

## **T3P-Promoted Synthesis of a Series of 2-Aryl-3-phenyl-2,3-dihydro-4*H*-pyrido[3,2-*e*][1,3]thiazin-4-ones and Their Activity Against the Kinetoplastid Parasite *Trypanosoma brucei***

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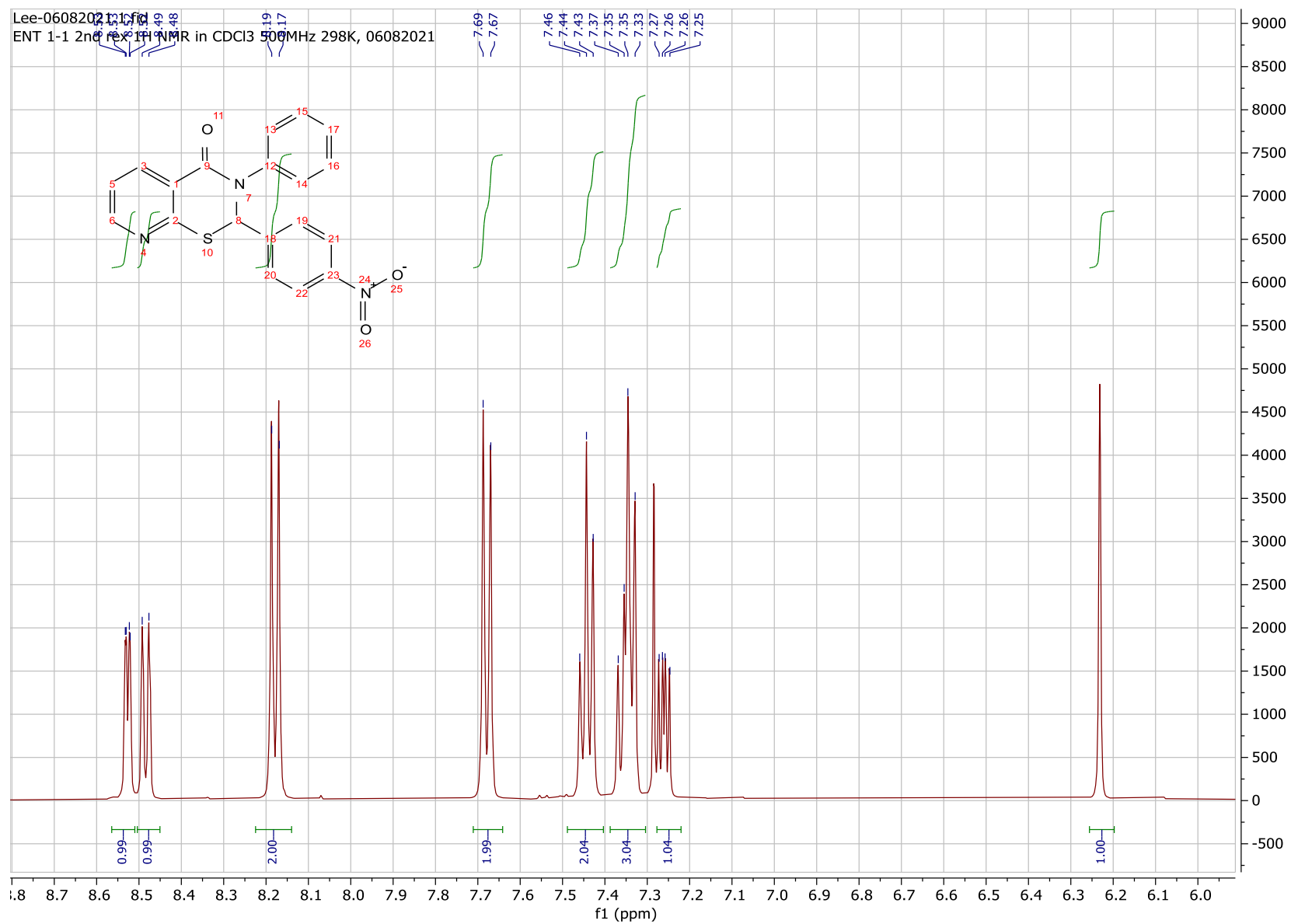
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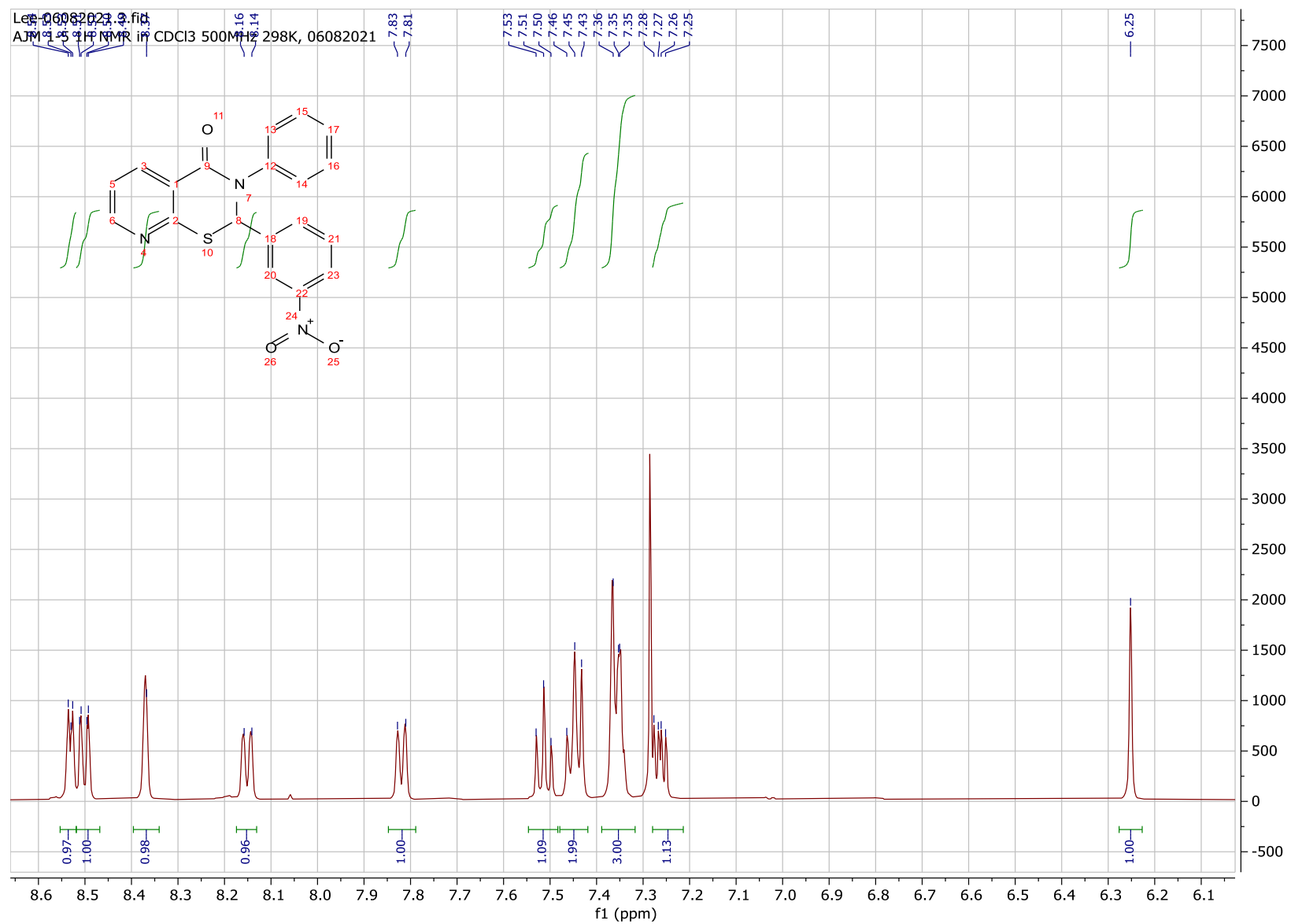
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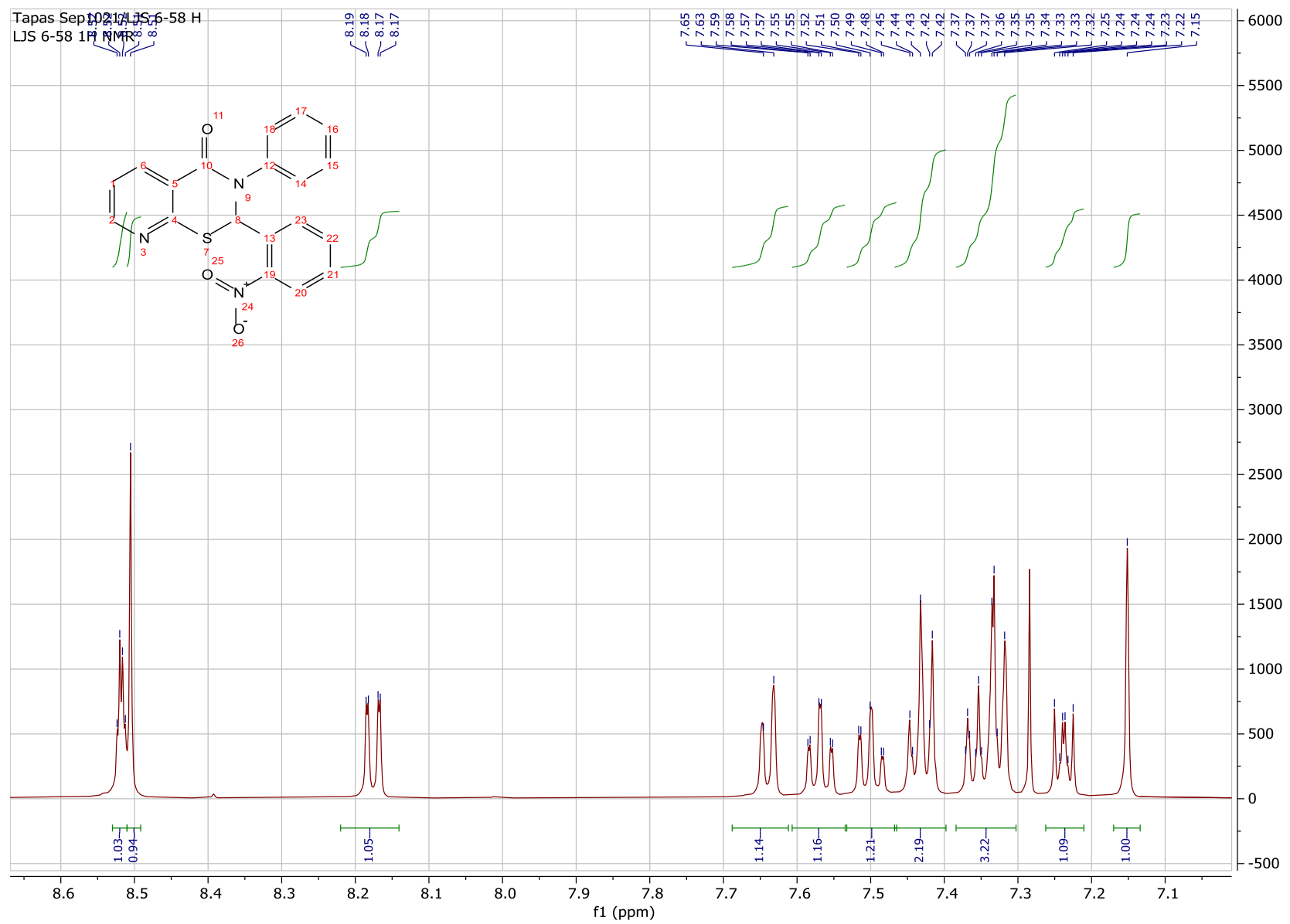
**Figure S1.**  $^1\text{H}$  NMR spectrum of compound **1a** ( $p\text{-NO}_2$ ).



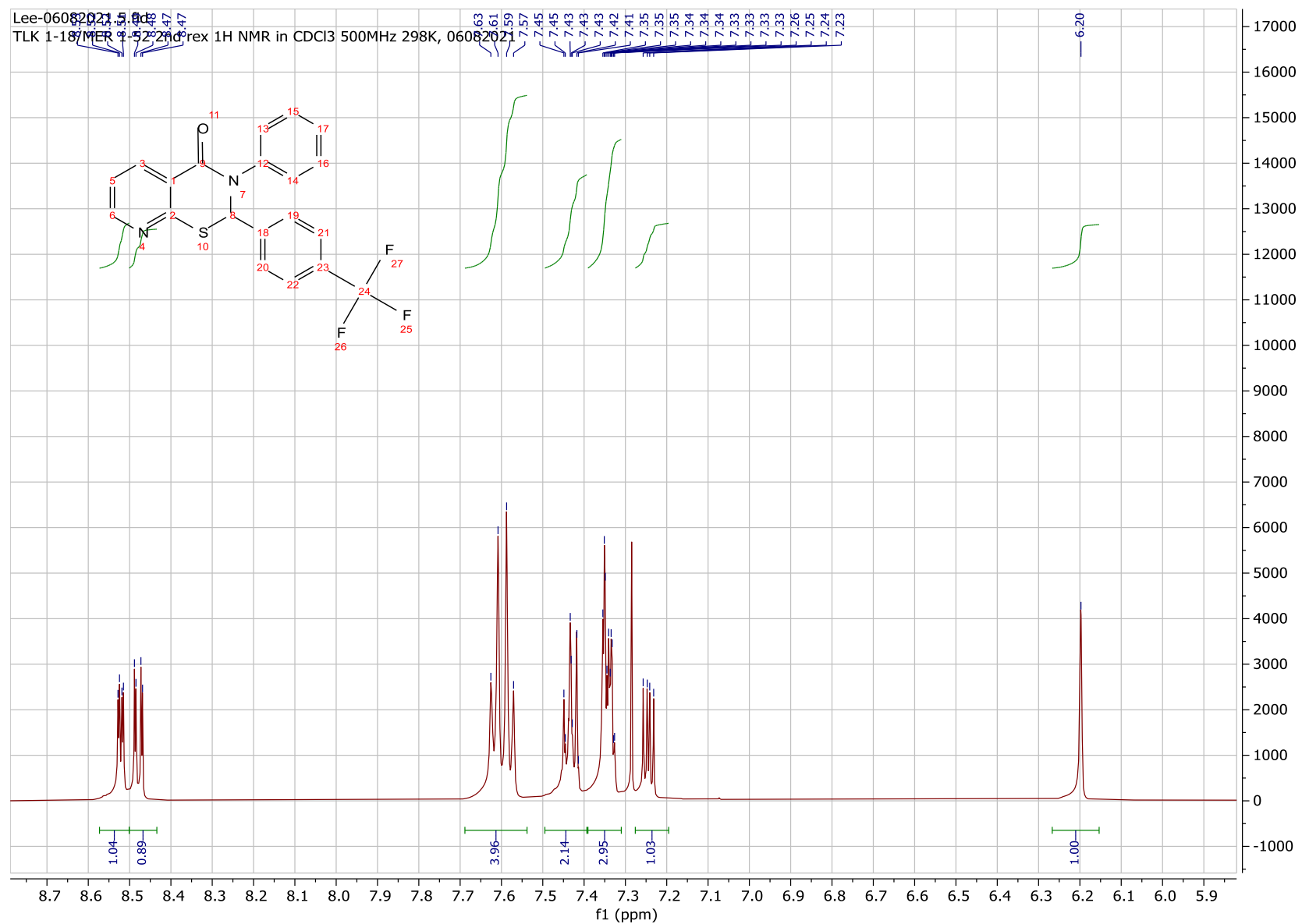
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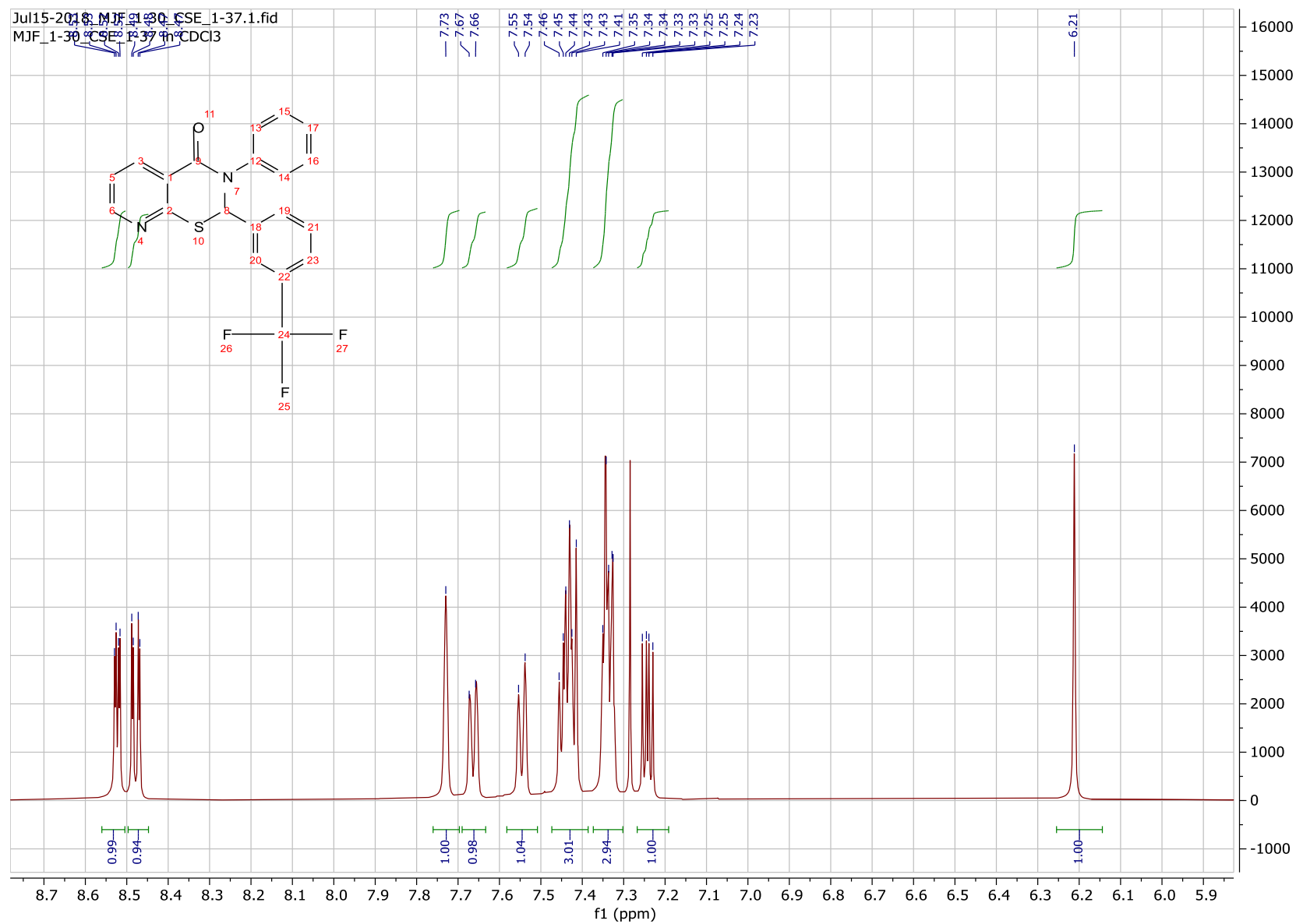
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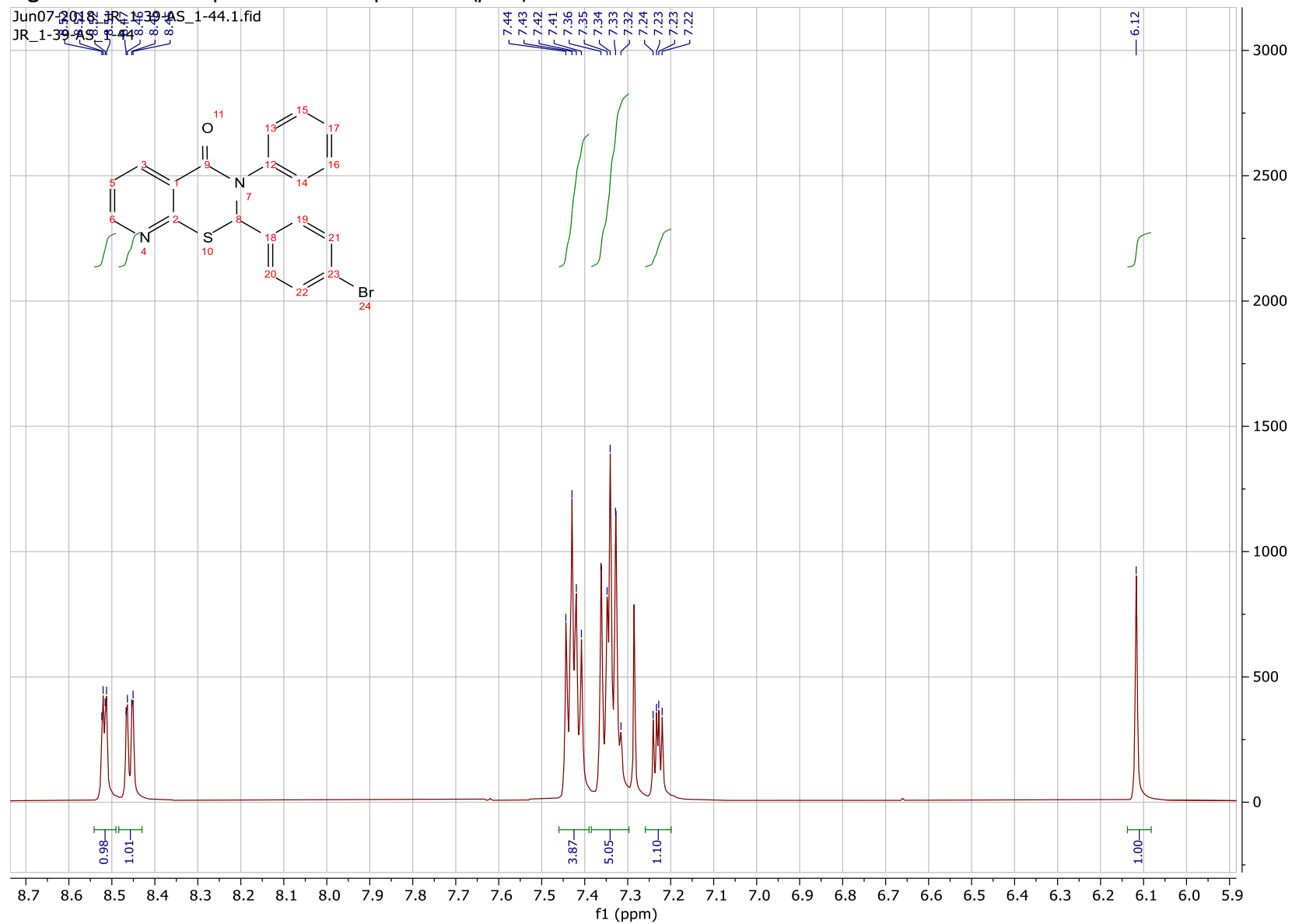
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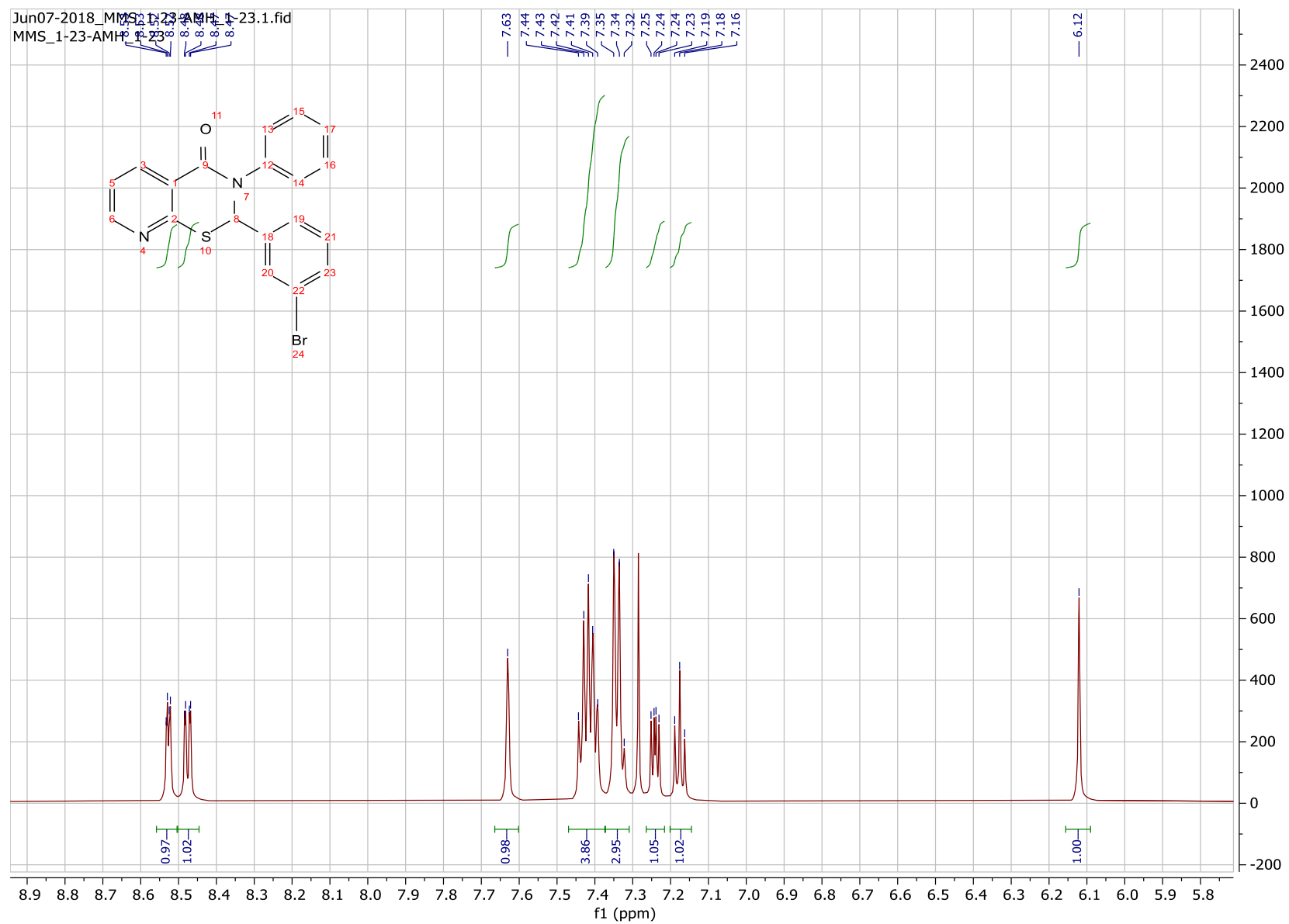
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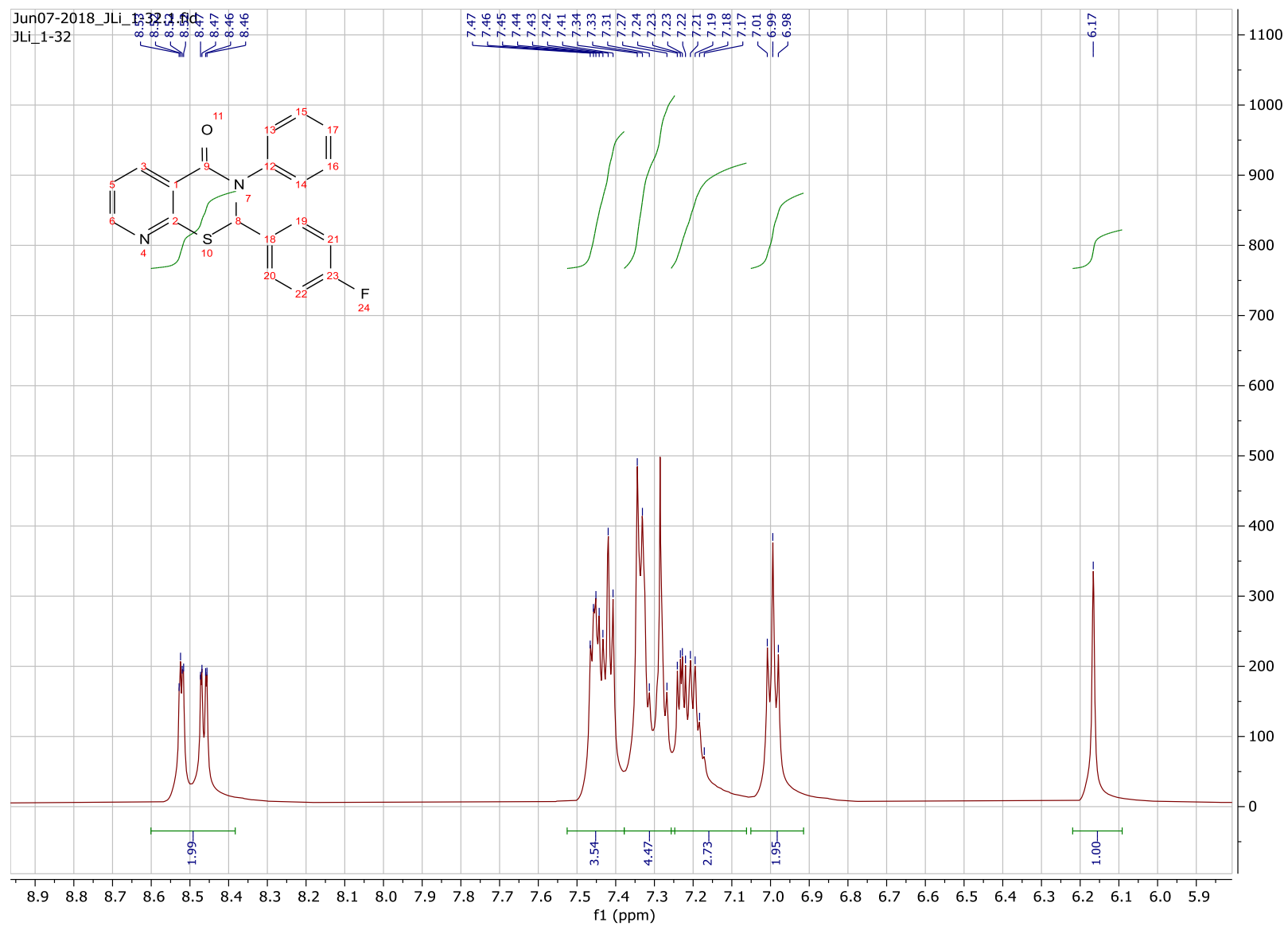
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**Figure S9.**  $^1\text{H}$  NMR spectrum of compound **1i** (*m*-F).

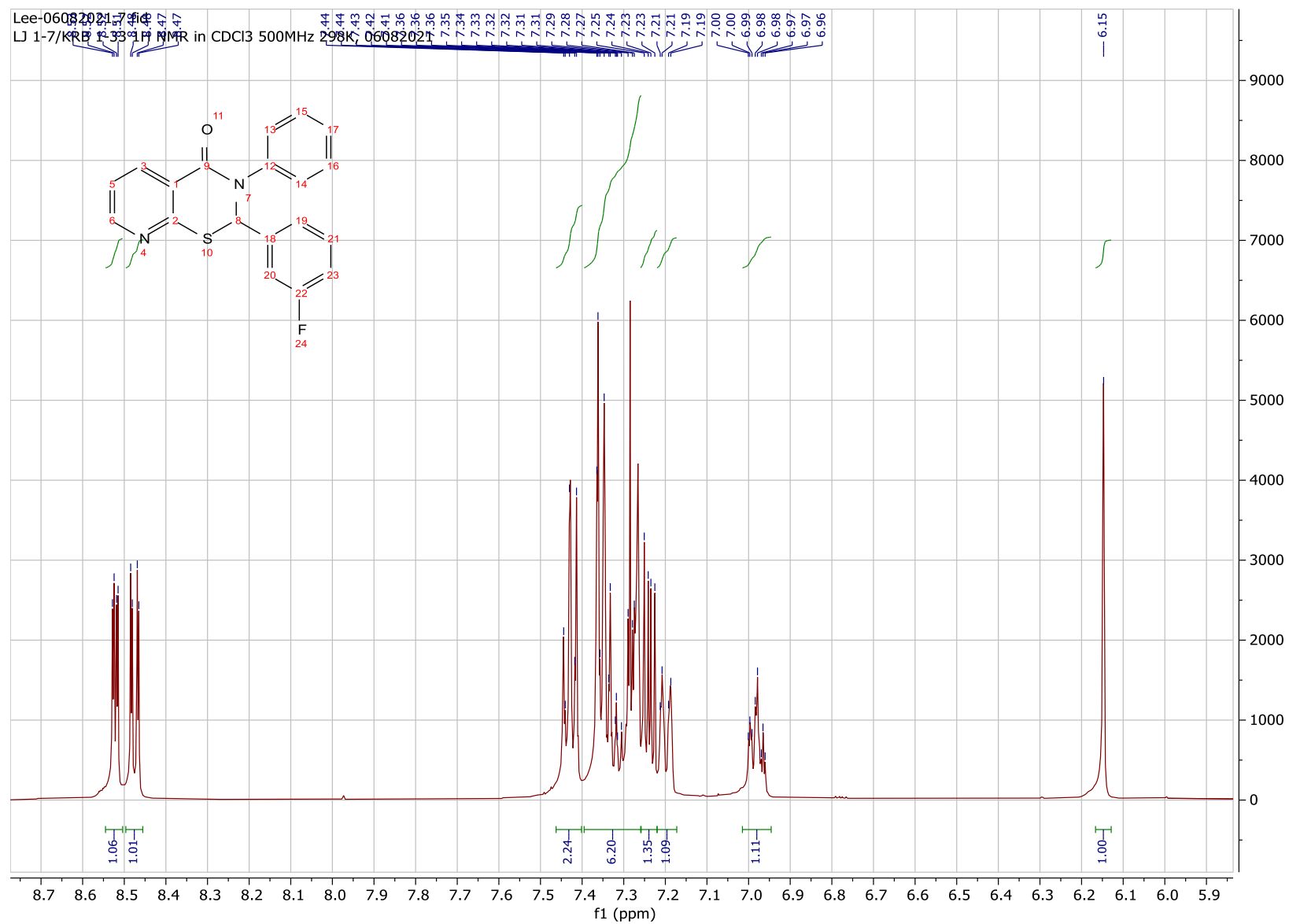
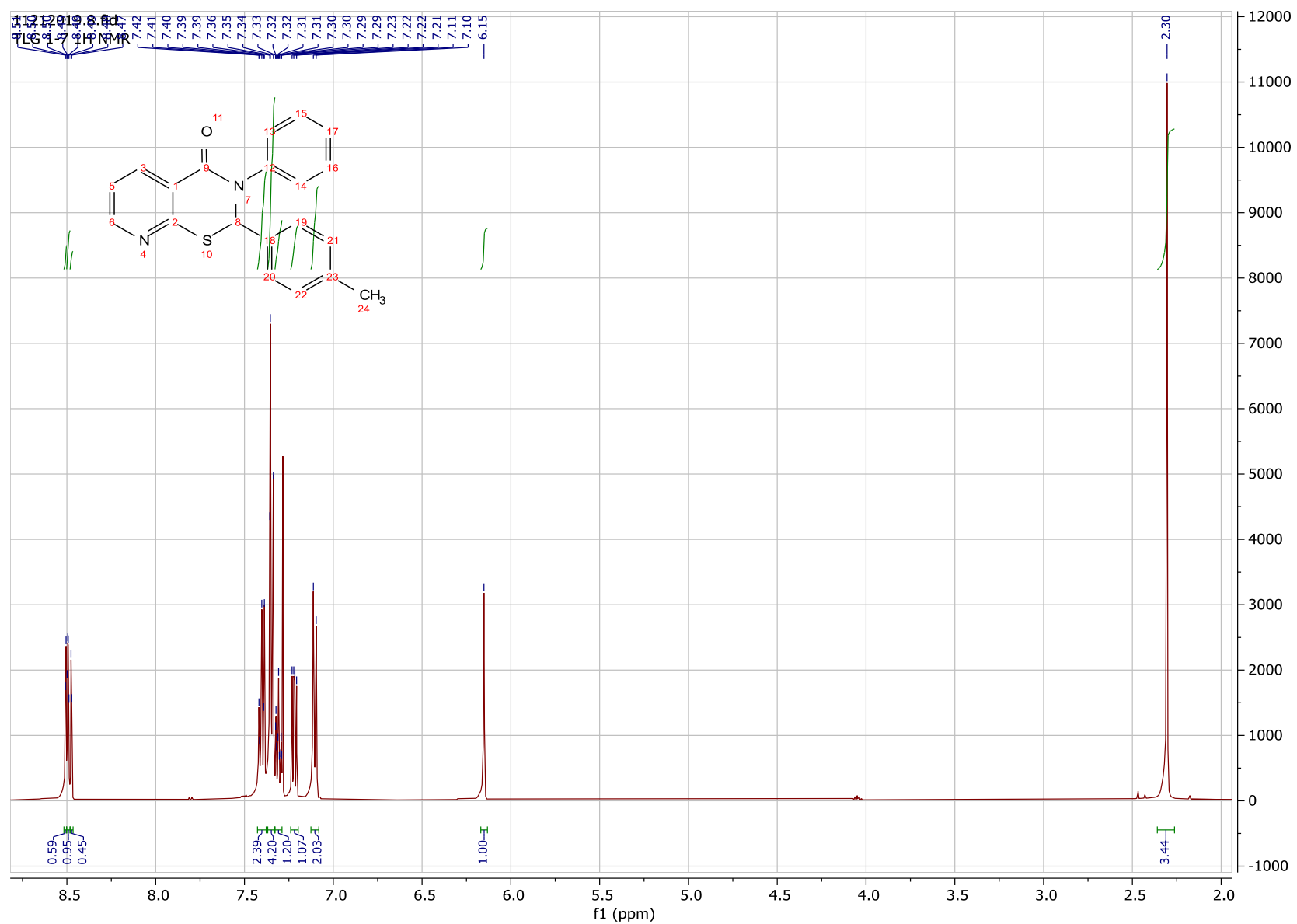
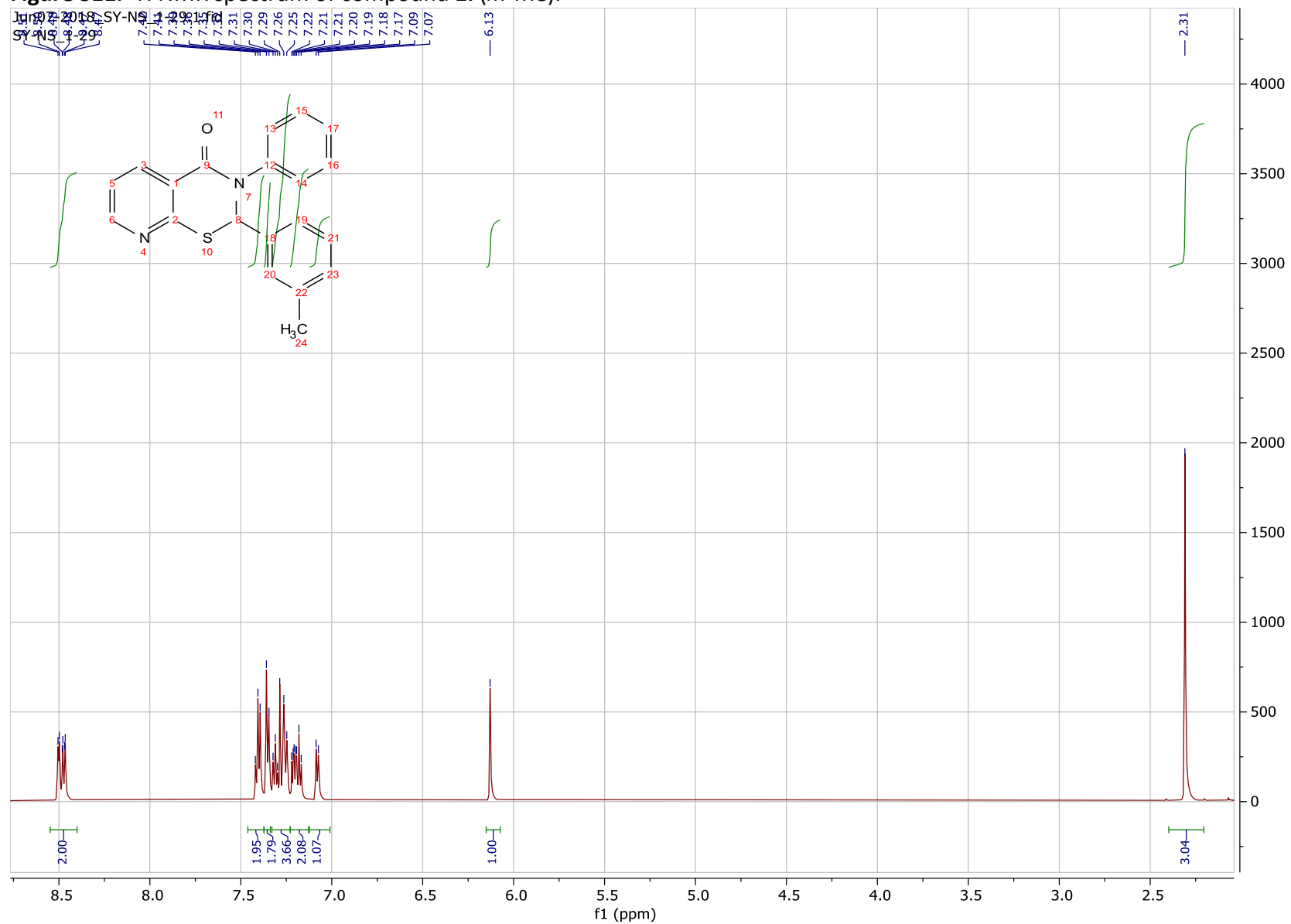


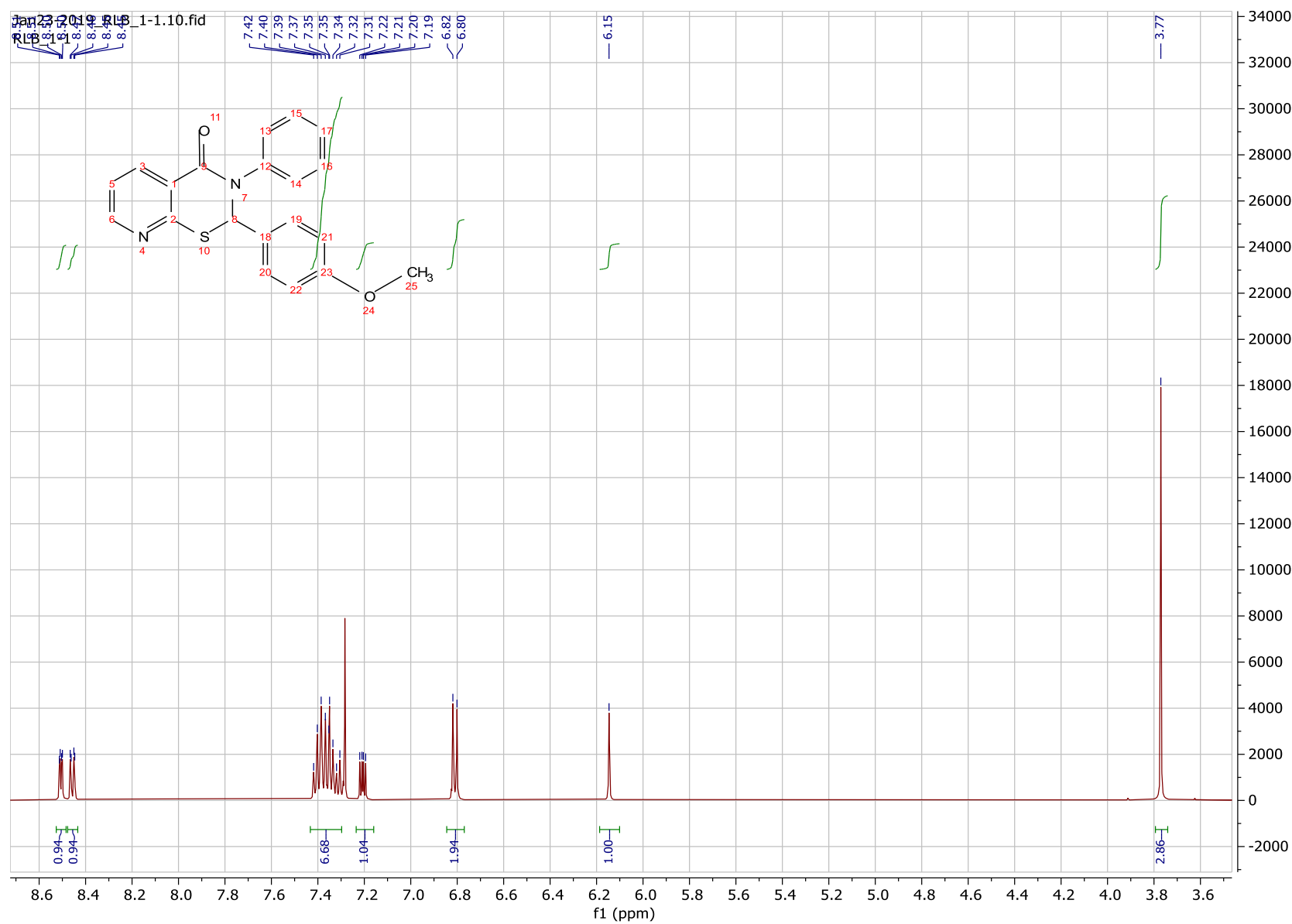
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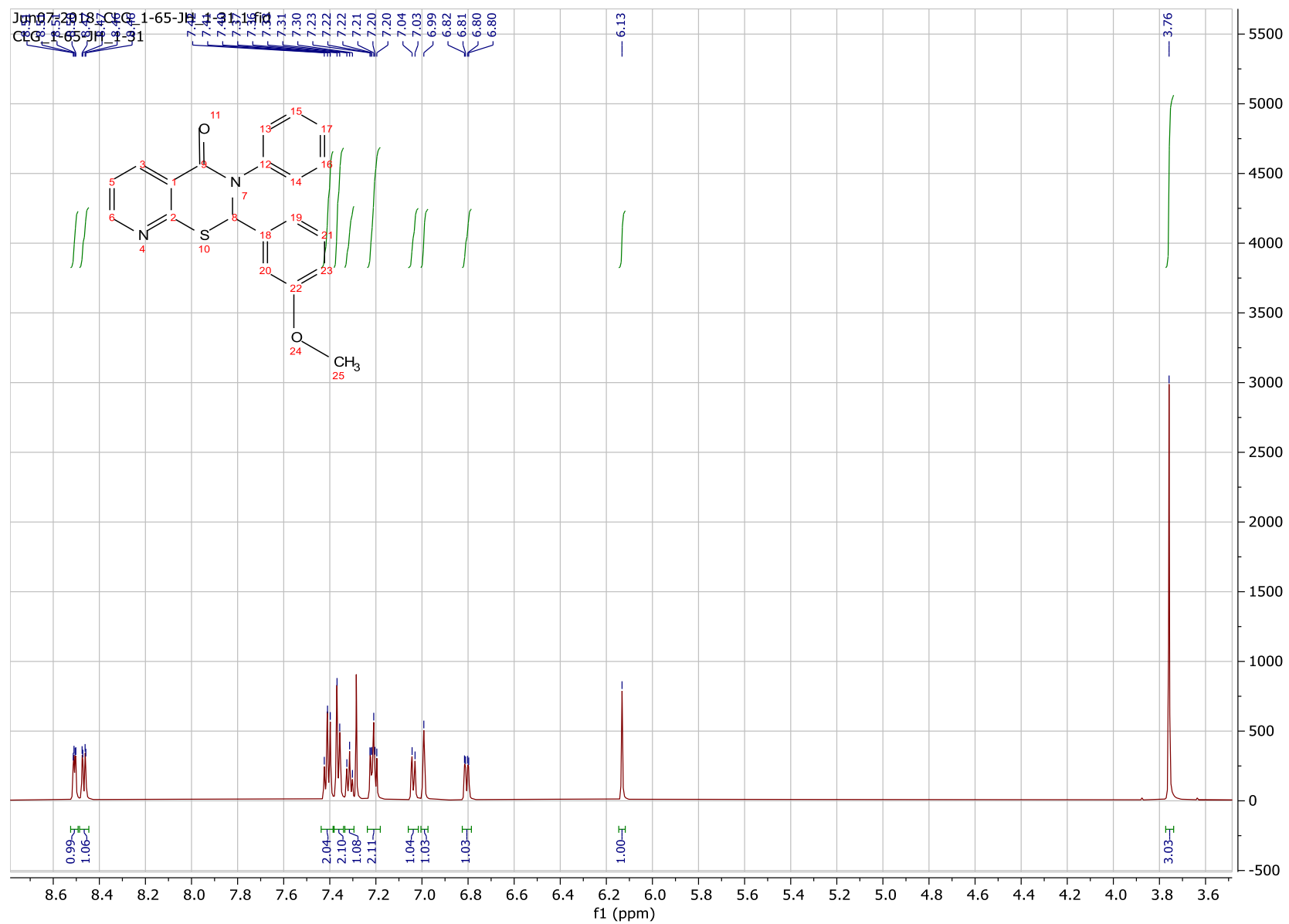
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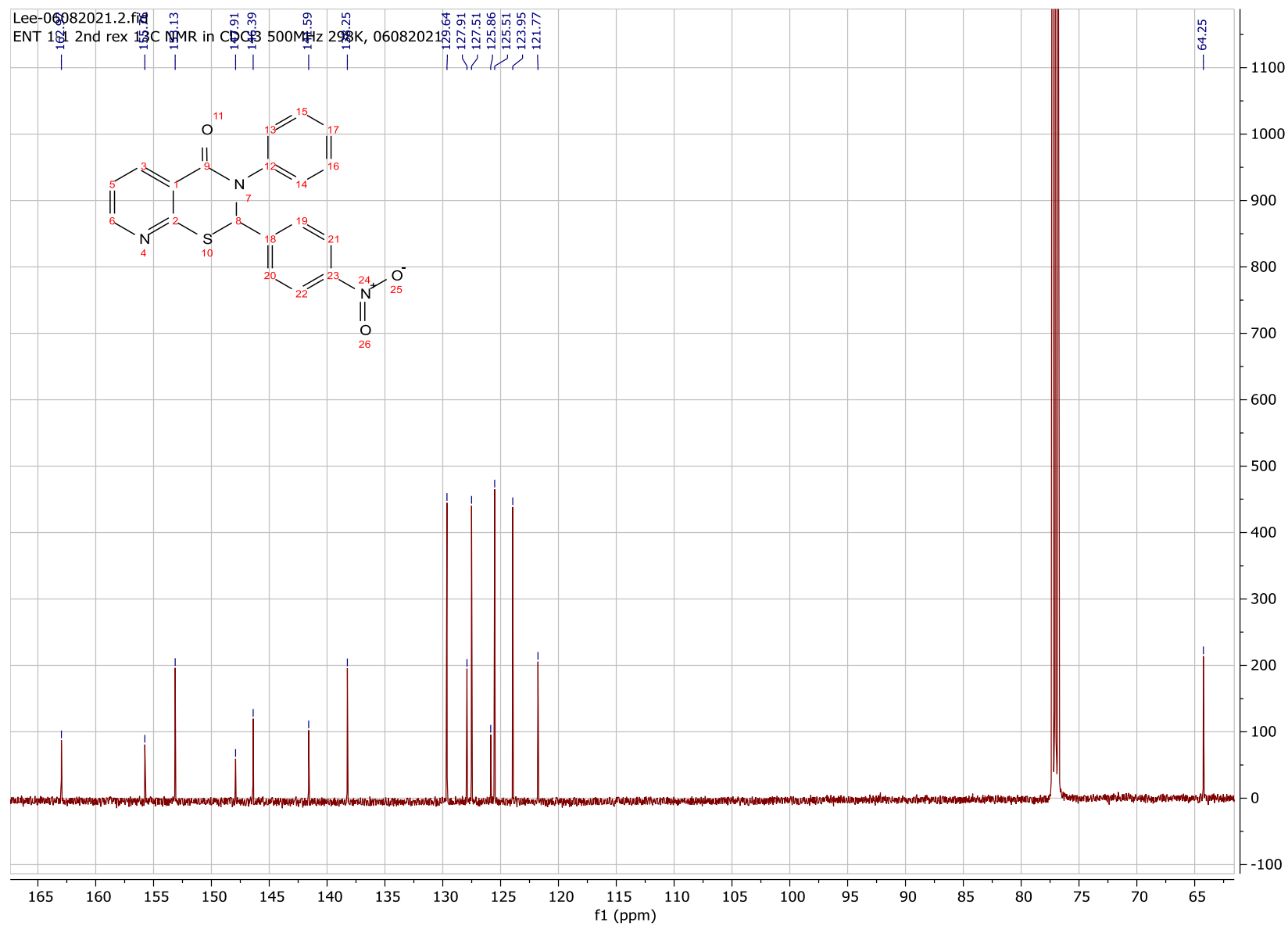
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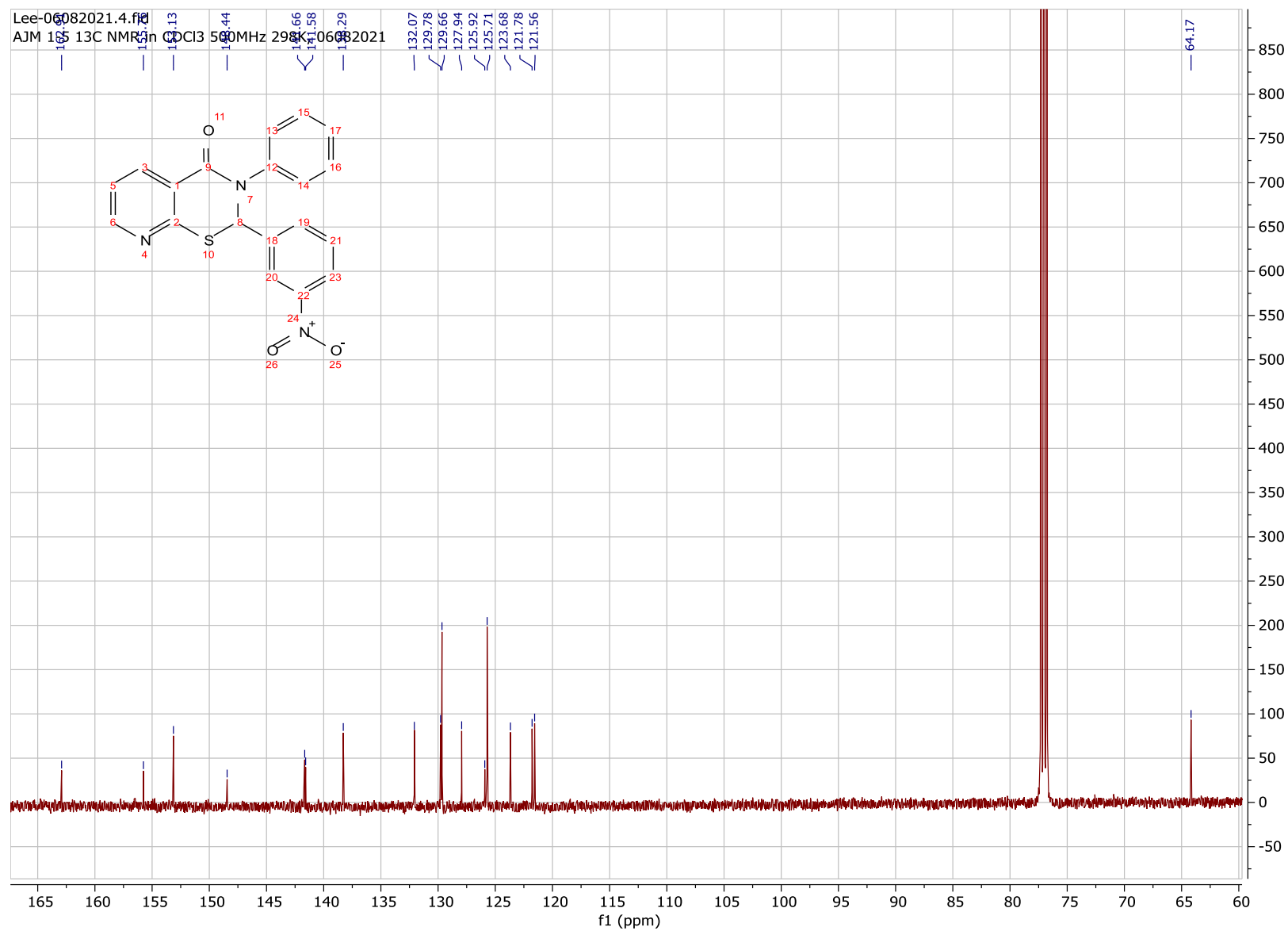
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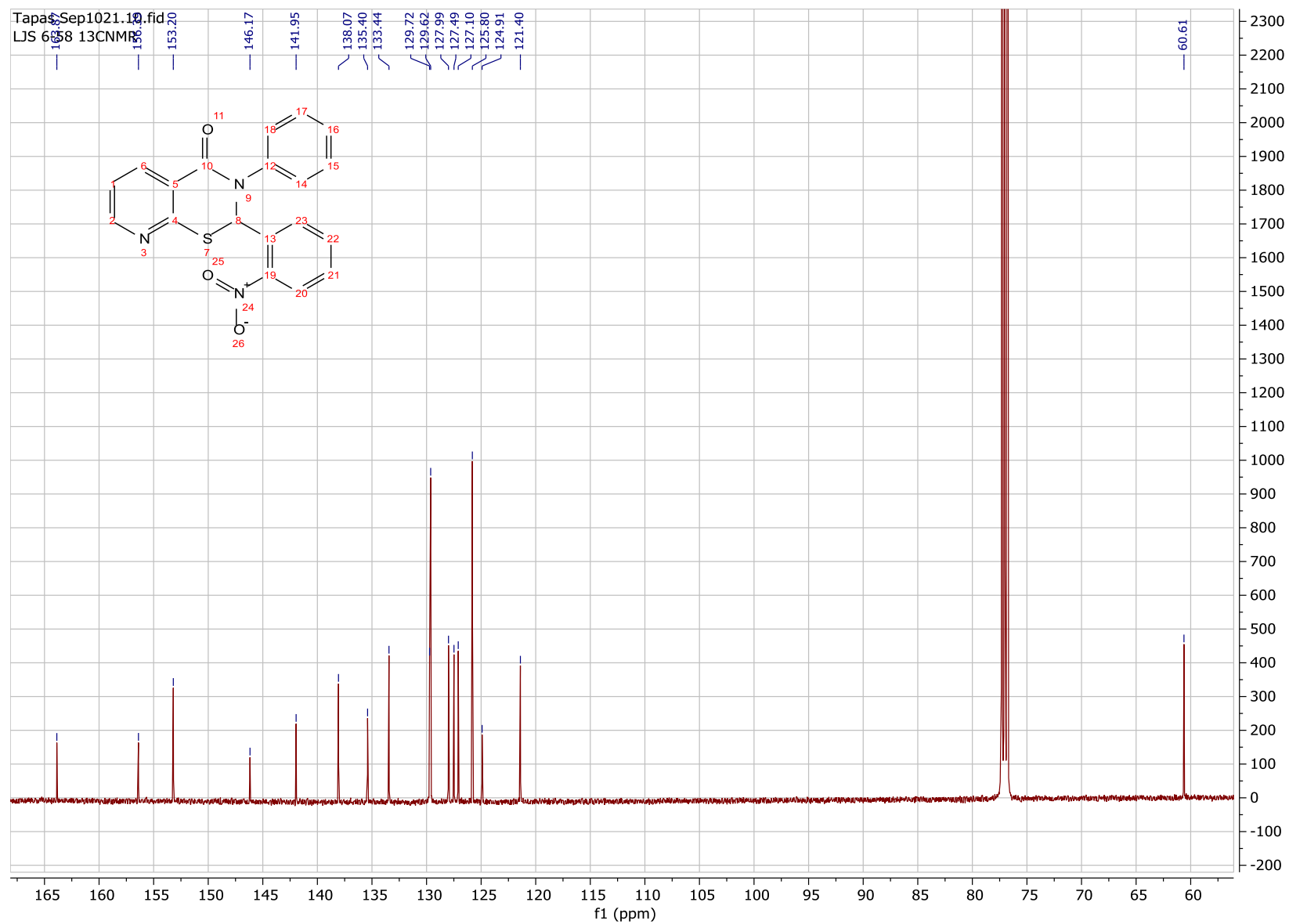
**Figure S14.**  $^{13}\text{C}$  NMR spectrum of compound **1a** (*p*-NO<sub>2</sub>).



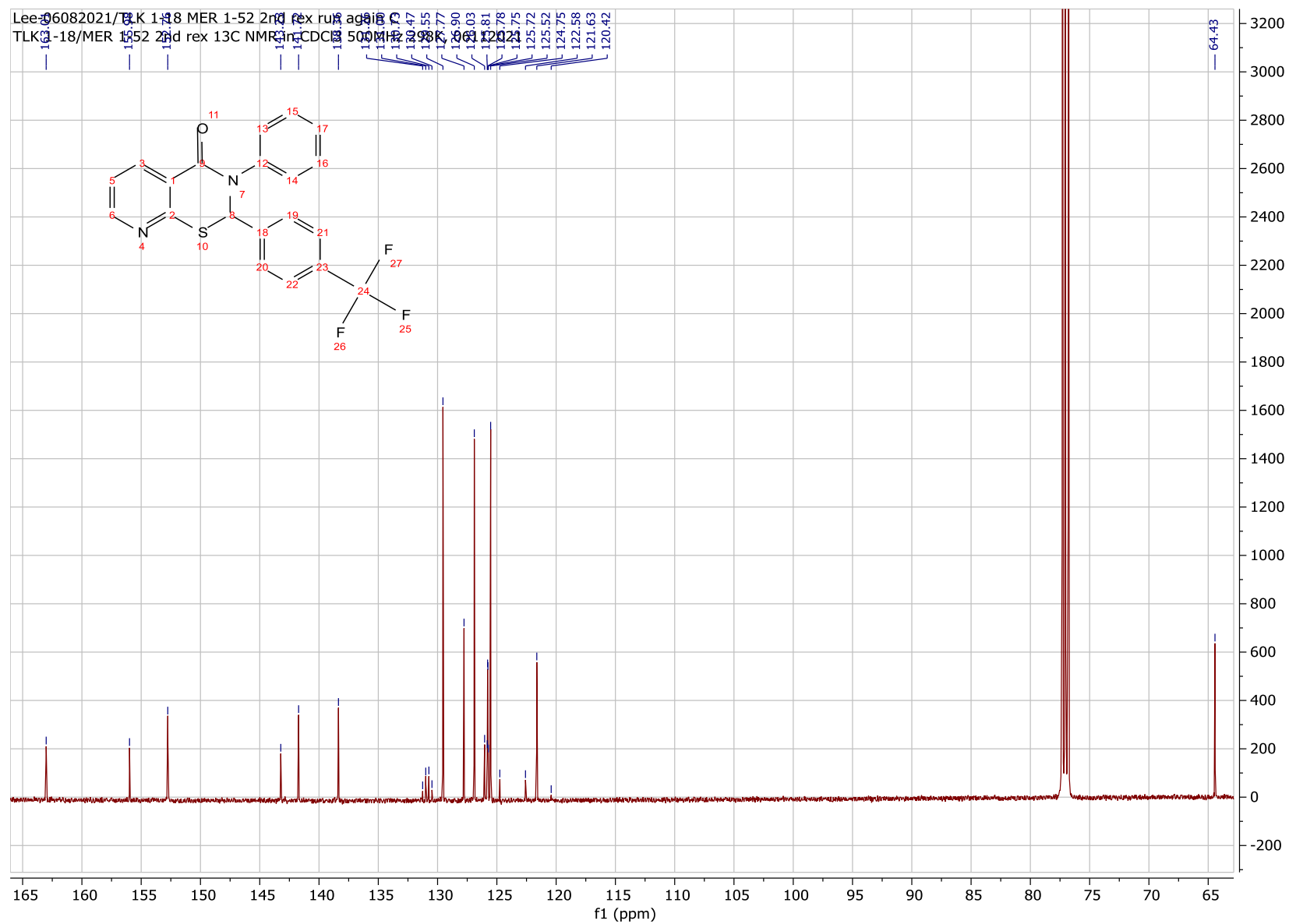
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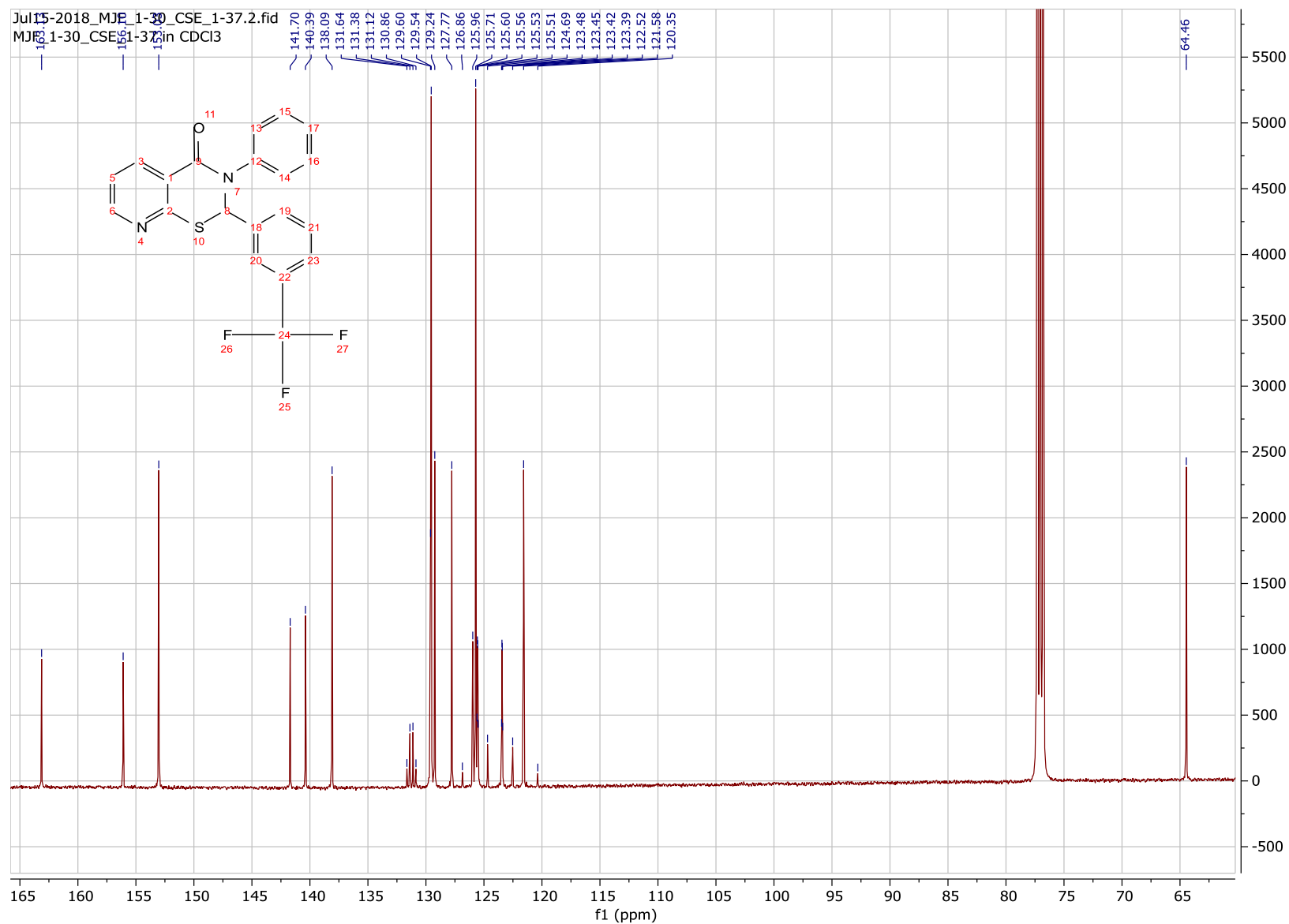
**Figure S16.**  $^{13}\text{C}$  NMR spectrum of compound **1c** (*o*-NO<sub>2</sub>).



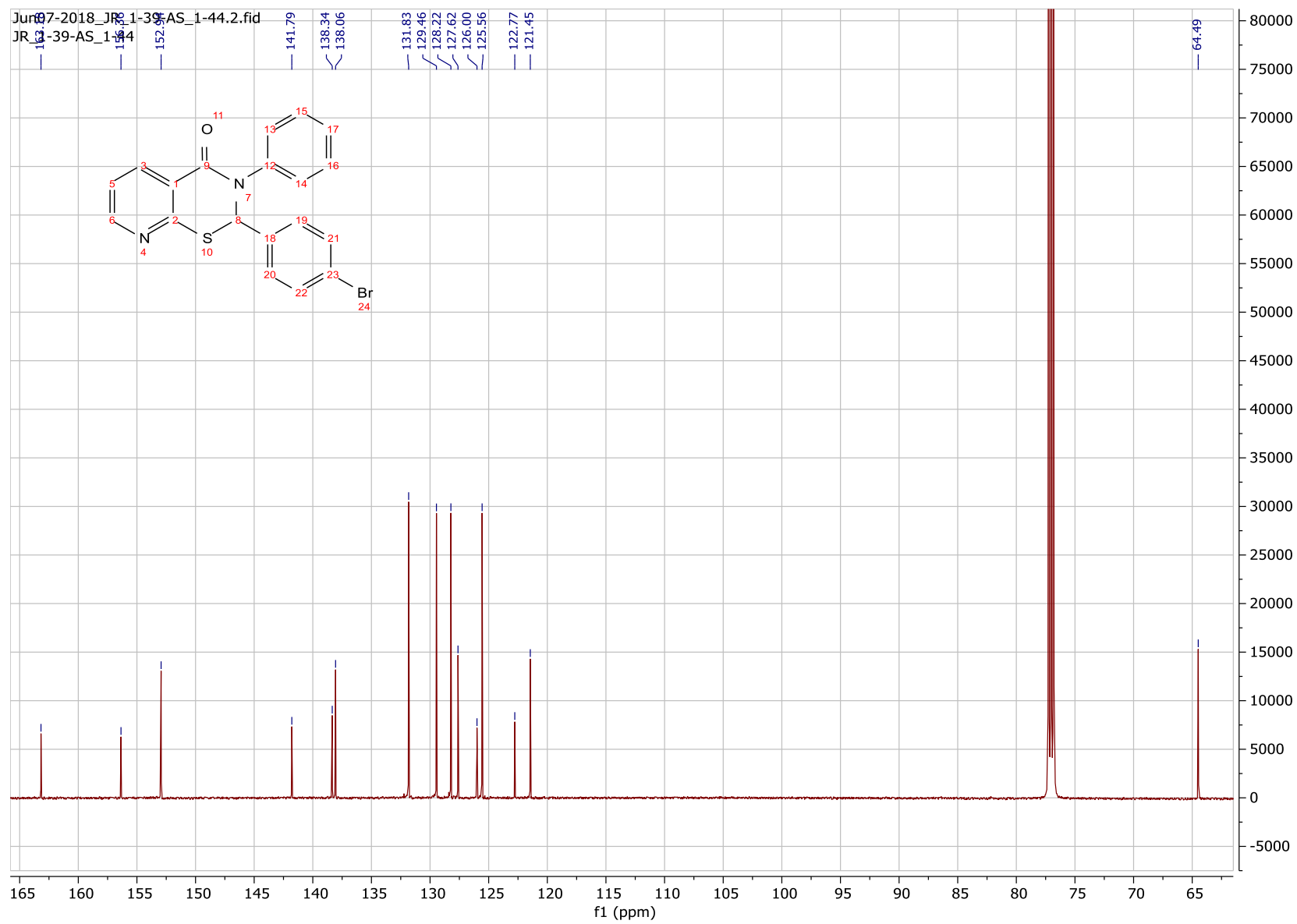
**Figure S17.**  $^{13}\text{C}$  NMR spectrum of compound **1d** ( $p\text{-CF}_3$ ).



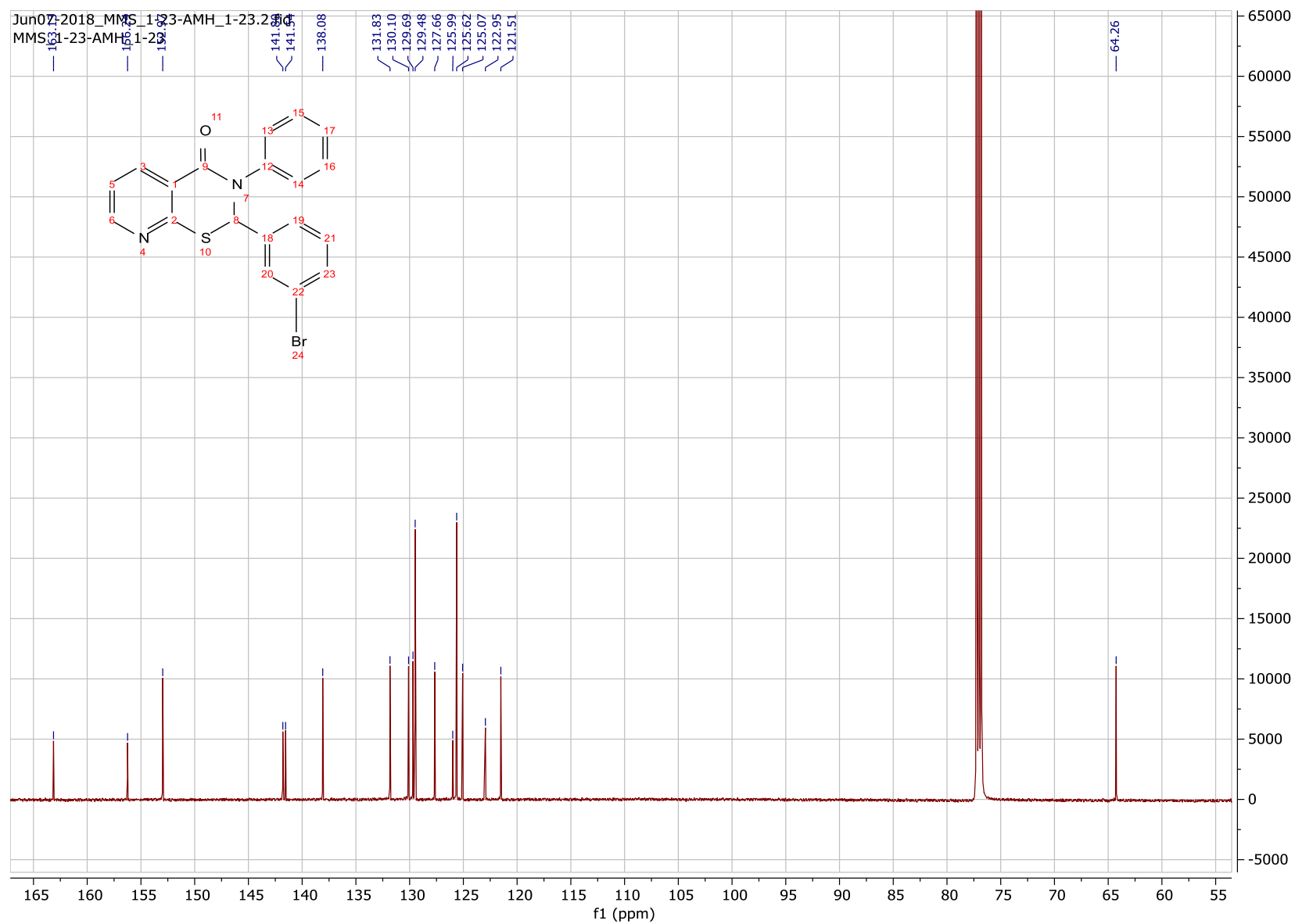
**Figure S18.**  $^{13}\text{C}$  NMR spectrum of compound **1e** (*m*-CF<sub>3</sub>).



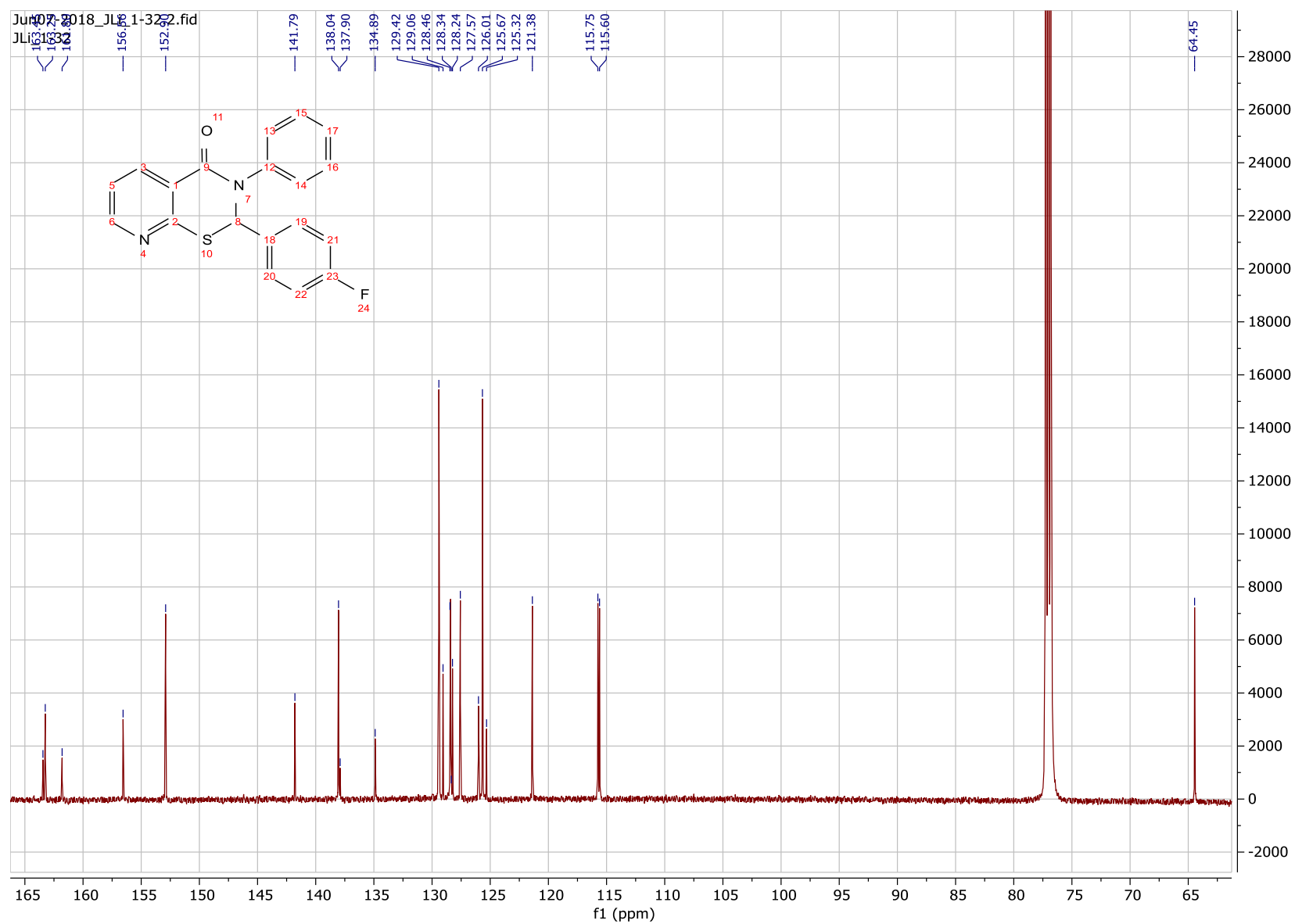
**Figure S19.**  $^{13}\text{C}$  NMR spectrum of compound **1f** (*p*-Br).



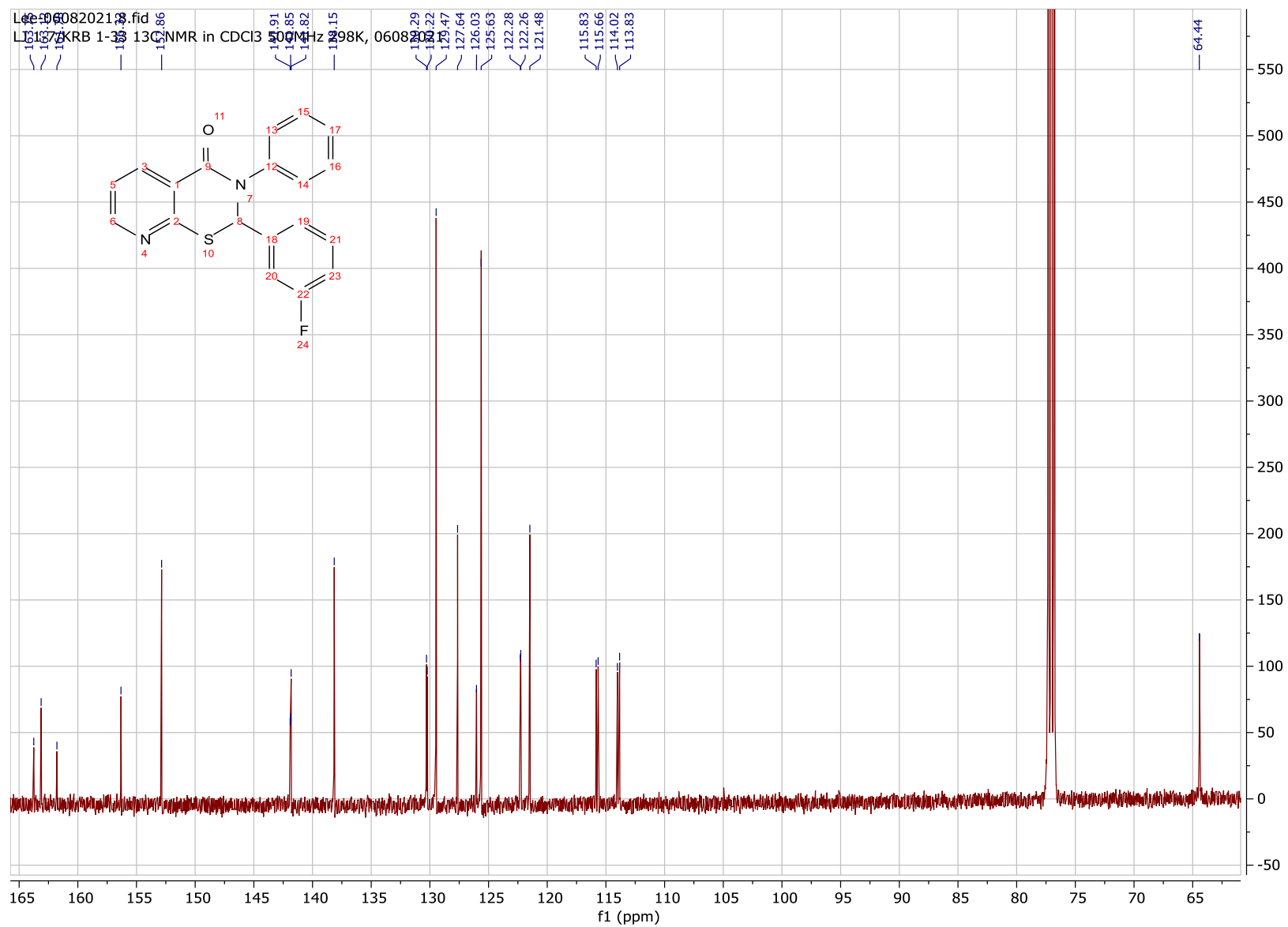
**Figure S20.**  $^{13}\text{C}$  NMR spectrum of compound **1g** (*m*-Br).



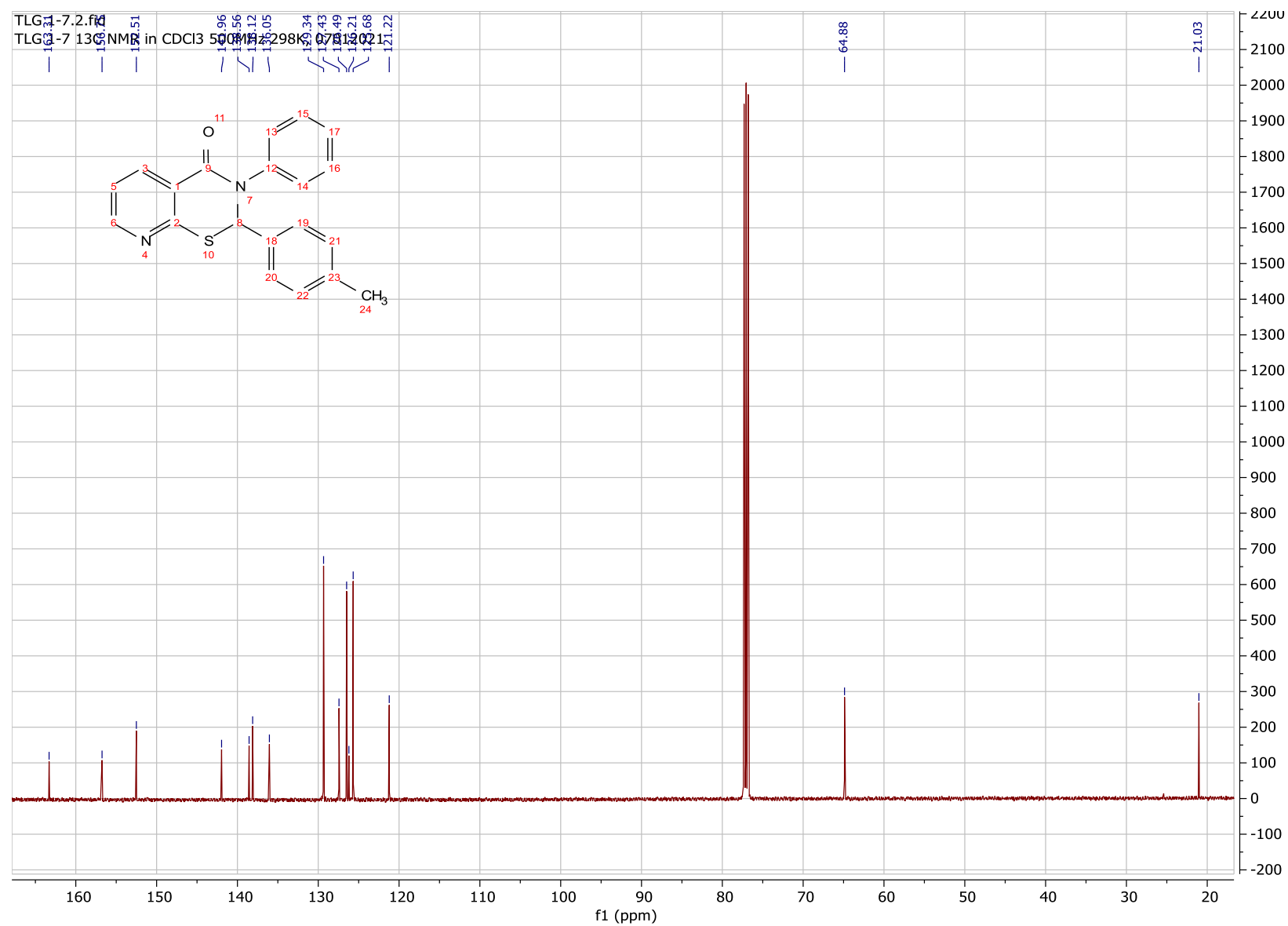
**Figure S21.**  $^{13}\text{C}$  NMR spectrum of compound **1h** (*p*-F).



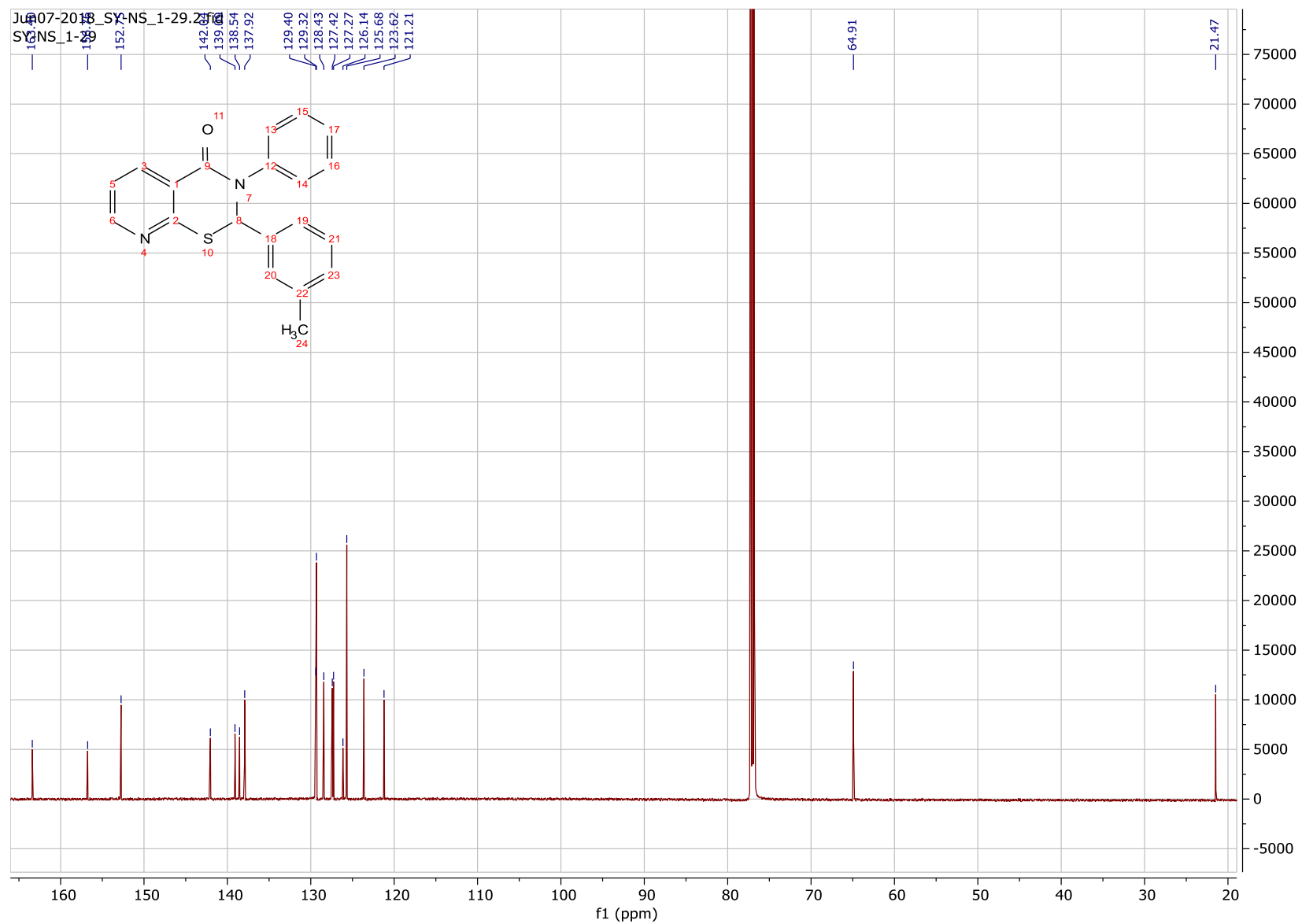
**Figure S22.**  $^{13}\text{C}$  NMR spectrum of compound **1i** (*m*-F).



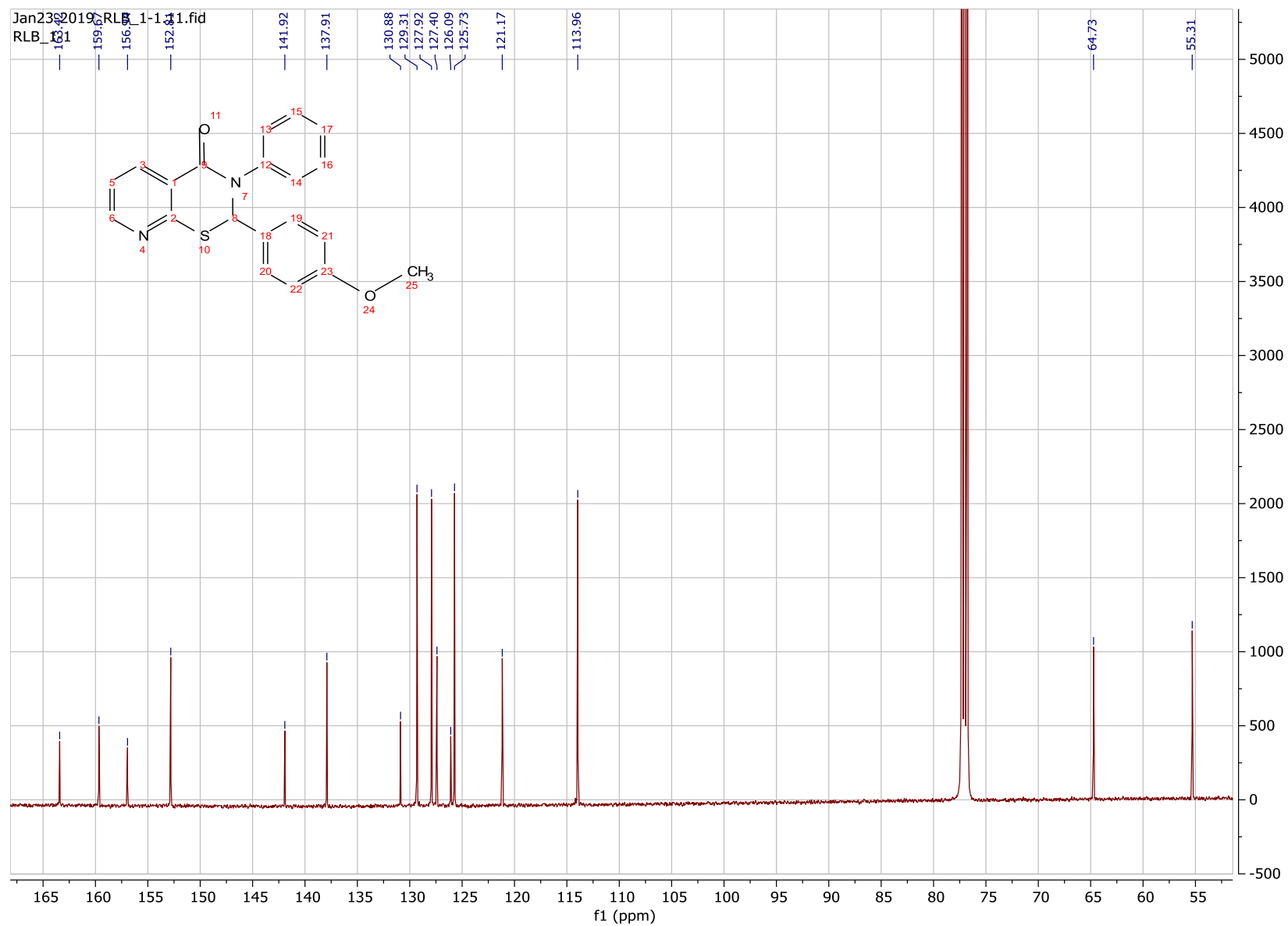
**Figure S23.**  $^{13}\text{C}$  NMR spectrum of compound **1k** (*p*-Me).



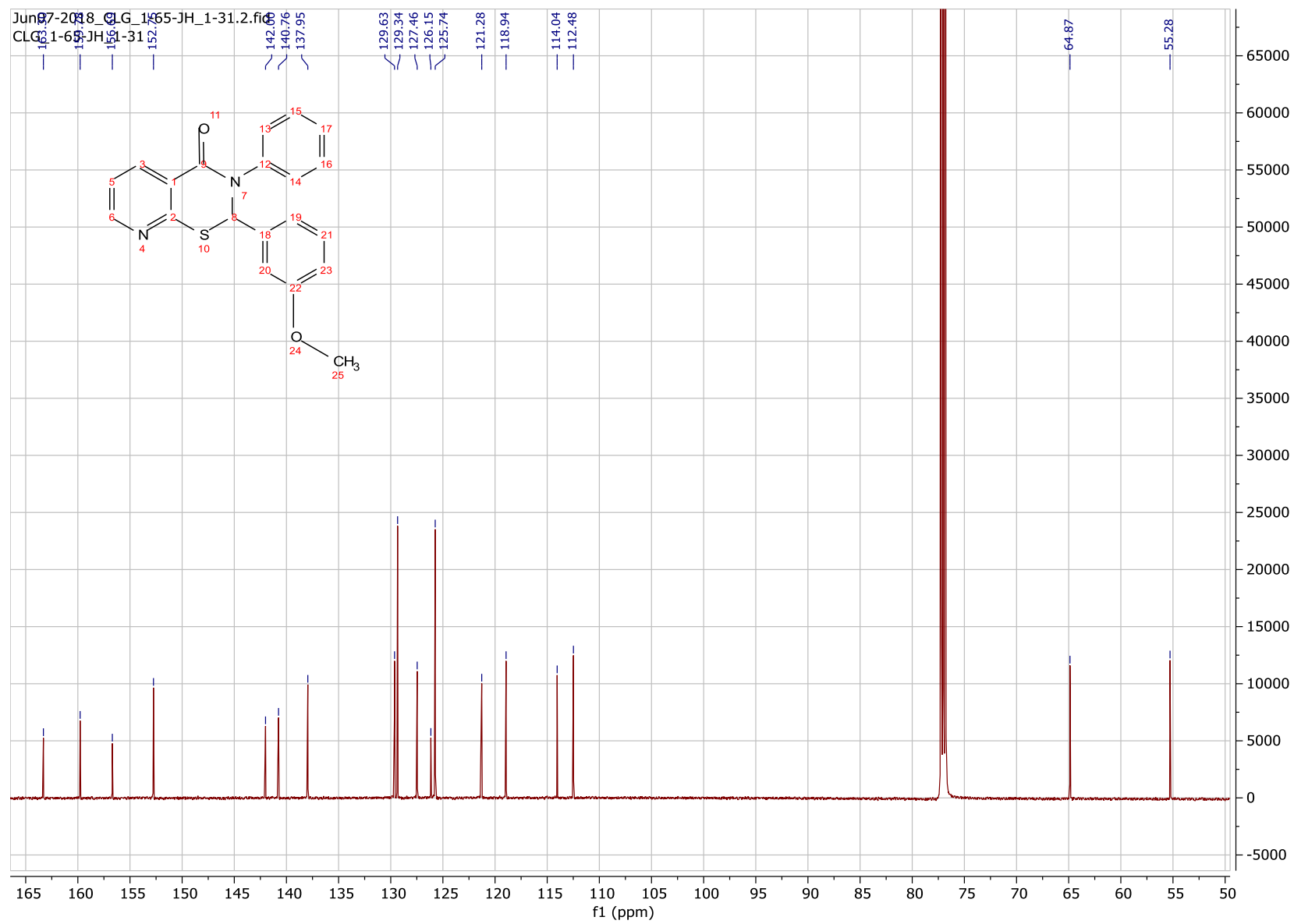
**Figure S24.**  $^{13}\text{C}$  NMR spectrum of compound **1l** (*m*-Me).



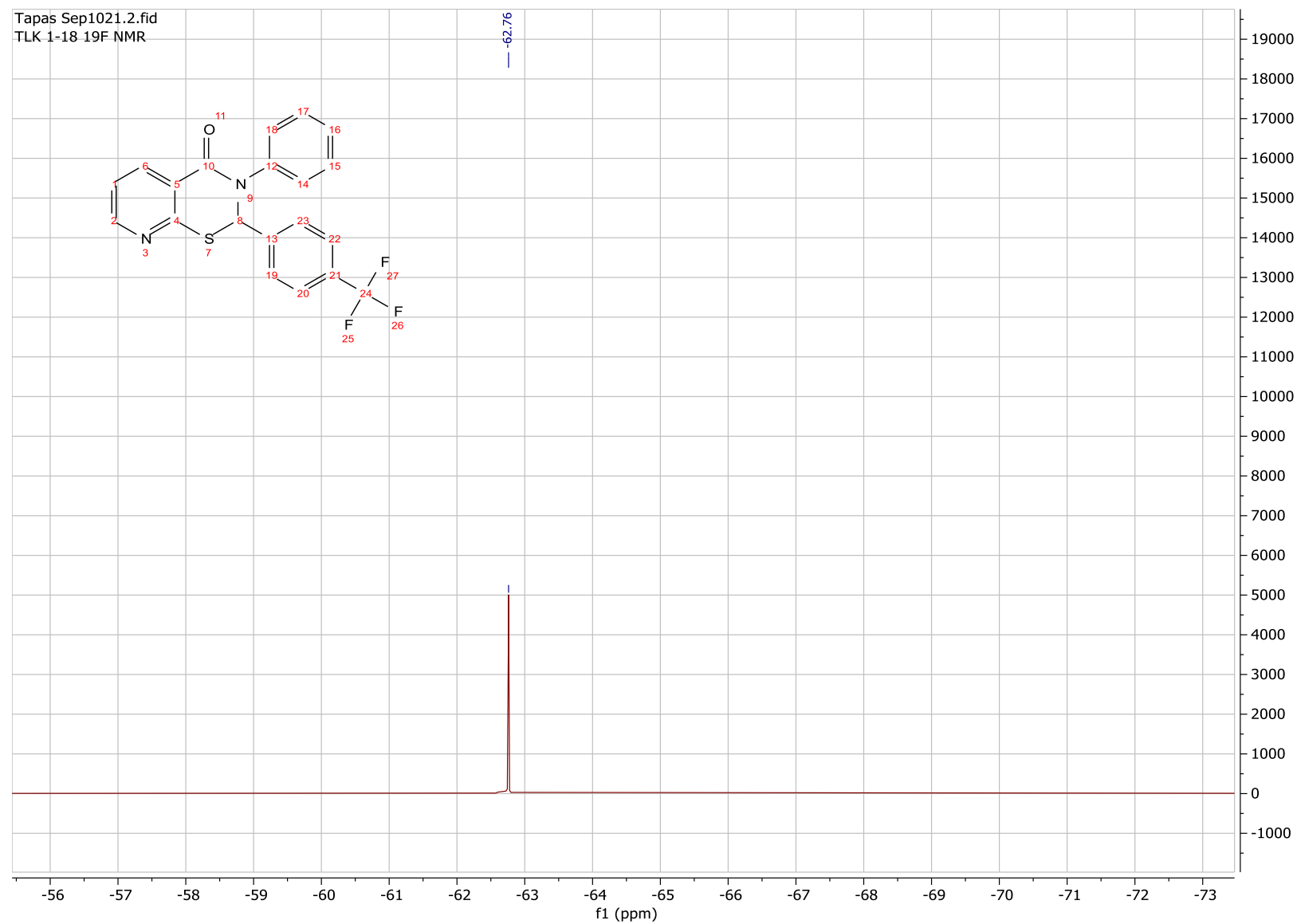
**Figure S25.**  $^{13}\text{C}$  NMR spectrum of compound **1m** (*p*-OMe).



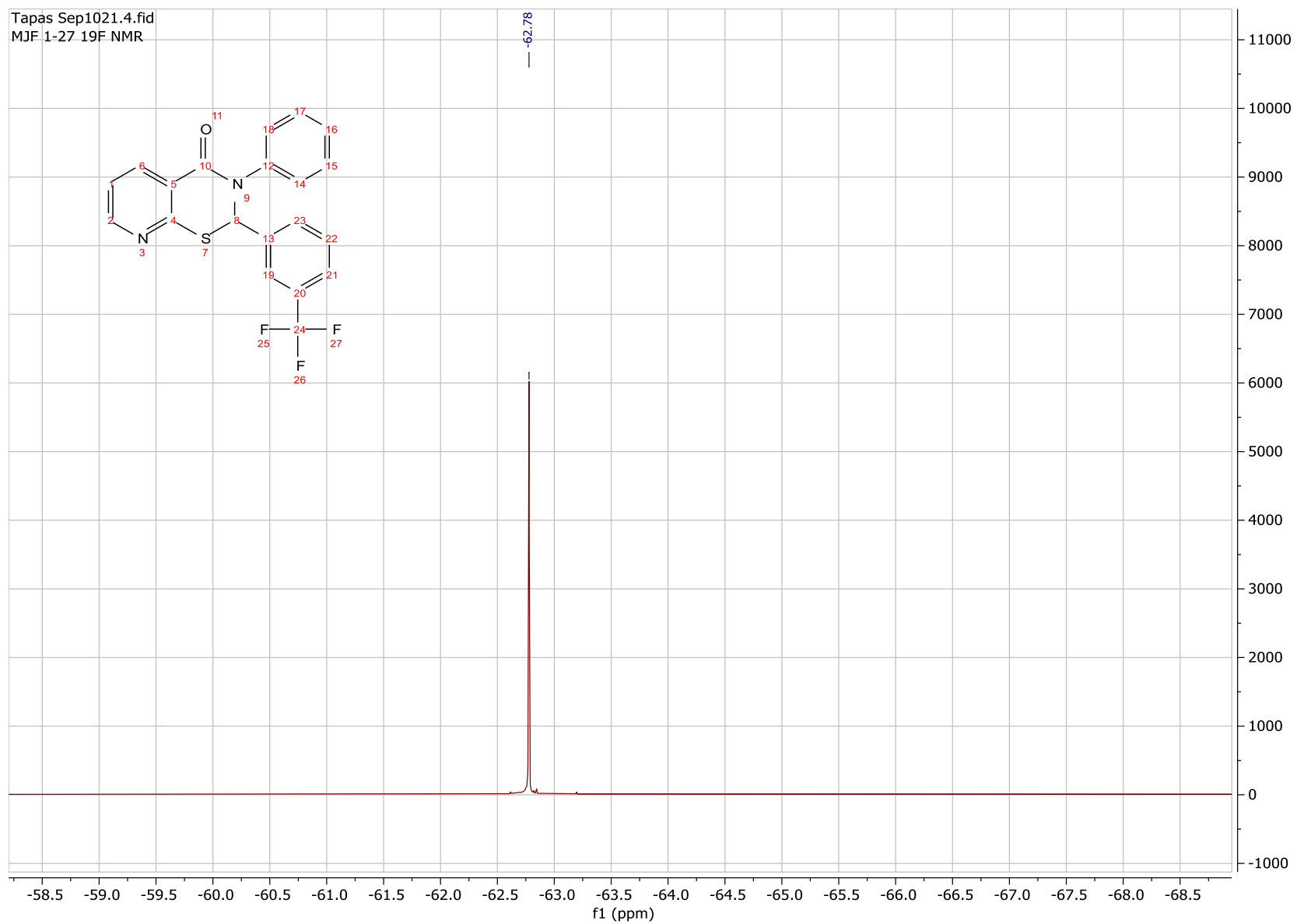
**Figure S26.**  $^{13}\text{C}$  NMR spectrum of compound **1n** (*m*-OMe).



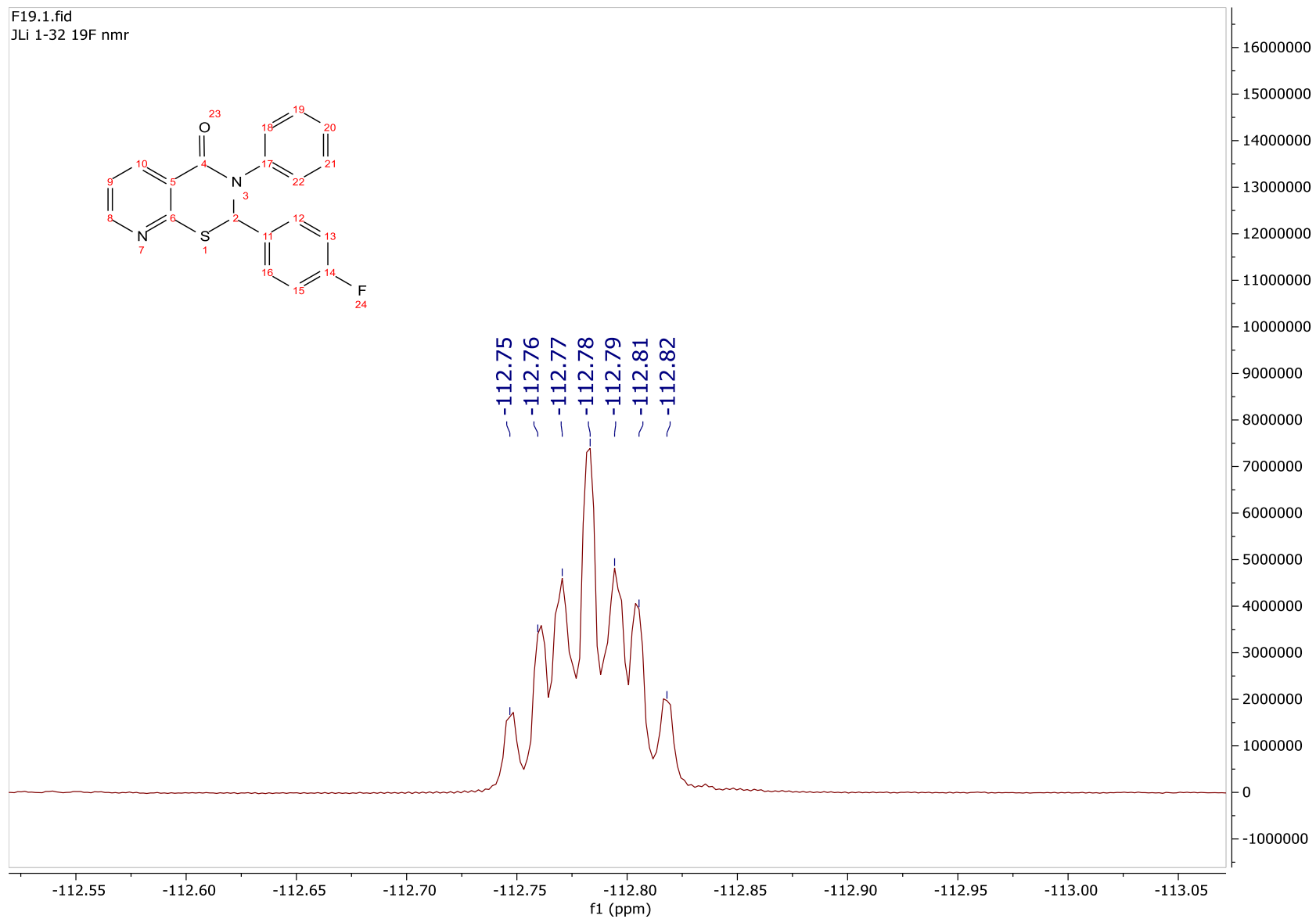
**Figure S27.**  $^{19}\text{F}$  NMR spectrum of compound **1d** (*p*- $\text{CF}_3$ ).



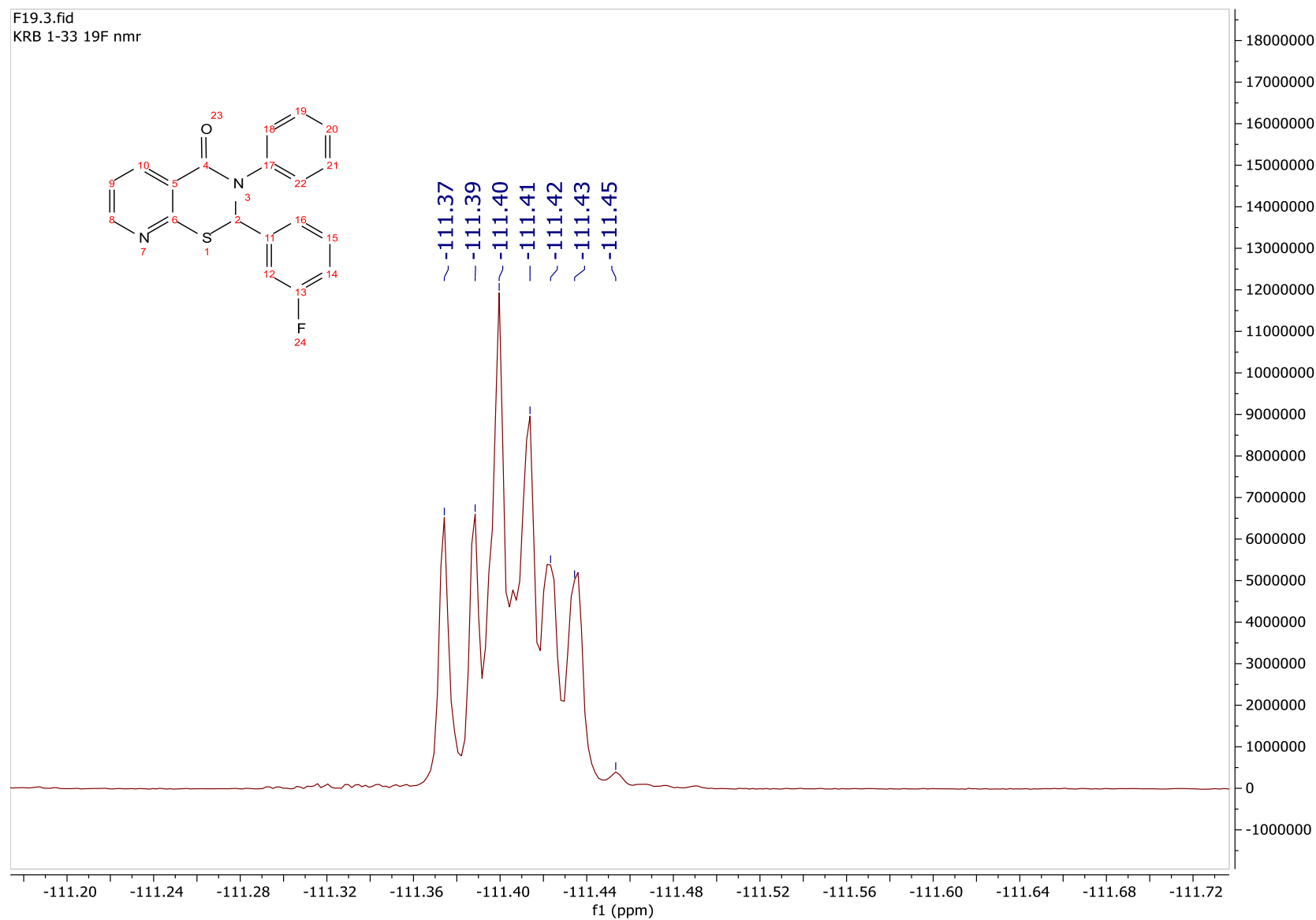
**Figure S28.**  $^{19}\text{F}$  NMR spectrum of compound **1e** (*m*-CF<sub>3</sub>).



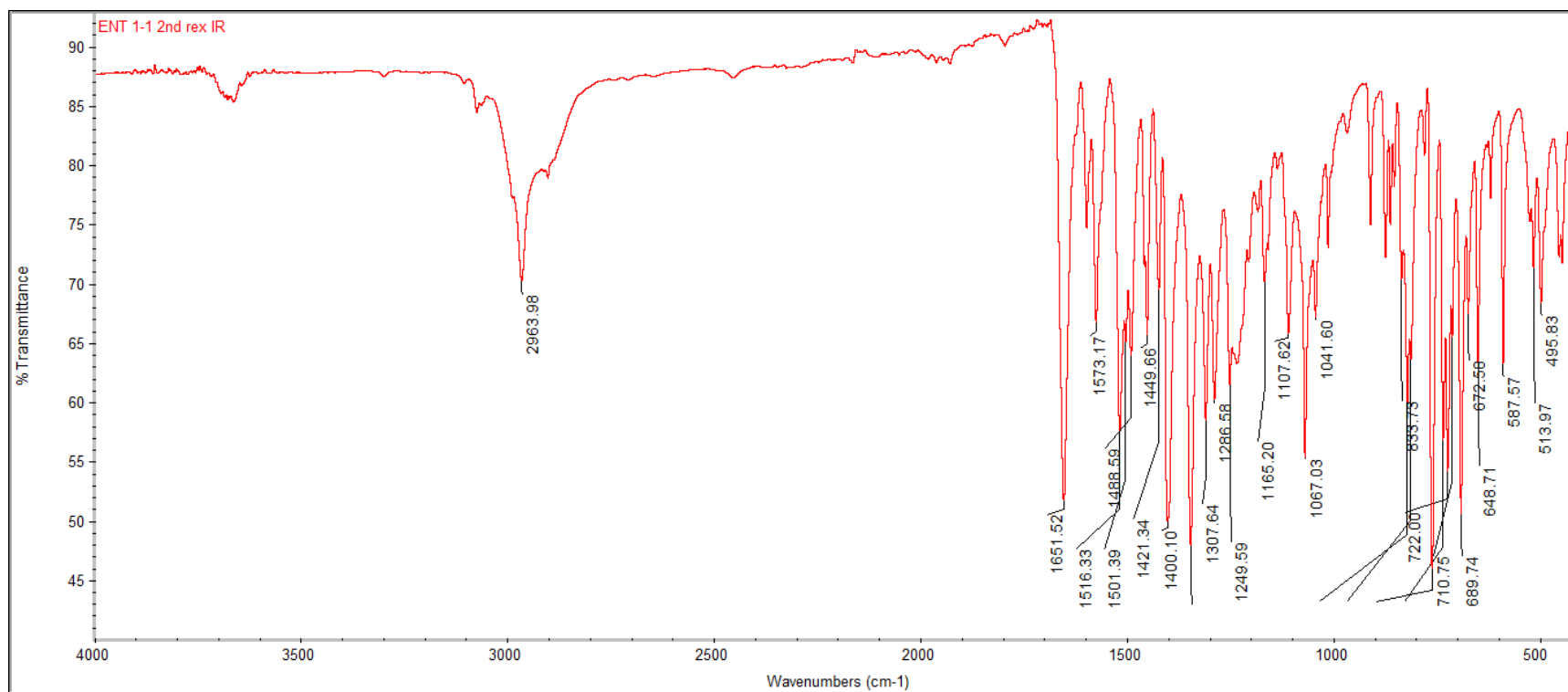
**Figure S29.**  $^{19}\text{F}$  NMR spectrum of compound **1h** (*p*-F).



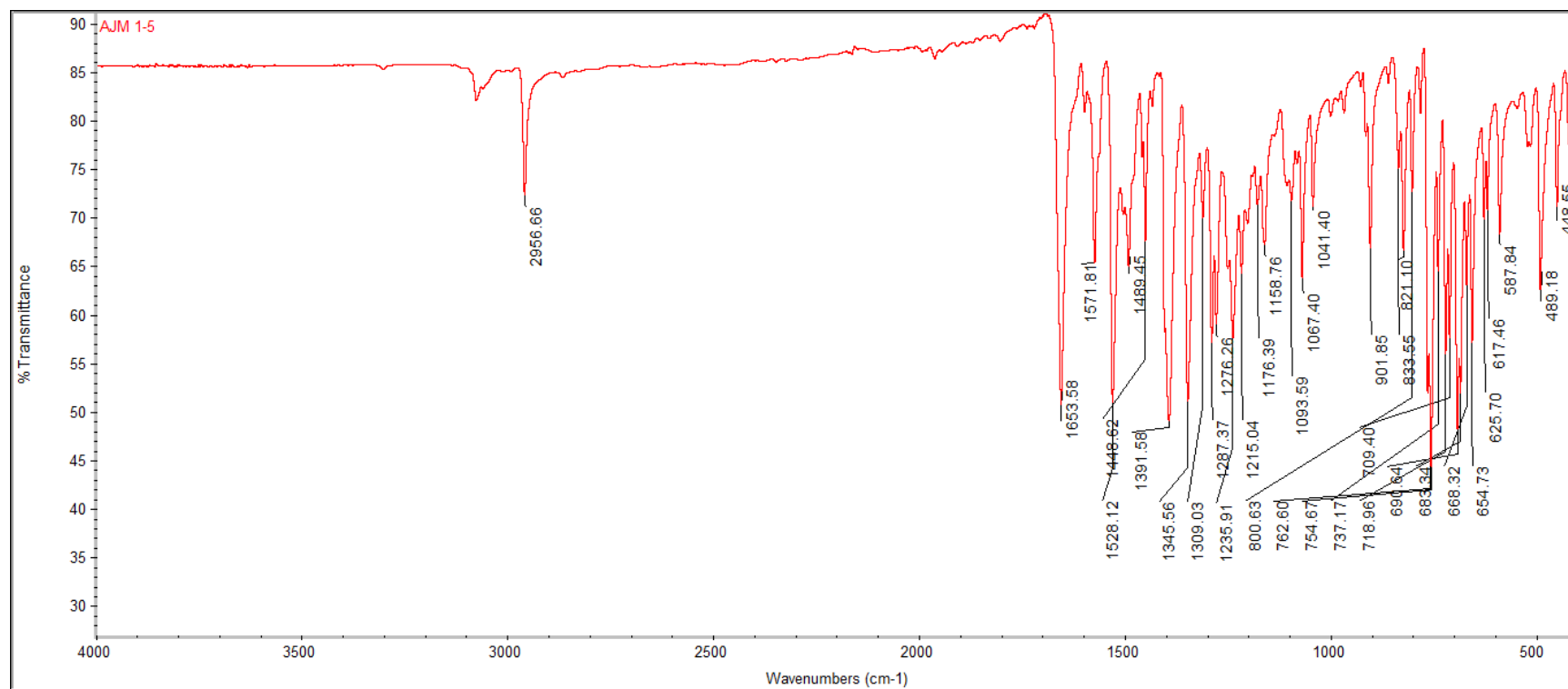
**Figure S30.**  $^{19}\text{F}$  NMR spectrum of compound **1i** (*m*-F).



**Figure S31.** FT-IR spectrum of compound **1a** (*p*-NO<sub>2</sub>).



**Figure S32.** FT-IR spectrum of compound **1b** (*m*-NO<sub>2</sub>).



**Figure S33.** FT-IR spectrum of compound **1c** (*o*-NO<sub>2</sub>).

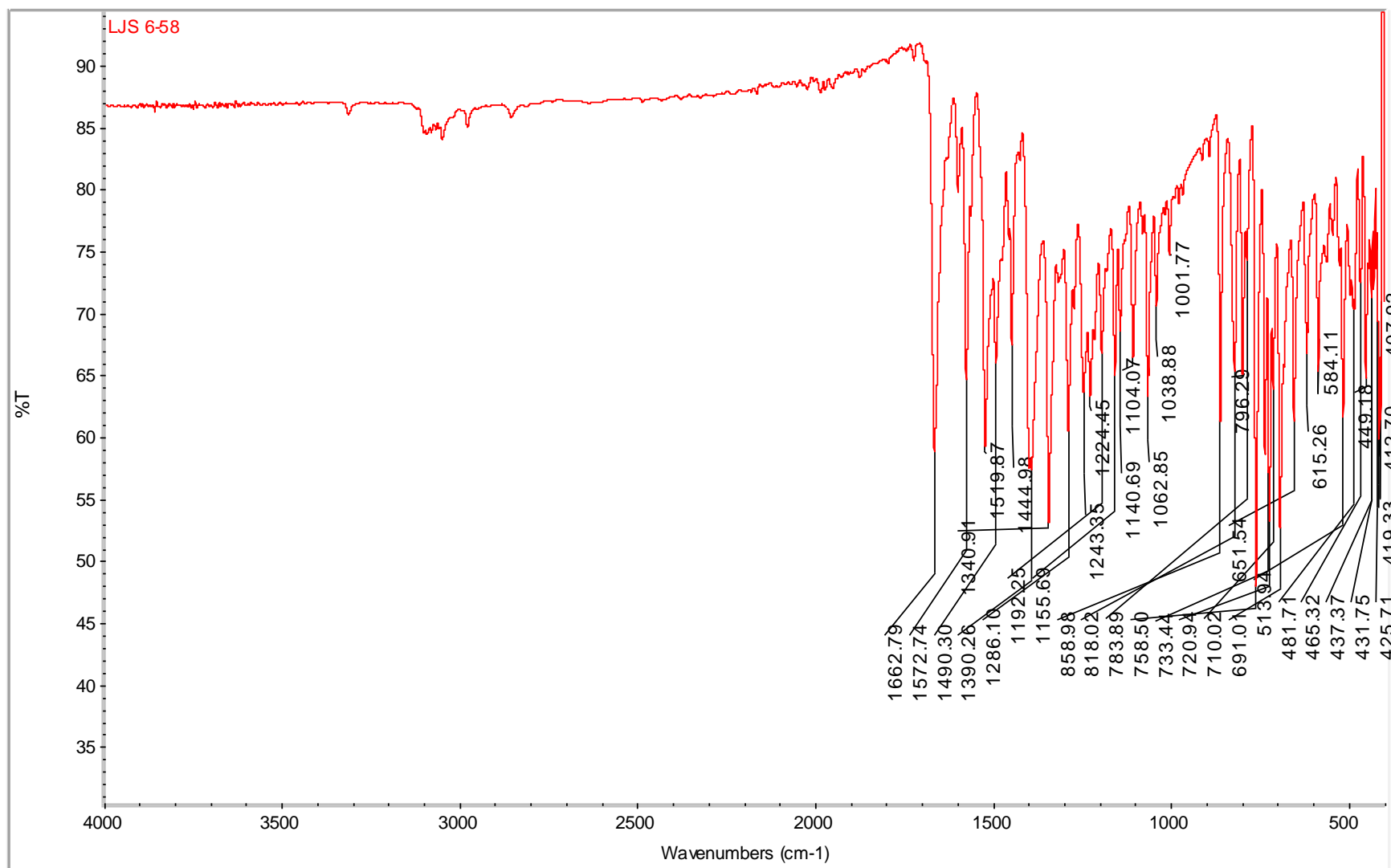


Figure S34. FT-IR spectrum of compound **1d** (*p*-CF<sub>3</sub>).

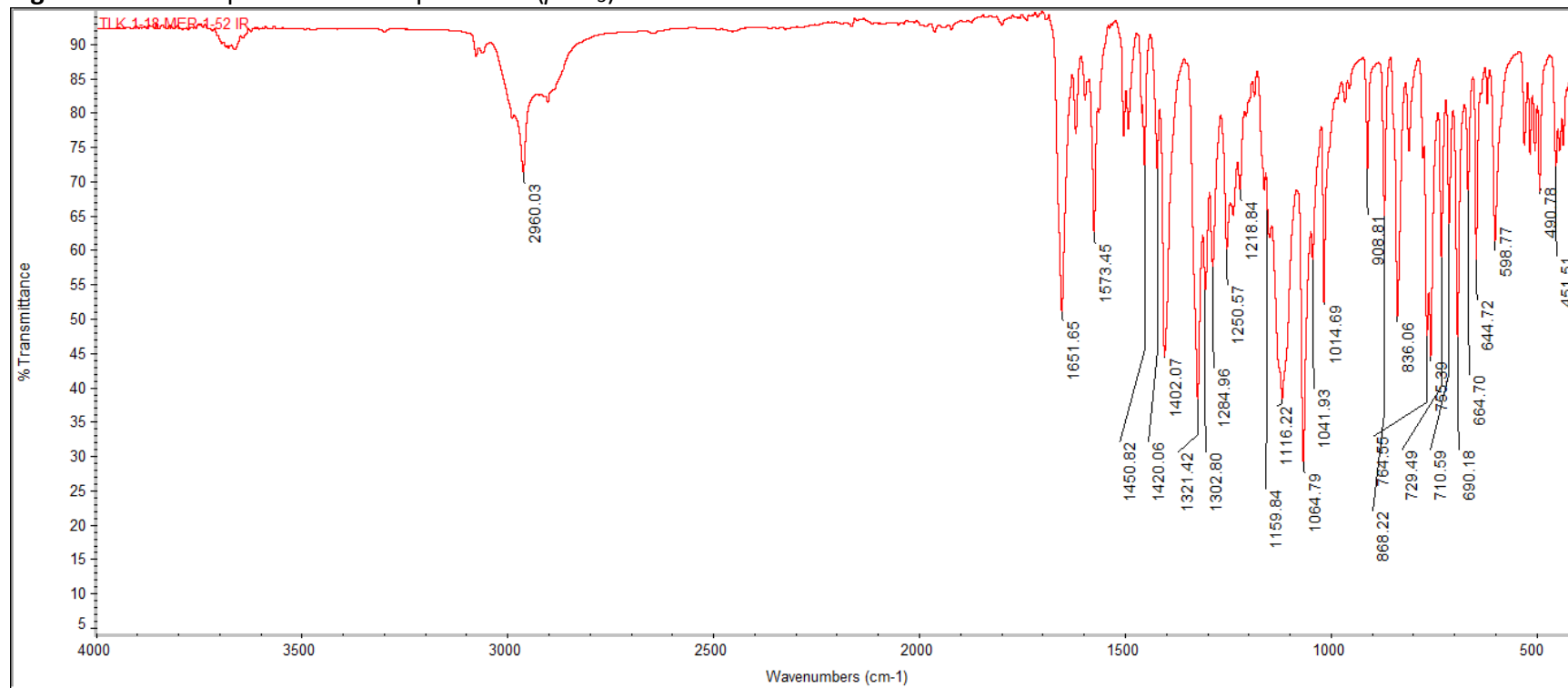


Figure S35. FT-IR spectrum of compound **1e** (*m*-CF<sub>3</sub>).

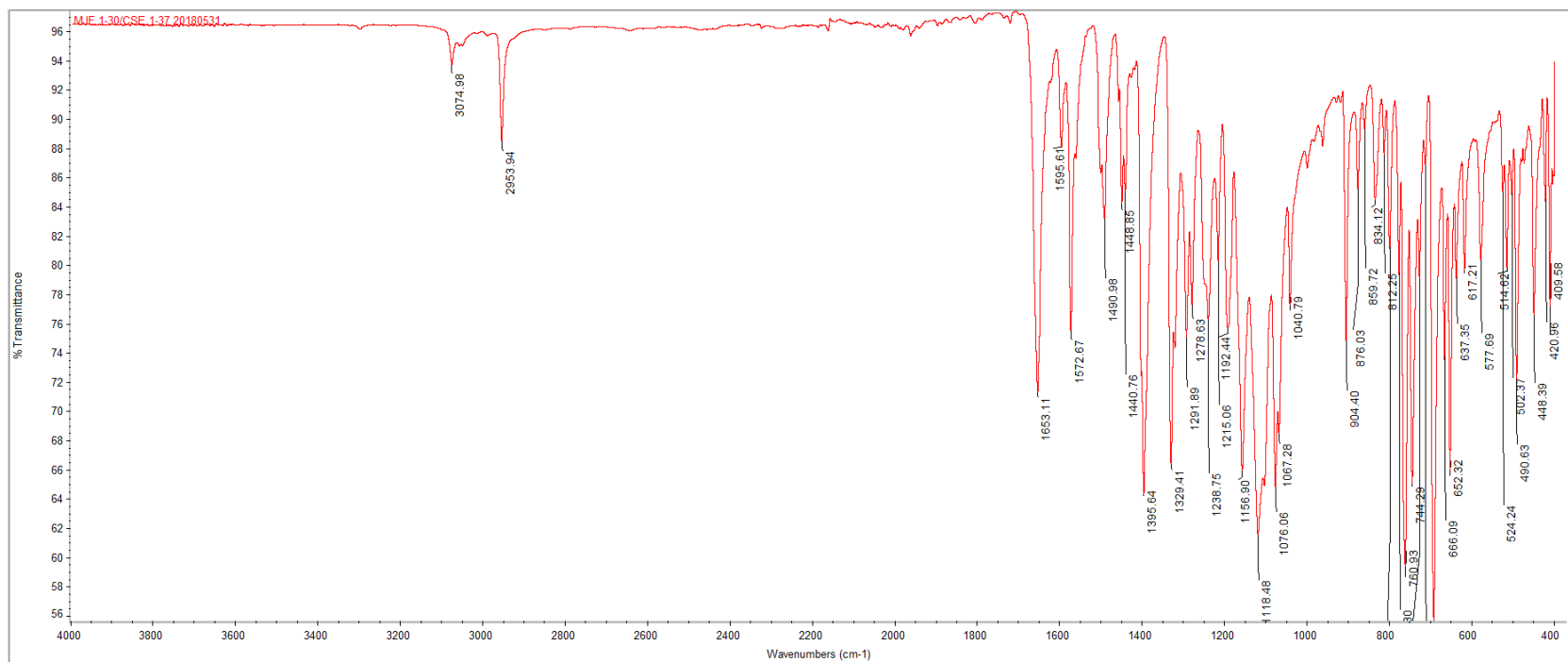
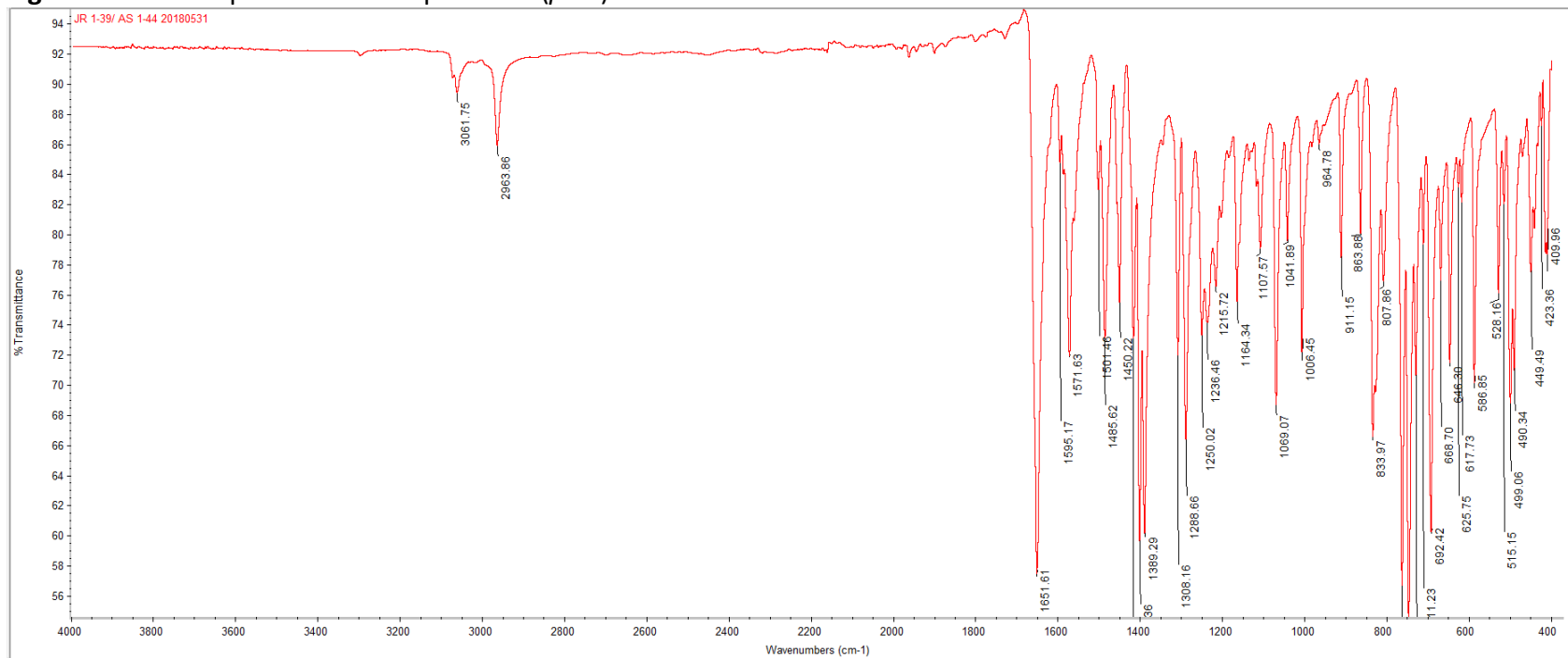
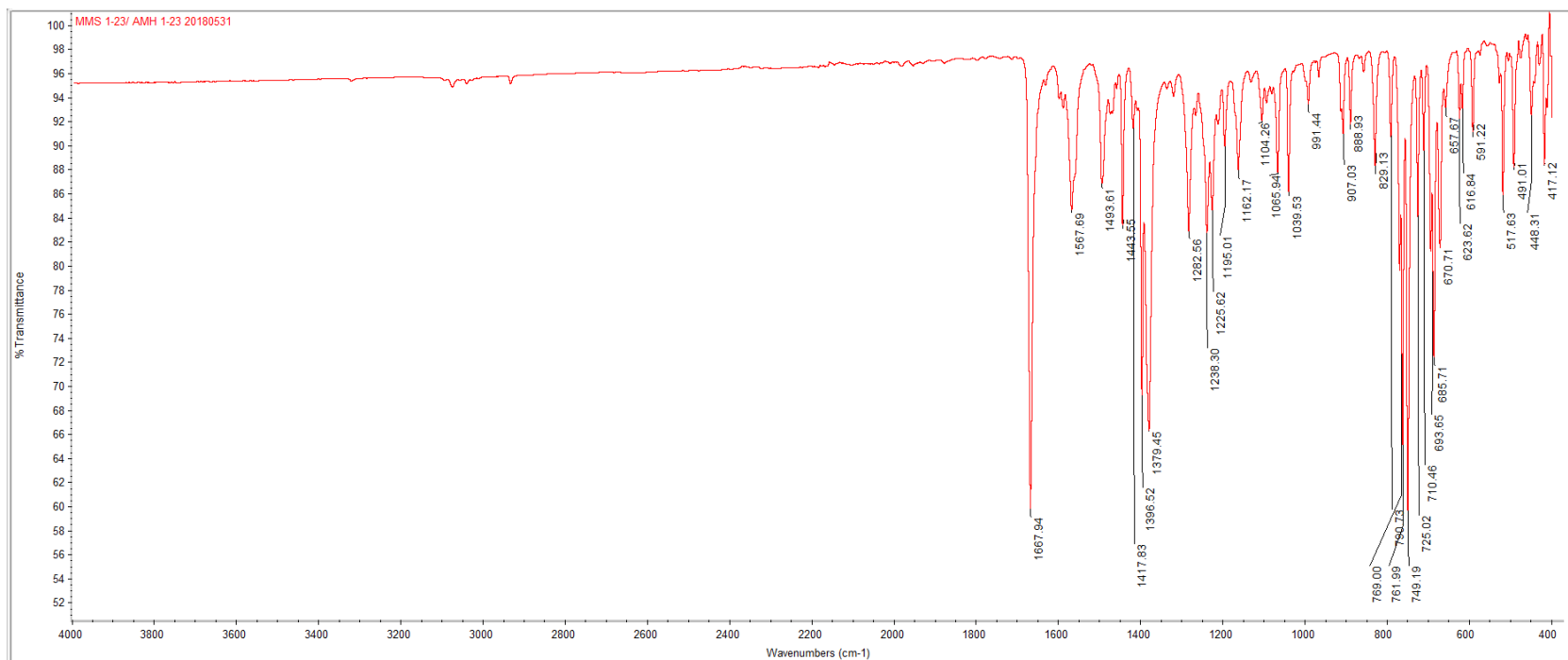


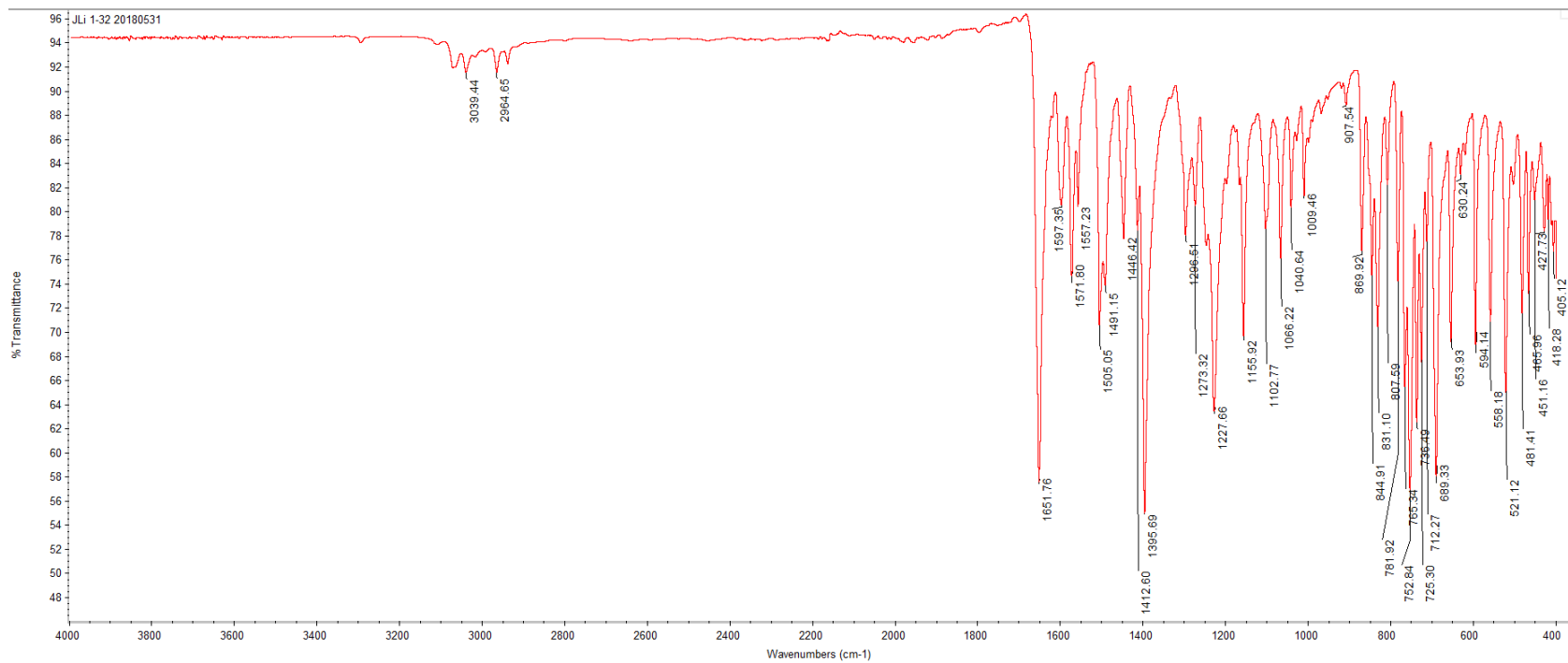
Figure S36. FT-IR spectrum of compound **1f** (*p*-Br).



**Figure S37.** FT-IR spectrum of compound **1g** (*m*-Br).



**Figure S38.** FT-IR spectrum of compound **1h** (*p*-F).



**Figure S39.** FT-IR spectrum of compound **1i** (*m*-F).

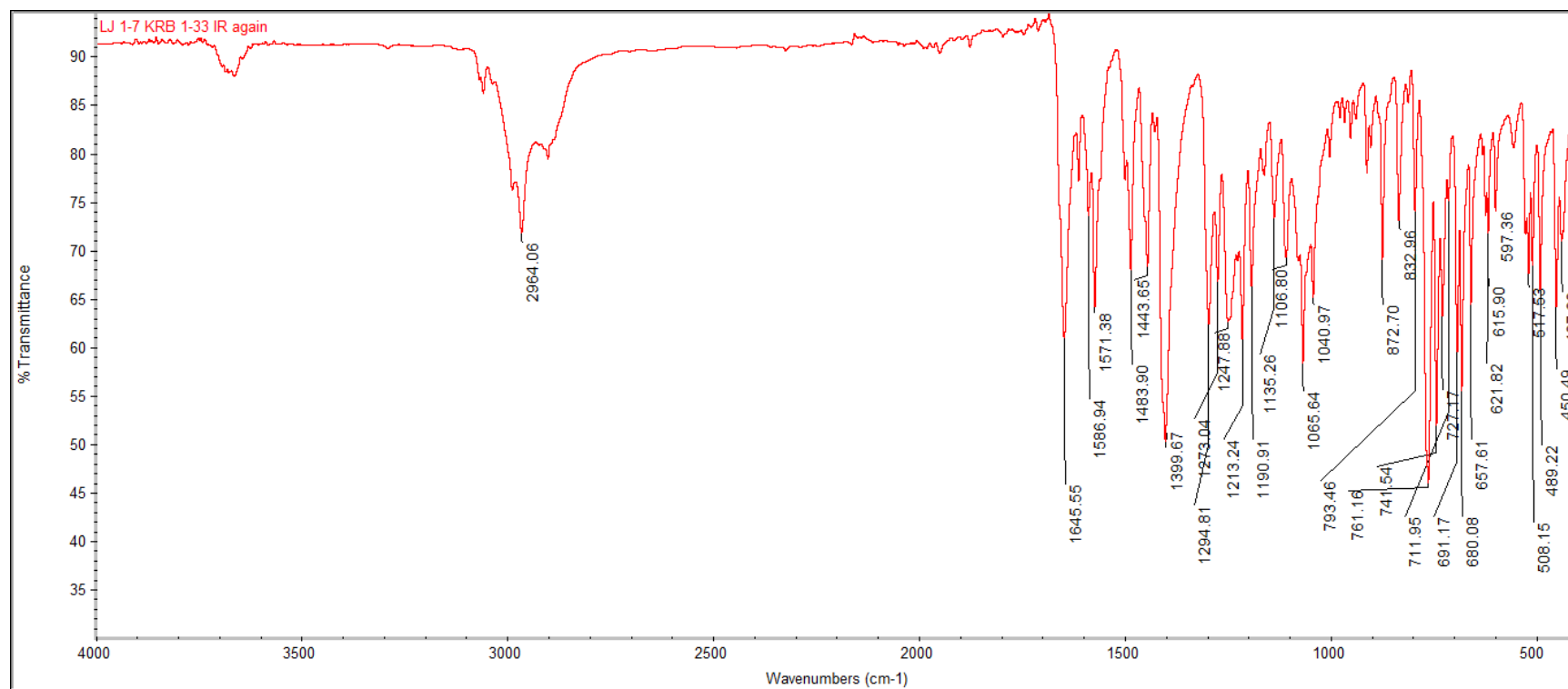
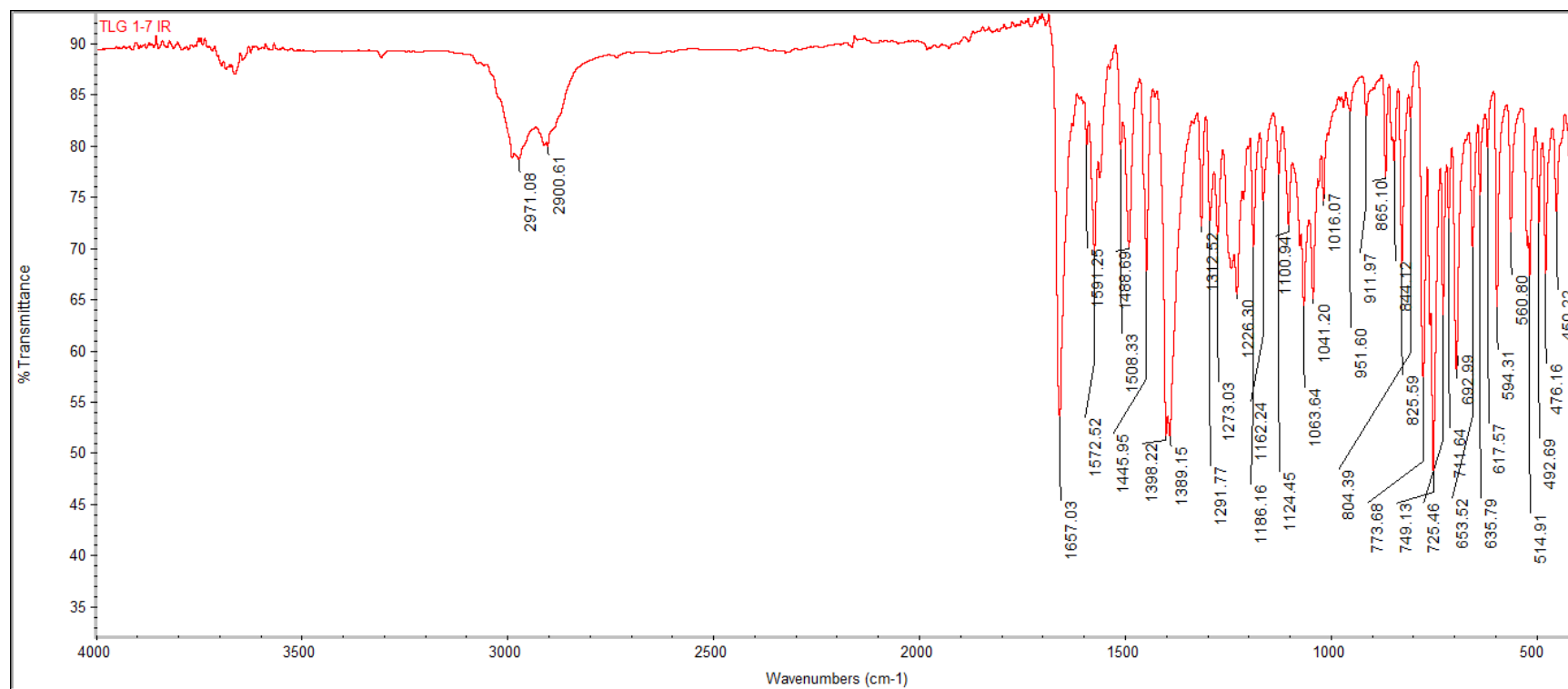
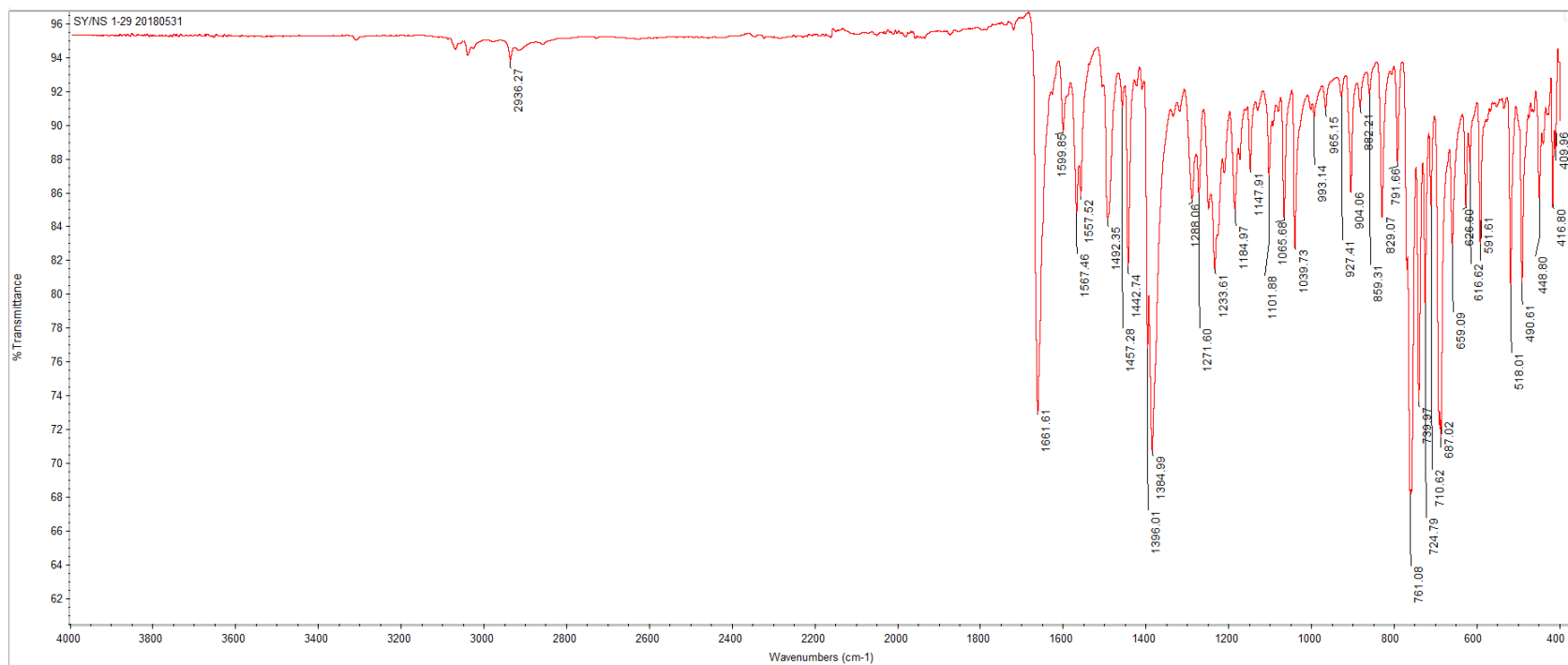


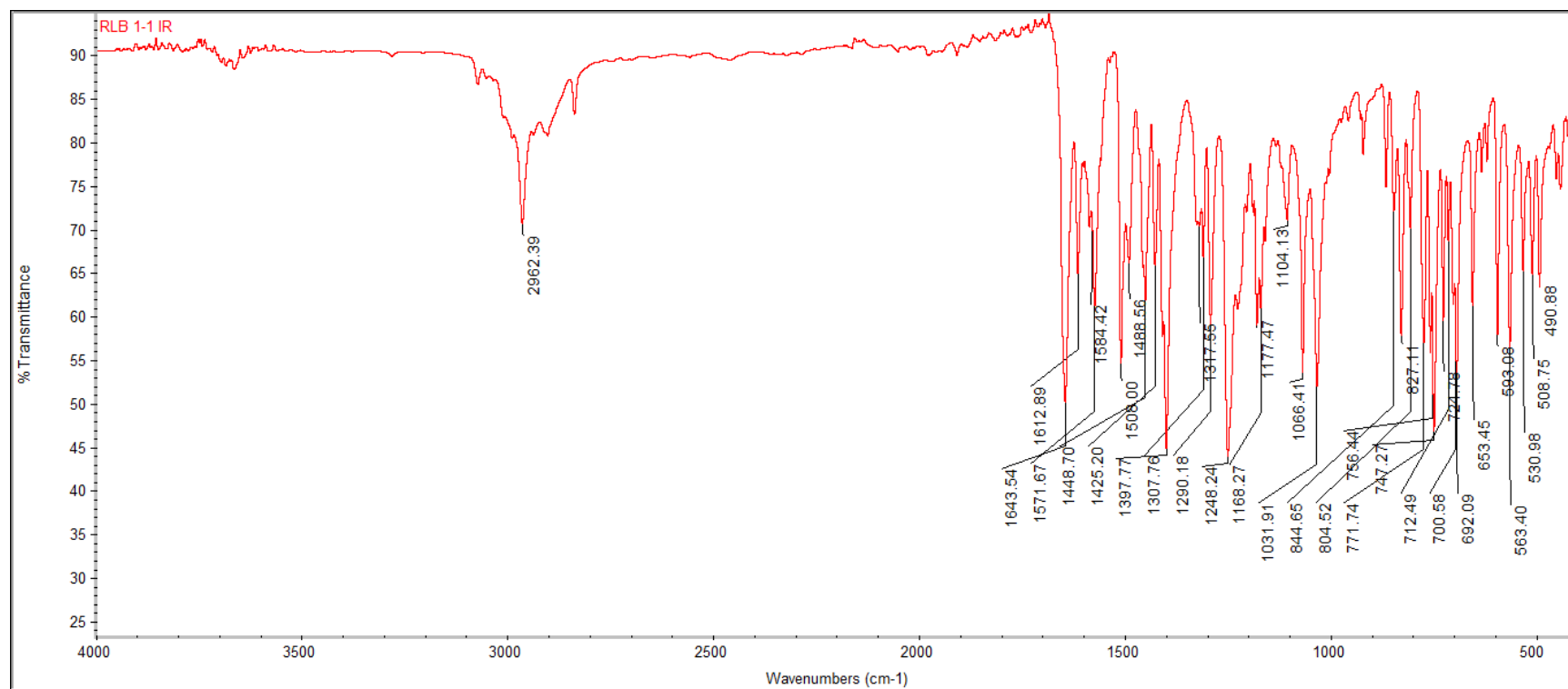
Figure S40. FT-IR spectrum of compound **1k** (*p*-Me).



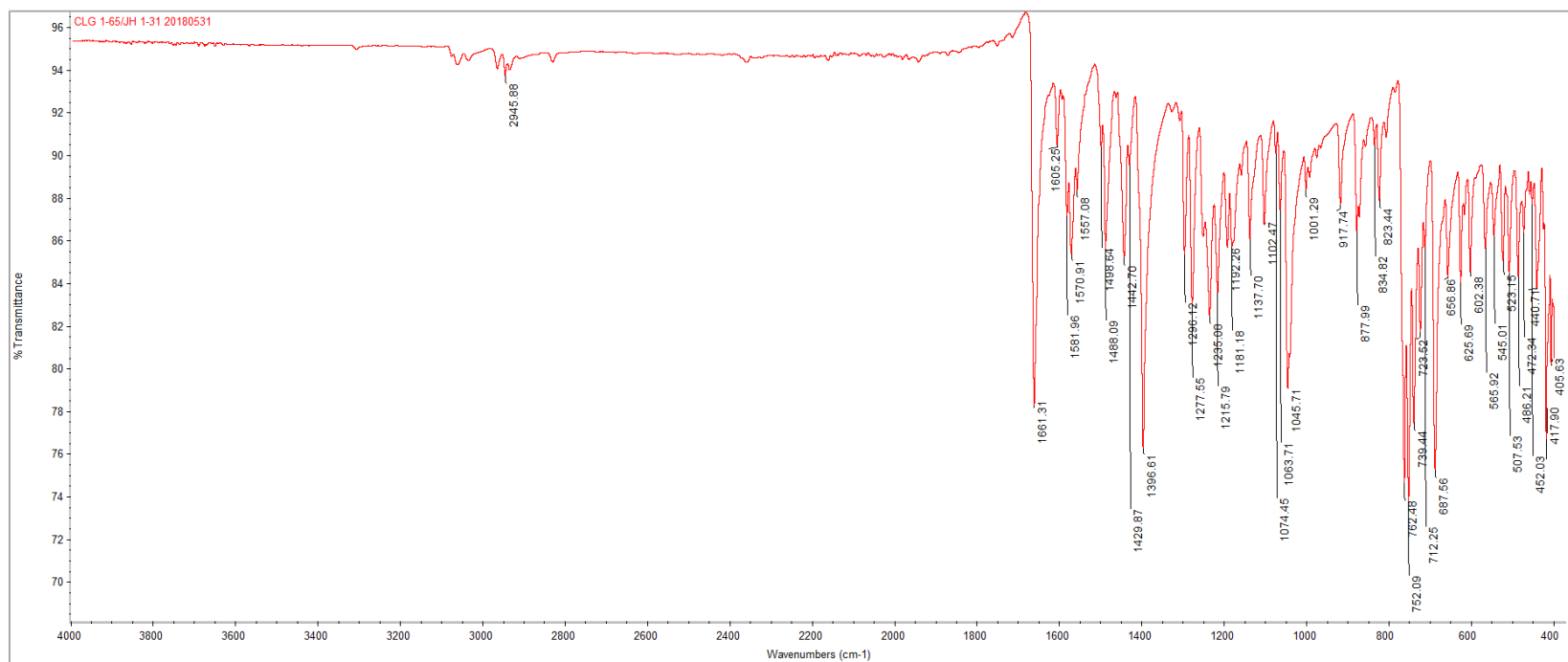
**Figure S41.** FT-IR spectrum of compound **1l** (*m*-Me).



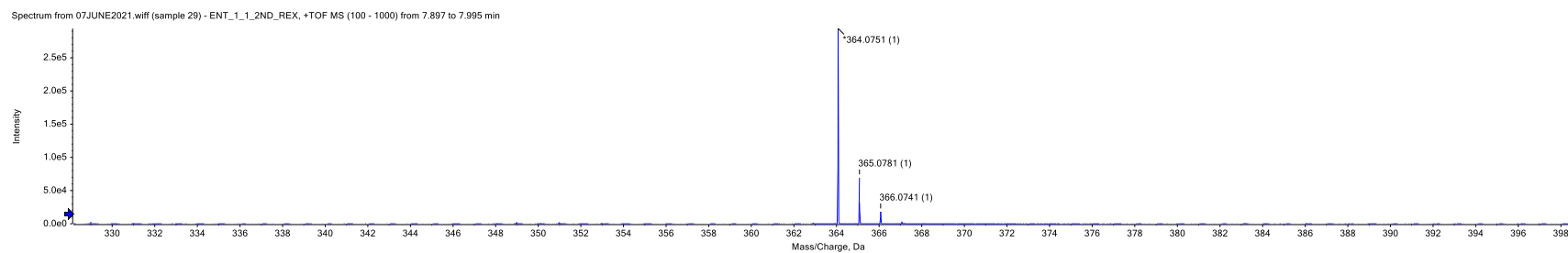
**Figure S42.** FT-IR spectrum of compound **1m** (*p*-OMe).



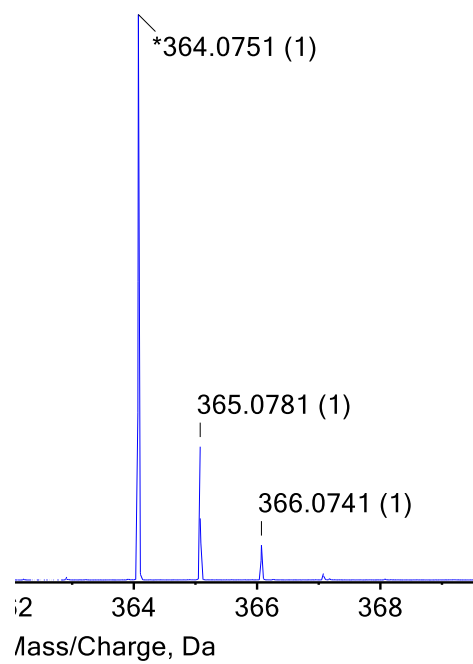
**Figure S43.** FT-IR spectrum of compound **1n** (*m*-OMe).



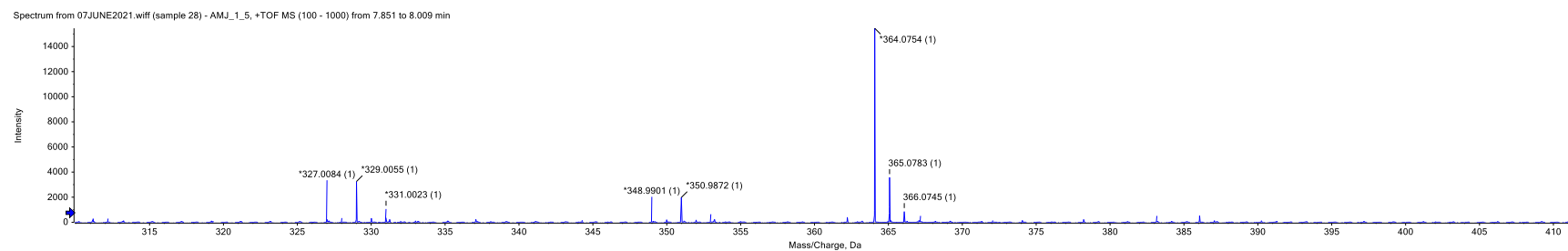
**Figure S44.** Mass spectrum of compound **1a** (*p*-NO<sub>2</sub>).



[M+H]<sup>+</sup> 364.0751Da

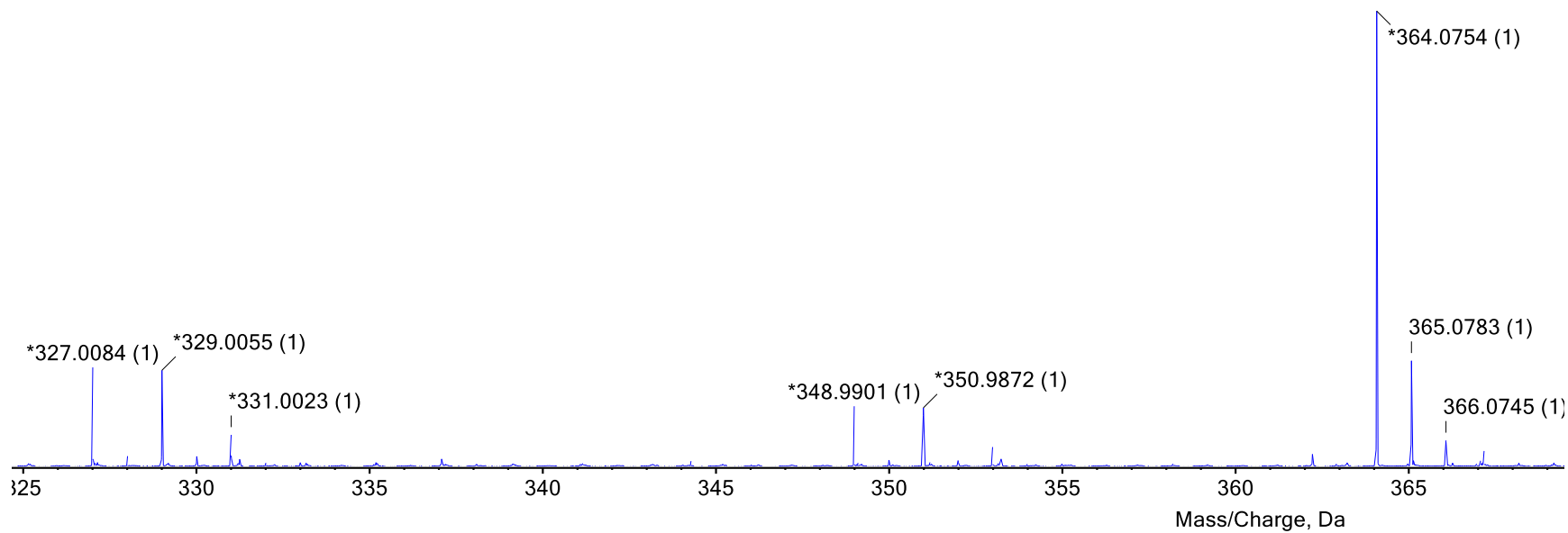


**Figure S45.** Mass spectrum of compound **1b** (*m*-NO<sub>2</sub>).

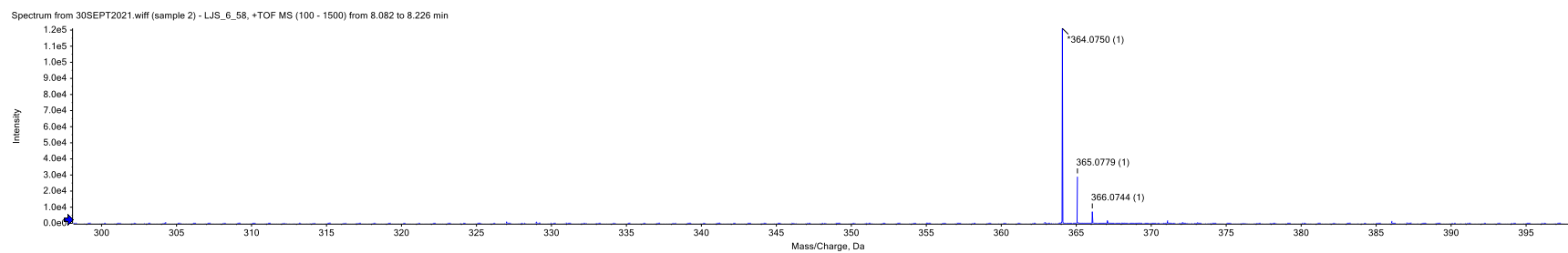


[M+H]<sup>+</sup> 364.0754Da

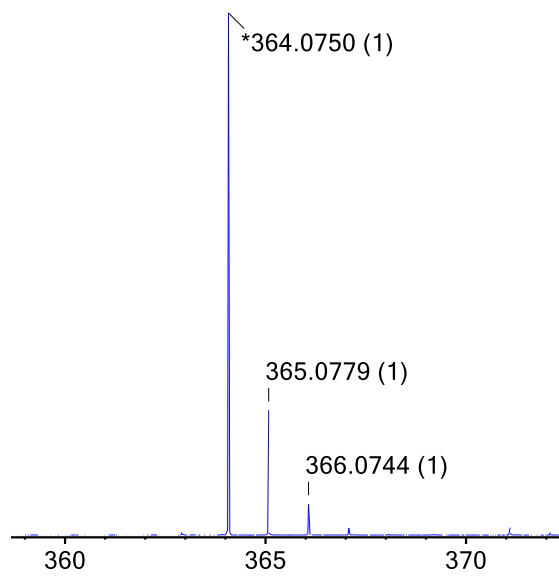
3 (100 - 1000) from 7.851 to 8.009 min



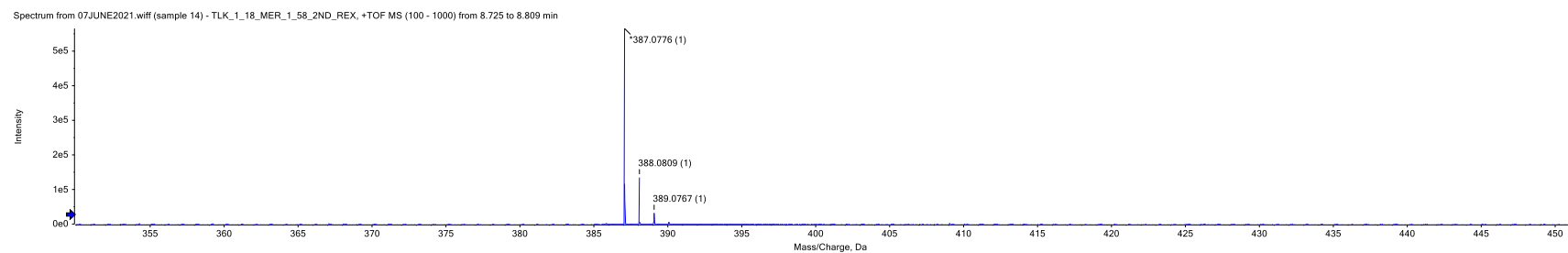
**Figure S46.** Mass spectrum of compound **1c** (*o*-NO<sub>2</sub>).



[M+H]<sup>+</sup> 364.0750

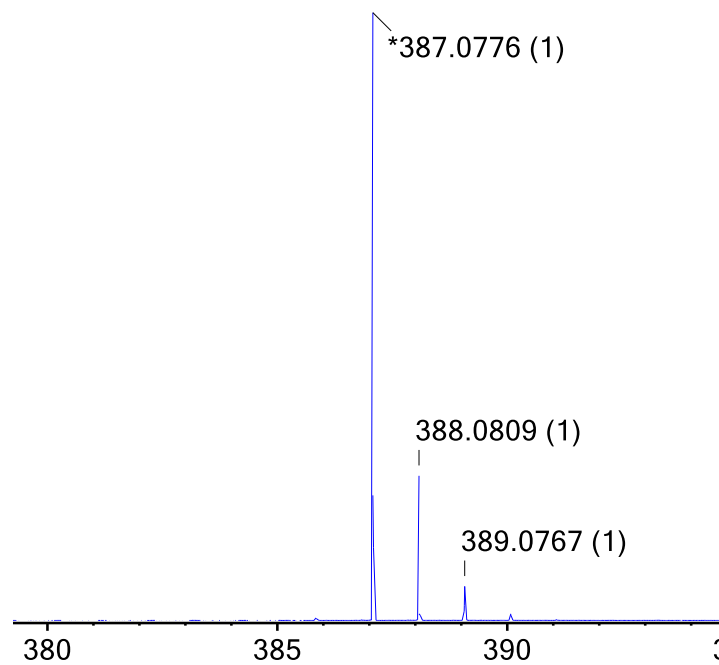


**Figure S47.** Mass spectrum of compound **1d** (*p*-CF<sub>3</sub>).

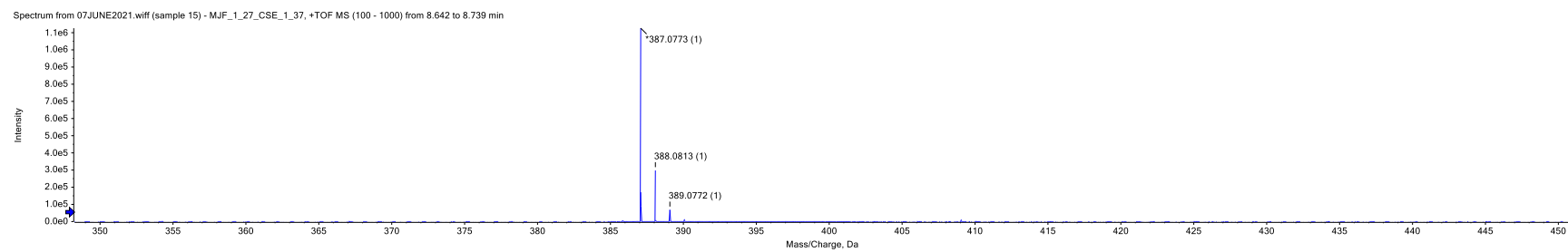


[M+H]<sup>+</sup> 387.0076Da

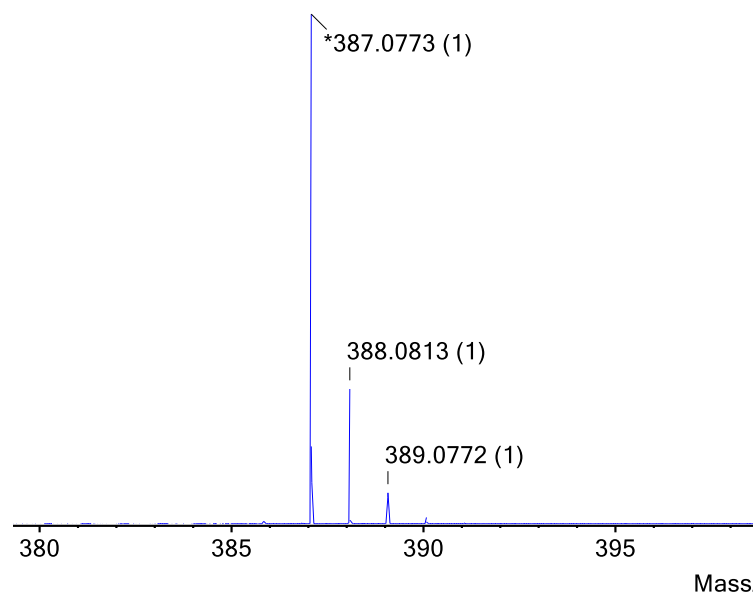
o 8.809 min



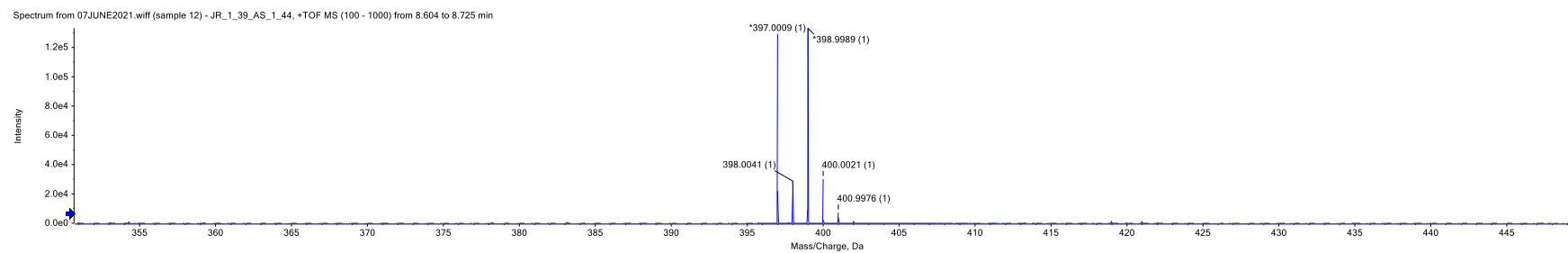
**Figure S48.** Mass spectrum of compound **1e** (*m*-CF<sub>3</sub>).



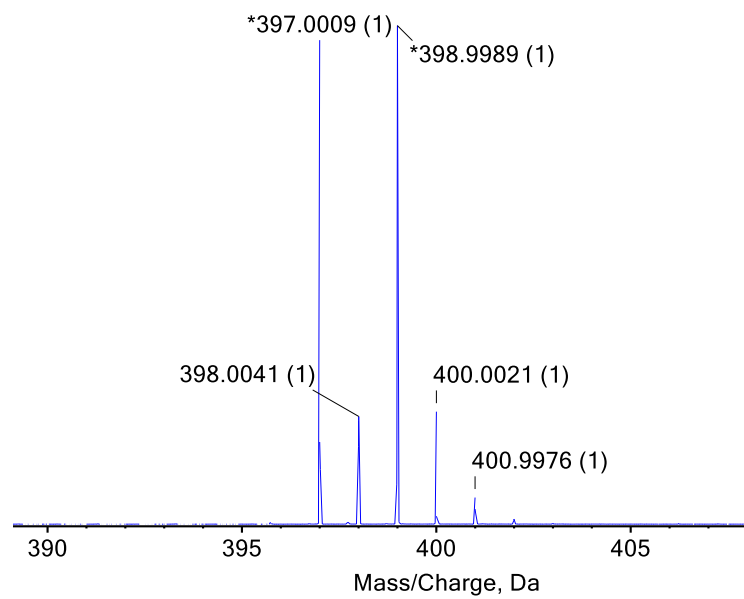
[M+H]<sup>+</sup> 387.0773Da



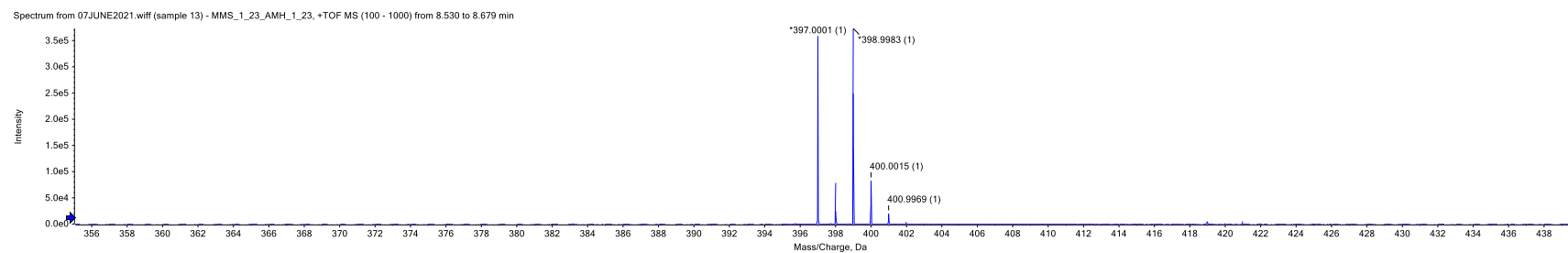
**Figure S49.** Mass spectrum of compound **1f** (*p*-Br).



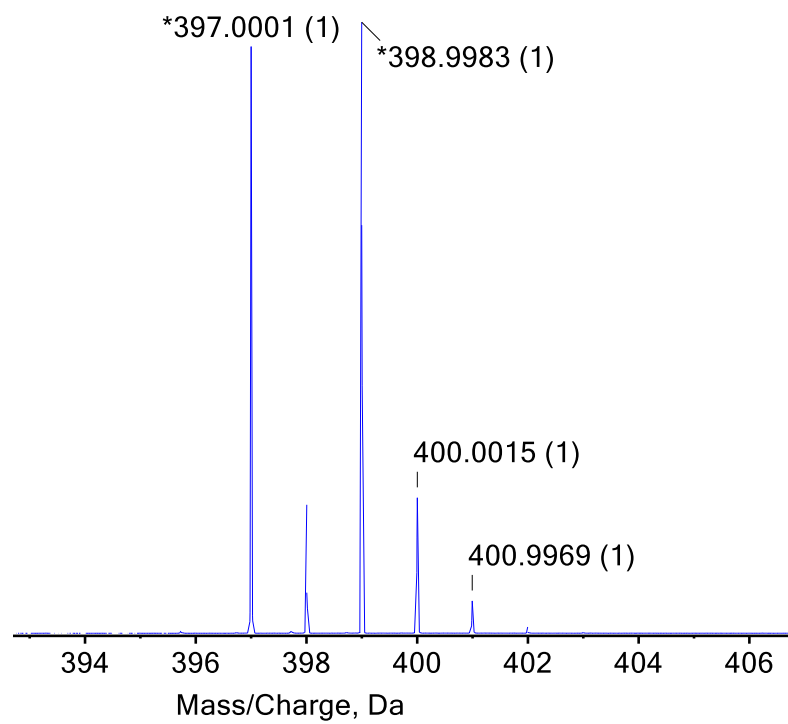
$[M+H]^+$  397.0009Da



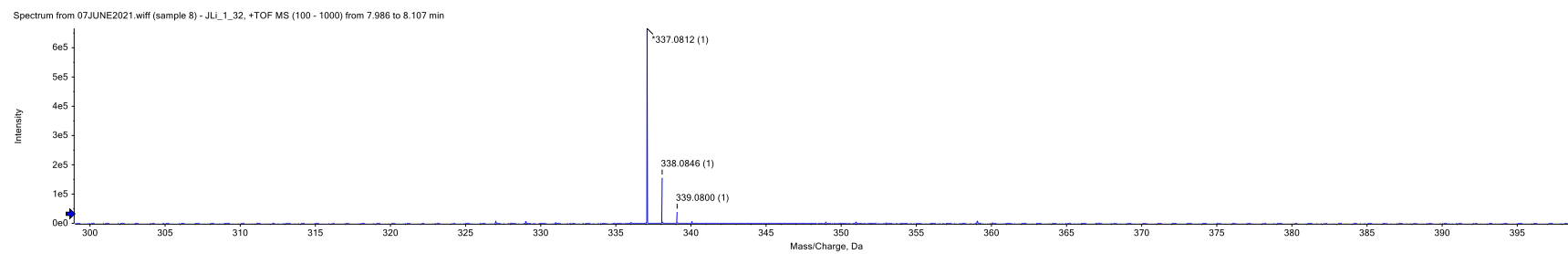
**Figure S50.** Mass spectrum of compound **1g** (*m*-Br).



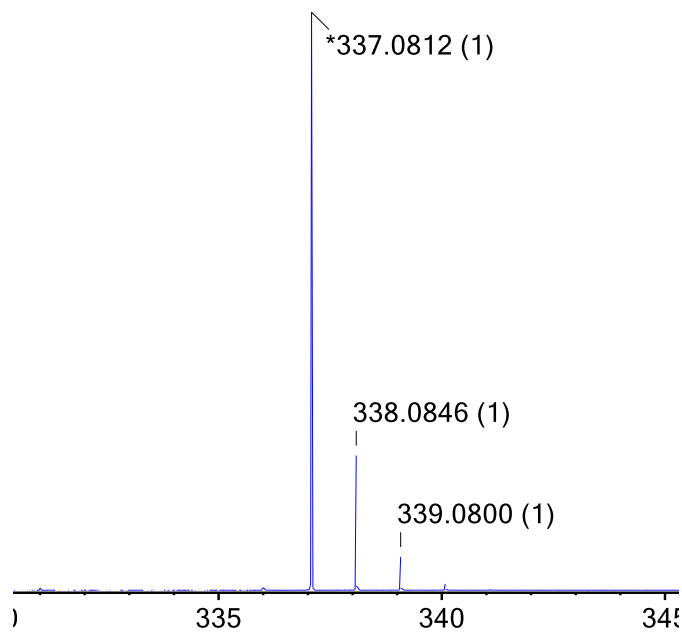
$[M+H]^+$  397.0001Da



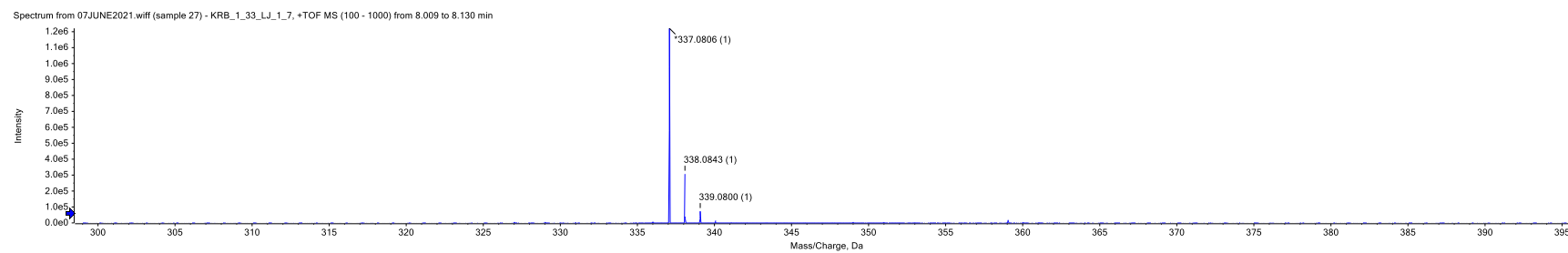
**Figure S51.** Mass spectrum of compound **1h** (*p*-F).



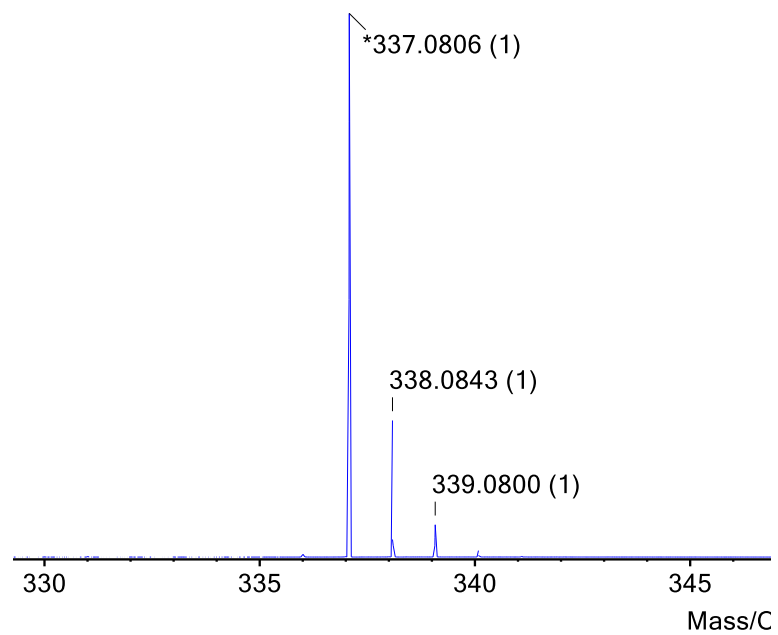
$[M+H]^+$  337.0812Da



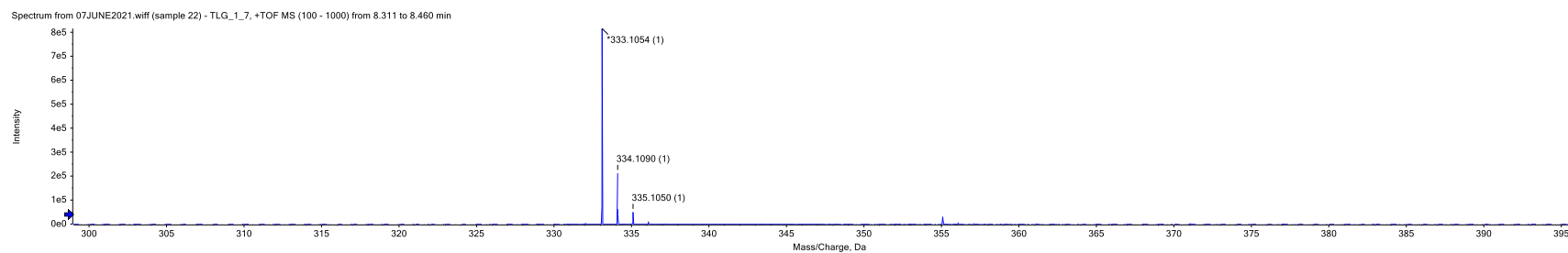
**Figure S52.** Mass spectrum of compound **1i** (*m*-F).



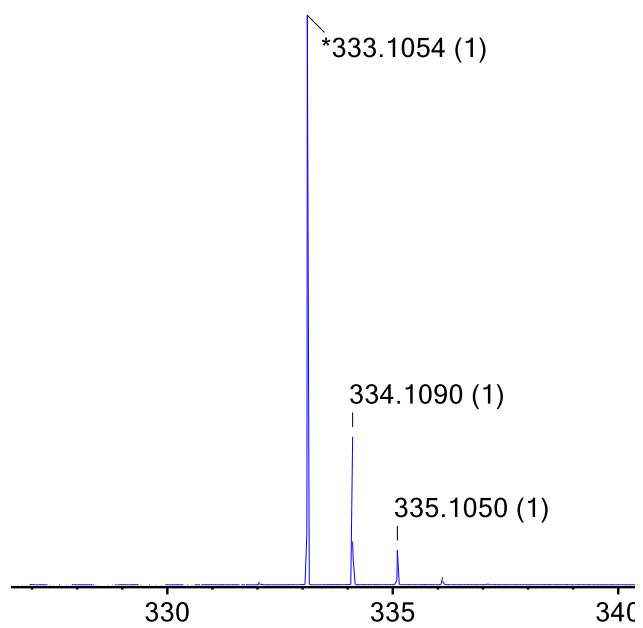
$[M+H]^+$  337.0806Da



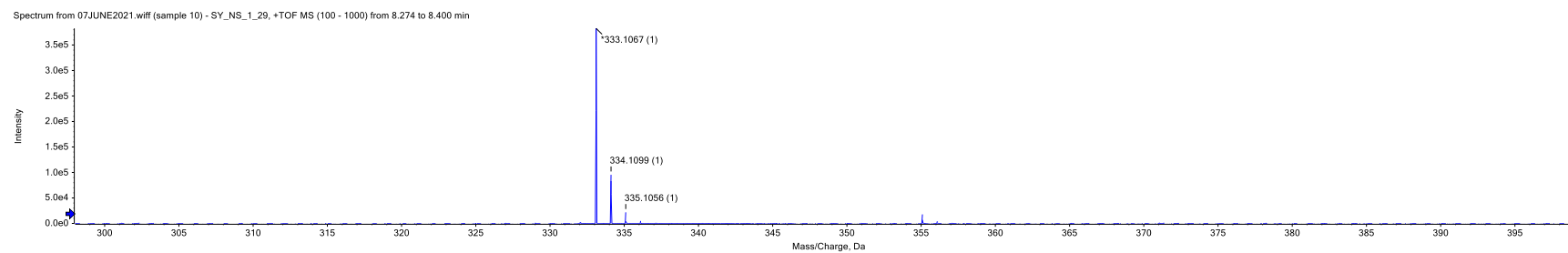
**Figure S53.** Mass spectrum of compound **1k** (*p*-Me).



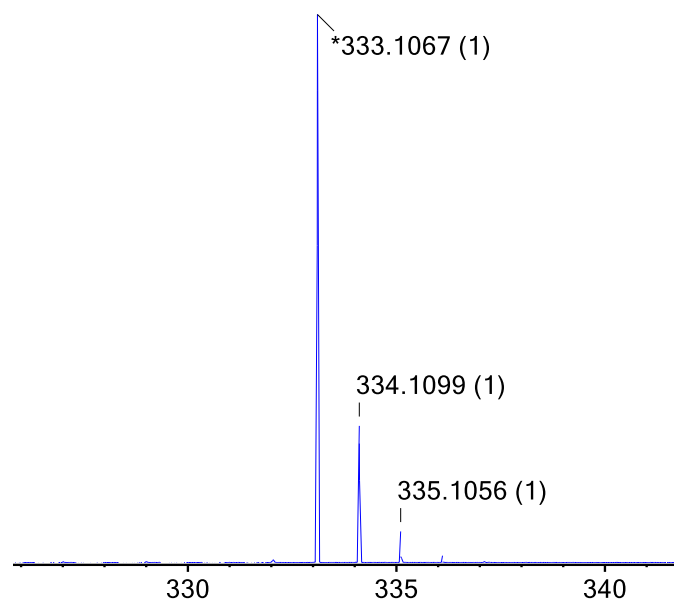
$[M+H]^+$  333.1054Da



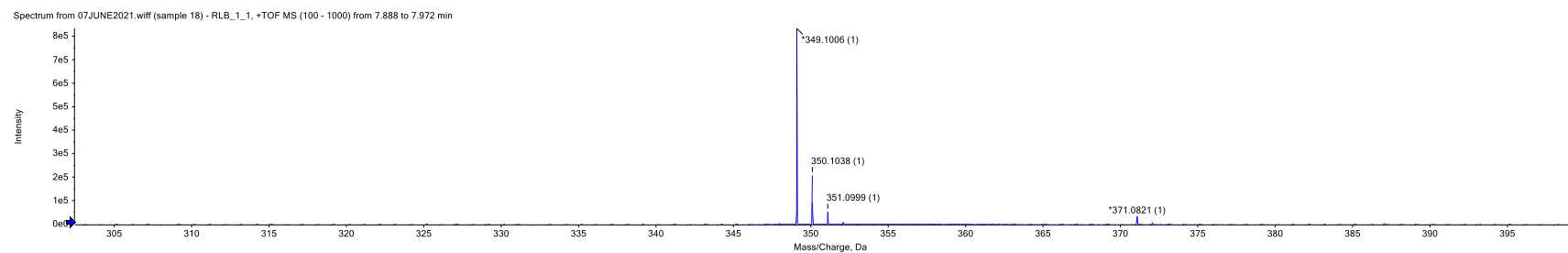
**Figure S54.** Mass spectrum of compound **1l** (*m*-Me).



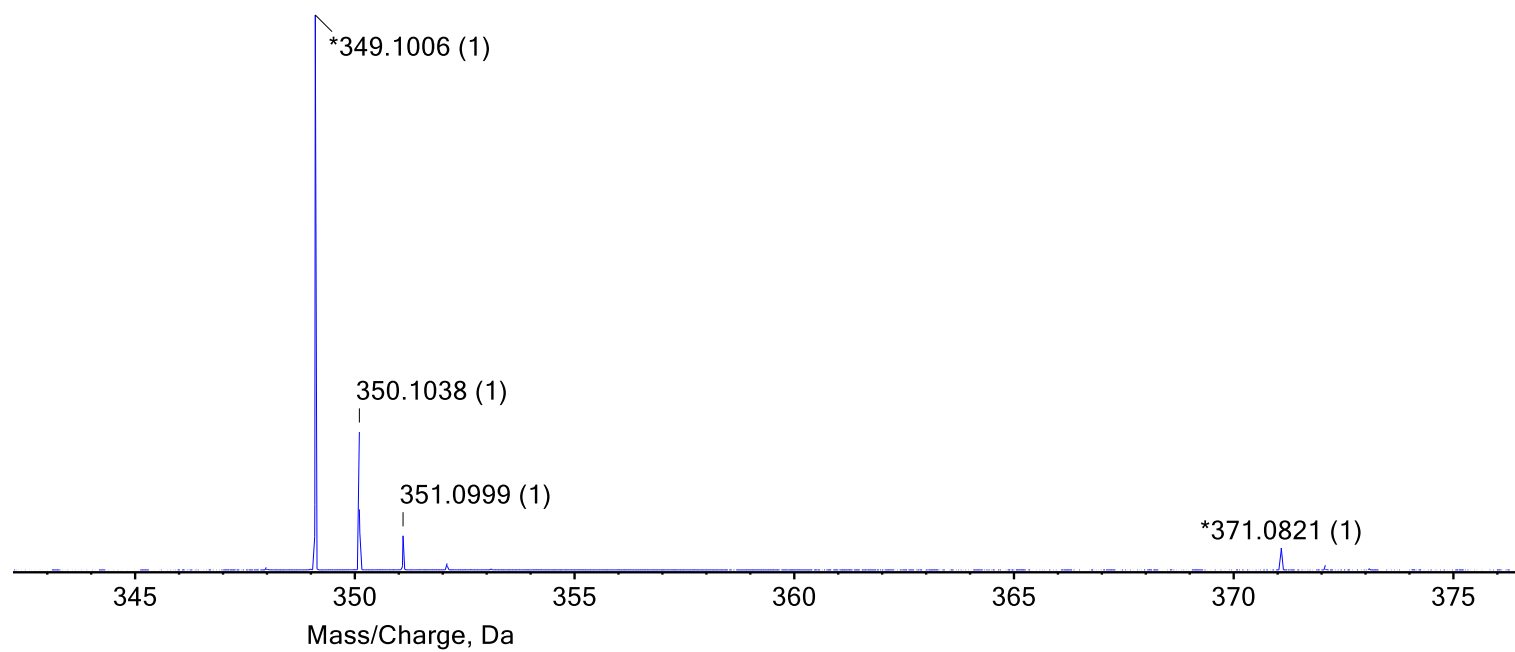
$[M+H]^+$  333.1067Da



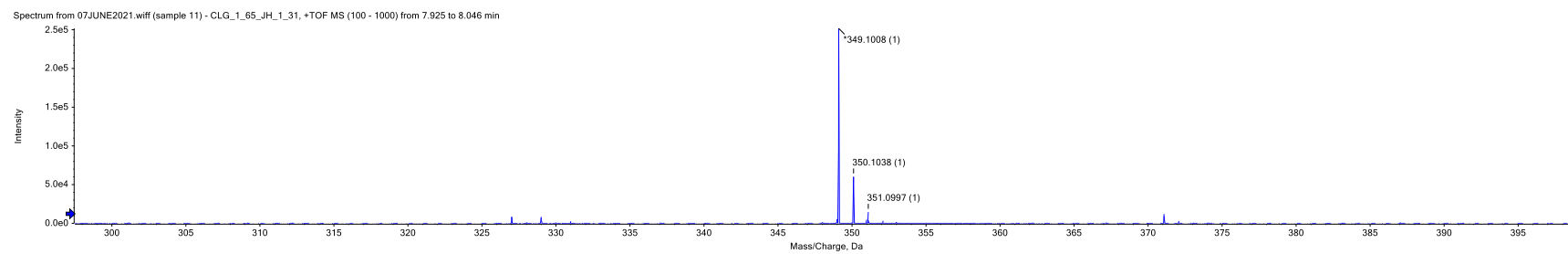
**Figure S55.** Mass spectrum of compound **1m** (*p*-OMe).



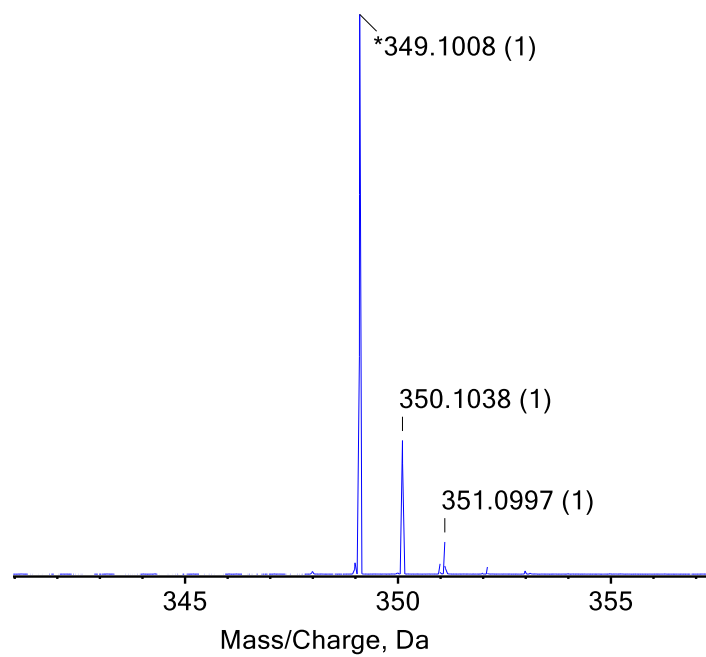
$[M+H]^+$  349.1006Da



**Figure S56.** Mass spectrum of compound **1n** (*m*-OMe).



$[M+H]^+$  349.1008Da



**Table S1.** TbBSF 90-13 growth curve data with 50 uM pyridothiazinones **1a-1n**. Cell densities are shown in parasites/mL in the following table. "R1" = Run 1, etc.

Hours	0	18	42	66
DMSO R1	2.33E+05	1.75E+06	5.35E+06	2.85E+06
DMSO R2	2.33E+05	2.07E+06	4.80E+06	2.15E+06
DMSO R3	2.33E+05	1.58E+06	5.30E+06	1.85E+06
DMSO R4	2.67E+05	1.10E+06	5.60E+06	2.62E+06
<b>1a</b> R1	2.33E+05	1.24E+06	3.80E+06	3.25E+06
<b>1a</b> R2	2.33E+05	1.19E+06	3.40E+06	3.60E+06
<b>1a</b> R3	2.33E+05	1.18E+06	3.10E+06	2.90E+06
<b>1b</b> R1	2.33E+05	1.36E+06	3.02E+06	3.15E+06
<b>1b</b> R2	2.33E+05	1.23E+06	3.33E+06	2.86E+06
<b>1b</b> R3	2.33E+05	1.26E+06	3.48E+06	3.23E+06
<b>1c</b> R1	2.67E+05	5.20E+05	8.10E+05	1.32E+06
<b>1c</b> R2	2.67E+05	6.50E+05	1.17E+06	1.37E+06
<b>1c</b> R3	2.67E+05	4.20E+05	9.10E+05	1.22E+06
<b>1d</b> R1	2.33E+05	0.00E+00	0.00E+00	0.00E+00
<b>1d</b> R2	2.33E+05	1.00E+04	0.00E+00	0.00E+00
<b>1d</b> R3	2.33E+05	0.00E+00	0.00E+00	0.00E+00
<b>1e</b> R1	2.33E+05	0.00E+00	0.00E+00	0.00E+00
<b>1e</b> R2	2.33E+05	1.00E+04	1.00E+04	0.00E+00
<b>1e</b> R3	2.33E+05	0.00E+00	0.00E+00	0.00E+00
<b>1f</b> R1	2.33E+05	0.00E+00	0.00E+00	0.00E+00
<b>1f</b> R2	2.33E+05	0.00E+00	0.00E+00	0.00E+00
<b>1f</b> R3	2.33E+05	0.00E+00	0.00E+00	0.00E+00
<b>1g</b> R1	2.33E+05	0.00E+00	0.00E+00	0.00E+00
<b>1g</b> R2	2.33E+05	1.00E+04	0.00E+00	0.00E+00
<b>1g</b> R2	2.33E+05	0.00E+00	0.00E+00	0.00E+00

<b>1h R1</b>	2.33E+05	1.17E+06	2.47E+06	2.80E+06
<b>1h R2</b>	2.33E+05	1.08E+06	2.73E+06	2.80E+06
<b>1h R3</b>	2.33E+05	9.70E+05	2.82E+06	2.35E+06
<b>1i R1</b>	2.33E+05	1.21E+06	2.83E+06	2.60E+06
<b>1i R2</b>	2.33E+05	9.60E+05	2.06E+06	2.55E+06
<b>1i R3</b>	2.33E+05	1.02E+06	2.06E+06	2.91E+06
<b>1j R1</b>	2.33E+05	1.40E+06	3.17E+06	2.63E+06
<b>1j R2</b>	2.33E+05	1.21E+06	3.95E+06	3.36E+06
<b>1j R3</b>	2.33E+05	1.37E+06	3.65E+06	3.69E+06
<b>1k R1</b>	2.33E+05	5.00E+04	2.00E+04	5.00E+04
<b>1k R2</b>	2.33E+05	0.00E+00	0.00E+00	0.00E+00
<b>1k R3</b>	2.33E+05	0.00E+00	0.00E+00	2.00E+04
<b>1l R1</b>	2.33E+05	5.00E+05	8.20E+05	1.35E+06
<b>1l R2</b>	2.33E+05	5.20E+05	6.50E+05	1.24E+06
<b>1l R3</b>	2.33E+05	7.00E+05	1.31E+06	1.91E+06
<b>1m R1</b>	2.33E+05	7.50E+05	1.53E+06	2.74E+06
<b>1m R2</b>	2.33E+05	1.25E+06	2.68E+06	3.09E+06
<b>1m R3</b>	2.33E+05	1.19E+06	2.27E+06	3.12E+06
<b>1n R1</b>	2.33E+05	1.39E+06	2.02E+06	2.45E+06
<b>1n R2</b>	2.33E+05	1.22E+06	2.32E+06	2.80E+06
<b>1n R3</b>	2.33E+05	1.10E+06	2.36E+06	2.77E+06