

## **Supplementary Data**

### **Journal: New Journal of Chemistry**

#### **Synthesis, characterization, antibacterial, antioxidant, DNA binding and SAR study of novel pyrazine moiety bearing 2-pyrazoline derivatives**

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1. <sup>1</sup>H NMR and <sup>13</sup>C NMR spectra of compounds **4a-4l**.

Figure S1: <sup>1</sup>H NMR spectra of 4a

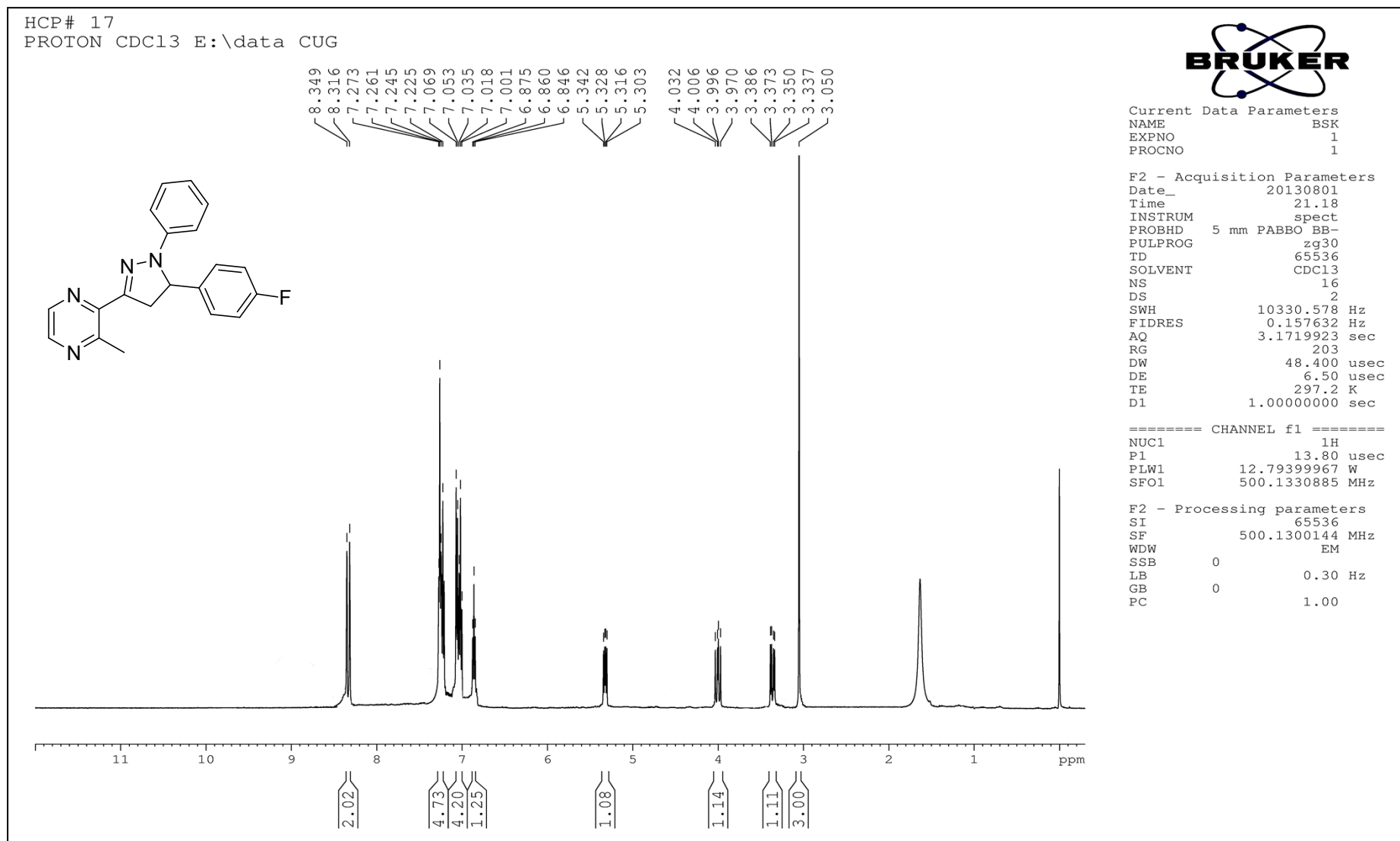


Figure S2: <sup>13</sup>C NMR spectra of 4a

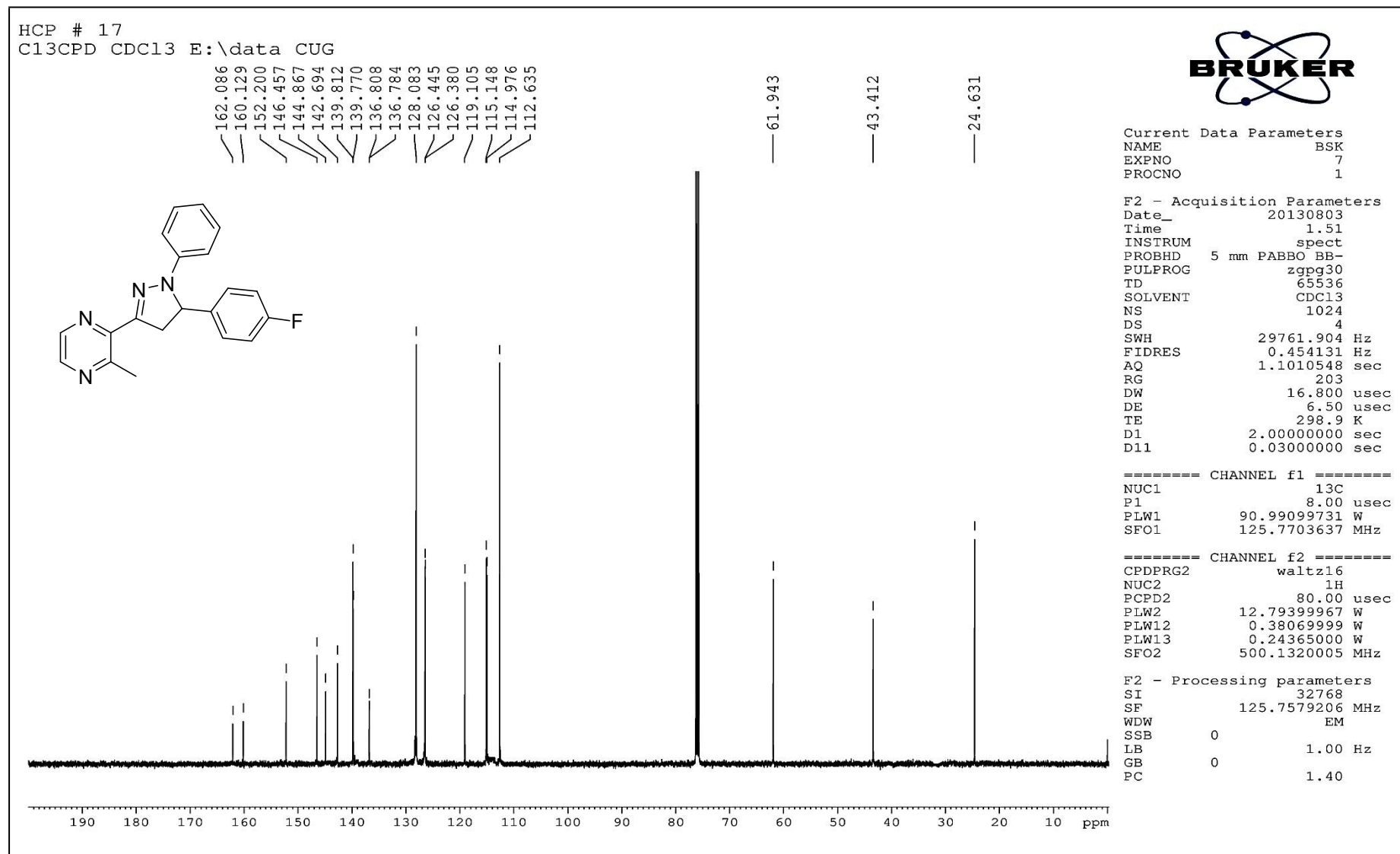


Figure S3: <sup>1</sup>H NMR spectra of 4b

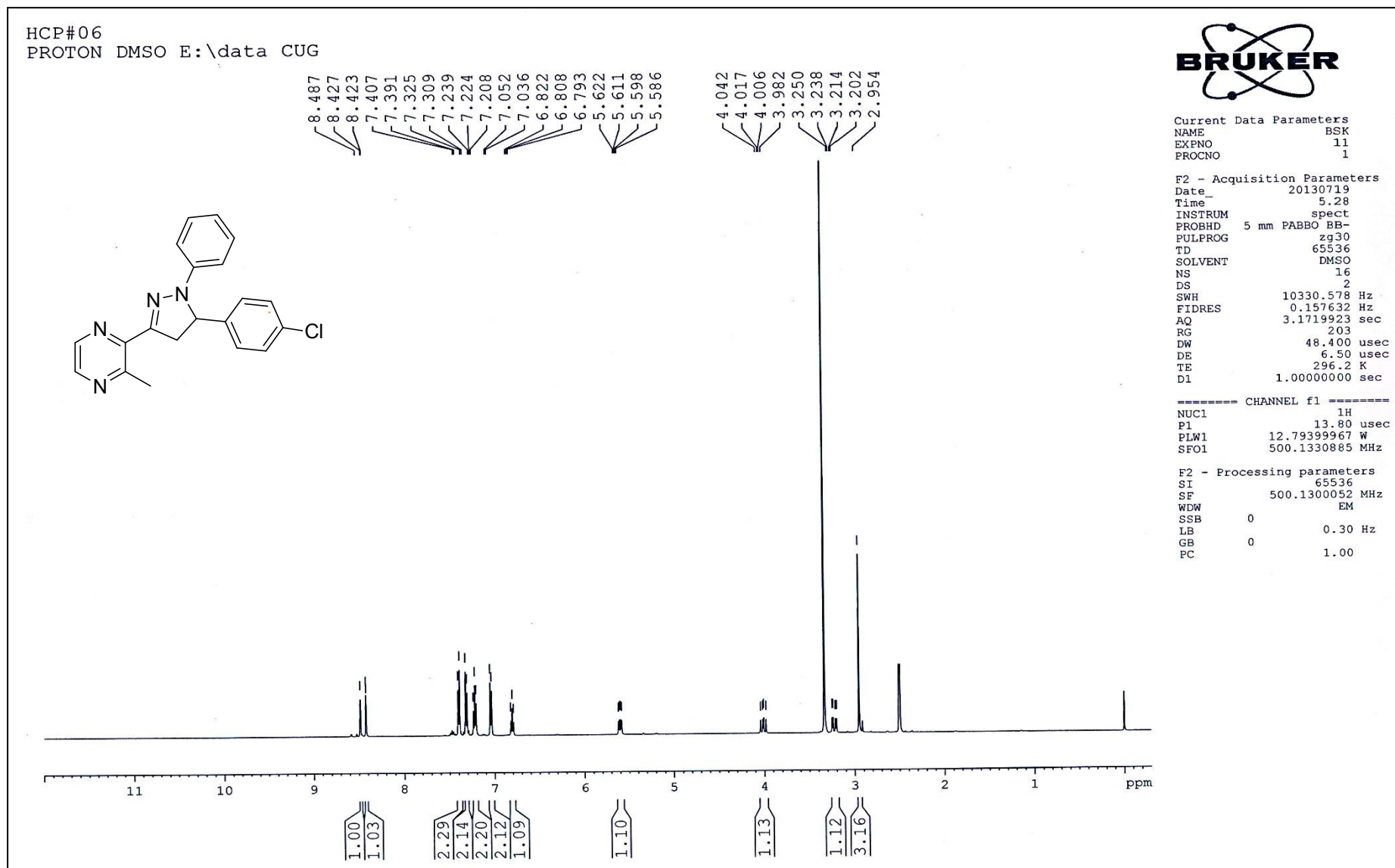




Figure S4: <sup>13</sup>C NMR spectra of 4b

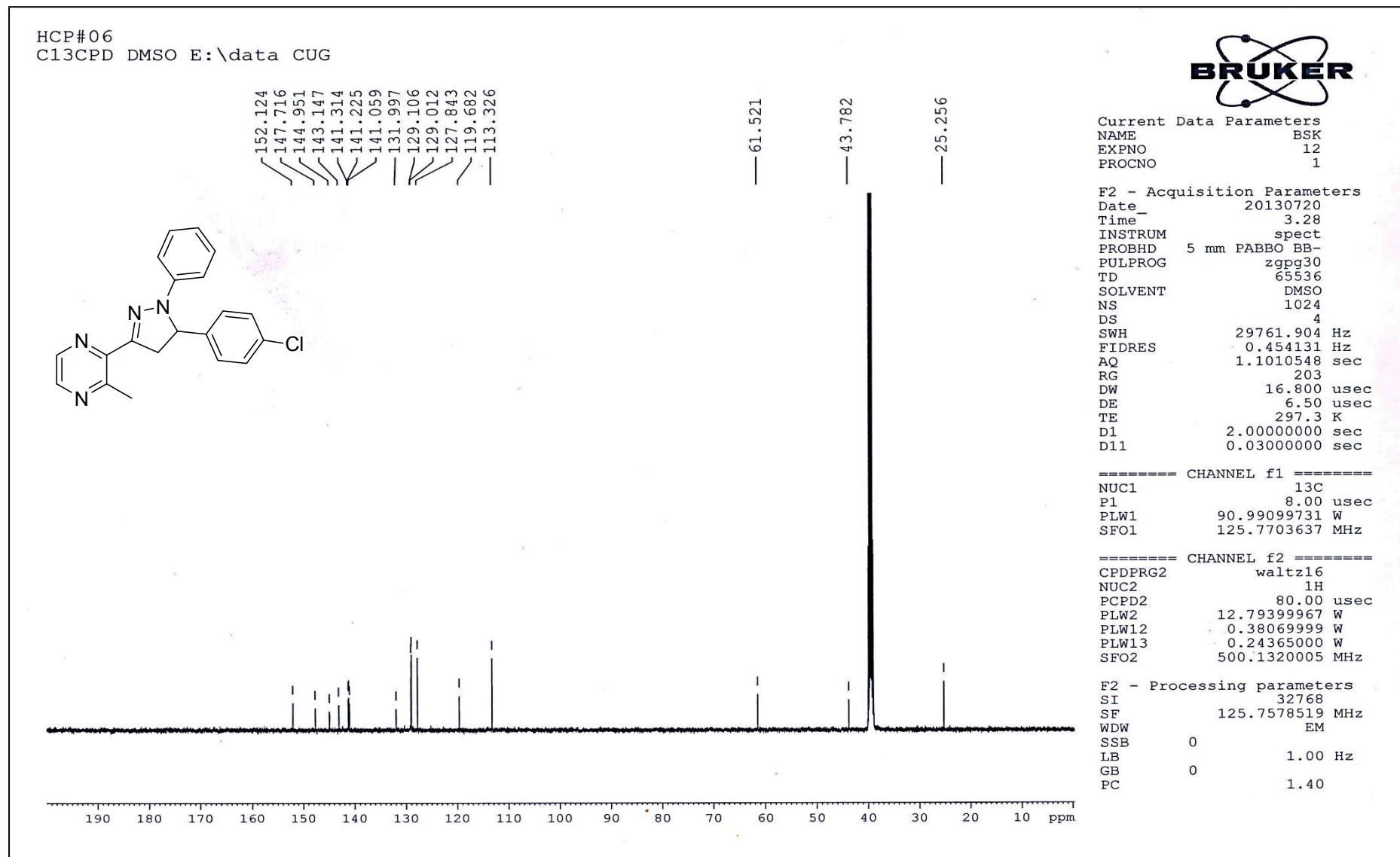


Figure S5: <sup>1</sup>H NMR spectra of 4c

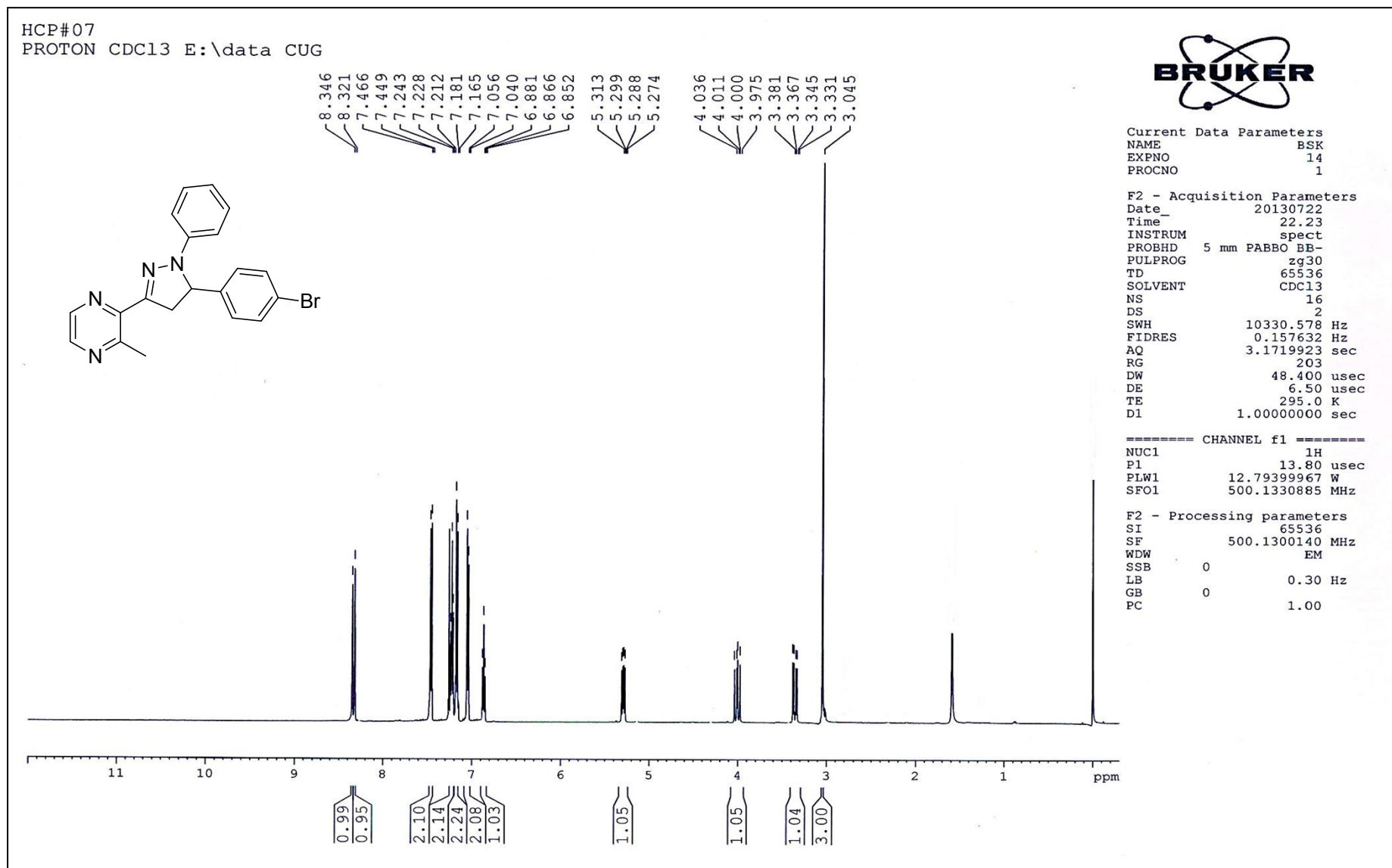


Figure S6: <sup>13</sup>C NMR spectra of 4c

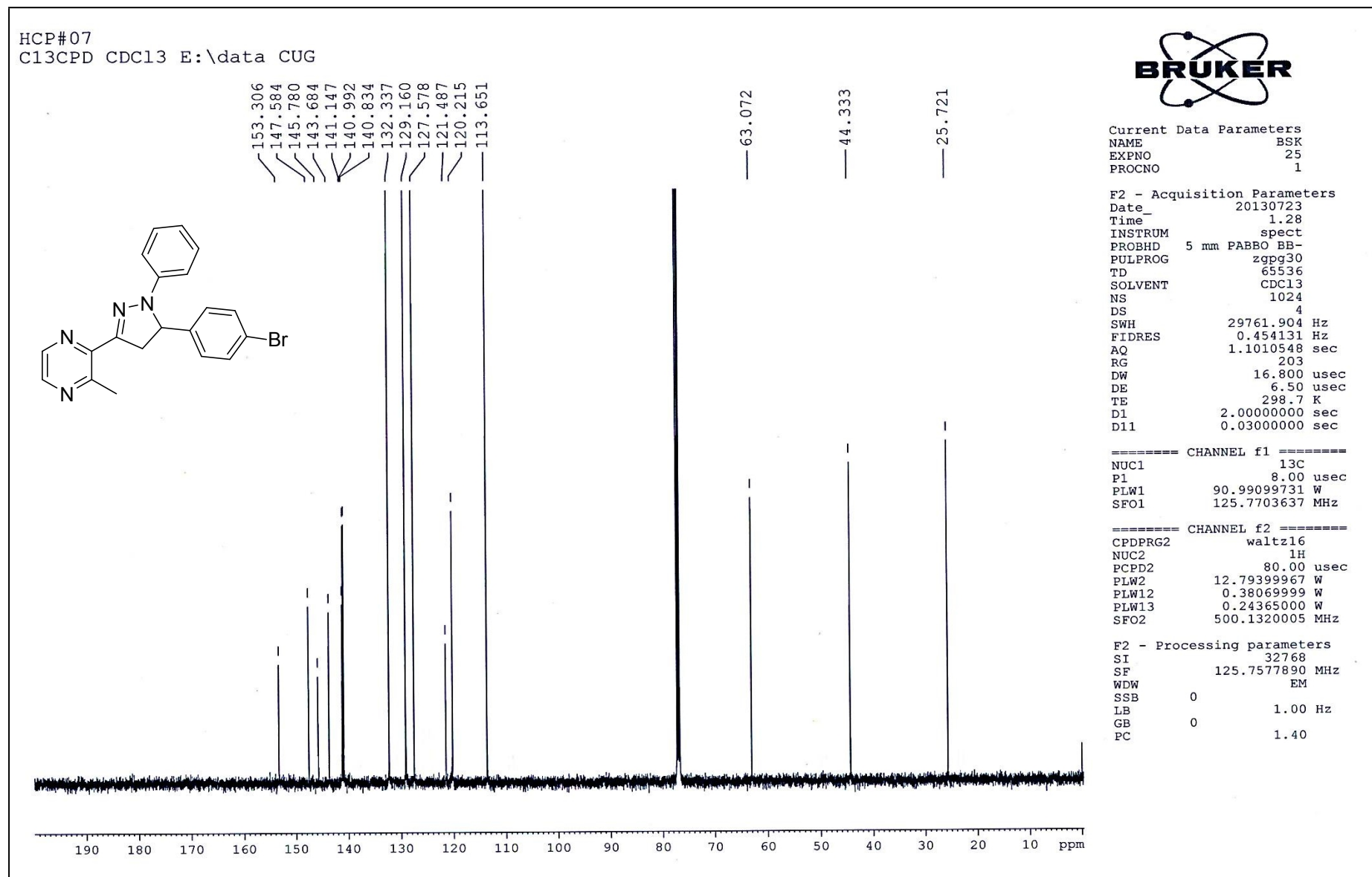


Figure S7: <sup>1</sup>H NMR spectra of 4d

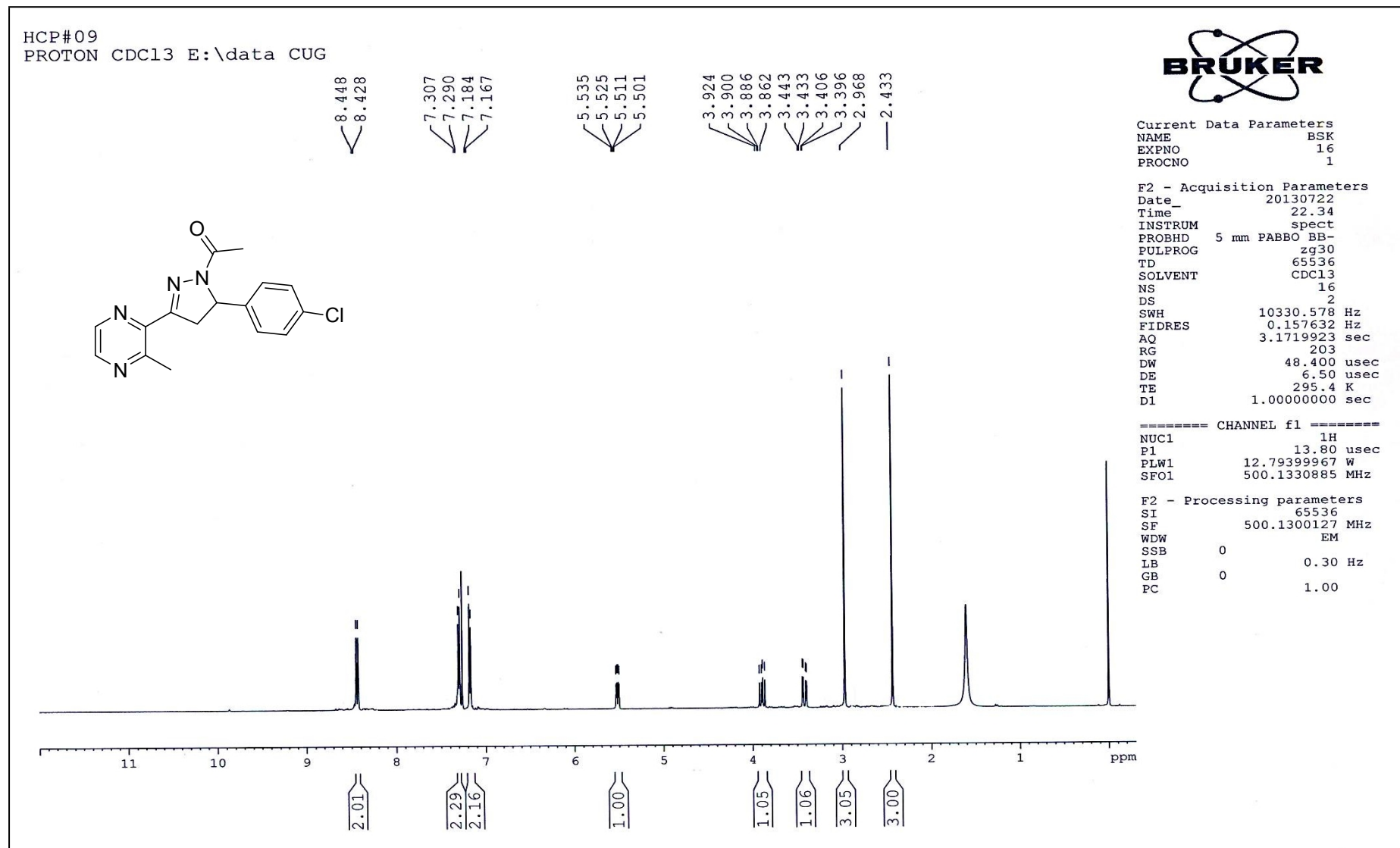


Figure S8: <sup>13</sup>C NMR spectra of 4d

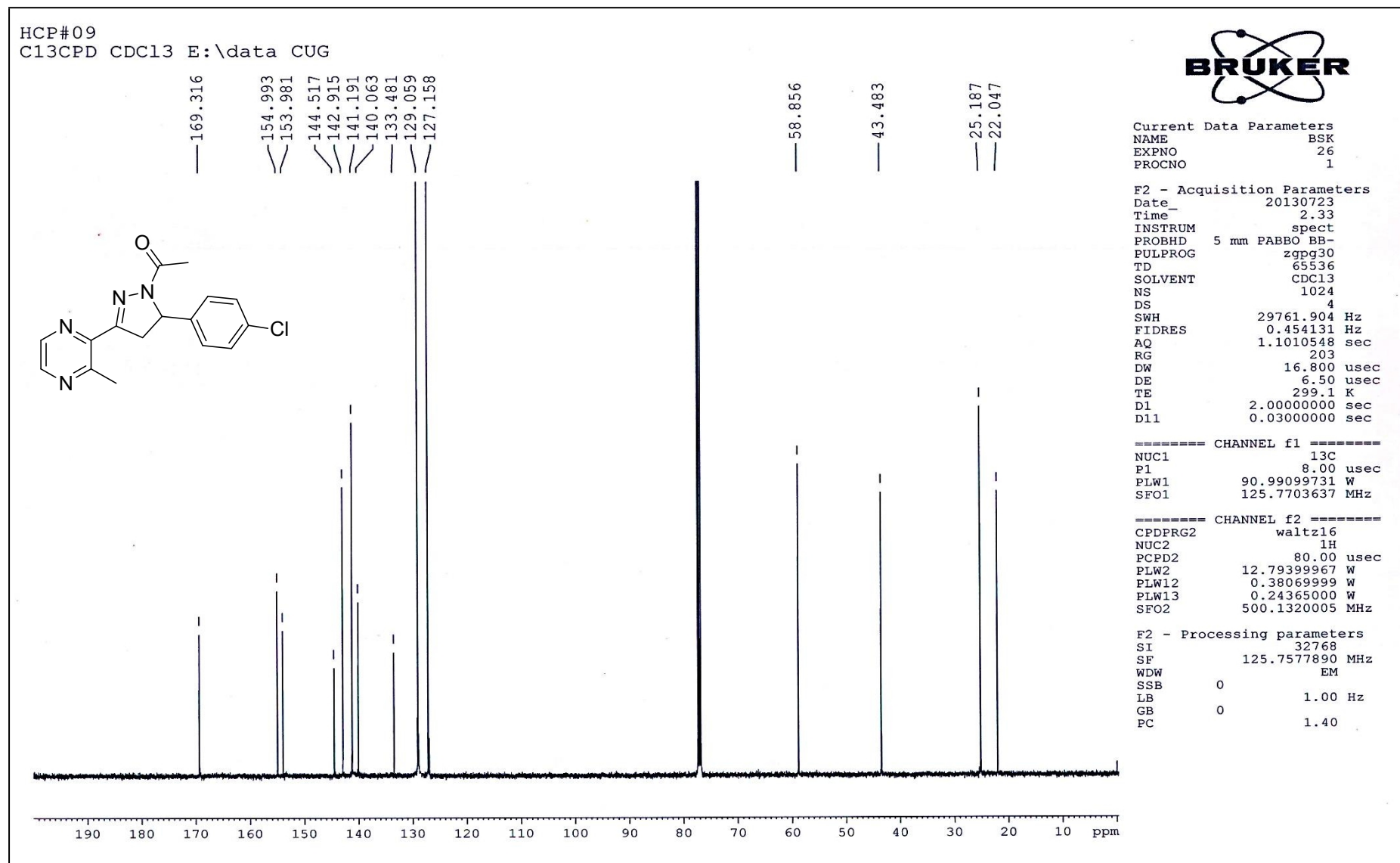


Figure S9: <sup>1</sup>H NMR spectra of 4e

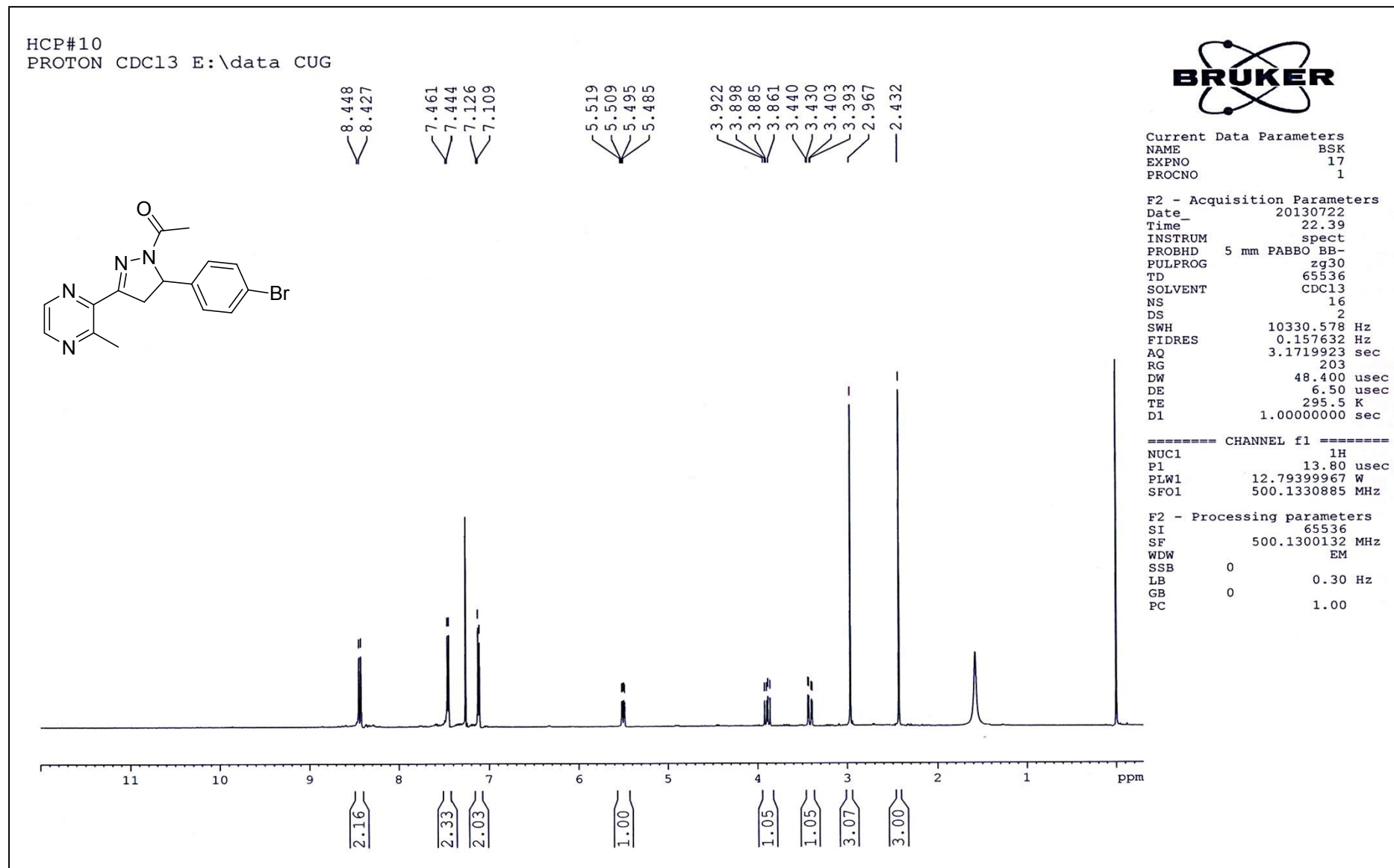


Figure S10:  $^{13}\text{C}$  NMR spectra of 4e

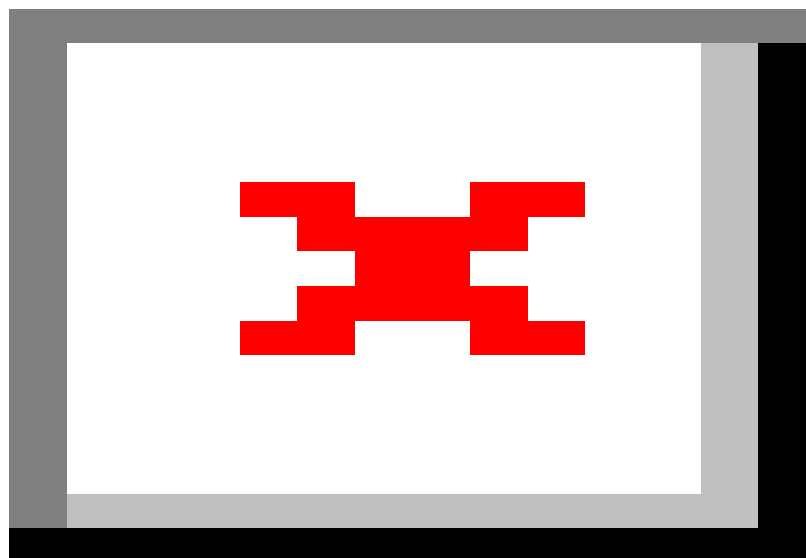
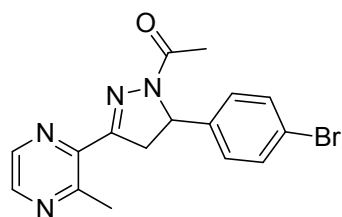




Figure S11: <sup>1</sup>H NMR spectra of 4f

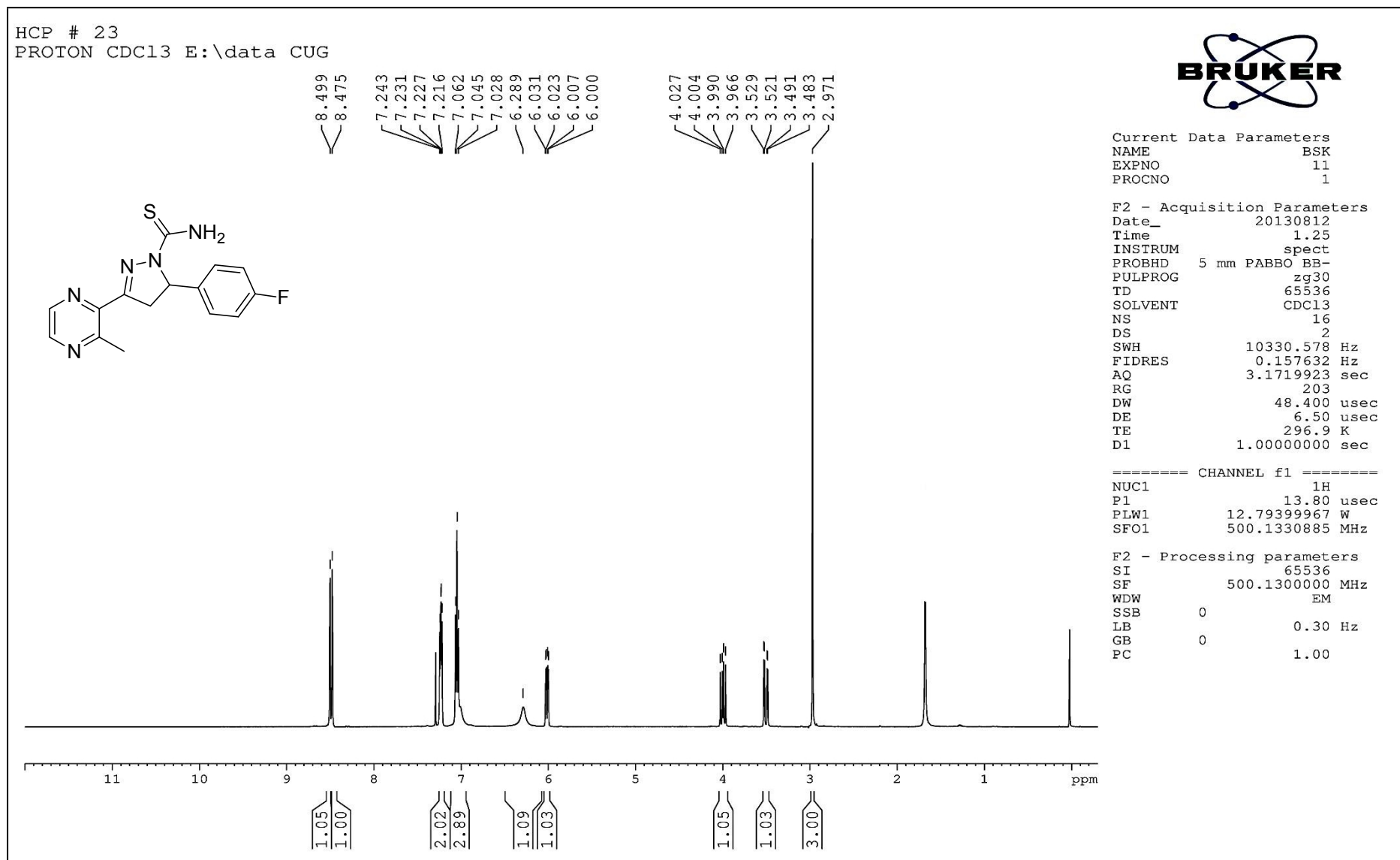




Figure S12: <sup>13</sup>C NMR spectra of 4f

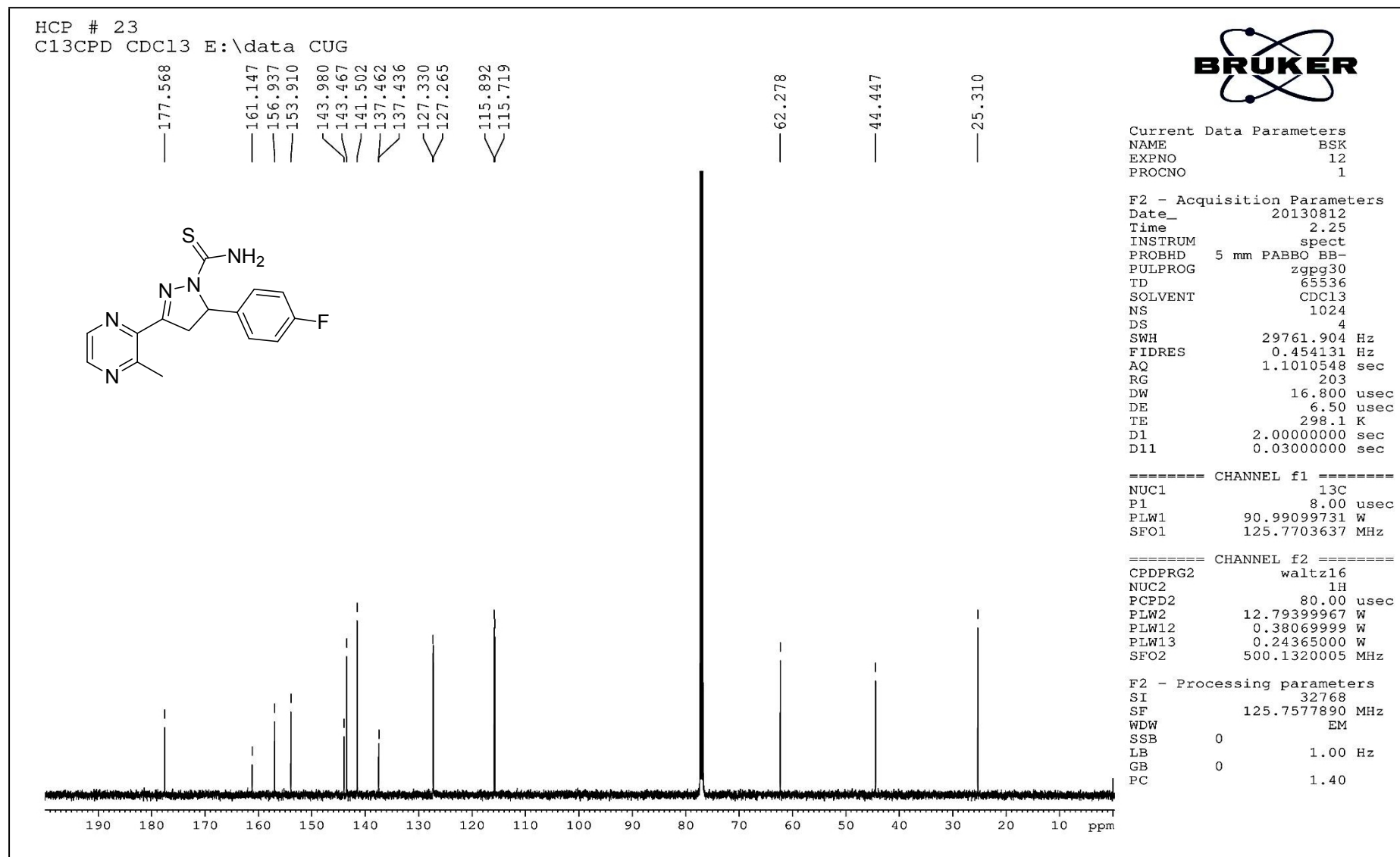


Figure S13: <sup>1</sup>H NMR spectra of 4g

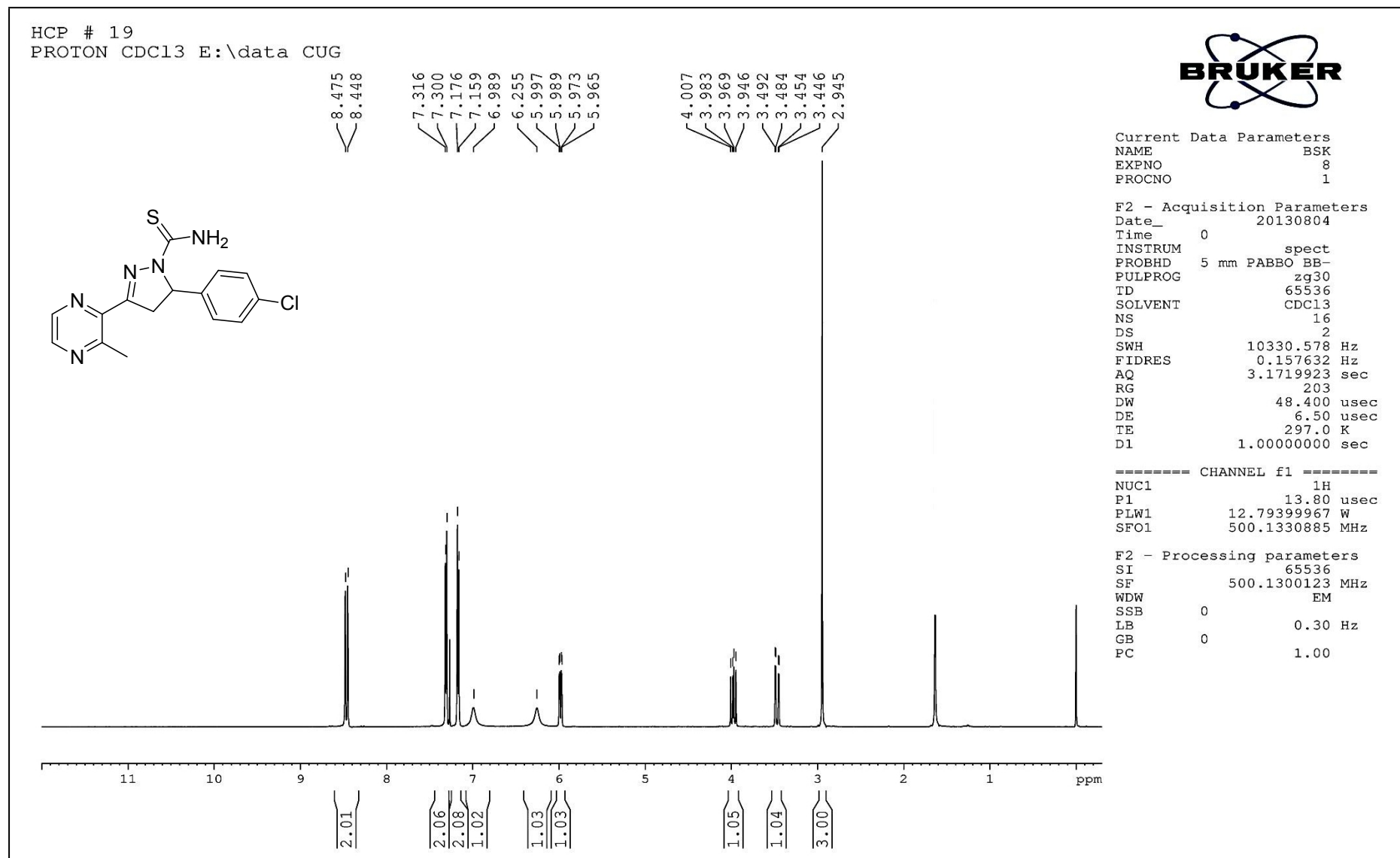


Figure S14: <sup>13</sup>C NMR spectra of 4g

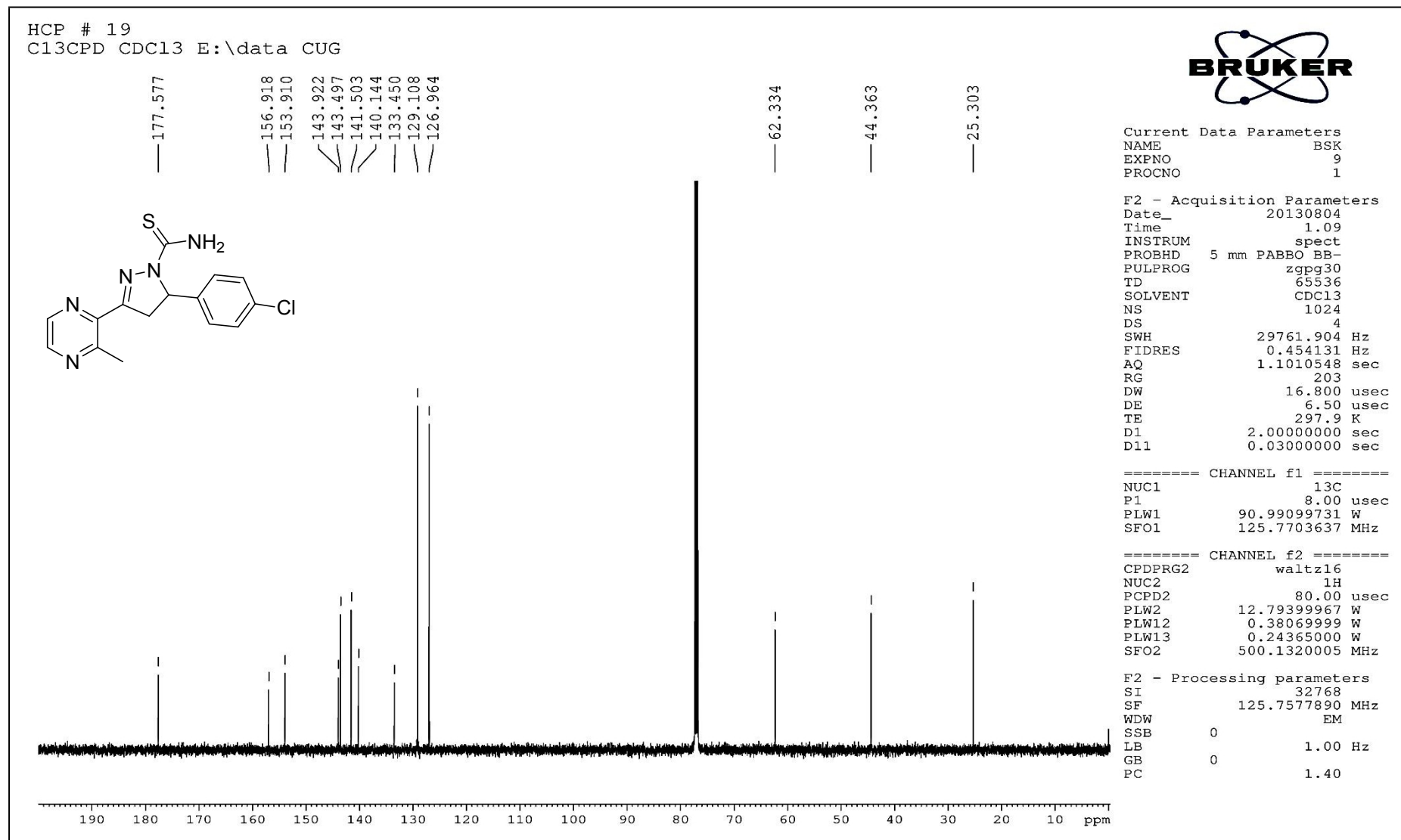


Figure S15: <sup>1</sup>H NMR spectra of 4h

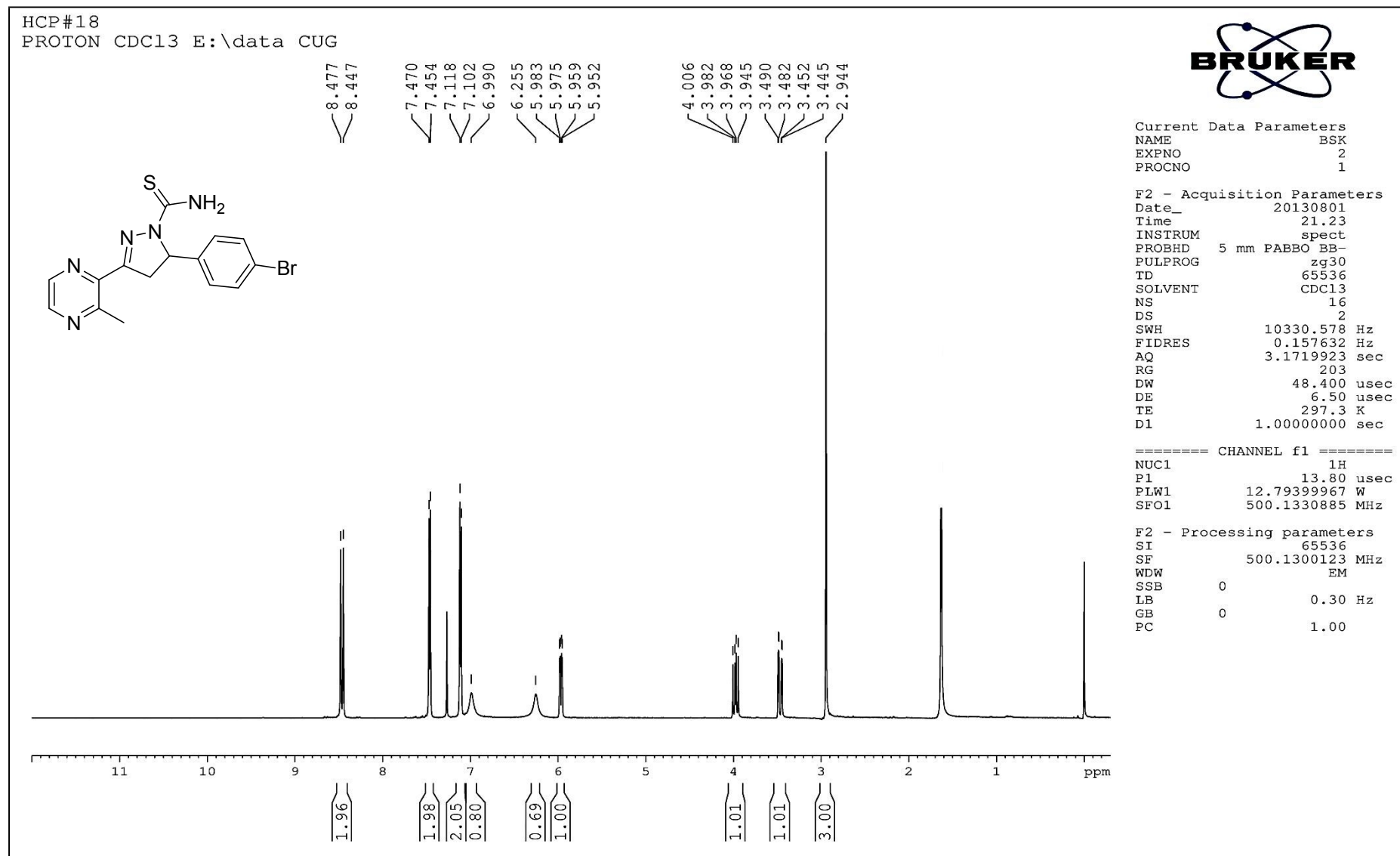


Figure S16: <sup>13</sup>C NMR spectra of 4h

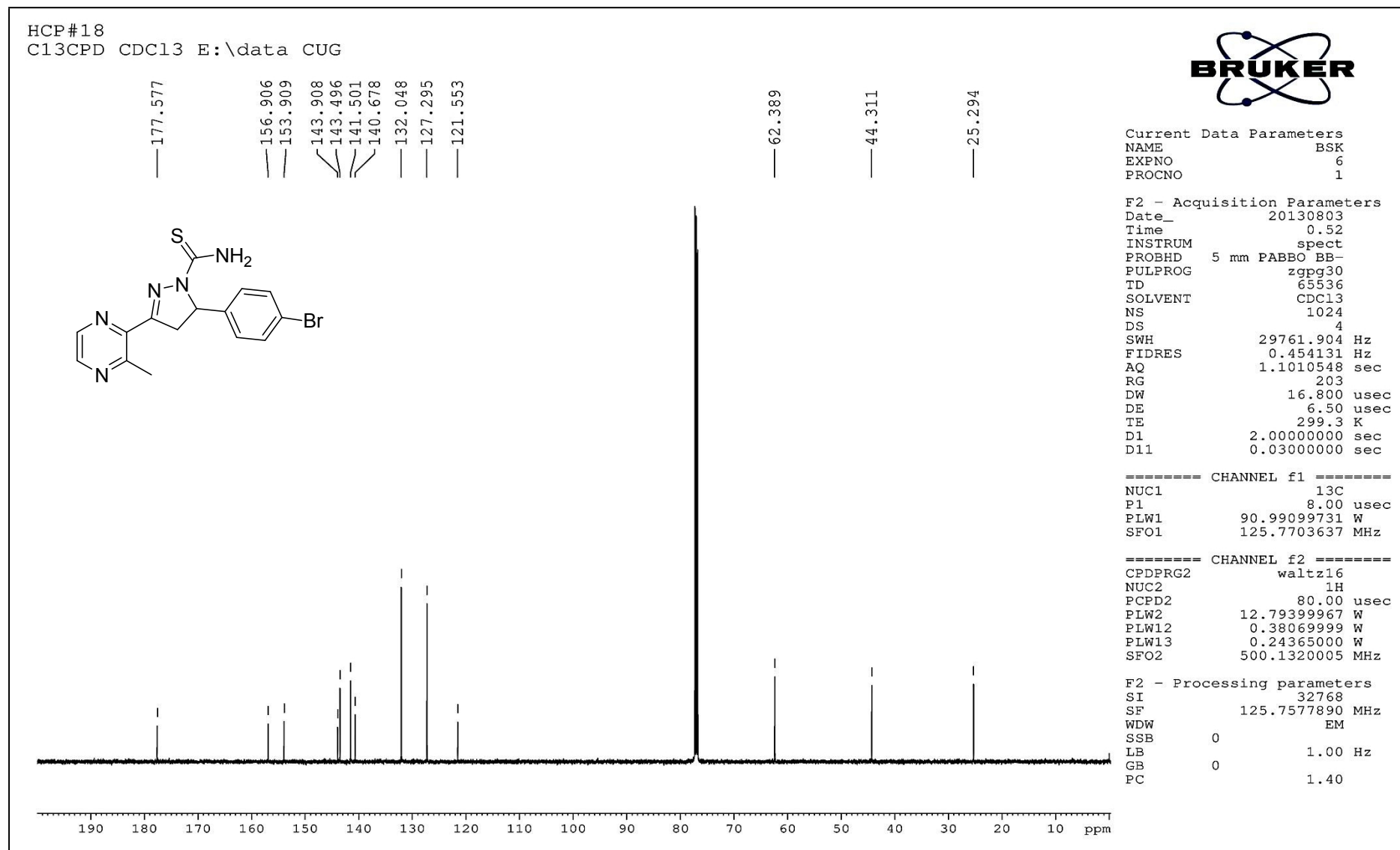


Figure S17: <sup>1</sup>H NMR spectra of 4i

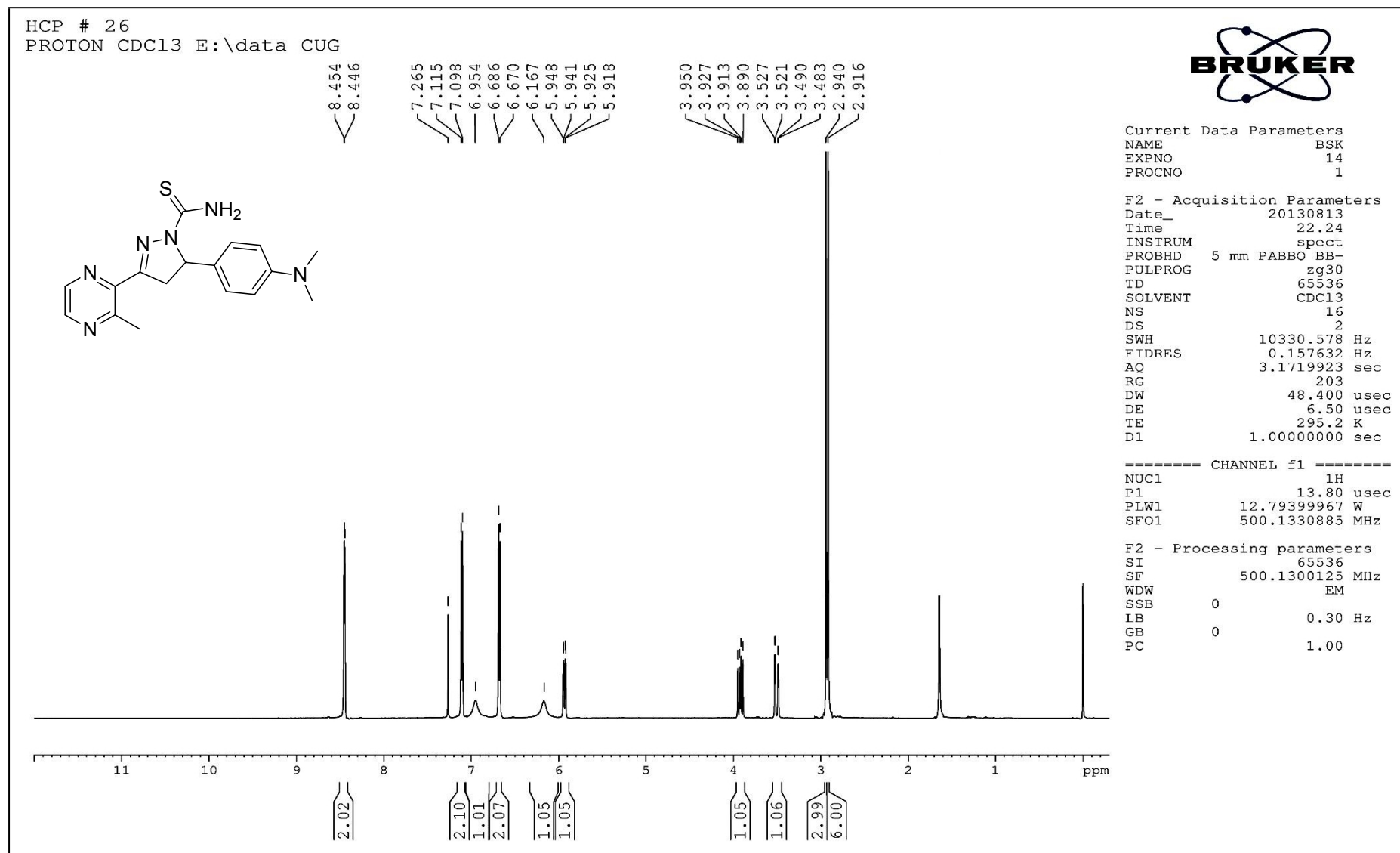


Figure S18: <sup>13</sup>C NMR spectra of 4i

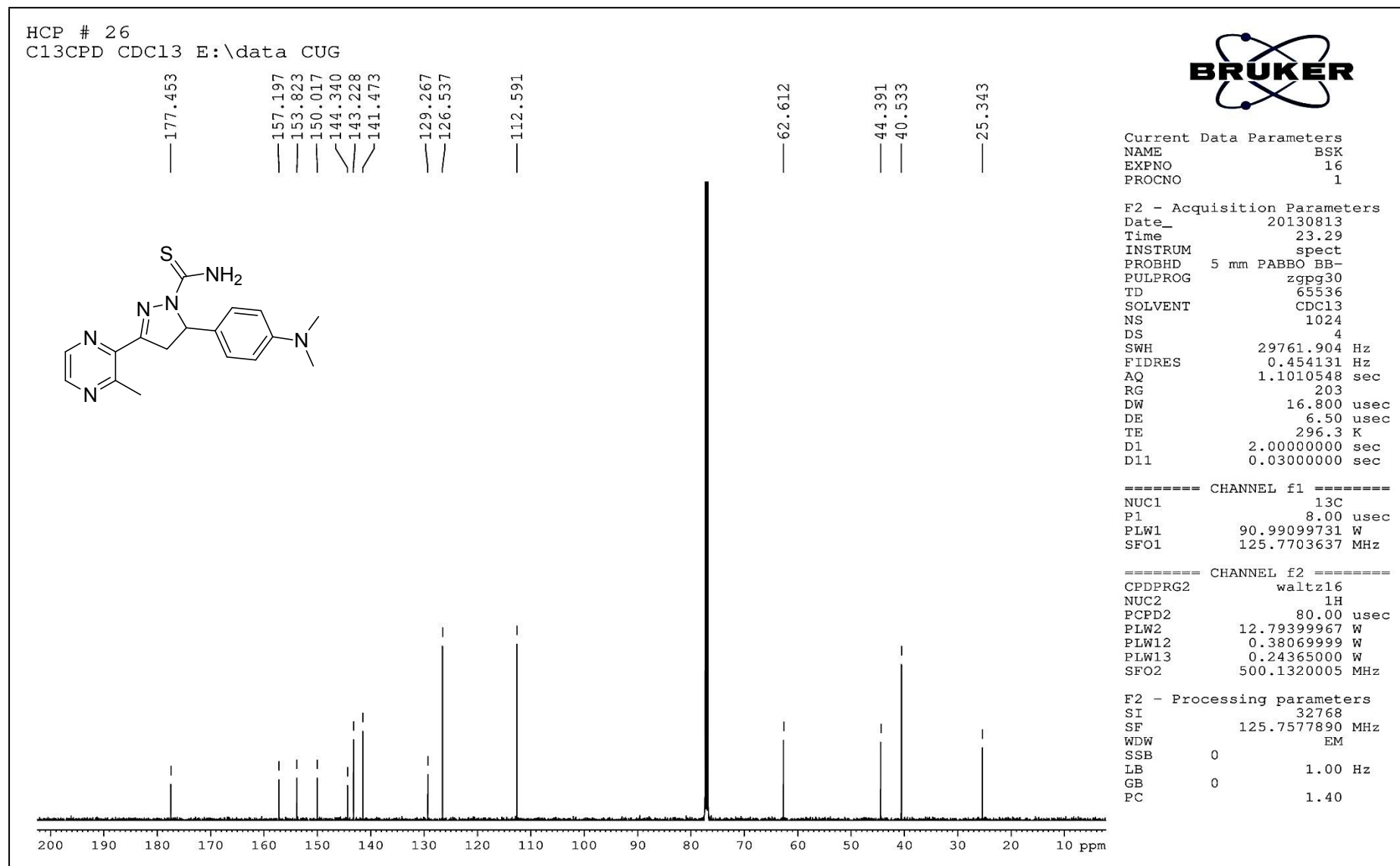


Figure S19: <sup>1</sup>H NMR spectra of 4j

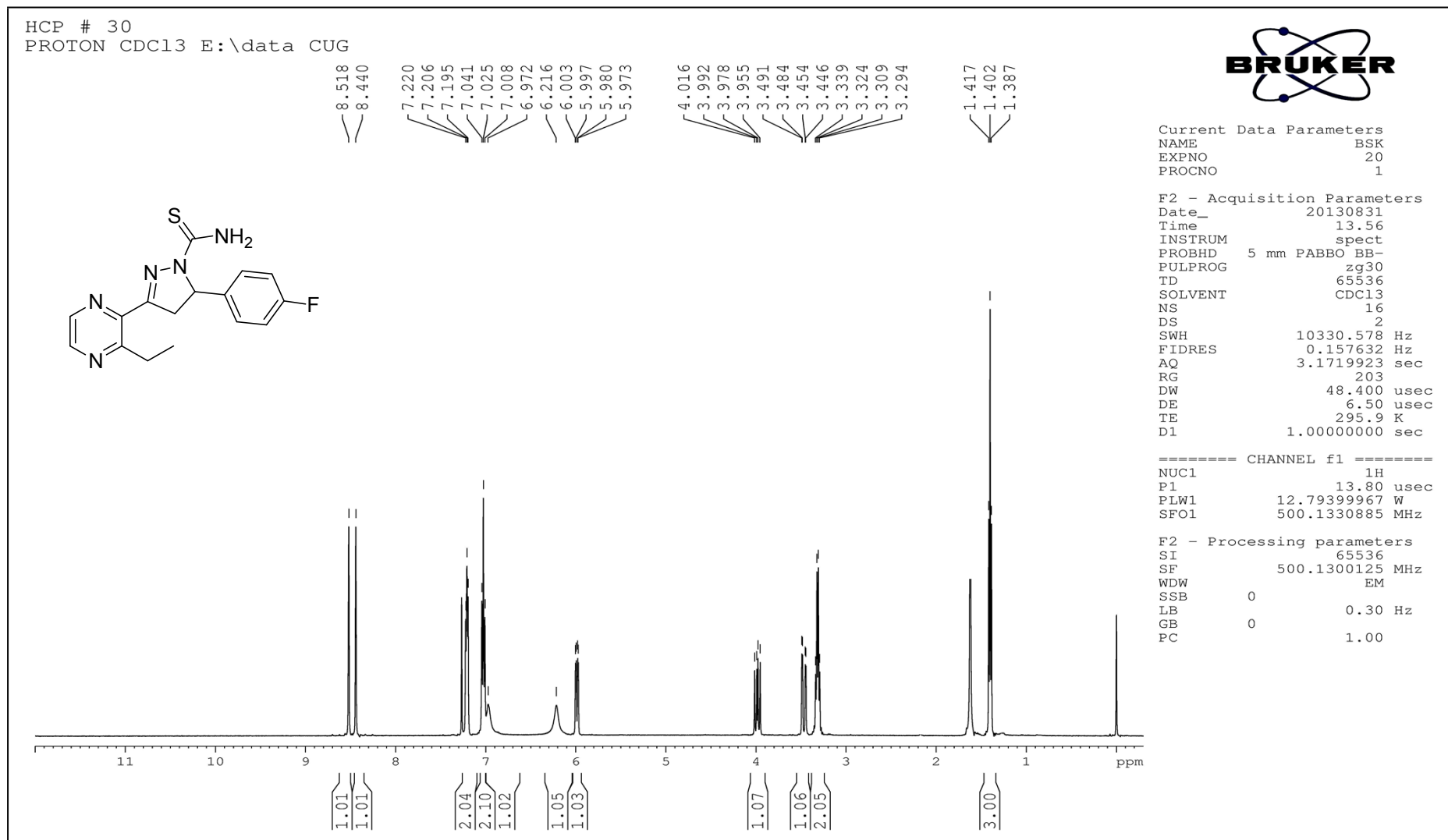




Figure S20: <sup>13</sup>C NMR spectra of 4j

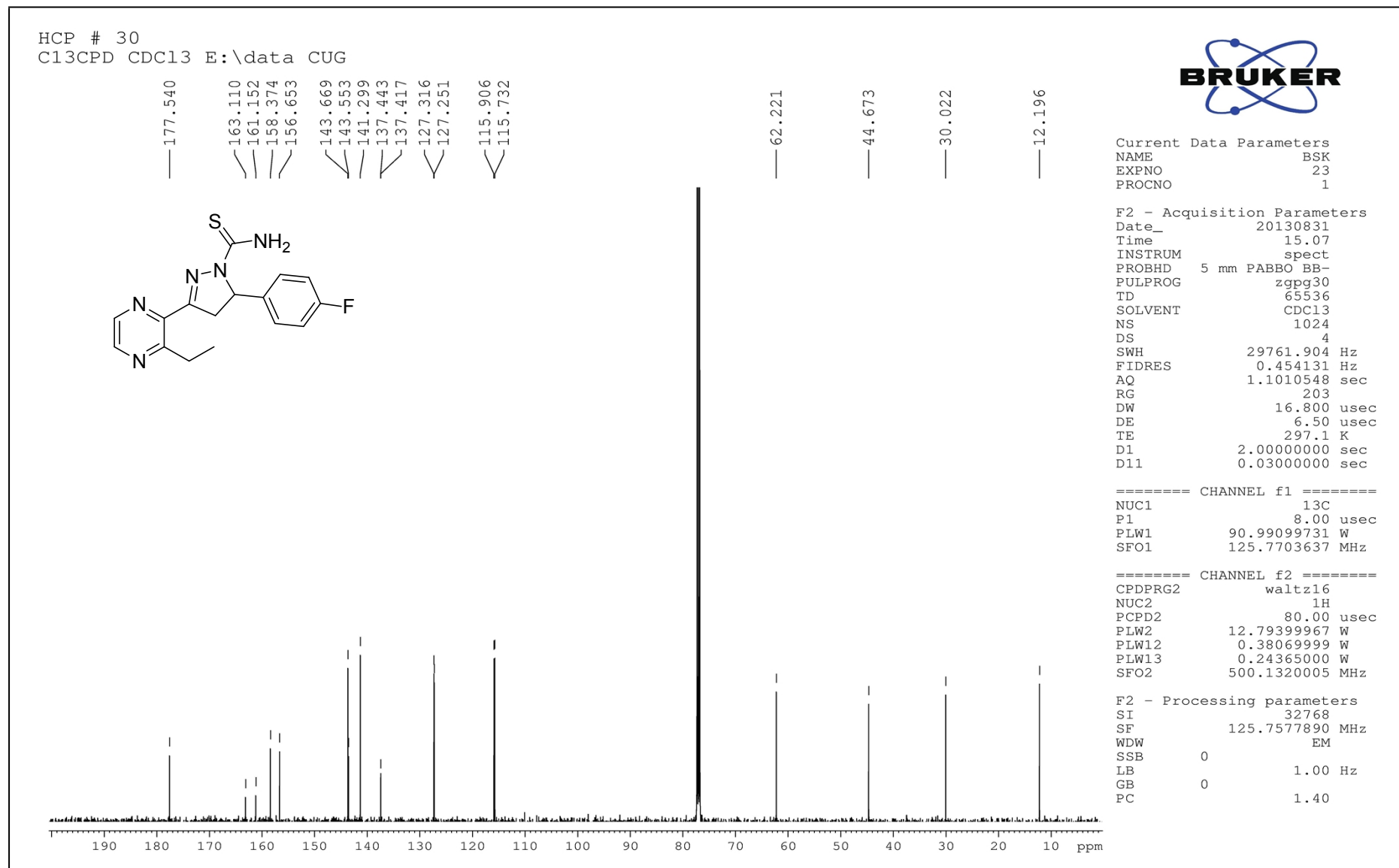


Figure S21: <sup>1</sup>H NMR spectra of 4k

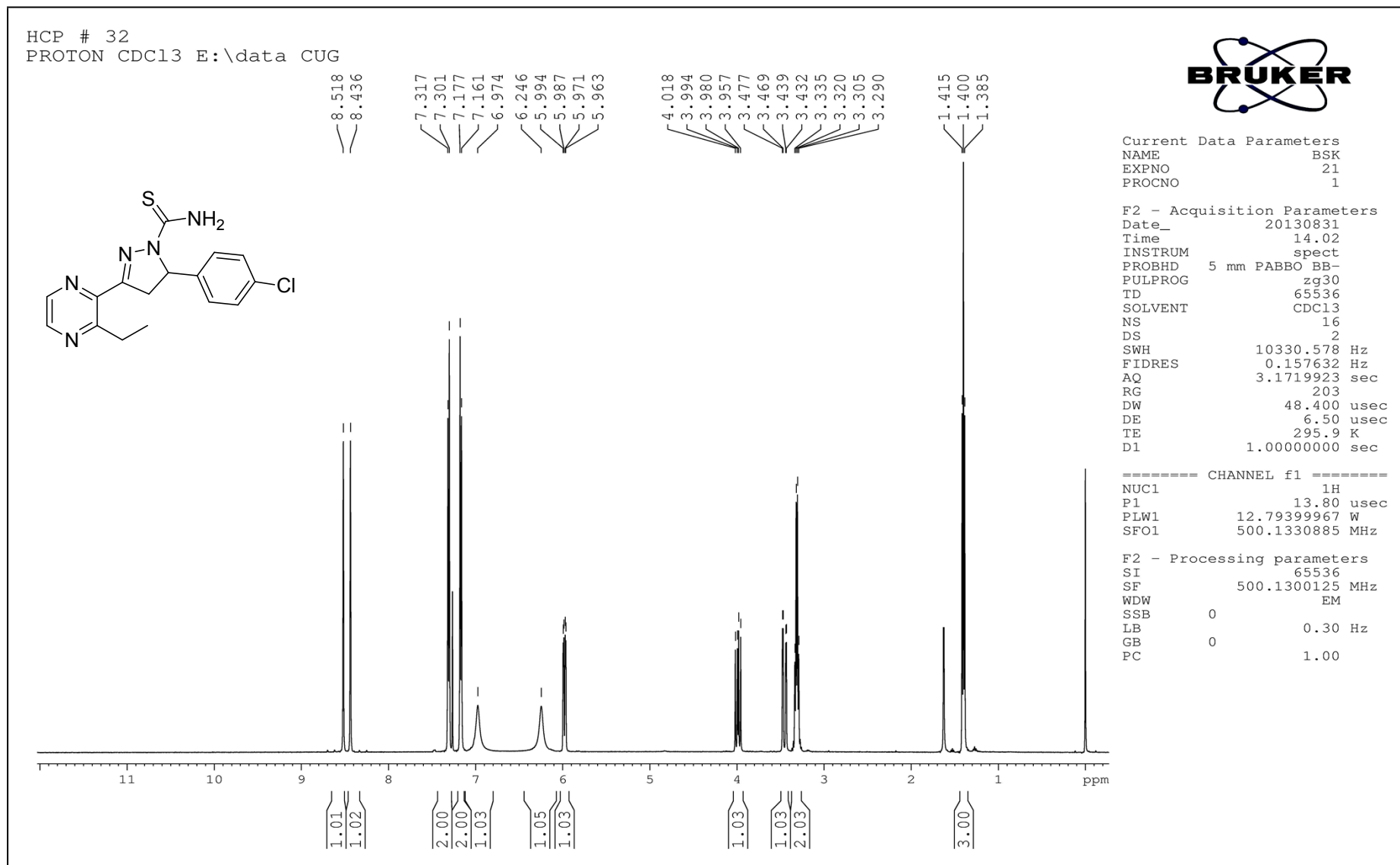


Figure S22: <sup>13</sup>C NMR spectra of 4k

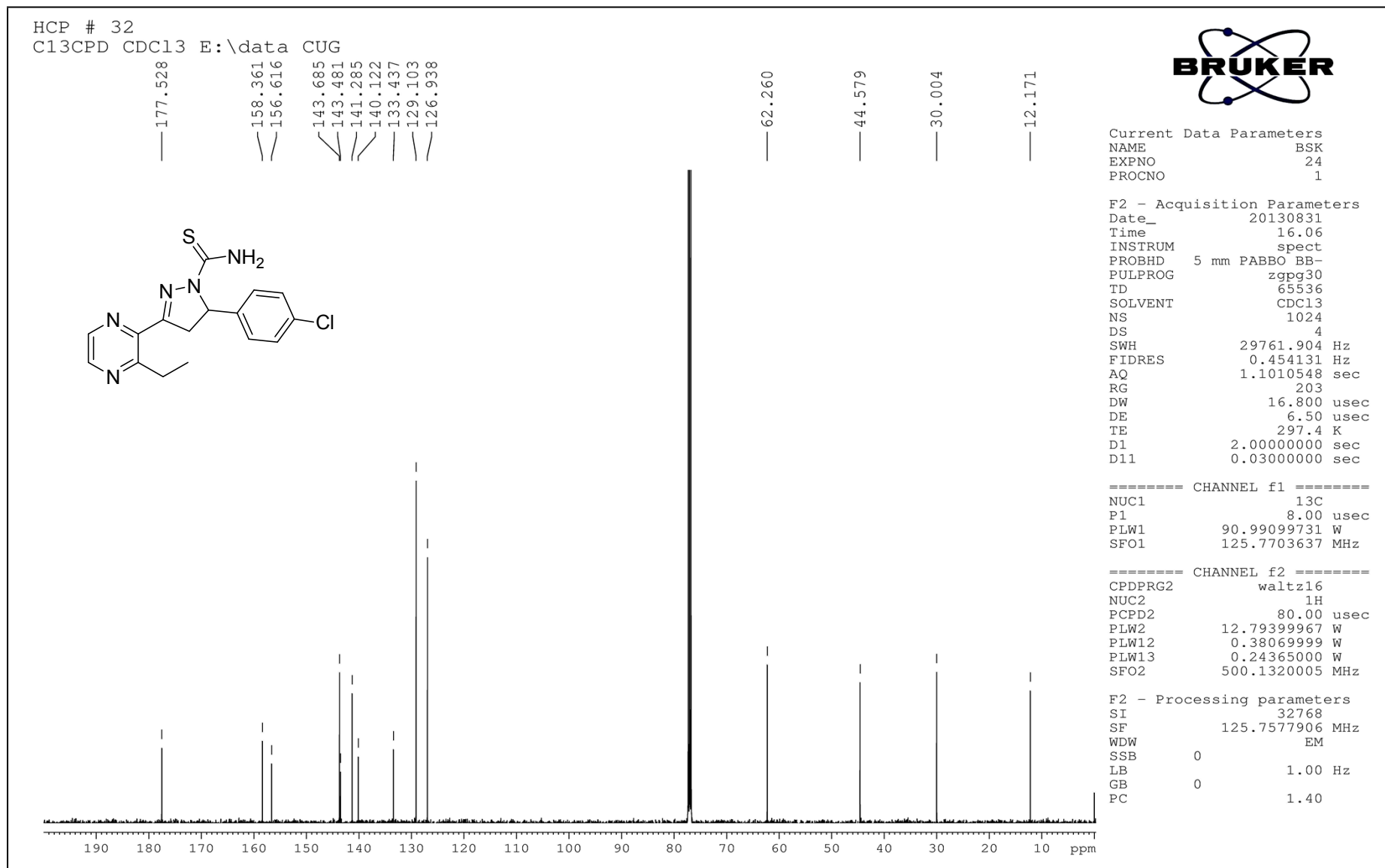


Figure S23: <sup>1</sup>H NMR spectra of 4l

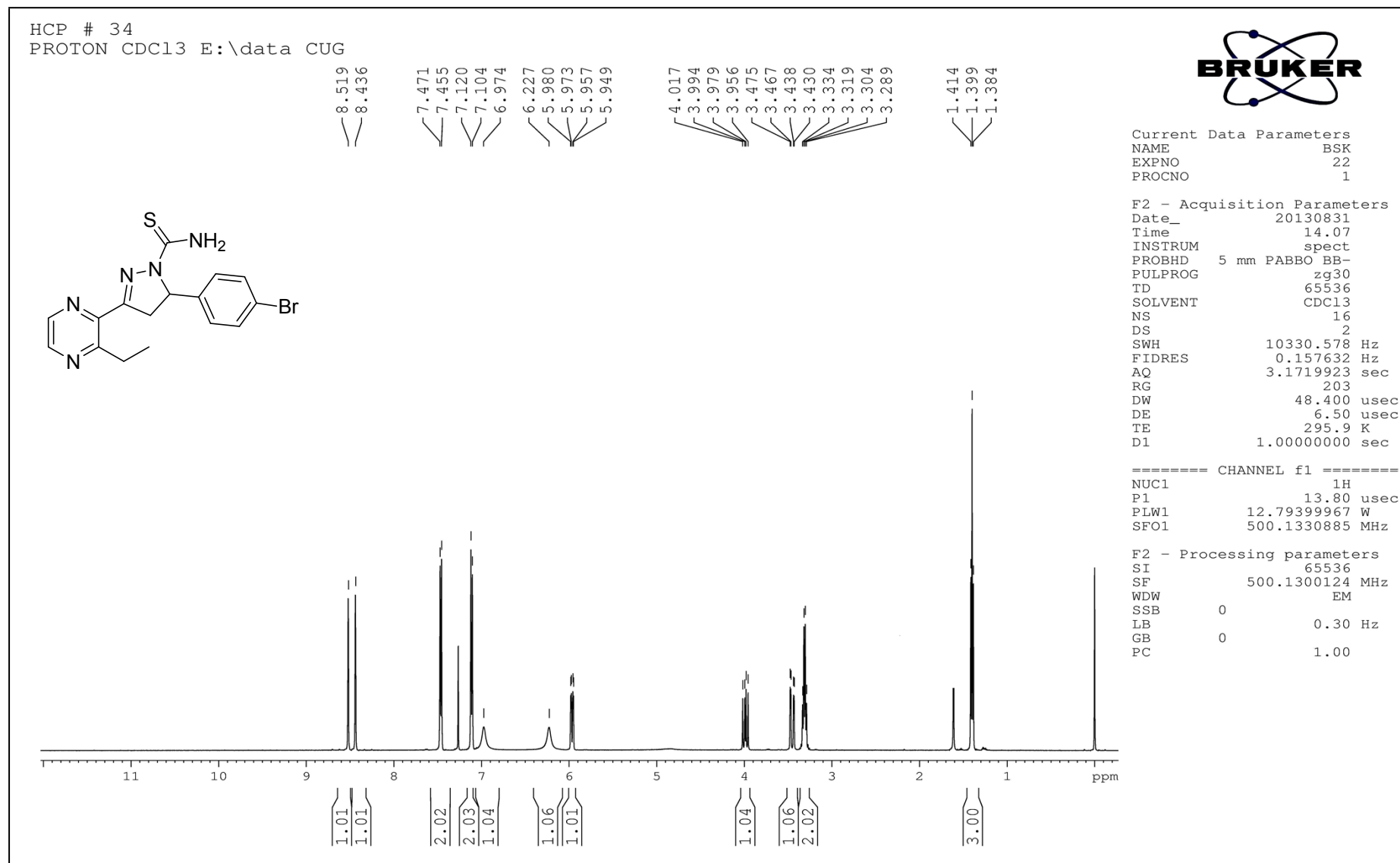


Figure S24: <sup>13</sup>C NMR spectra of 4l

