

## Supporting Information for

### The chemical constituents from fruits of *Catalpa bignonioides* Walt. and their $\alpha$ -glucosidase inhibitory activity and insulin secretion effect

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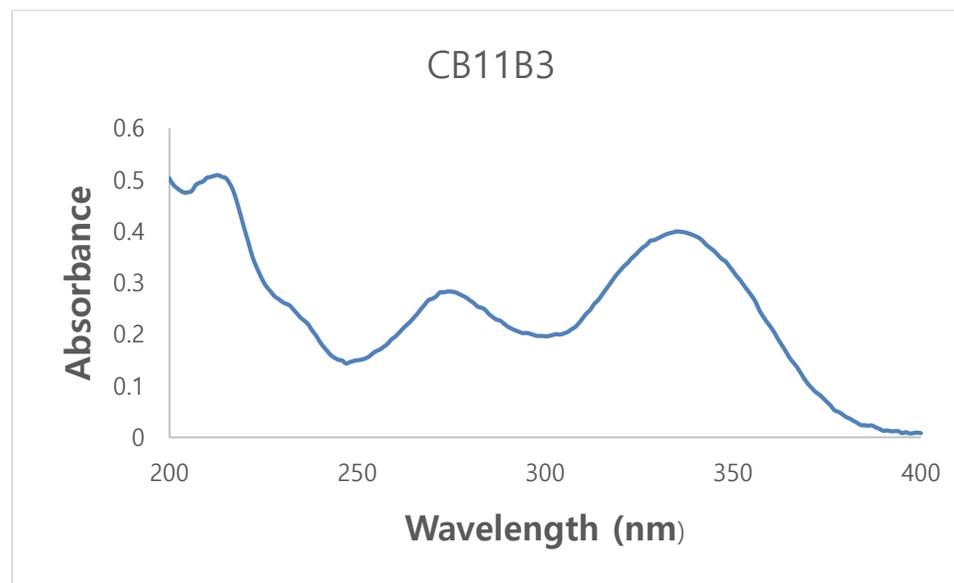
\*(S.H.K.) Tel: +82-32-749-4514. E-mail: kimsh11@yonsei.ac.kr

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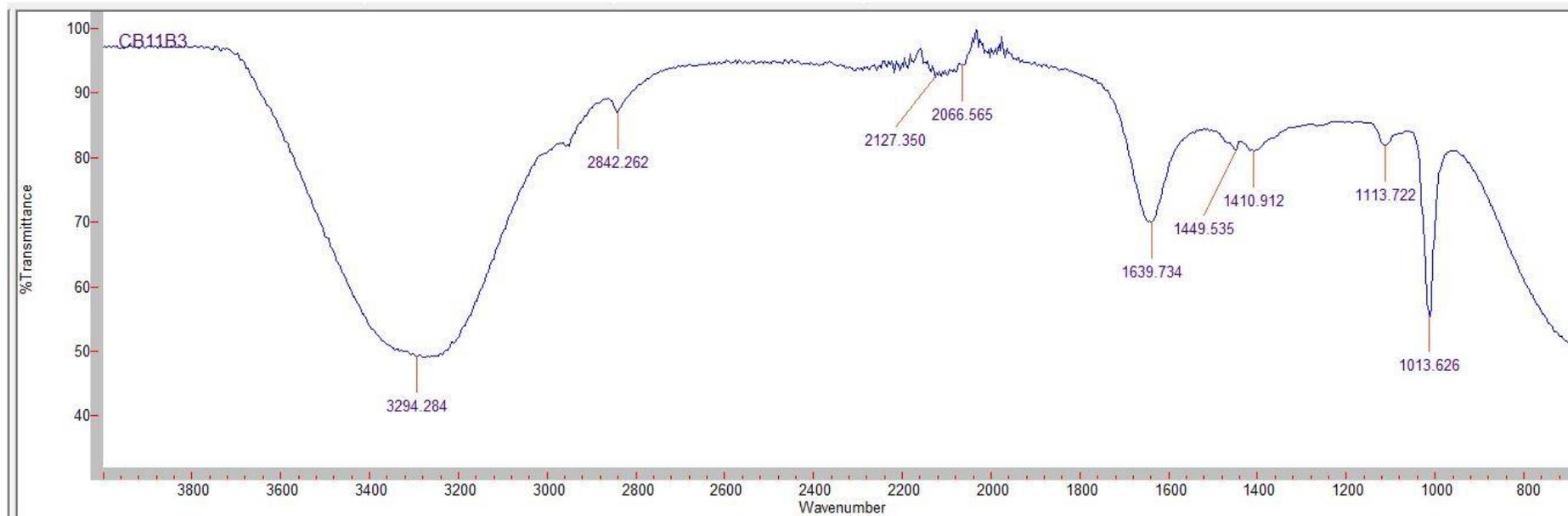
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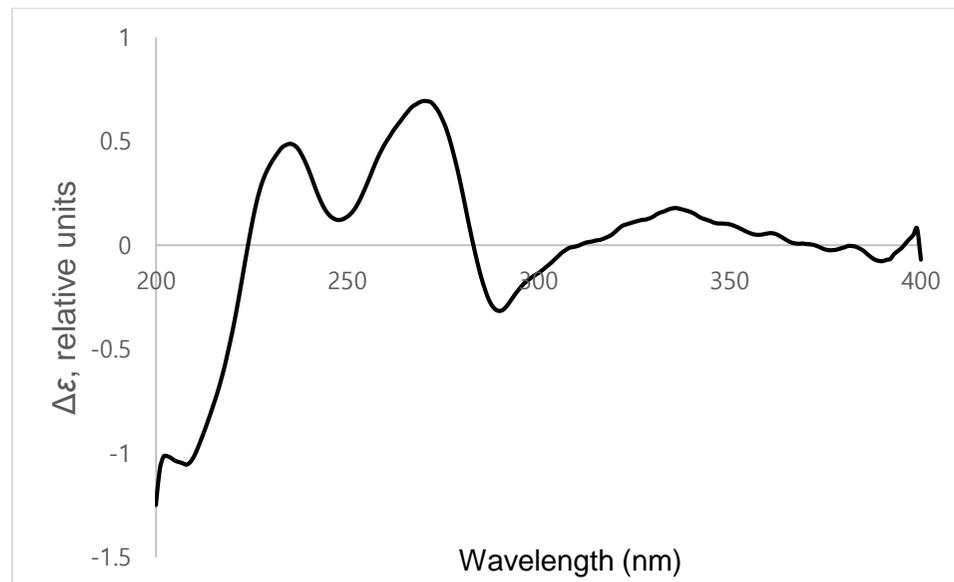
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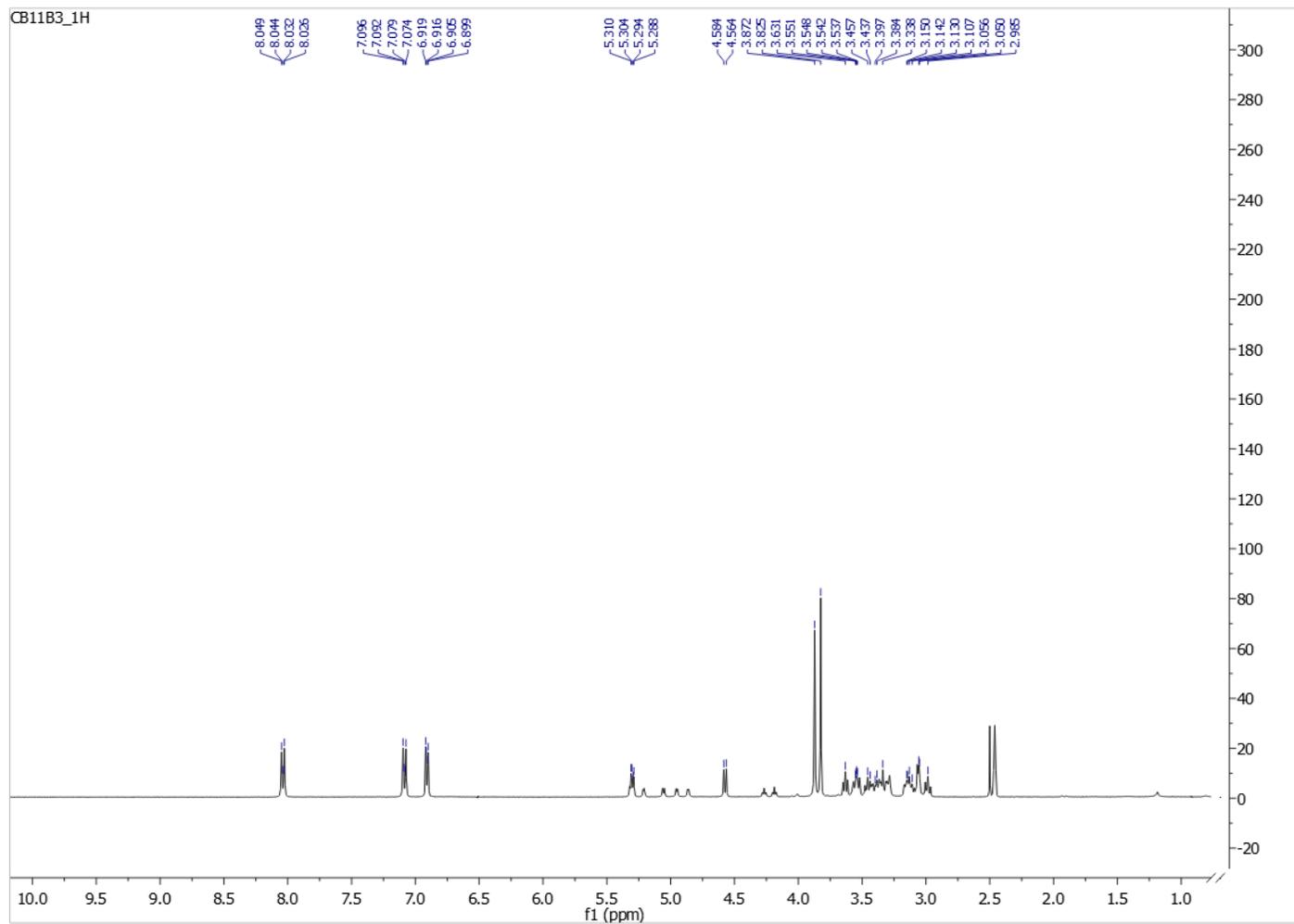
**Figure S1.** UV spectrum of compound **1**



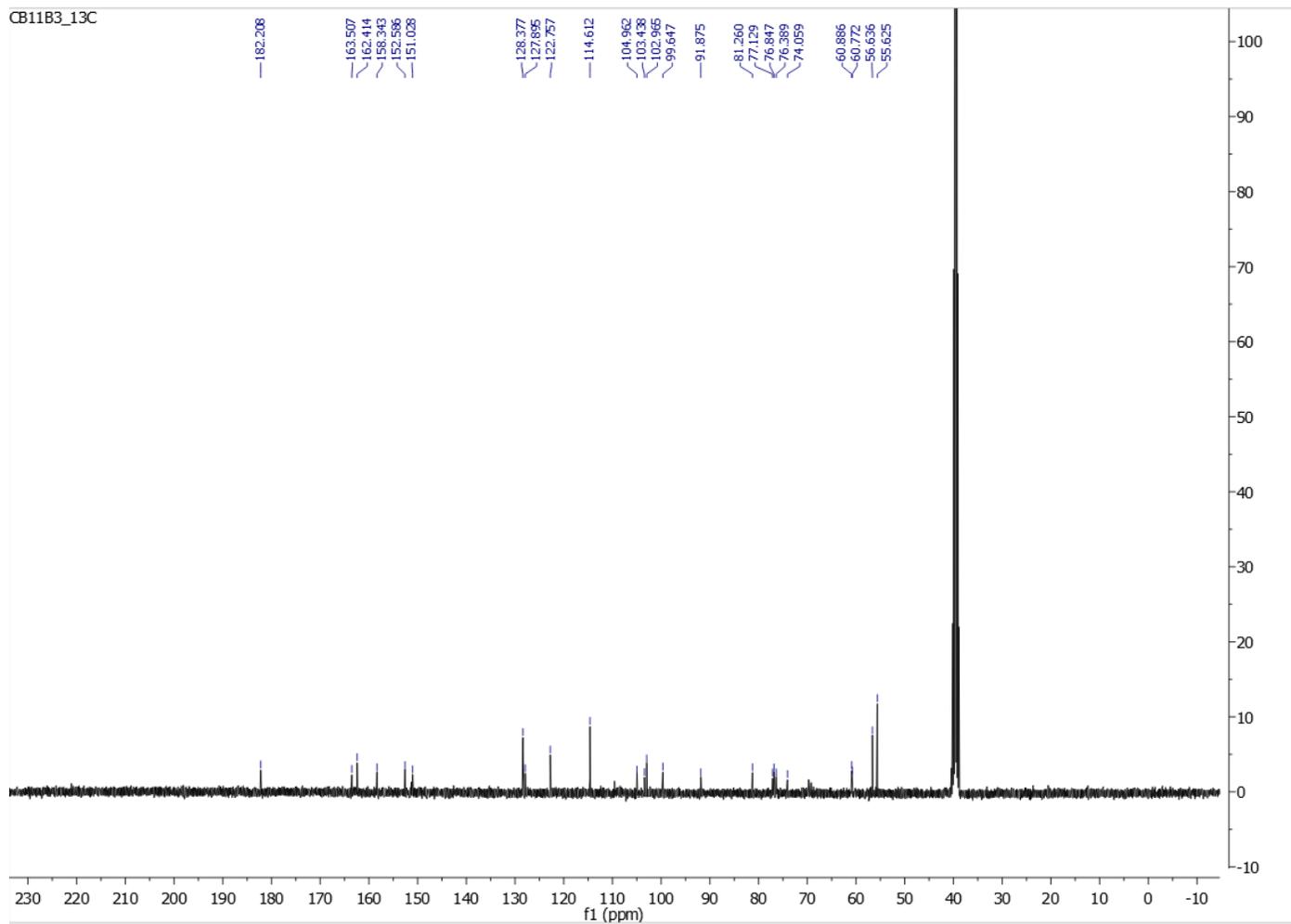
**Figure S2.** IR spectrum of compound **1**



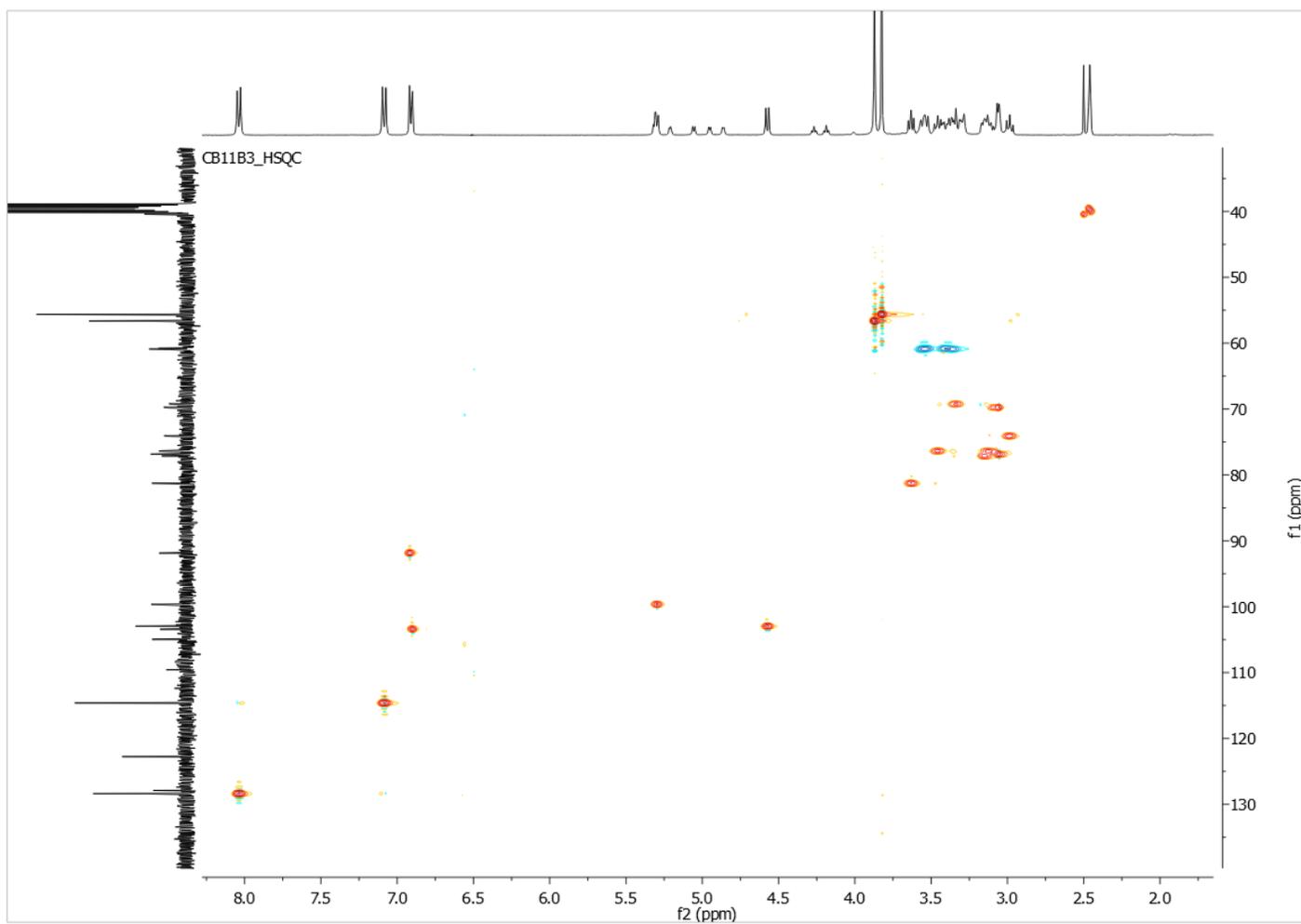
**Figure S3.** CD spectrum of compound **1**



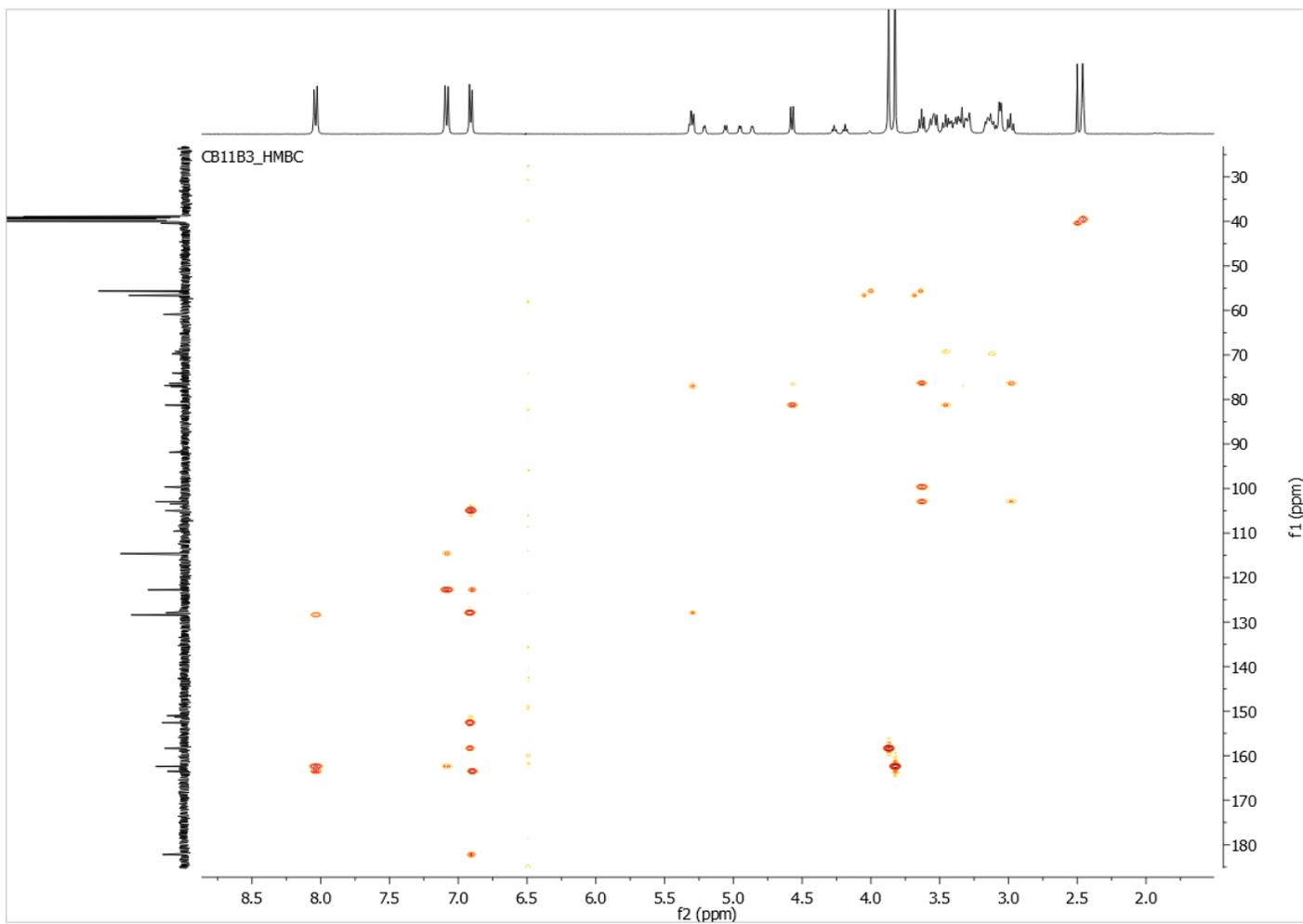
**Figure S4.**  $^1\text{H}$ -NMR spectrum of compound **1** (400 MHz, Dimethyl sulfoxide- $d_6$ )



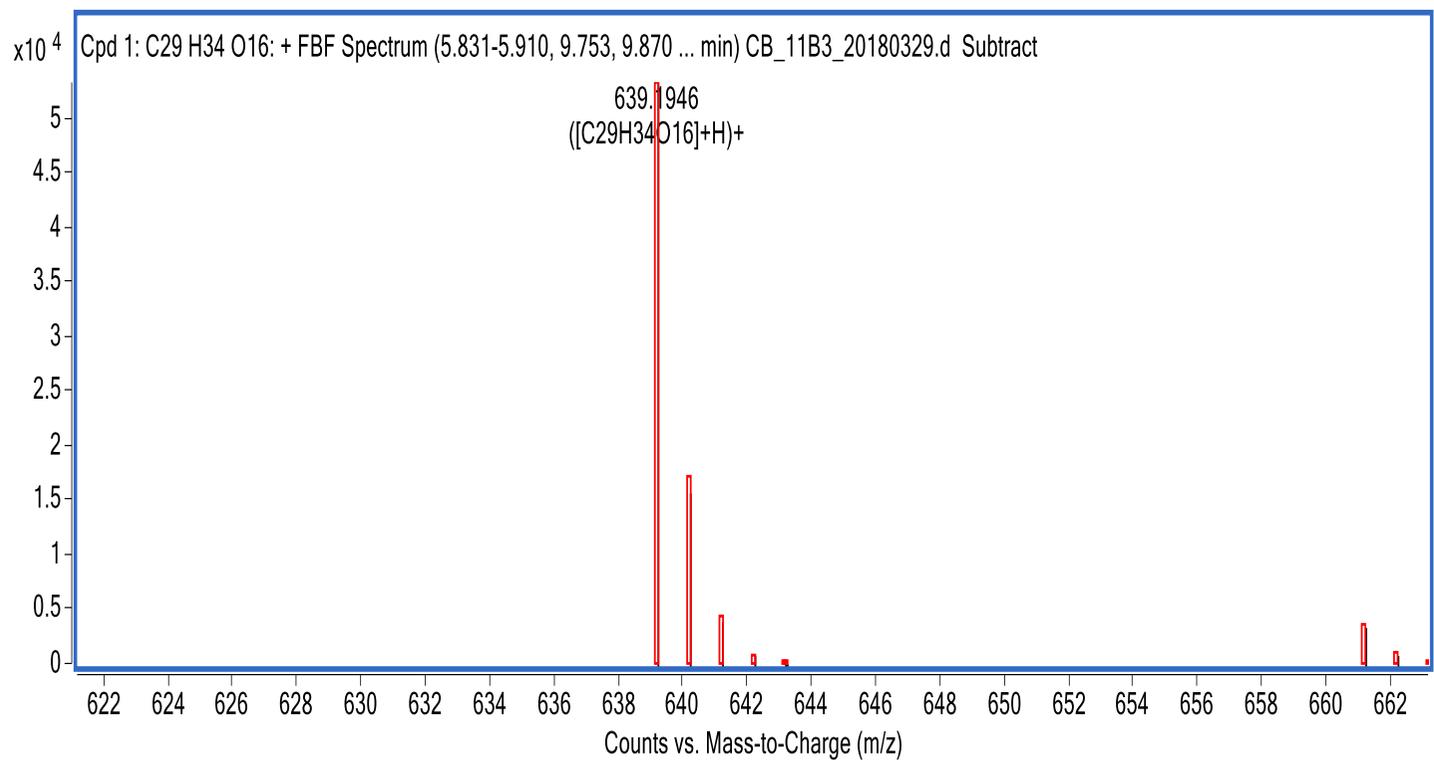
**Figure S5.**  $^{13}\text{C}$ -NMR spectrum of compound **1** (100 MHz, Dimethyl sulfoxide- $d_6$ )



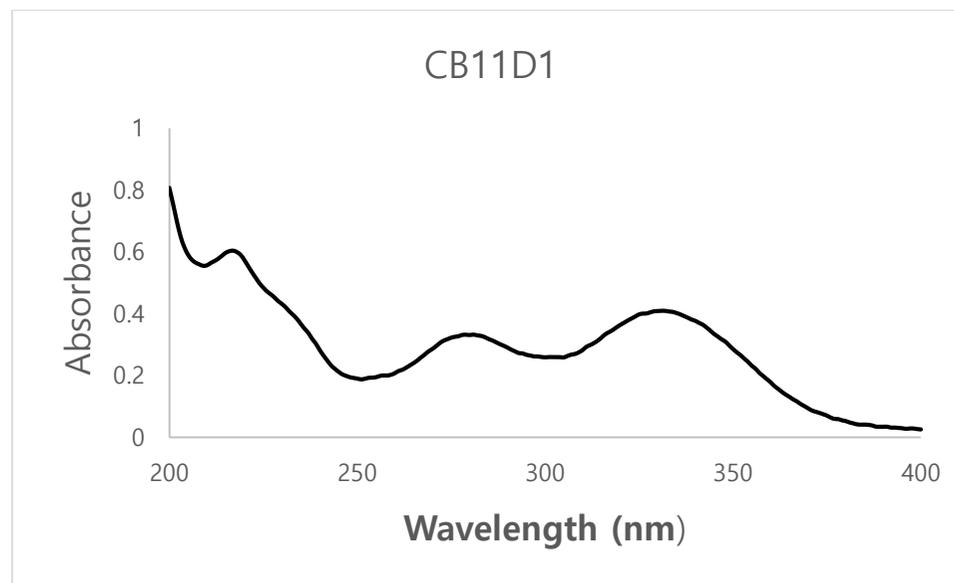
**Figure S6.** HSQC spectrum of compound **1** (Dimethyl sulfoxide- $d_6$ )



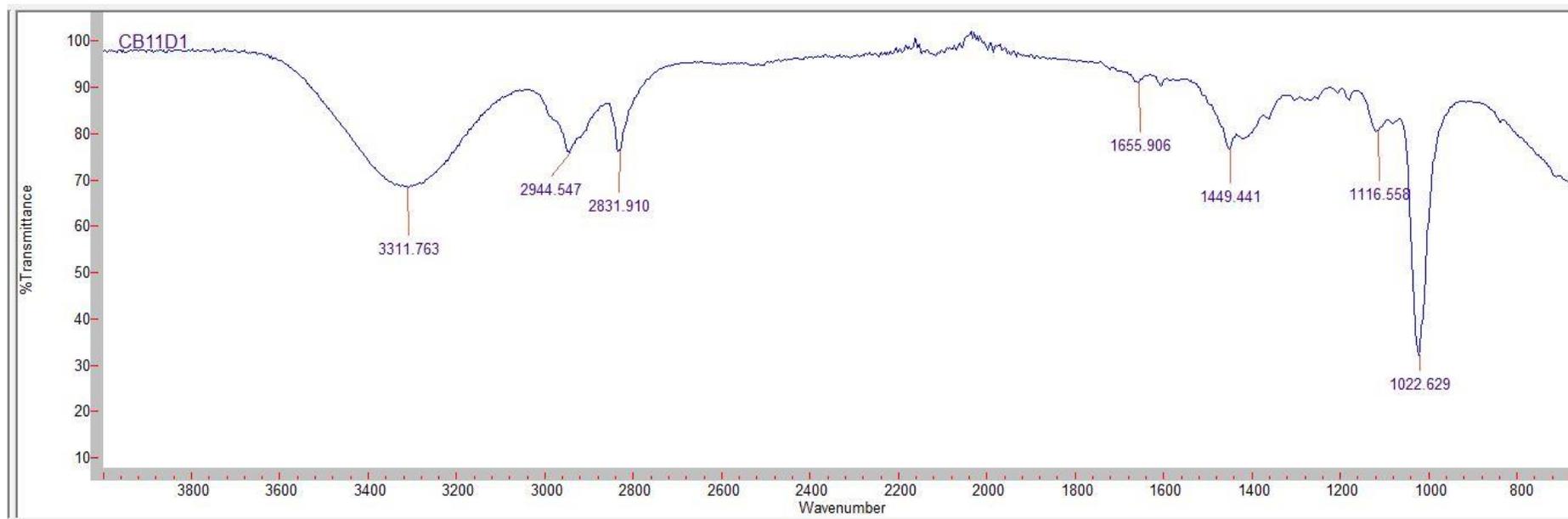
**Figure S7.** HMBC spectrum of compound **1** (Dimethyl sulfoxide- $d_6$ )



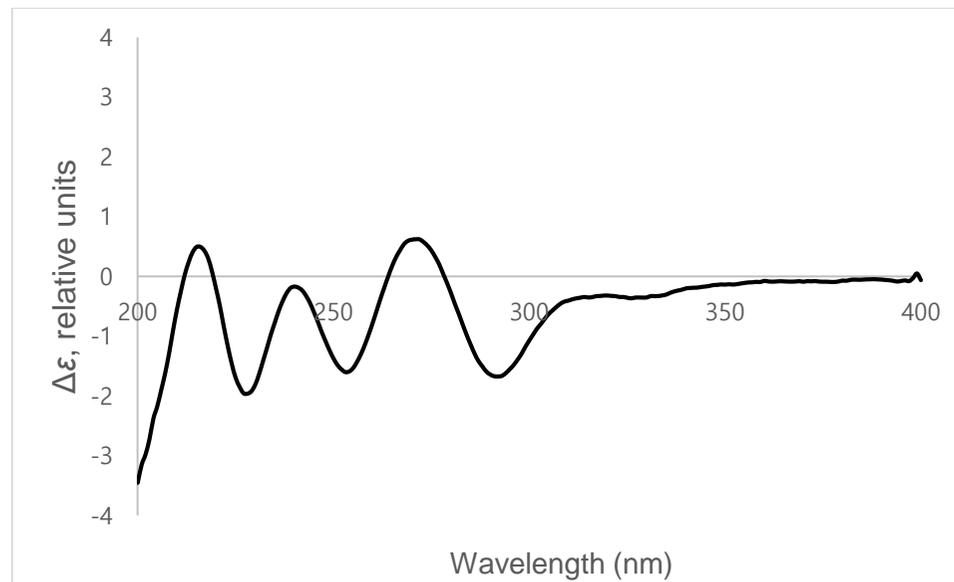
**Figure S8.** HR-ESI-MS of compound **1**



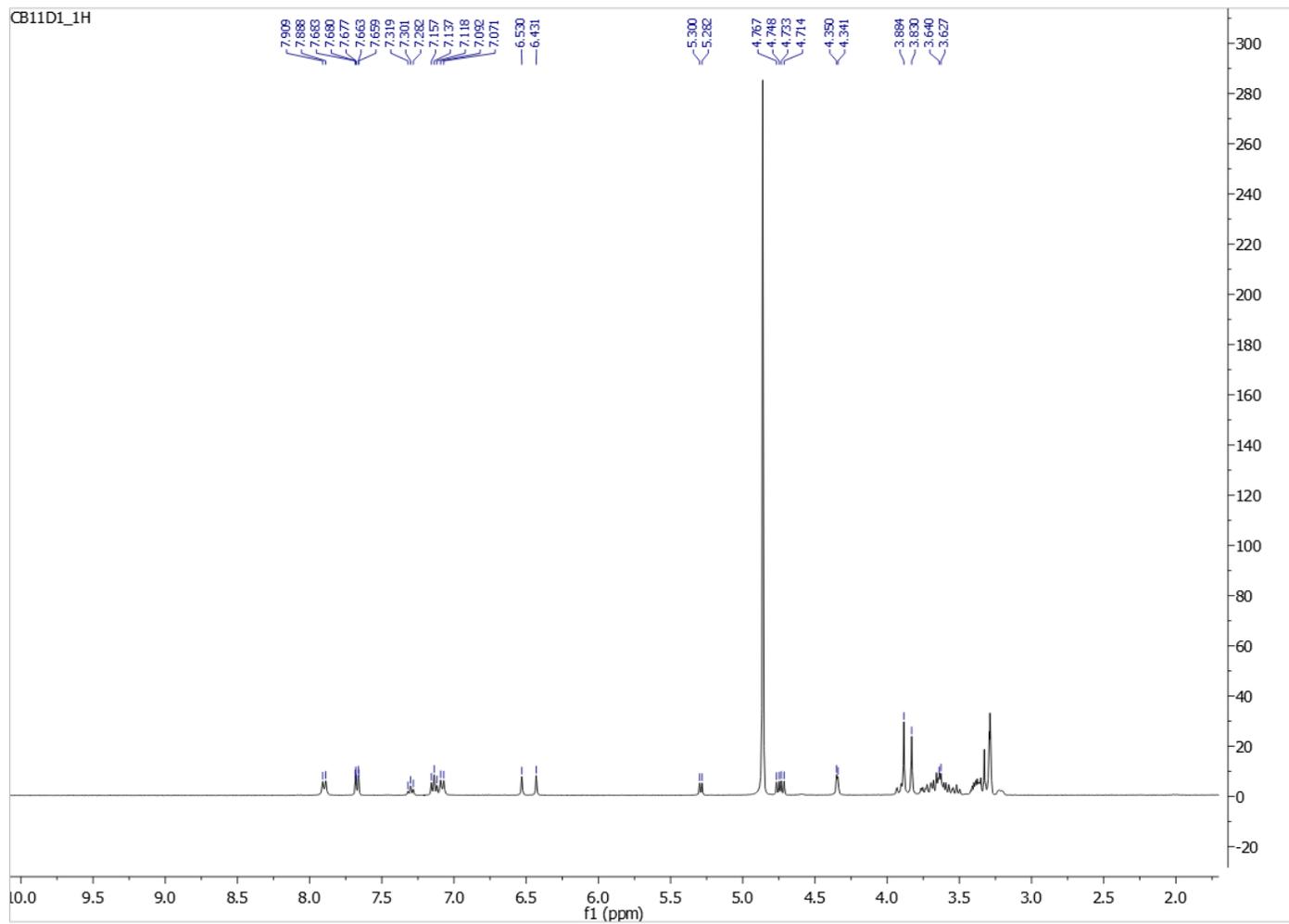
**Figure S9.** UV spectrum of compound **2**



**Figure S10.** IR spectrum of compound **2**



**Figure S11.** CD spectrum of compound **2**



**Figure S12.** <sup>1</sup>H-NMR spectrum of compound **2** (400 MHz, methanol-*d*<sub>4</sub>)

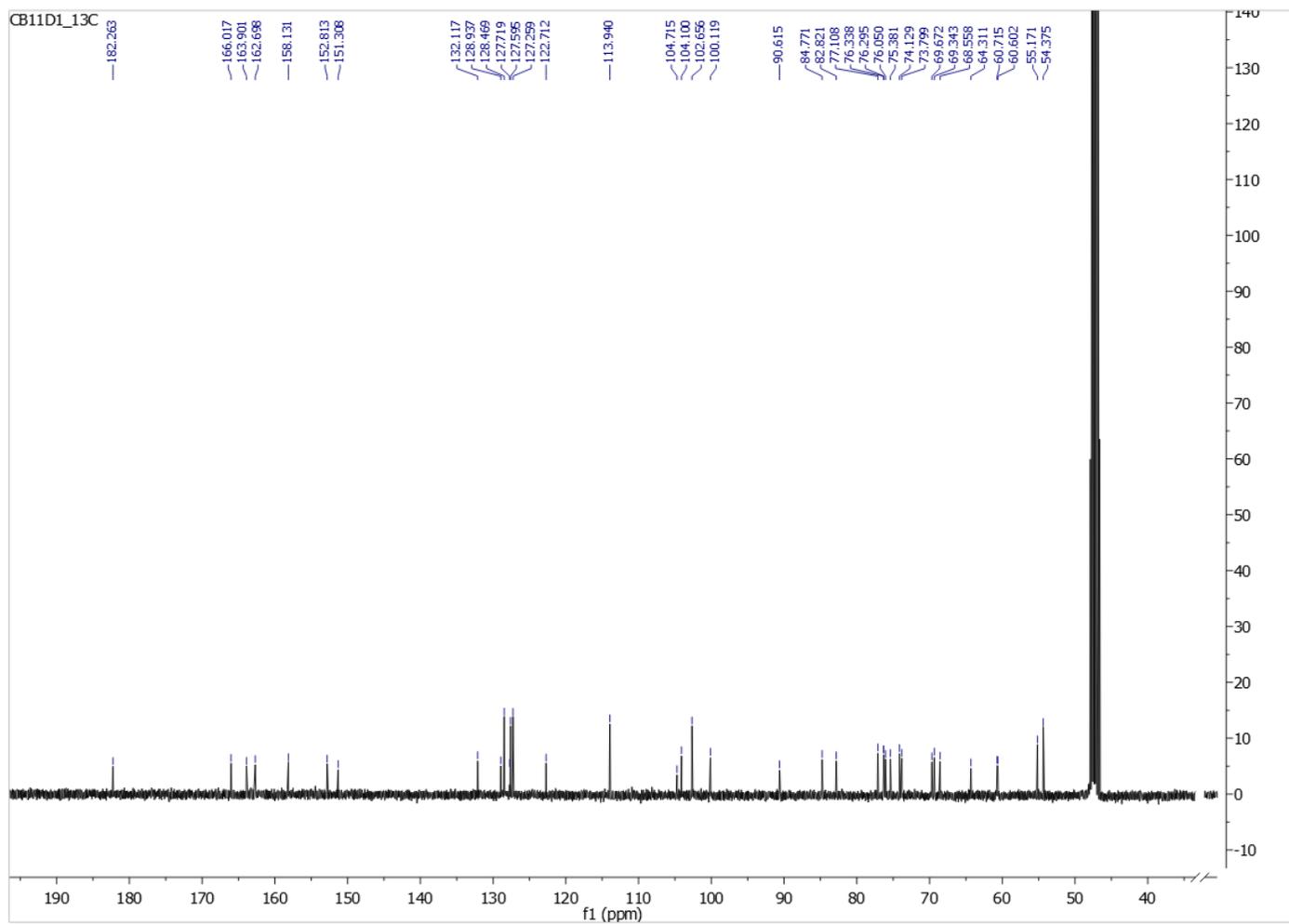
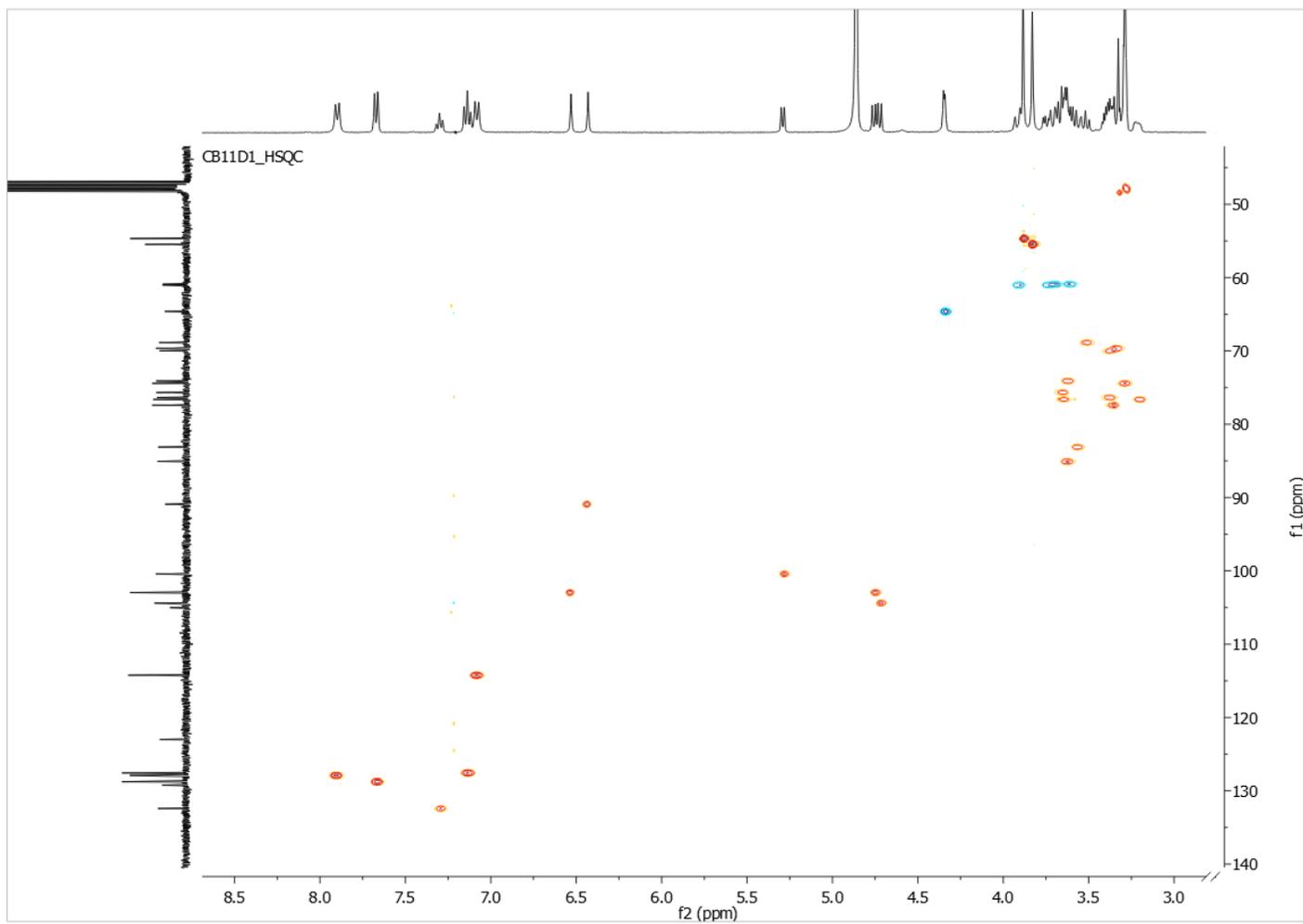


Figure S13.  $^{13}\text{C}$ -NMR spectrum of compound **2** (100 MHz, methanol- $d_4$ )



**Figure S14.** HSQC spectrum of compound **2** (methanol- $d_4$ )

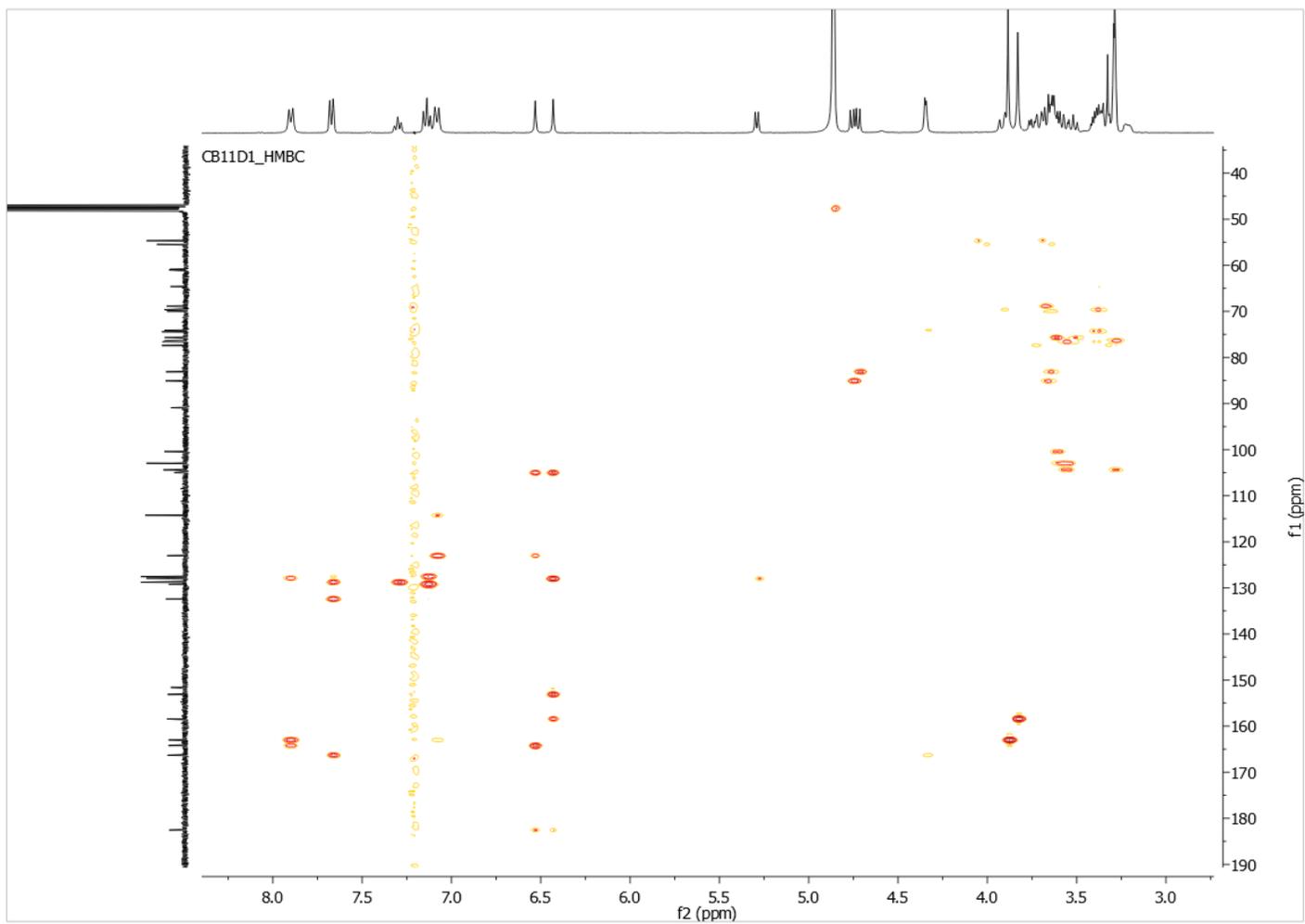
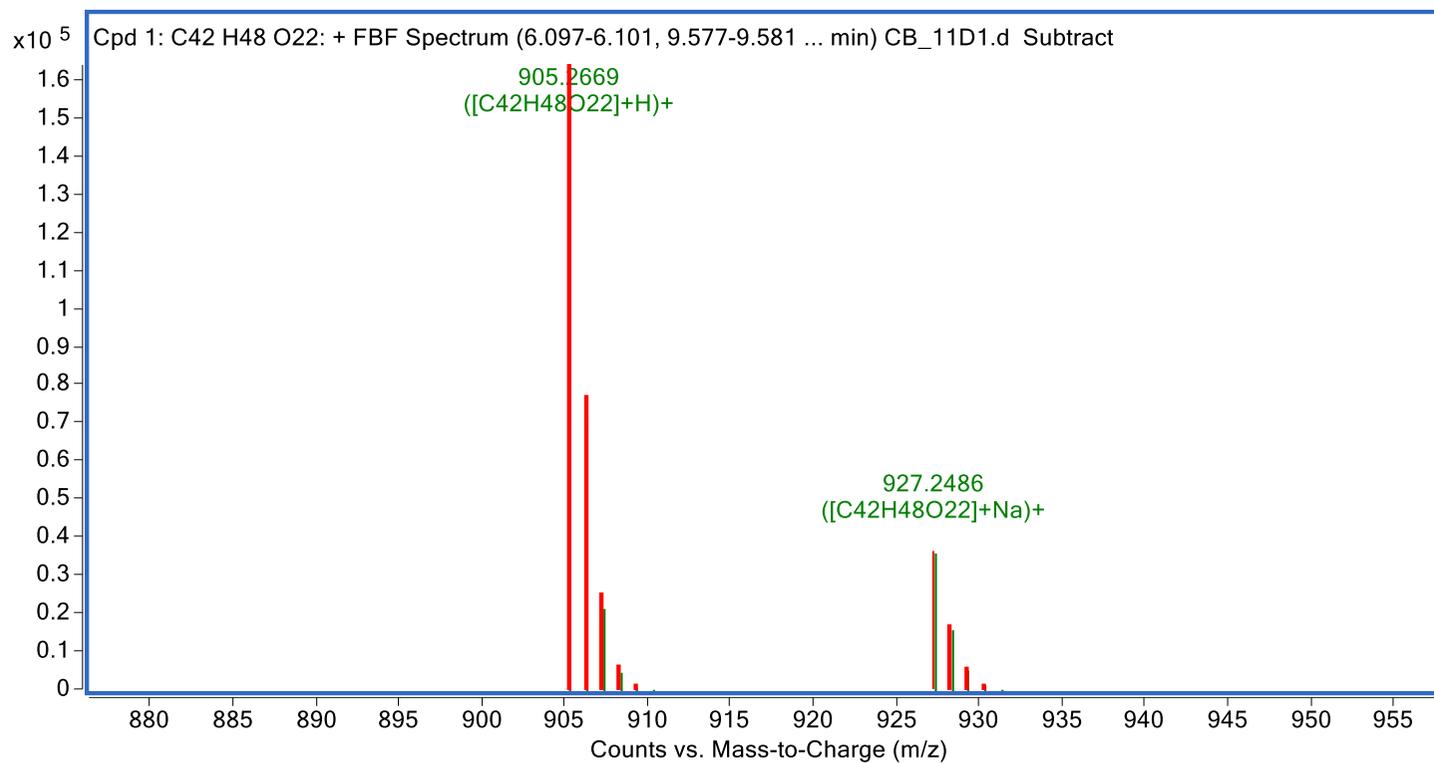
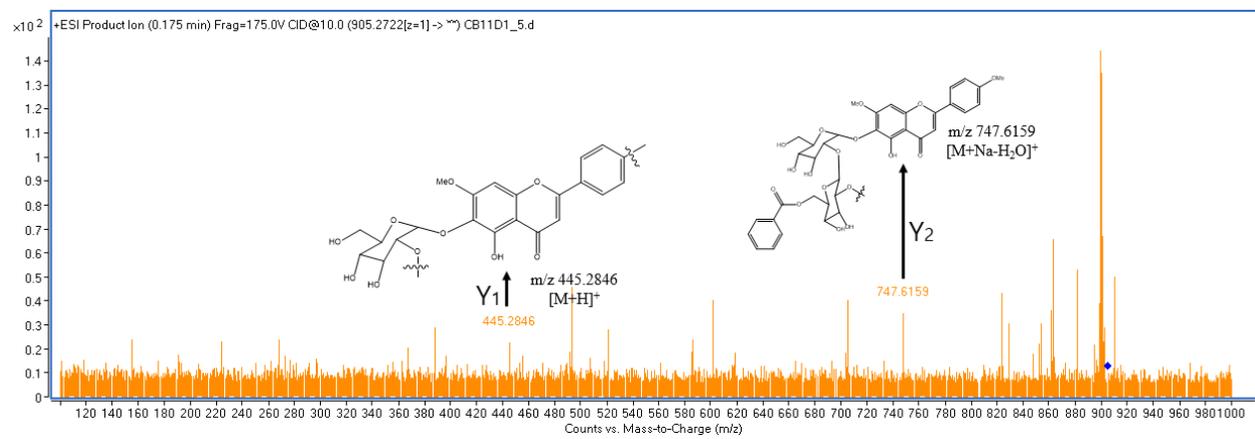


Figure S15. HMBC spectrum of compound **2** (methanol- $d_4$ )



**Figure S16.** HR-ESI-MS of compound **2**

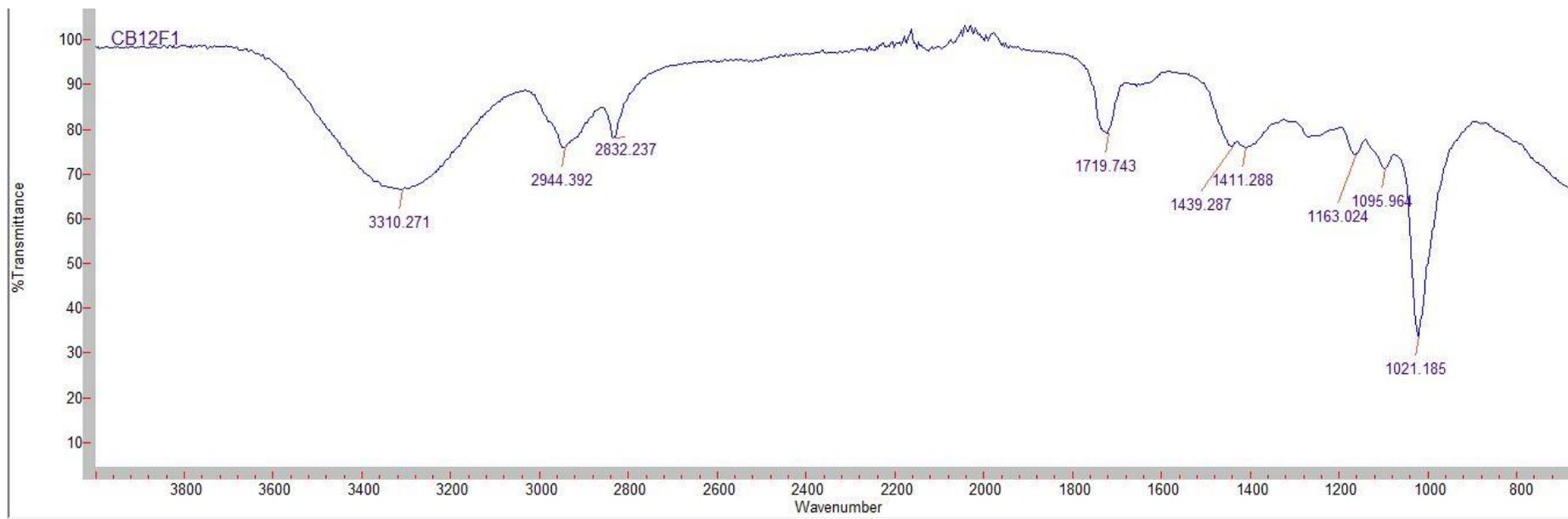


The ms/ms spectrum of compound 2 ( $m/z$  905.2772)

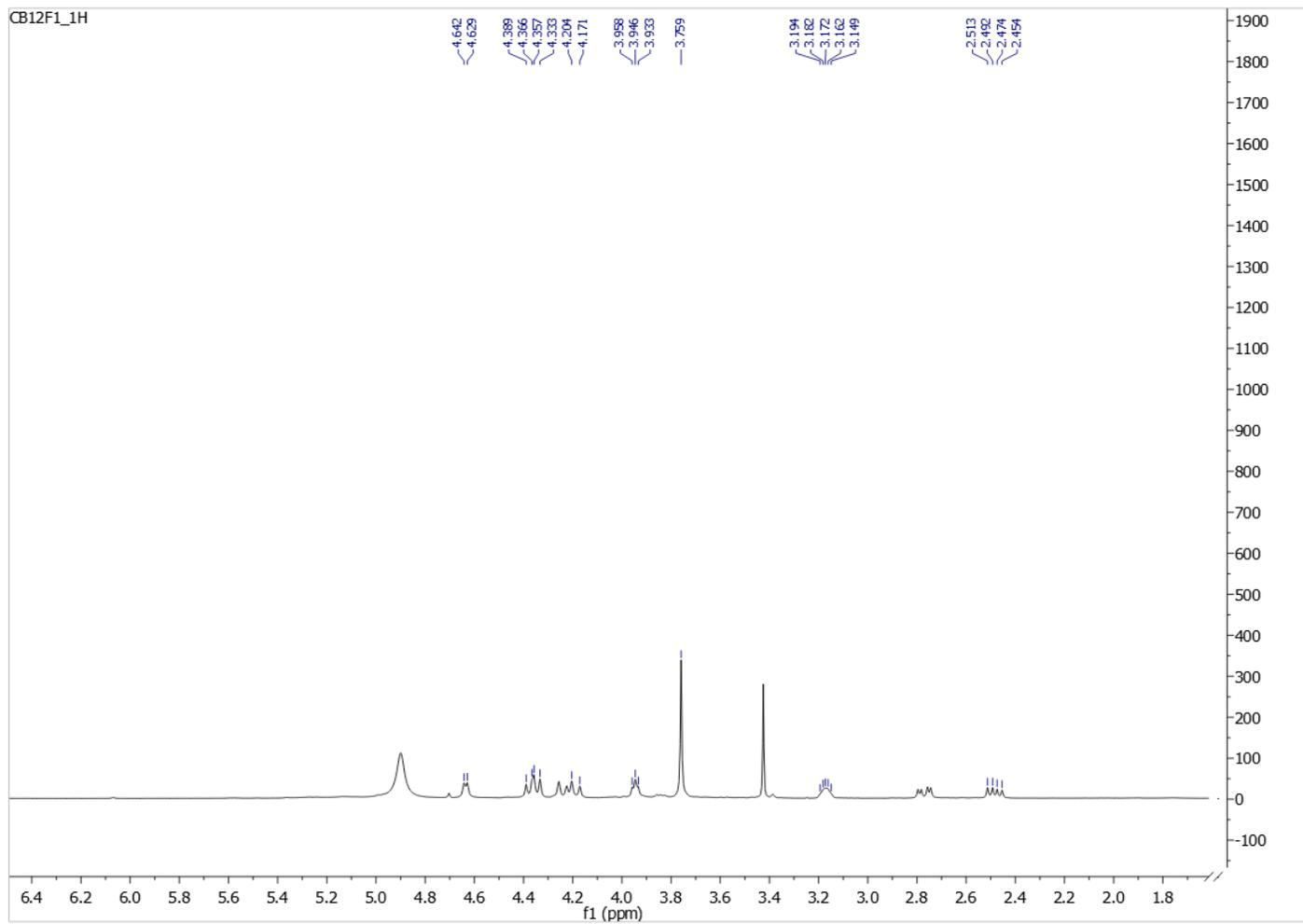
Y1 :  $[M+H]^+$  = 445.2846

Y2 :  $[M+Na-H_2O]^+$  = 747.6159

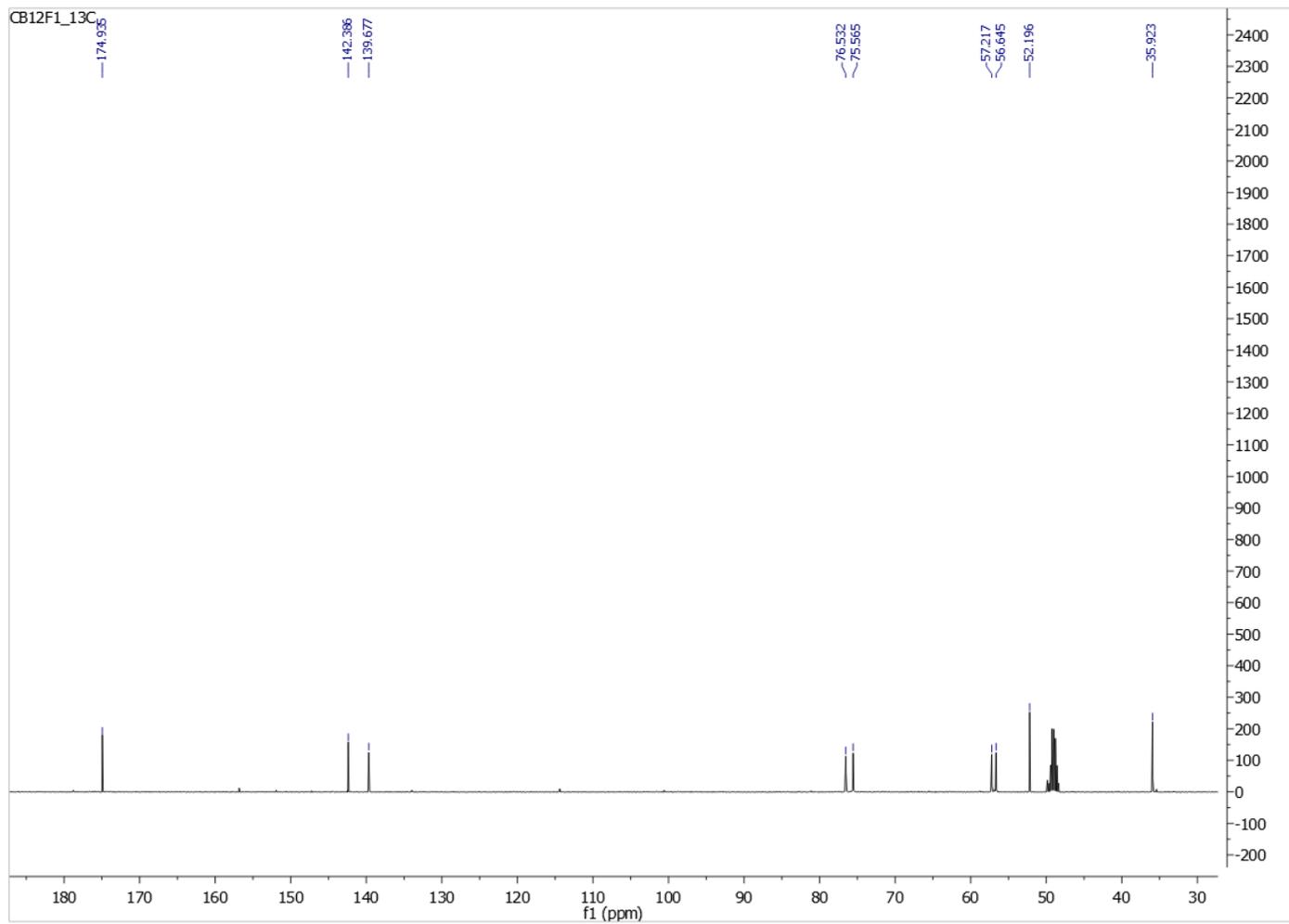
**Figure S17.** MS/MS spectrum of compound 2



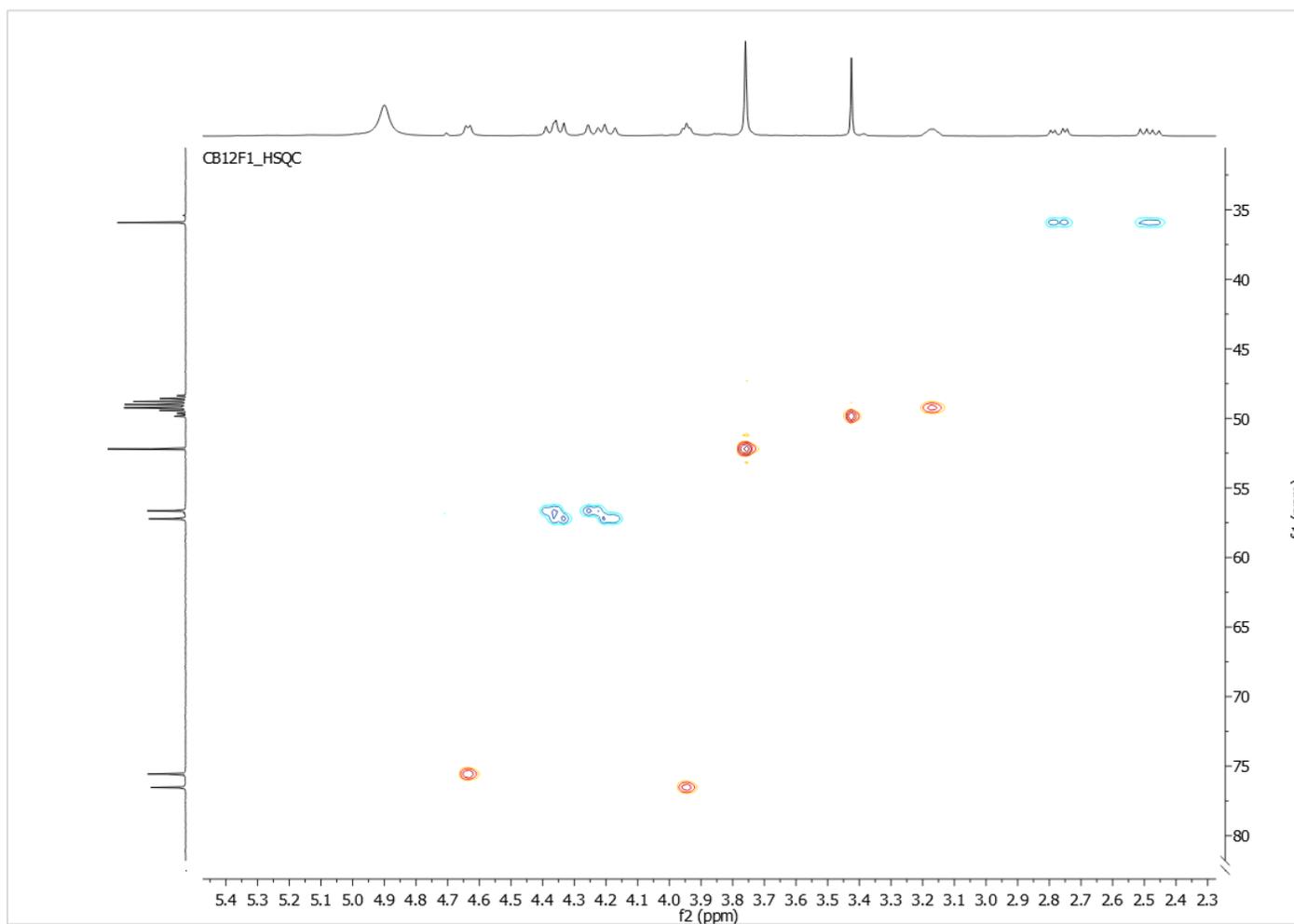
**Figure S18.** IR spectrum of compound **3**



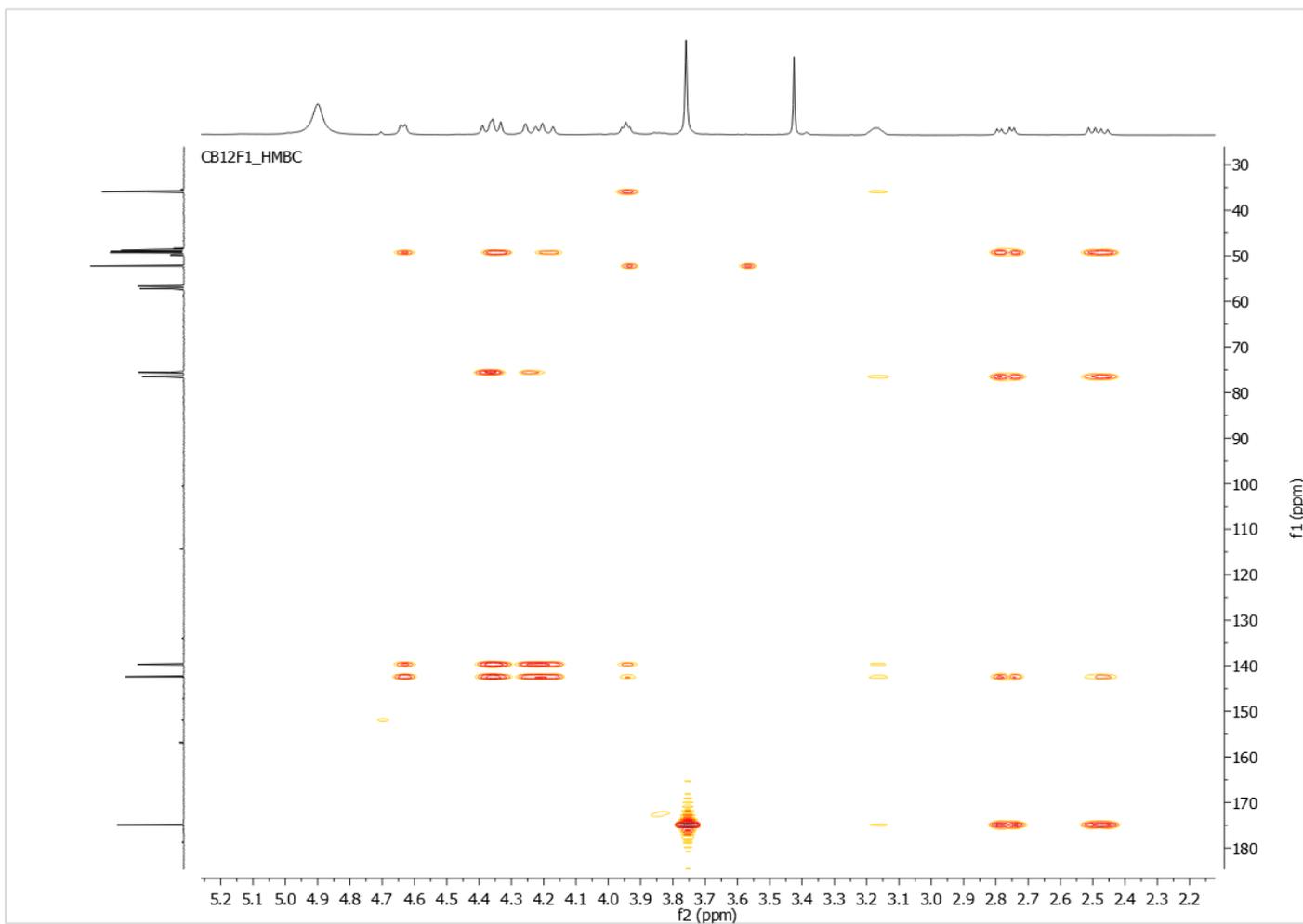
**Figure S19.** <sup>1</sup>H-NMR spectrum of compound **3** (400 MHz, methanol-*d*<sub>4</sub>)



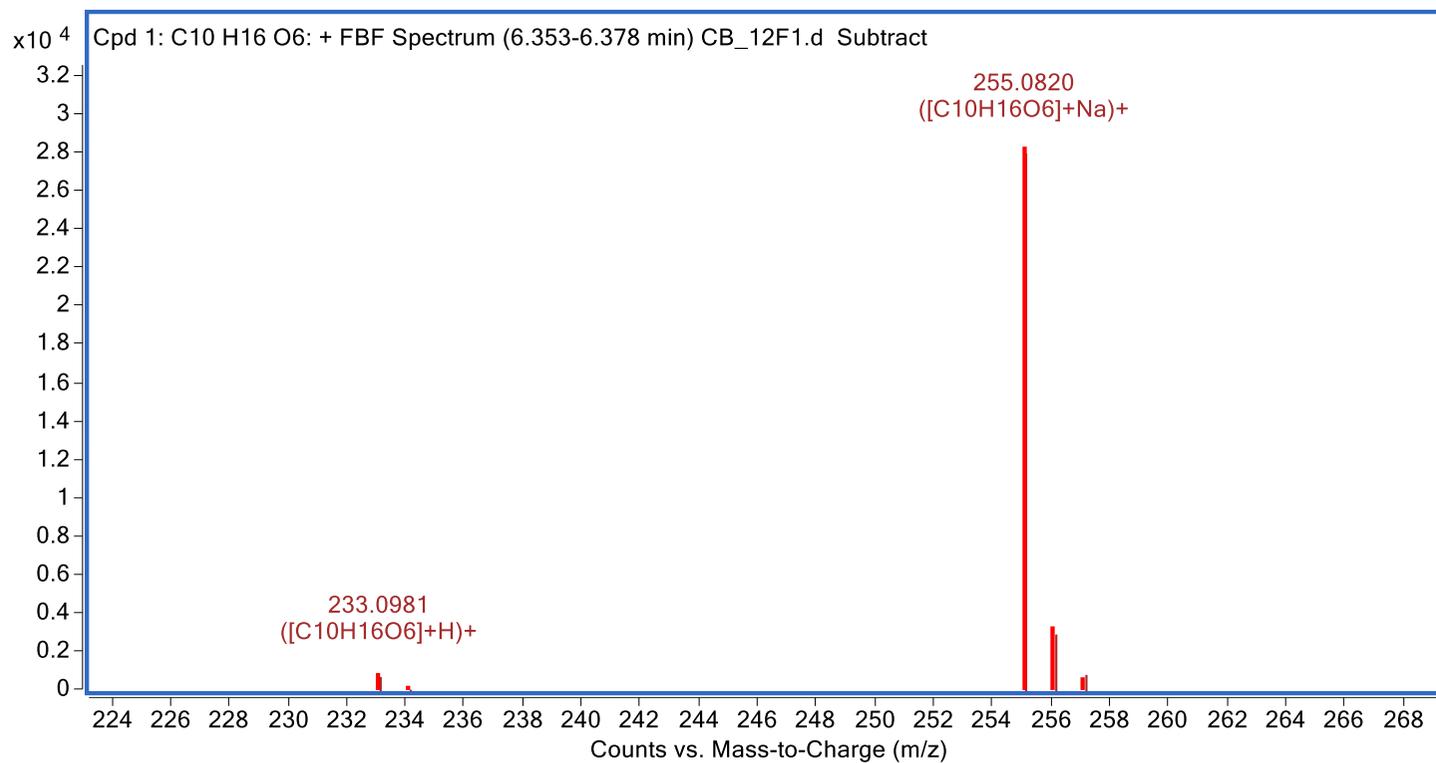
**Figure S20.**  $^{13}\text{C}$ -NMR spectrum of compound 3 (100 MHz, methanol- $d_4$ )



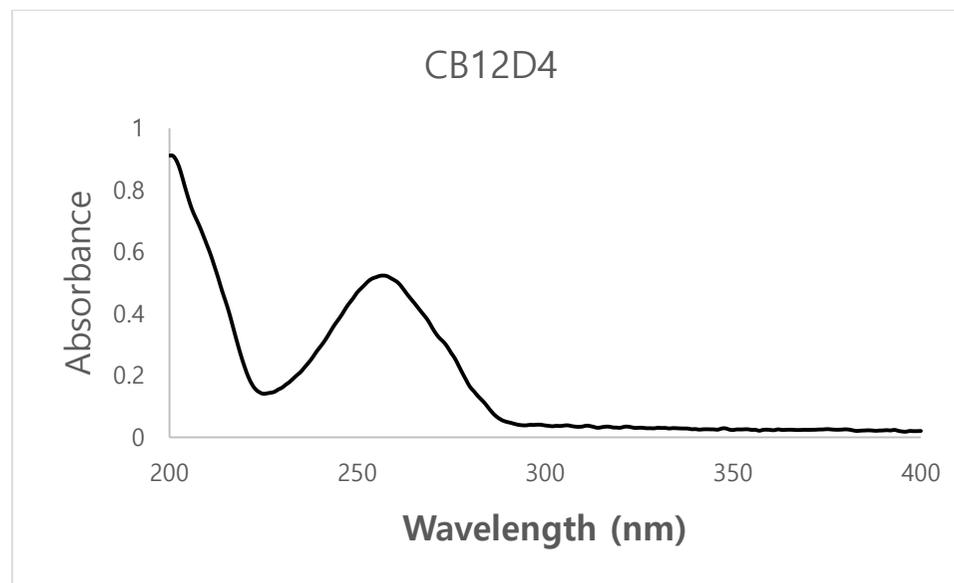
**Figure S21.** HSQC spectrum of compound **3** (methanol-*d*<sub>4</sub>)



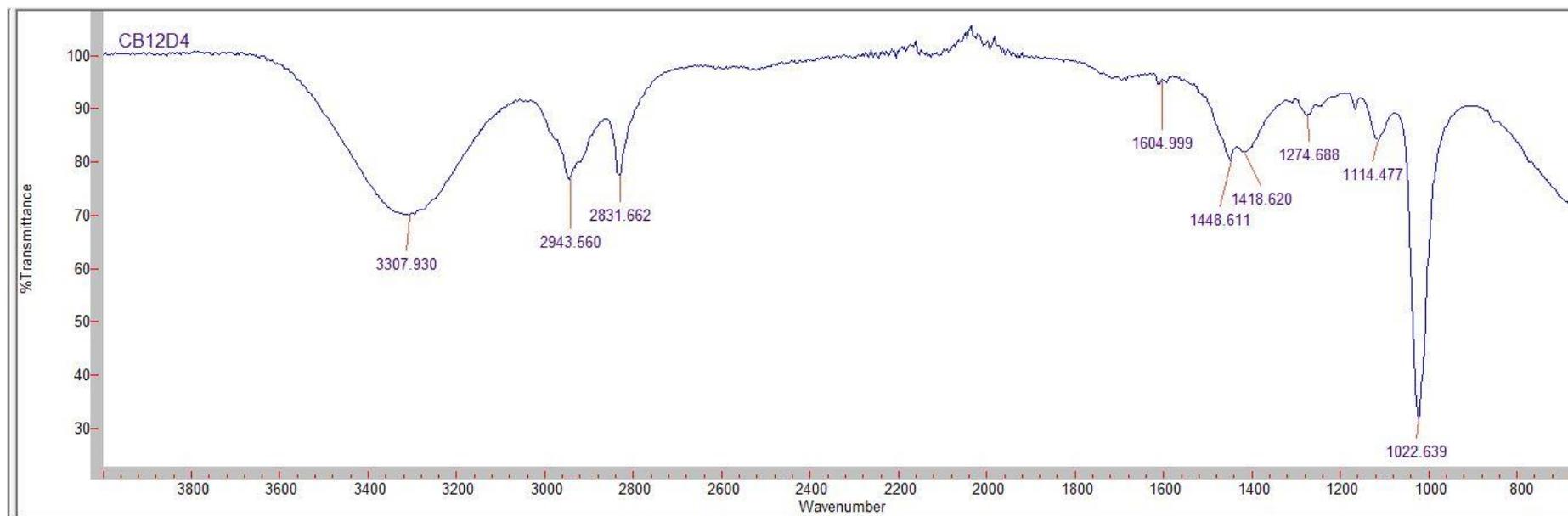
**Figure S22.** HMBC spectrum of compound **3** (methanol- $d_4$ )



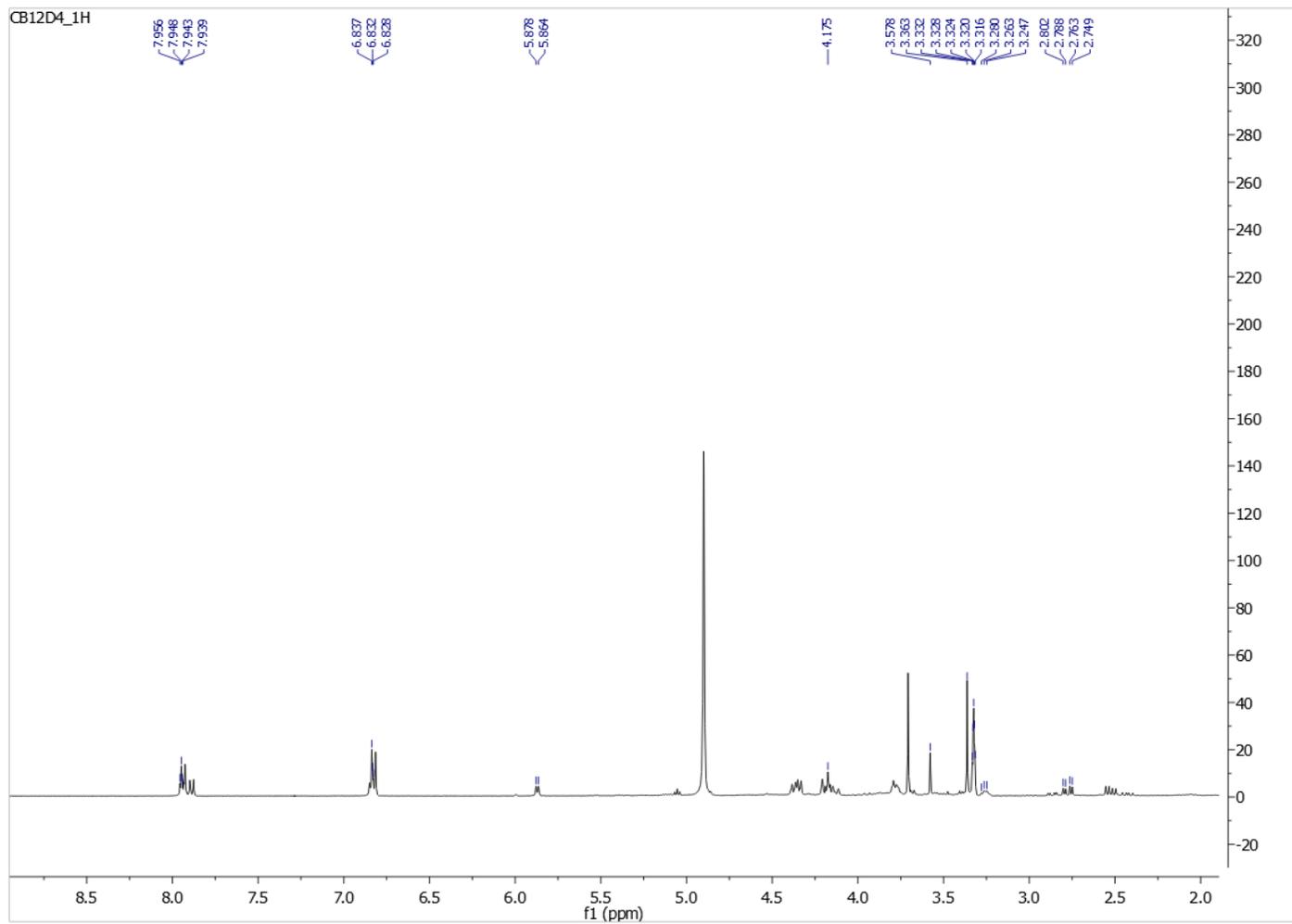
**Figure S23.** HR-ESI-MS of compound **3**



**Figure S24.** UV spectrum of compound 4



**Figure S25.** IR spectrum of compound 4



**Figure S26.**  $^1\text{H}$ -NMR spectrum of compound **4** (400 MHz, methanol- $d_4$ )

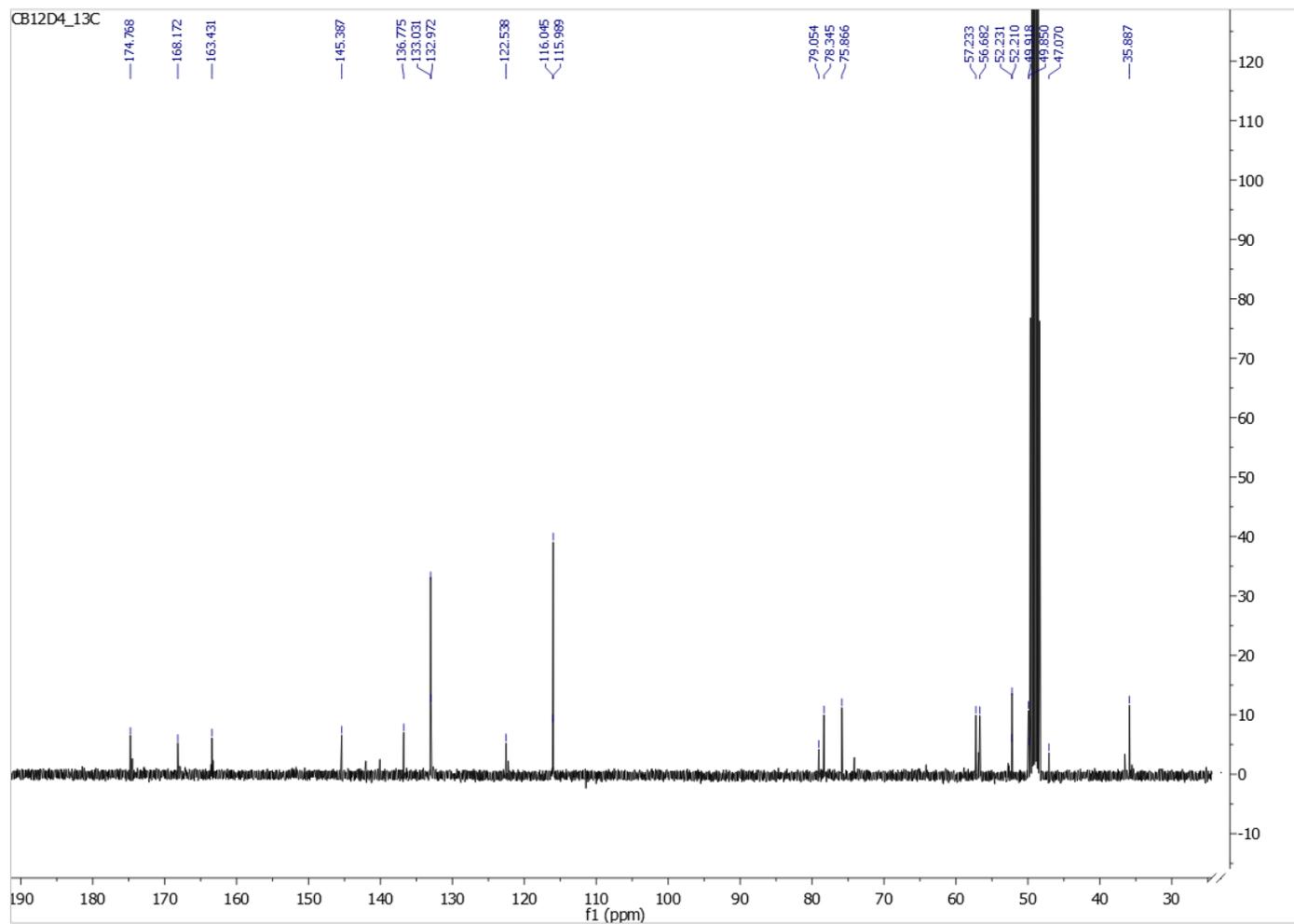


Figure S27.  $^{13}\text{C}$ -NMR spectrum of compound **4** (100 MHz, methanol- $d_4$ )

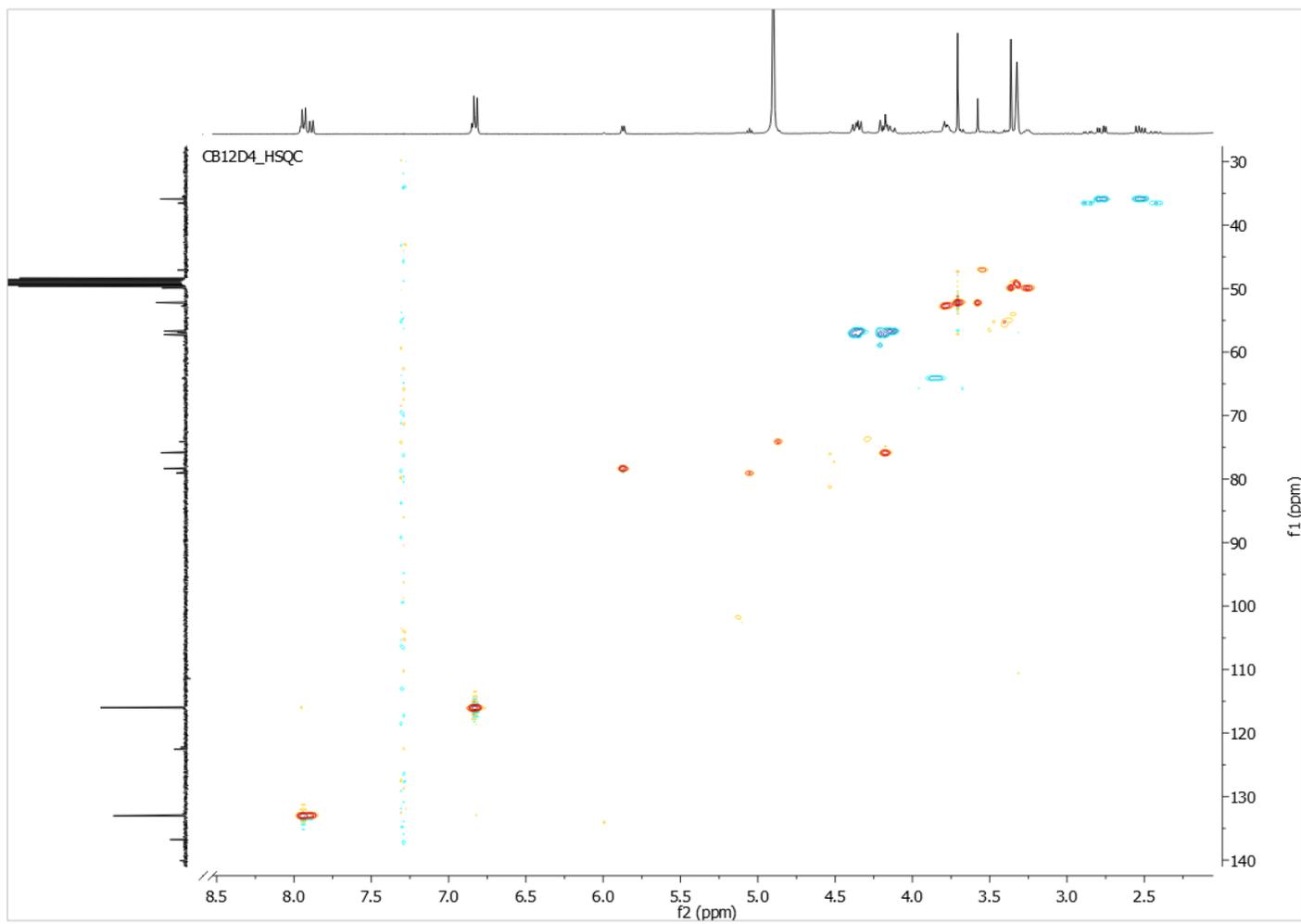


Figure S28. HSQC spectrum of compound 4 (methanol- $d_4$ )

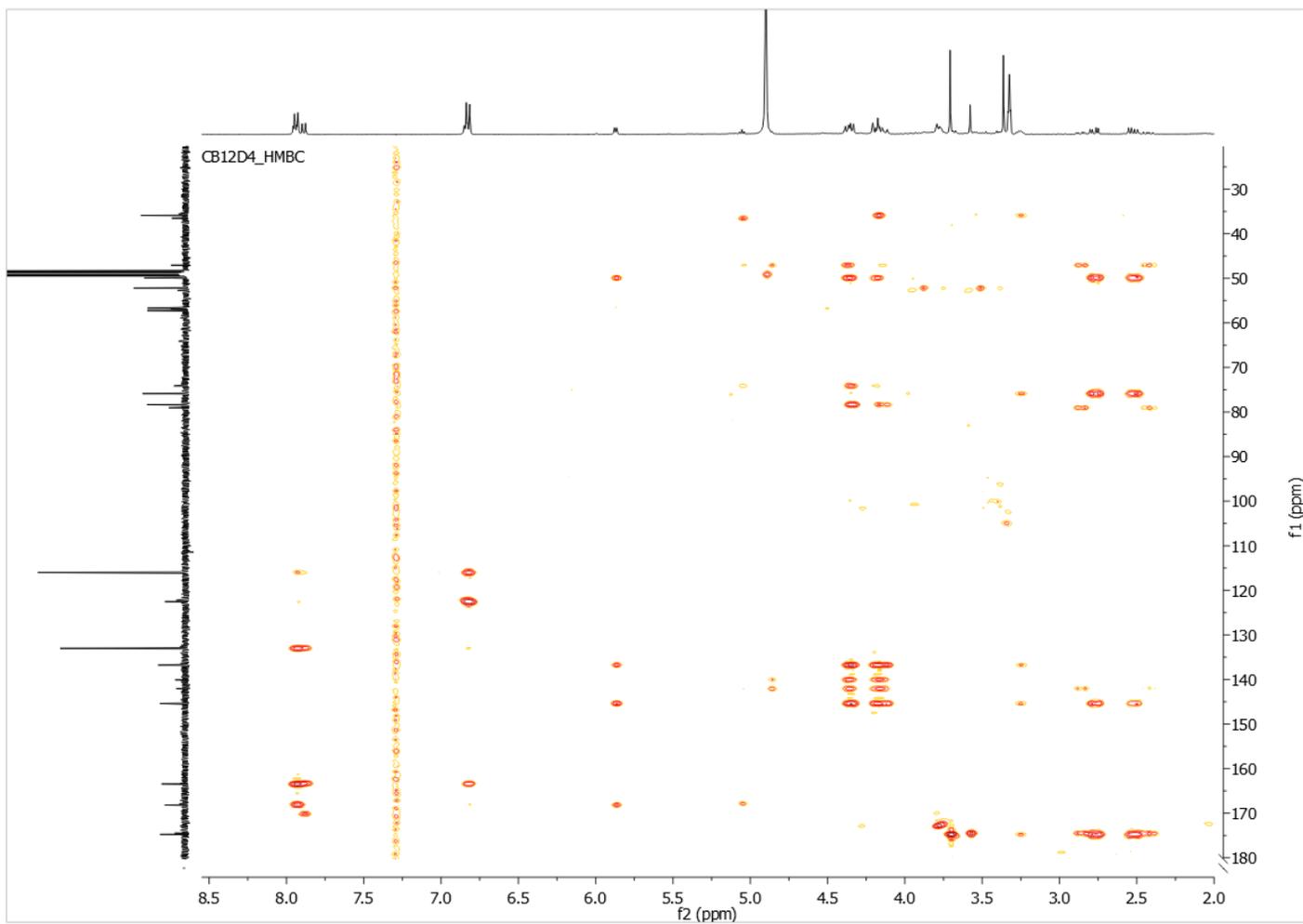
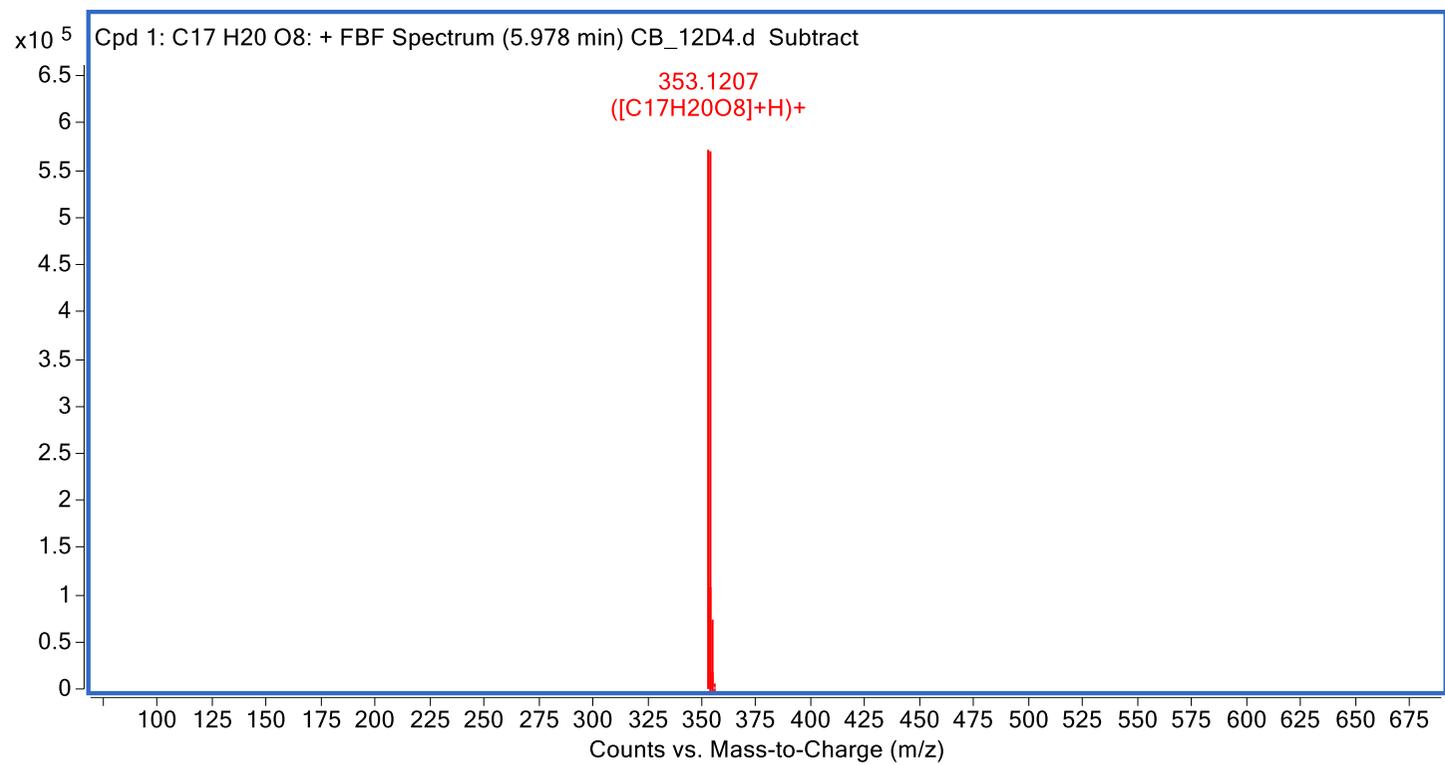


Figure S29. HMBC spectrum of compound 4 (methanol- $d_4$ )



**Figure S30.** HR-ESI-MS of compound **4**