

## Supplementary Information

# The Development of an Effective Synthetic Route of Belinostat

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### ANALYTICAL HPLC TEST METHOD

Column: Shimadzu Inertsil-SP C18 (5  $\mu$ m; 250 mm  $\times$  4.6 mm),

Flow Rate: 1.5 mL/min,

Oven Temp: 30  $^{\circ}$ C,

Inj. volume: 3  $\mu$ L,

Detection: 220 nm

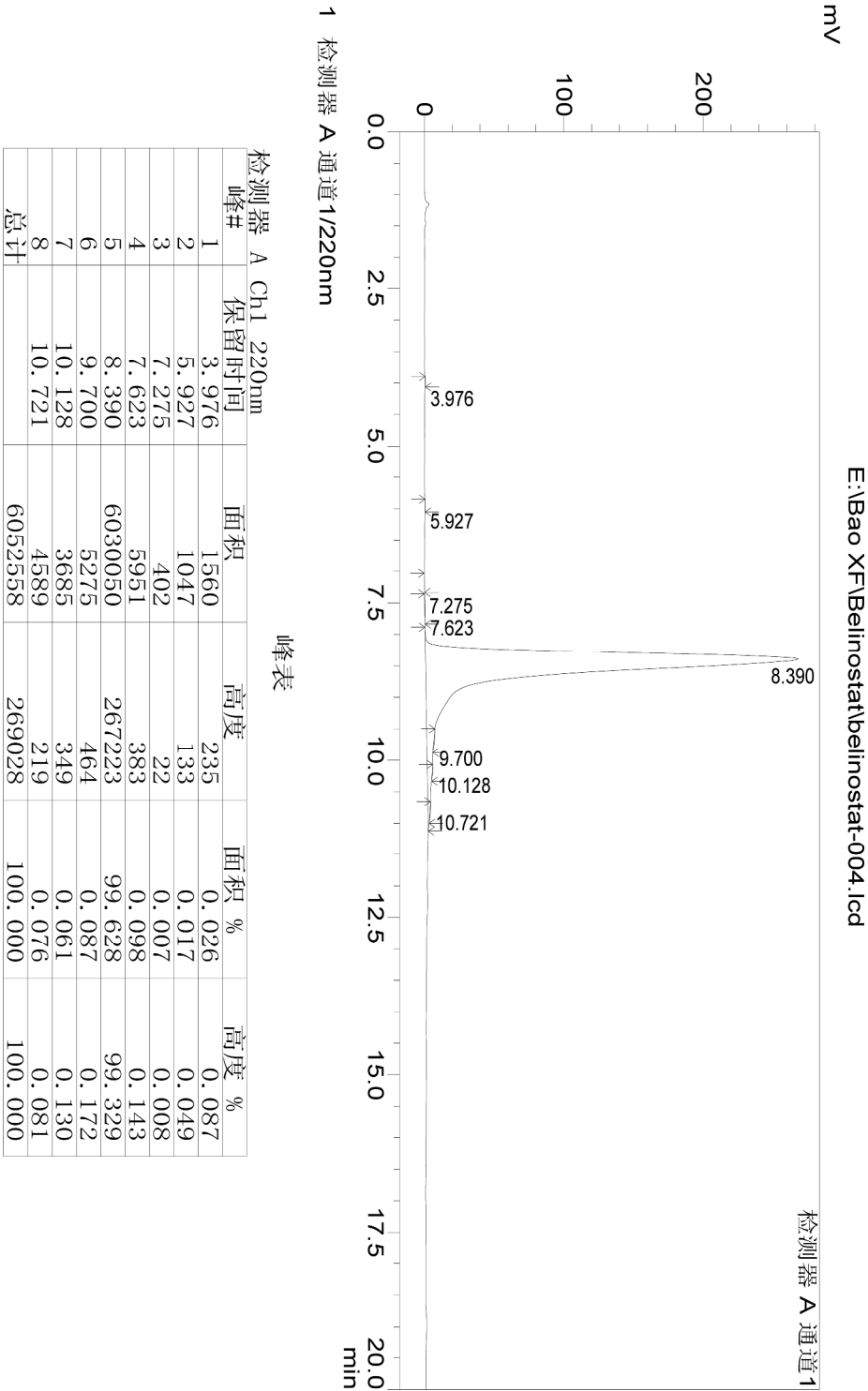
Mobile Phase, solution A: 25 mM phosphate buffer, pH 3.5, solution B :acetonitrile.

Gradient elution was performed as shown in **Table S1**.

**Table S1.** Gradient Program

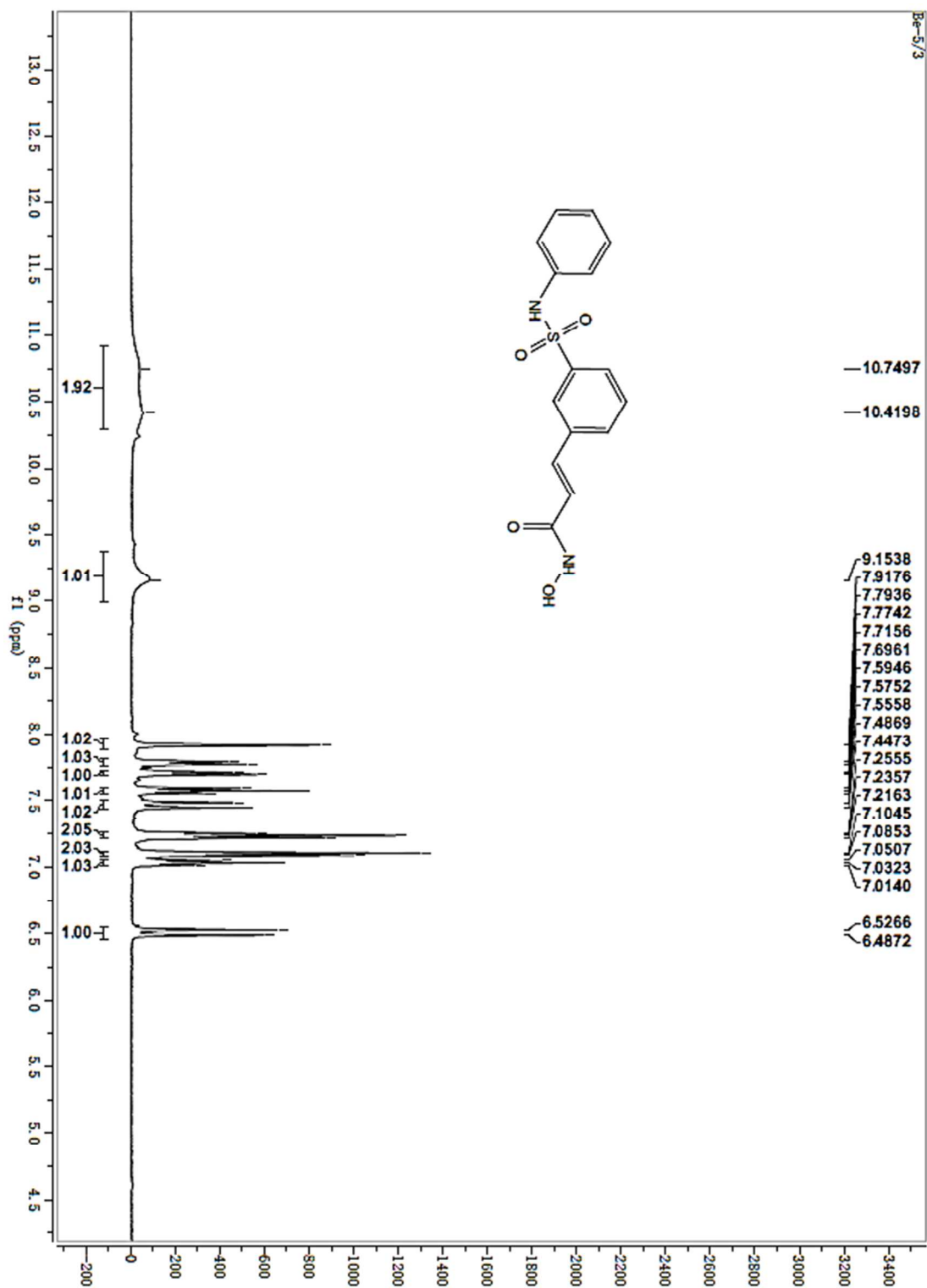
time (min)	mobile phase A (%)	mobile phase B (%)
0	75	25
20	60	40
35	30	70
35	75	25
45	75	25

Figure S1. HPLC spectrum of Belinostat.

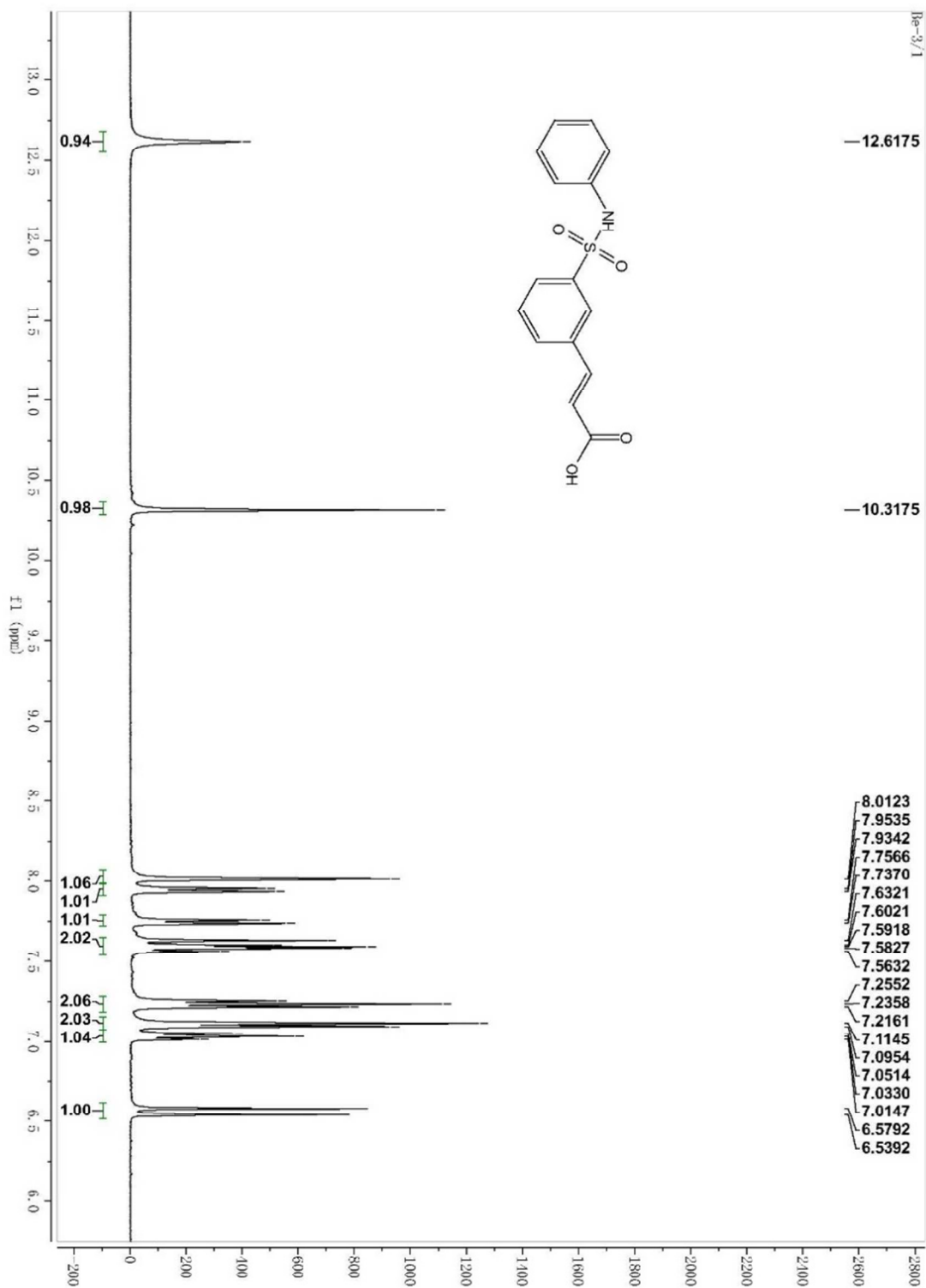


# <sup>1</sup>H NMR SPECTRA

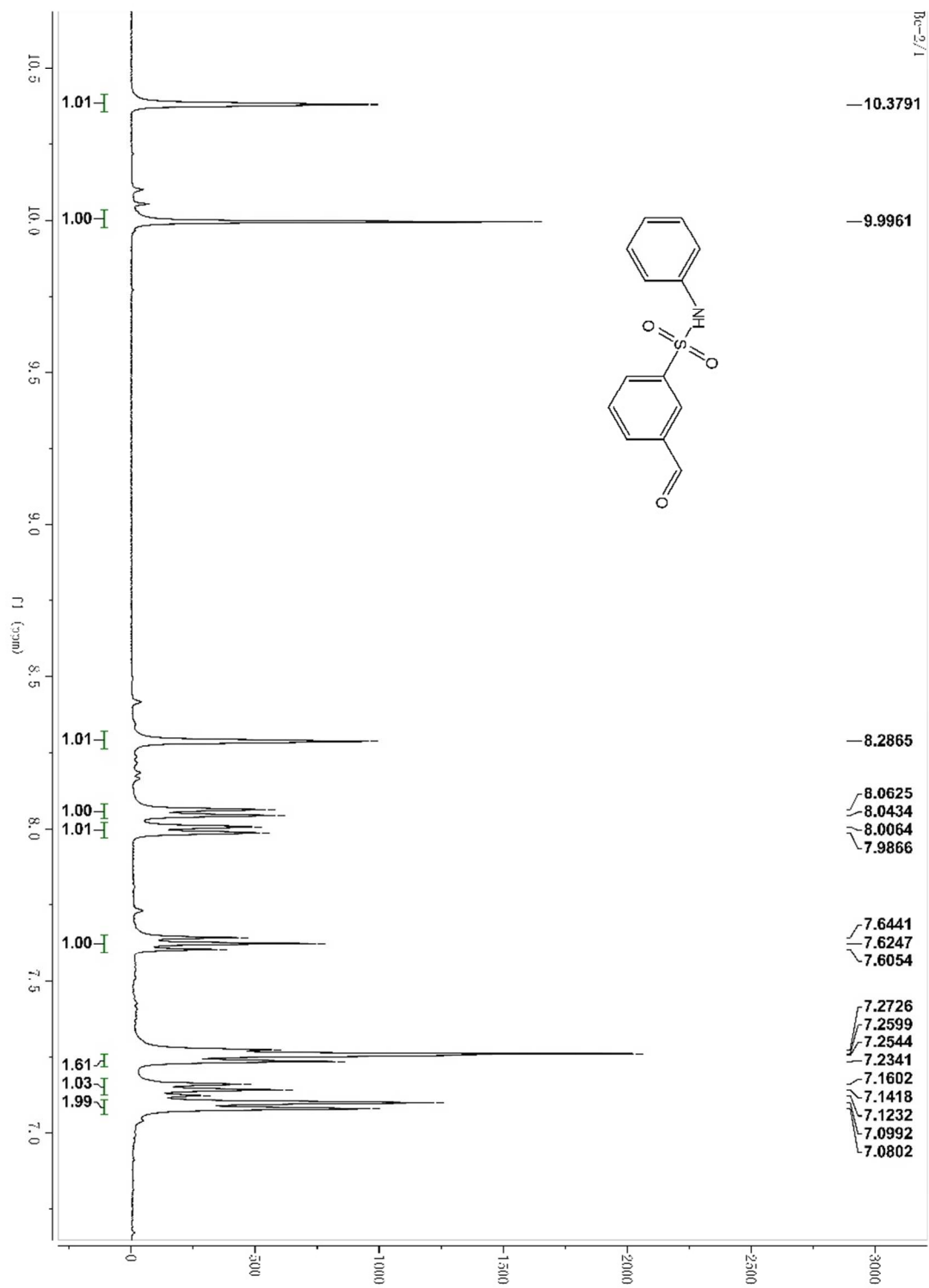
**Figure S2.** <sup>1</sup>H NMR spectrum (400 MHz, DMSO-*d*<sub>6</sub>) of belinostat **1**.



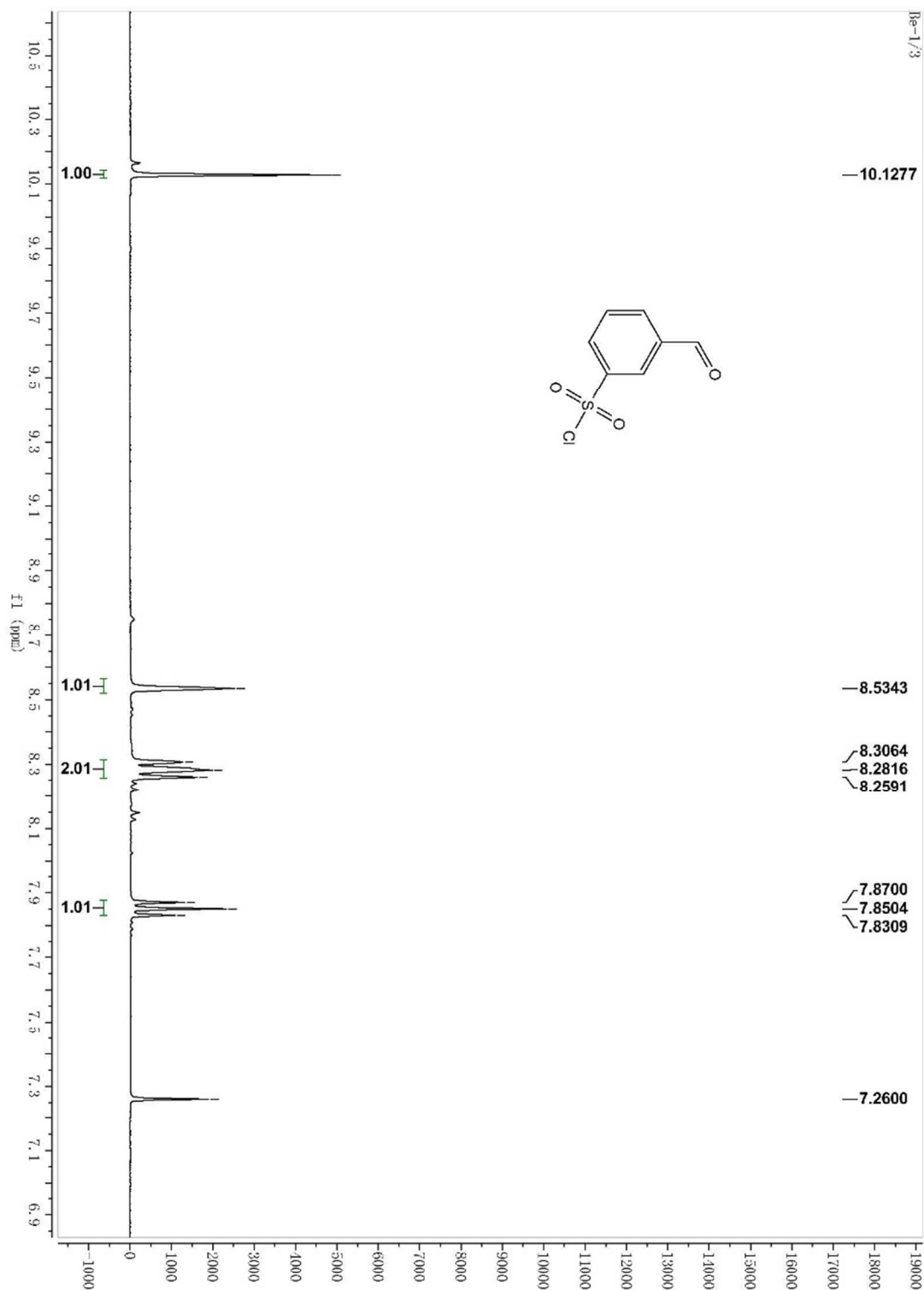
**Figure S3.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound **6**.



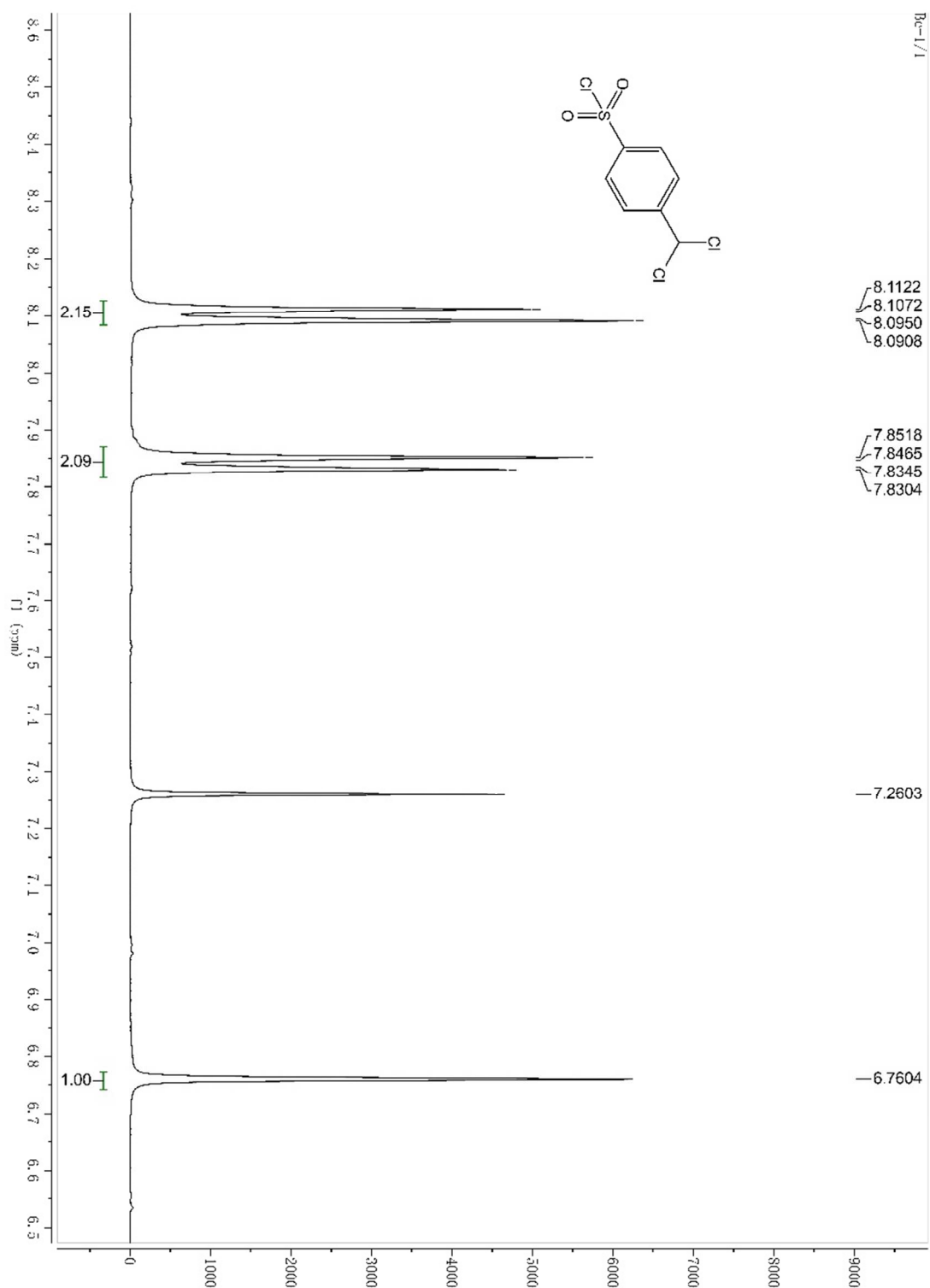
**Figure S4.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{CDCl}_3$ ) of compound **5**.



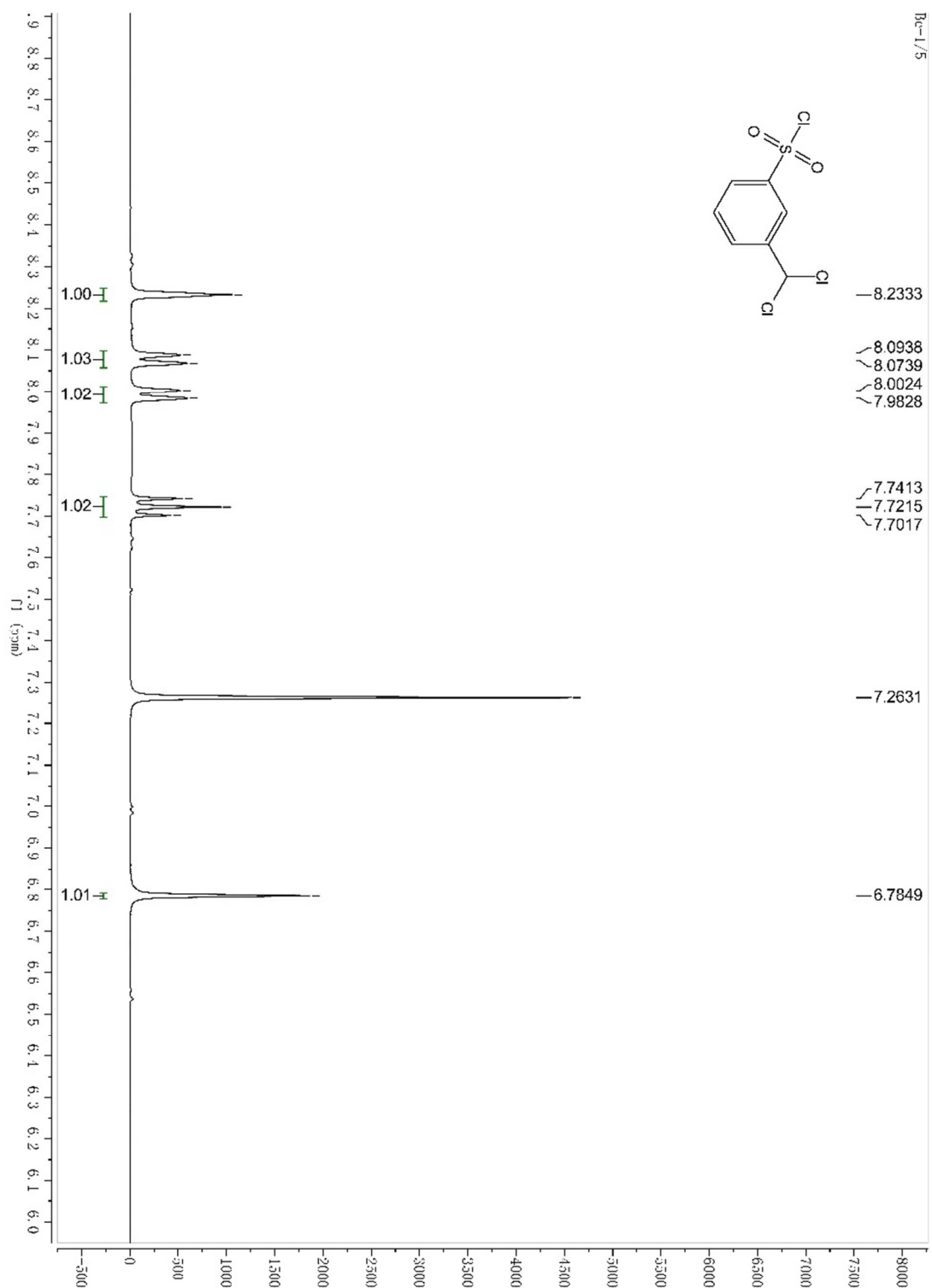
**Figure S5.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{CDCl}_3$ ) of compound 4.



**Figure S6.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{CDCl}_3$ ) of compound **7**.

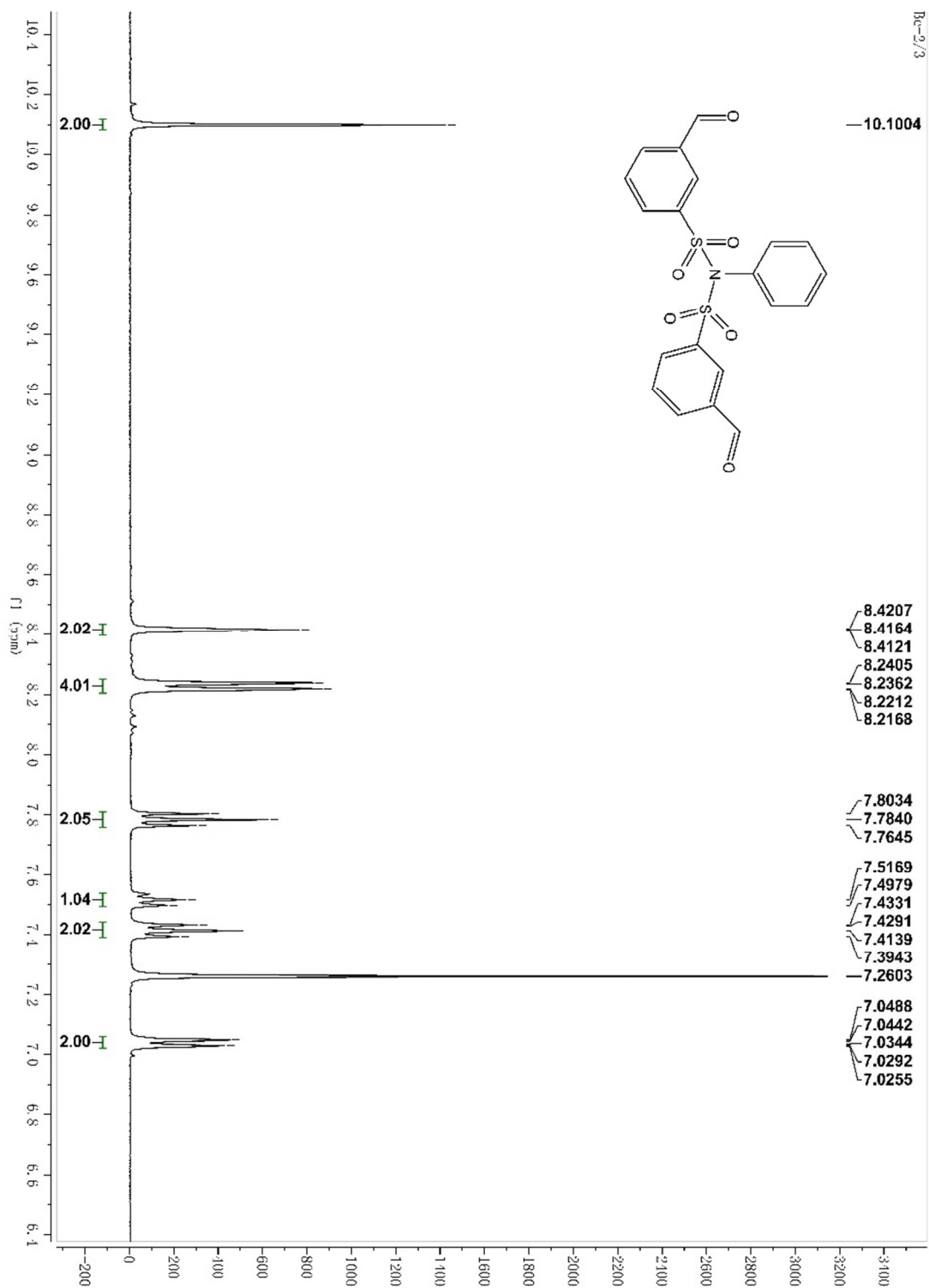


**Figure S7.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{CDCl}_3$ ) of compound **8**.





**Figure S8.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{CDCl}_3$ ) of compound **11**.



**Figure S9.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{CDCl}_3$ ) of compound **10**.

