Supporting Information
Enantioselective Synthesis of β-Fluoro Amines via β-Amino α-Fluoro Nitroalkanes and a Traceless Activating Group Strategy

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SI-II-X

Figure 1. ^{1}H NMR (400 MHz, $CDCl_3$) of 2 3
Figure 2. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of 2 4
Figure 3. ^{1}H NMR (600 MHz, $CDCl_3$) of 3 5
Figure 4. ^{13}C NMR/DEPT135 (150MHz, $CDCl_3$) of 3 6
Figure 5. ^{1}H NMR (400 MHz, $CDCl_3$) of 7a 7
Figure 6. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of 7a 8
Figure 7. ^{1}H NMR (400 MHz, $CDCl_3$) of 7b 9
Figure 8. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of 7b 10
Figure 9. ^{1}H NMR (400 MHz, $CDCl_3$) of 7c 11
Figure 10. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of 7c 12
Figure 11. ^{1}H NMR (400 MHz, $CDCl_3$) of 7d 13
Figure 12. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of 7d 14
Figure 13. ^{1}H NMR (400 MHz, $CDCl_3$) of 7e 15
Figure 14. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of 7e 16
Figure 15. ^{1}H NMR (400 MHz, $CDCl_3$) of 7f 17
Figure 16. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of 7f 18
Figure 17. ^{1}H NMR (400 MHz, $CDCl_3$) of 7g 19
Figure 18. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of 7g 20
Figure 19. ^{1}H NMR (600 MHz, $CDCl_3$) of 7h 21
Figure 20. ^{13}C NMR/DEPT135 (150 MHz, $CDCl_3$) of 7h 22
Figure 21. ^{1}H NMR (600 MHz, $CDCl_3$) of 7i 23
Figure 22. ^{13}C NMR/DEPT135 (150 MHz, $CDCl_3$) of 7i 24
Figure 23. ^{1}H NMR (600 MHz, $CDCl_3$) of 7j 24
Figure 24. ^{13}C NMR/DEPT135 (150 MHz, $CDCl_3$) of 7j 26
Figure 25. ^{1}H NMR (600 MHz, MeOD) of *cis*-8 27
Figure 26. ^{13}C NMR/DEPT135 (150 MHz, MeOD) of *cis*-8 28
Figure 27. ^{1}H NMR (400 MHz, MeOD) of *trans*-8 29
Figure 28. ^{13}C NMR/DEPT135 (100 MHz, MeOD) of *trans*-8 30
Figure 29. ^{1}H NMR (400 MHz, $CDCl_3$) of 9 31
Figure 30. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of 9 32
Figure 31. ^{1}H NMR (400 MHz, $CDCl_3$) of 10 33
Figure 32. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of 10 34
Figure 33. ^{1}H NMR (400 MHz, $CDCl_3$) of 11 35
Figure 34. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of 11 36
Figure 35. ^{1}H NMR (600 MHz, $CDCl_3$) of S1 37
Figure 36. ^{13}C NMR/DEPT135 (150 MHz, $CDCl_3$) of S1 38

Figure 37. ^{1}H NMR (400 MHz, $CDCl_3$) of S2 39
Figure 38. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of S2 40
Figure 39. ^{1}H NMR (400 MHz, $CDCl_3$) of S3 41
Figure 40. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of S3 42
Figure 41. ^{1}H NMR (400 MHz, MeOD) of S4 43
Figure 42. ^{13}C NMR/DEPT135 (100 MHz, MeOD) of S4 44
Figure 43. HPLC trace of 3. 45
Figure 44. HPLC trace of 7a. 46
Figure 45. HPLC trace of 7b. 47
Figure 46. HPLC trace of 7c. 48
Figure 47. HPLC trace of 7d. 49
Figure 48. HPLC trace of 7e. 50
Figure 49. HPLC trace of 7f + *ent*-7f. 51
Figure 50. HPLC trace of 7g. 52
Figure 51. HPLC trace of 7h. 53
Figure 52. HPLC trace of 7i. 54
Figure 53. HPLC trace of 7j. 55
Figure 54. HPLC trace of 10. 56

Figure 1. ^{1}H NMR (400 MHz, $CDCl_3$) of **2**

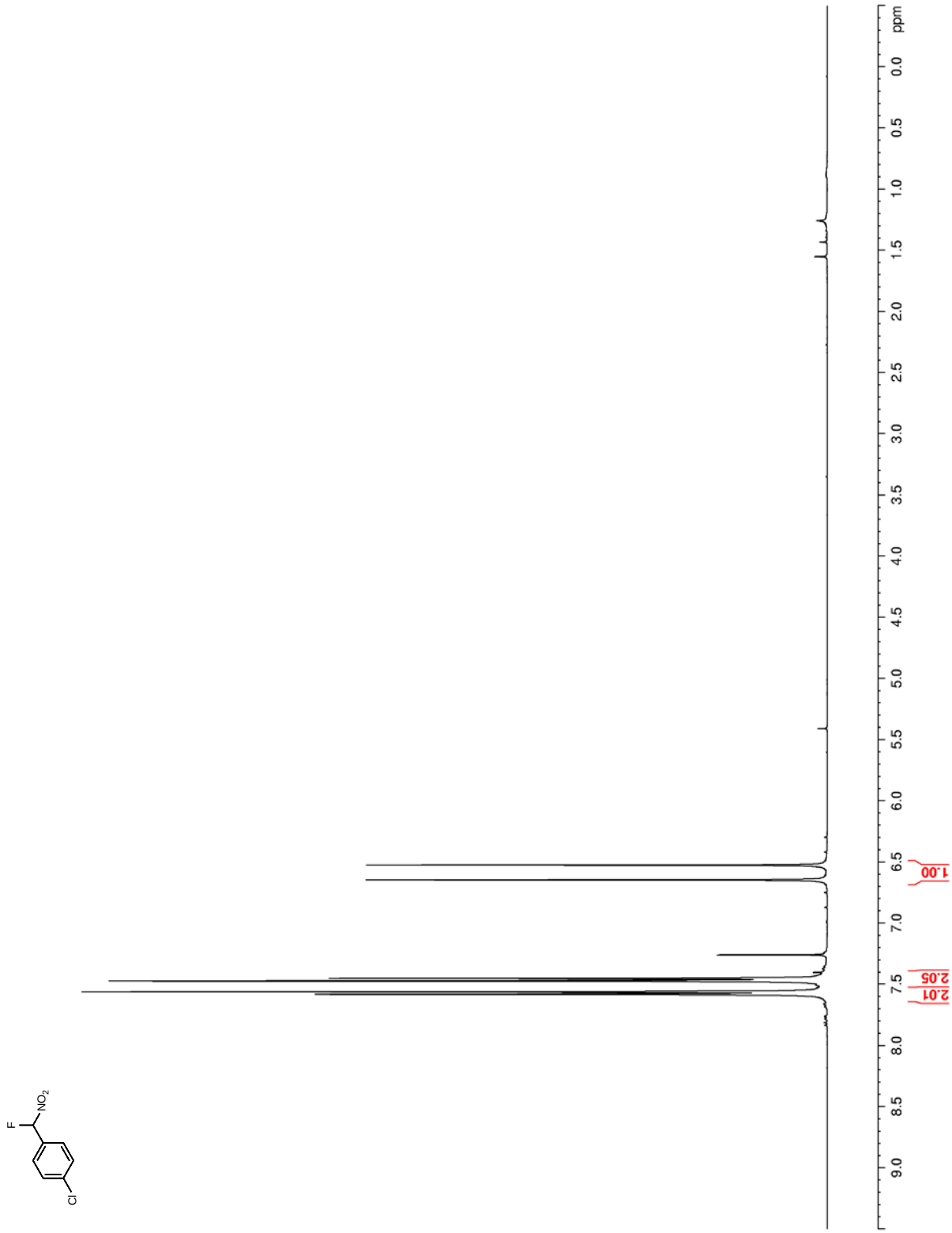


Figure 2. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of **2**

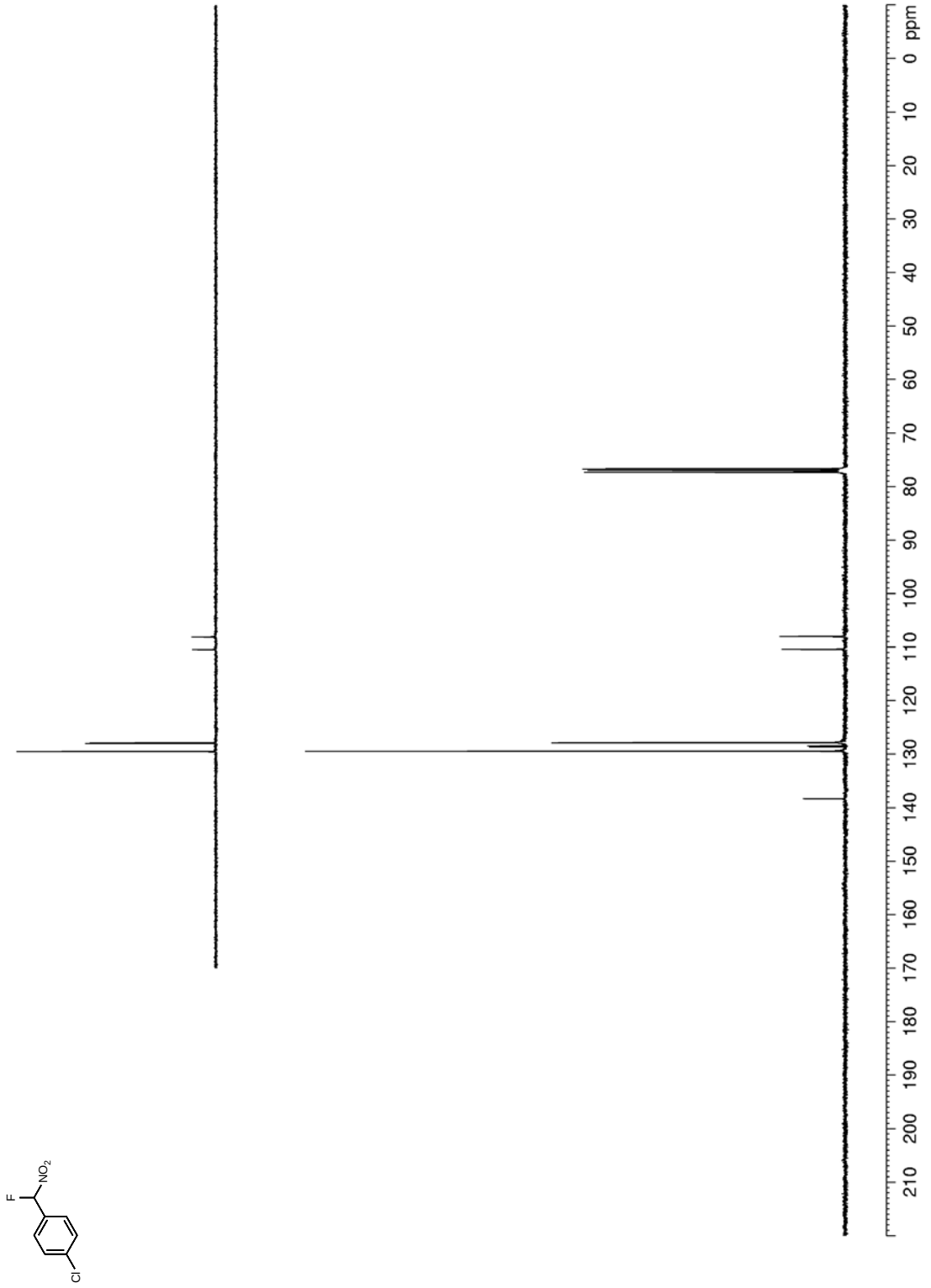


Figure 3. ^{1}H NMR (600 MHz, $CDCl_3$) of **3**

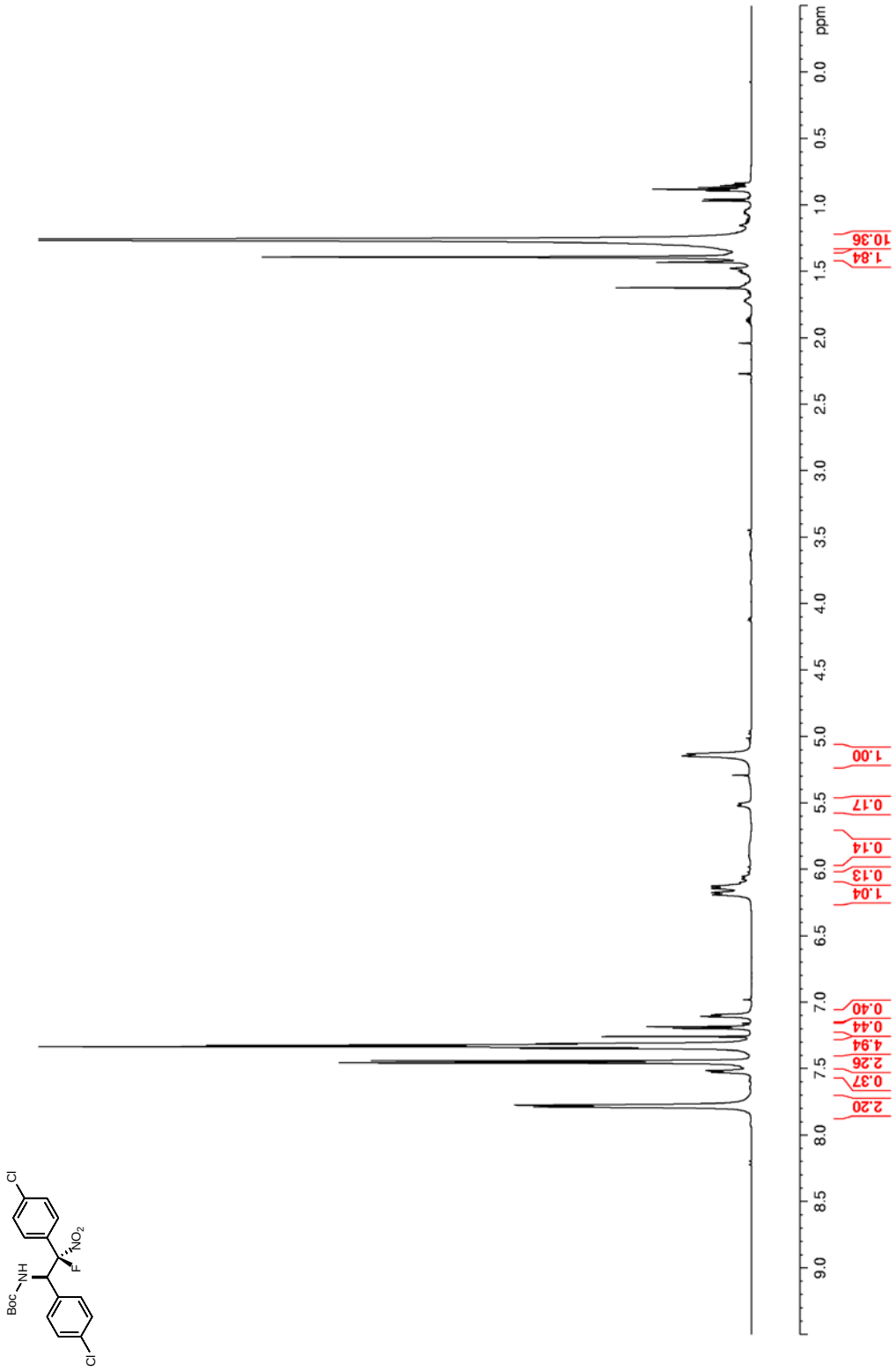


Figure 4. ^{13}C NMR/DEPT135 (150MHz, $CDCl_3$) of **3**

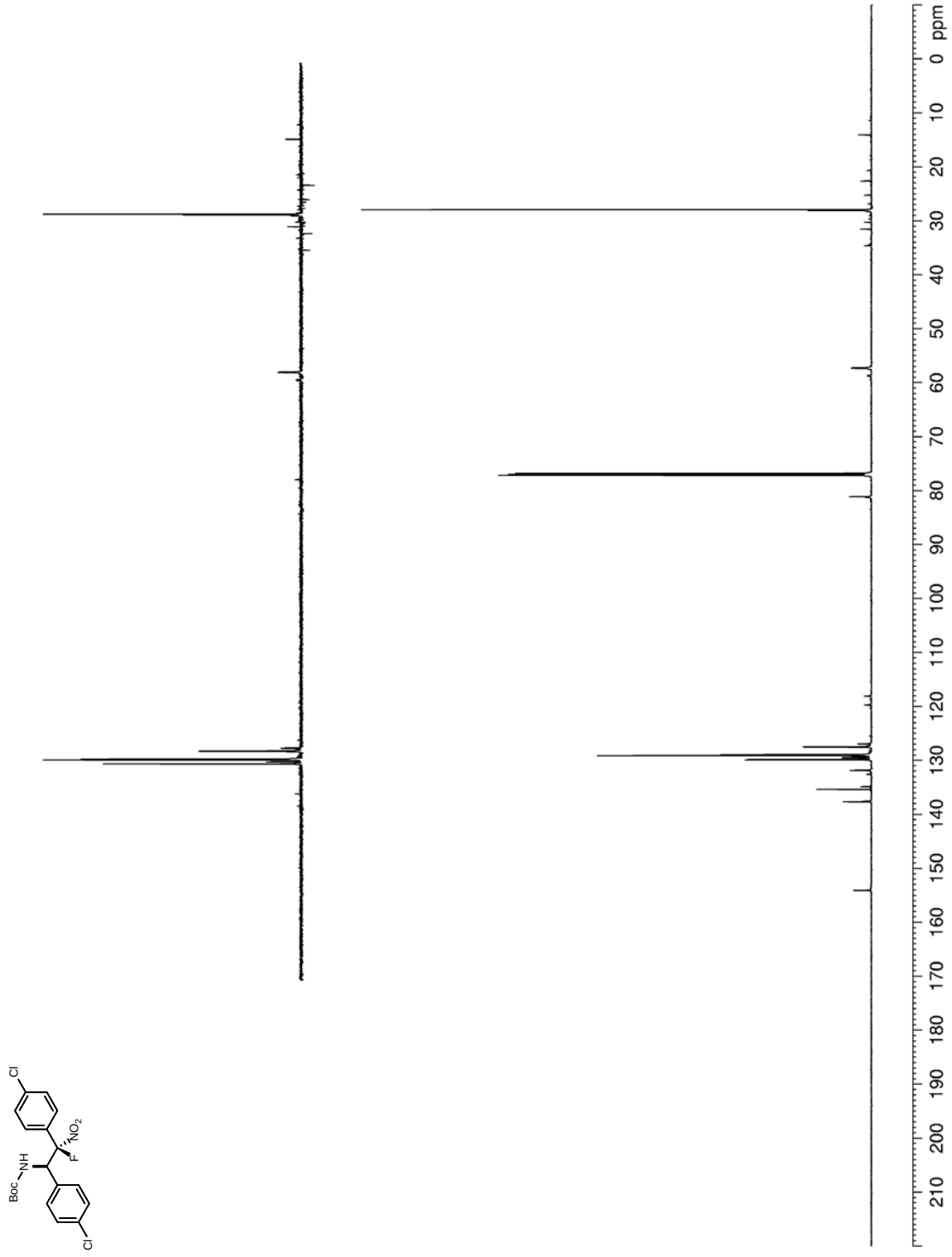


Figure 5. ^{1}H NMR (400 MHz, $CDCl_3$) of **7a**

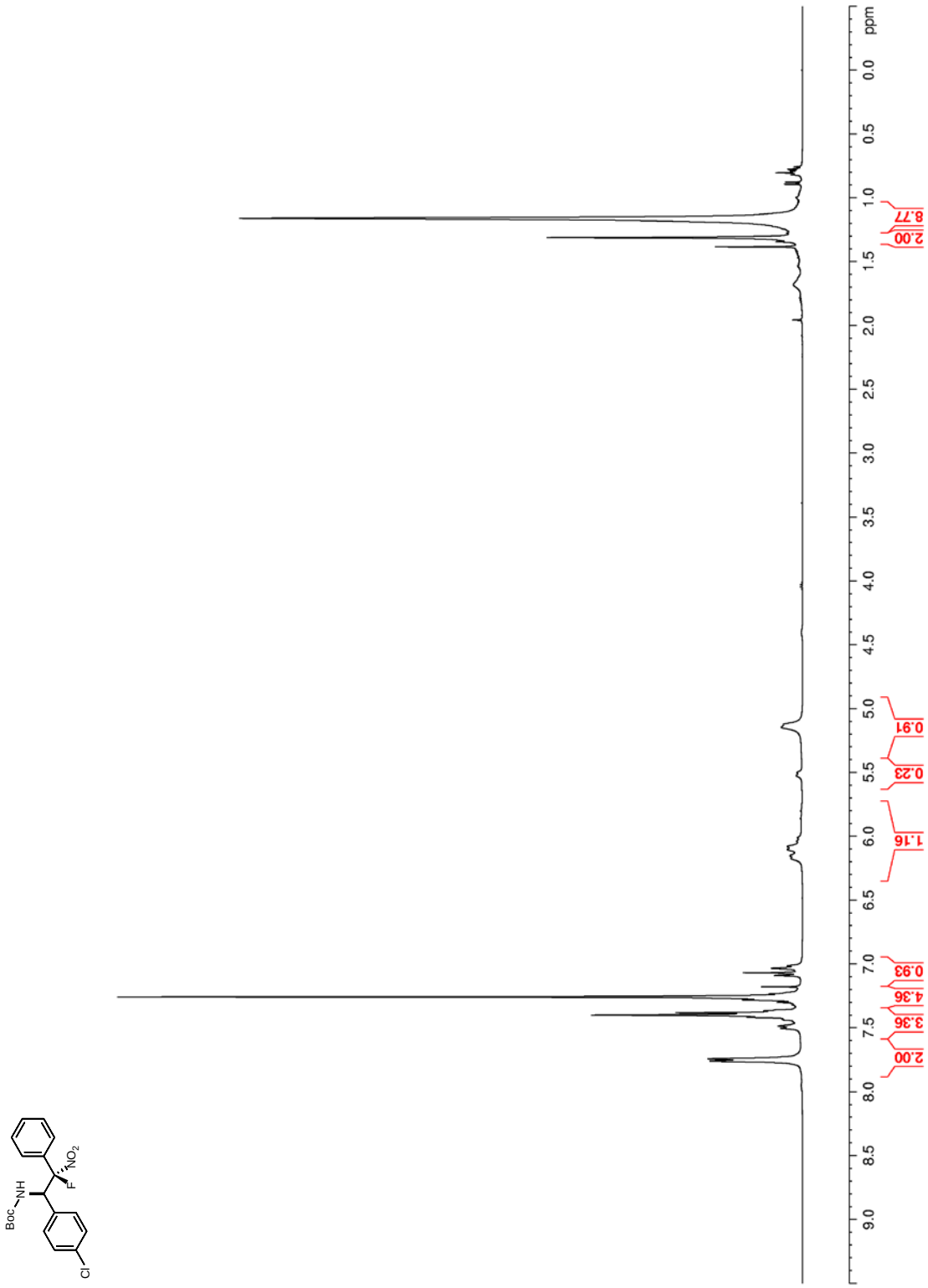


Figure 6. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of **7a**

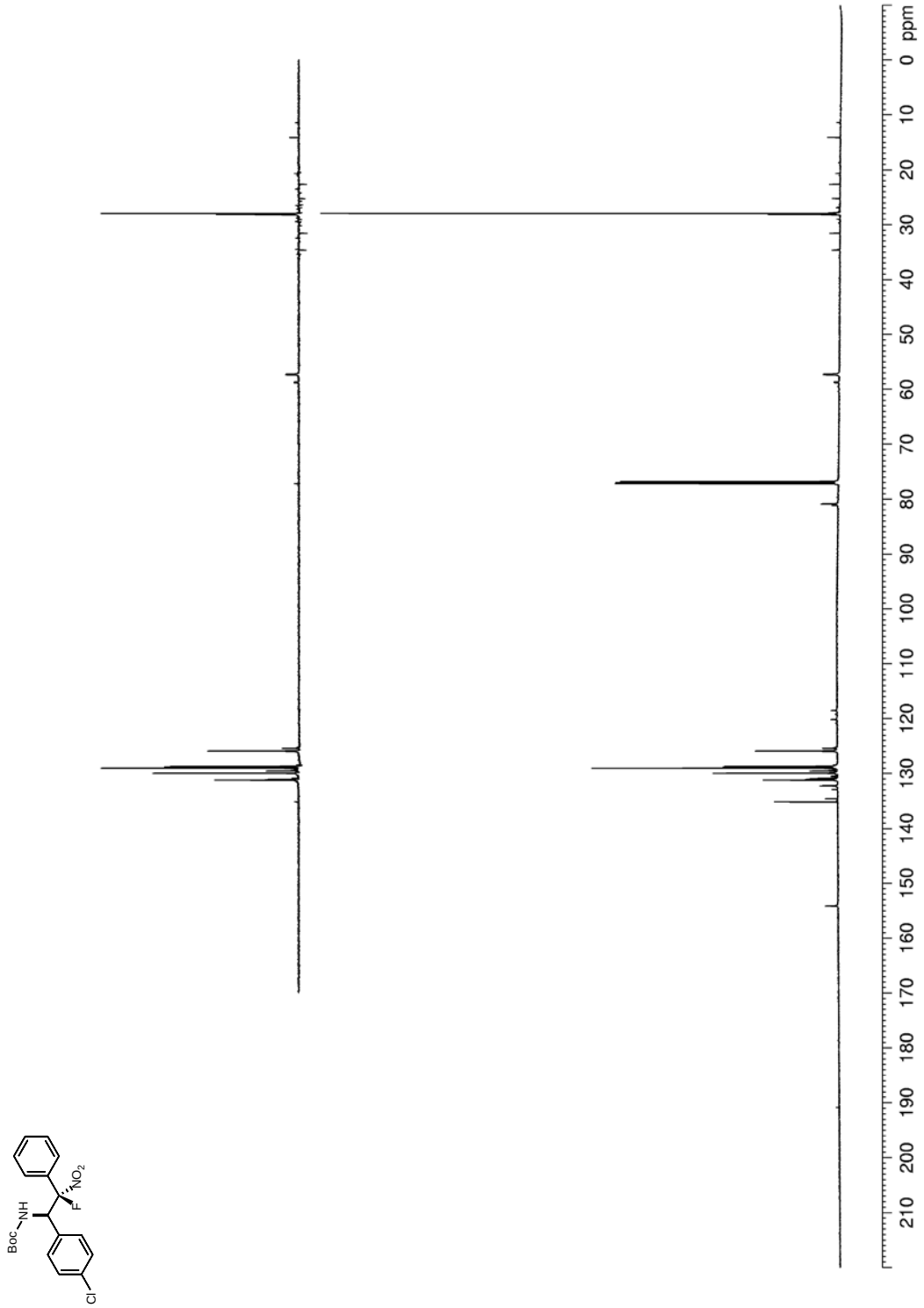


Figure 7. ^{1}H NMR (400 MHz, $CDCl_3$) of **7b**

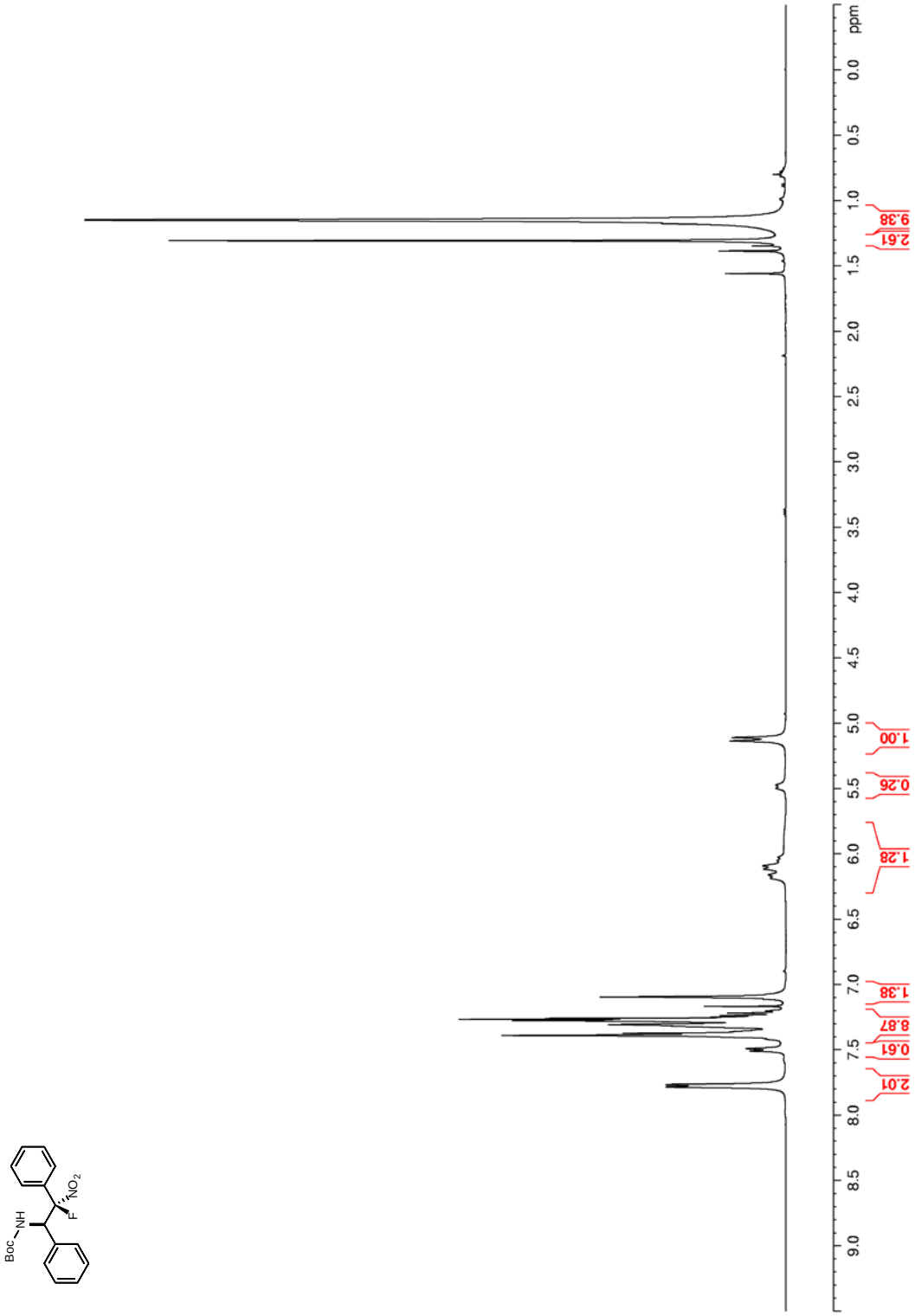


Figure 8. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of **7b**

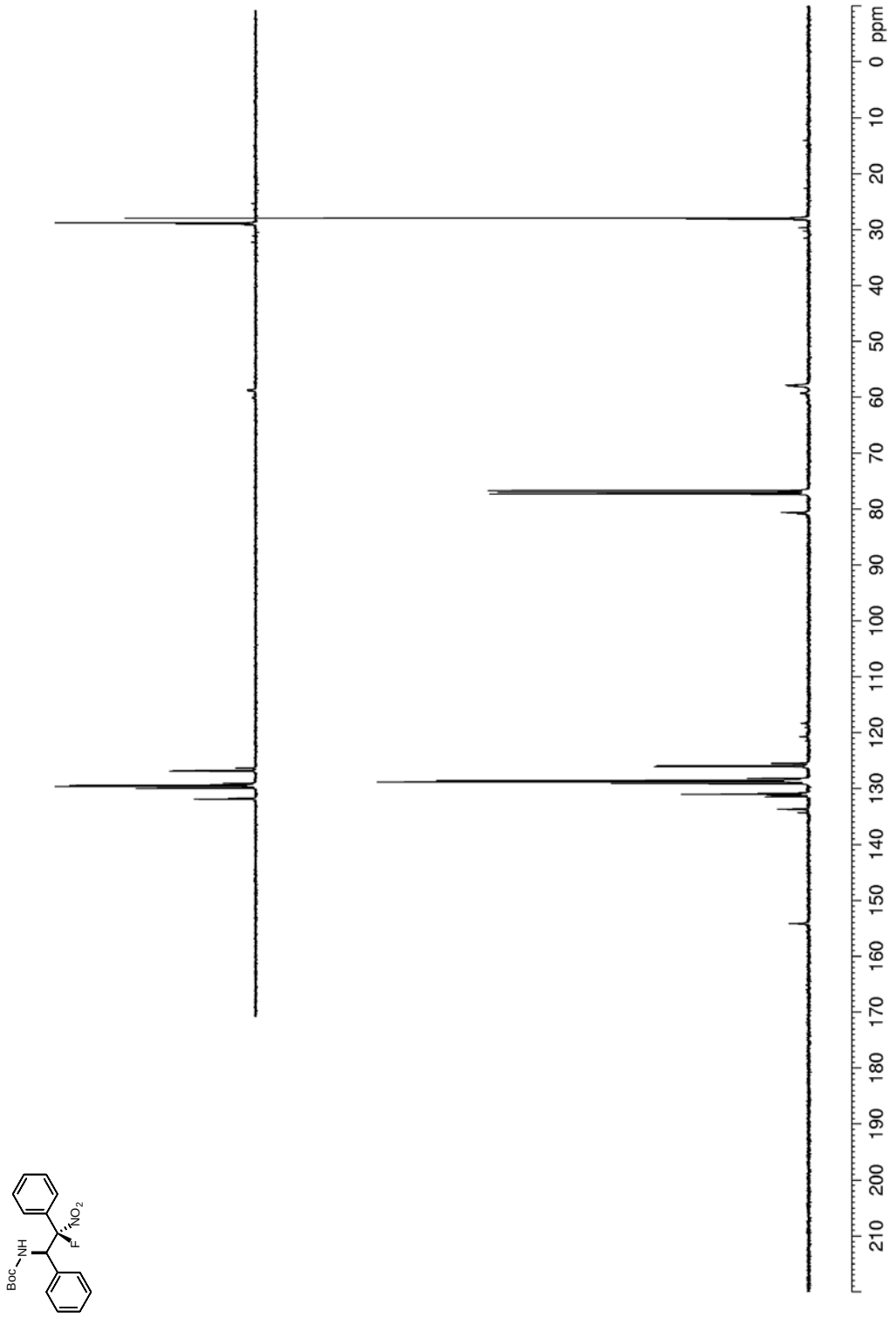


Figure 9. ^{1}H NMR (400 MHz, $CDCl_3$) of **7c**

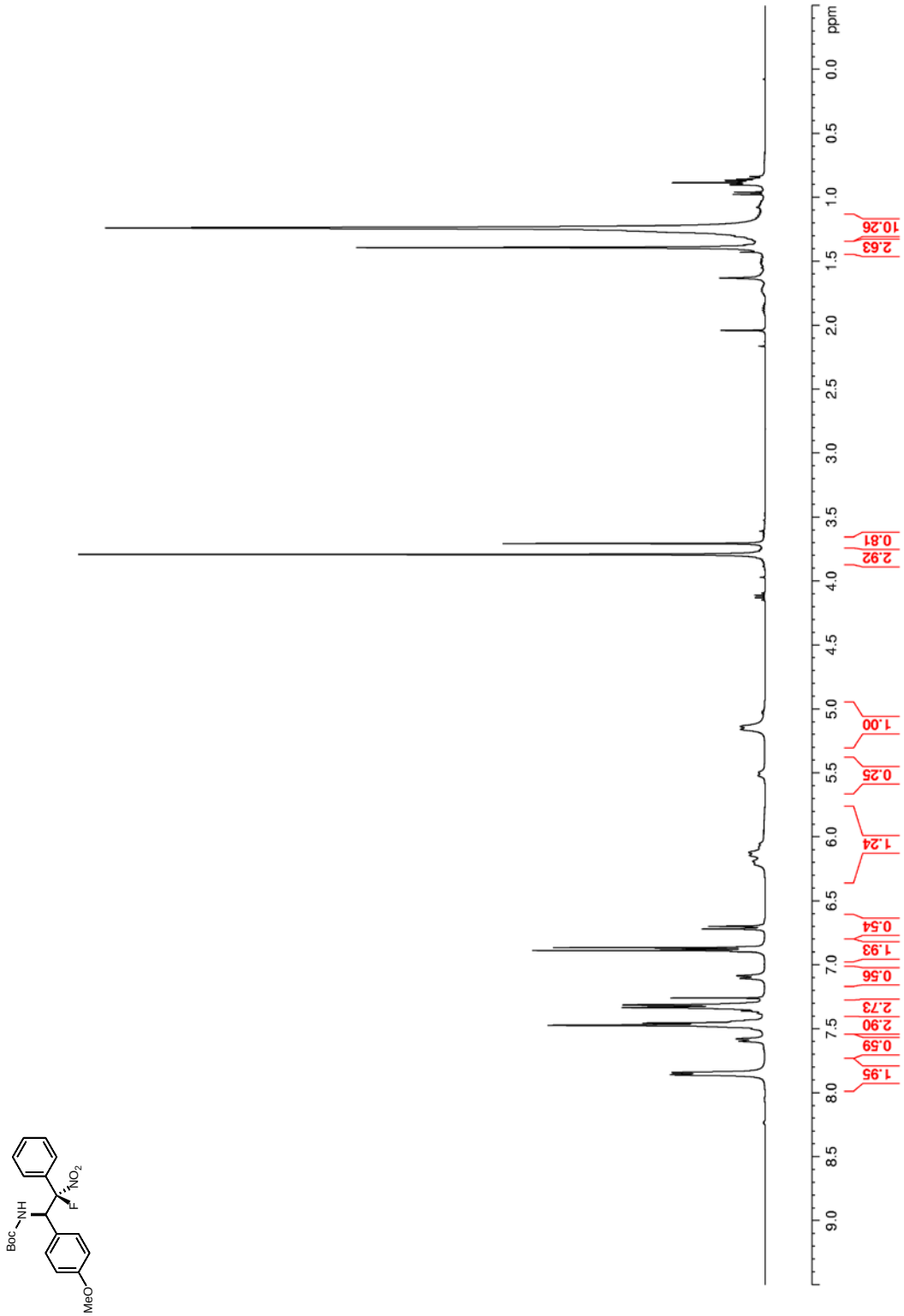


Figure 10. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of **7c**

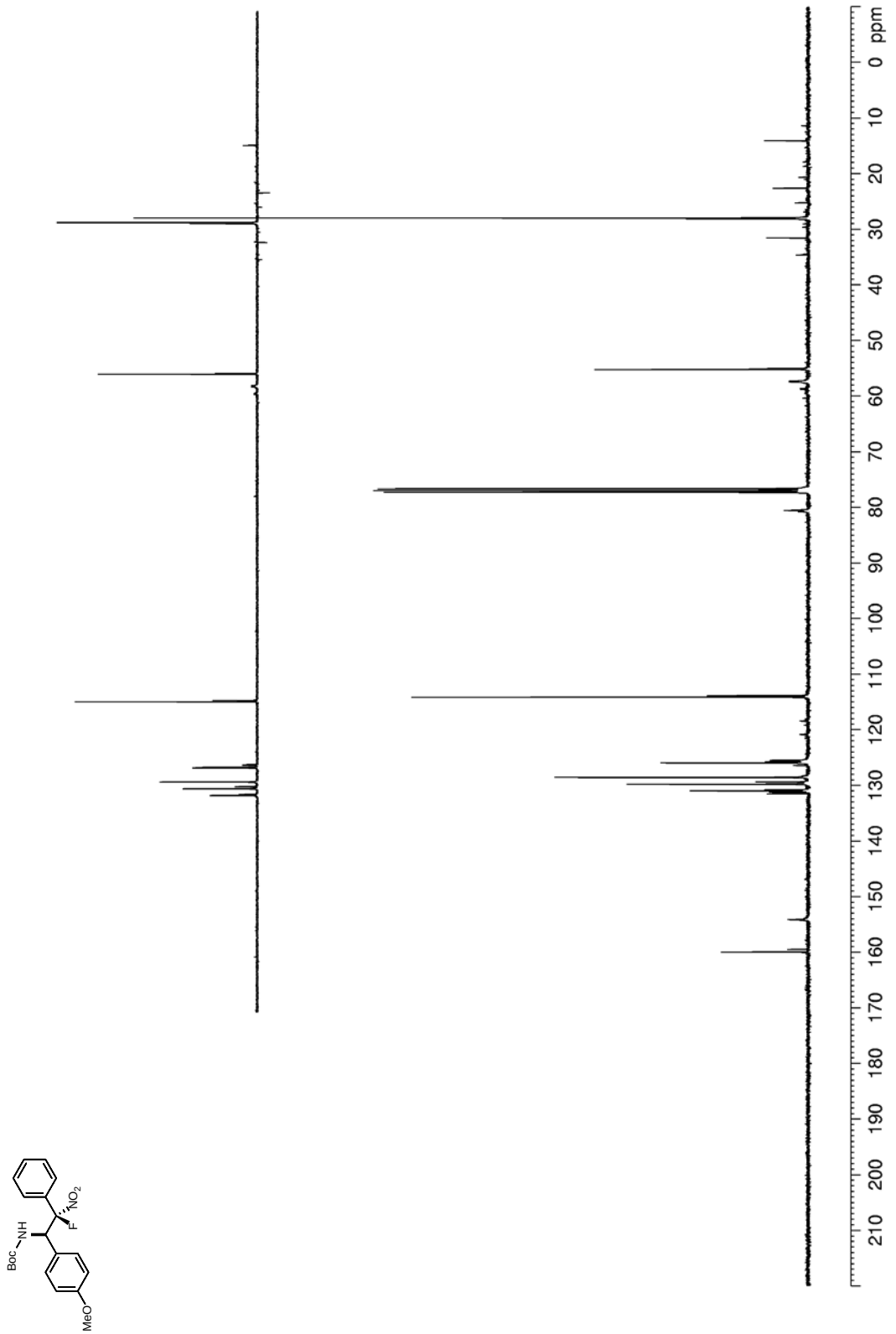


Figure 11. ^{1}H NMR (400 MHz, $CDCl_3$) of **7d**

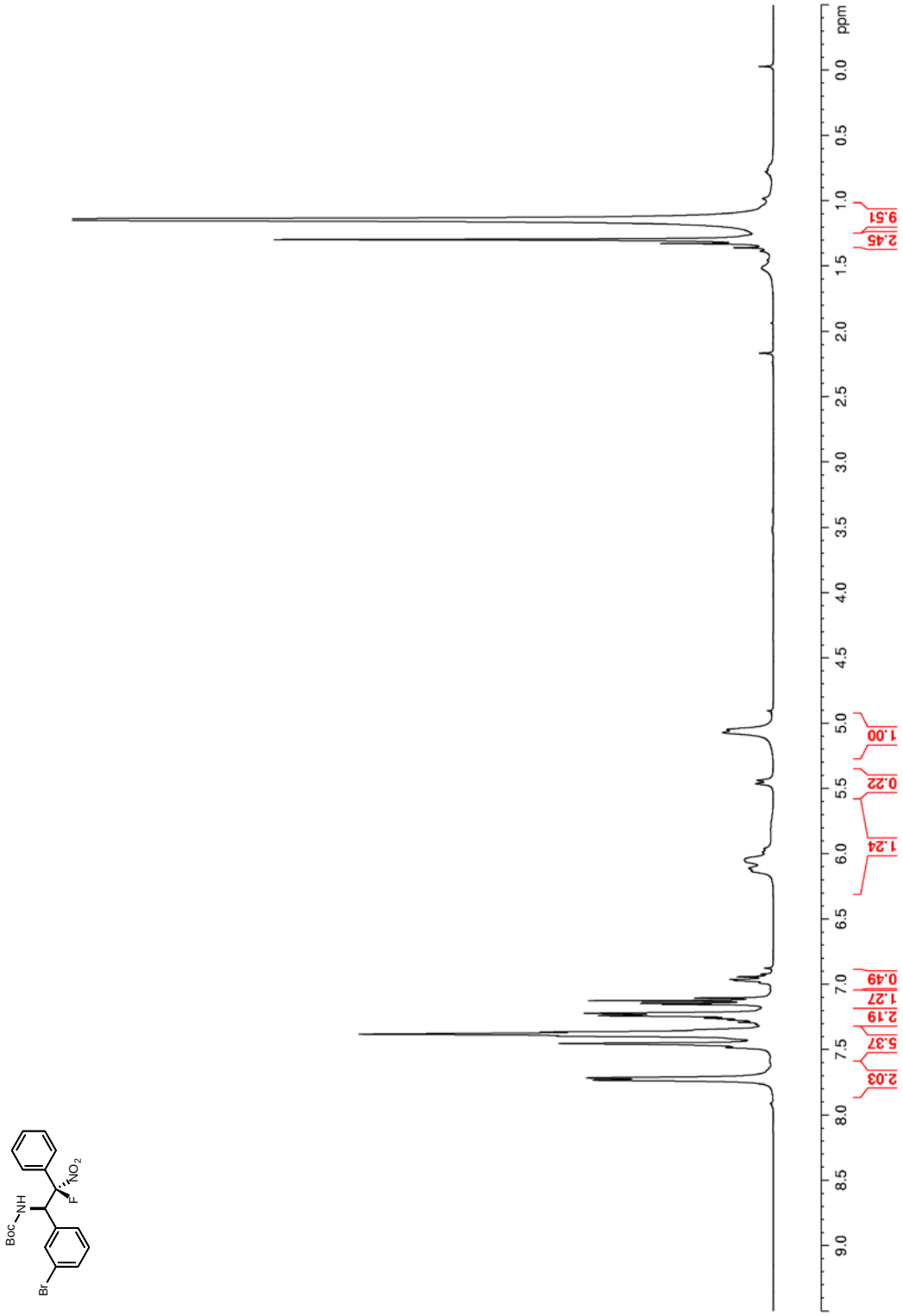


Figure 12. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of **7d**

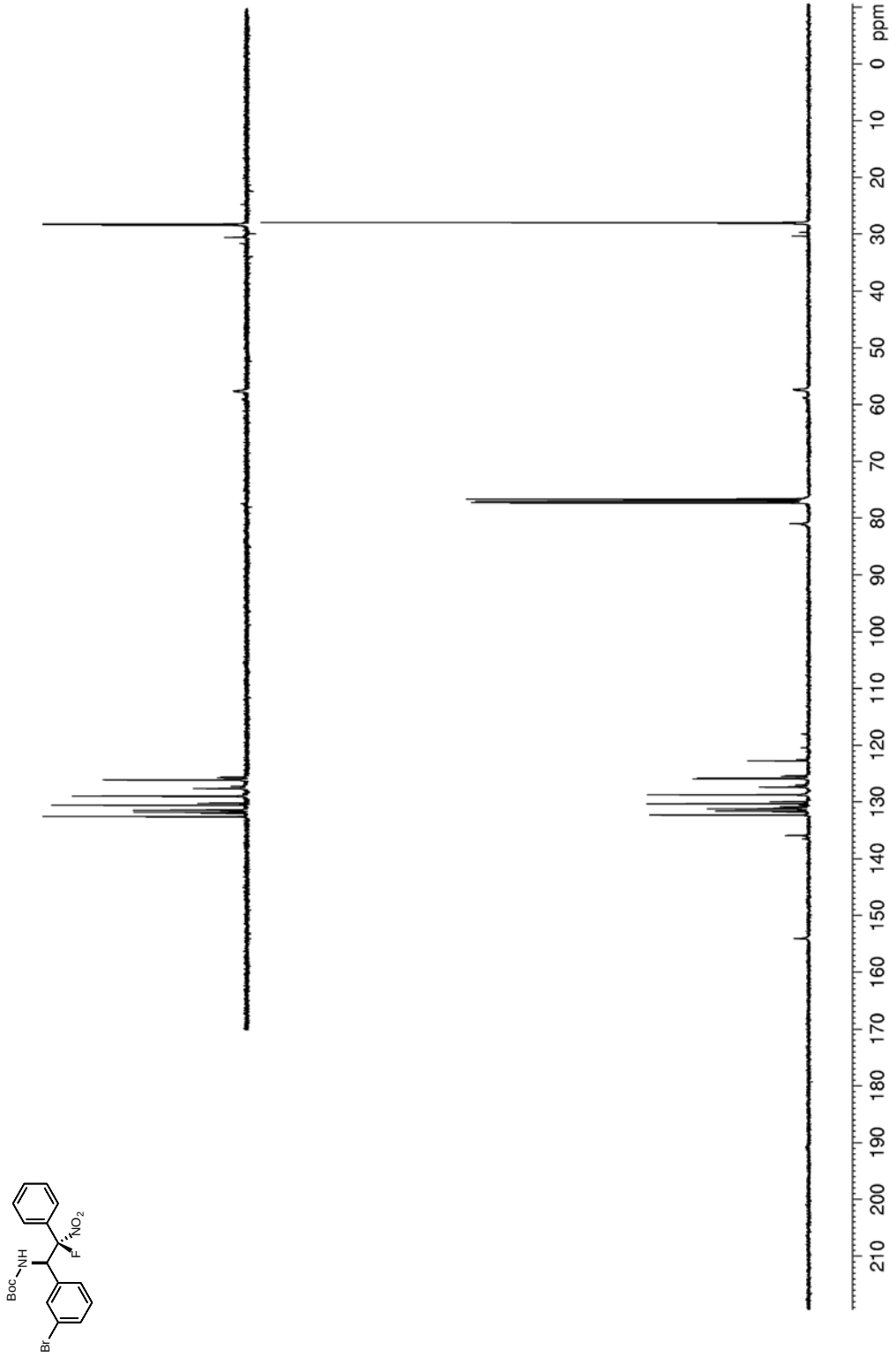


Figure 13. ^{1}H NMR (400 MHz, $CDCl_3$) of **7e**

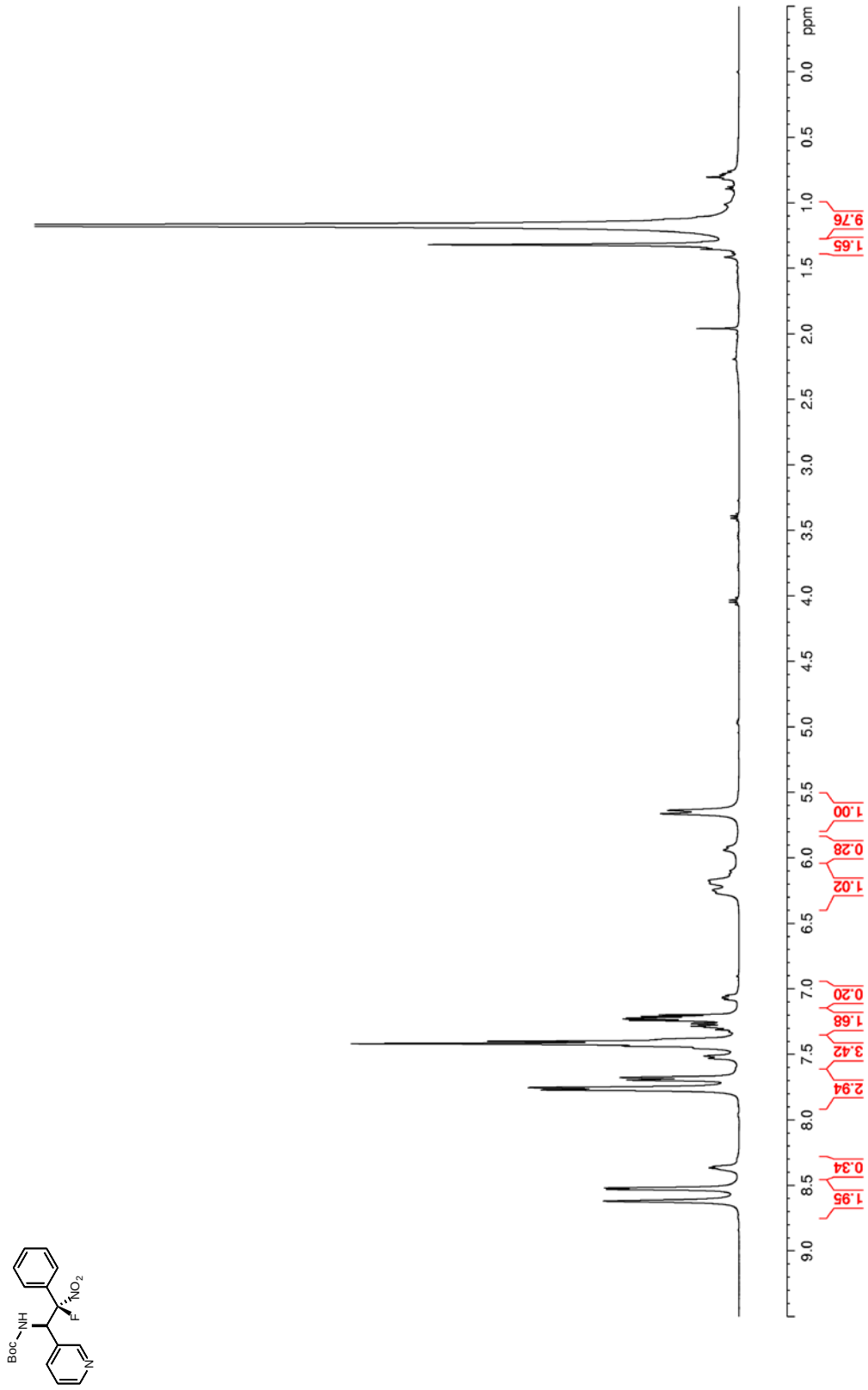


Figure 14. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of **7e**

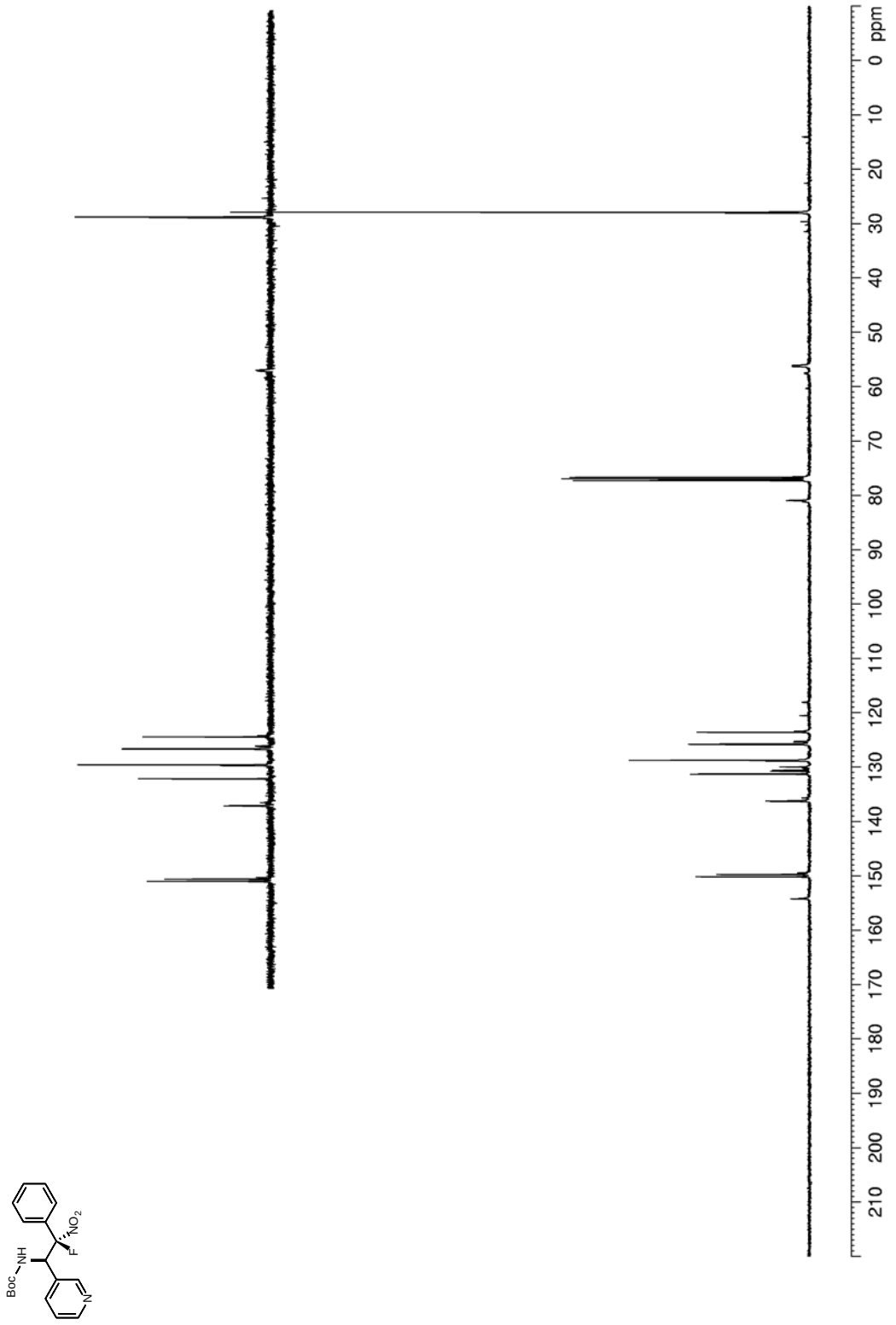


Figure 15. ^{1}H NMR (400 MHz, $CDCl_3$) of **7f**

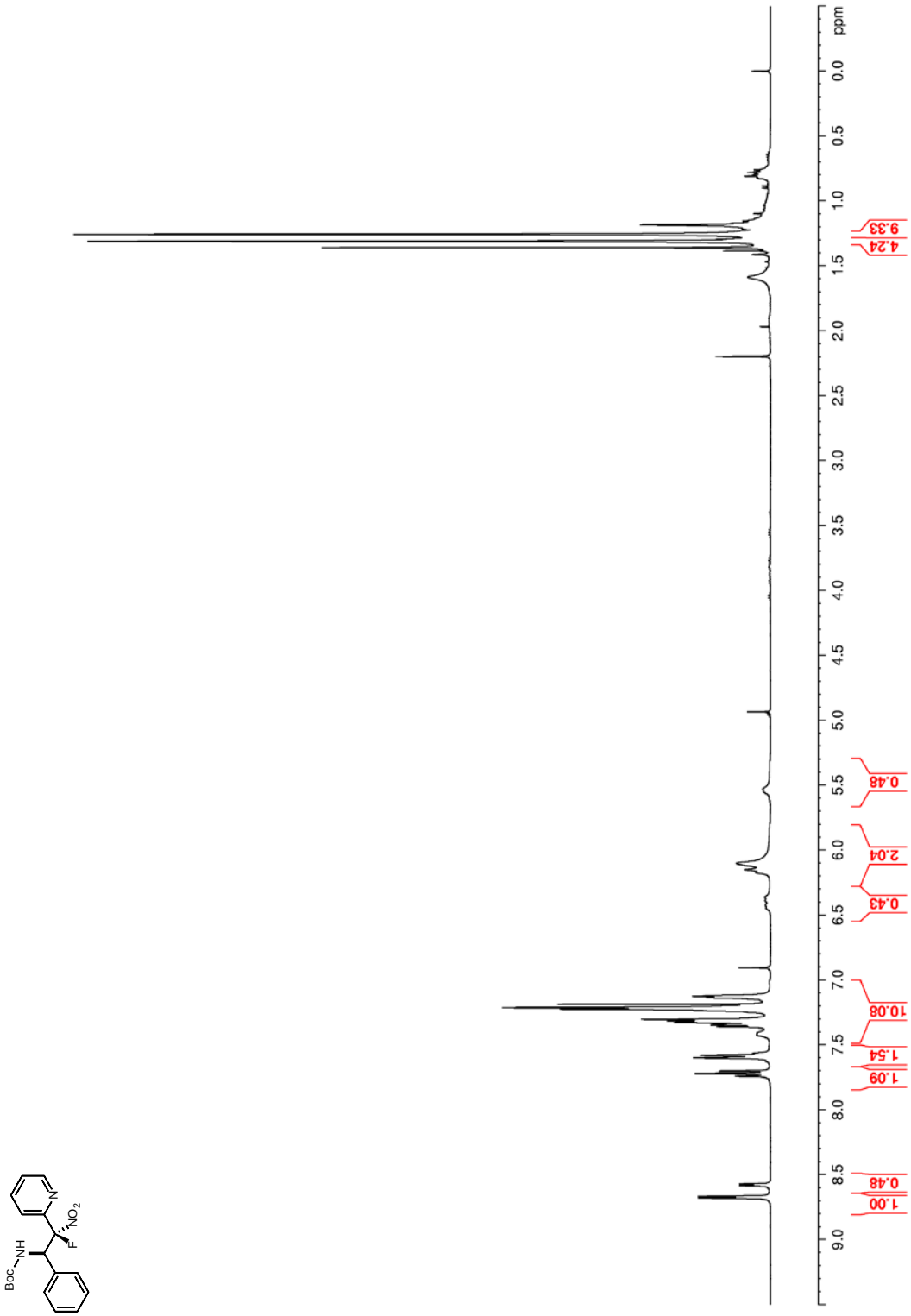


Figure 16. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of **7f**

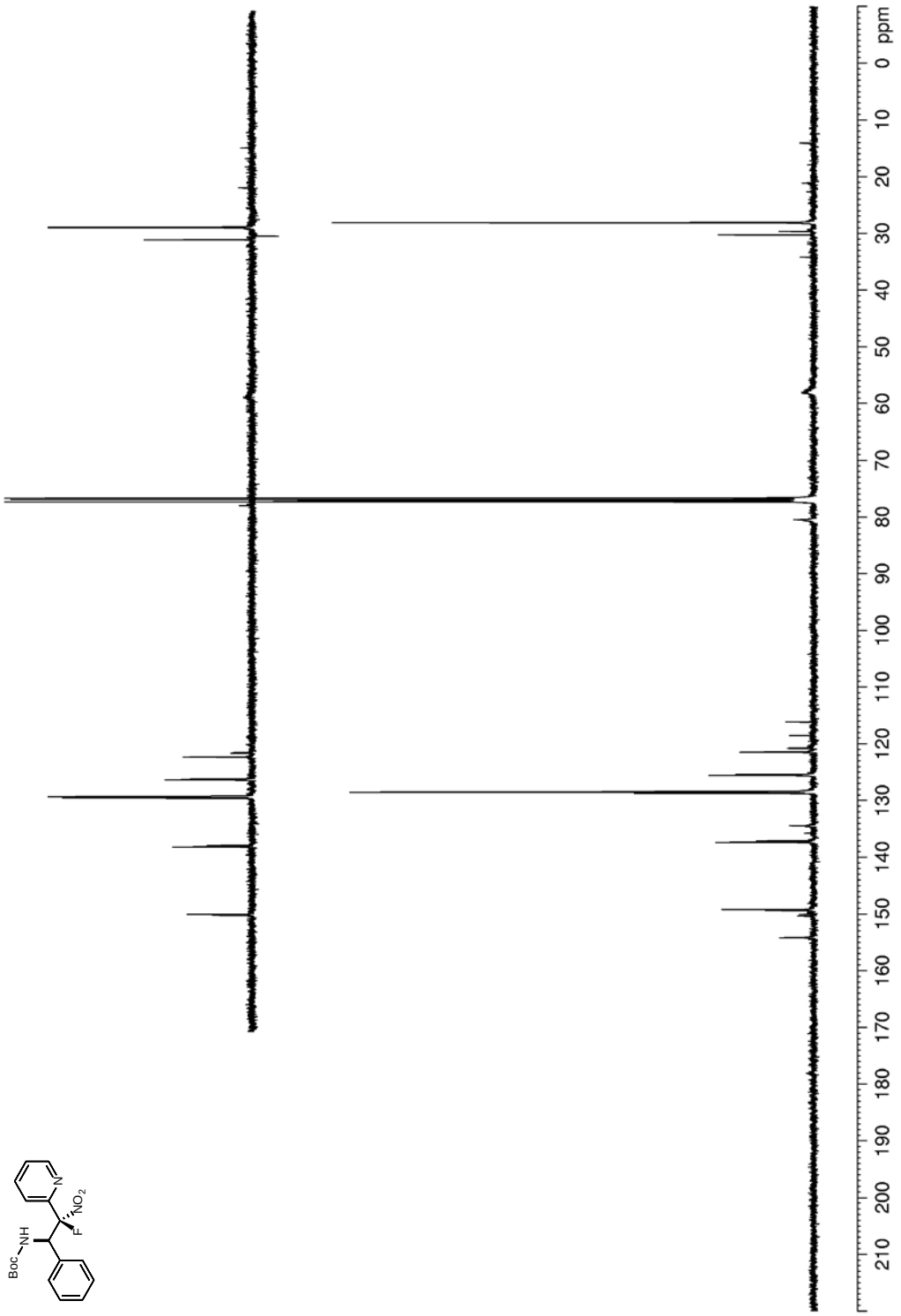


Figure 17. ^{1}H NMR (400 MHz, $CDCl_3$) of **7g**

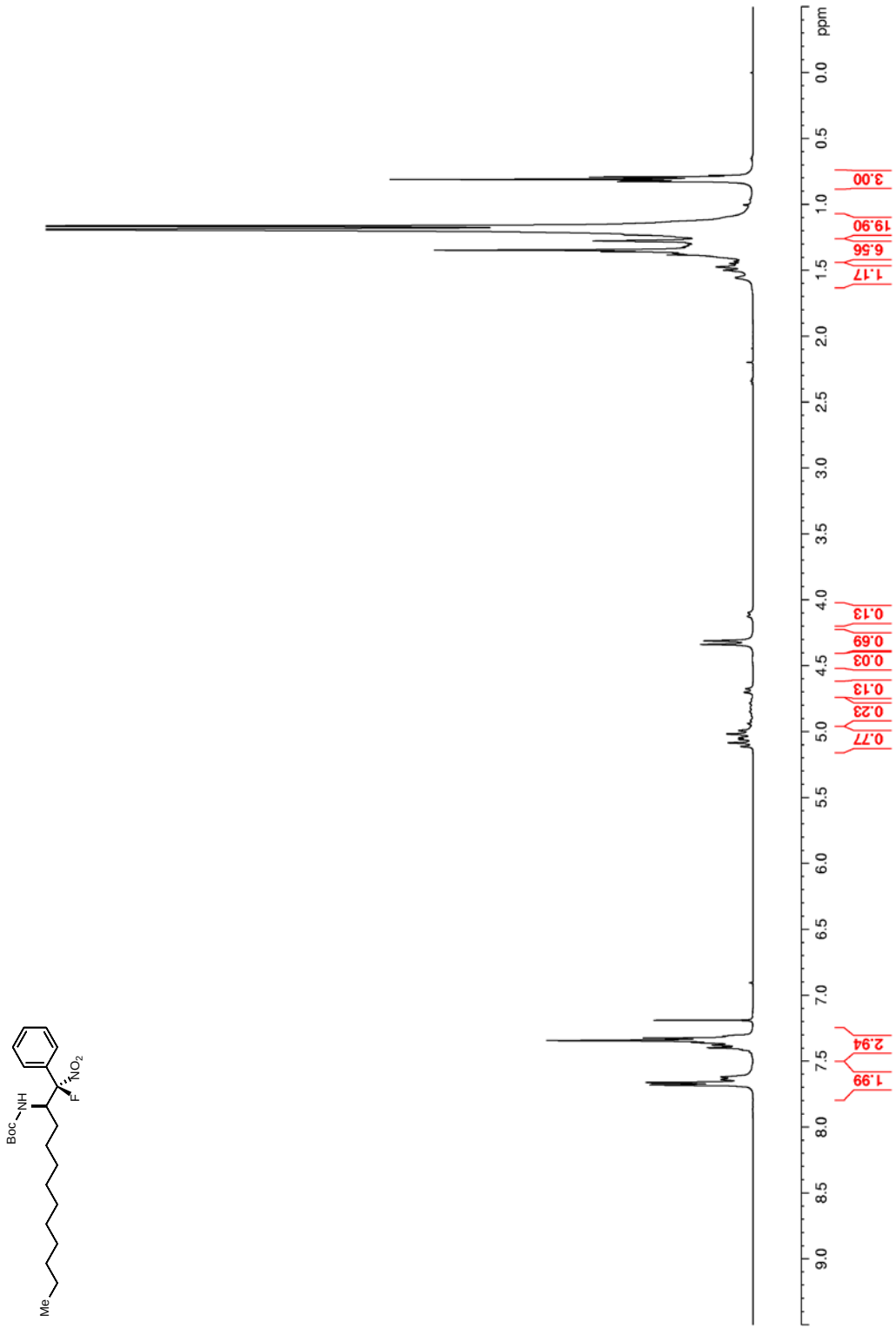


Figure 18. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of **7g**

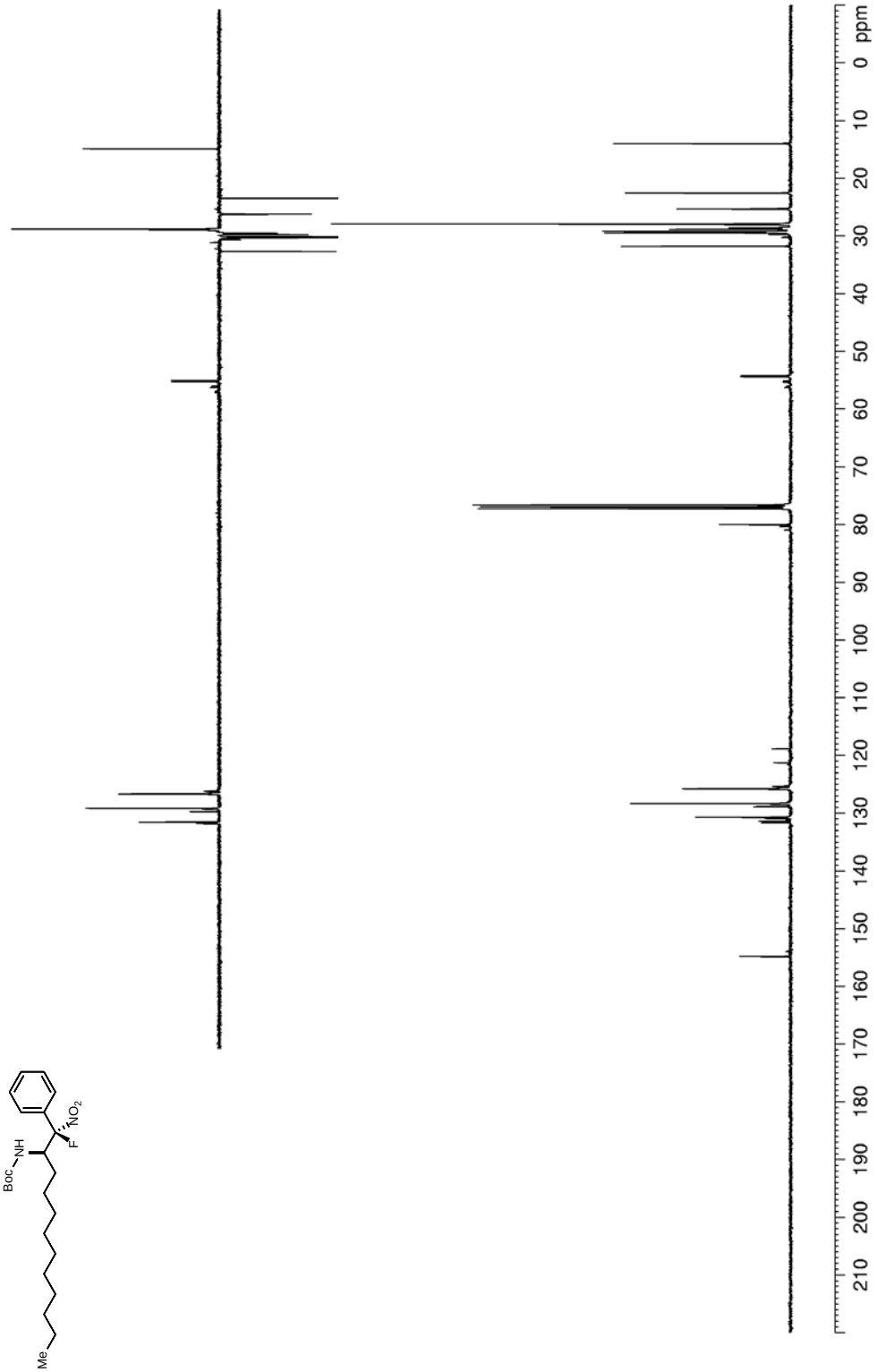


Figure **19**. ^{1}H NMR (600 MHz, $CDCl_3$) of **7h**

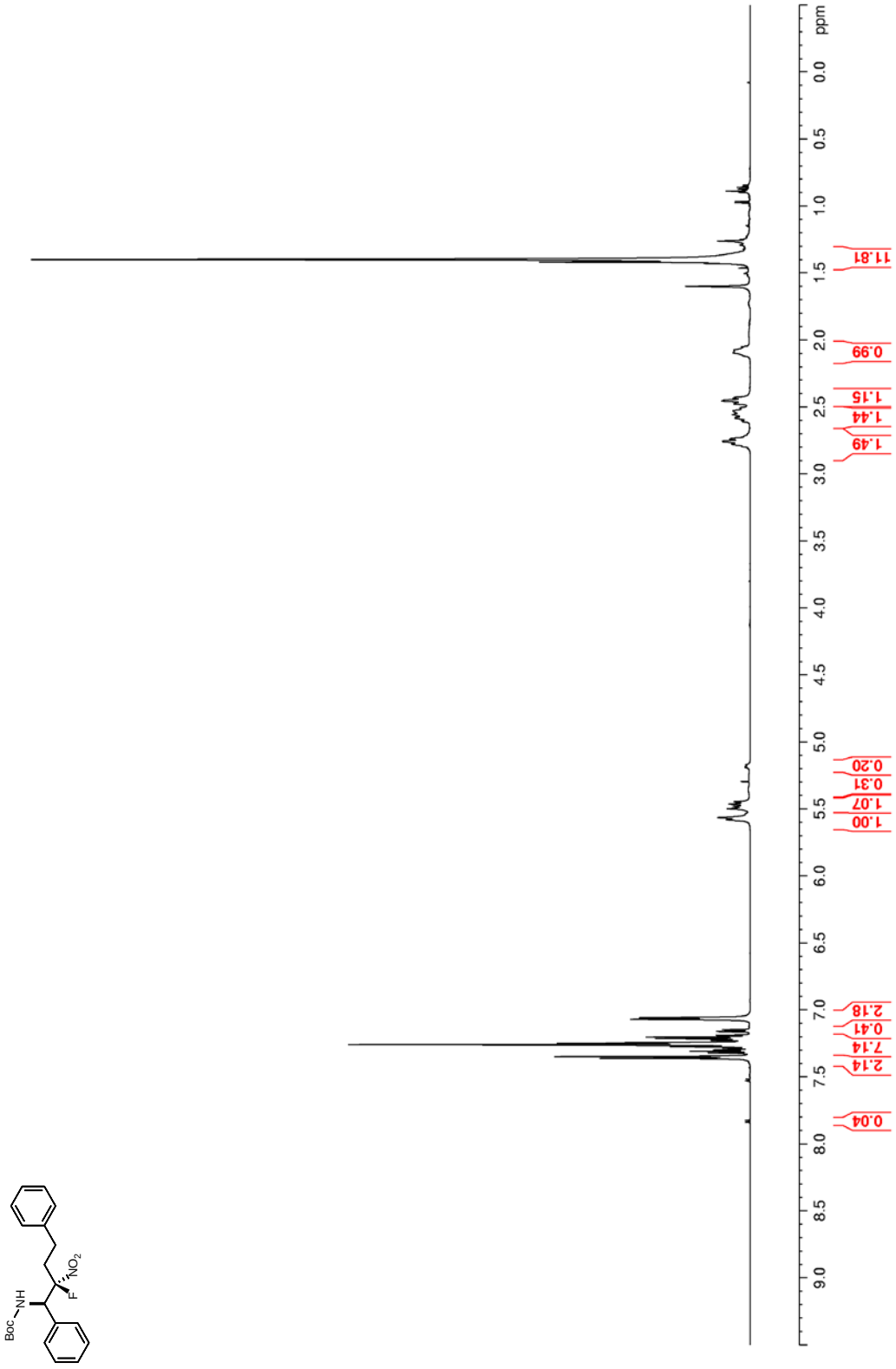


Figure **20**. ^{13}C NMR/DEPT135 (150 MHz, $CDCl_3$) of **7h**

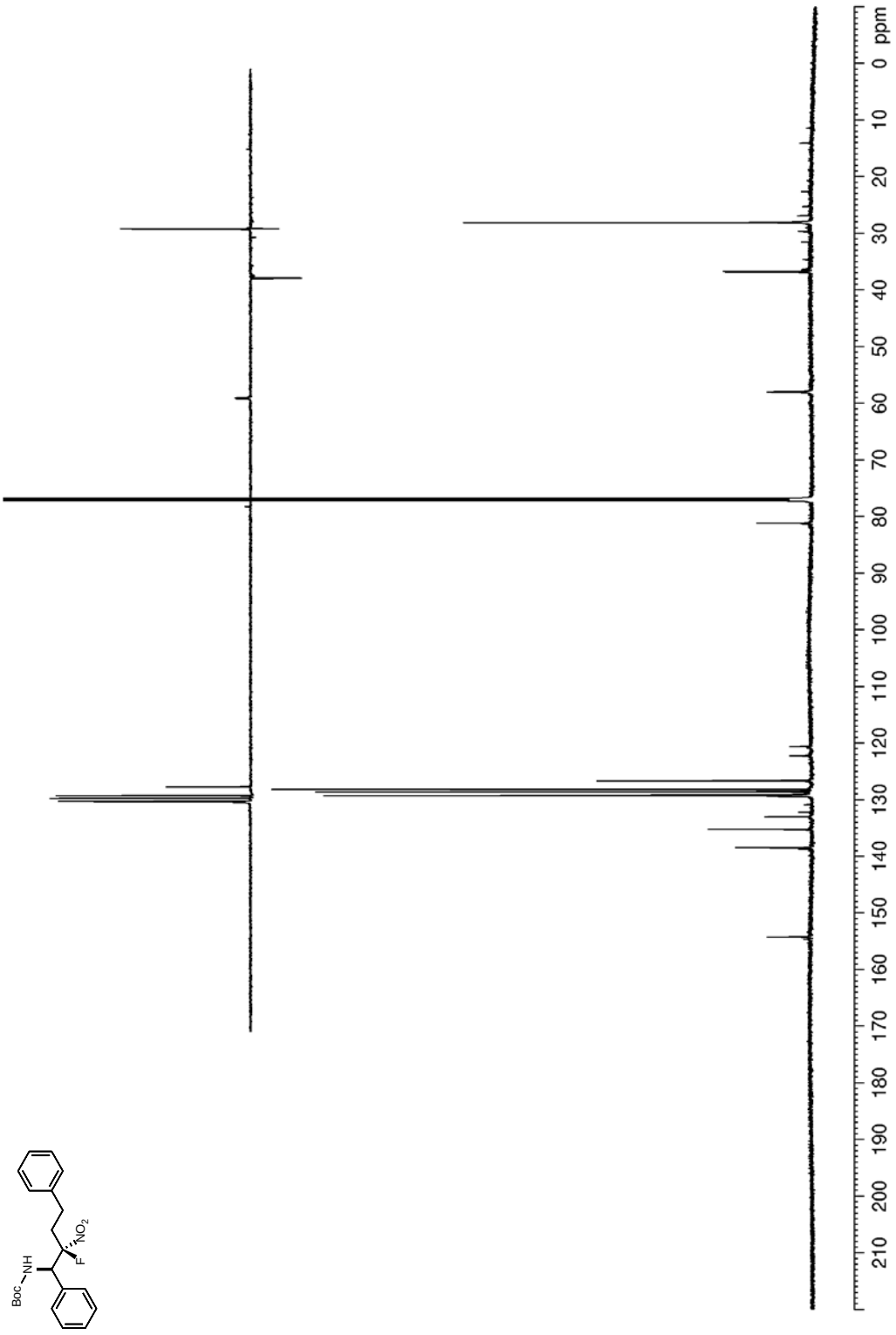


Figure 21. ^{1}H NMR (600 MHz, $CDCl_3$) of **7i**

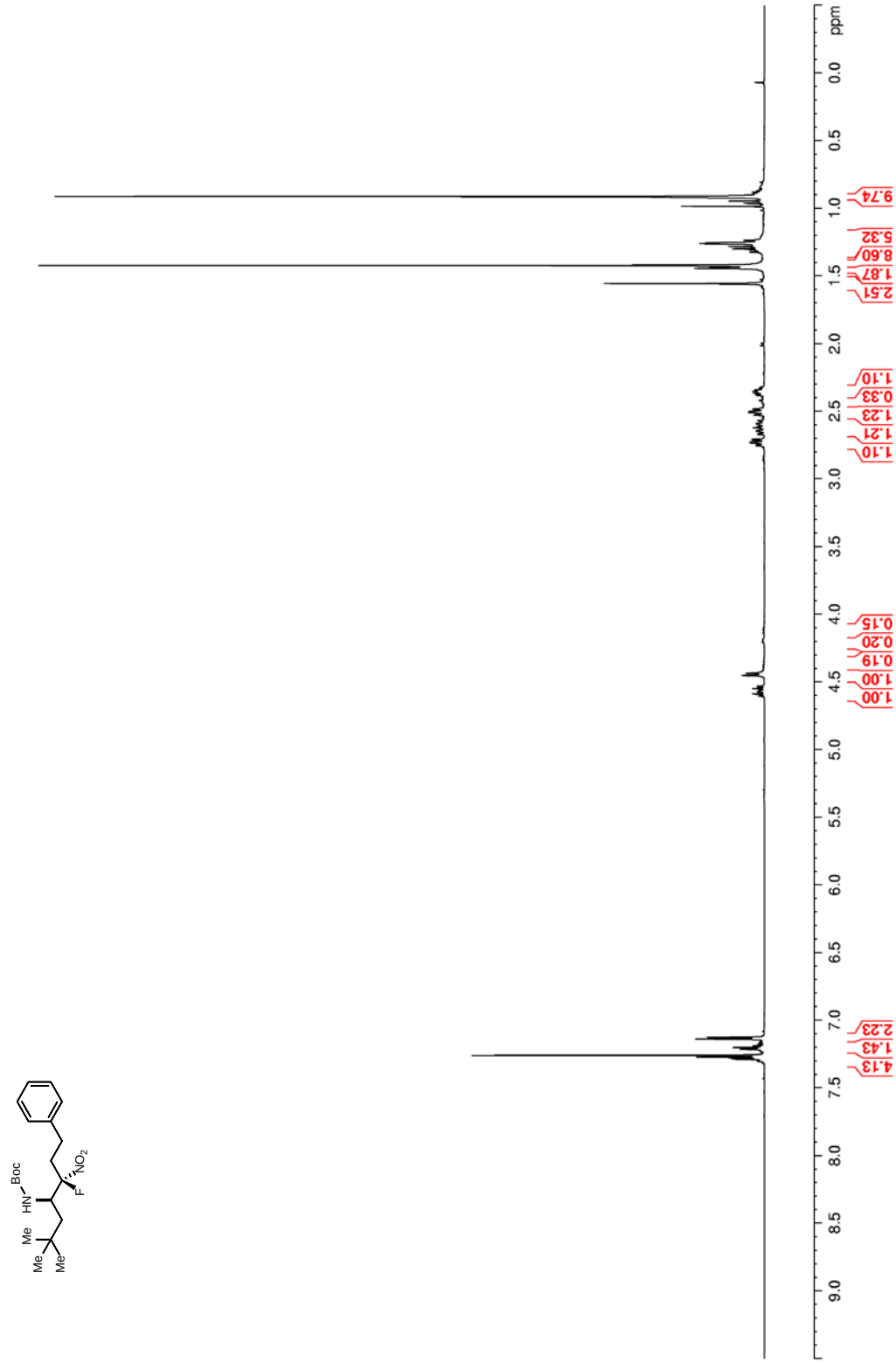


Figure 22. ^{13}C NMR/DEPT135 (150 MHz, $CDCl_3$) of **7i**

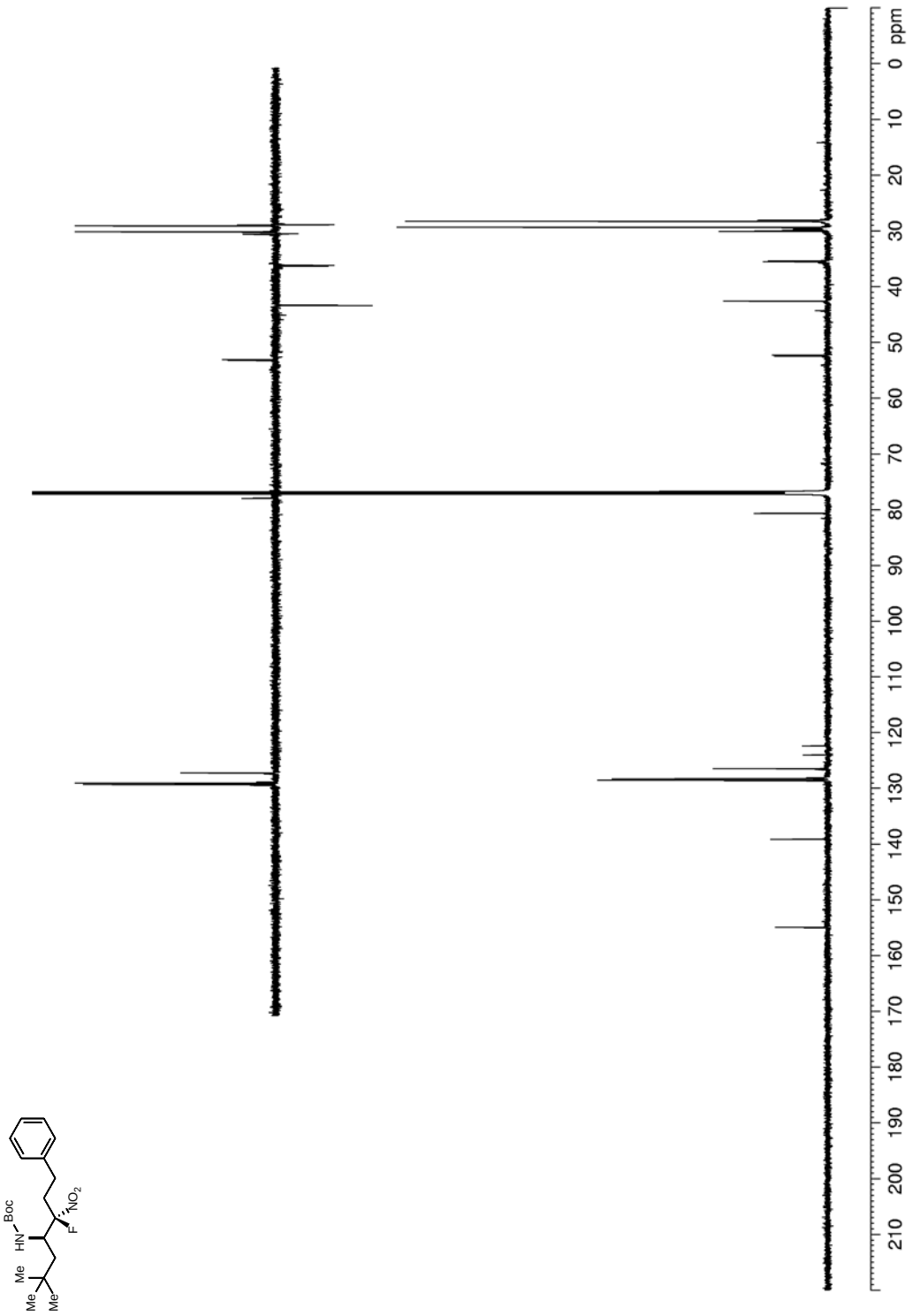


Figure 23. ^{1}H NMR (600 MHz, $CDCl_3$) of **7j**

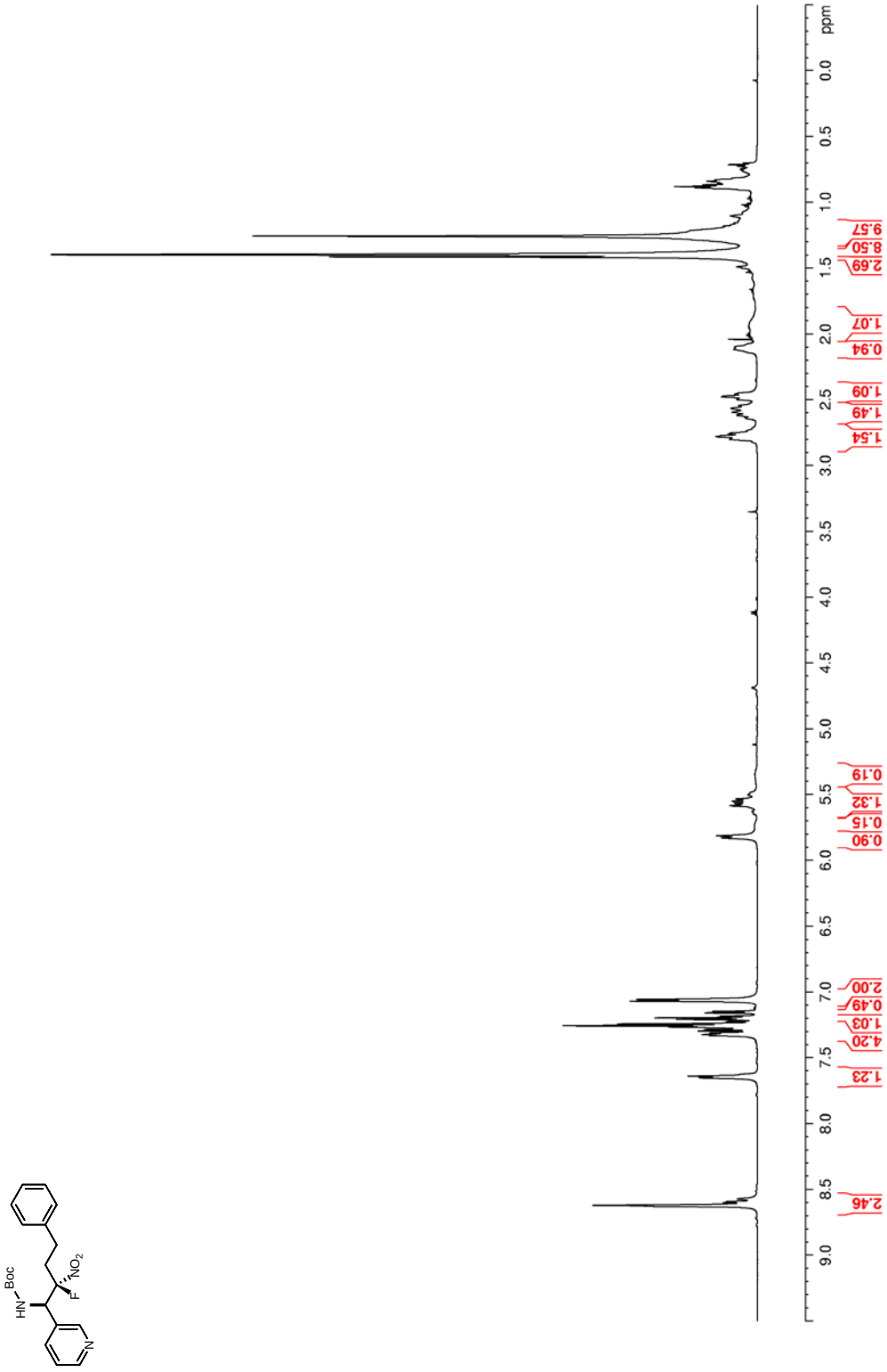


Figure 24. ^{13}C NMR/DEPT135 (150 MHz, $CDCl_3$) of **7j**

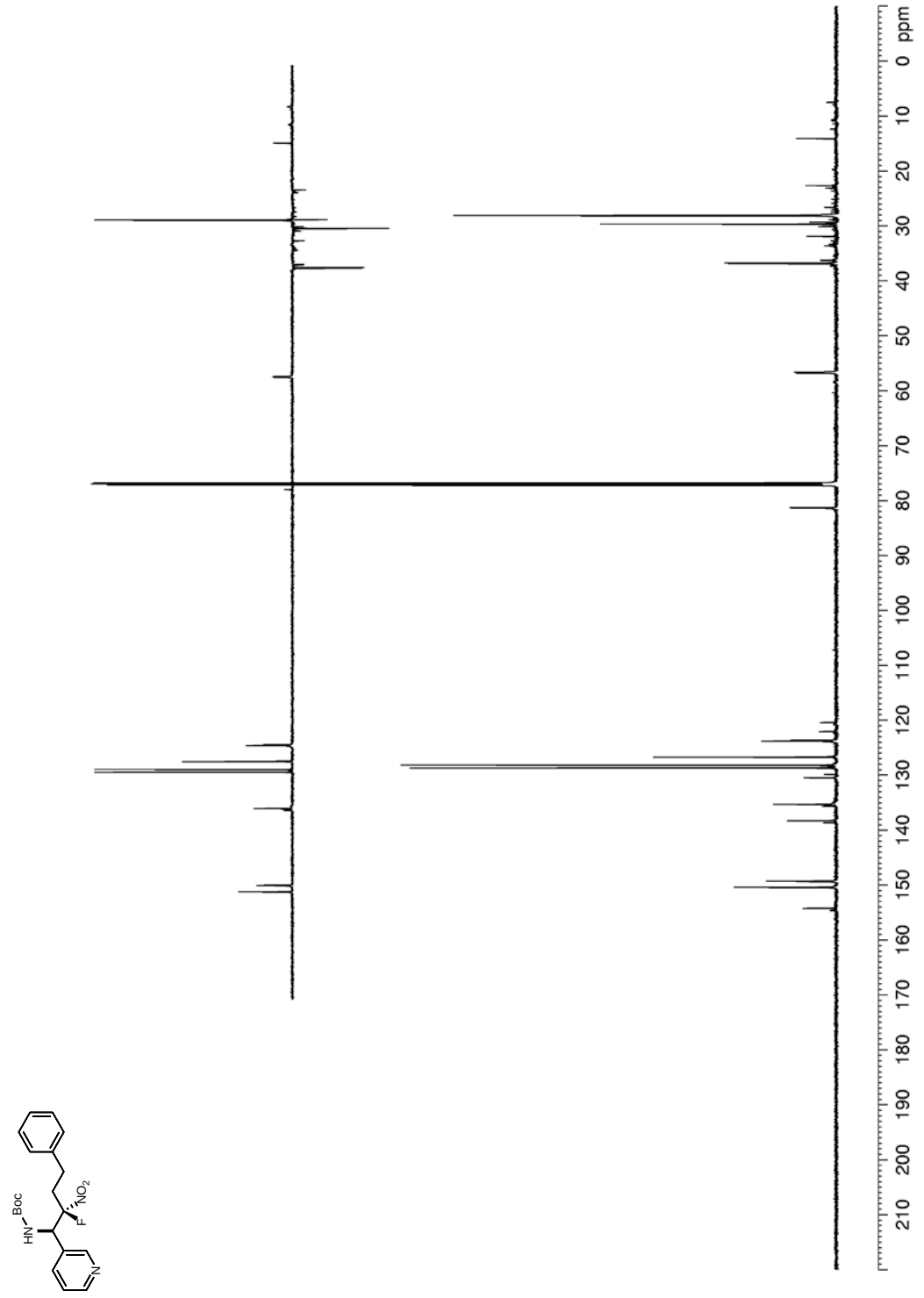


Figure 25. ^{1}H NMR (600 MHz, MeOD) of *cis*-**8**

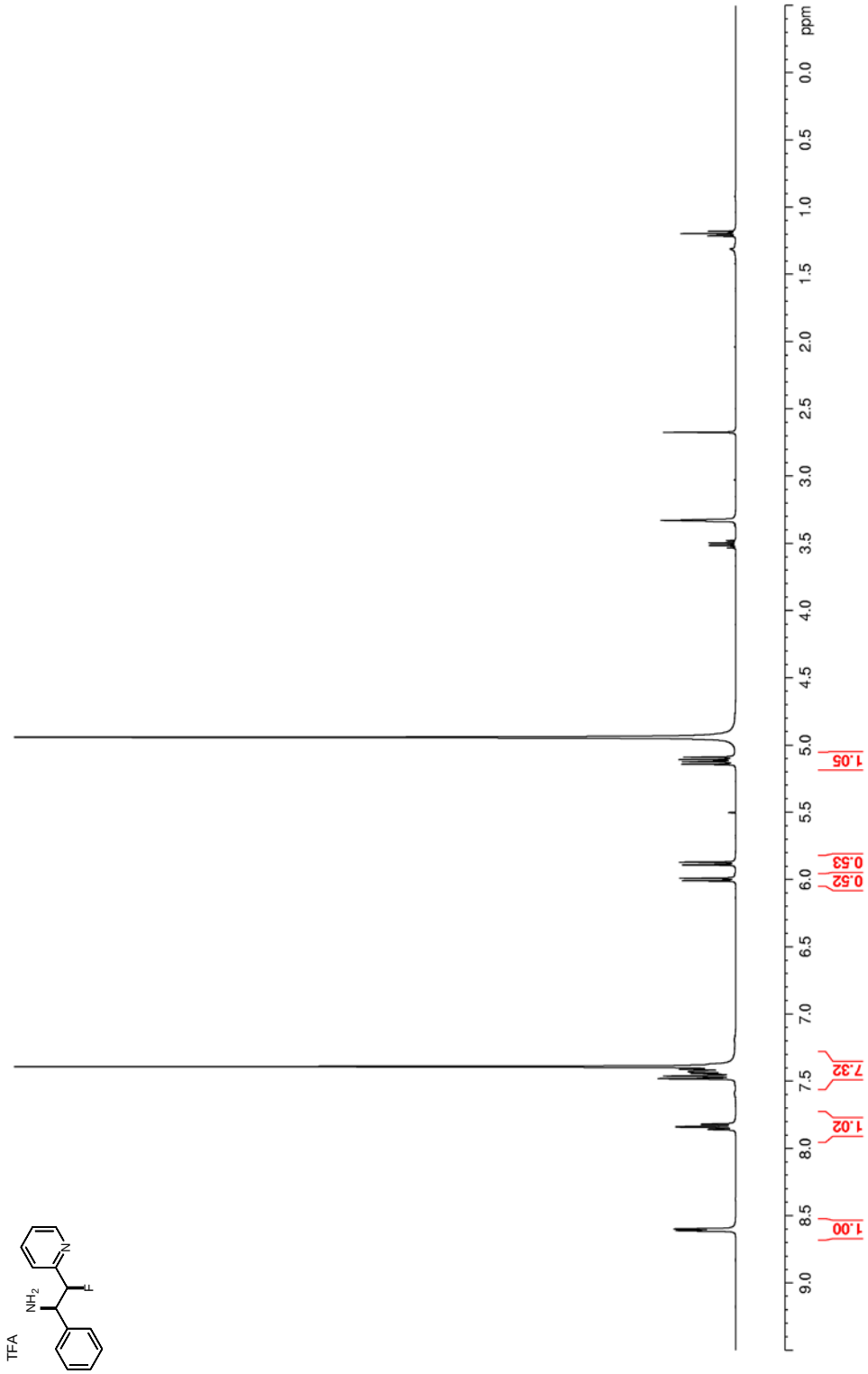


Figure 26. ^{13}C NMR/DEPT135 (150 MHz, MeOD) of *cis*-**8**

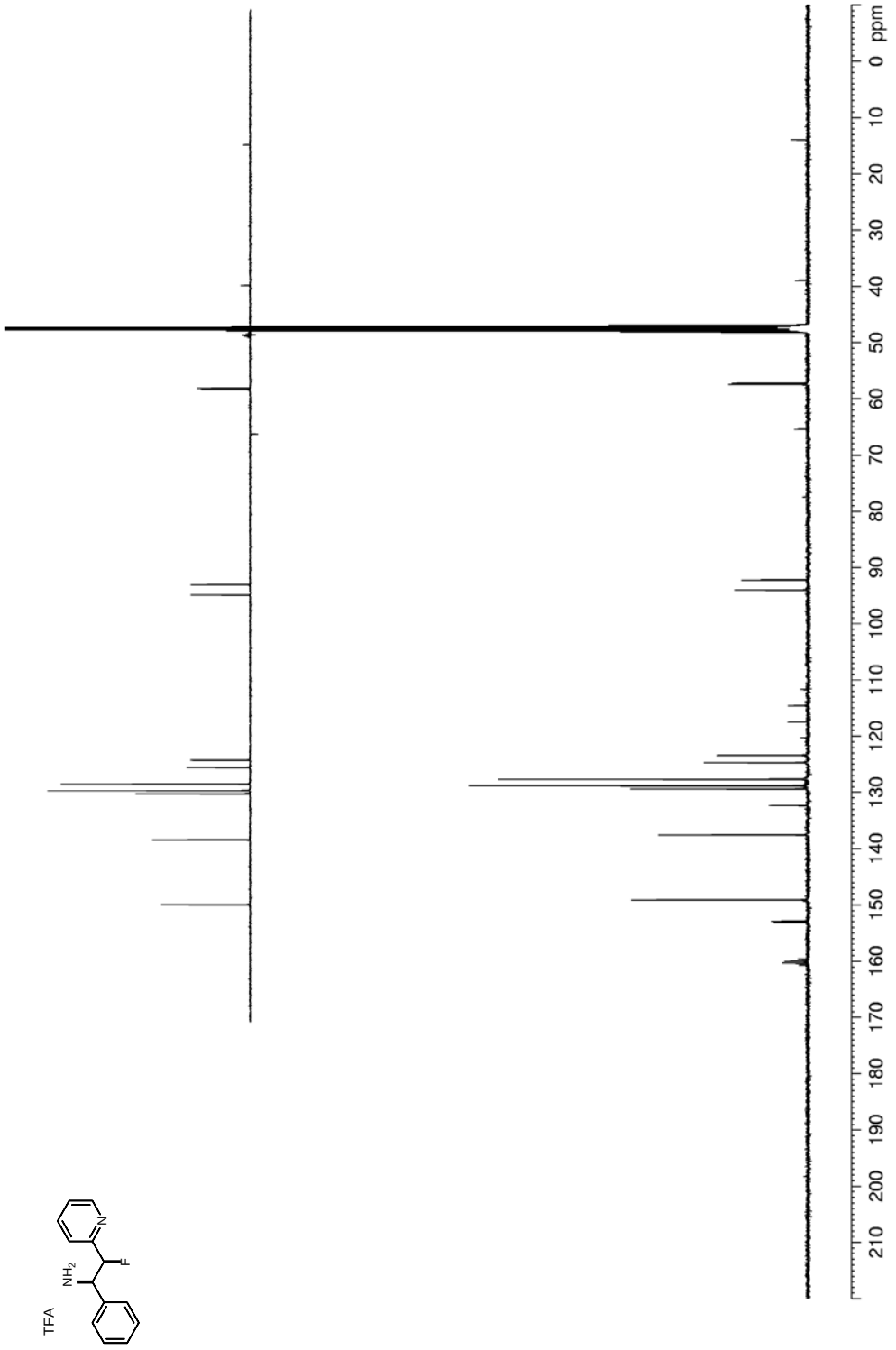


Figure 27. ^{1}H NMR (400 MHz, MeOD) of *trans*-**8**

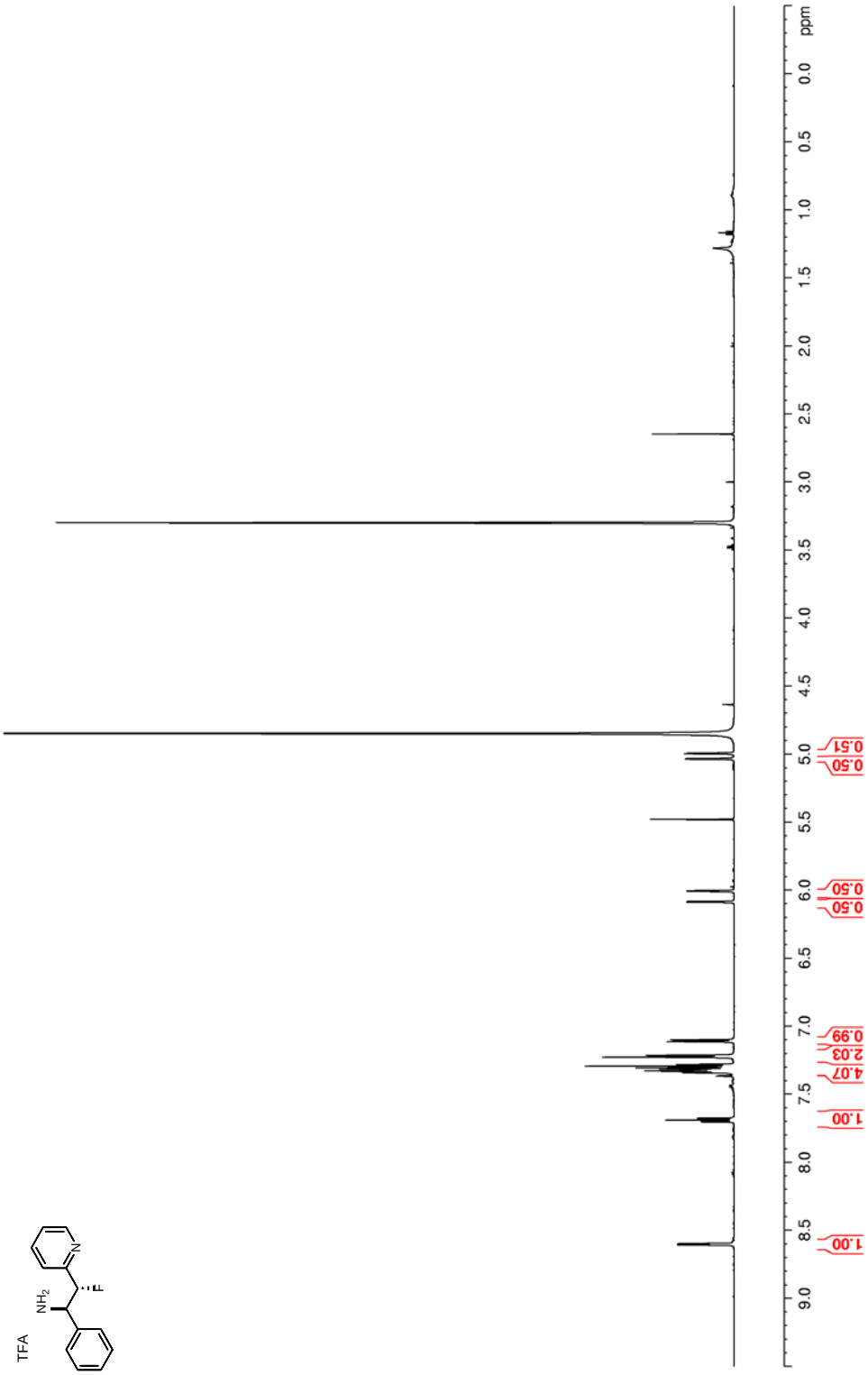


Figure 28. ^{13}C NMR/DEPT135 (100 MHz, MeOD) of *trans*-**8**

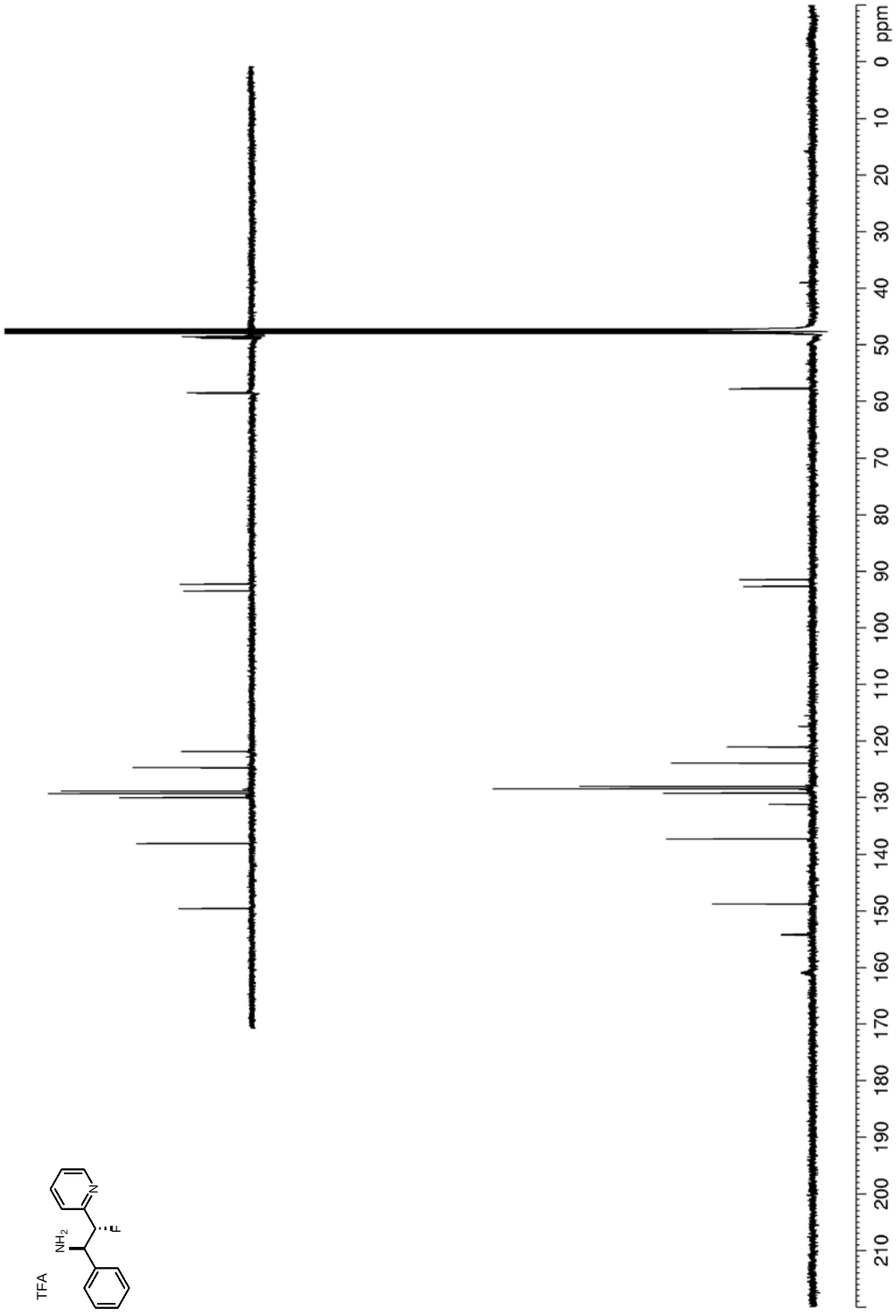


Figure 29. ^{1}H NMR (400 MHz, $CDCl_3$) of **9**

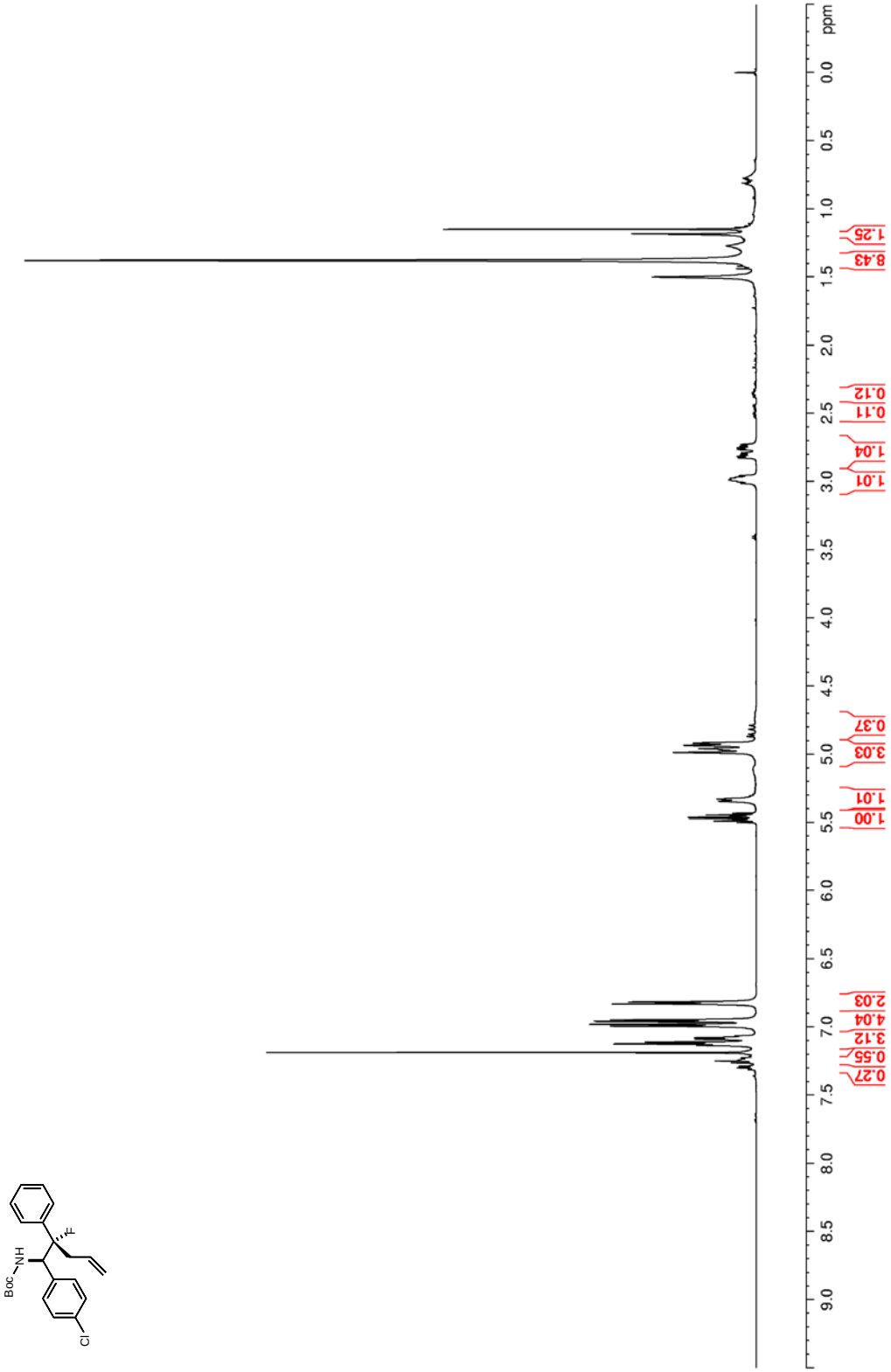


Figure 30. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of **9**

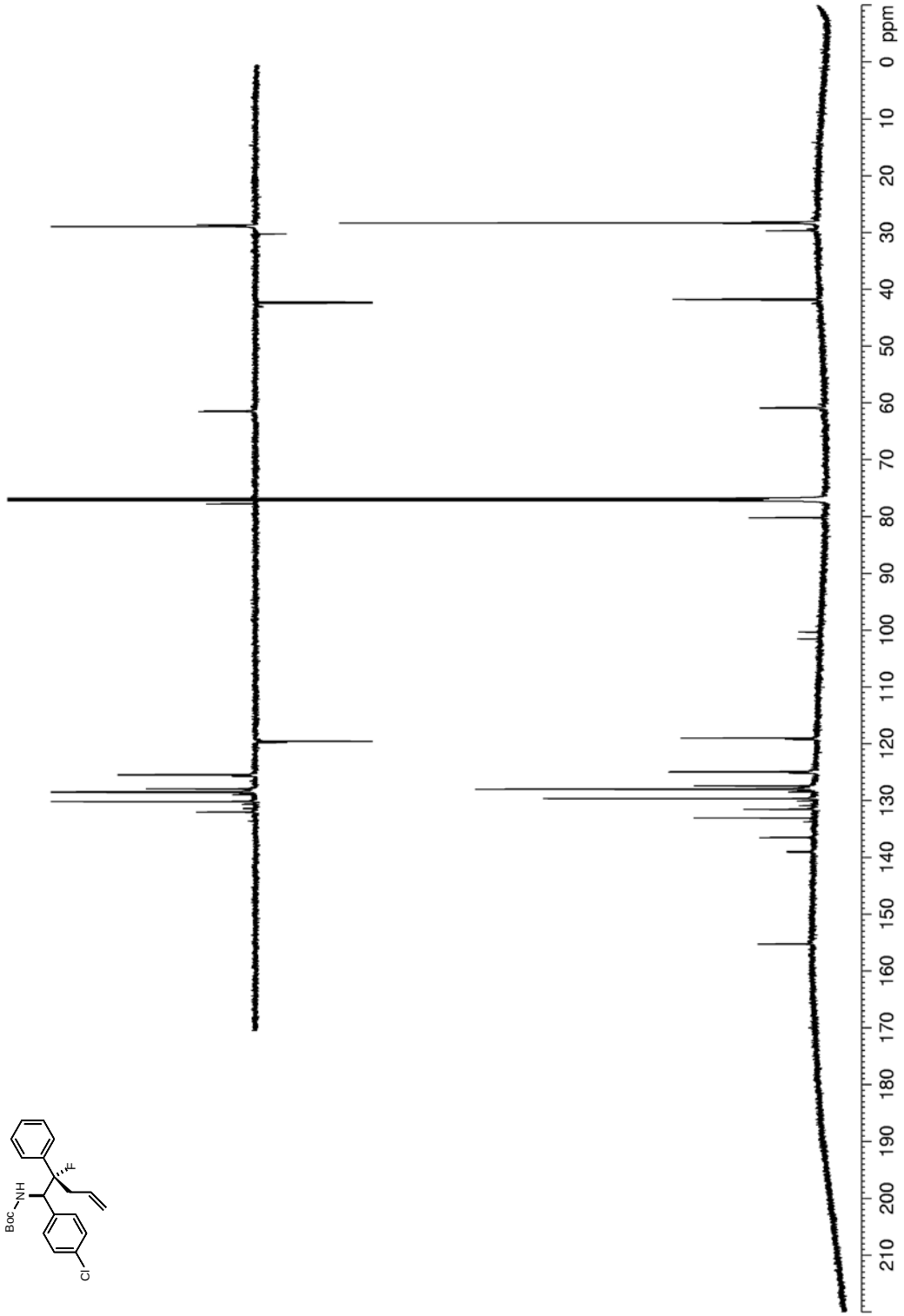


Figure 31. ^{1}H NMR (400 MHz, $CDCl_3$) of **10**

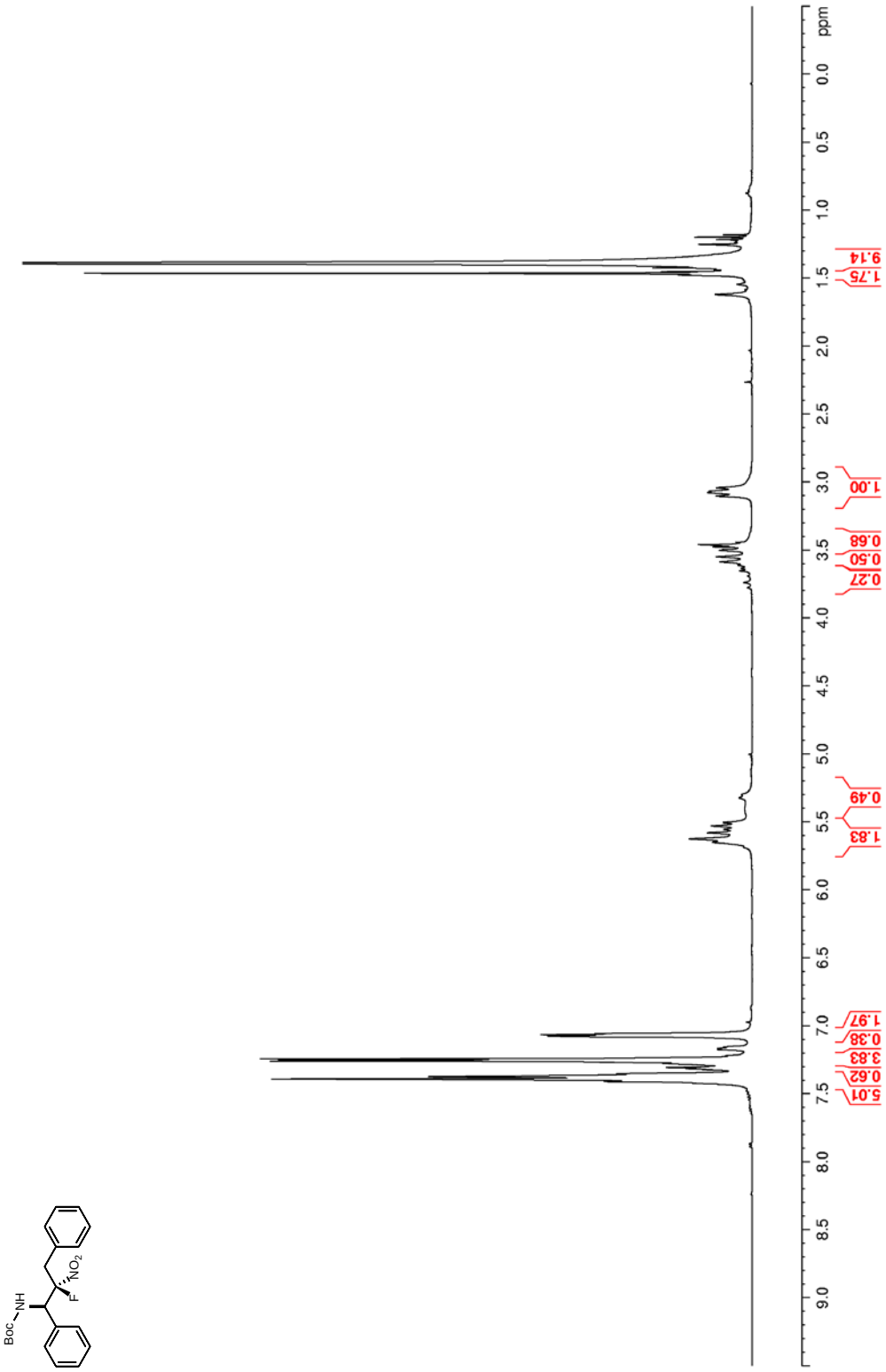


Figure 32. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of **10**

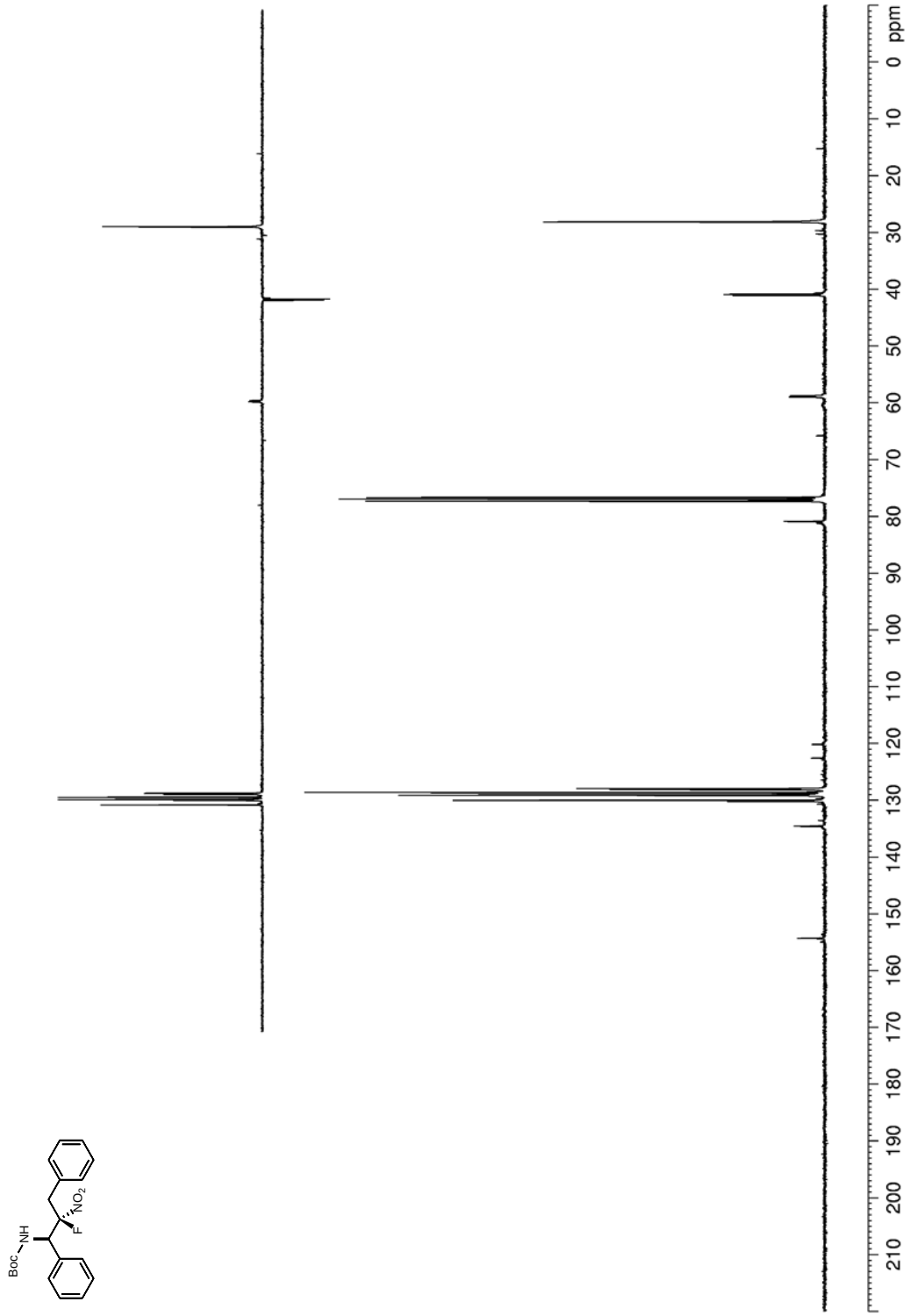


Figure 33. ^{1}H NMR (400 MHz, $CDCl_3$) of **11**

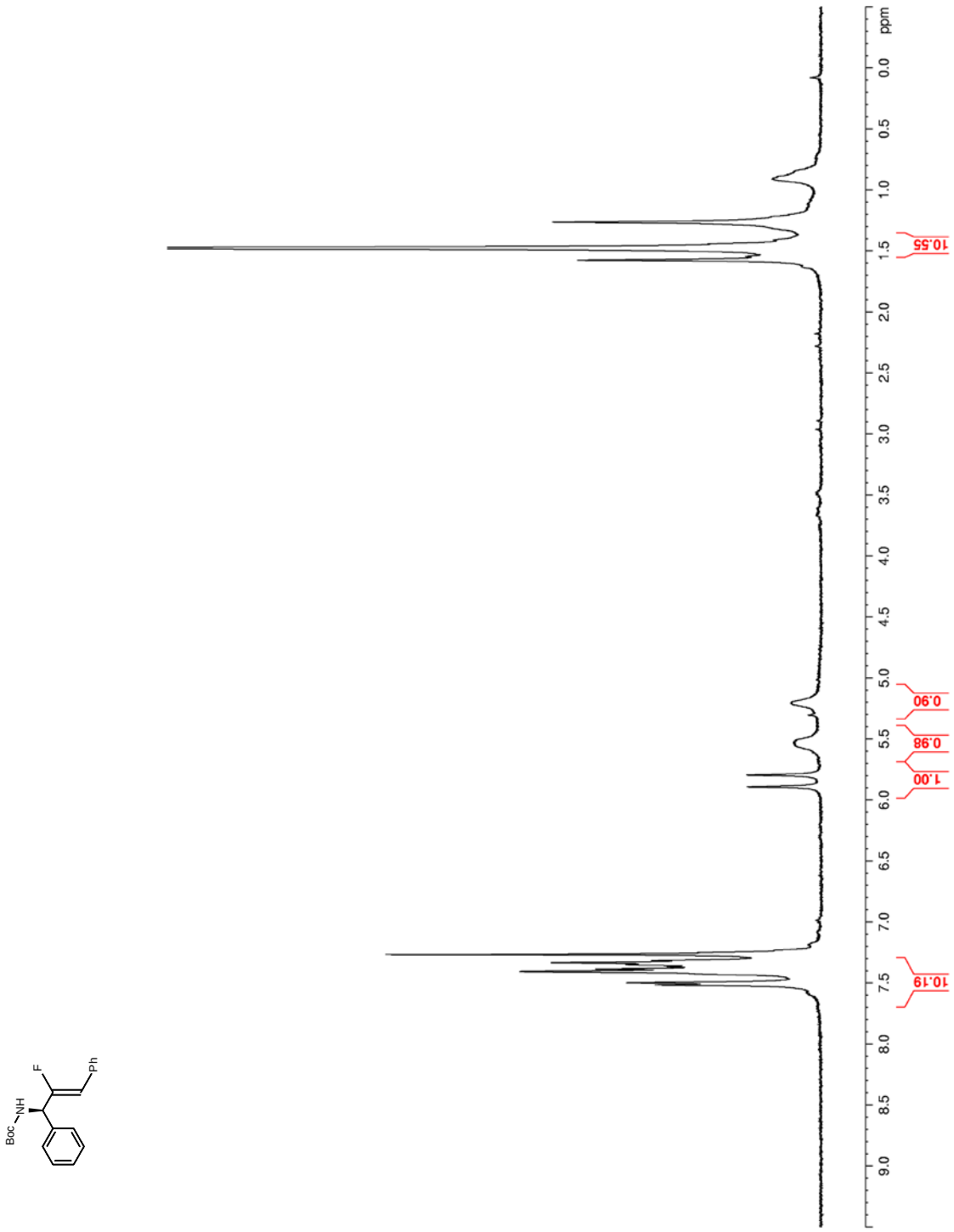


Figure 34. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of **11**

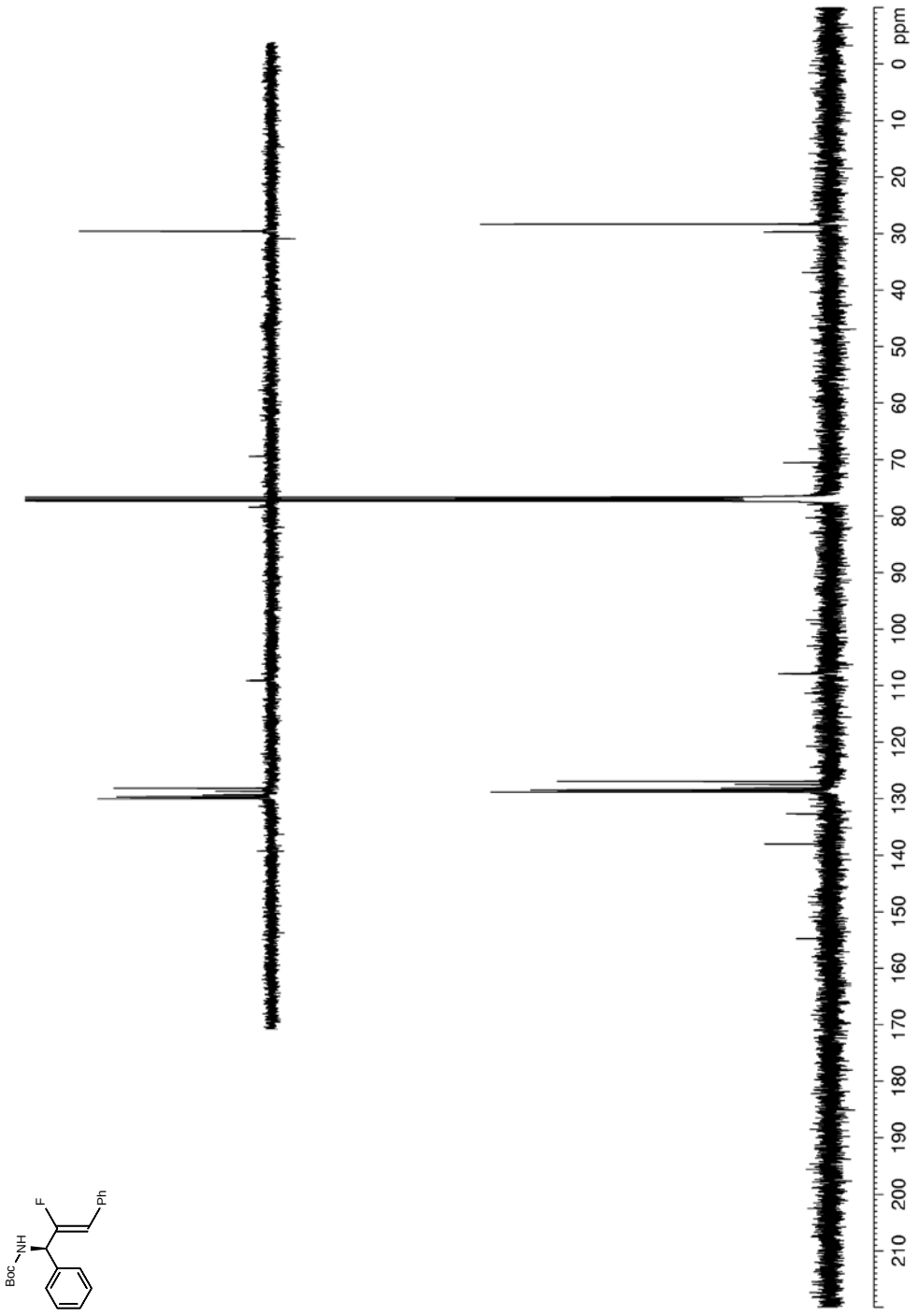


Figure 35. ^{1}H NMR (600 MHz, $CDCl_3$) of **S1**

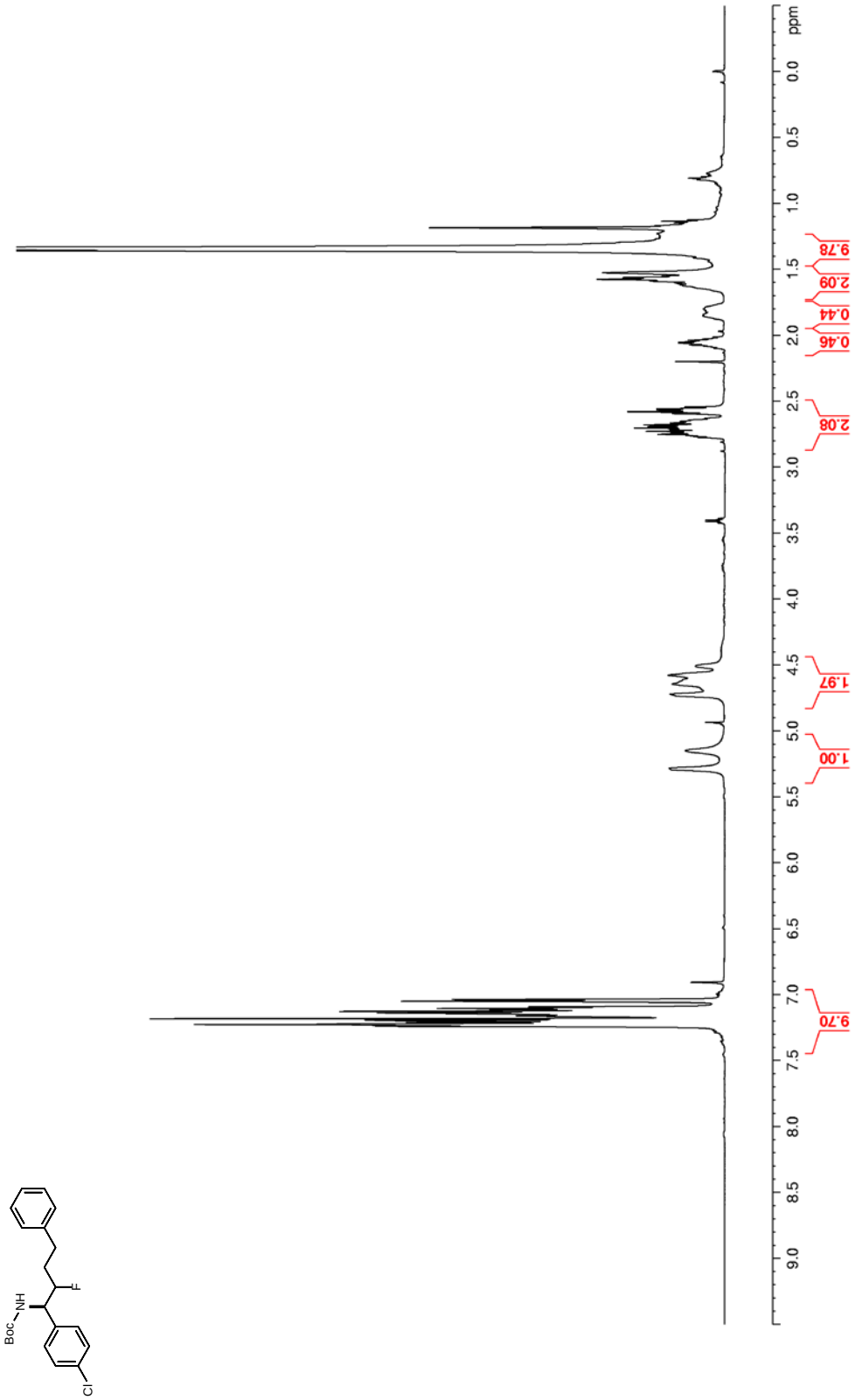


Figure 36. ^{13}C NMR/DEPT135 (150 MHz, $CDCl_3$) of **S1**

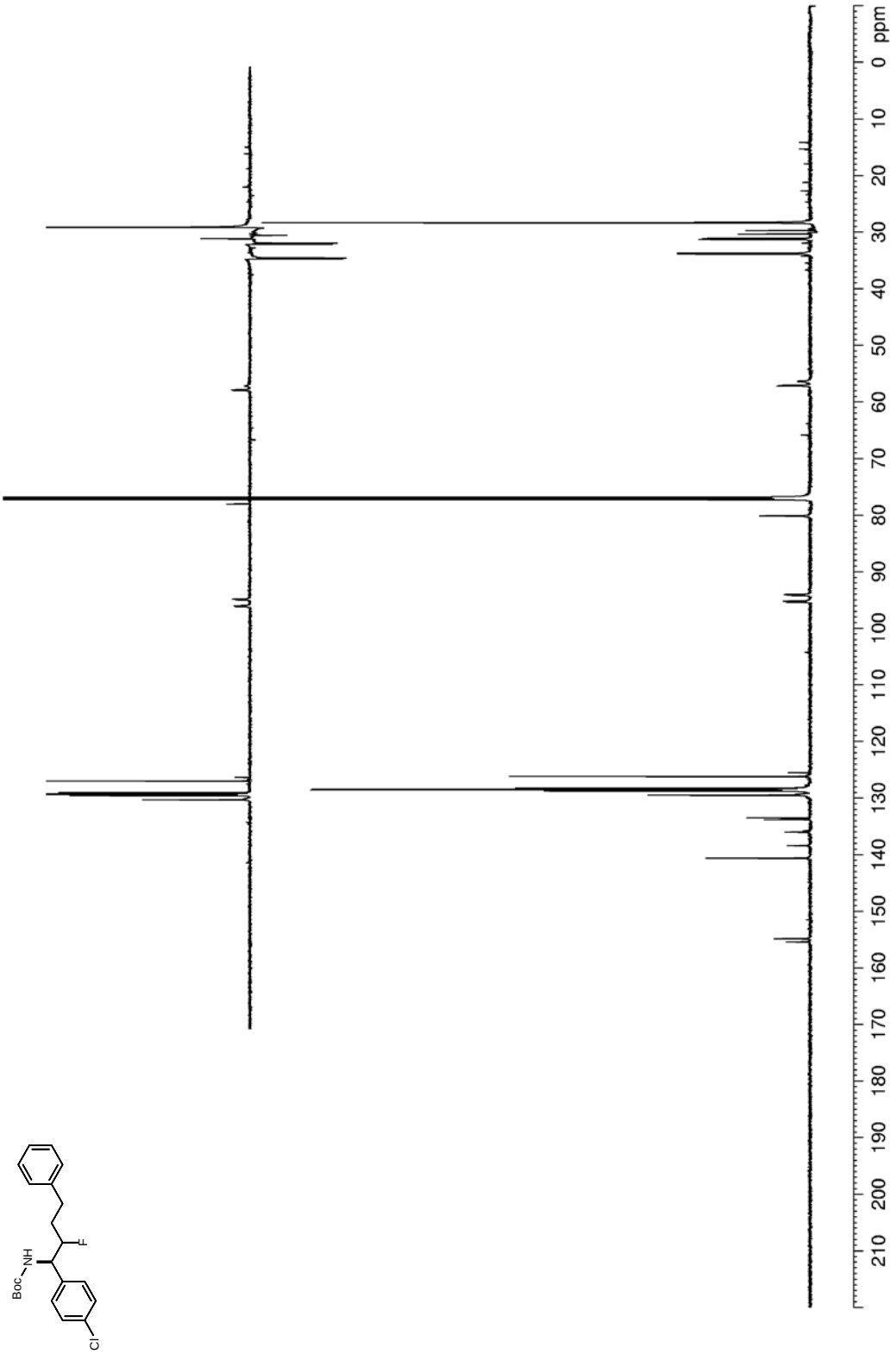


Figure 37. ^{1}H NMR (400 MHz, $CDCl_3$) of **S2**

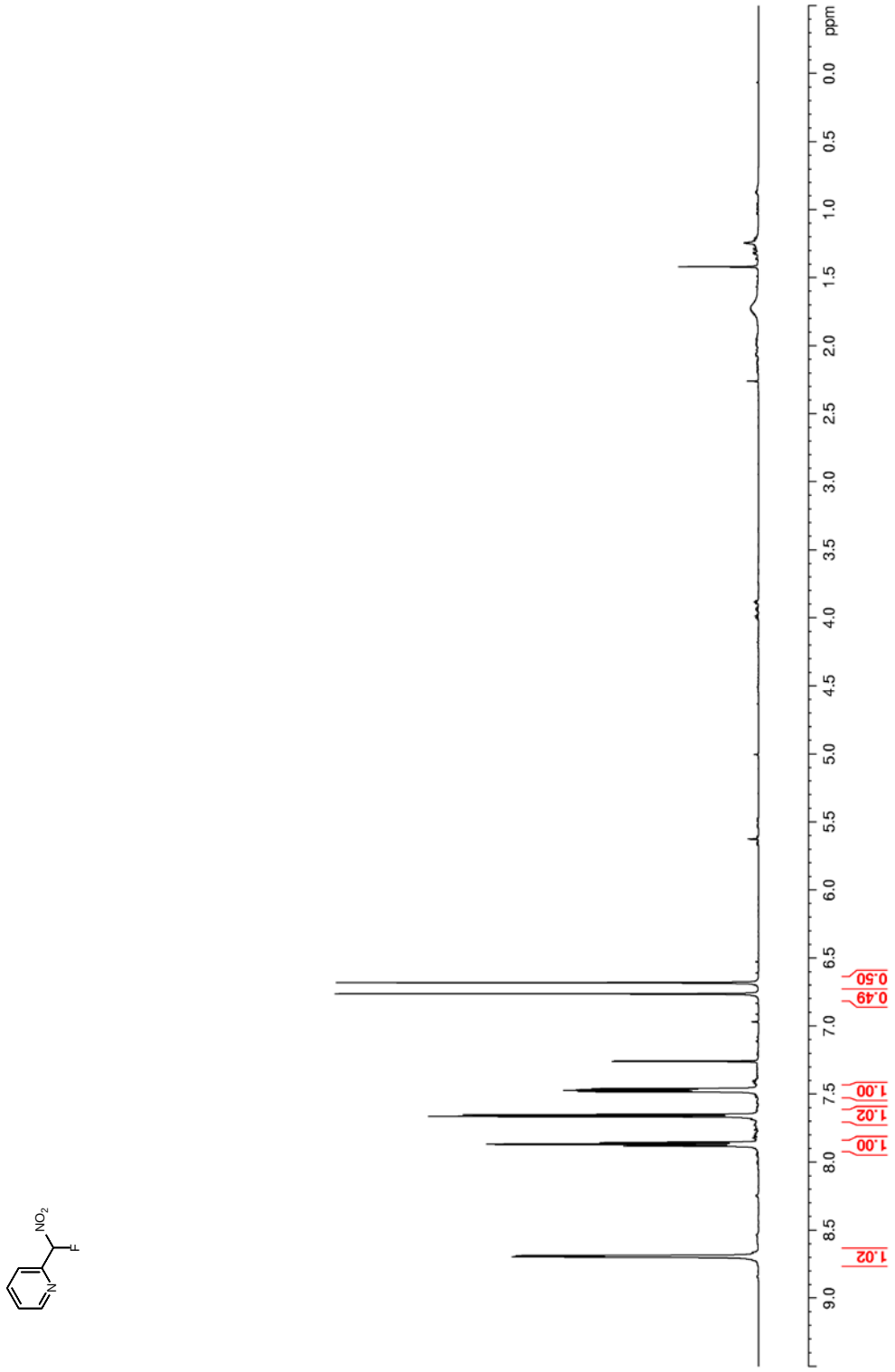


Figure 38. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of **S2**

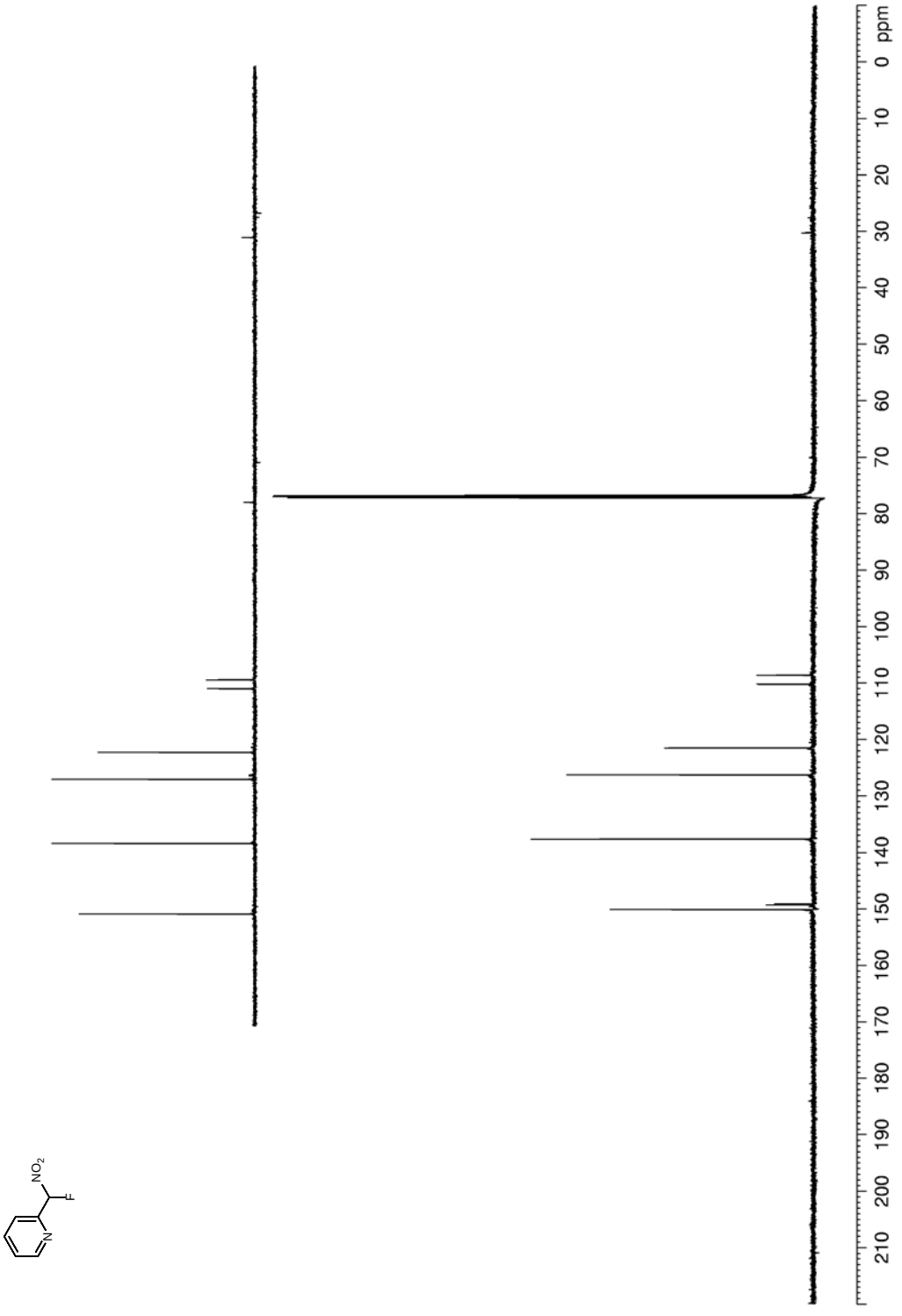


Figure 39. ^{1}H NMR (400 MHz, $CDCl_3$) of **S3**

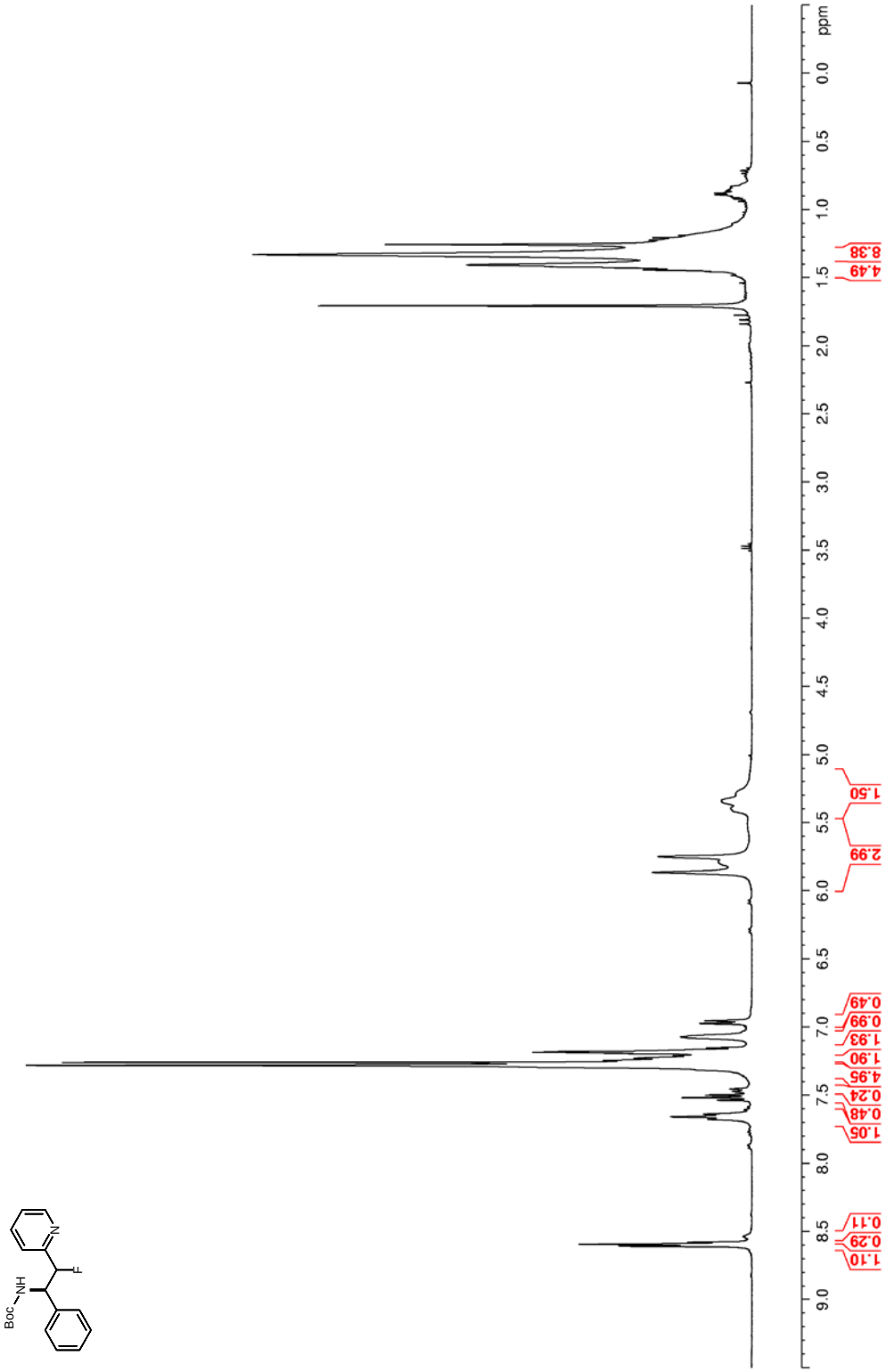


Figure 40. ^{13}C NMR/DEPT135 (100 MHz, $CDCl_3$) of **S3**

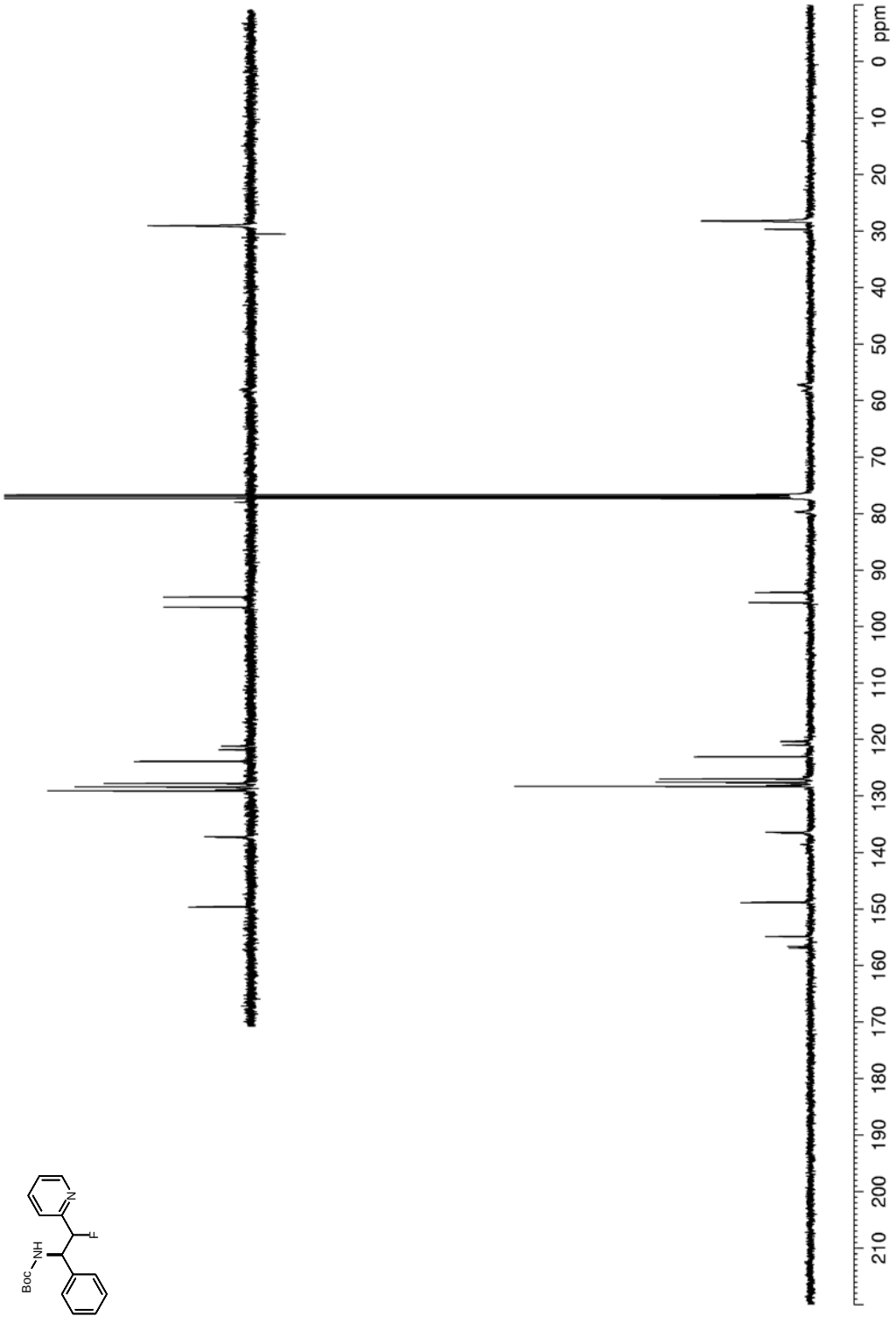


Figure 41. ^{1}H NMR (400 MHz, MeOD) of **S4**

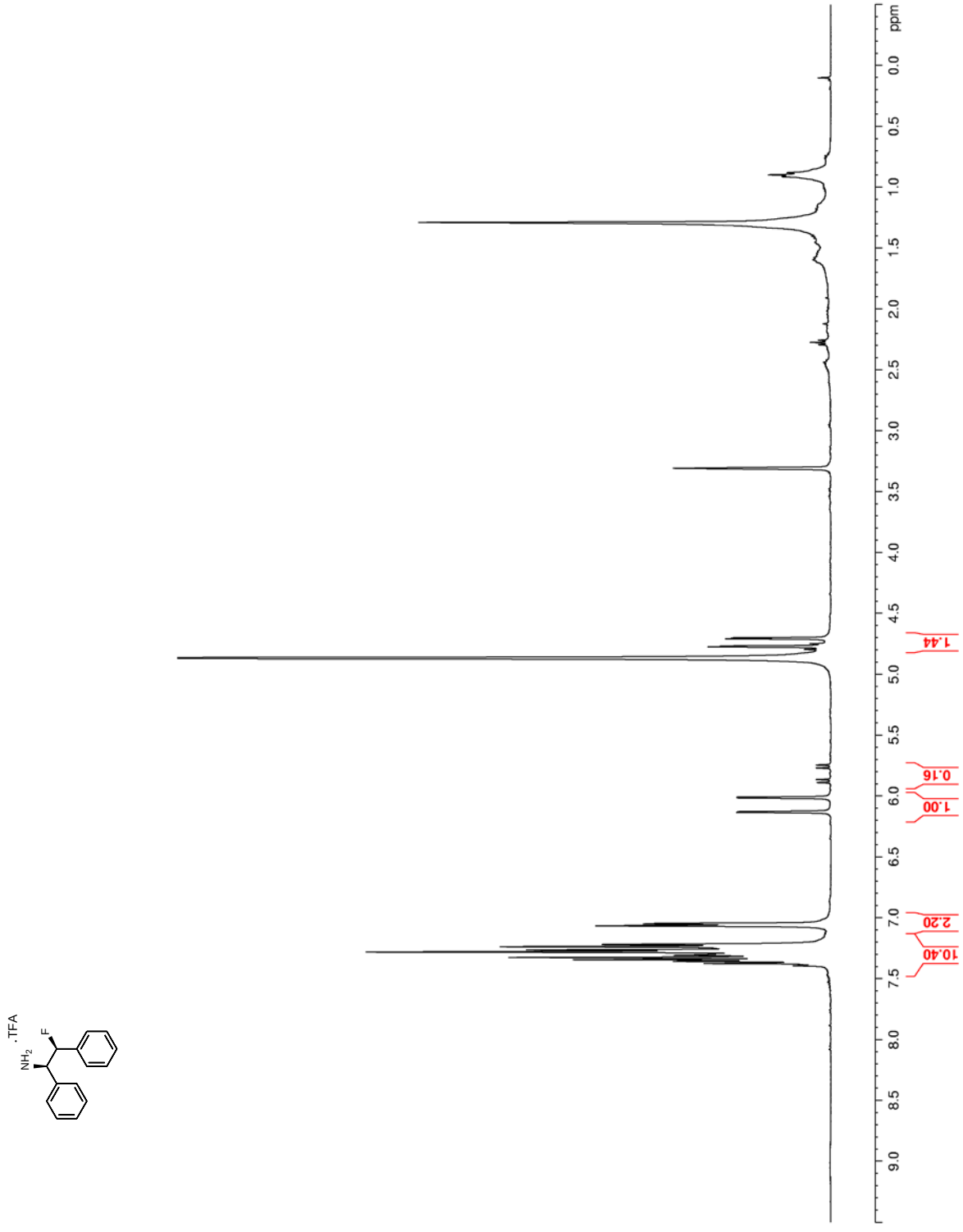


Figure 42. ^{13}C NMR/DEPT135 (100 MHz, MeOD) of **S4**

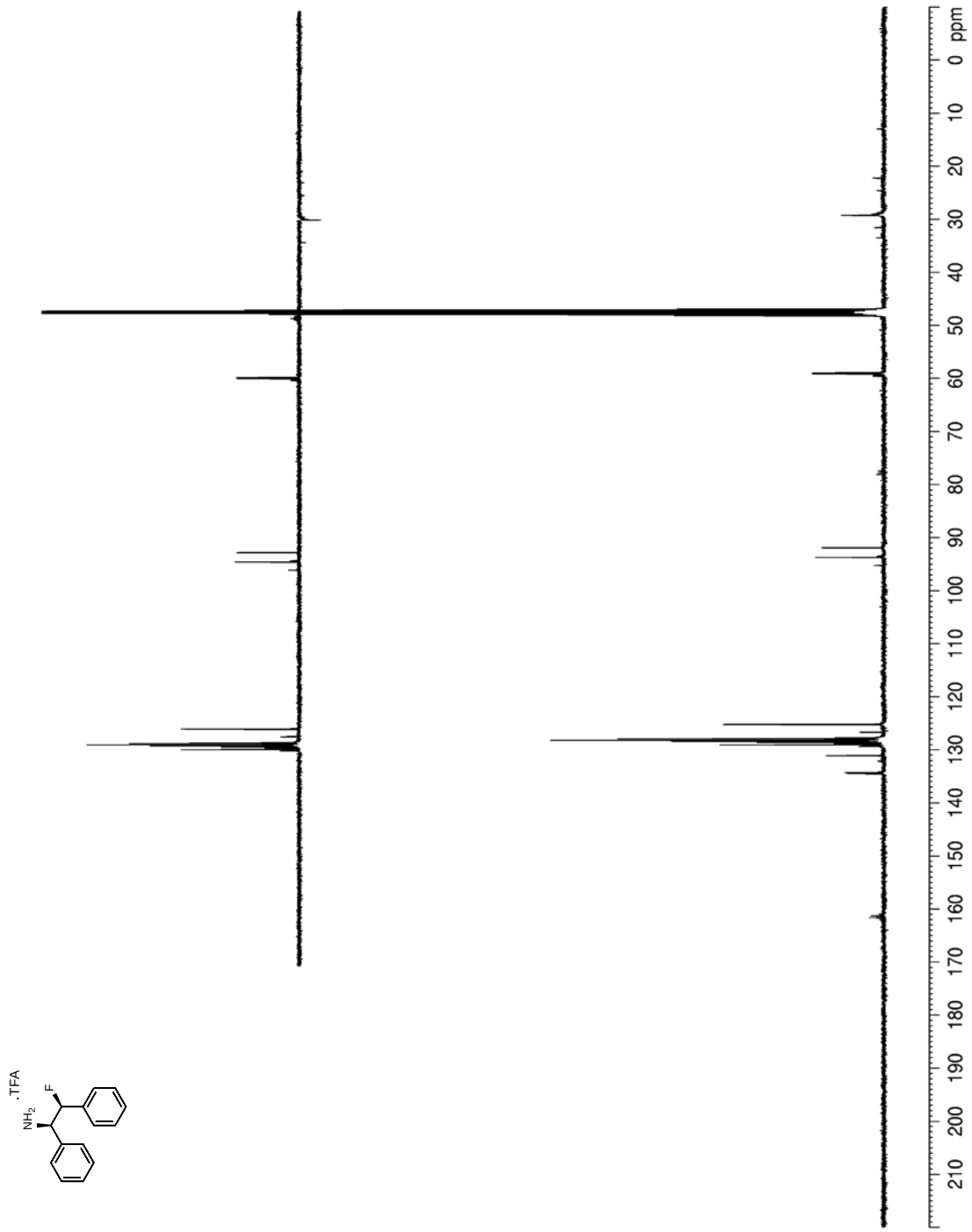
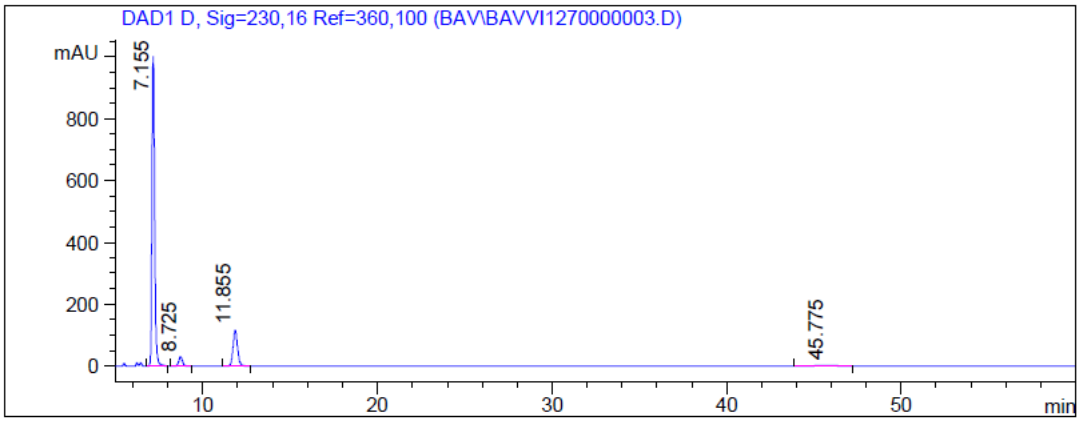
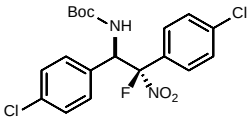


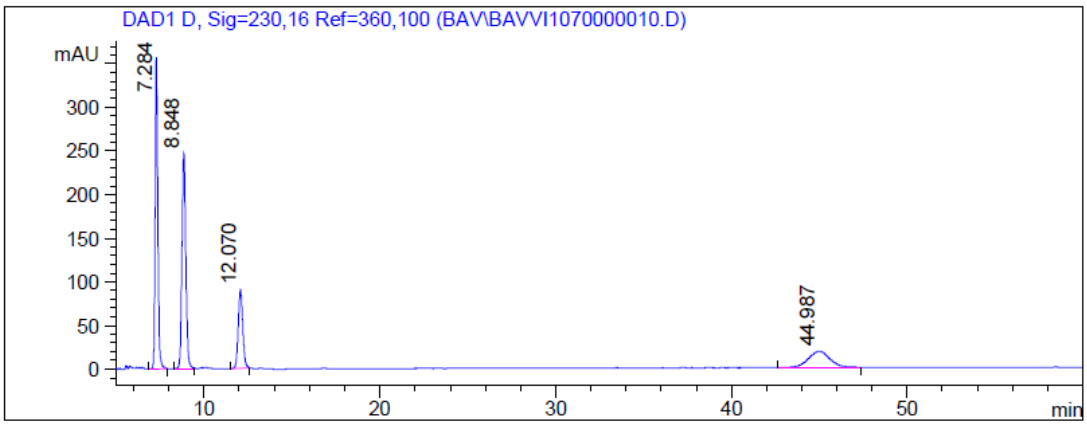
Figure 43. HPLC trace of **3.**





Signal 1: DAD1 D, Sig=230,16 Ref=360,100

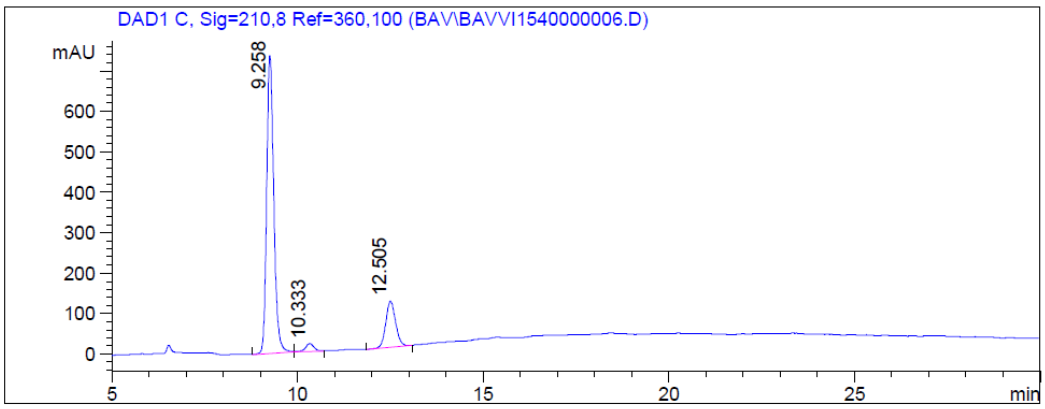
Peak #	RT [min]	Width [min]	Area	Area %
1	7.155	0.176	10599.966	79.39
2	8.725	0.252	454.341	3.40
3	11.855	0.298	2085.416	15.62
4	45.775	1.615	212.238	1.59

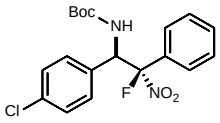


Signal 1: DAD1 D, Sig=230,16 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	7.284	0.174	3740.637	34.65
2	8.848	0.255	3772.445	34.94
3	12.070	0.295	1607.546	14.89
4	44.987	1.487	1676.373	15.53

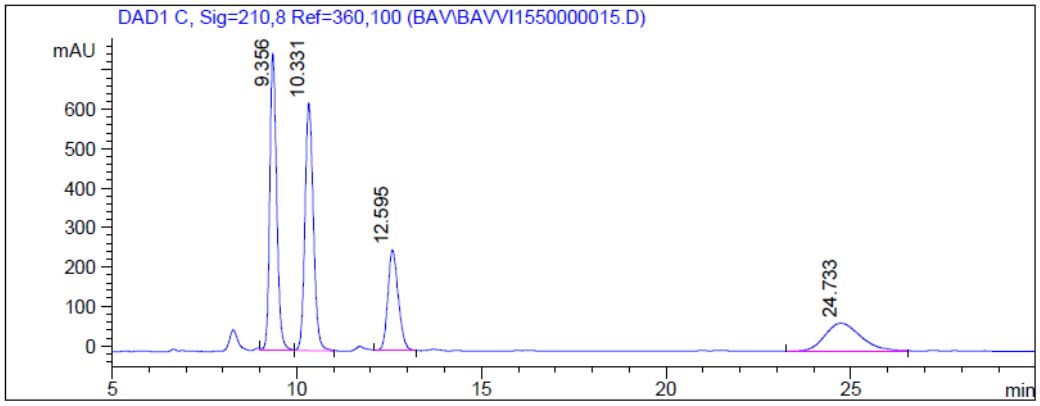
Figure 44. HPLC trace of **7a.**





Signal 1: DAD1 C, Sig=210,8 Ref=360,100

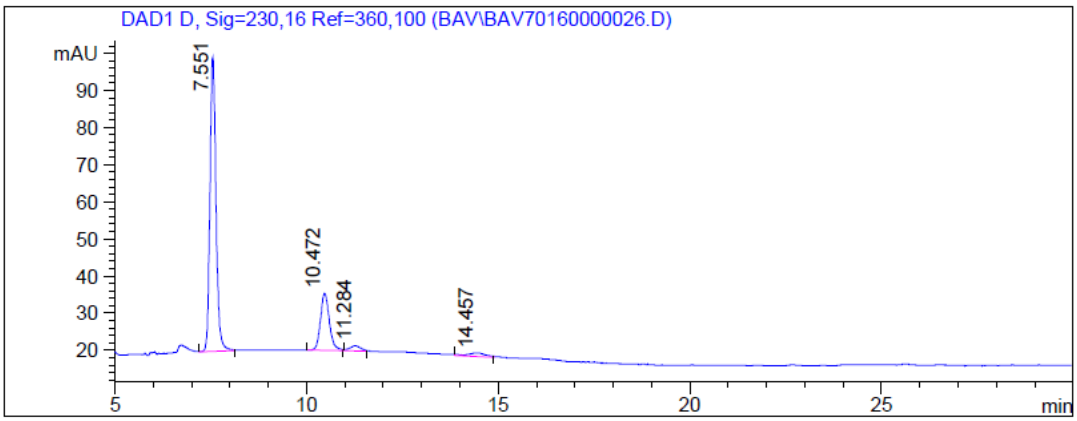
Peak #	RT [min]	Width [min]	Area	Area %
1	9.258	0.221	9778.399	80.29
2	10.333	0.259	297.102	2.44
3	12.505	0.307	2103.689	17.27

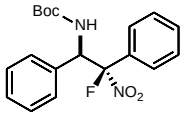


Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	9.356	0.216	9783.243	33.19
2	10.331	0.264	9932.305	33.69
3	12.595	0.329	5031.937	17.07
4	24.733	1.110	4731.183	16.05

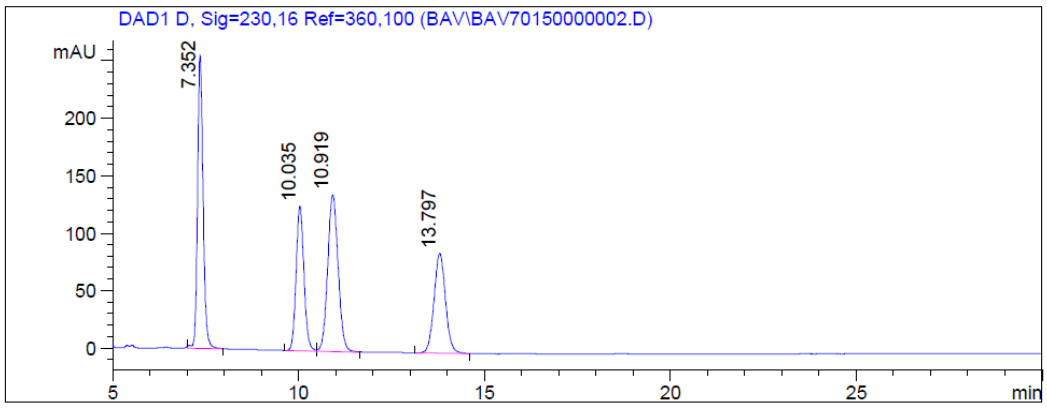
Figure 45. HPLC trace of **7b.**





Signal 1: DAD1 D, Sig=230,16 Ref=360,100

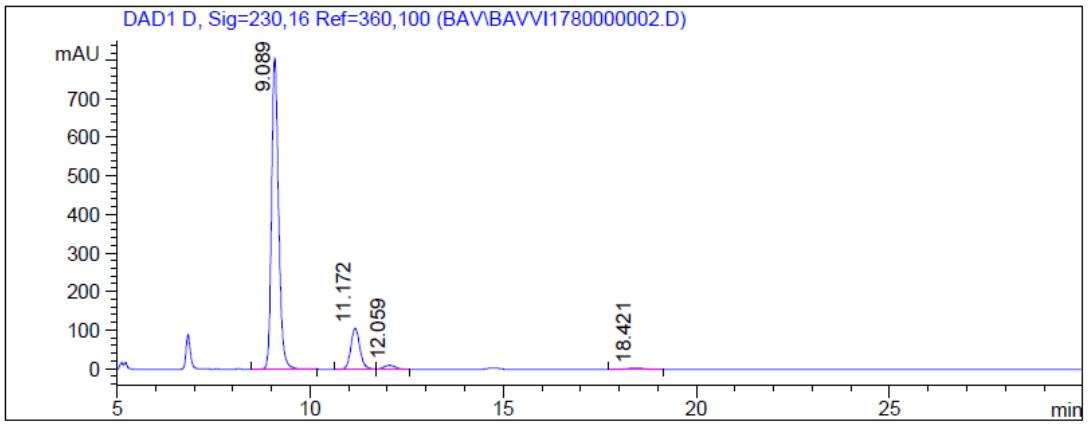
Peak #	RT [min]	Width [min]	Area	Area %
1	7.551	0.181	862.144	74.04
2	10.472	0.266	244.085	20.96
3	11.284	0.335	27.027	2.32
4	14.457	0.543	31.196	2.68

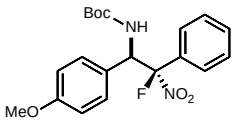


Signal 1: DAD1 D, Sig=230,16 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	7.352	0.173	2654.923	29.36
2	10.035	0.245	1855.349	20.52
3	10.919	0.326	2666.948	29.49
4	13.797	0.358	1865.698	20.63

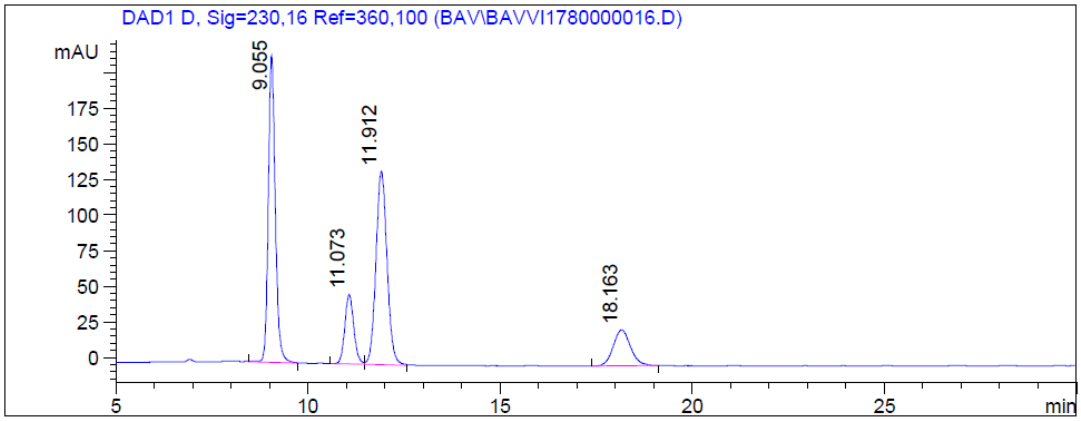
Figure 46. HPLC trace of **7c.**





Signal 1: DAD1 D, Sig=230,16 Ref=360,100

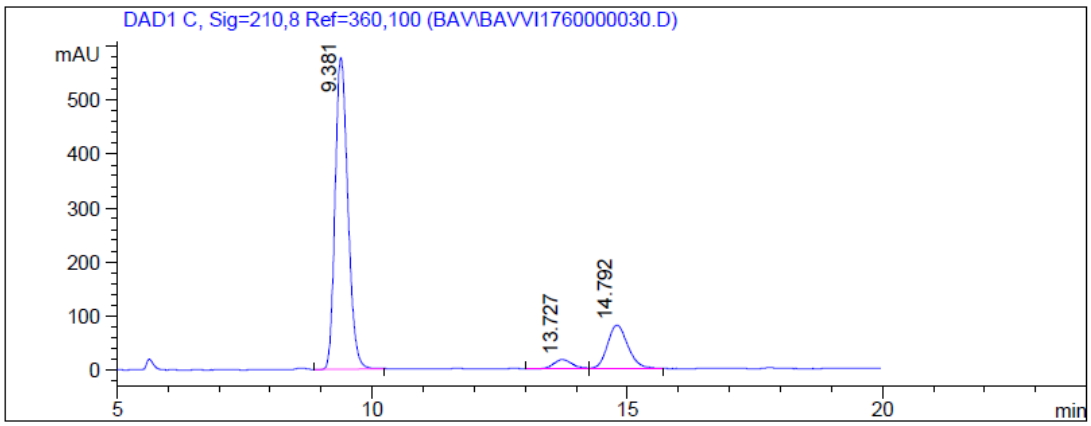
Peak #	RT [min]	Width [min]	Area	Area %
1	9.089	0.210	10206.280	82.98
2	11.172	0.272	1750.505	14.23
3	12.059	0.347	219.357	1.78
4	18.421	0.544	123.147	1.00

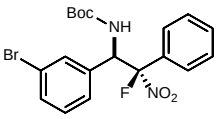


Signal 1: DAD1 D, Sig=230,16 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	9.055	0.210	2722.281	38.80
2	11.073	0.269	785.431	11.19
3	11.912	0.334	2723.632	38.82
4	18.163	0.520	784.835	11.19

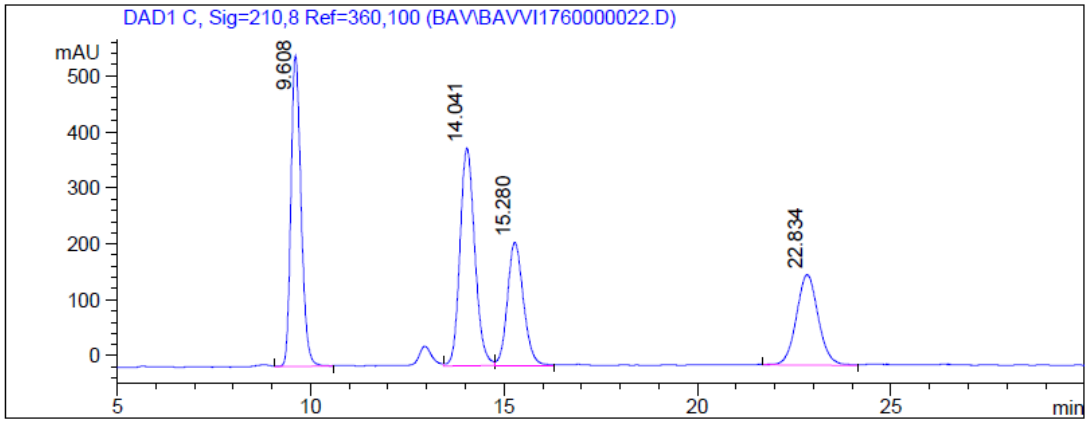
Figure 47. HPLC trace of **7d.**





Signal 1: DAD1 C, Sig=210,8 Ref=360,100

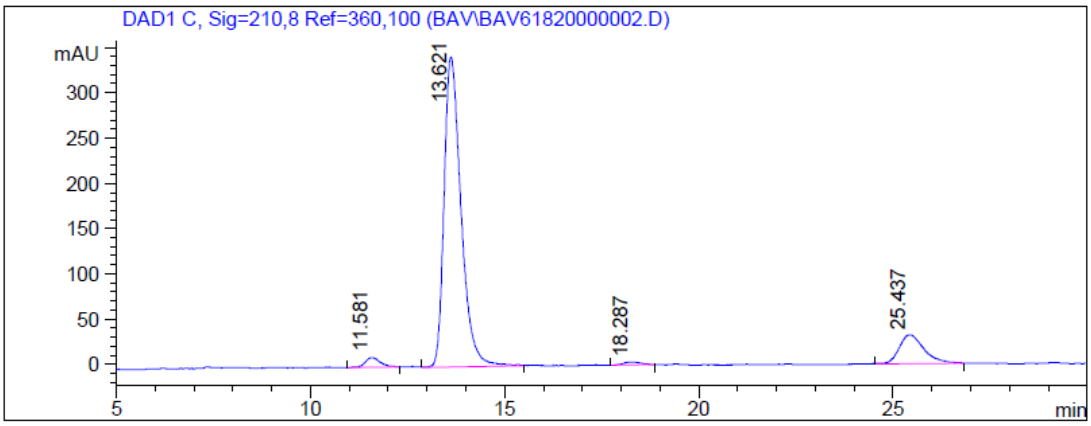
Peak #	RT [min]	Width [min]	Area	Area %
1	9.381	0.290	10049.248	79.12
2	13.727	0.419	415.758	3.27
3	14.792	0.462	2236.555	17.61

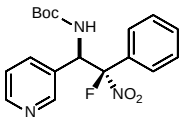


Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	9.608	0.304	10116.866	30.50
2	14.041	0.445	10369.546	31.27
3	15.280	0.479	6310.808	19.03
4	22.834	0.656	6368.974	19.20

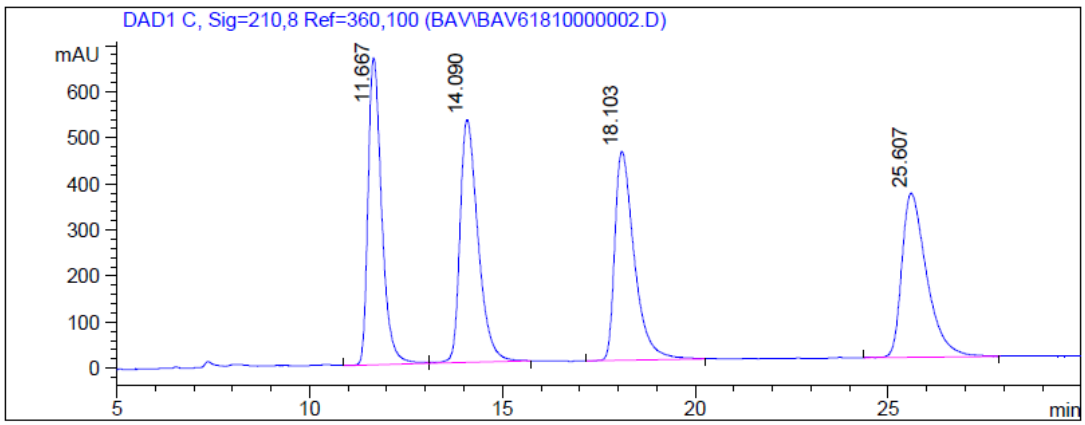
Figure 48. HPLC trace of **7e.**





Signal 1: DAD1 C, Sig=210,8 Ref=360,100

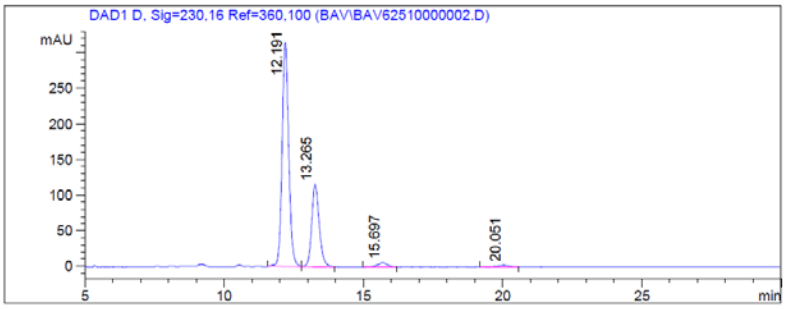
Peak #	RT [min]	Width [min]	Area	Area %
1	11.581	0.447	293.182	2.40
2	13.621	0.506	10395.784	85.16
3	18.287	0.532	114.923	0.94
4	25.437	0.735	1404.119	11.50

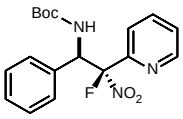


Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	11.667	0.409	16332.238	24.76
2	14.090	0.541	17089.305	25.90
3	18.103	0.587	15963.237	24.20
4	25.607	0.751	16014.698	24.27
5	44.855	0.242	572.871	0.87

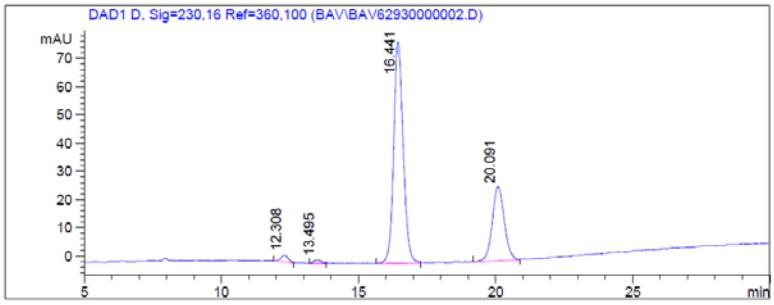
Figure 49. HPLC trace of **7f** + *ent*-**7f.**

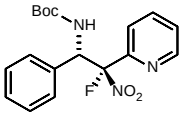




Signal 1: DAD1 D, Sig=230,16 Ref=360,100

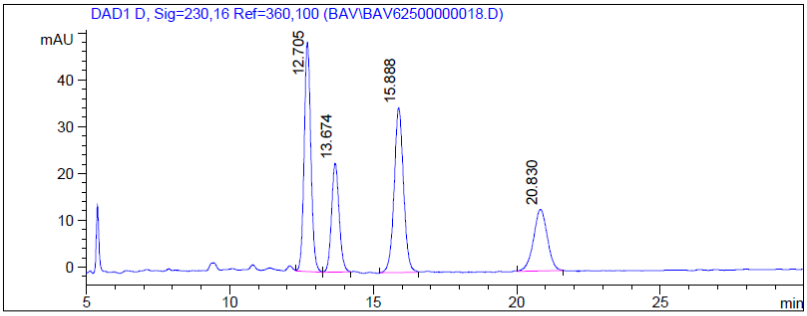
Peak #	RT [min]	Width [min]	Area	Area %
1	12.191	0.274	5165.790	68.55
2	13.265	0.312	2151.945	28.56
3	15.697	0.442	146.380	1.94
4	20.051	0.576	71.575	0.95





Signal 1: DAD1 D, Sig=230,16 Ref=360,100

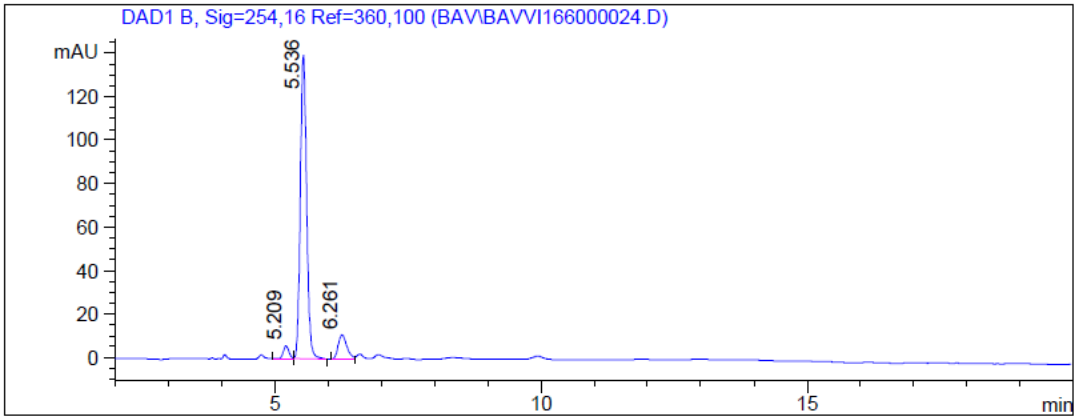
Peak #	RT [min]	Width [min]	Area	Area %
1	12.308	0.298	42.326	1.54
2	13.495	0.328	25.096	0.91
3	16.441	0.399	1879.701	68.39
4	20.091	0.509	801.416	29.16

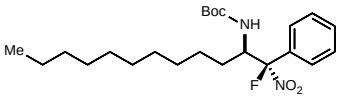


Signal 1: DAD1 D, Sig=230,16 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	12.705	0.269	790.160	32.13
2	13.674	0.308	430.599	17.51
3	15.888	0.379	799.429	32.51
4	20.830	0.555	439.100	17.85

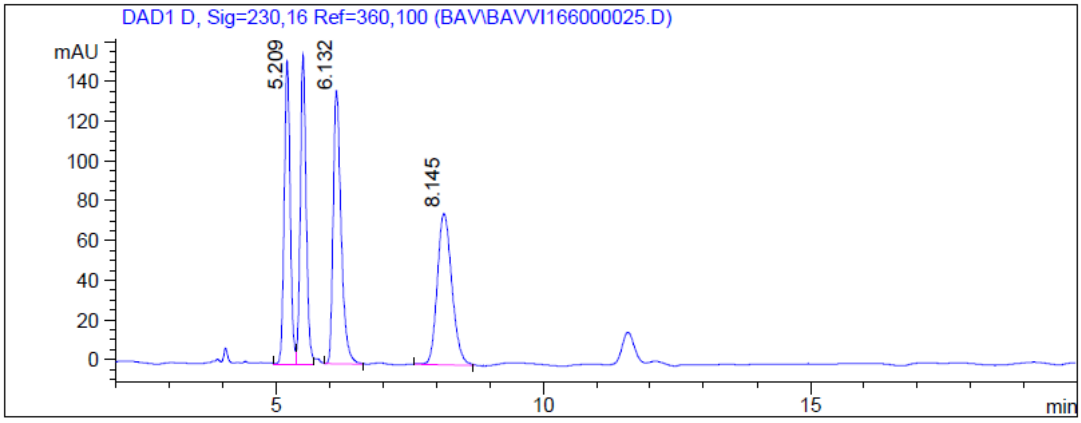
Figure 50. HPLC trace of **7g.**





Signal 1: DAD1 B, Sig=254,16 Ref=360,100

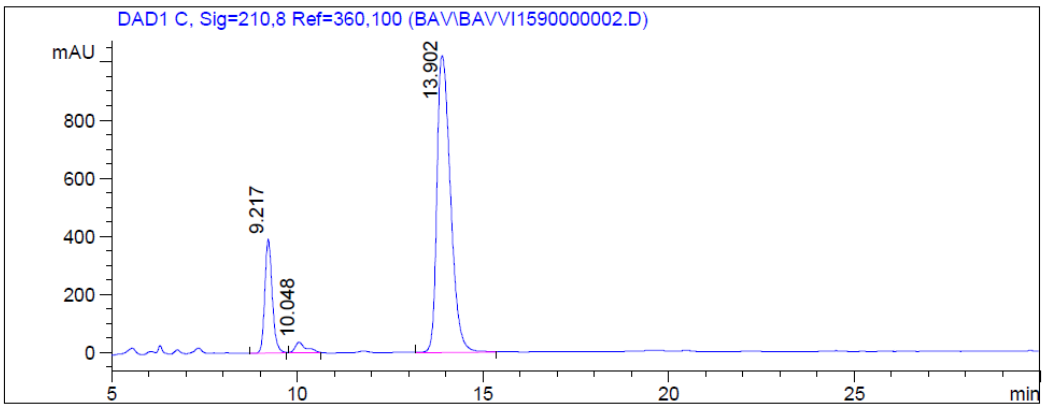
Peak #	RT [min]	Width [min]	Area	Area %
1	5.209	0.122	43.786	3.28
2	5.536	0.138	1157.429	86.69
3	6.261	0.195	133.858	10.03

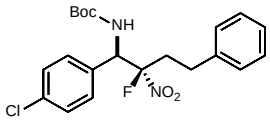


Signal 1: DAD1 D, Sig=230,16 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	5.209	0.128	1174.427	22.45
2	5.508	0.127	1185.151	22.66
3	6.132	0.172	1421.073	27.17
4	8.145	0.317	1450.498	27.73

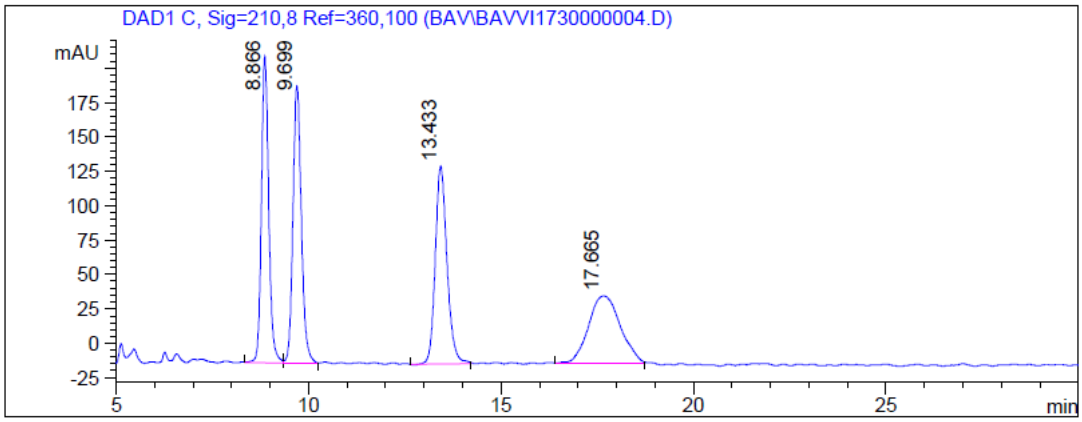
Figure 51. HPLC trace of **7h.**





Signal 1: DAD1 C, Sig=210,8 Ref=360,100

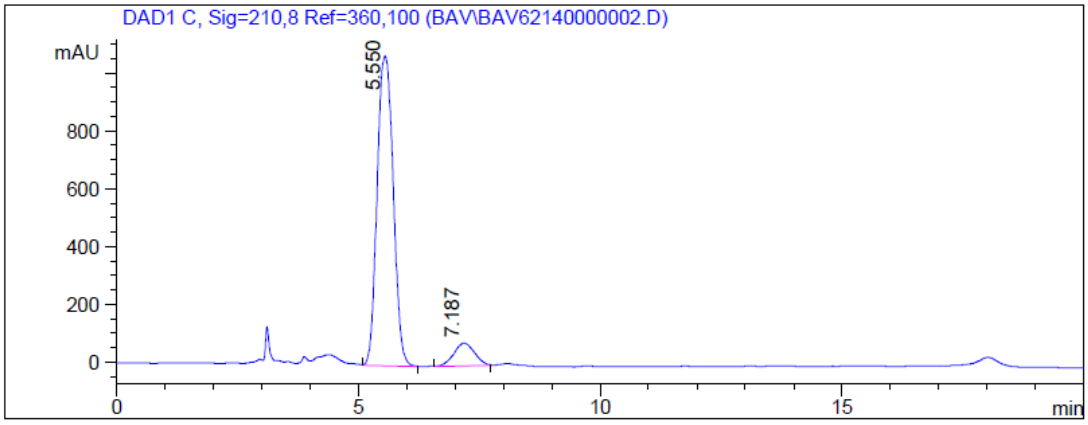
Peak #	RT [min]	Width [min]	Area	Area %
1	9.217	0.231	5444.865	16.85
2	10.048	0.365	807.436	2.50
3	13.902	0.424	26055.645	80.65

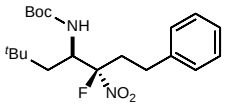


Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	8.866	0.219	2924.311	24.68
2	9.699	0.253	3063.250	25.85
3	13.433	0.356	3067.807	25.89
4	17.665	0.952	2792.467	23.57

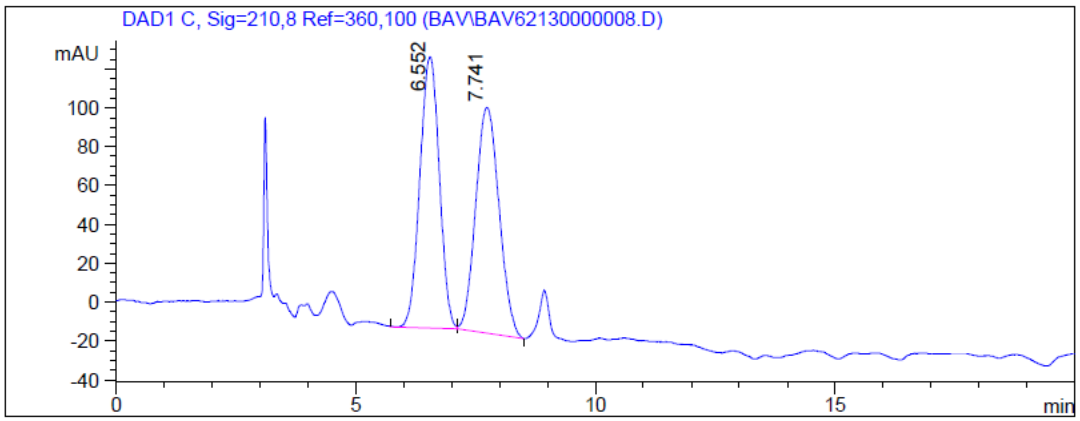
Figure 52. HPLC trace of **7i.**





Signal 1: DAD1 C, Sig=210,8 Ref=360,100

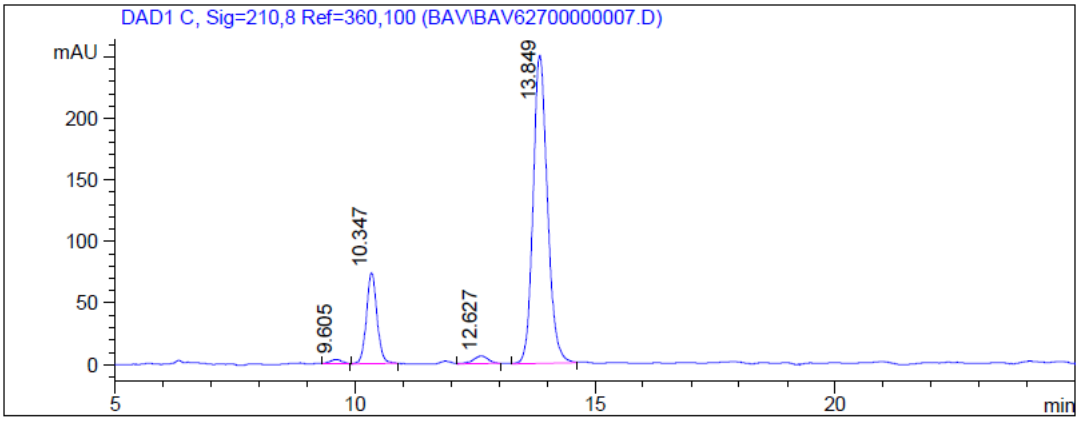
Peak #	RT [min]	Width [min]	Area	Area %
1	5.550	0.385	24709.771	91.41
2	7.187	0.497	2322.444	8.59

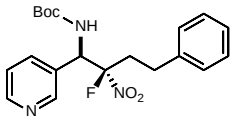


Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	6.552	0.470	3938.330	49.98
2	7.741	0.565	3941.525	50.02

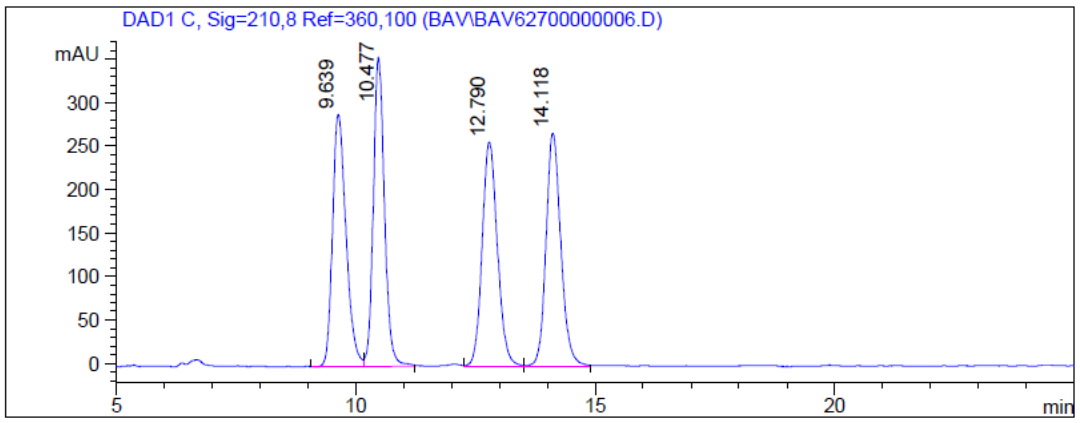
Figure 53. HPLC trace of **7j.**





Signal 1: DAD1 C, Sig=210,8 Ref=360,100

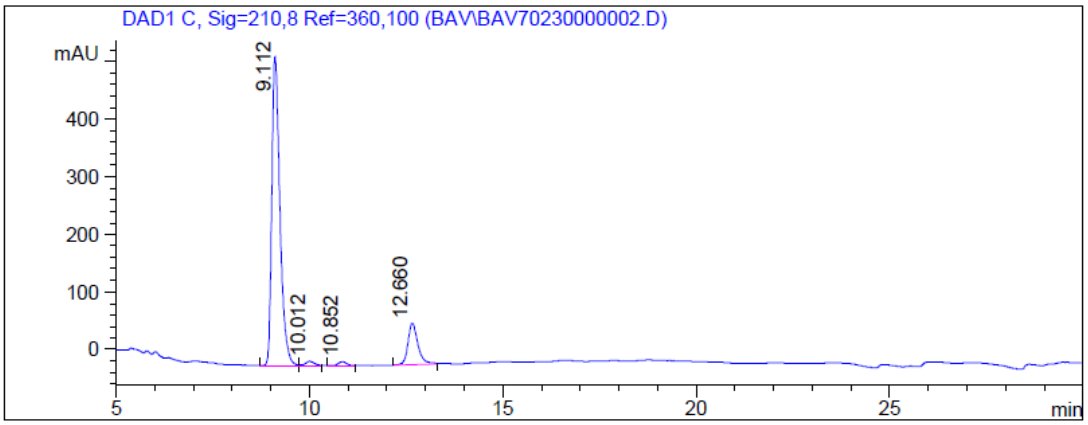
Peak #	RT [min]	Width [min]	Area	Area %
1	9.605	0.292	61.668	0.94
2	10.347	0.256	1132.465	17.35
3	12.627	0.362	133.279	2.04
4	13.849	0.346	5199.589	79.66

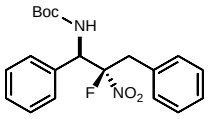


Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	9.639	0.328	5701.634	24.93
2	10.477	0.269	5739.758	25.10
3	12.790	0.368	5685.617	24.86
4	14.118	0.358	5739.110	25.10

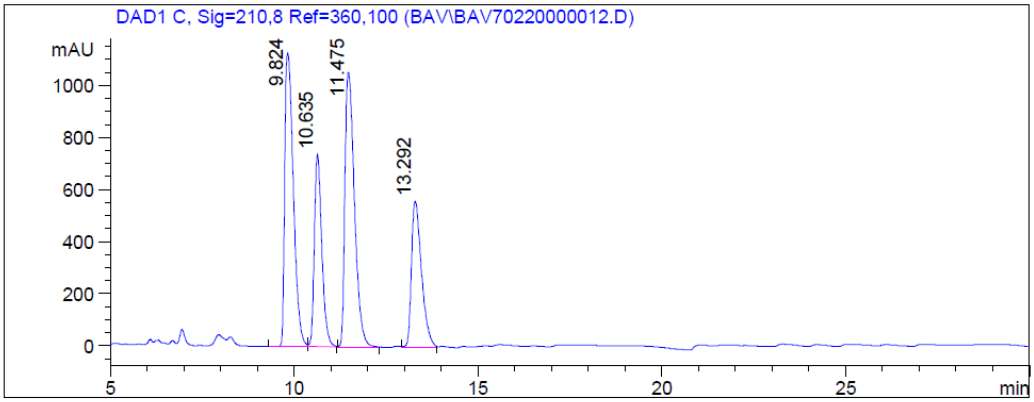
Figure 54. HPLC trace of **10.**





Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	9.112	0.243	7845.124	83.38
2	10.012	0.287	144.605	1.54
3	10.852	0.281	118.508	1.26
4	12.660	0.301	1300.506	13.82



Signal 1: DAD1 C, Sig=210,8 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	9.824	0.271	18351.621	31.46
2	10.635	0.235	10425.837	17.88
3	11.475	0.300	18996.447	32.57
4	13.292	0.314	10550.926	18.09