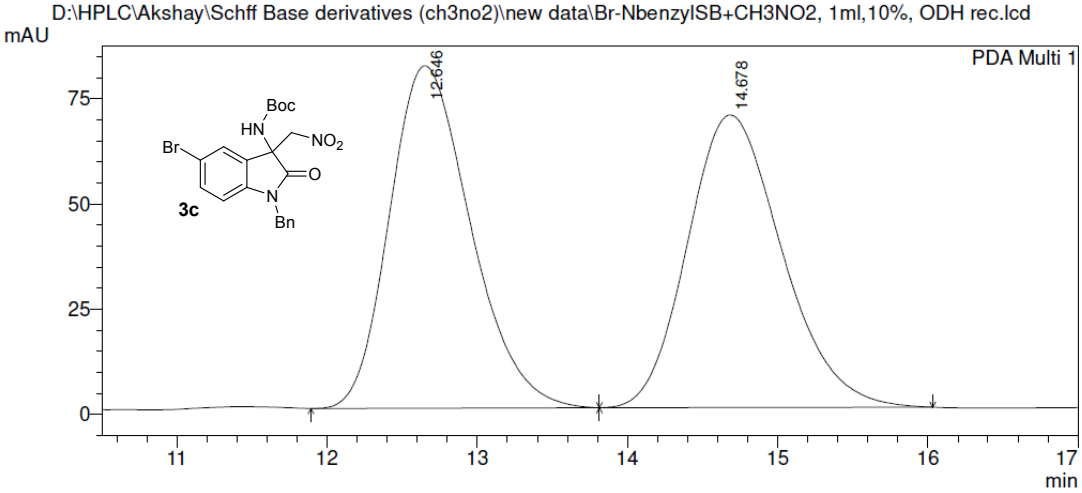
PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	8.833	966929	63119	16.428	17.543
2	9.376	4919015	296668	83.572	82.457
Total		5885944	359787	100.000	100.000

==== Shimadzu LCsolution Analysis Report ====

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\new data\Br-NbenzylSB+CH3NO2, 1ml,10%, ODH rec.lcd



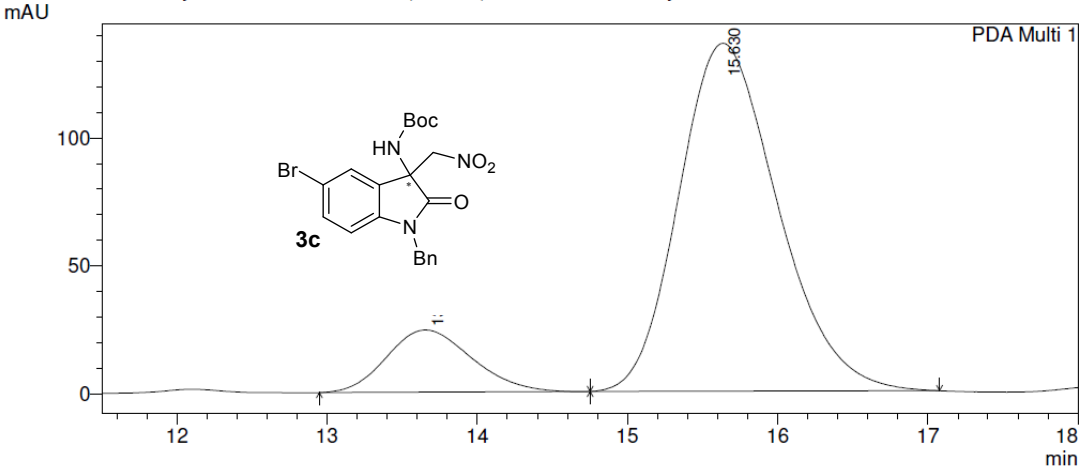
1 PDA Multi 1/254nm 4nm

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	12.646	3047501	81293	50.114	53.929
2	14.678	3033645	69448	49.886	46.071
Total		6081146	150741	100.000	100.000

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\new data\Br-NbenzylSB+CH3NO2, 1ml,10%, ODH Chiral.lcd



1 PDA Multi 1/254nm 4nm

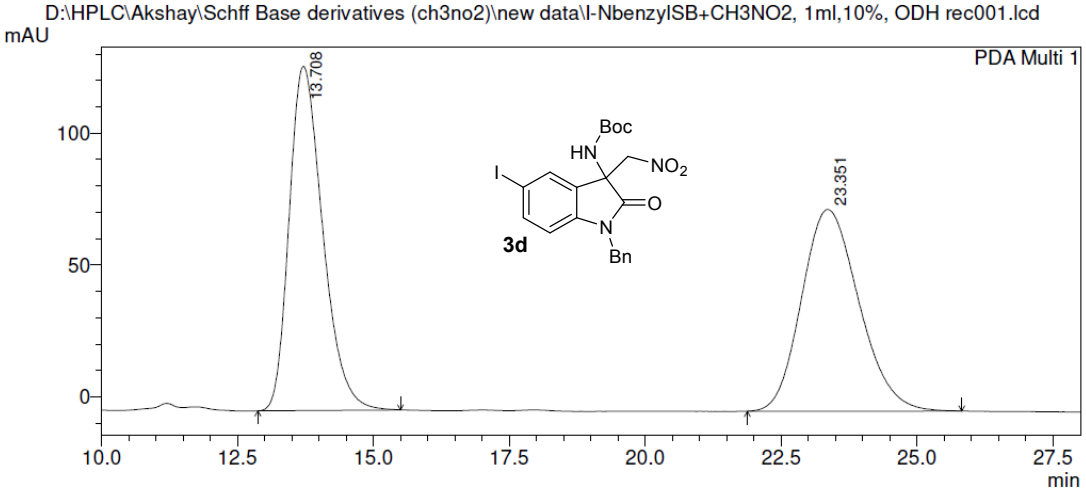
PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	13.650	957649	24333	13.323	15.171
2	15.630	6230471	136062	86.677	84.829
Total		7188121	160396	100.000	100.000

==== Shimadzu LCsolution Analysis Report ====

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\new data\I-NbenzylSB+CH3NO2, 1ml,10%, ODH rec001.lcd



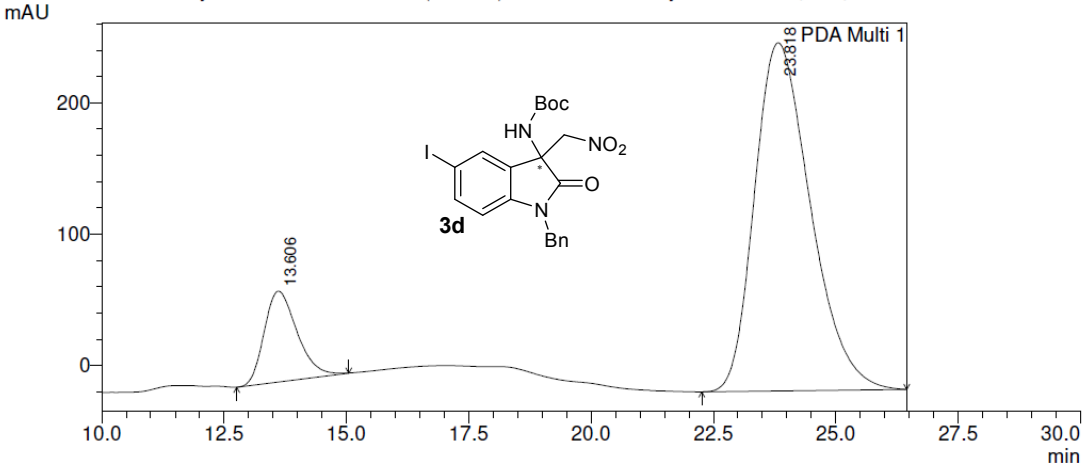
1 PDA Multi 1/254nm 4nm

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	13.708	5607790	130491	49.996	63.056
2	23.351	5608769	76455	50.004	36.944
Total		11216559	206946	100.000	100.000

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\new data\I-Nbenzylist+CH3NO2, 1ml,10% ODH chiral.lcd



1 PDA Multi 1/254nm 4nm

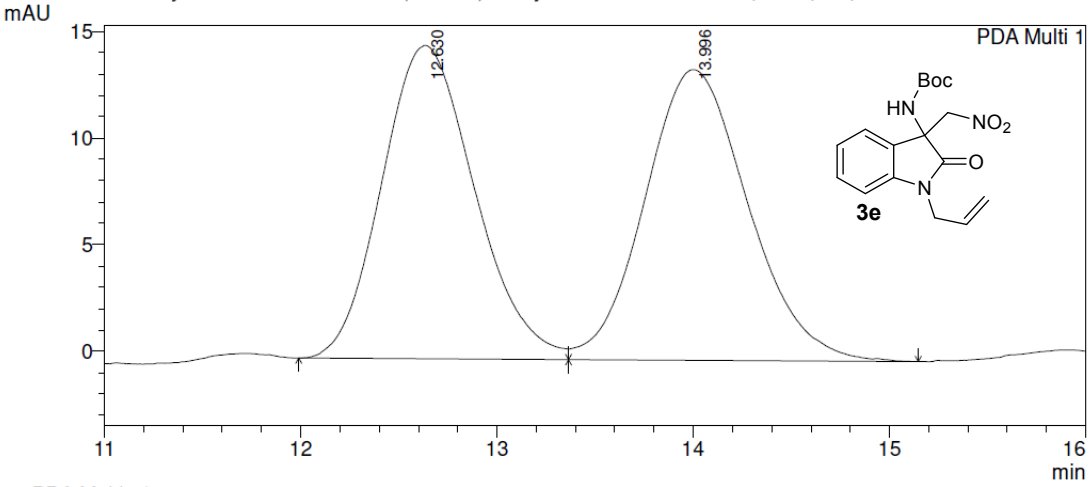
PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	13.606	3227921	69188	13.302	20.699
2	23.818	21039419	265066	86.698	79.301
Total		24267341	334254	100.000	100.000

==== Shimadzu LCsolution Analysis Report ====

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\N-allylisschffbase+CH3NO2, ODH,1ml,10% Racemic0001.lcd



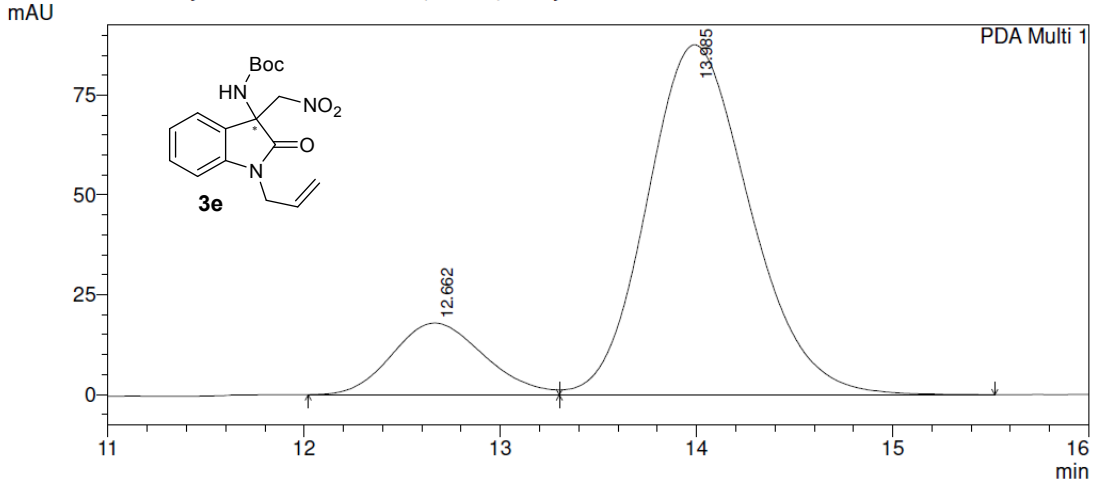
1 PDA Multi 1/254nm 4nm

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	12.630	482676	14691	49.183	51.872
2	13.996	498721	13631	50.817	48.128
Total		981396	28322	100.000	100.000

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\N-allylisschffbase+CH3NO2, ODH,1ml,10% chiral0001.lcd



1 PDA Multi 1/254nm 4nm

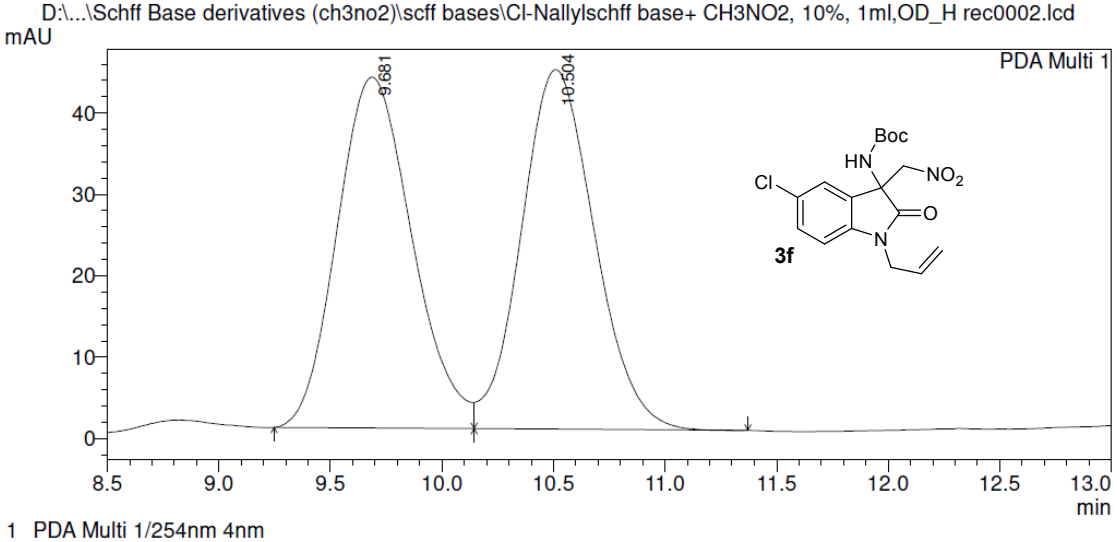
PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	12.662	585532	17948	15.479	16.987
2	13.985	3197122	87712	84.521	83.013
Total		3782654	105660	100.000	100.000

==== Shimadzu LCsolution Analysis Report ====

D:\...\Schff Base derivatives (ch3no2)\scff bases\Cl-Nallylschff base+ CH3NO2, 10%, 1ml,OD_H rec0002.lcd



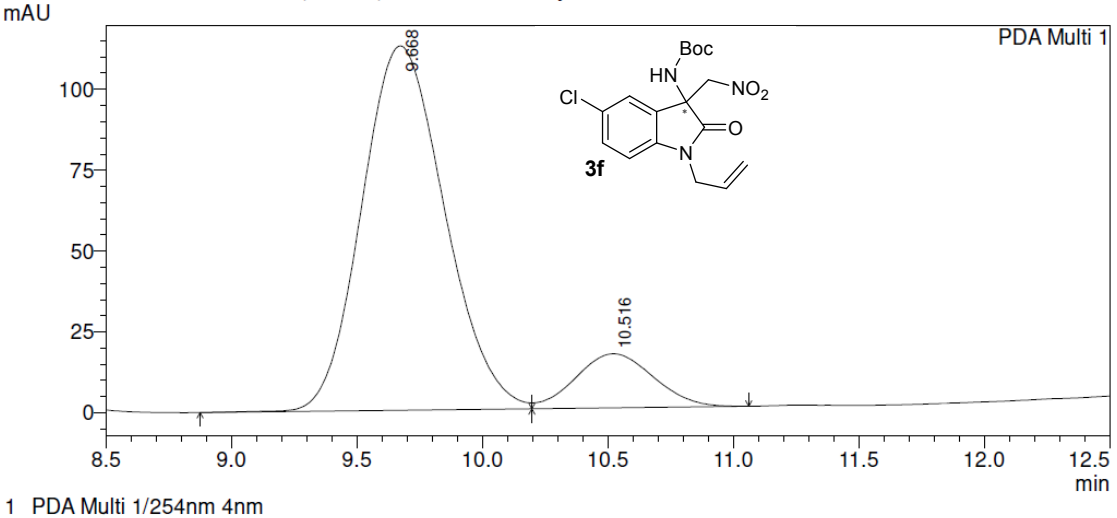
1 PDA Multi 1/254nm 4nm

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	9.681	1007418	43122	50.012	49.398
2	10.504	1006944	44173	49.988	50.602
Total		2014361	87295	100.000	100.000

D:\...\Schff Base derivatives (ch3no2)\scff bases\Cl-Nallylschff base+ CH3NO2, 10%, 1ml,OD_H chiral0003.lcd



1 PDA Multi 1/254nm 4nm

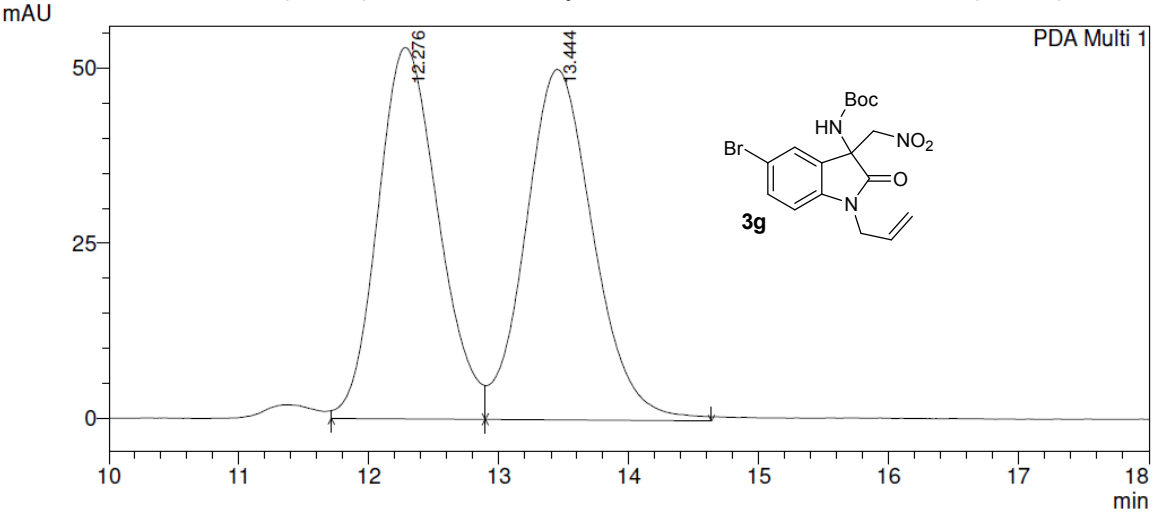
PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	9.668	2588111	112605	87.746	87.070
2	10.516	361424	16721	12.254	12.930
Total		2949535	129327	100.000	100.000

==== Shimadzu LCsolution Analysis Report ====

D:\...\Schff Base derivatives (ch3no2)\scff bases\-Br-N-allylschbase+CH3NO2, ODH, 1ml, 10mol%(racemic)0001.lcd



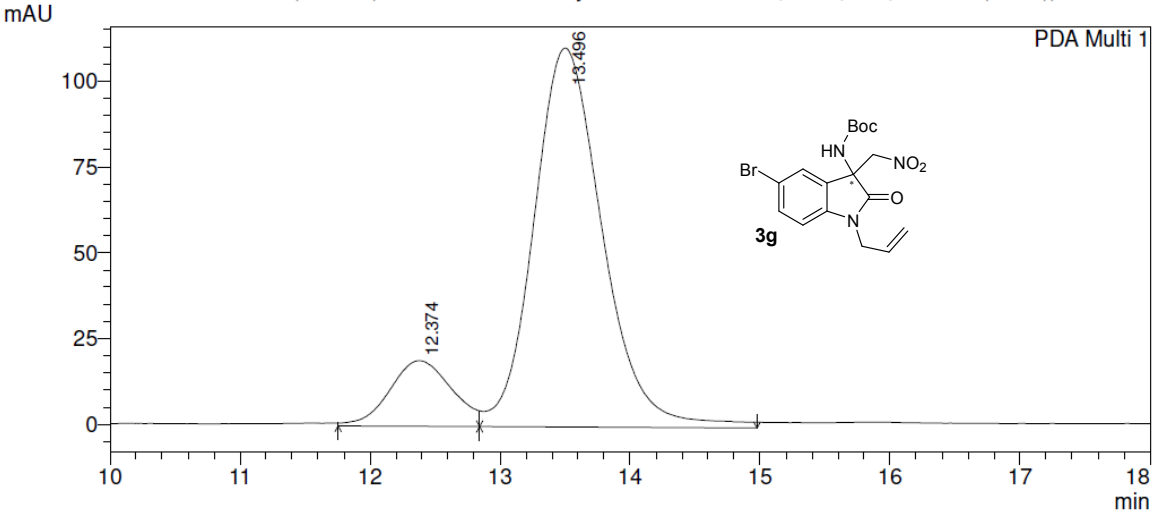
1 PDA Multi 1/254nm 4nm

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	12.276	1723022	53096	48.720	51.461
2	13.444	1813537	50081	51.280	48.539
Total		3536559	103177	100.000	100.000

D:\...\Schff Base derivatives (ch3no2)\scff bases\-Br-N-allylschbase+CH3NO2, ODH, 1ml, 10mol%(chiral))0001.lcd



1 PDA Multi 1/254nm 4nm

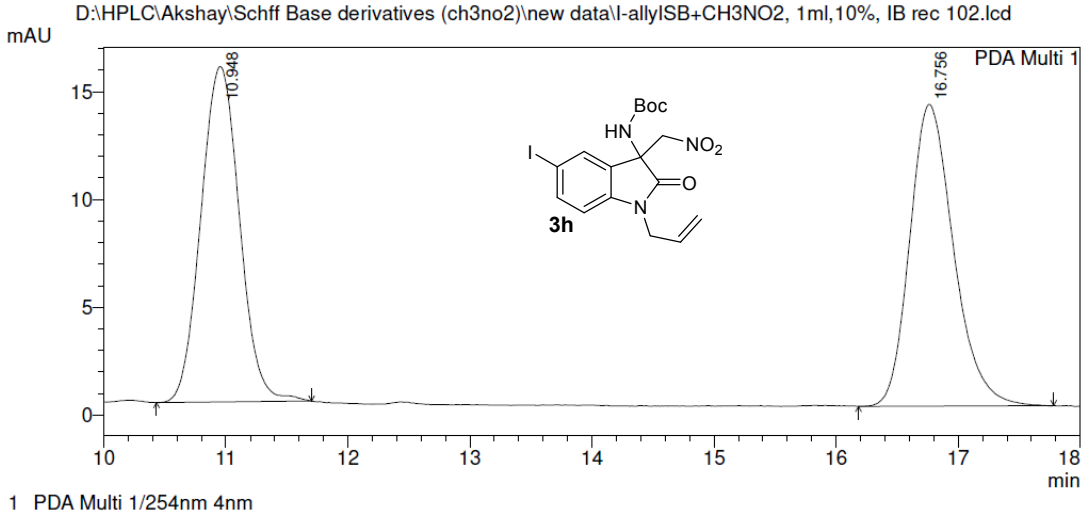
PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	12.374	634750	19122	13.516	14.760
2	13.496	4061391	110432	86.484	85.240
Total		4696142	129554	100.000	100.000

==== Shimadzu LCsolution Analysis Report ====

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\new data\I-allylSB+CH3NO2, 1ml,10%, IB rec 102.lcd



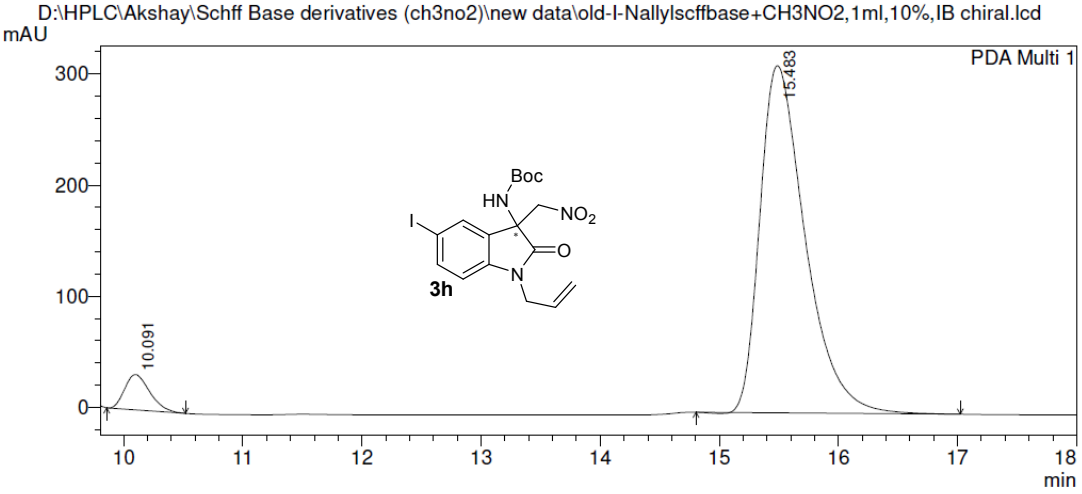
1 PDA Multi 1/254nm 4nm

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	10.948	341972	15543	49.456	52.641
2	16.756	349496	13984	50.544	47.359
Total		691468	29527	100.000	100.000

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\new data\old-I-NallylscffbaseCH3NO2,1ml,10%,IB chiral.lcd



1 PDA Multi 1/254nm 4nm

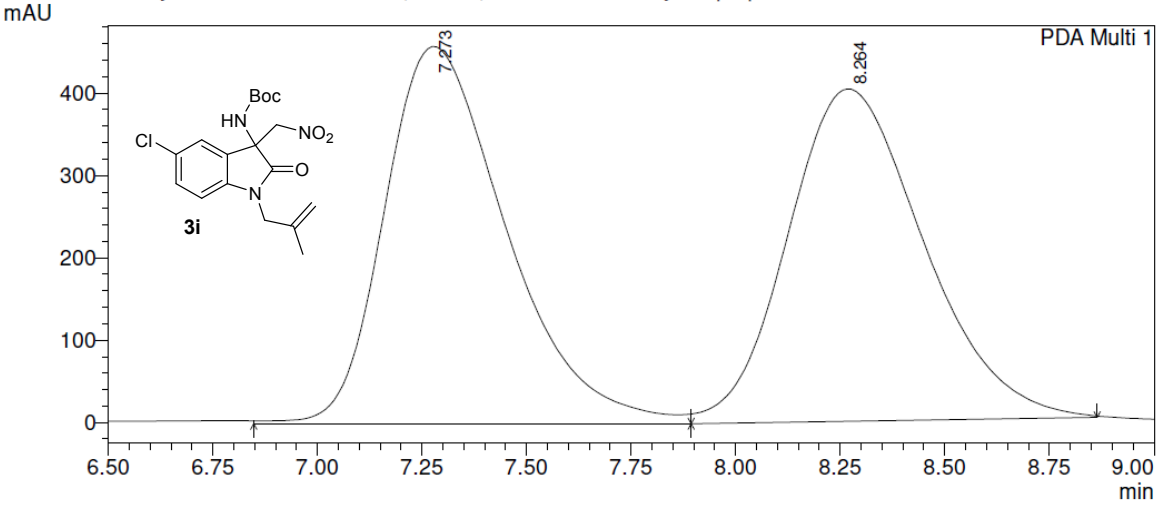
PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	10.091	462506	31703	5.306	9.213
2	15.483	8253592	312407	94.694	90.787
Total		8716098	344110	100.000	100.000

==== Shimadzu LCsolution Analysis Report ====

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\scff bases\Cl-Nallyl-Br-propen ist+CH3NO2, 1ml,10%, OD-H rec.lcd



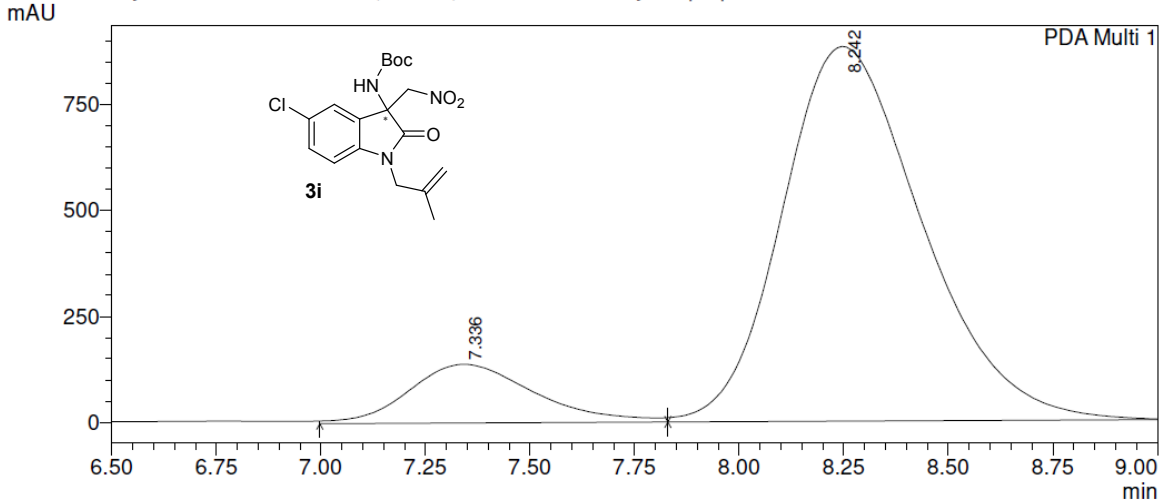
1 PDA Multi 1/254nm 4nm

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	7.273	9288930	458260	50.458	53.163
2	8.264	9120240	403730	49.542	46.837
Total		18409170	861991	100.000	100.000

D:\...\Akshay\Schff Base derivatives (ch3no2)\scff bases\Cl-Nallyl-Br-propen ist+CH3NO2, 1ml,10%, OD-H chiral.lcd



1 PDA Multi 1/254nm 4nm

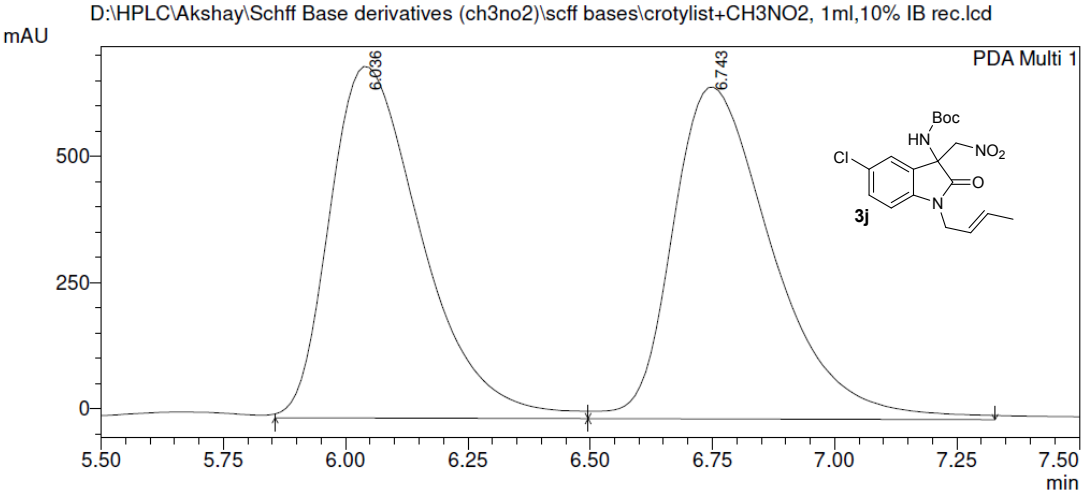
PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	7.336	2912621	138606	12.393	13.550
2	8.242	20589757	884299	87.607	86.450
Total		23502378	1022905	100.000	100.000

==== Shimadzu LCsolution Analysis Report ====

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\scff bases\crotylist+CH3NO2, 1ml,10% IB rec.lcd



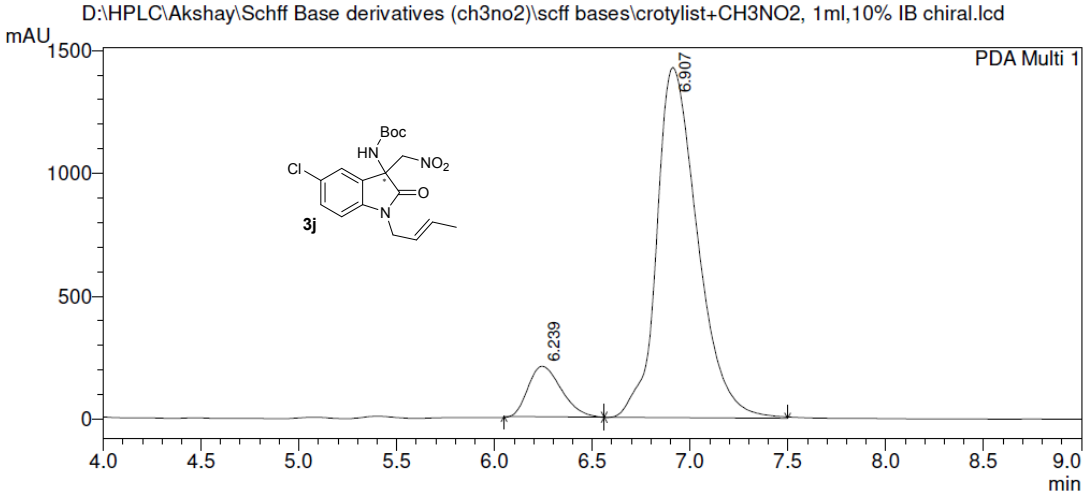
1 PDA Multi 1/254nm 4nm

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	6.036	9140645	695932	49.244	51.435
2	6.743	9421132	657112	50.756	48.565
Total		18561778	1353044	100.000	100.000

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\scff bases\crotylist+CH3NO2, 1ml,10% IB chiral.lcd



1 PDA Multi 1/254nm 4nm

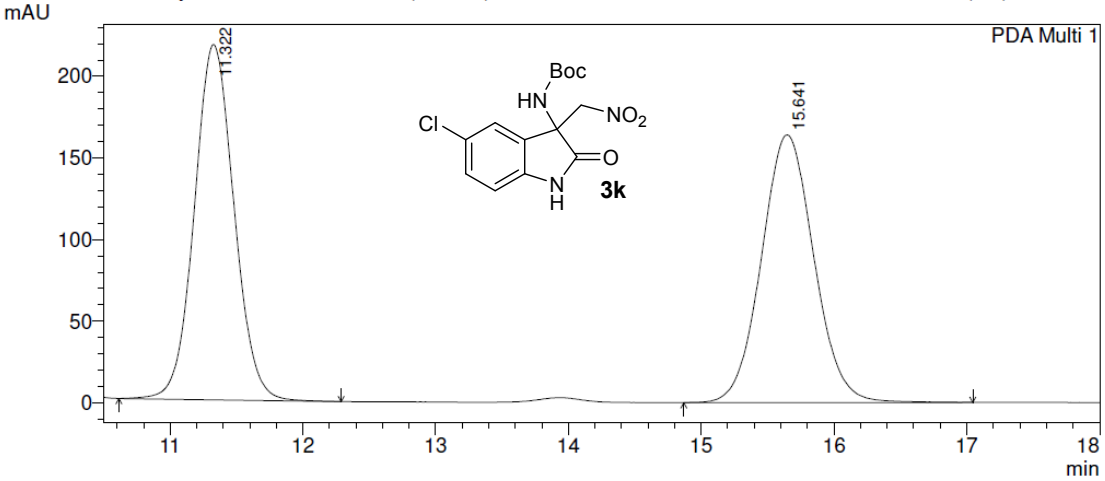
PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	6.239	2410421	204960	10.423	12.572
2	6.907	20716100	1425297	89.577	87.428
Total		23126521	1630257	100.000	100.000

==== Shimadzu LCsolution Analysis Report ====

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\new data\Cl-NHschff base+ CH3NO2, 1ml,10% IA (rec) 99.lcd



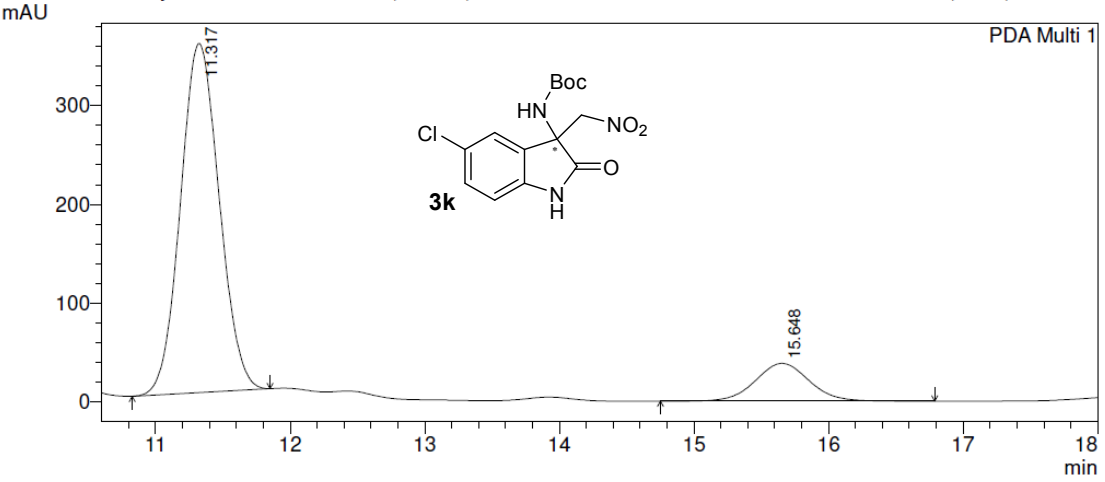
1 PDA Multi 1/254nm 4nm

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	11.322	4526266	217701	50.136	57.035
2	15.641	4501756	163994	49.864	42.965
Total		9028021	381695	100.000	100.000

D:\HPLC\Akshay\Schff Base derivatives (ch3no2)\new data\Cl-NHschff base+ CH3NO2, 1ml,10% IA (chiral) 100.lcd



1 PDA Multi 1/254nm 4nm

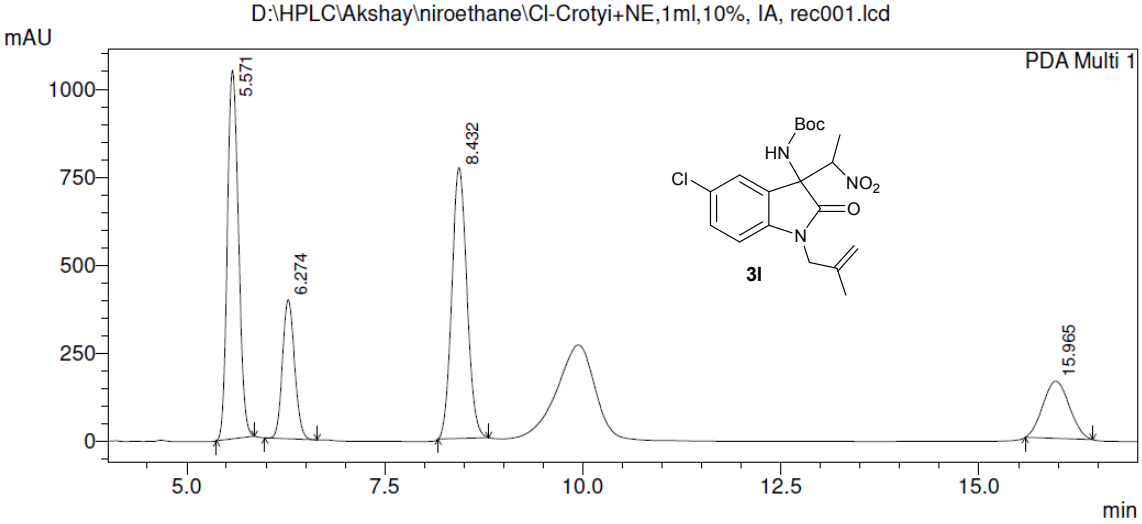
PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	11.317	7077660	353443	86.864	90.240
2	15.648	1070275	38229	13.136	9.760
Total		8147935	391671	100.000	100.000

==== Shimadzu LCsolution Analysis Report ====

D:\HPLC\Akshay\niroethane\Cl-Crotyi+NE,1ml,10%, IA, rec001.lcd



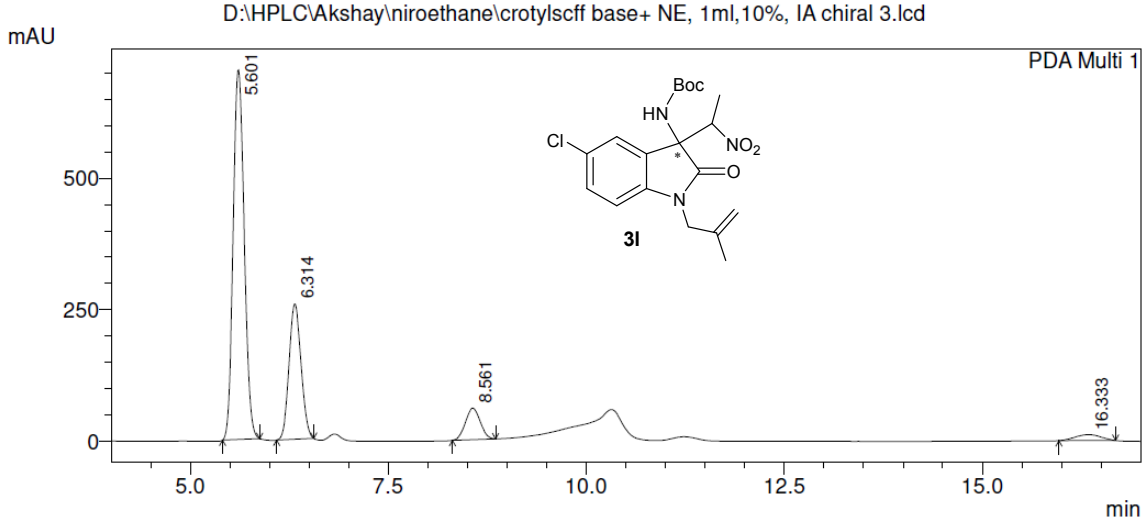
1 PDA Multi 1/254nm 4nm

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	5.571	10212841	1046673	35.972	44.097
2	6.274	4209789	394634	14.828	16.626
3	8.432	10186166	769492	35.878	32.419
4	15.965	3781984	162788	13.321	6.858
Total		28390780	2373588	100.000	100.000

D:\HPLC\Akshay\niroethane\crotylscff base+ NE, 1ml,10%, IA chiral 3.lcd



1 PDA Multi 1/254nm 4nm

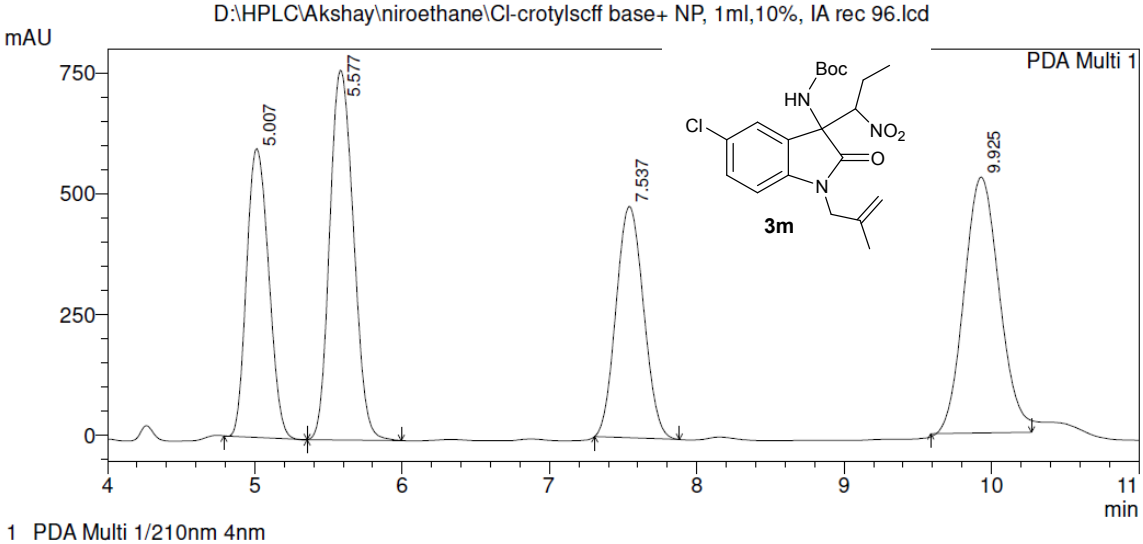
PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	5.601	6801781	702305	64.485	68.165
2	6.314	2721342	257069	25.800	24.951
3	8.561	775377	59620	7.351	5.787
4	16.333	249380	11301	2.364	1.097
Total		10547880	1030294	100.000	100.000

==== Shimadzu LCsolution Analysis Report ====

D:\HPLC\Akshay\niroethane\Cl-crotylscff base+ NP, 1ml,10%, IA rec 96.lcd



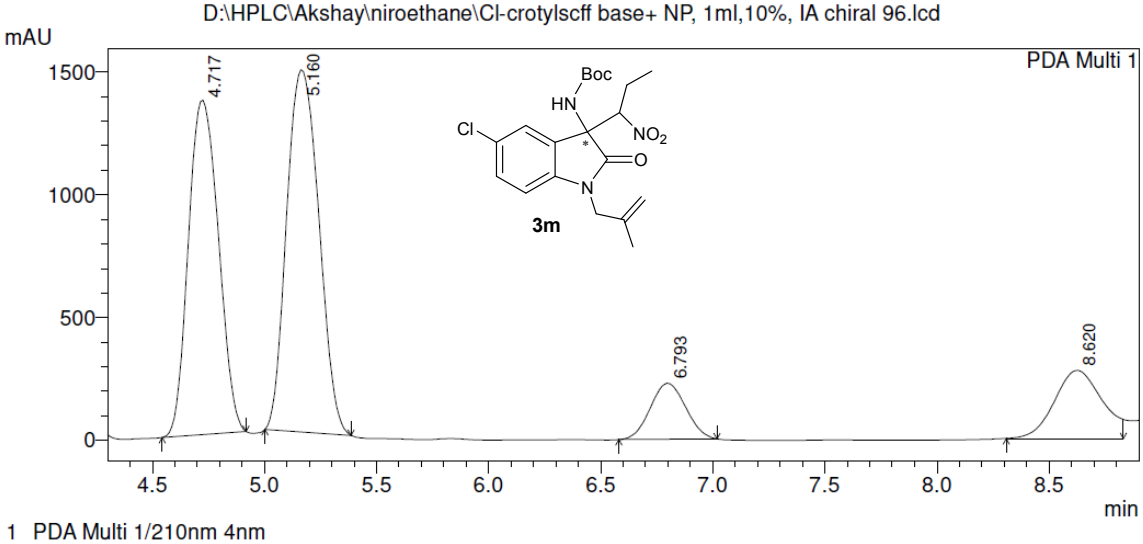
1 PDA Multi 1/210nm 4nm

PeakTable

PDA Ch1 210nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	5.007	6240916	598407	20.918	25.216
2	5.577	8585684	765722	28.777	32.266
3	7.537	6225642	479156	20.867	20.191
4	9.925	8783025	529834	29.438	22.326
Total		29835268	2373119	100.000	100.000

D:\HPLC\Akshay\niroethane\Cl-crotylscff base+ NP, 1ml,10%, IA chiral 96.lcd



1 PDA Multi 1/210nm 4nm

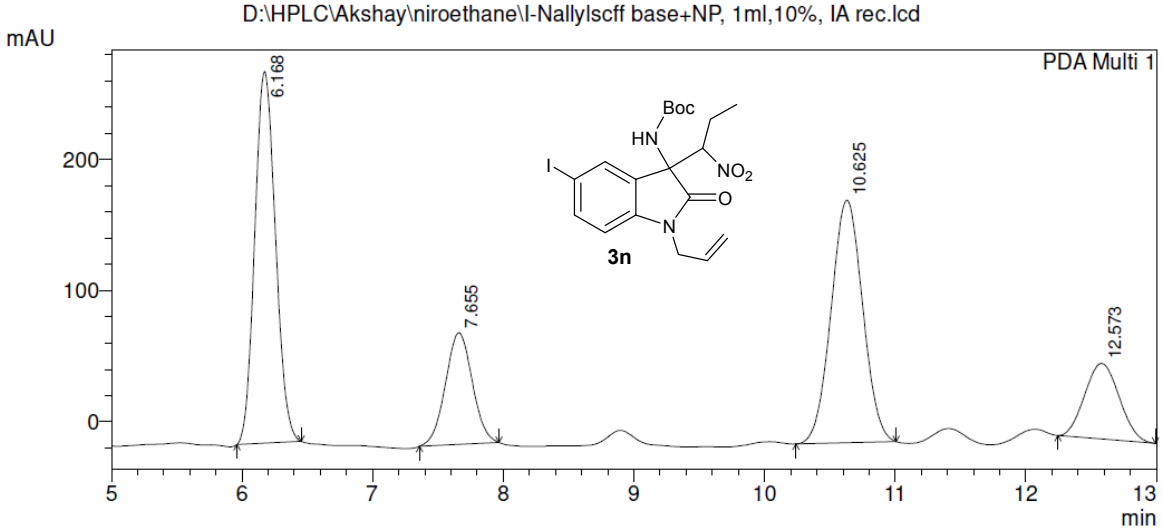
PeakTable

PDA Ch1 210nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	4.717	12719903	1362120	37.277	40.748
2	5.160	14775156	1474943	43.300	44.123
3	6.793	2496332	227572	7.316	6.808
4	8.620	4131193	278182	12.107	8.322
Total		34122583	3342817	100.000	100.000

==== Shimadzu LCsolution Analysis Report ====

D:\HPLC\Akshay\niroethane\I-Nallylscff base+NP, 1ml,10%, IA rec.lcd



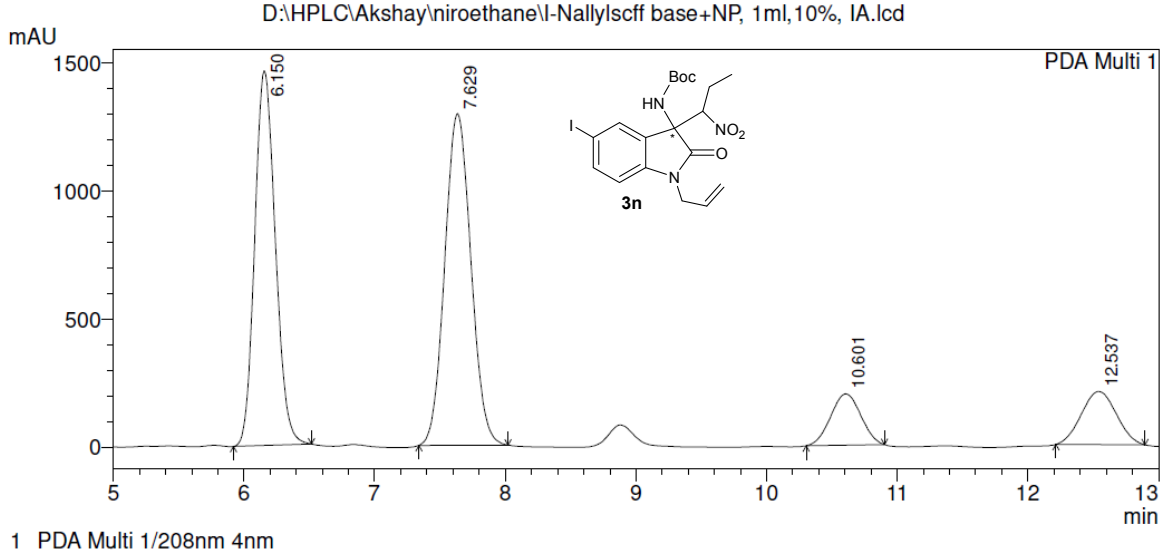
1 PDA Multi 1/209nm 4nm

PeakTable

PDA Ch1 209nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	6.168	3123252	283522	36.676	46.366
2	7.655	1220934	85199	14.337	13.933
3	10.625	3114764	185072	36.577	30.266
4	12.573	1056734	57692	12.409	9.435
Total		8515684	611486	100.000	100.000

D:\HPLC\Akshay\niroethane\I-Nallylscff base+NP, 1ml,10%, IA.lcd

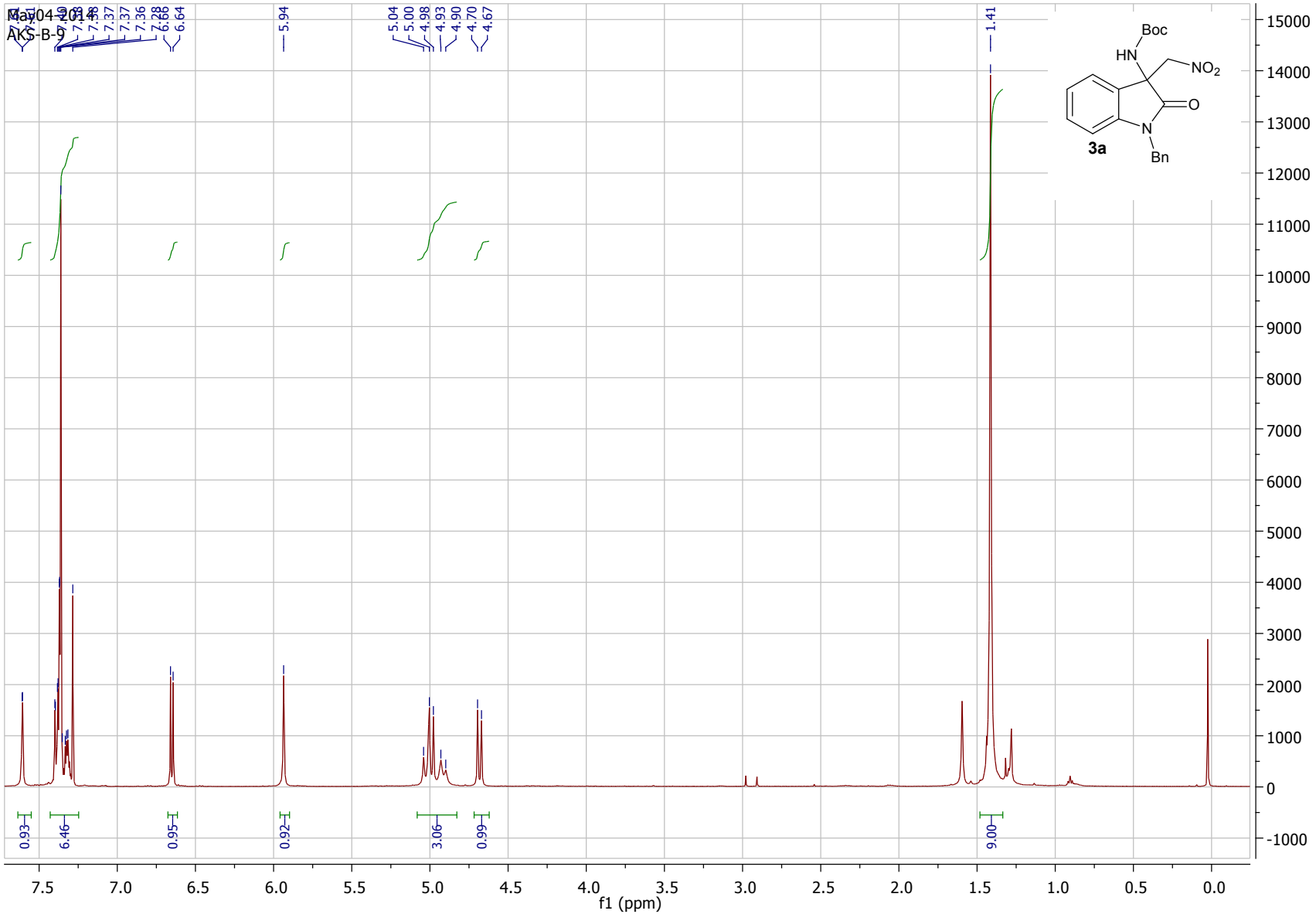


1 PDA Multi 1/208nm 4nm

PeakTable

PDA Ch1 208nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	6.150	16061530	1463160	39.030	46.223
2	7.629	18006695	1294571	43.757	40.897
3	10.601	3214834	200034	7.812	6.319
4	12.537	3868842	207649	9.401	6.560
Total		41151901	3165414	100.000	100.000


May04-2014
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7.58
7.37
7.36
6.68
6.64
5.94
5.04
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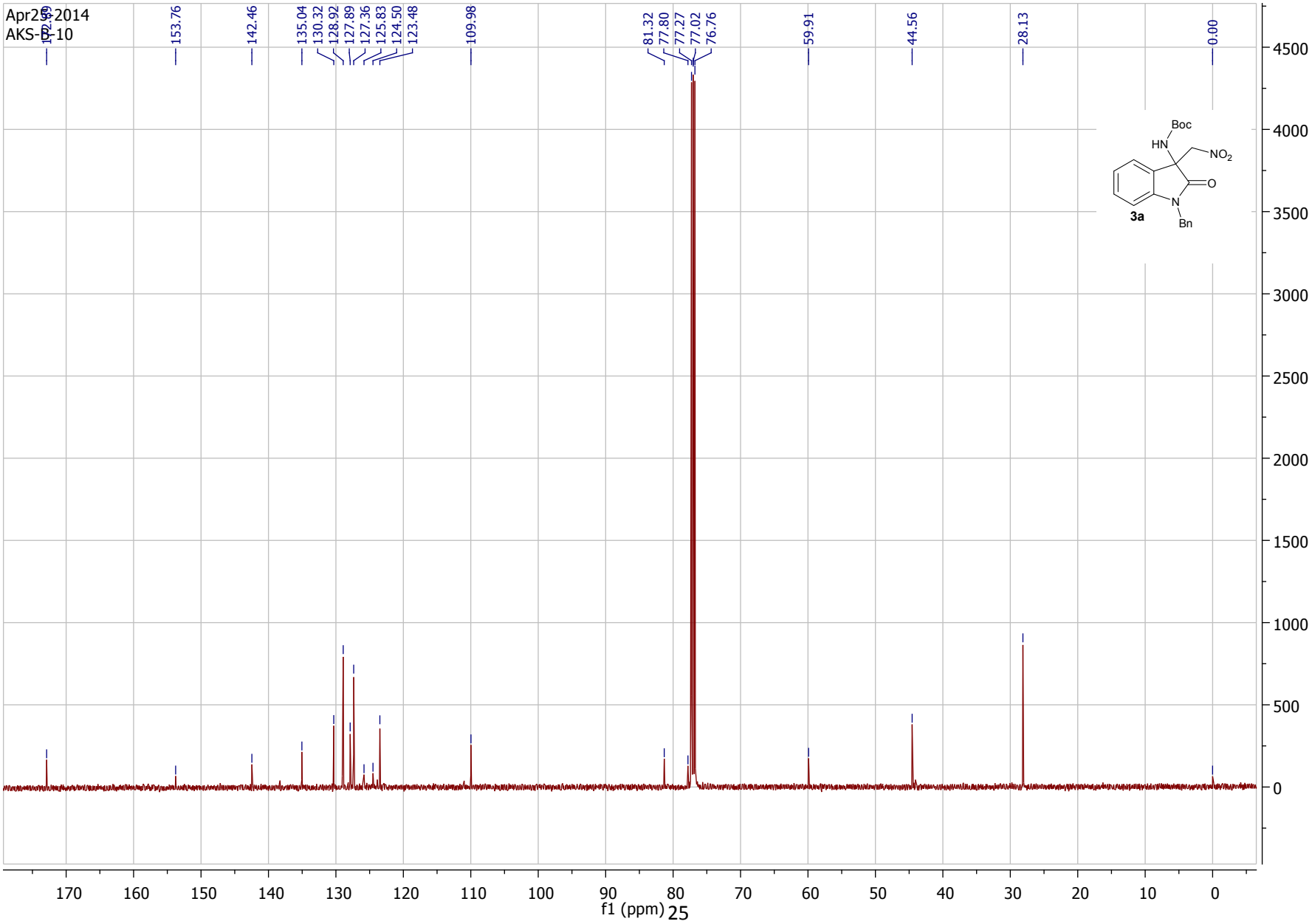
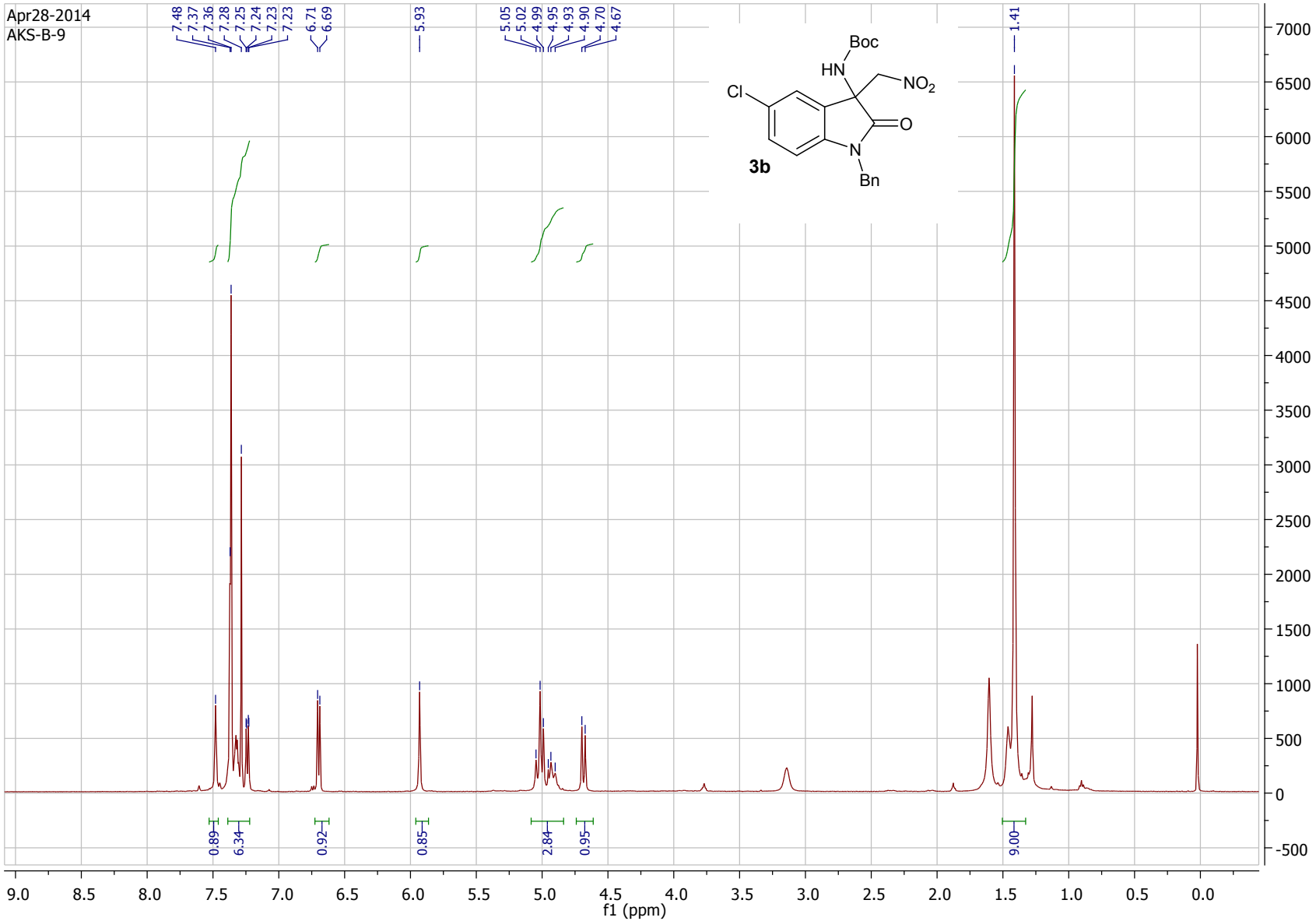
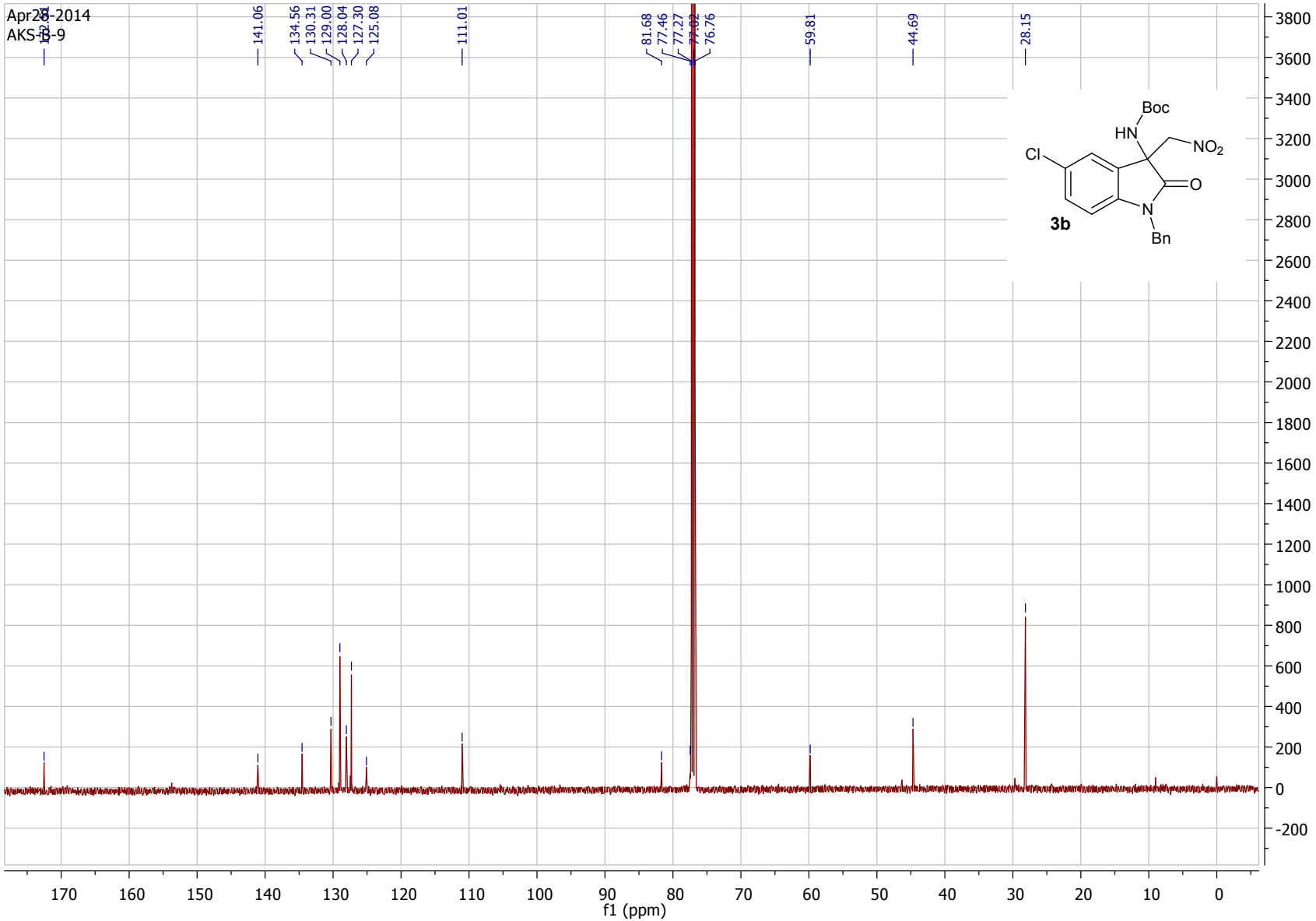
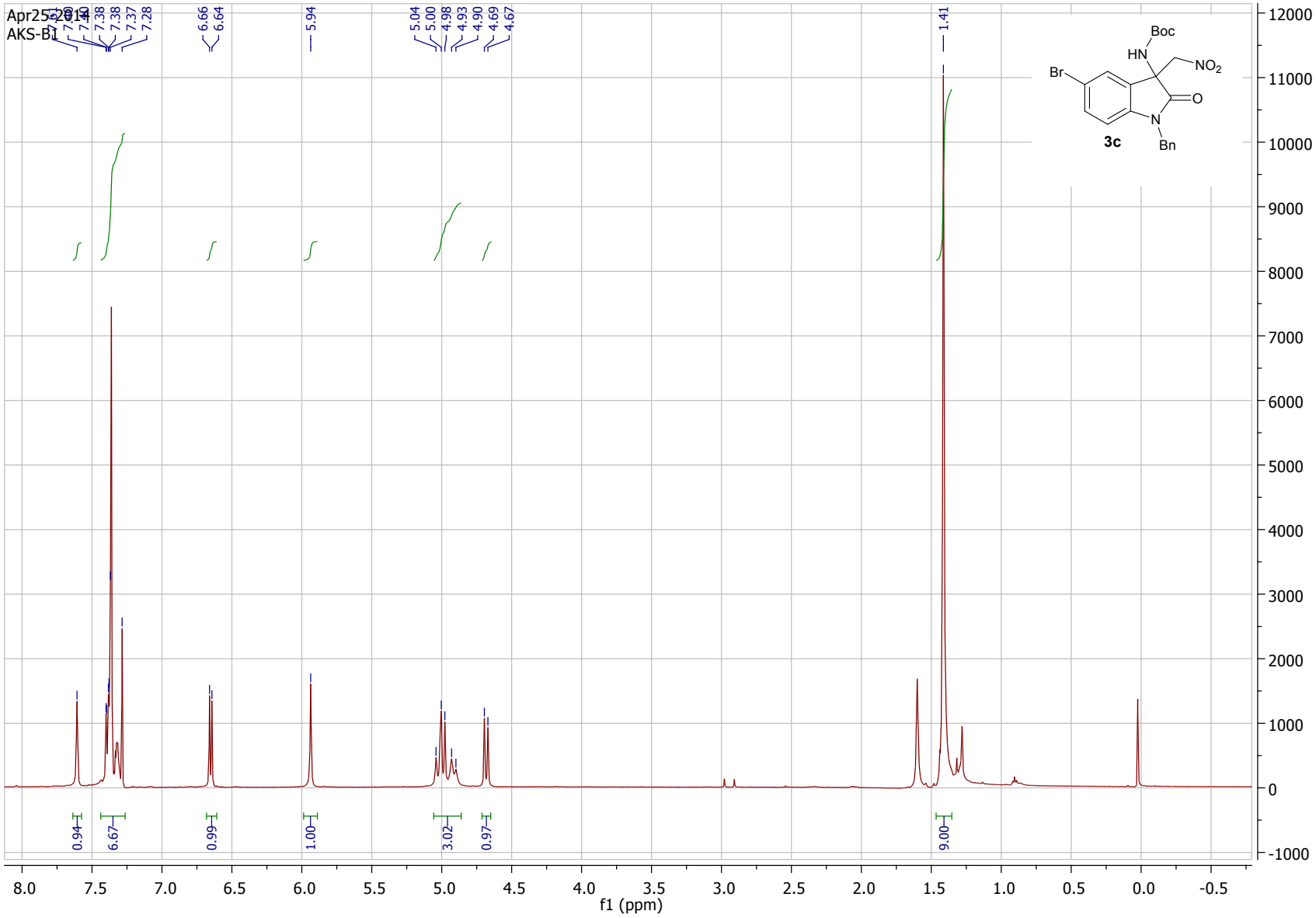
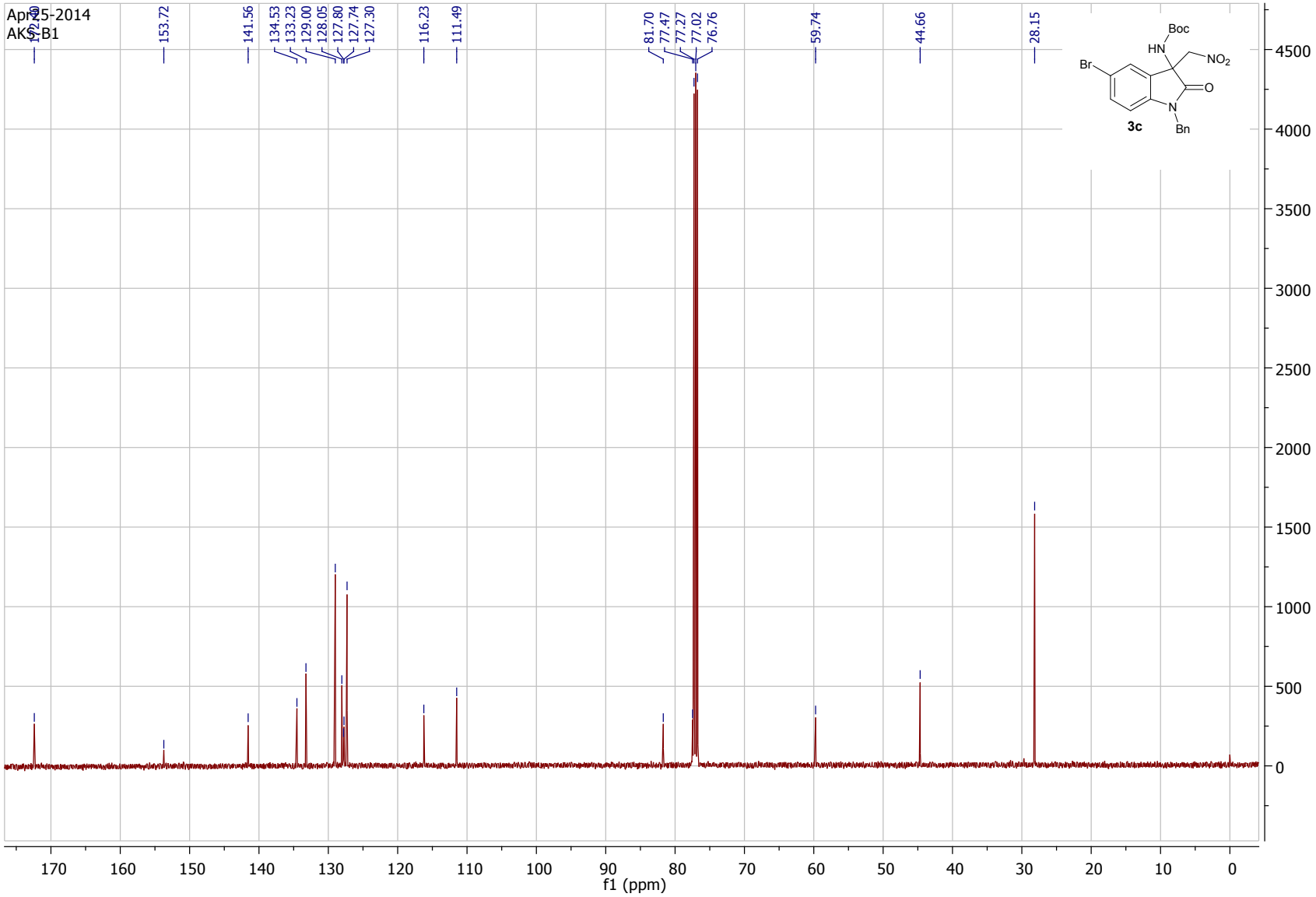
4.90
4.70
4.67
1.41
Boc
HN
NO2
O
N
Bn
3a
0.93
6.46
0.95
0.92
3.06
0.99
9.00
f1 (ppm)


Apr25-2014
AKS-D-10
172.69
153.76
142.46
135.04
130.32
128.92
127.89
127.36
125.83
124.50
123.48
109.98
81.32
77.80
77.27
77.02
76.76
59.91
44.56
28.13
0.00
Boc
HN
NO2
O
N
Bn
3a
4500
4000
3500
3000
2500
2000
1500
1000
500
0
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

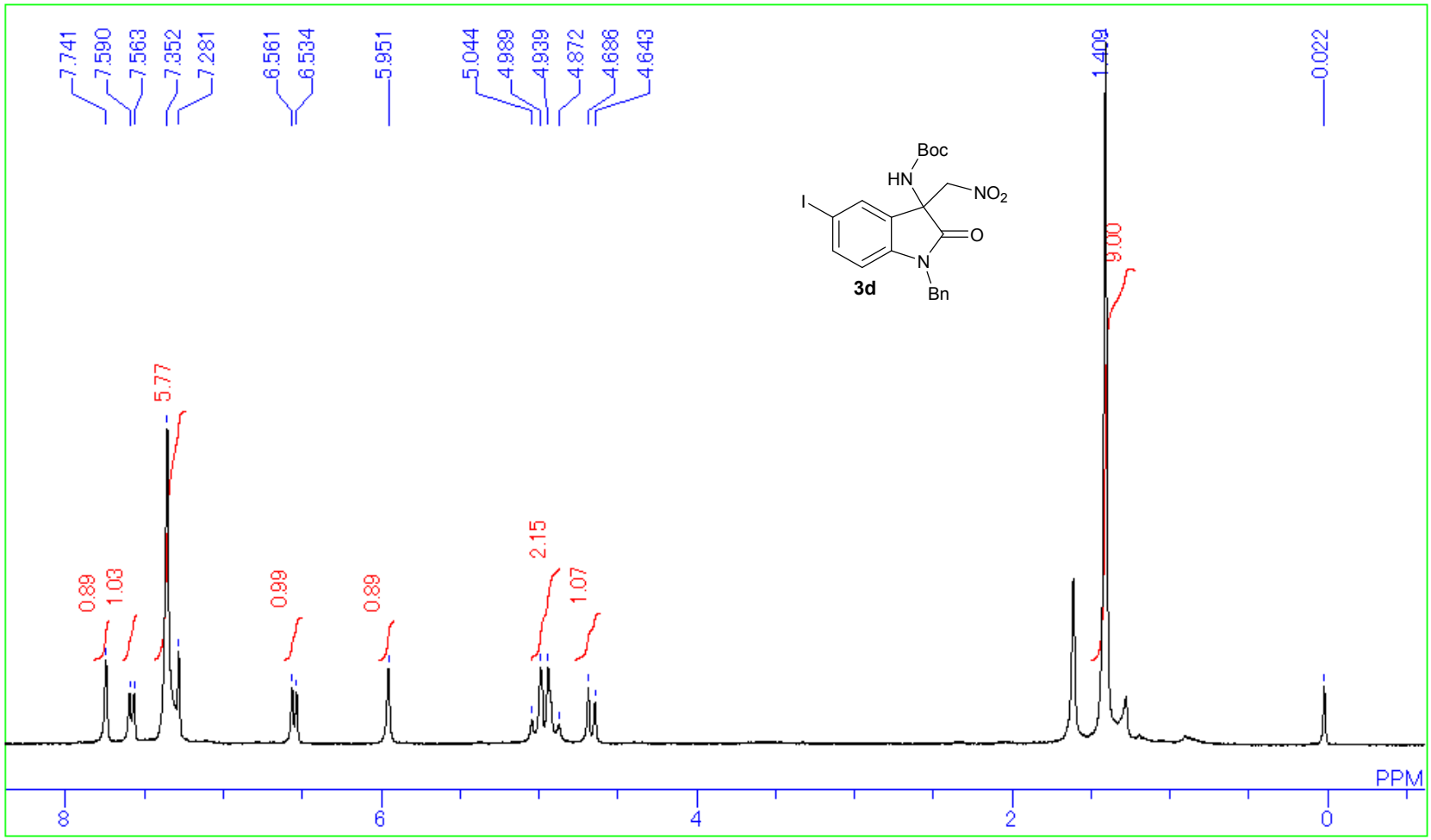

Apr28-2014
AKS-B-9
7.48
7.37
7.36
7.28
7.25
7.24
7.23
7.23
6.71
6.69
5.93
5.05
5.02
4.99
4.95
4.93
4.90
4.70
4.67
1.41
Boc
HN
NO2
Cl
O
N
Bn
3b
0.89
6.34
0.92
0.85
2.84
0.95
9.00
f1 (ppm)

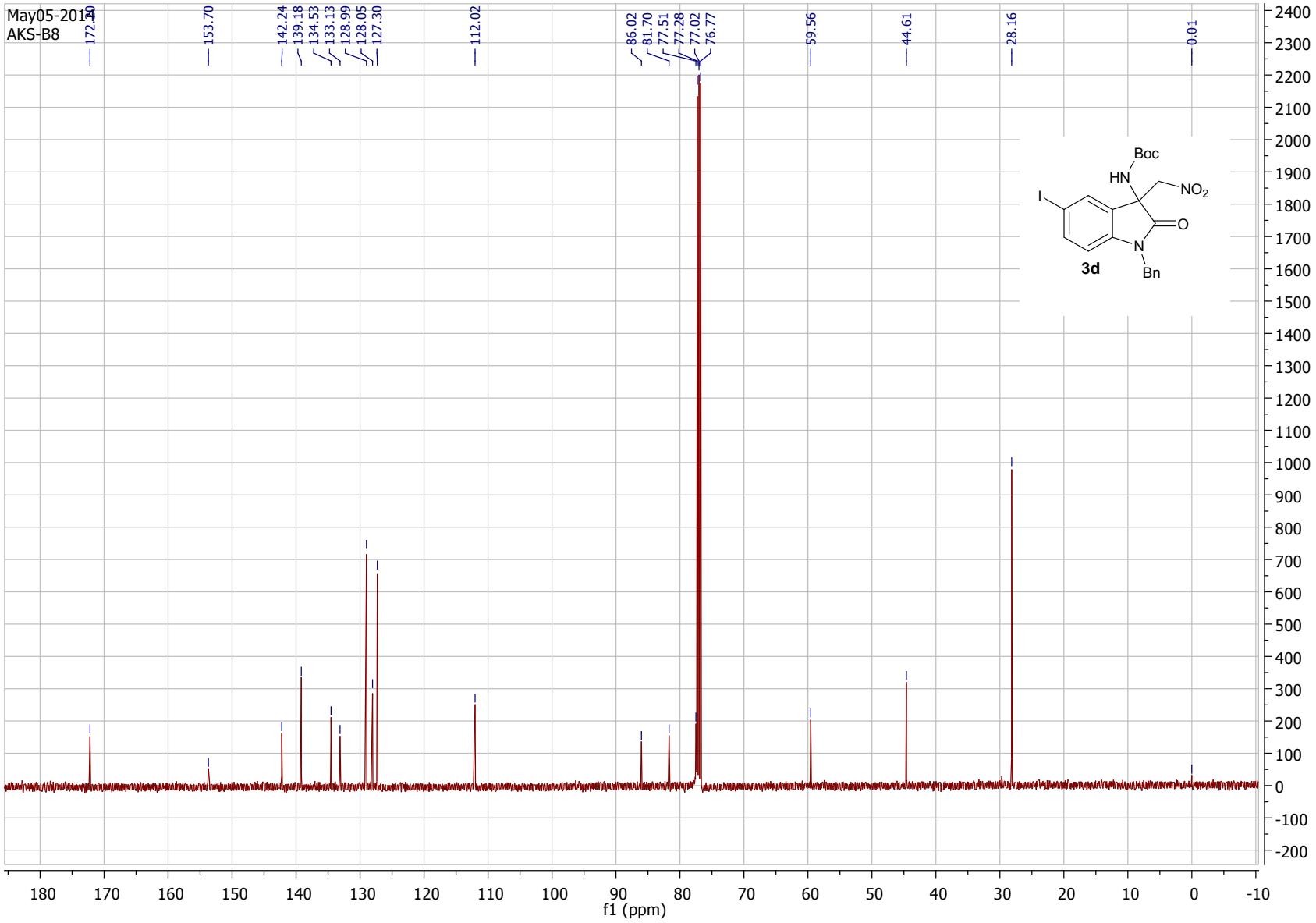

Apr28-2014
AKS-B-9
172.84
141.06
134.56
130.31
129.00
128.04
127.30
125.08
111.01
81.68
77.46
77.27
77.02
76.76
59.81
44.69
28.15
Boc
HN
NO2
Cl
O
N
Bn
3b
f1 (ppm)

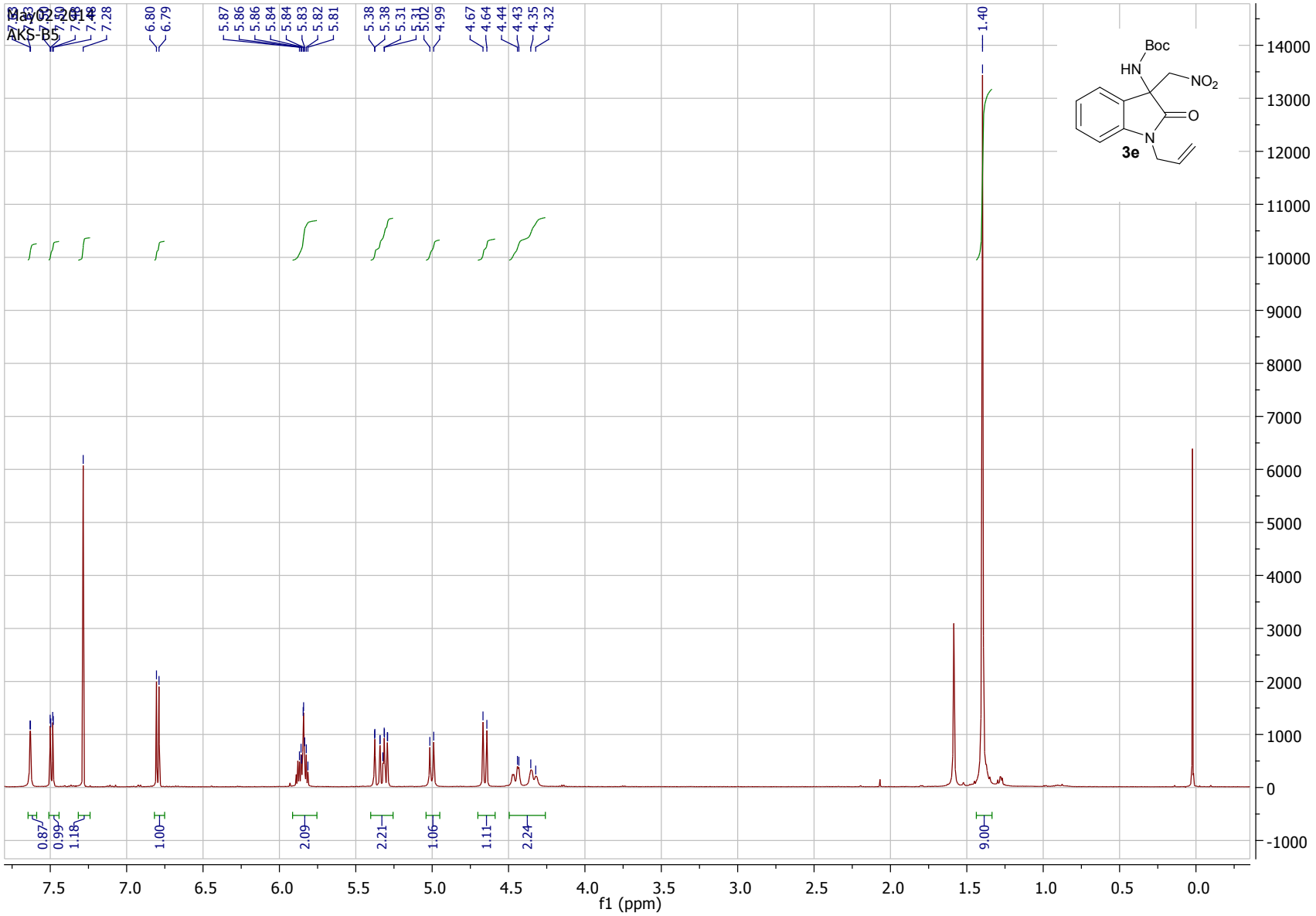

Apr25-2014
AKS-B1
7.38
7.38
7.37
7.28
6.66
6.64
5.94
5.04
5.00
4.98
4.93
4.90
4.69
4.67
1.41
Boc
HN
NO2
Br
O
N
Bn
3c
0.94
6.67
0.99
1.00
3.02
0.97
9.00
f1 (ppm)

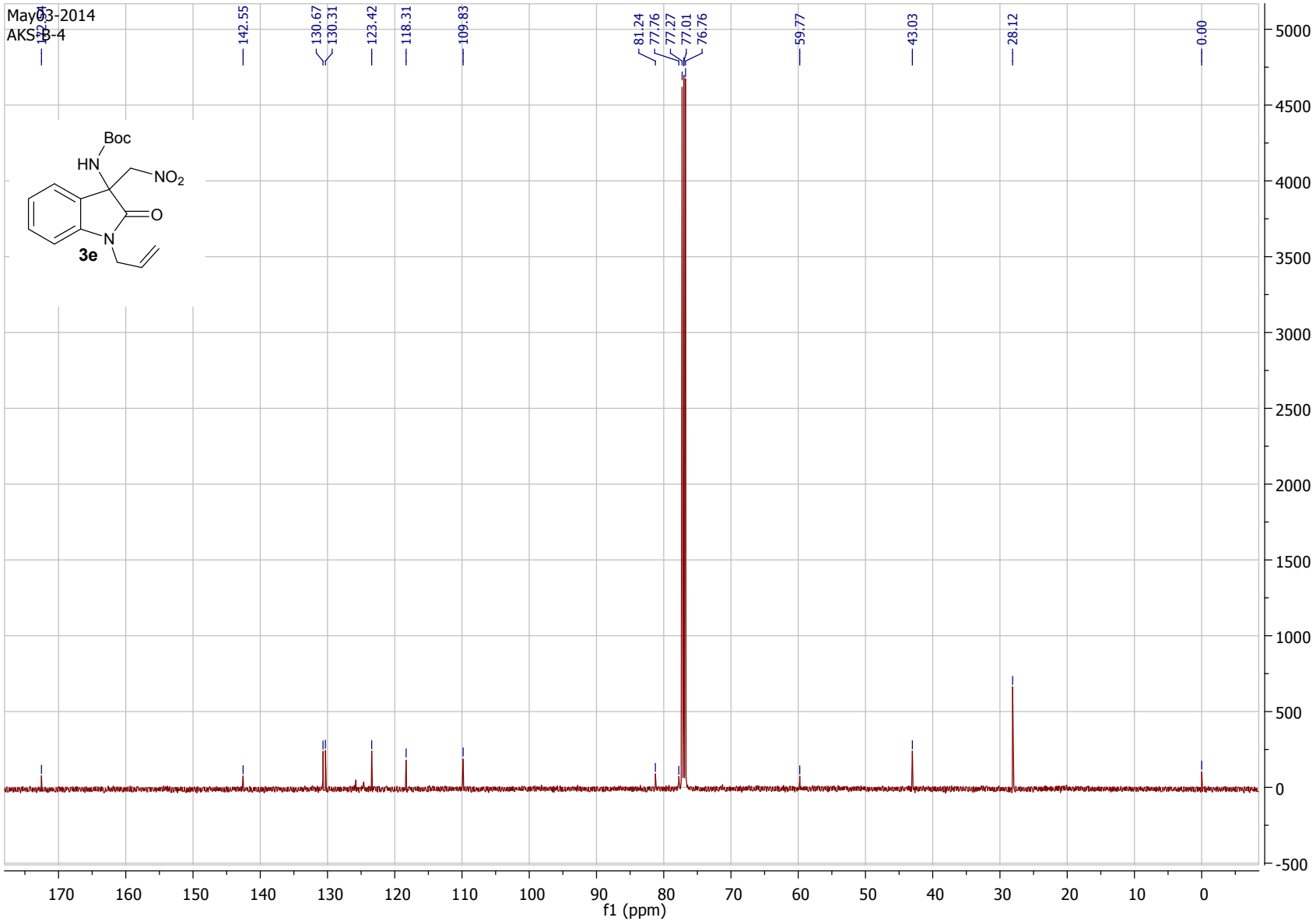

Apr25-2014
AKS-B1
153.72
141.56
134.53
133.23
129.00
128.05
127.80
127.74
127.30
116.23
111.49
81.70
77.47
77.27
77.02
76.76
59.74
44.66
28.15
Boc
HN
NO2
Br
O
N
Bn
3c
4500
4000
3500
3000
2500
2000
1500
1000
500
0
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

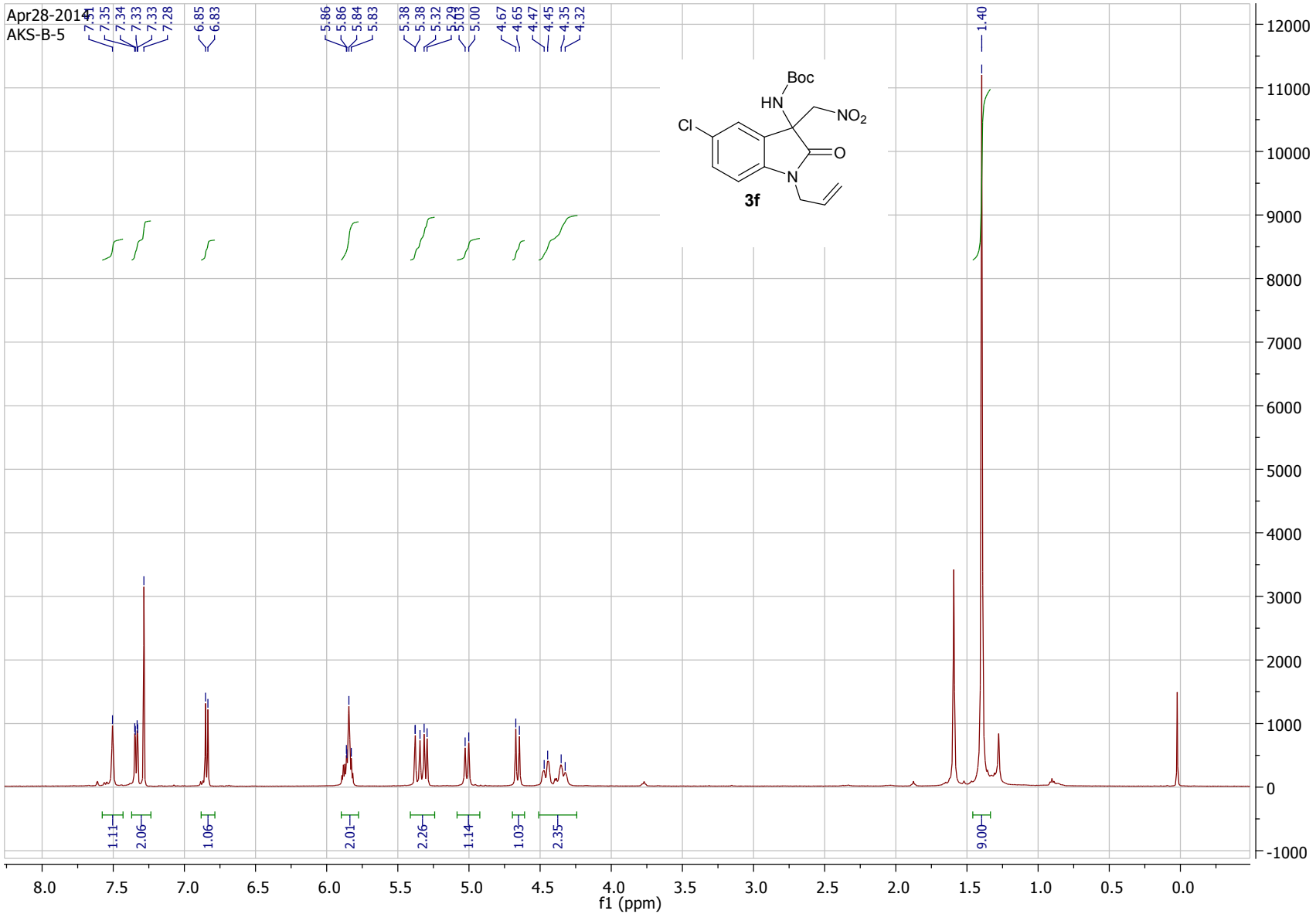
C:¥Users¥technologies¥Desktop¥nmrs¥AKSB8.als

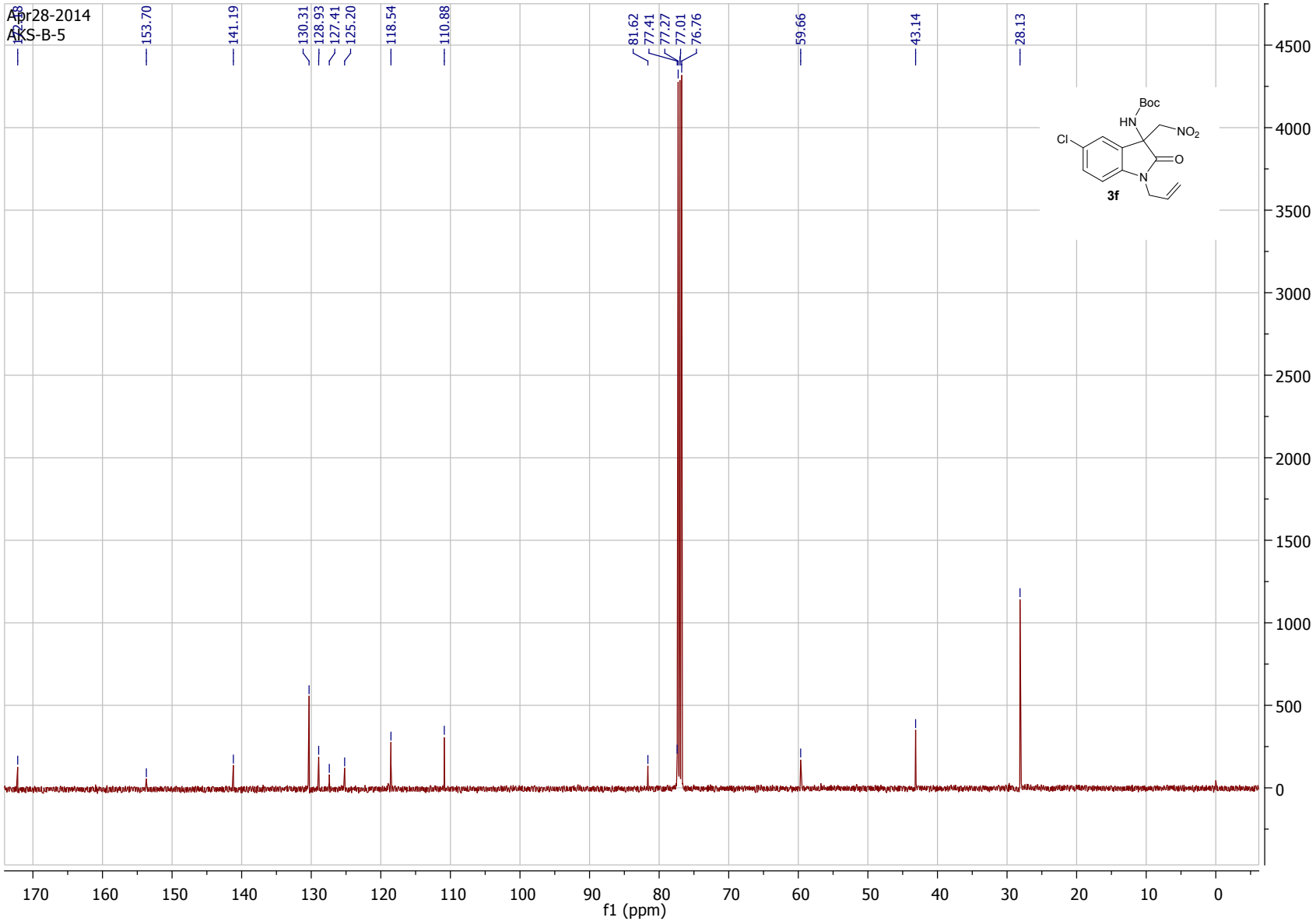


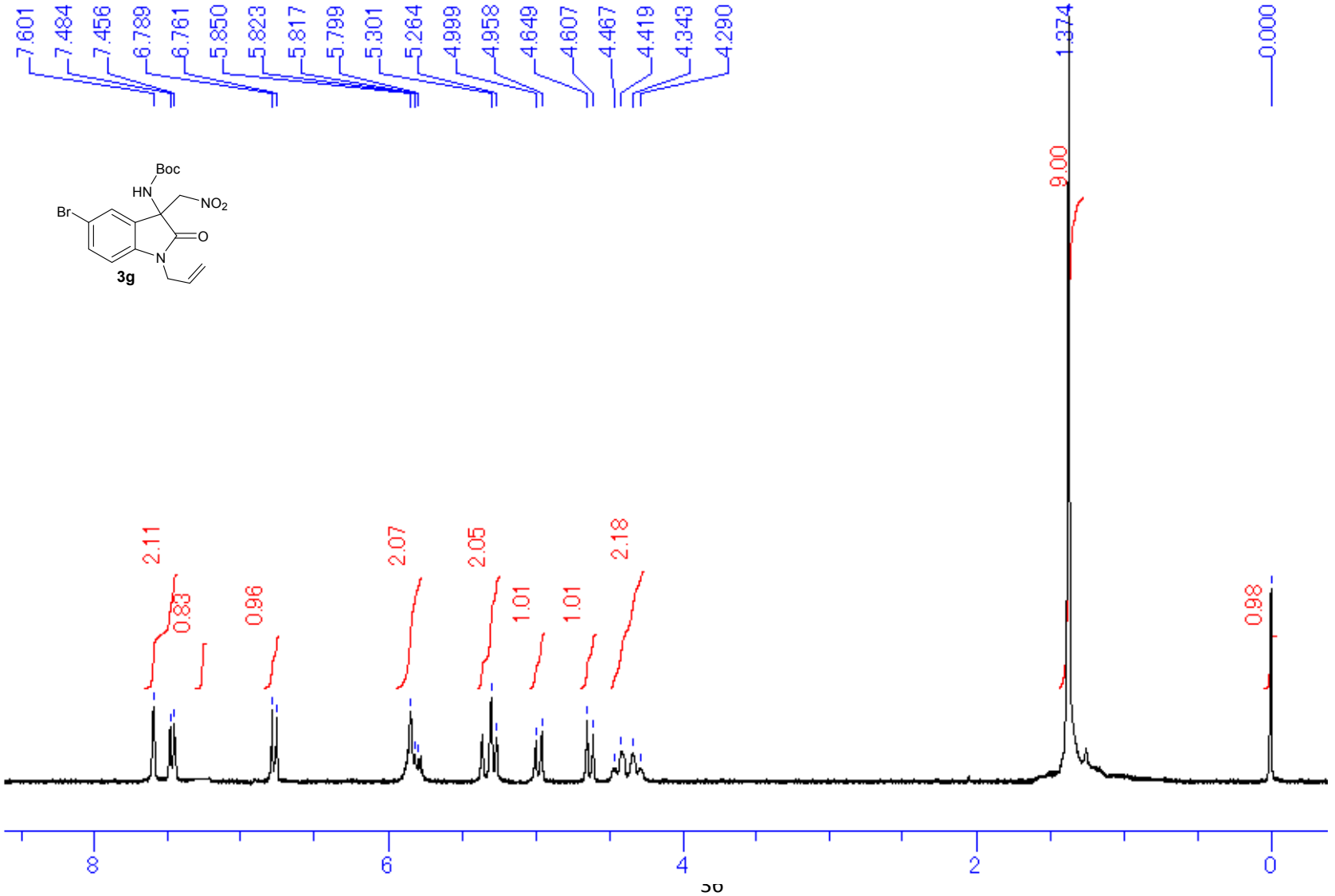

May05-2014
AKS-B8
172.30
153.70
142.24
139.18
134.53
133.13
128.99
128.05
127.30
112.02
86.02
81.70
77.51
77.28
77.02
76.77
59.56
44.61
28.16
0.01
Boc
HN
NO2
I
O
N
Bn
3d
f1 (ppm)

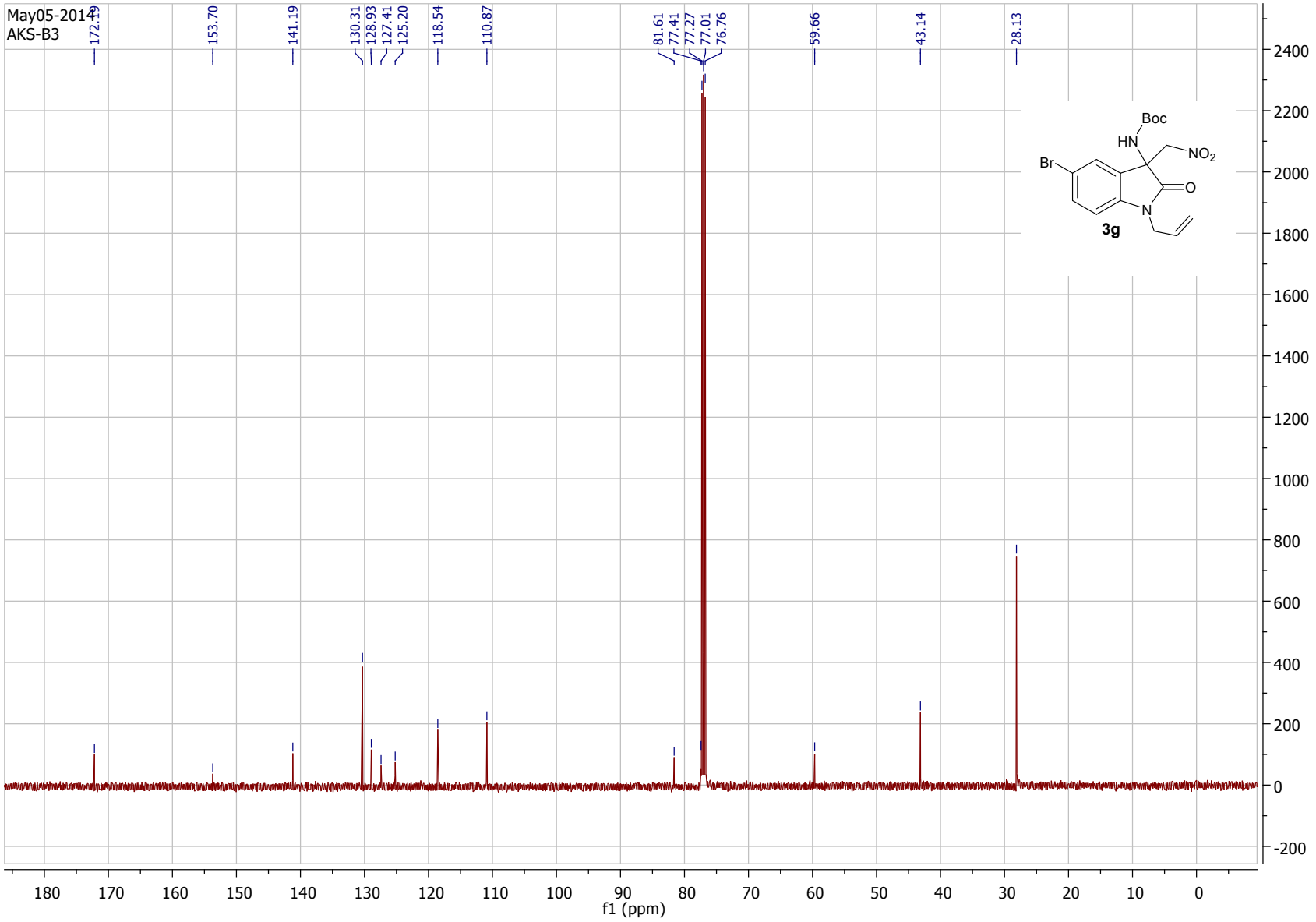

May02_2014
AKS-B5
7.33
7.30
7.28
7.26
7.18
7.16
7.28
6.80
6.79
5.87
5.86
5.86
5.84
5.84
5.84
5.83
5.82
5.81
5.38
5.38
5.31
5.31
5.02
4.99
4.67
4.64
4.44
4.43
4.35
4.32
1.40
Boc
HN
NO2
O
N
3e
0.87
0.99
1.18
1.00
2.09
2.21
1.06
1.11
2.24
9.00
f1 (ppm)


May03-2014
AKS-5-4
Boc
HN
NO2
O
N
3e
142.55
130.67
130.31
123.42
118.31
109.83
81.24
77.76
77.27
77.01
76.76
59.77
43.03
28.12
0.00
f1 (ppm)

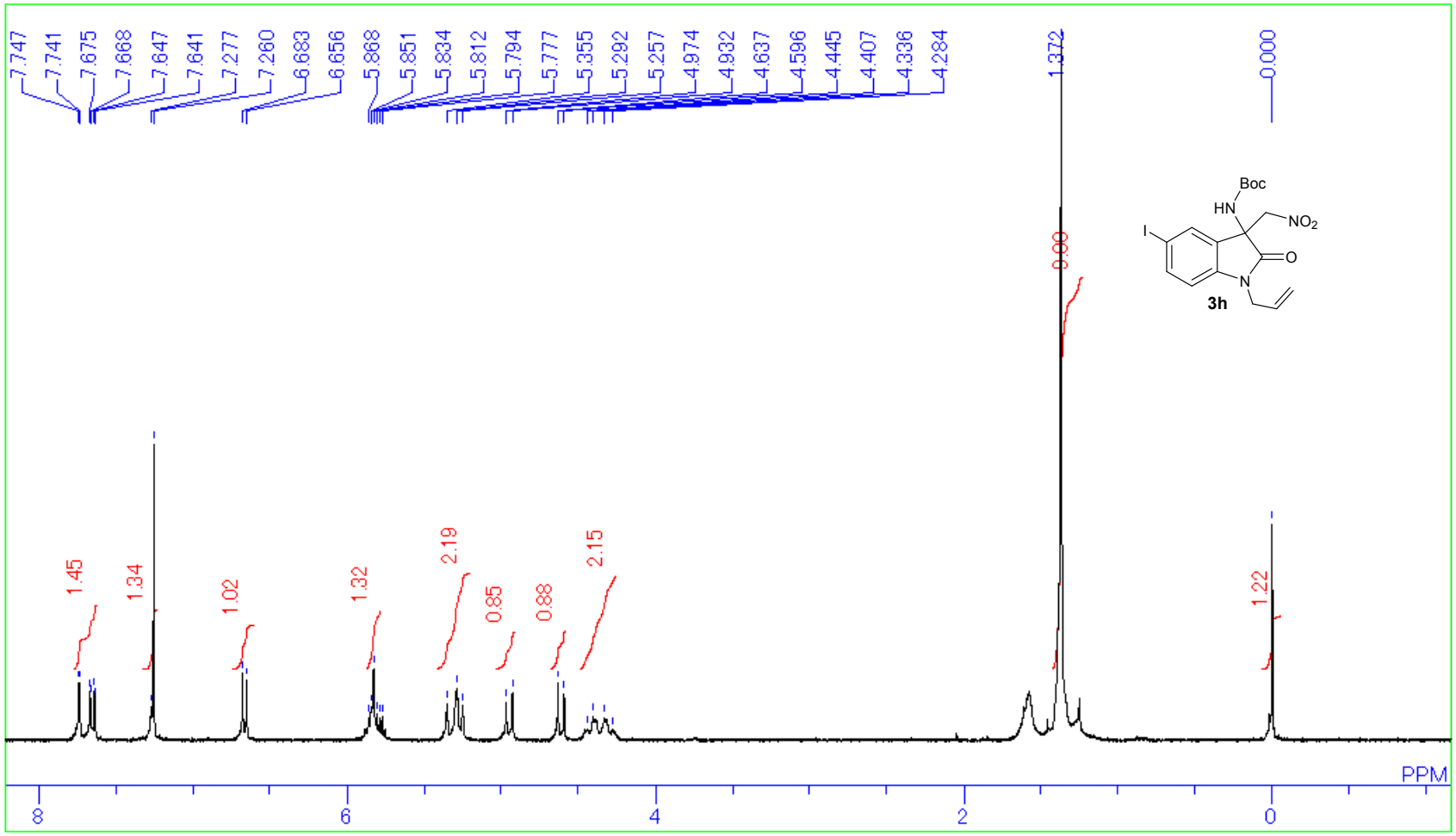

Apr28-2014
AKS-B-5
7.41
7.35
7.34
7.33
7.33
7.28
6.85
6.83
5.86
5.86
5.84
5.83
5.38
5.38
5.32
5.03
5.00
4.67
4.65
4.47
4.45
4.35
4.32
1.40
Boc
HN
NO2
Cl
O
N
3f
1.11
2.06
1.06
2.01
2.26
1.14
1.03
2.35
9.00
f1 (ppm)

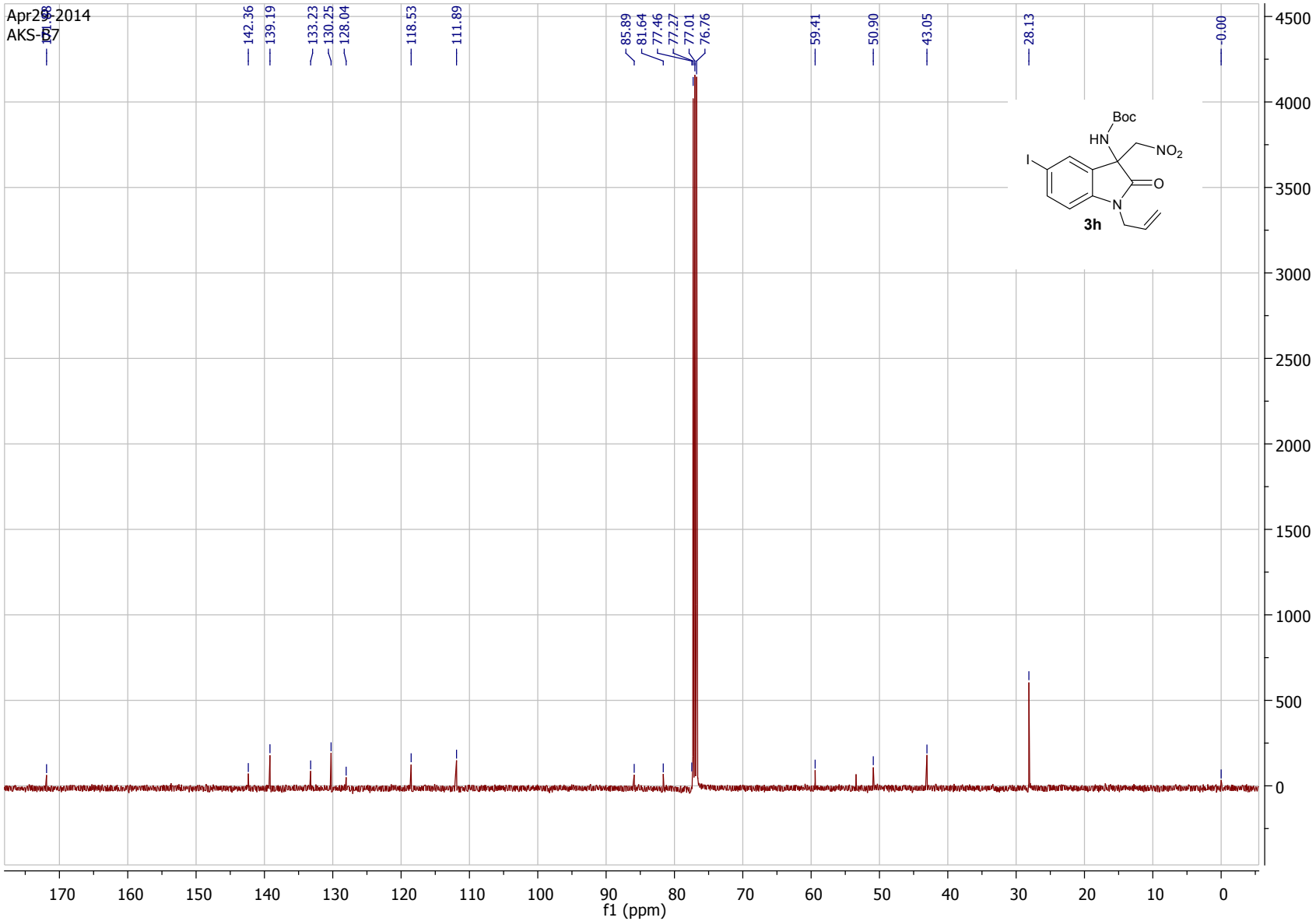

Apr28-2014
AKS-B-5
153.70
141.19
130.31
128.93
127.41
125.20
118.54
110.88
81.62
77.41
77.27
77.01
76.76
59.66
43.14
28.13
Boc
HN
NO2
Cl
O
N
3f
f1 (ppm)


7.601
7.484
7.456
6.789
6.761
5.850
5.823
5.817
5.799
5.301
5.264
4.999
4.958
4.649
4.607
4.467
4.419
4.343
4.290
1.374
0.000
Boc
HN
NO2
Br
O
N
3g
9.00
2.11
0.83
0.96
2.07
2.05
1.01
1.01
2.18
0.98
8
6
4
2
0

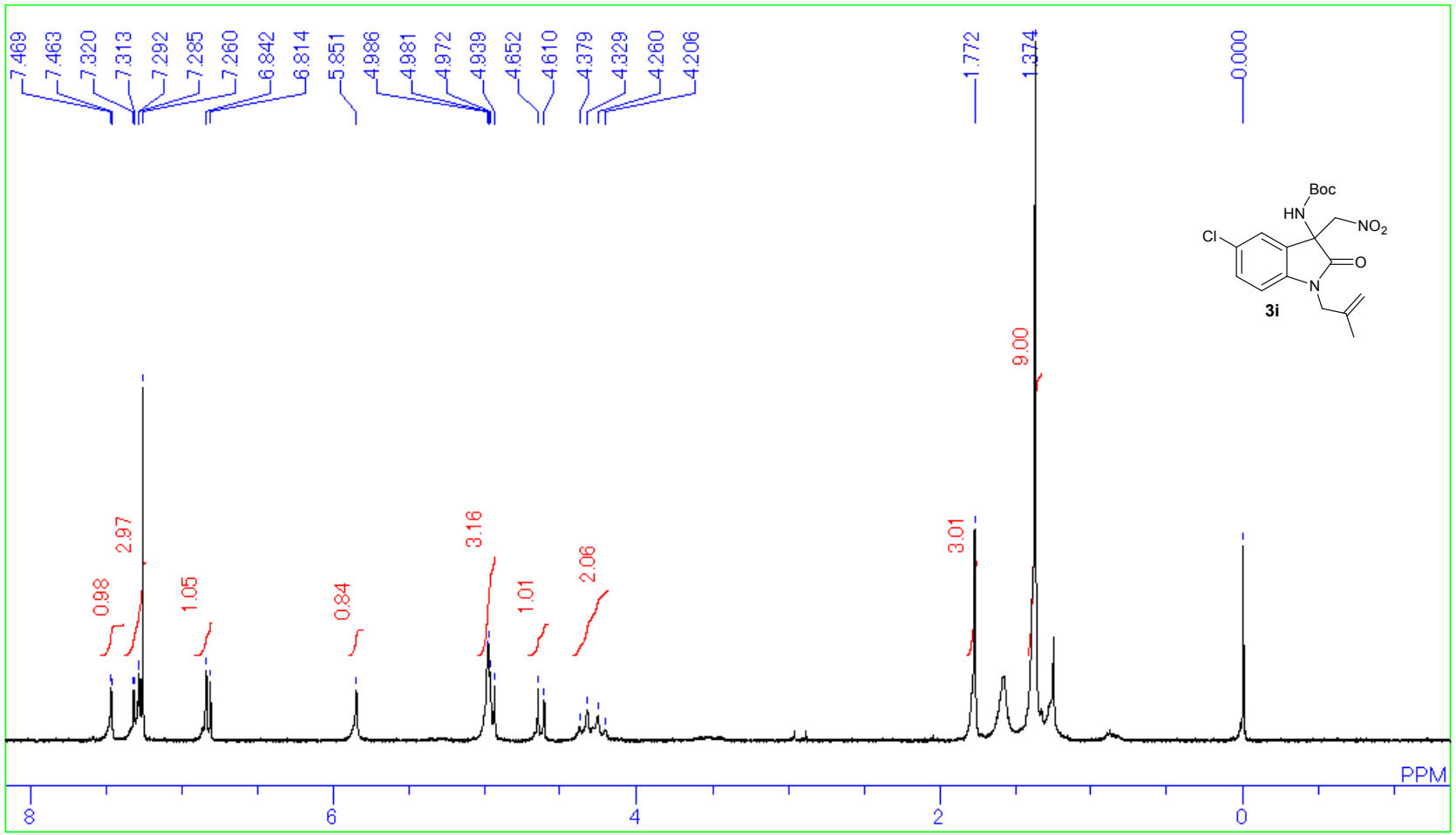

May05-2014
AKS-B3
172.19
153.70
141.19
130.31
128.93
127.41
125.20
118.54
110.87
81.61
77.41
77.27
77.01
76.76
59.66
43.14
28.13
Boc
HN
NO2
Br
O
N
3g
f1 (ppm)

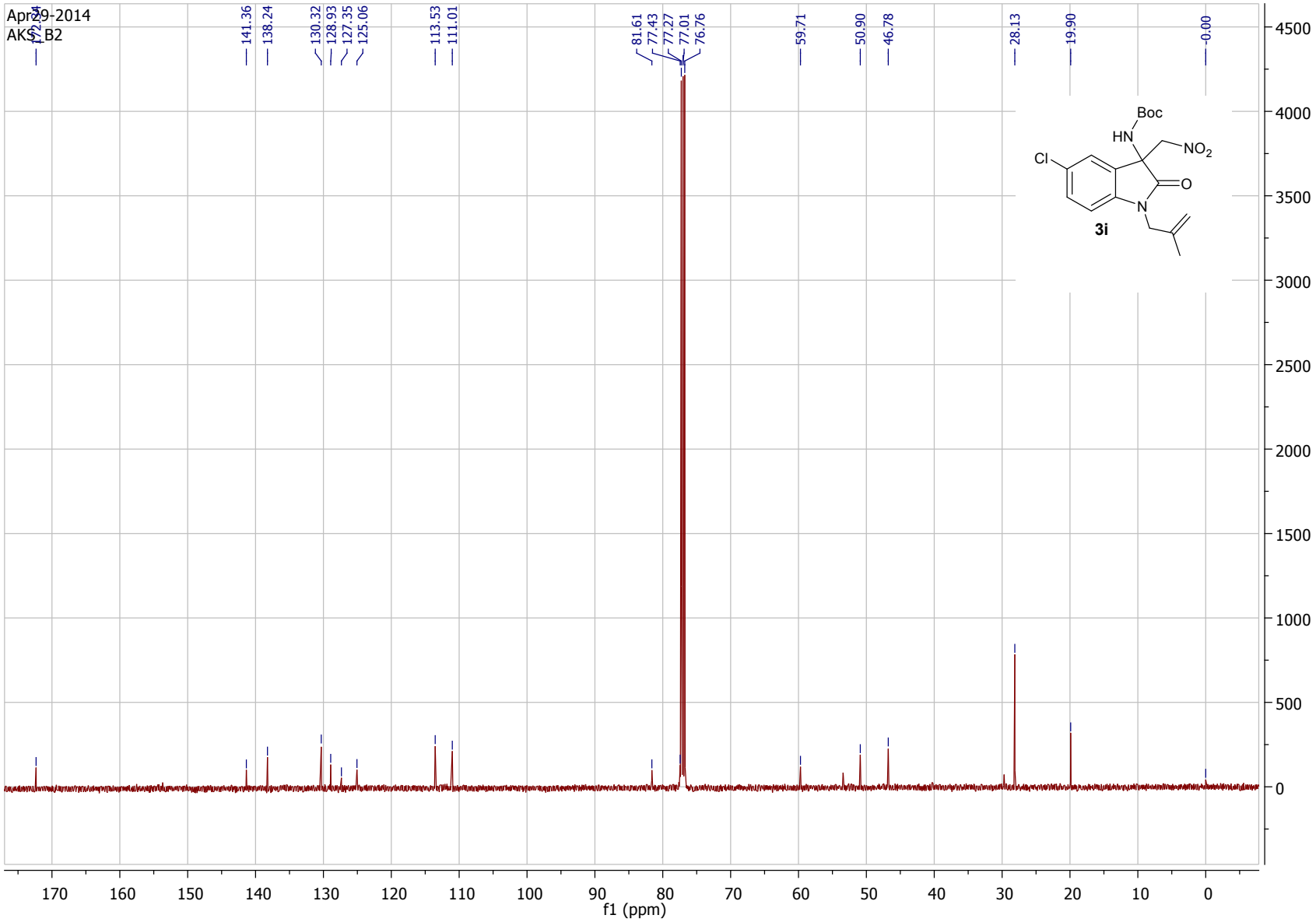
C:¥Users¥technologies¥Desktop¥nmrs¥Dr_Chimni¥ c-aksb71NON_E1_FT.als

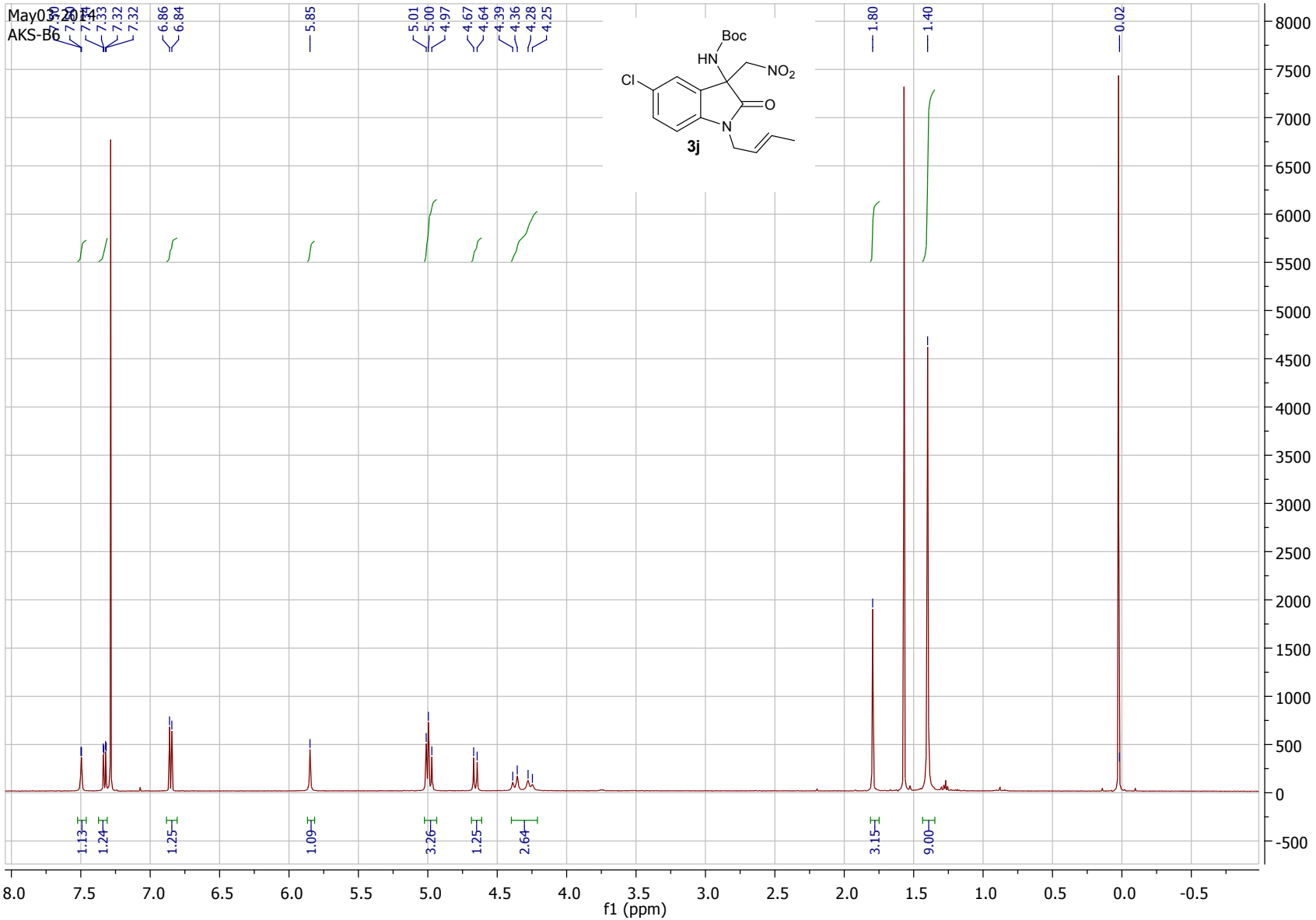


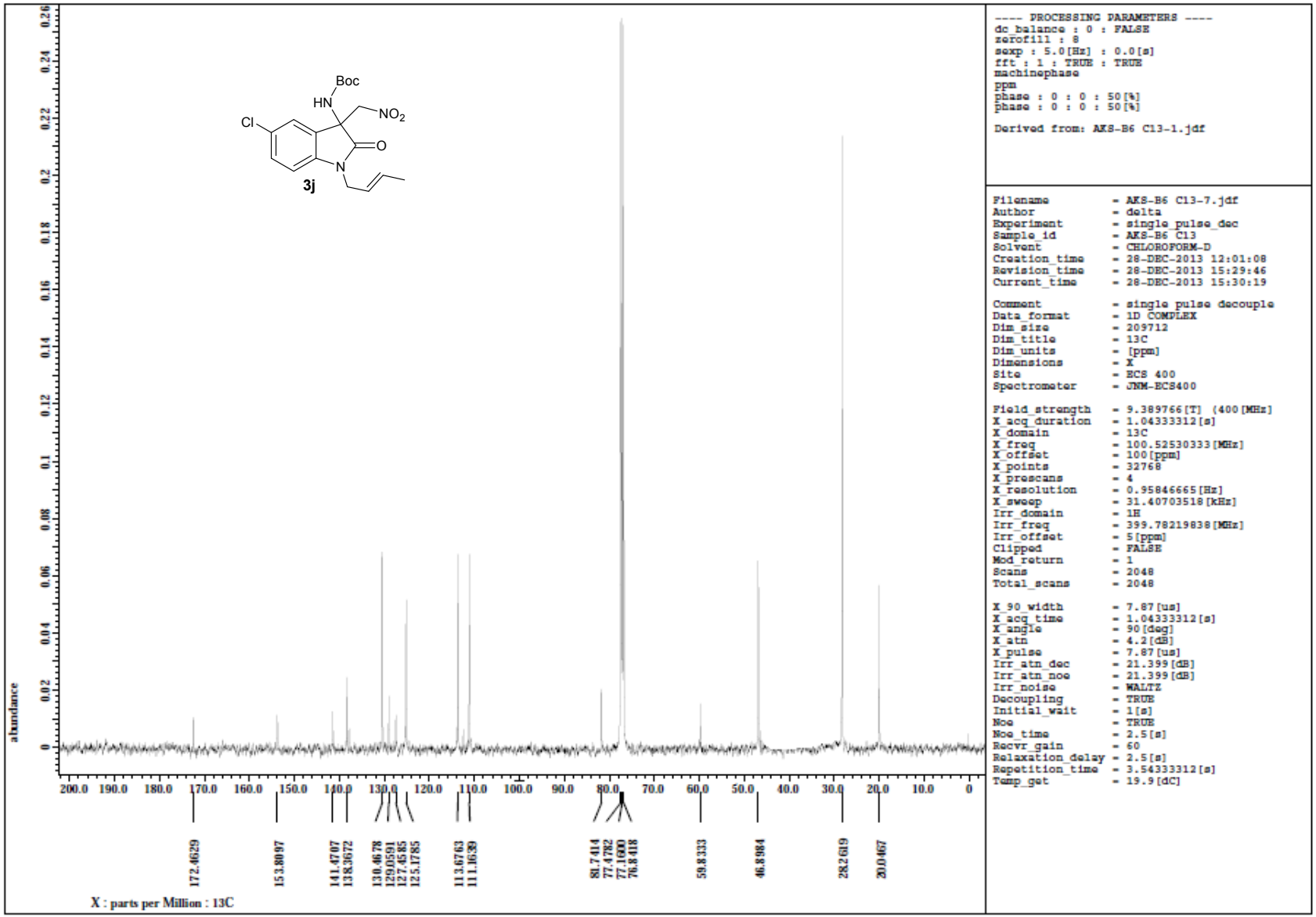

Apr25-2014
AKS-B7
142.36
139.19
133.23
130.25
128.04
118.53
111.89
85.89
81.64
77.46
77.27
77.01
76.76
59.41
50.90
43.05
28.13
0.00
Boc
HN
NO2
I
O
N
3h
f1 (ppm)

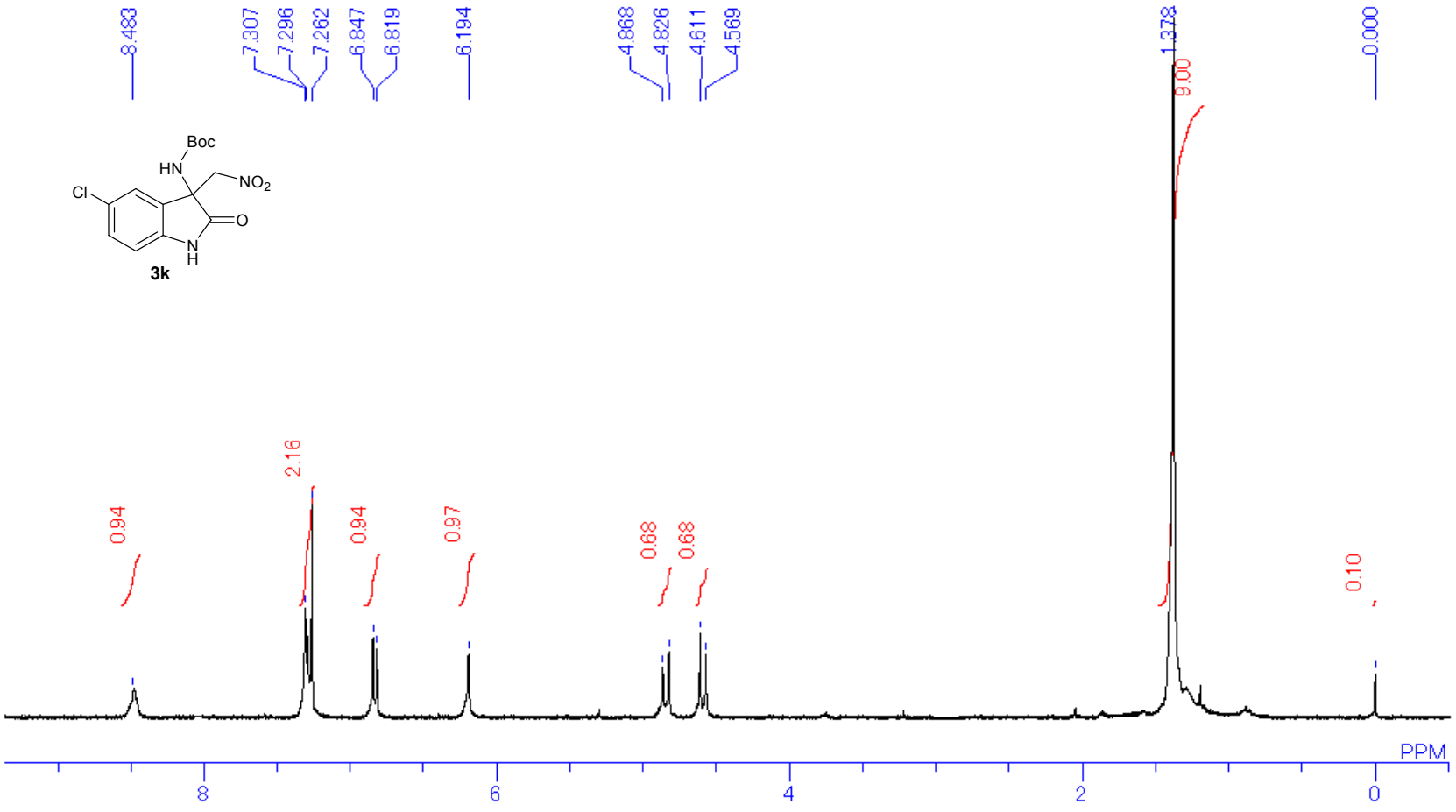
C:¥Users¥technologies¥Desktop¥nmrs¥Dr_Chimni¥ C-AKSB21NON_E2_FT.als



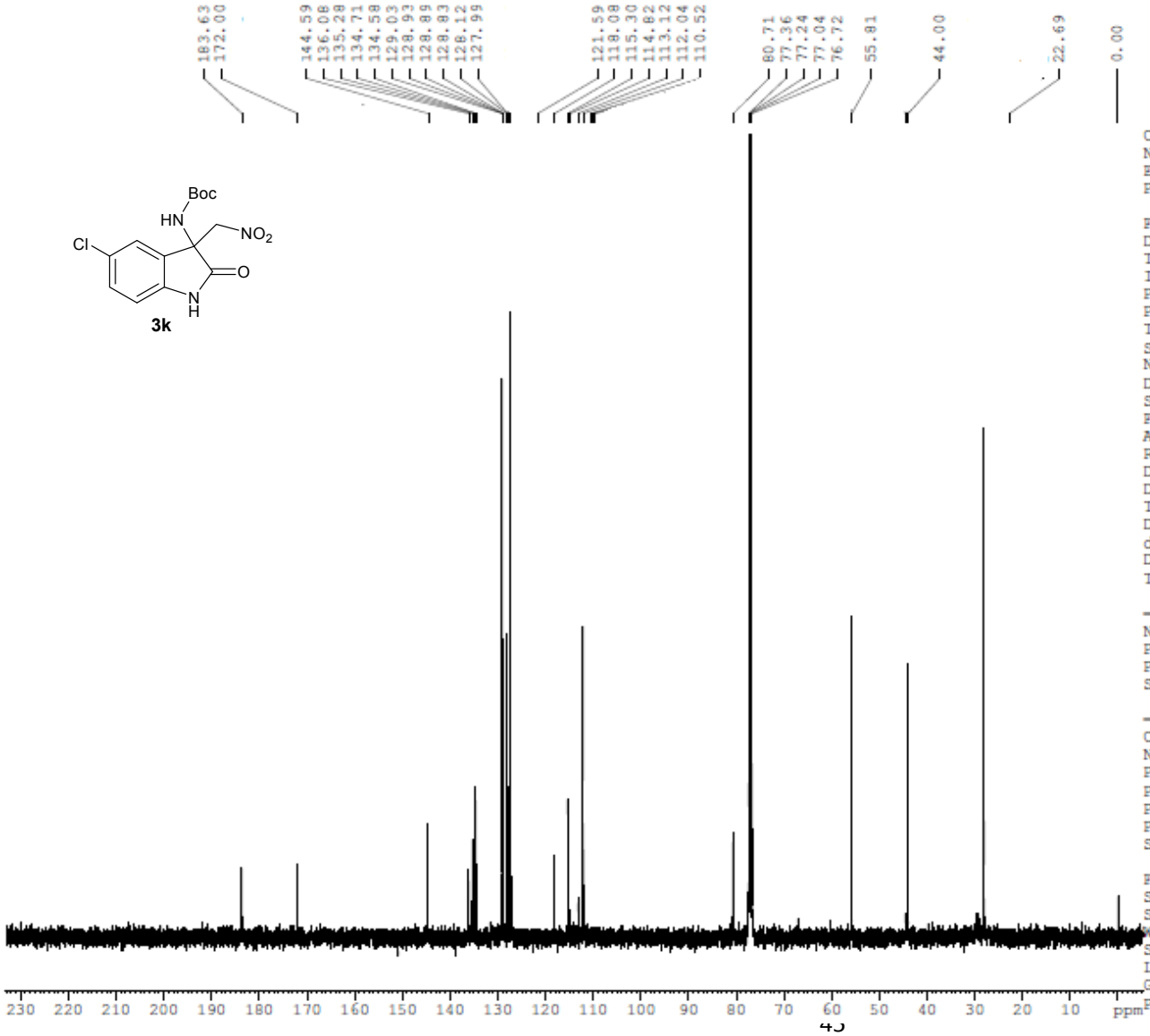

Apr29-2014
AKS_1_B2
171.34
141.36
138.24
130.32
128.93
127.35
125.06
113.53
111.01
81.61
77.43
77.27
77.01
76.76
59.71
50.90
46.78
28.13
19.90
0.00
Boc
HN
NO2
Cl
O
N
3i
4500
4000
3500
3000
2500
2000
1500
1000
500
0
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)


May03 2014
AKS-B6
7.34
7.33
7.32
7.32
6.86
6.84
5.85
5.01
5.00
4.97
4.67
4.64
4.39
4.36
4.28
4.25
1.80
1.40
0.02
Boc
HN
NO2
Cl
O
N
3j
1.13
1.24
1.25
1.09
3.26
1.25
2.64
3.15
9.00
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
f1 (ppm)
8000
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
-500


Boc
HN
NO2
Cl
O
N
3j
abundance
X : parts per Million : 13C
172.4629
153.8097
141.4707
138.3672
130.4678
129.0591
127.4585
125.1785
113.6763
111.1639
81.7414
77.4782
77.1600
76.8418
59.8333
46.8984
28.2619
20.0467
---- PROCESSING PARAMETERS ----
dc_balance : 0 : FALSE
zerofill : 8
sexp : 5.0[Hz] : 0.0[s]
fft : 1 : TRUE : TRUE
machinephase
ppm
phase : 0 : 0 : 50[%]
phase : 0 : 0 : 50[%]
Derived from: AKS-B6 C13-1.jdf
Filename = AKS-B6 C13-7.jdf
Author = delta
Experiment = single_pulse_dec
Sample_id = AKS-B6 C13
Solvent = CHLOROFORM-D
Creation_time = 28-DEC-2013 12:01:08
Revision_time = 28-DEC-2013 15:29:46
Current_time = 28-DEC-2013 15:30:19
Comment = single pulse decouple
Data_format = 1D COMPLEX
Dim_size = 209712
Dim_title = 13C
Dim_units = [ppm]
Dimensions = X
Site = ECS 400
Spectrometer = JNM-ECS400
Field_strength = 9.389766[T] (400[MHz]
X_acq_duration = 1.04333312[s]
X_domain = 13C
X_freq = 100.52530333[MHz]
X_offset = 100[ppm]
X_points = 32768
X_prescans = 4
X_resolution = 0.95846665[Hz]
X_sweep = 31.40703518[kHz]
Irr_domain = 1H
Irr_freq = 399.78219838[MHz]
Irr_offset = 5[ppm]
Clipped = FALSE
Mod_return = 1
Scans = 2048
Total_scans = 2048
X_90_width = 7.87[us]
X_acq_time = 1.04333312[s]
X_angle = 90[deg]
X_atn = 4.2[dB]
X_pulse = 7.87[us]
Irr_atn_dec = 21.399[dB]
Irr_atn_noe = 21.399[dB]
Irr_noise = WALTZ
Decoupling = TRUE
Initial_wait = 1[s]
Noe = TRUE
Noe_time = 2.5[s]
Recvr_gain = 60
Relaxation_delay = 2.5[s]
Repetition_time = 3.54333312[s]
Temp_get = 19.9[dC]

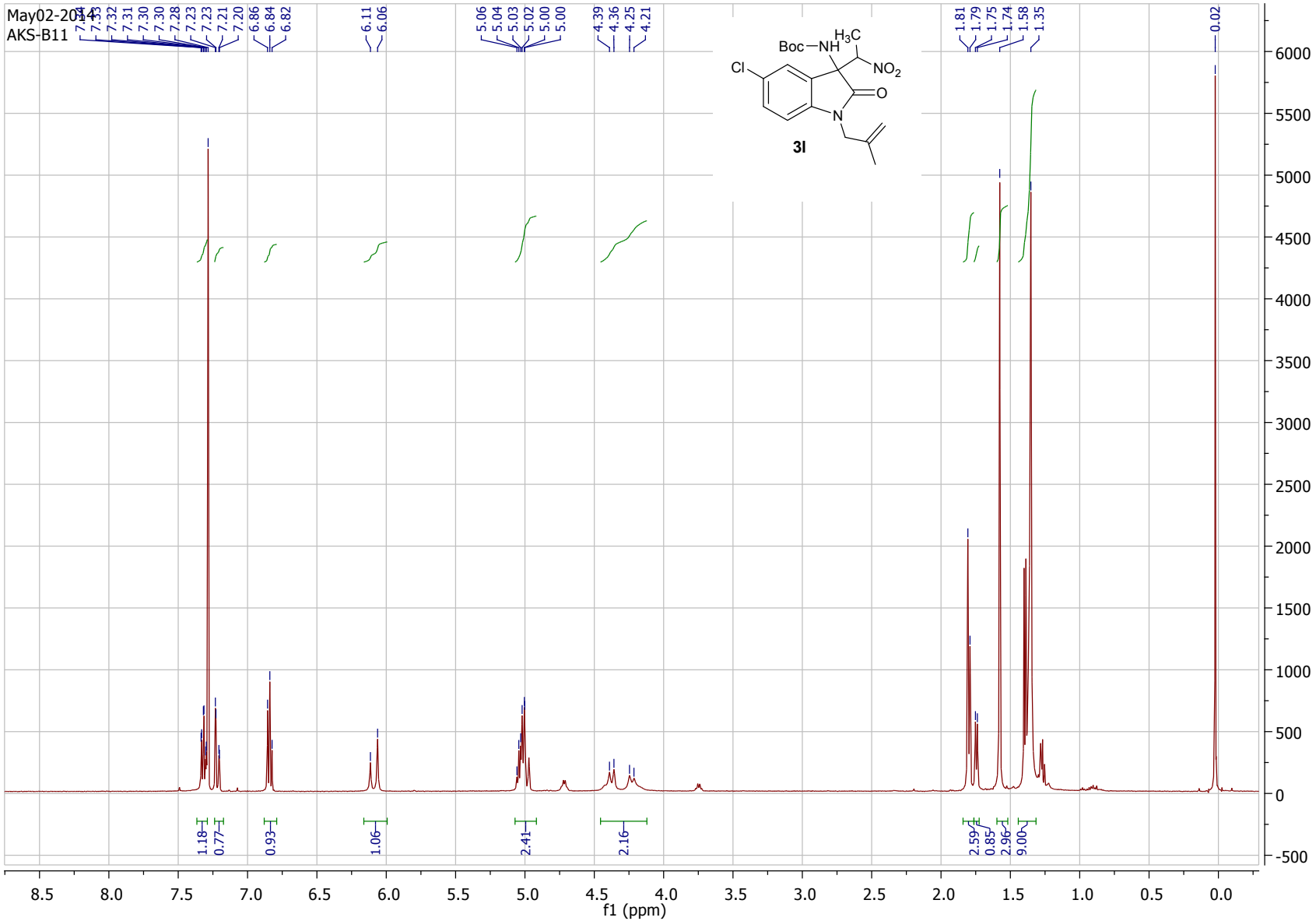

8.483
7.307
7.296
7.262
6.847
6.819
6.194
4.868
4.826
4.611
4.569
1.378
0.000
9.00
2.16
0.94
0.94
0.97
0.68
0.68
0.10
Boc
HN
NO2
Cl
O
N
H
3k
PPM
8
6
4
2
0

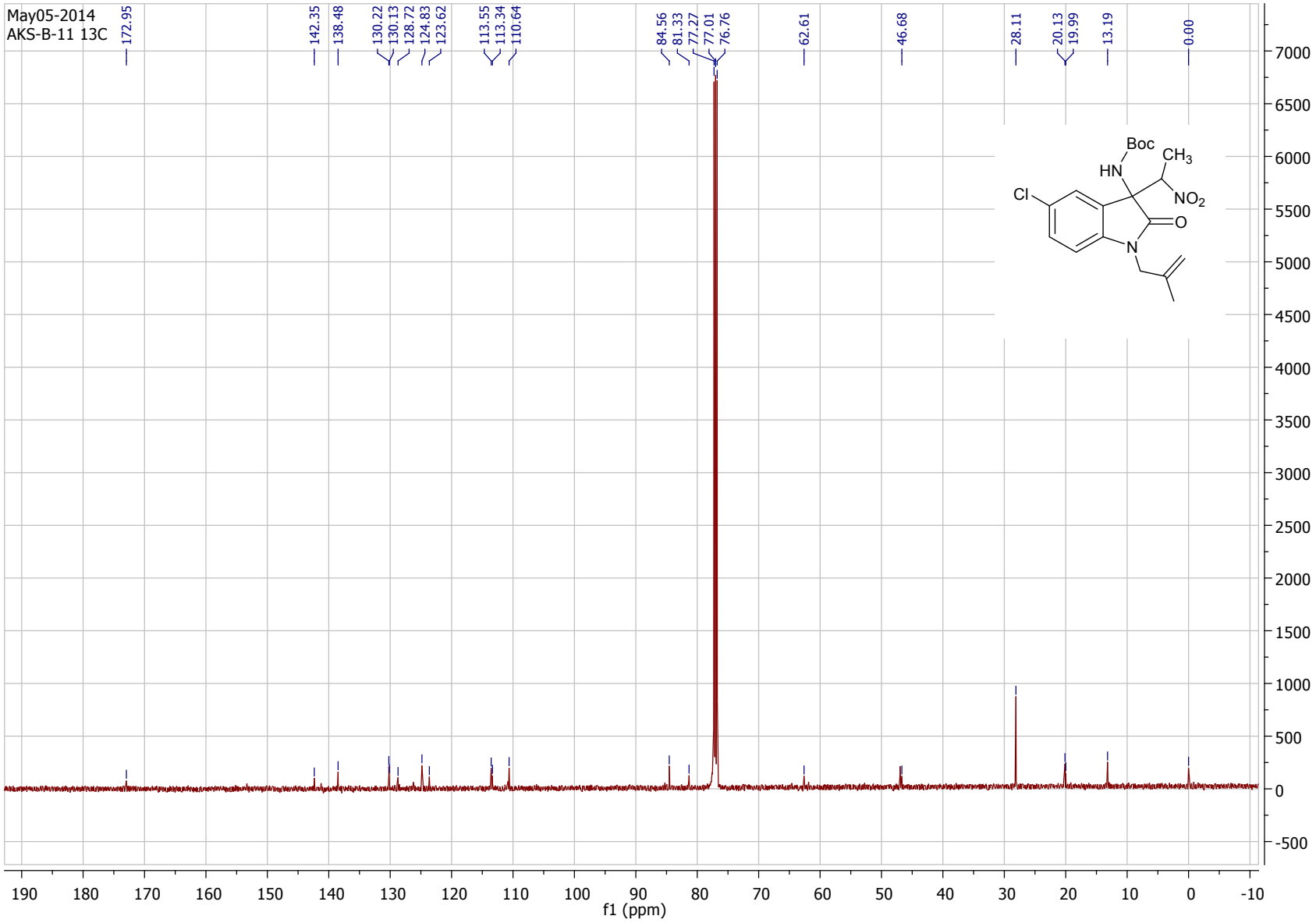
AKS-B13

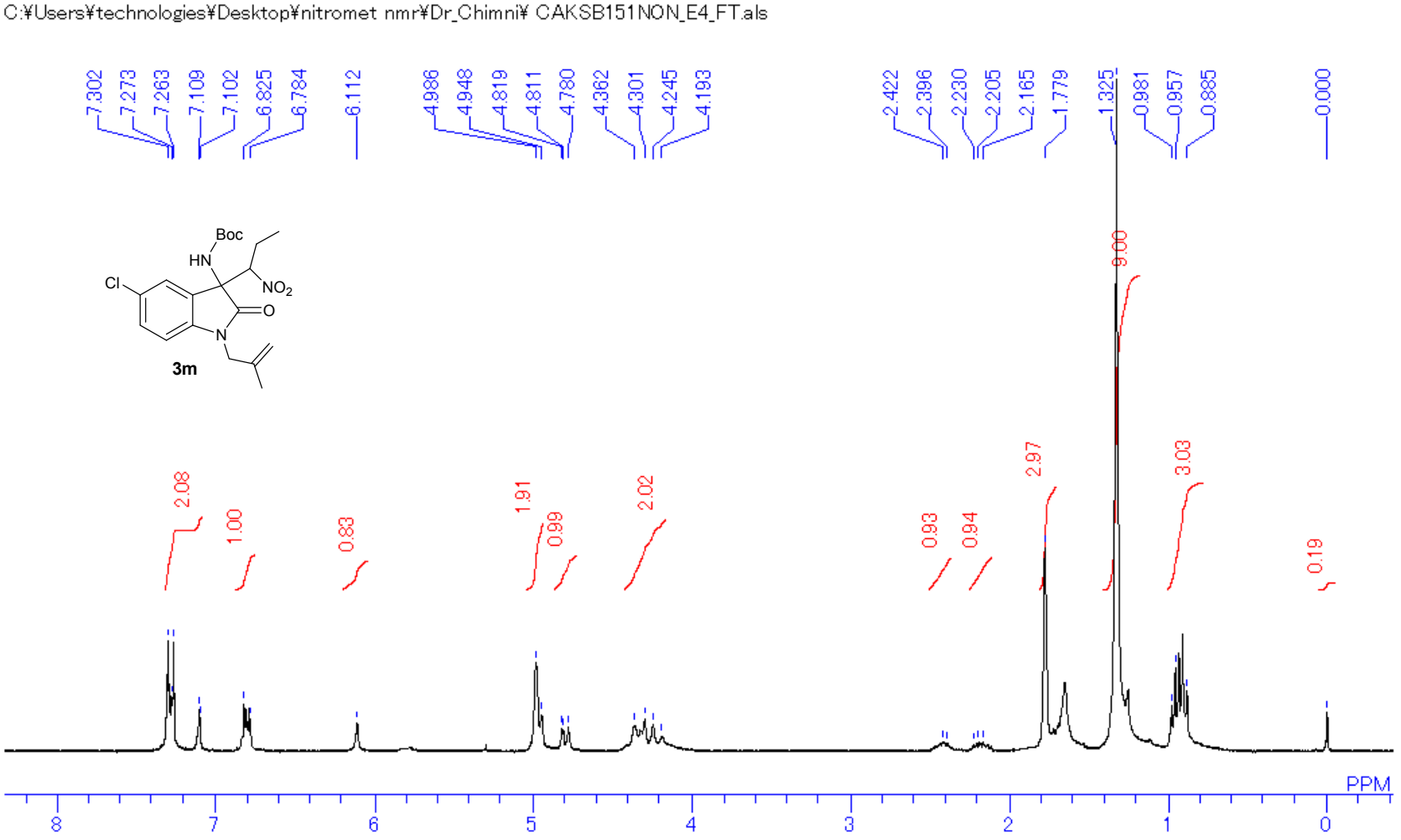


BRUKER
AVANCE II 400 NMR
Spectrometer
SAIF
Panjab University
Chandigarh

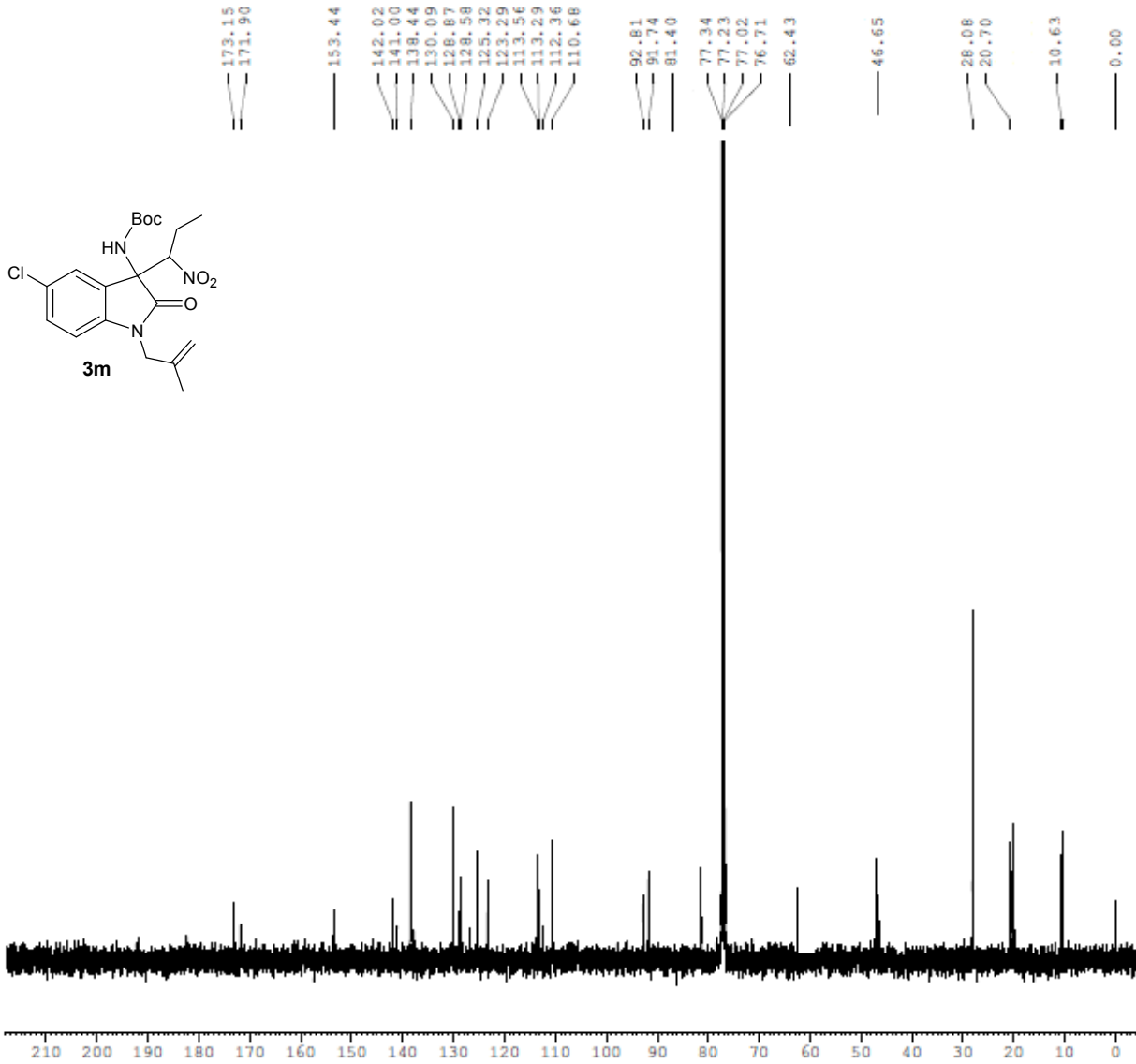
Current Data Parameters		
NAME	Jan08-2014	
EXPNO	321	
PROCNO	1	
F2 - Acquisition Parameters		
Date_	20140109	
Time	3.01	
INSTRUM	spect	
PROBHD	5 mm PABBO BB-	
PULPROG	zgpg30	
TD	65536	
SOLVENT	CDCl3	
NS	1024	
DS	4	
SWH	29761.904	Hz
FIDRES	0.454131	Hz
AQ	1.1010548	sec
RG	1030	
DW	16.800	usec
DE	6.00	usec
TE	294.5	K
D1	2.00000000	sec
d11	0.03000000	sec
DELTA	1.89999998	sec
TD0	1	
======== CHANNEL f1 ========		
NUC1	13C	
P1	9.60	usec
PL1	-2.00	dB
SFO1	100.6228298	MHz
======== CHANNEL f2 ========		
CPDPRG2	waltz16	
NUC2	1H	
PCPD2	80.00	usec
PL2	-3.00	dB
PL12	14.31	dB
PL13	18.00	dB
SFO2	400.1316005	MHz
F2 - Processing parameters		
SI	32768	
SF	100.6127709	MHz
WDW	EM	
SSB	0	
LB	1.00	Hz
GB	0	
PC	1.40	


May02-2014
AKS-B11
7.34
7.33
7.32
7.31
7.30
7.30
7.28
7.23
7.23
7.21
7.20
6.86
6.84
6.82
6.11
6.06
5.06
5.04
5.03
5.02
5.00
5.00
4.39
4.36
4.25
4.21
1.81
1.79
1.75
1.74
1.58
1.35
0.02
Boc—NH
H3C
NO2
Cl
O
N
3l
1.18
0.77
0.93
1.06
2.41
2.16
2.59
0.85
2.96
9.00
f1 (ppm)


May05-2014
AKS-B-11 13C
172.95
142.35
138.48
130.22
130.13
128.72
124.83
123.62
113.55
113.34
110.64
84.56
81.33
77.27
77.01
76.76
62.61
46.68
28.11
20.13
19.99
13.19
0.00
Boc
HN
CH3
NO2
Cl
O
N
f1 (ppm)


C:¥Users¥technologies¥Desktop¥nitromet nmr¥Dr_Chimni¥ CAKSB151NON_E4_FT.als
7.302
7.273
7.263
7.109
7.102
6.825
6.784
6.112
4.986
4.948
4.819
4.811
4.780
4.362
4.301
4.245
4.193
2.422
2.396
2.230
2.205
2.165
1.779
1.325
0.981
0.957
0.885
0.000
Boc
HN
Cl
NO2
O
N
3m
2.08
1.00
0.83
1.91
0.99
2.02
0.93
0.94
2.97
9.00
3.03
0.19
PPM
8
7
6
5
4
3
2
1
0

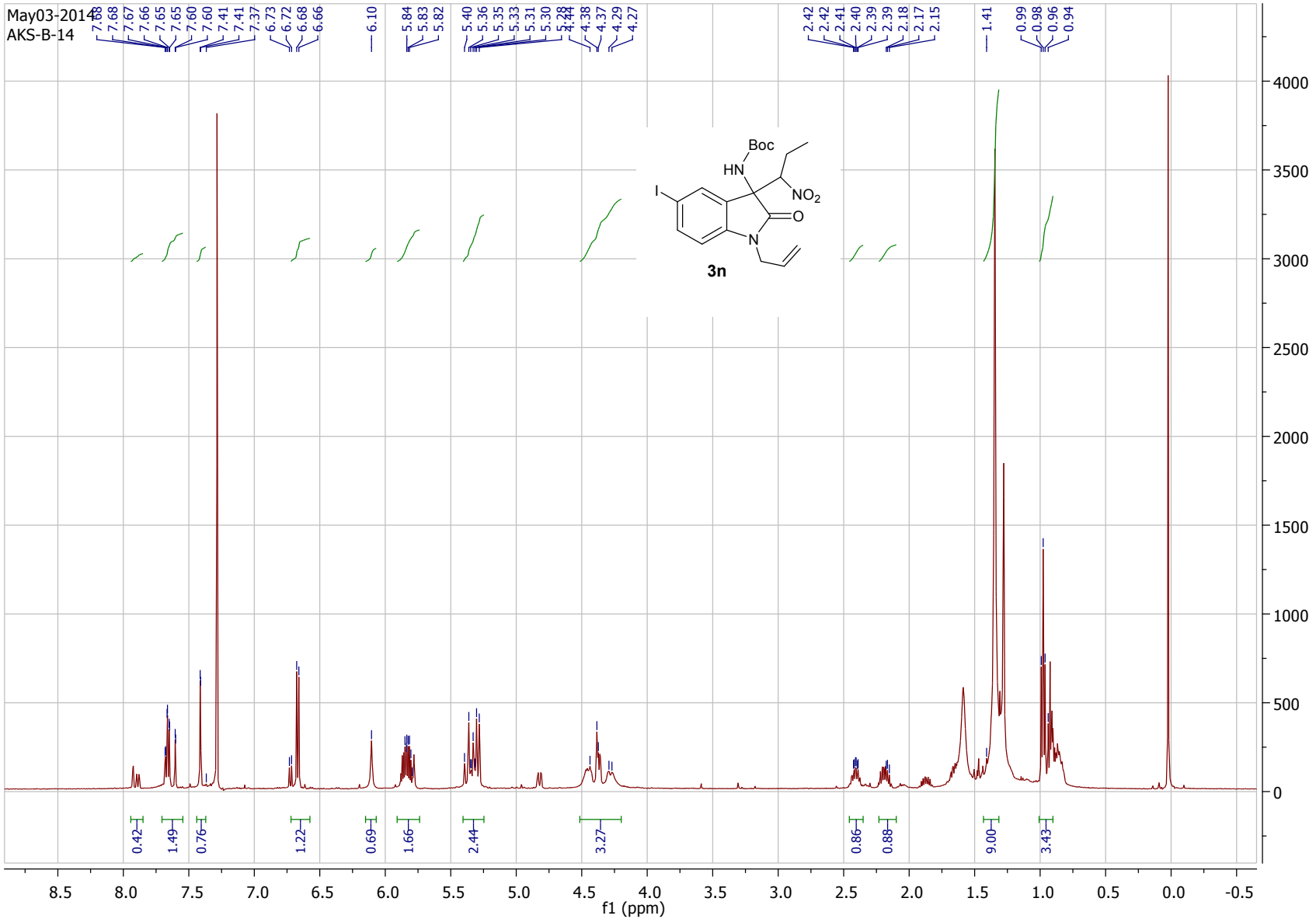
AKS-B15



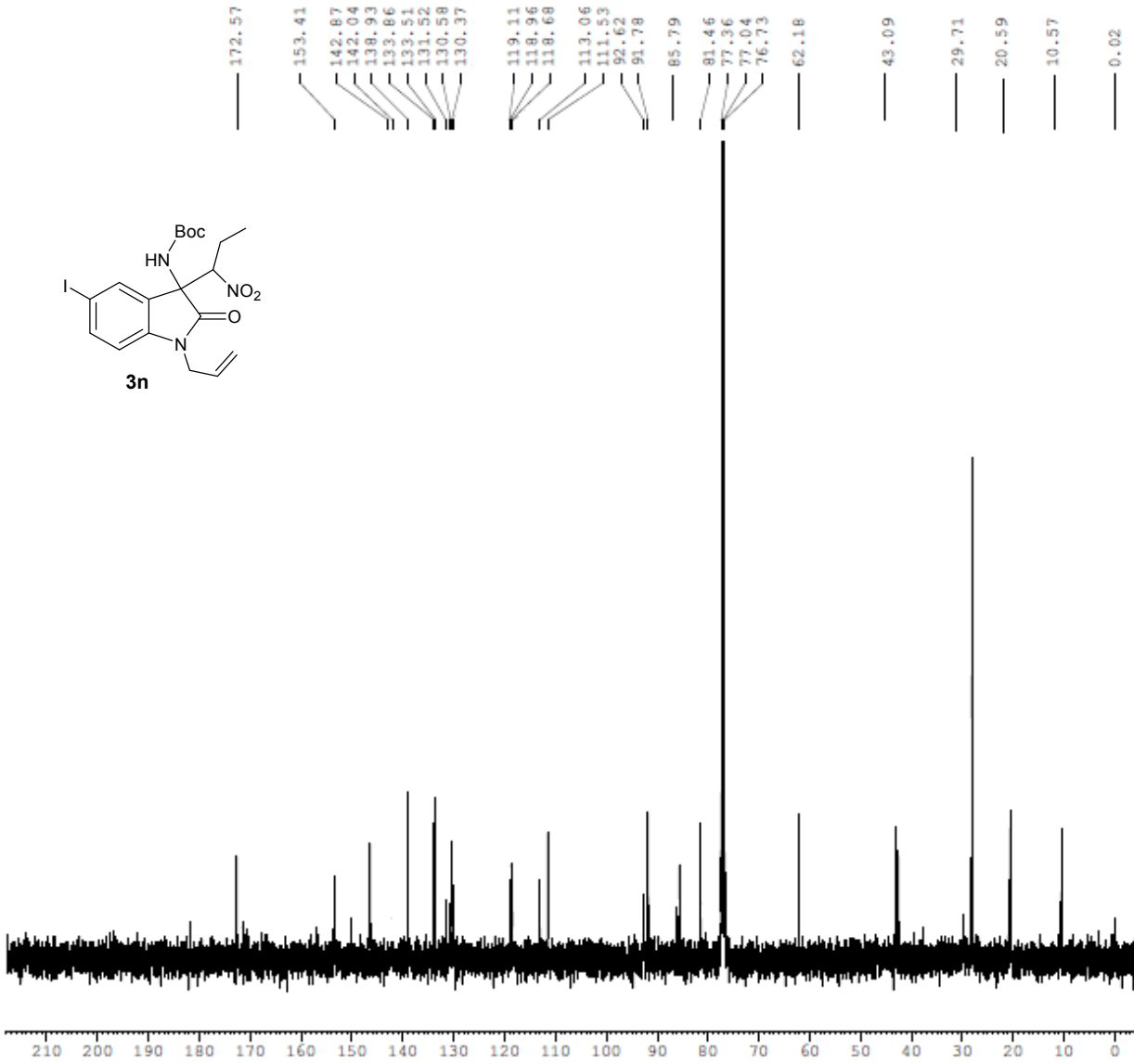
BRUKER
AVANCE II 400 NMR
Spectrometer
SAIF
Panjab University
Chandigarh

```
Current Data Parameters
NAME      Jan24-2014-Administrato
EXPNO                  211
PROCNO                   1

F2 - Acquisition Parameters
Date_             20140125
Time                  5.31
INSTRUM              spect
PROBHD    5 mm PABBO BB-
PULPROG             zgpg30
TD                   65536
SOLVENT              CDCl3
NS                     512
DS                       4
SWH              29761.904 Hz
FIDRES           0.454131 Hz
AQ               1.1010548 sec
RG                     575
DW                16.800 usec
DE                 6.00 usec
TE                295.1 K
D1             2.00000000 sec
d11            0.03000000 sec
DELTA          1.89999998 sec
TD0                      1

======== CHANNEL f1 ========
NUC1                   13C
P1                  9.60 usec
PL1                -2.00 dB
SFO1         100.6228298 MHz

======== CHANNEL f2 ========
CPDPRG2            waltz16
NUC2                   1H
PCPD2              80.00 usec
PL2                -3.00 dB
PL12               14.31 dB
PL13               18.00 dB
SFO2         400.1316005 MHz

F2 - Processing parameters
SI                   32768
SF           100.6127699 MHz
WDW                    EM
SSB                     0
LB                   1.00 Hz
GB                      0
PC                   1.40
```

avtar_saifpu@yahoo.co.in


May03-2014
AKS-B-14
Boc
HN
NO2
I
O
N
3n
f1 (ppm)

AKS-B14



BRUKER
AVANCE II 400 NMR
Spectrometer
SAIF
Panjab University
Chandigarh

```
Current Data Parameters
NAME      Jan24-2014-Administrator
EXPNO                  201
PROCNO                   1

F2 - Acquisition Parameters
Date_              20140125
Time                  4.58
INSTRUM              spect
PROBHD    5 mm PABBO BB-
PULPROG             zgpg30
TD                   65536
SOLVENT              CDCl3
NS                     512
DS                       4
SWH              29761.904 Hz
FIDRES           0.454131 Hz
AQ               1.1010548 sec
RG                     812
DW                16.800 usec
DE                 6.00 usec
TE                 294.9 K
D1             2.00000000 sec
d11            0.03000000 sec
DELTA          1.89999998 sec
TD0                      1

======== CHANNEL f1 ========
NUC1                   13C
P1                   9.60 usec
PL1                 -2.00 dB
SFO1         100.6228298 MHz

======== CHANNEL f2 ========
CPDPRG2            waltz16
NUC2                    1H
PCPD2              80.00 usec
PL2                 -3.00 dB
PL12                14.31 dB
PL13                18.00 dB
SFO2         400.1316005 MHz

F2 - Processing parameters
SI                   32768
SF           100.6127690 MHz
WDW                     EM
SSB                      0
LB                    1.00 Hz
GB                       0
PC                    1.40
```

avtar_saifpu@yahoo.co.in