

## Supplementary Material

### **Synthesis of thiazolidine derivatives via multicomponent reaction in the presence of Fe<sub>3</sub>O<sub>4</sub>@SiO<sub>2</sub>-SO<sub>3</sub>H nanoparticles as a heterogeneous catalyst**

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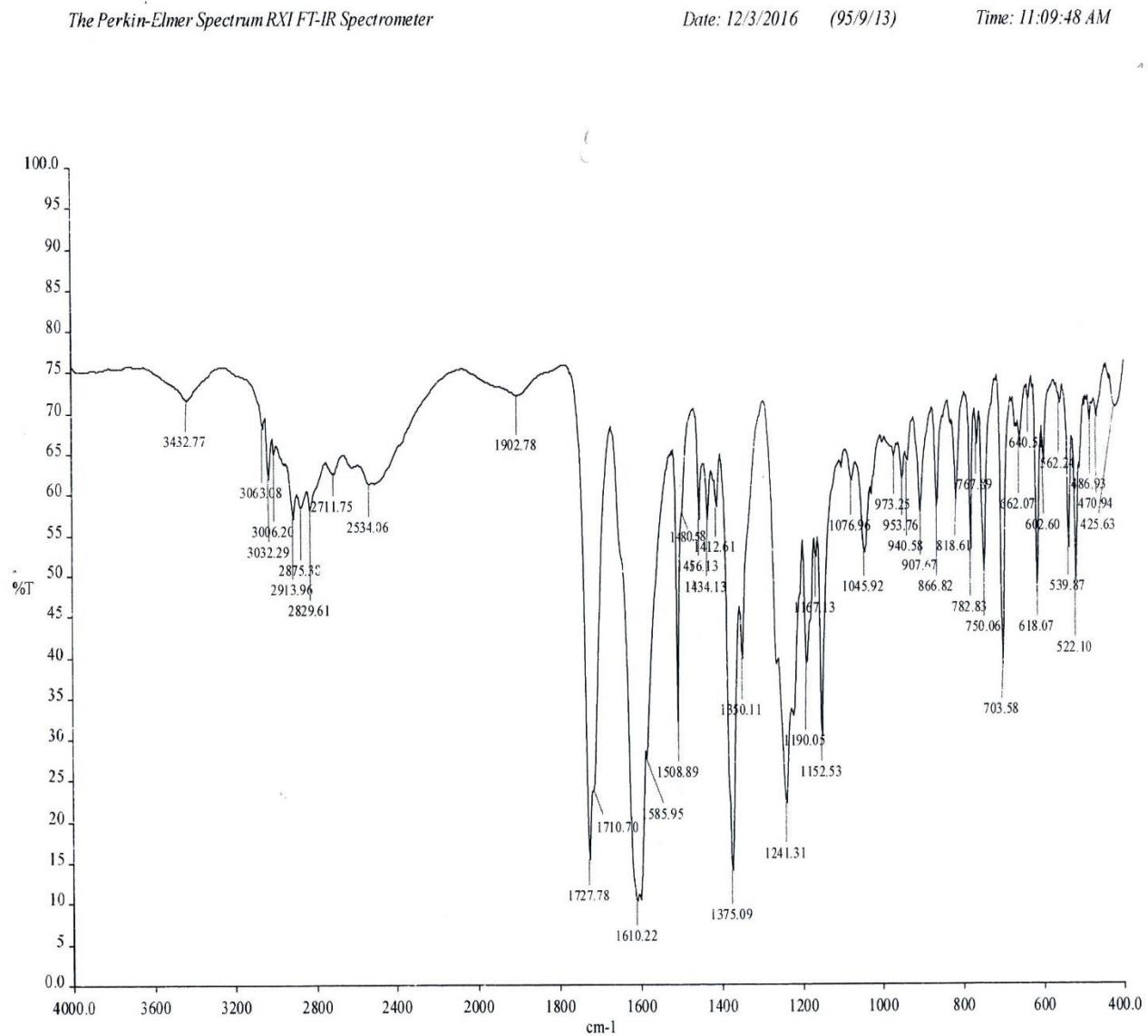
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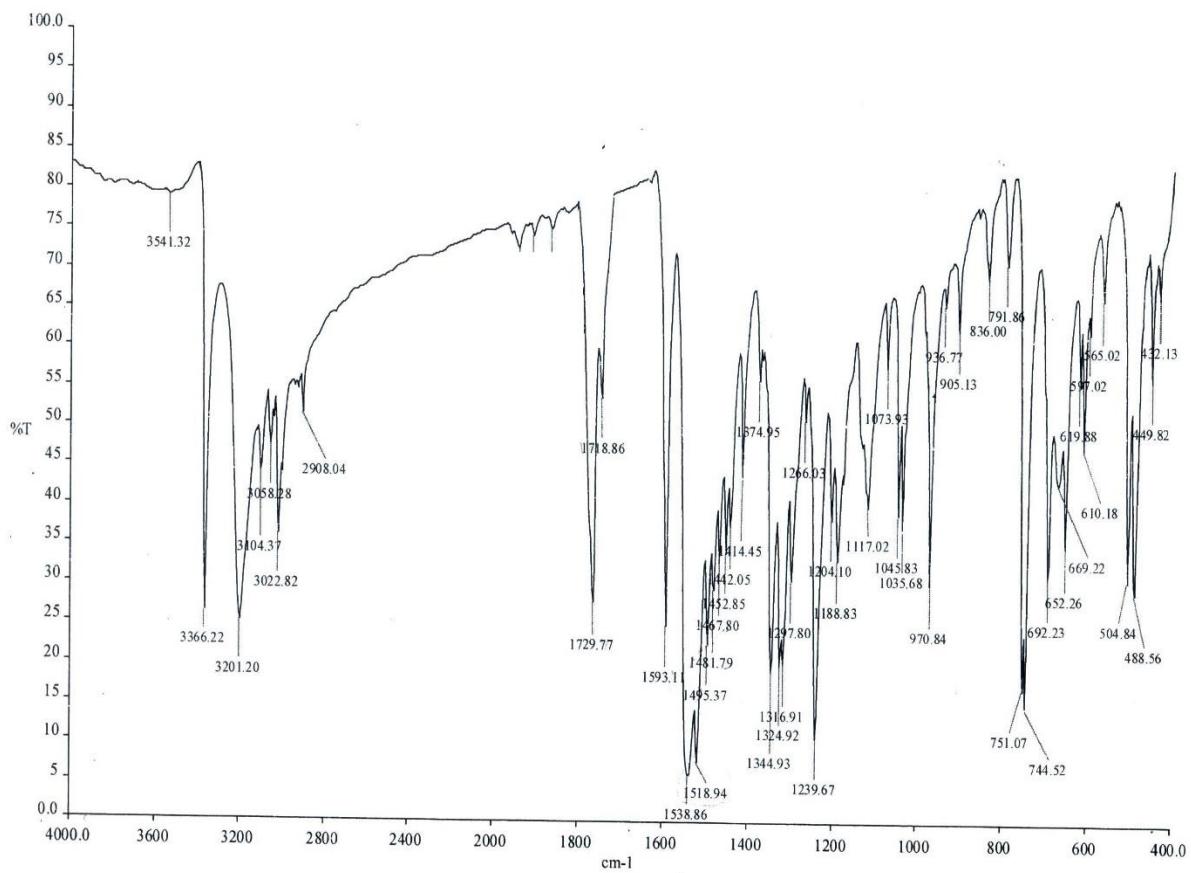
**Figure S1** IR spectrum of **4a**

**Figure S2** IR spectrum of **4b**

The Perkin-Elmer Spectrum RXI FT-IR Spectrometer

Date: 11/23/2016 (95/9/3)

Time: 2:12:54 PM

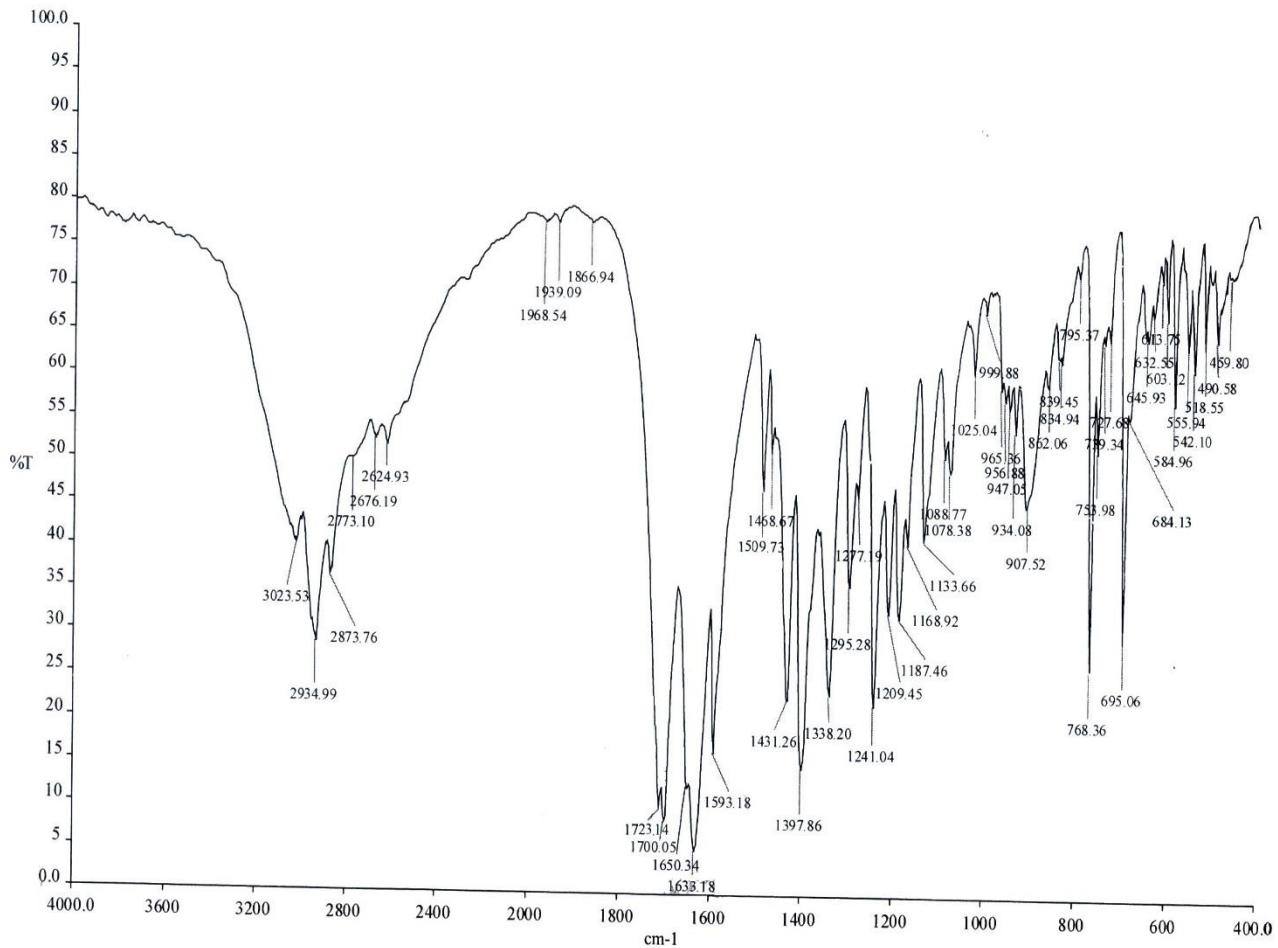


**Figure S3** IR spectrum of **4c**

The Perkin-Elmer Spectrum RXI FT-IR Spectrometer

Date: 2/5/2018 (96/11/16)

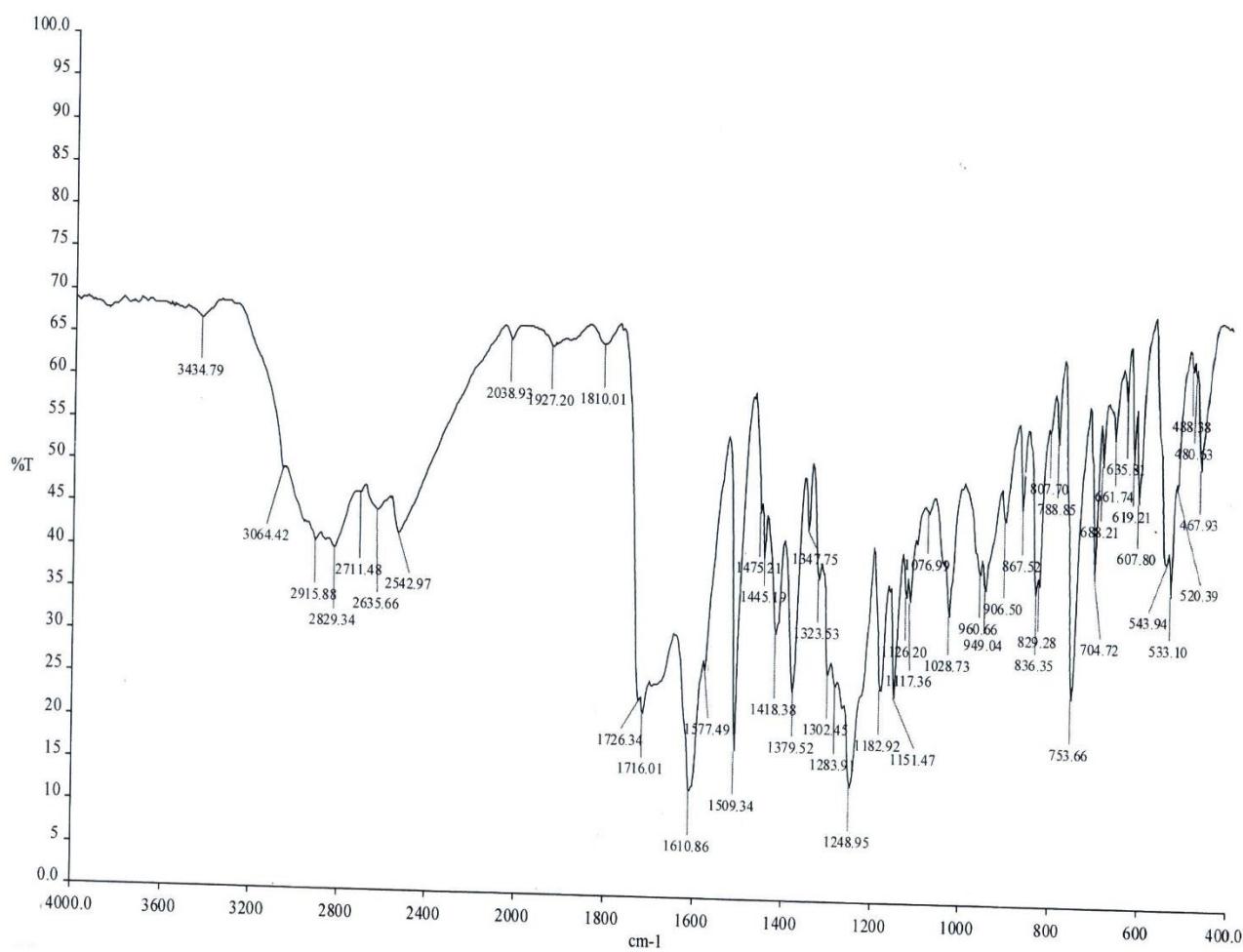
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**Figure S4** IR spectrum of **4d***The Perkin-Elmer Spectrum RXI FT-IR Spectrometer*

Date: 2/5/2018 (96/11/16)

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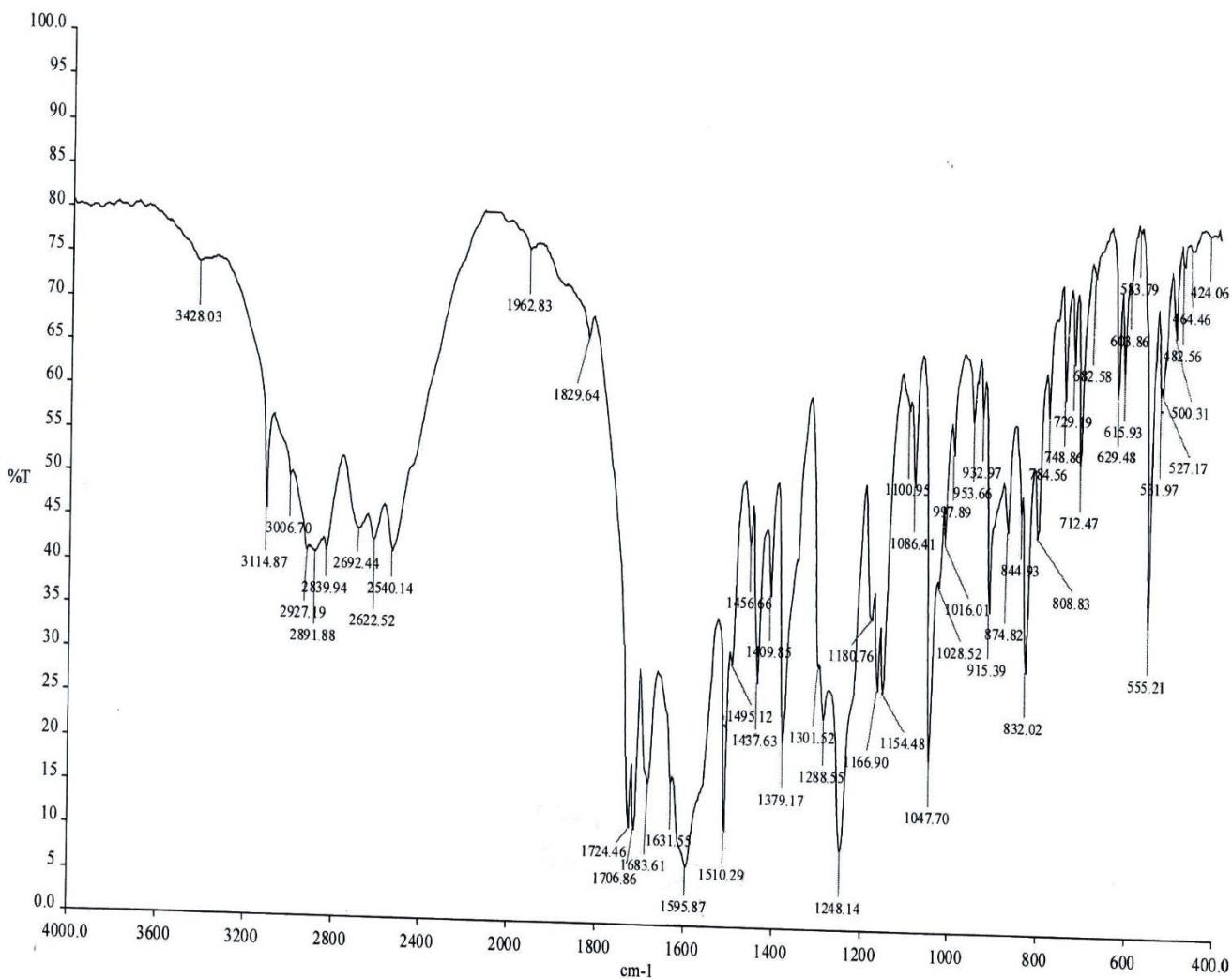


**Figure S5** IR spectrum of **4e**

The Perkin-Elmer Spectrum RXI FT-IR Spectrometer

Date: 2/5/2018 (96/11/16)

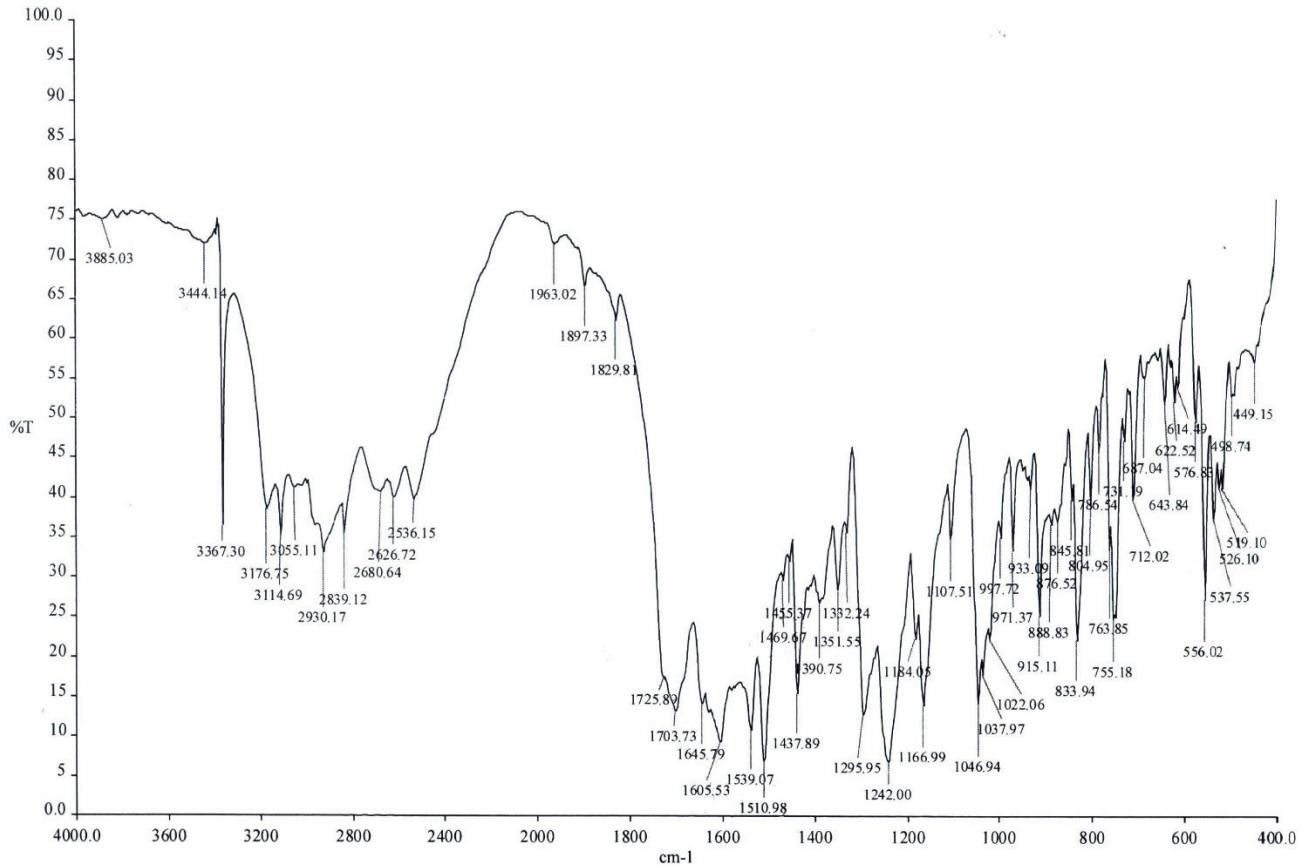
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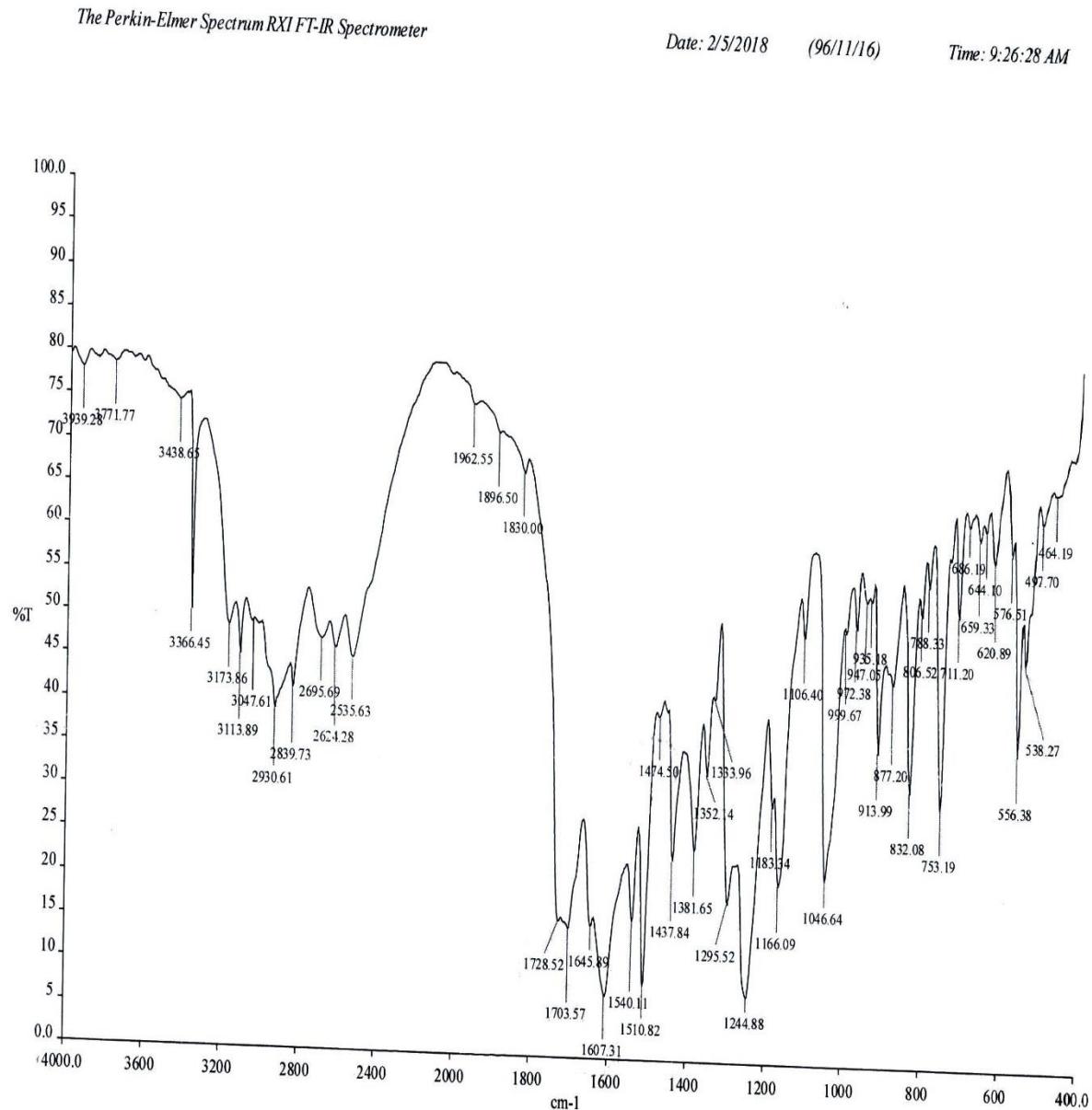
**Figure S6** IR spectrum of **4f**

The Perkin-Elmer Spectrum RXI FT-IR Spectrometer

Date: 2/5/2018 (96/11/16)

Time: 9:48:22 AM



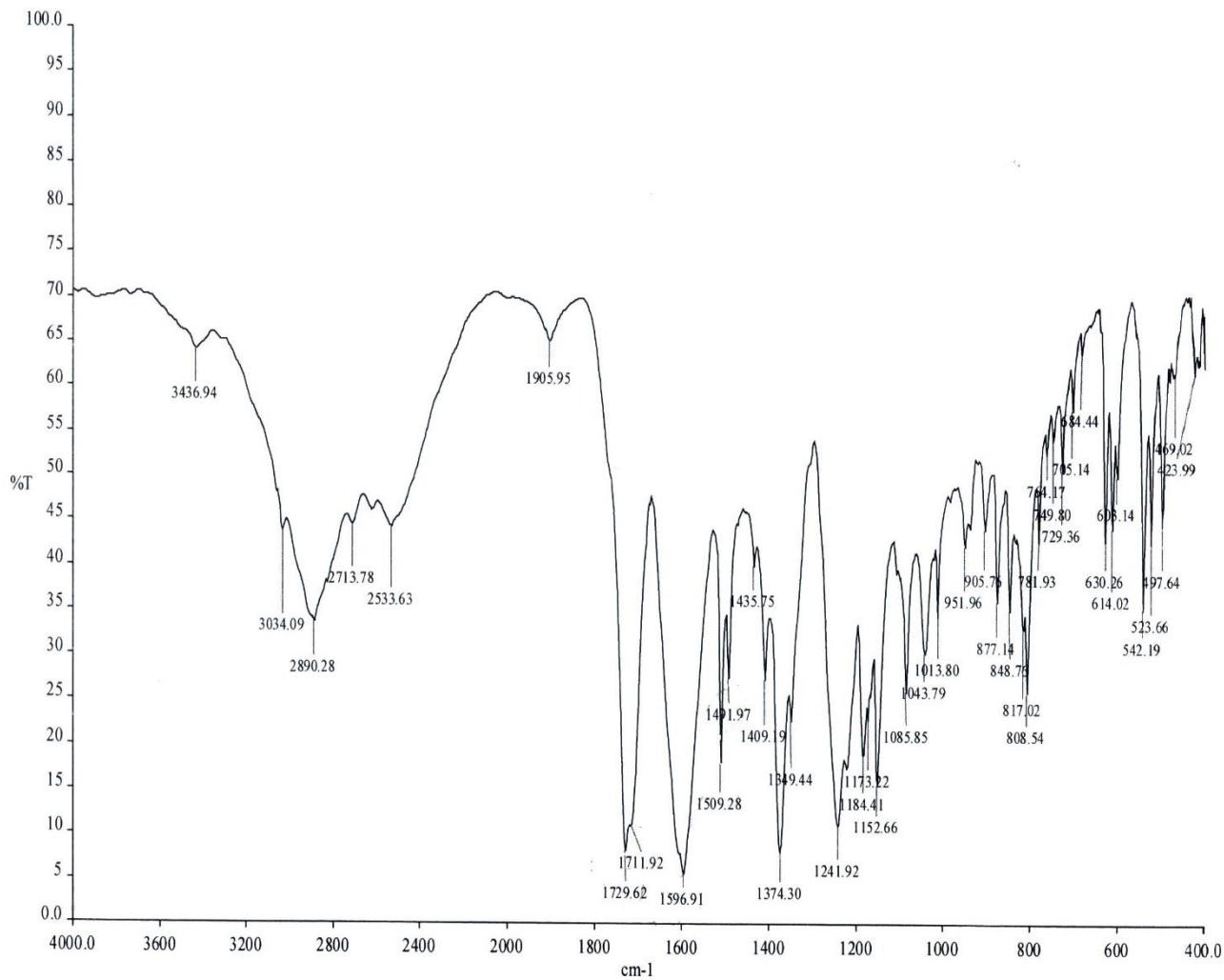
**Figure S7** IR spectrum of **4g**

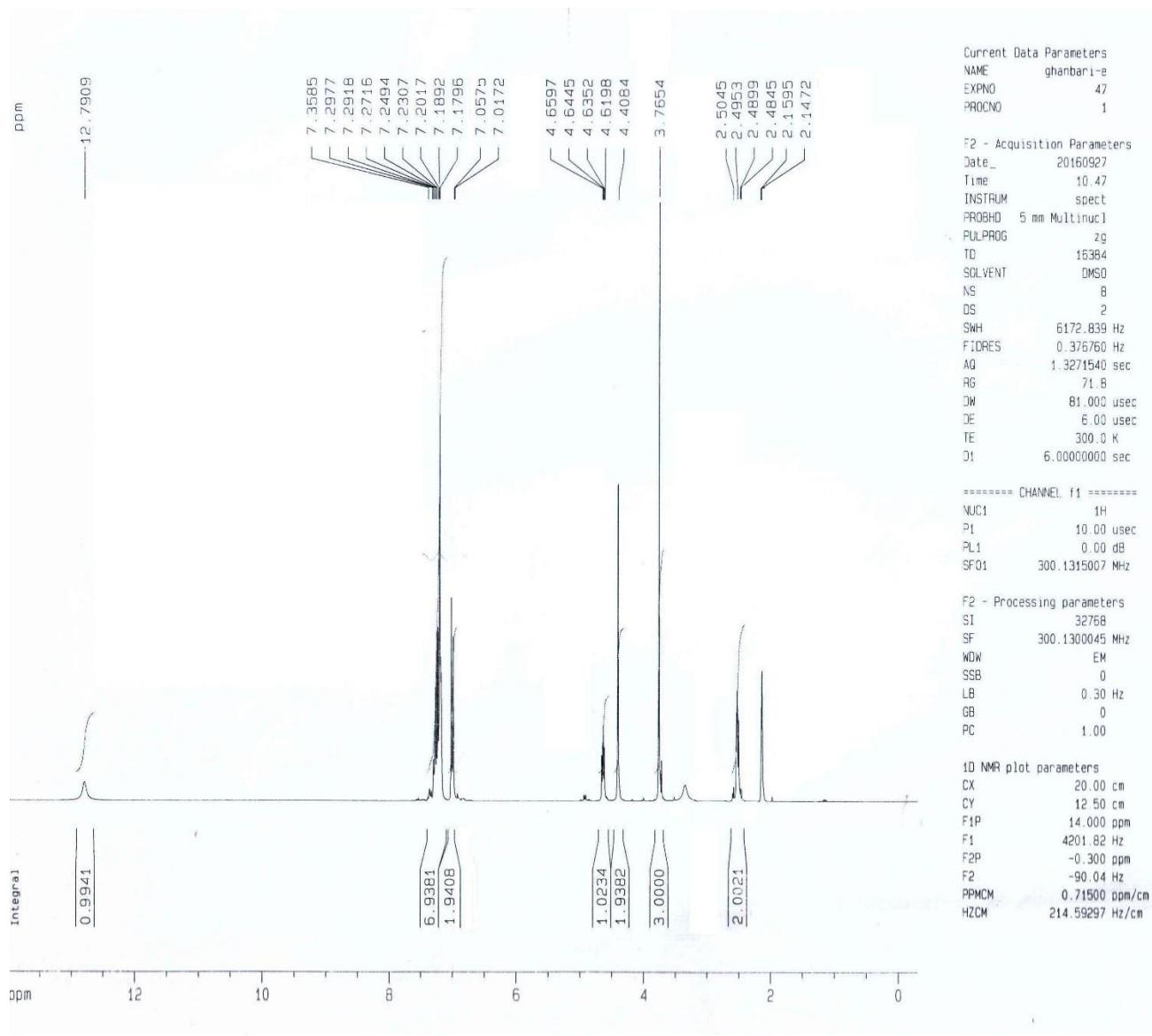
**Figure S8** IR spectrum of **4h**

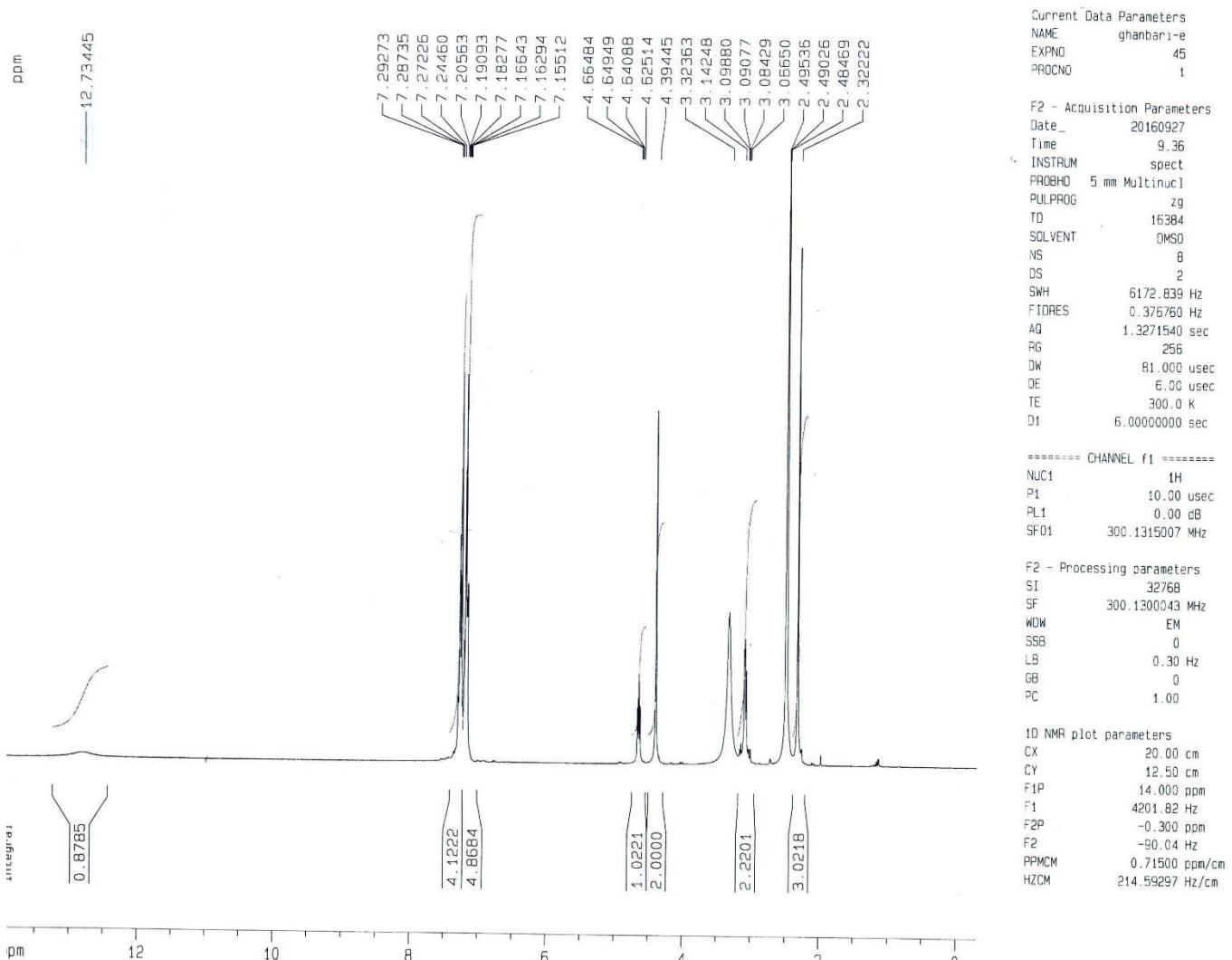
The Perkin-Elmer Spectrum RXI FT-IR Spectrometer

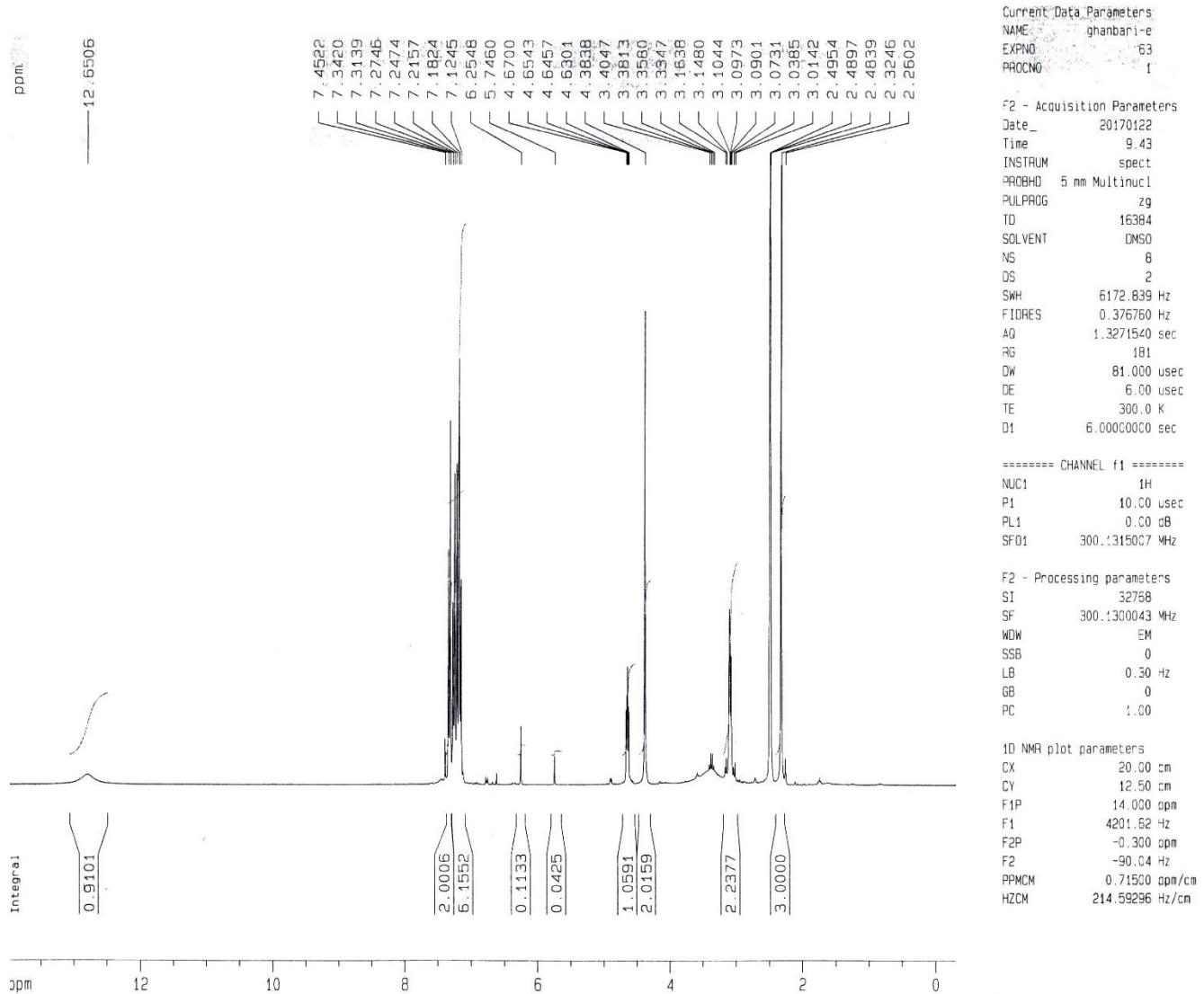
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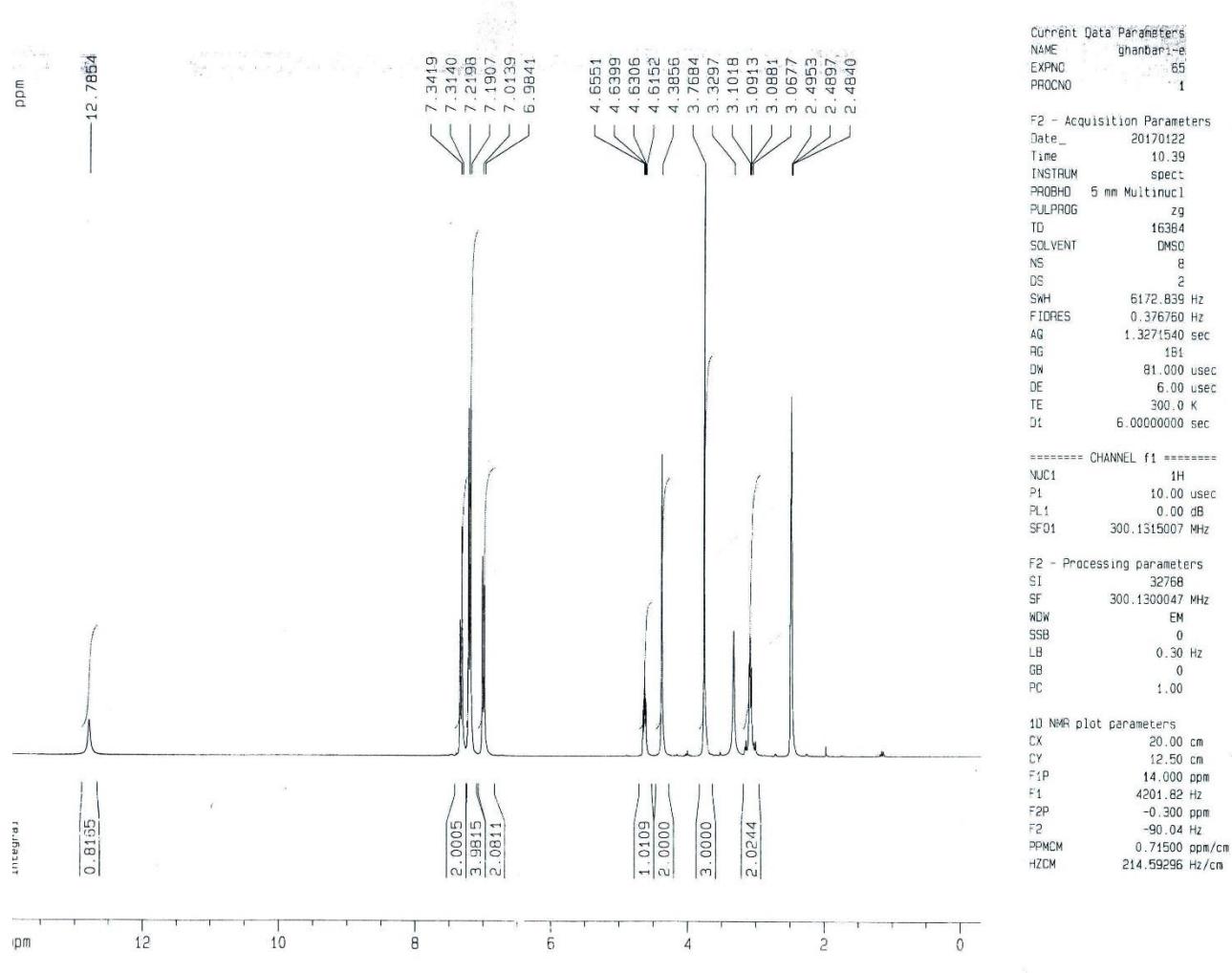
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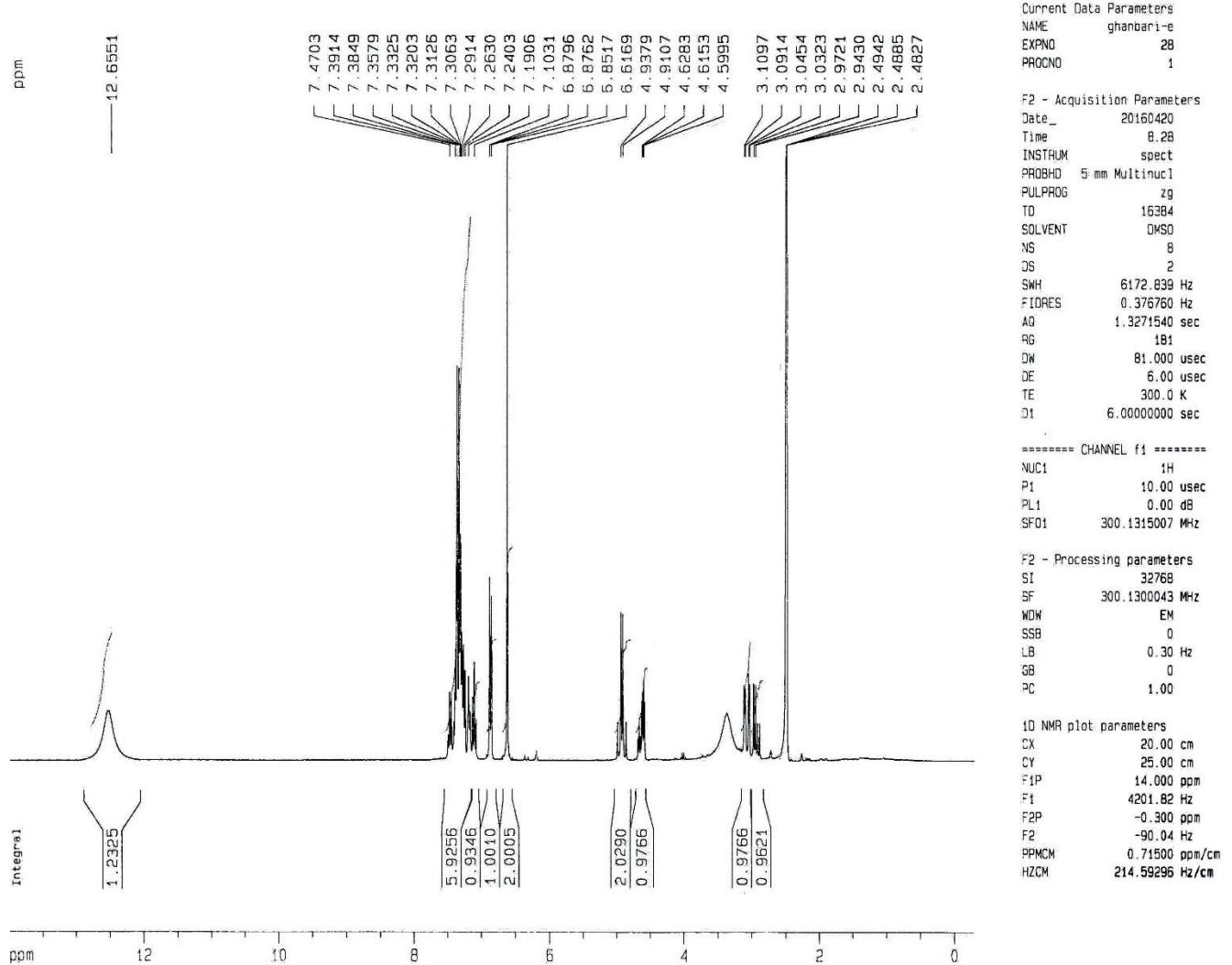


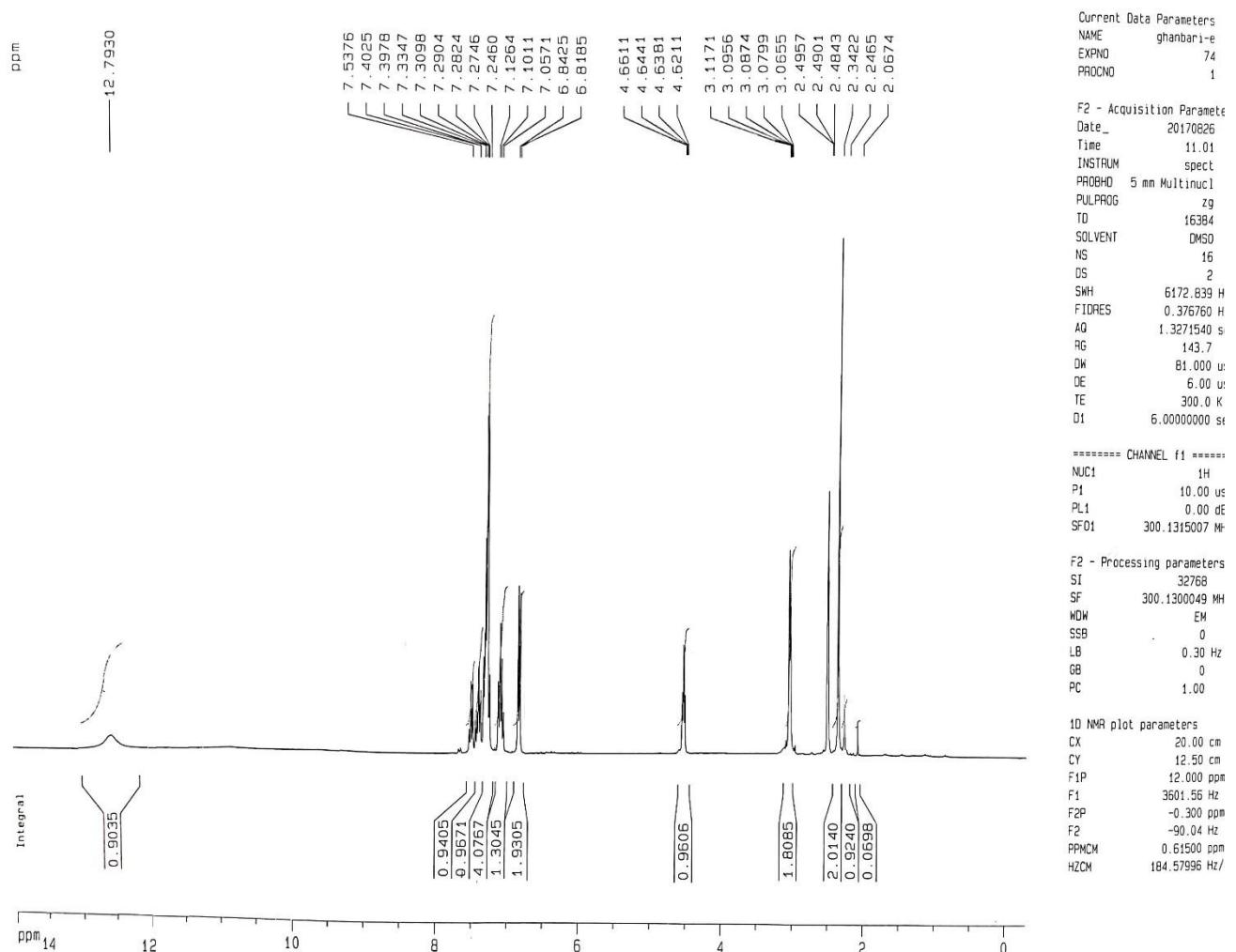
**Figure S9**  $^1\text{H}$  NMR spectrum of **4a**

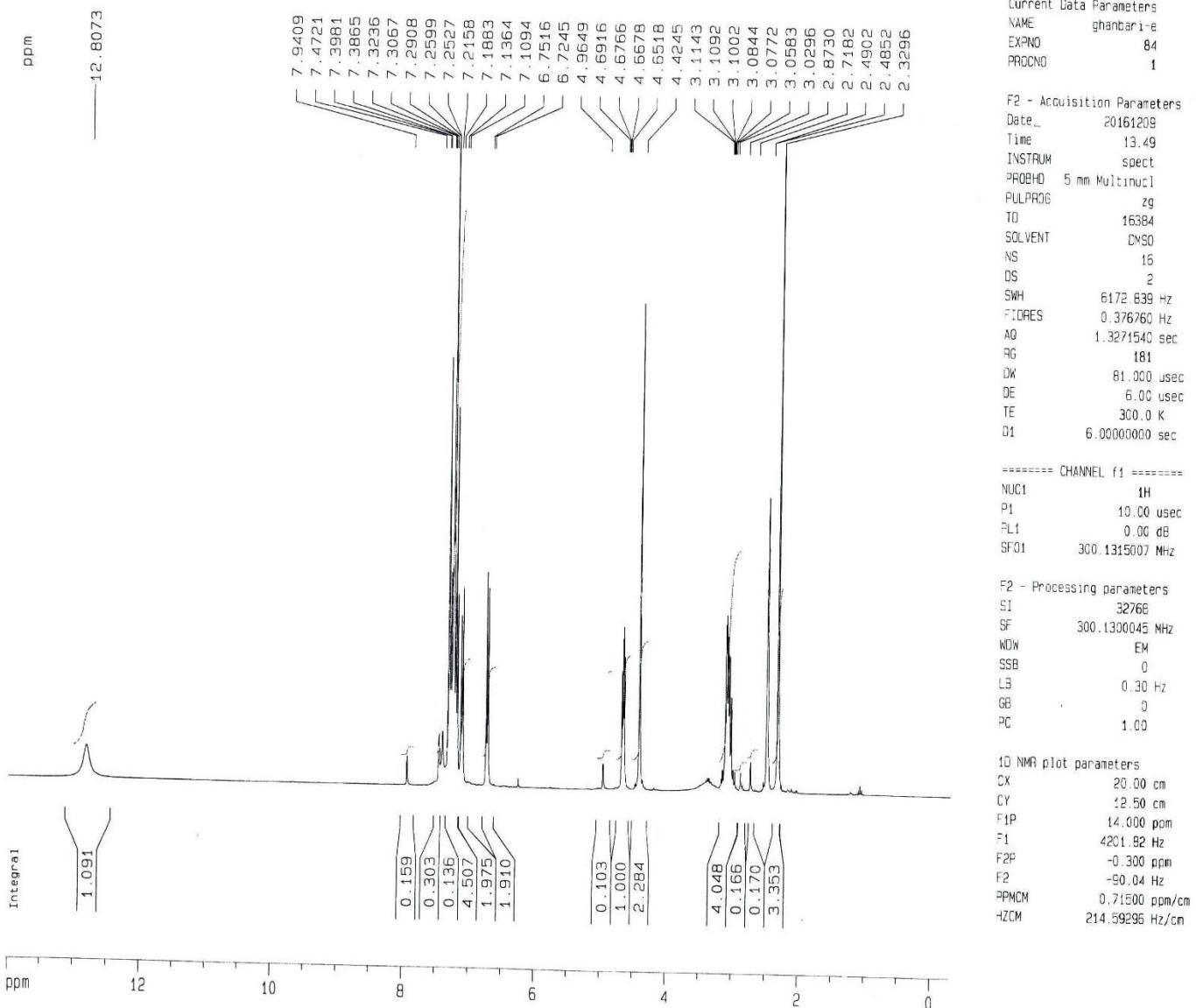
**Figure S10**  $^1\text{H}$  NMR spectrum of **4b**

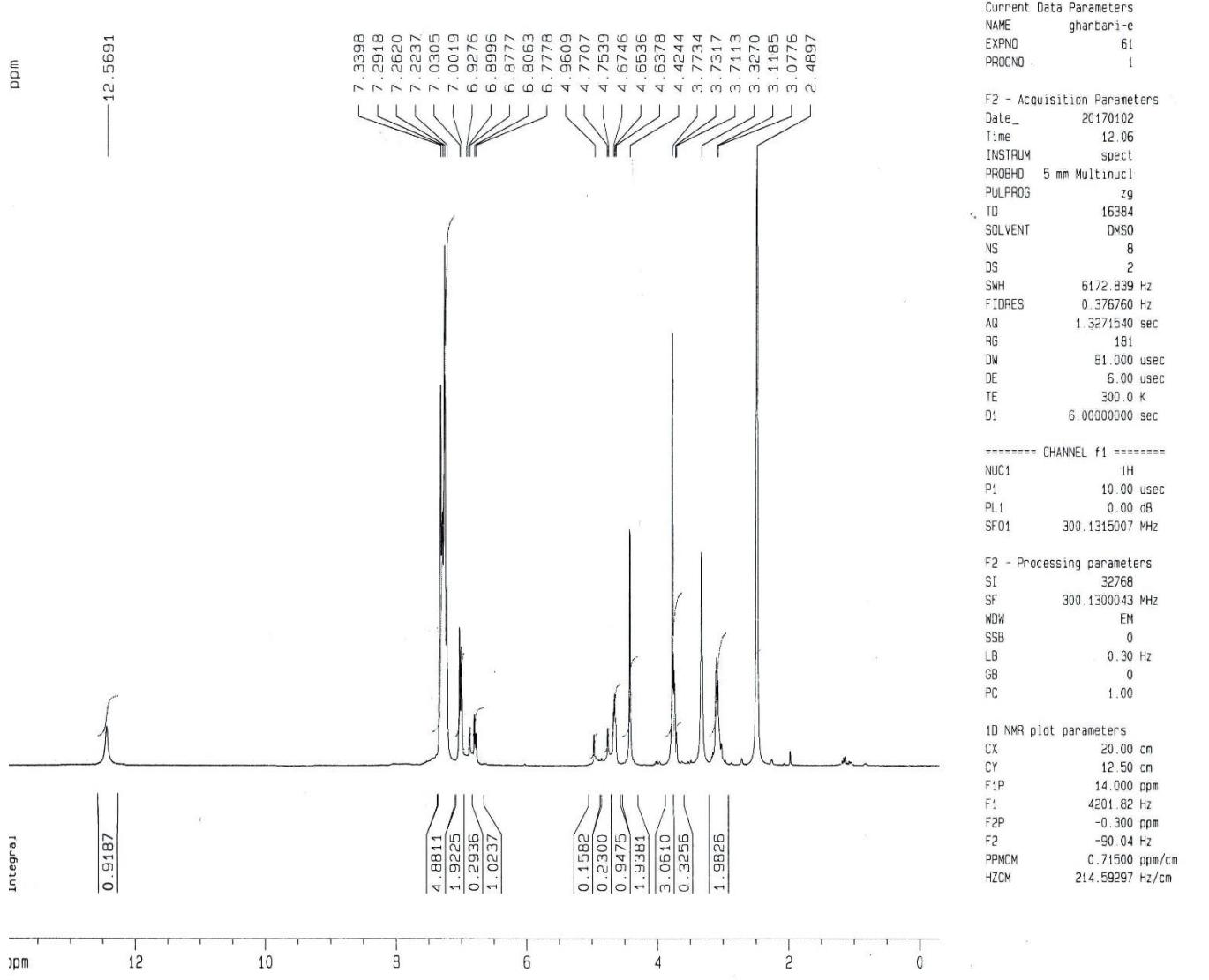
**Figure S11**  $^1\text{H}$  NMR spectrum of **4c**

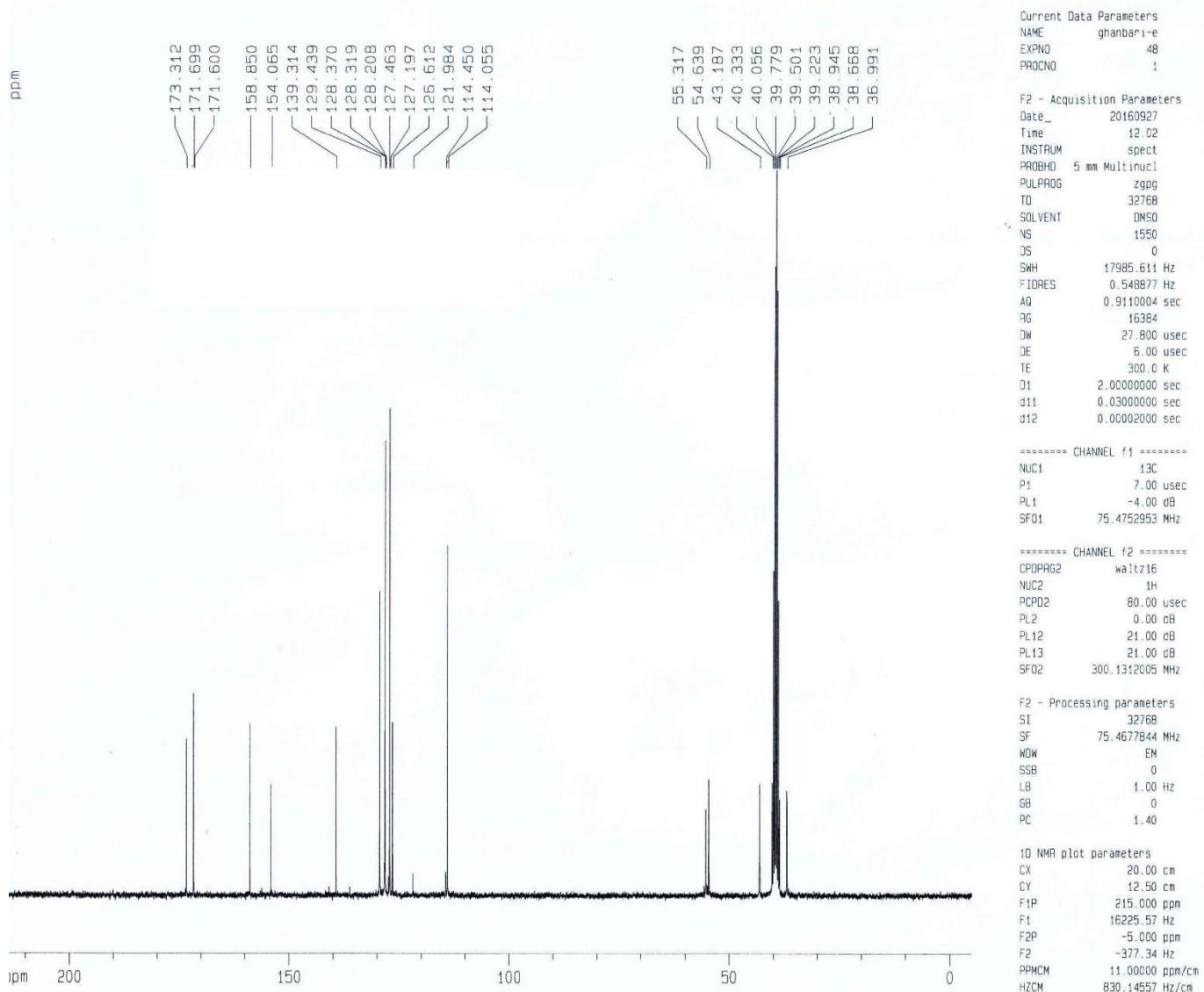
**Figure S12**  $^1\text{H}$  NMR spectrum of **4d**

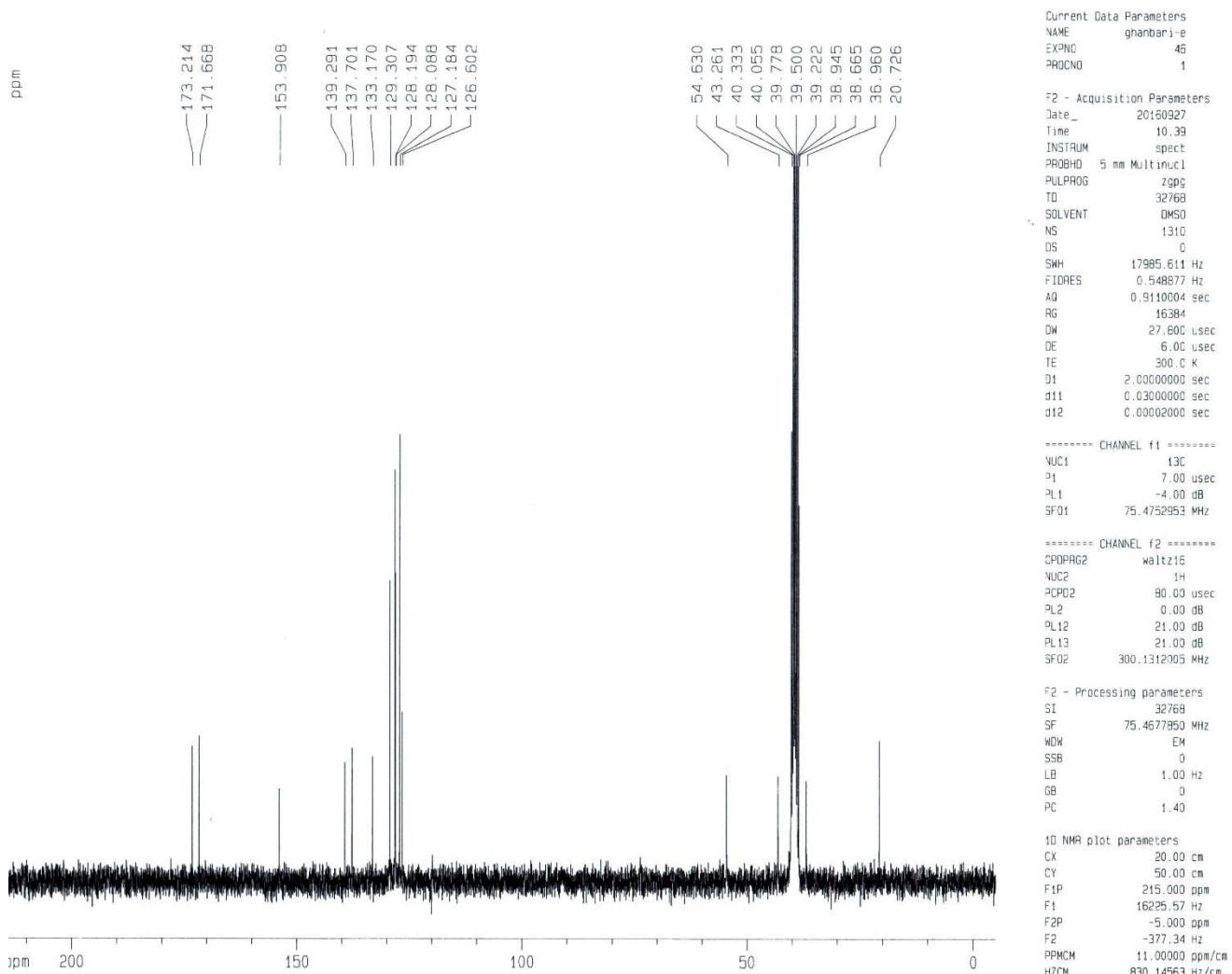
**Figure S13**  $^1\text{H}$  NMR spectrum of **4e**

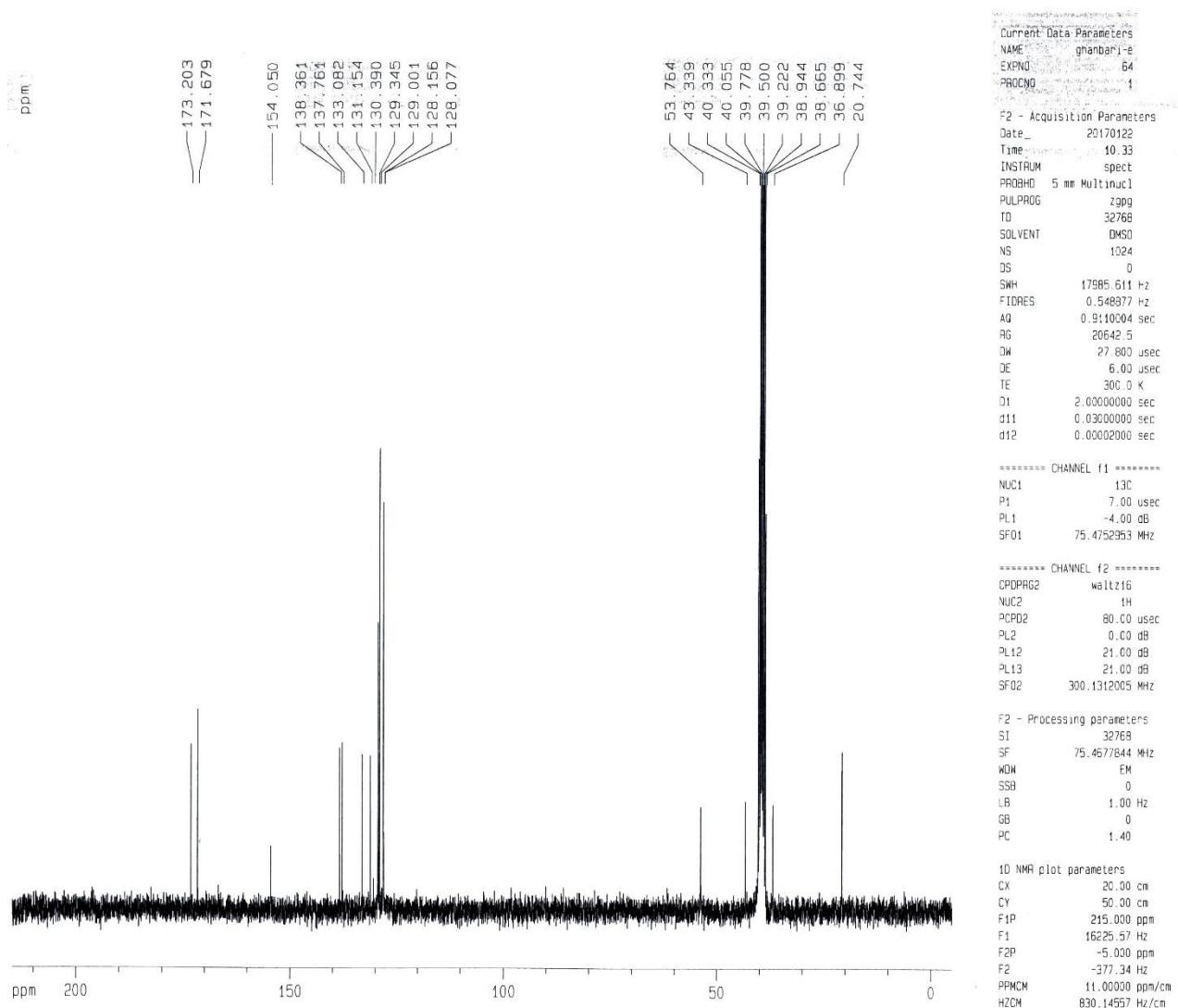
**Figure S14**  $^1\text{H}$  NMR spectrum of **4f**

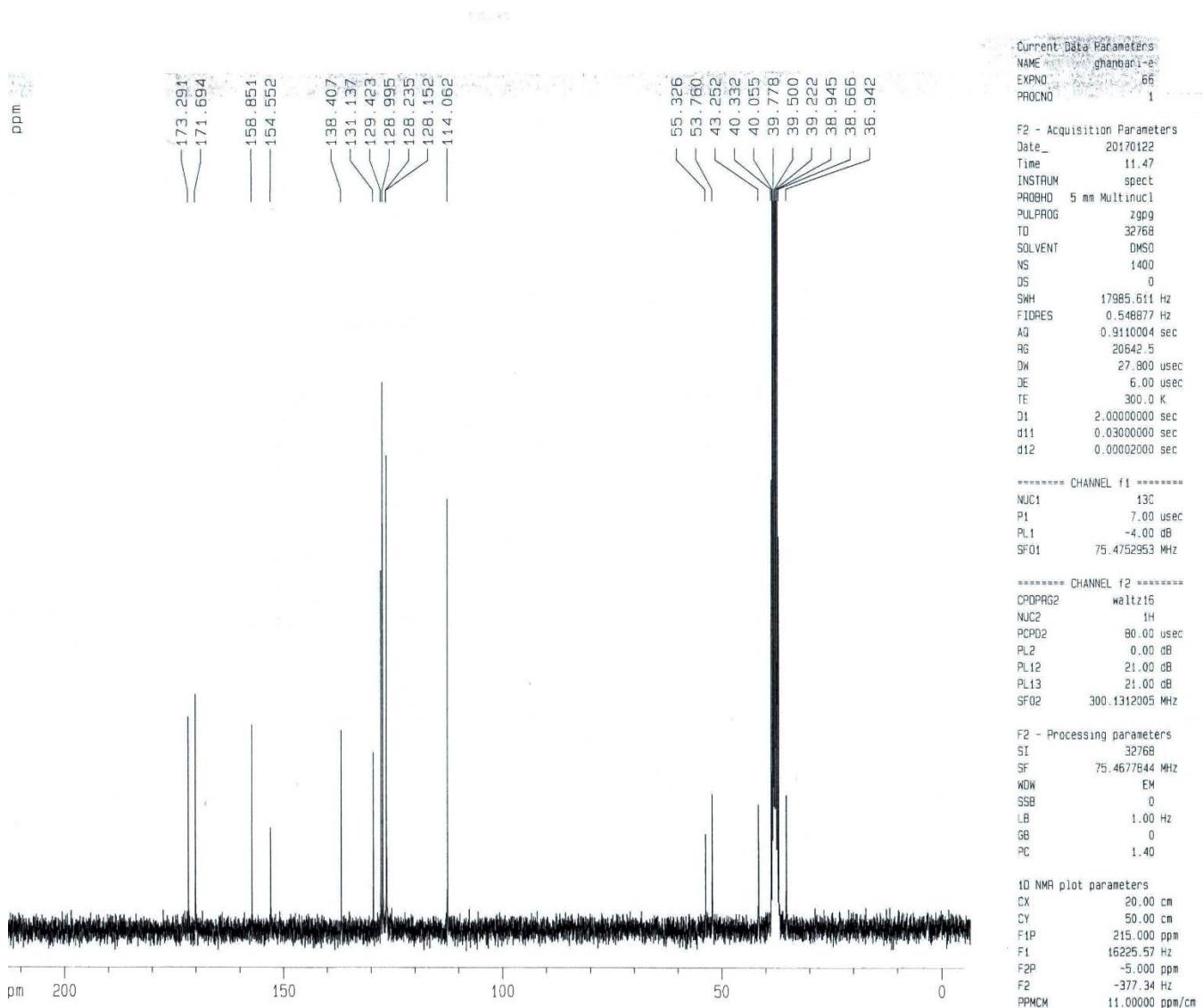
**Figure S15**  $^1\text{H}$  NMR spectrum of **4g**

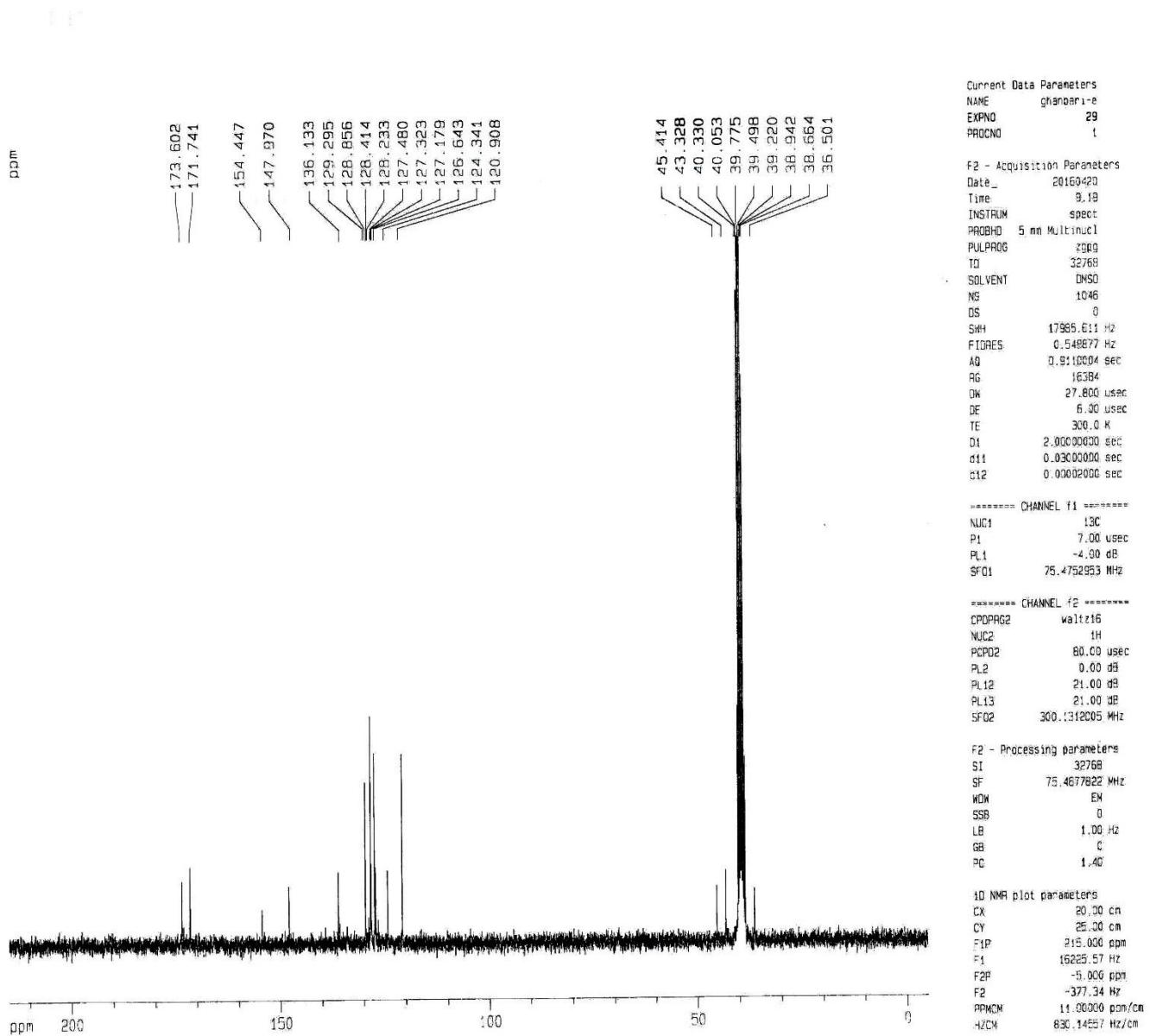
**Figure S16**  $^1\text{H}$  NMR spectrum of **4h**

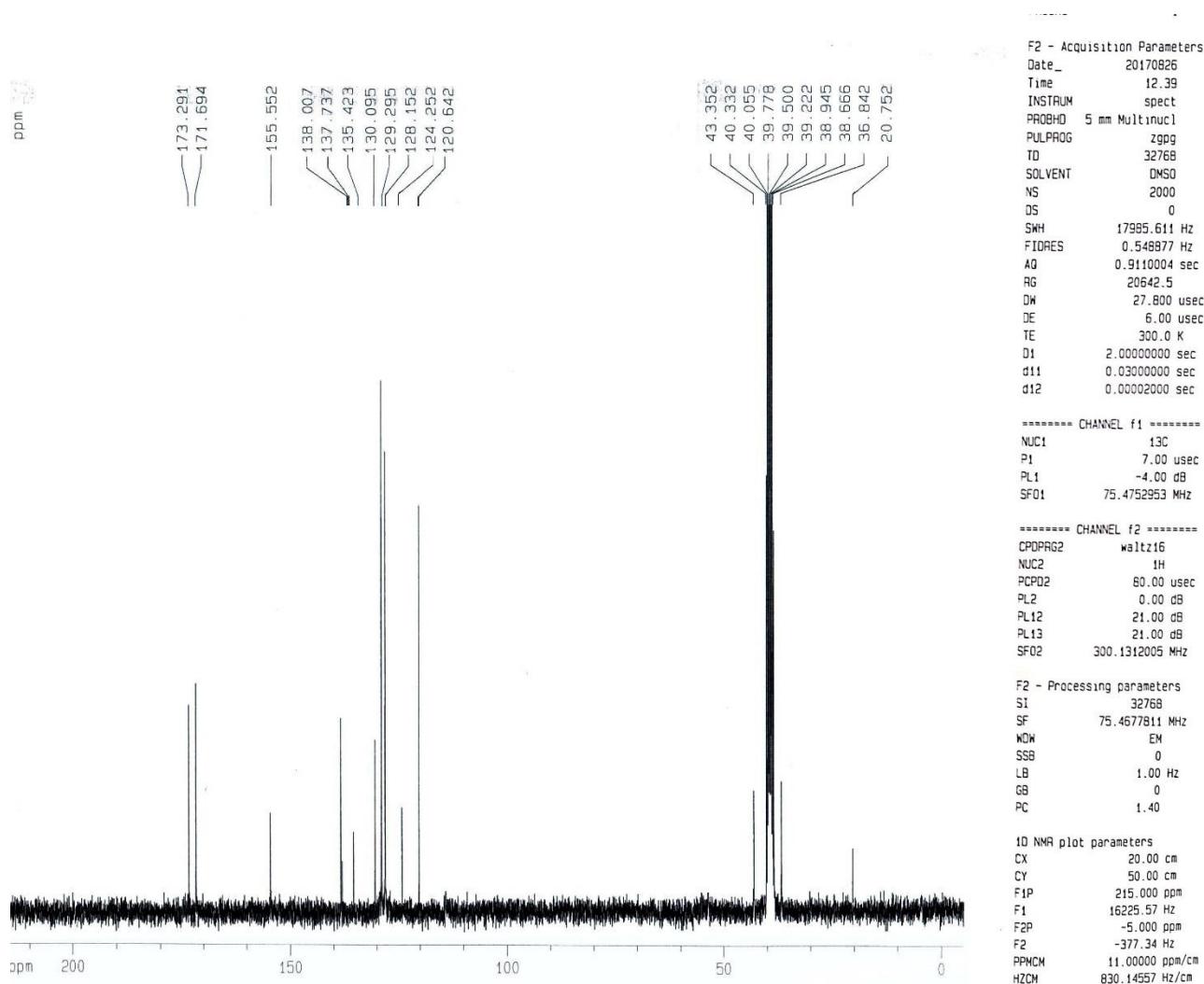
**Figure S17**  $^{13}\text{C}$  NMR spectrum of **4a**

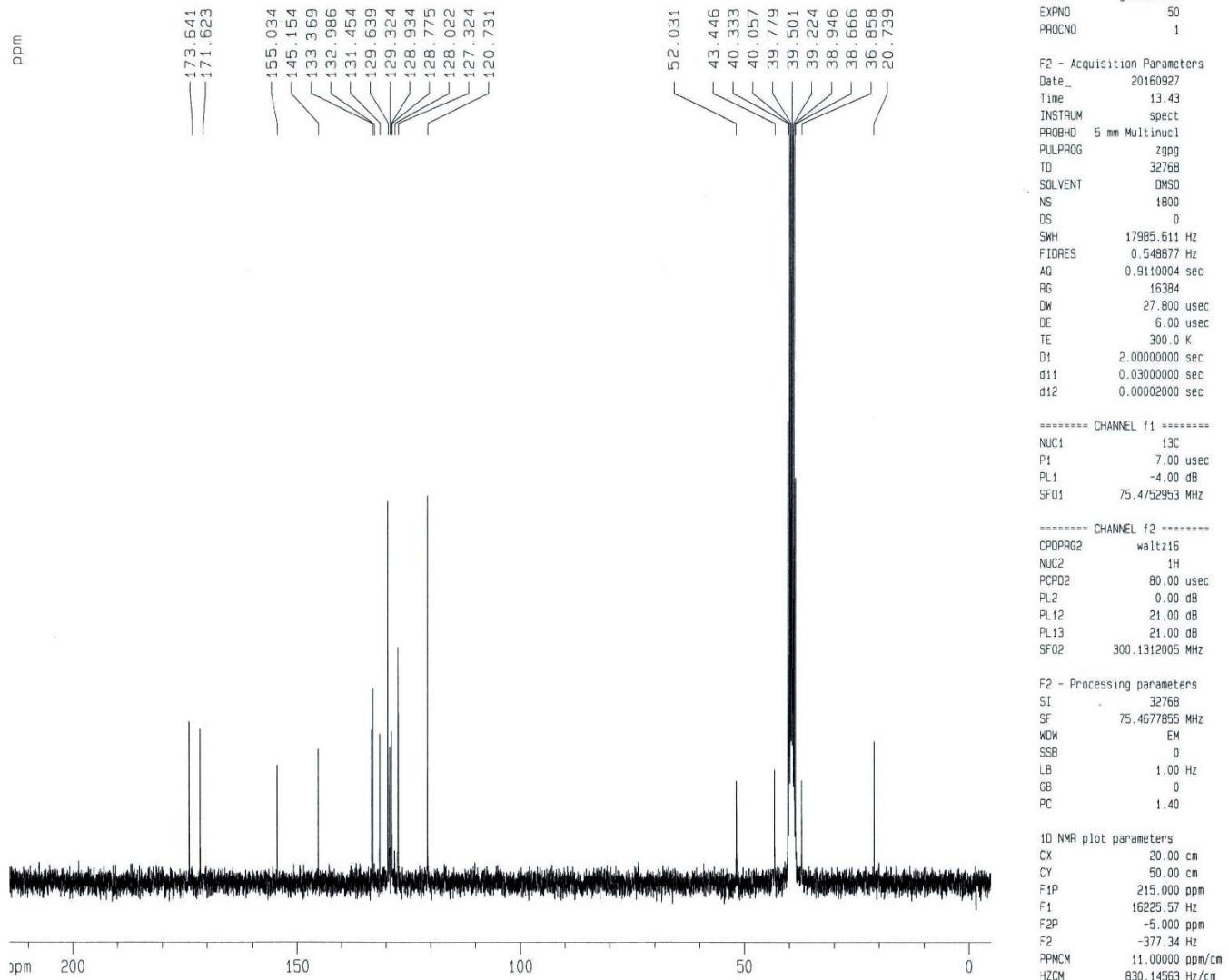
**Figure S18**  $^{13}\text{C}$  NMR spectrum of **4b**

**Figure S19**  $^{13}\text{C}$  NMR spectrum of **4c**

**Figure S20**  $^{13}\text{C}$  NMR spectrum of **4d**

**Figure S21**  $^{13}\text{C}$  NMR spectrum of **4e**

**Figure S22**  $^{13}\text{C}$  NMR spectrum of **4f**

**Figure S23**  $^{13}\text{C}$  NMR spectrum of **4g**

**Figure S24**  $^{13}\text{C}$  NMR spectrum of **4h**