

# Synthesis of Menthol Glycinates and Their Potential as Cooling Agents

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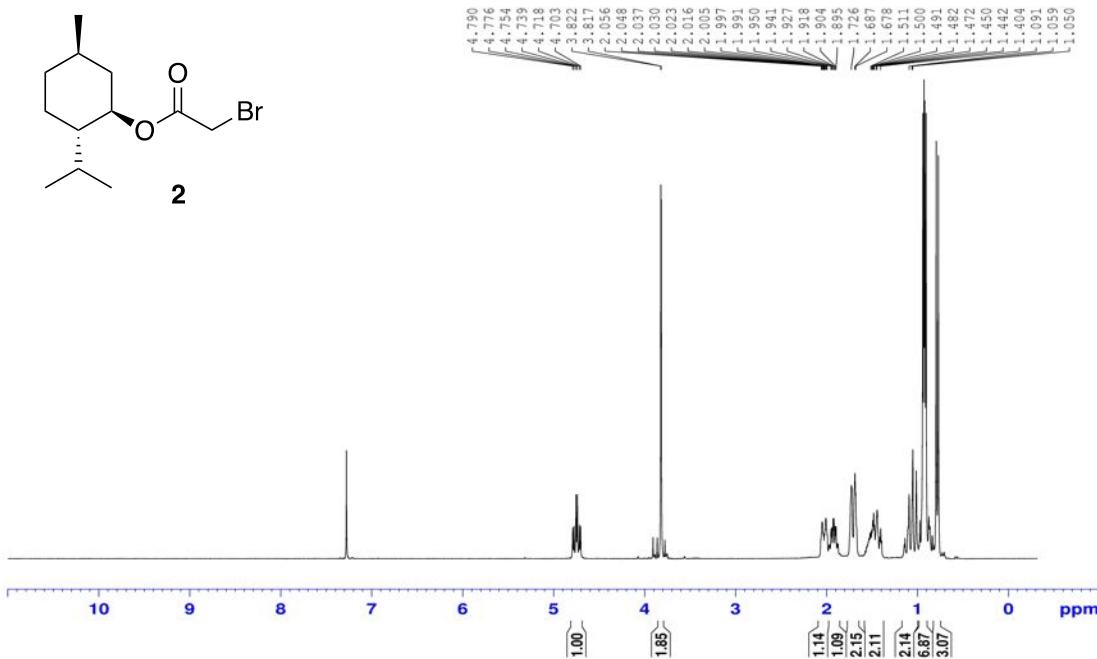
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<sup>c</sup>FONA International, Inc.

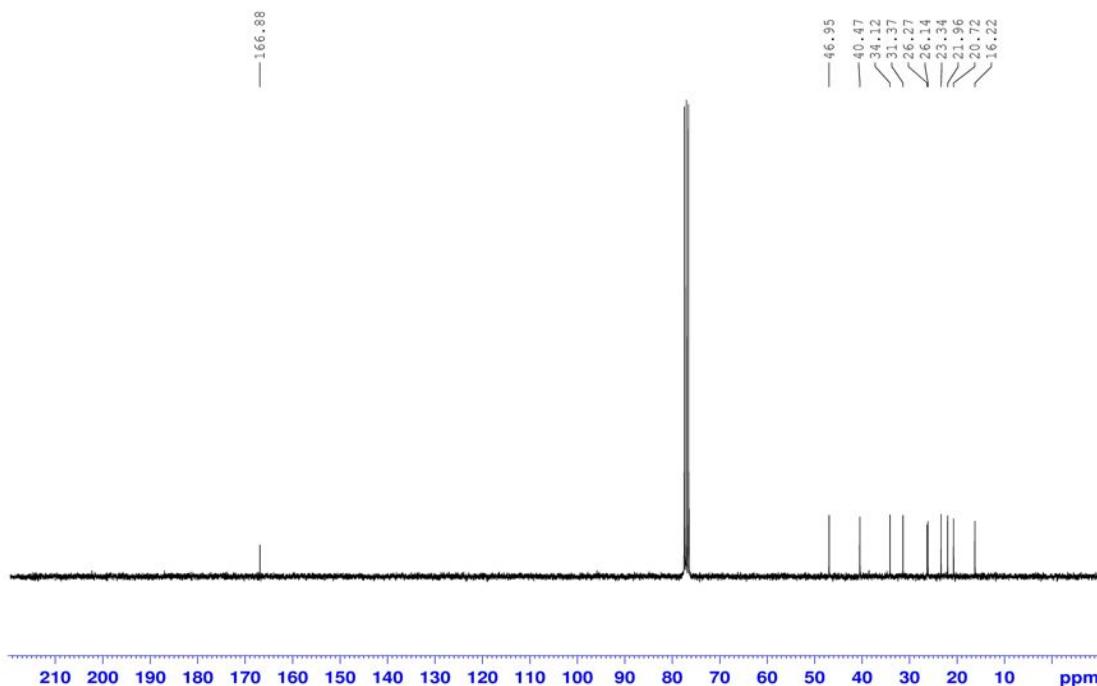
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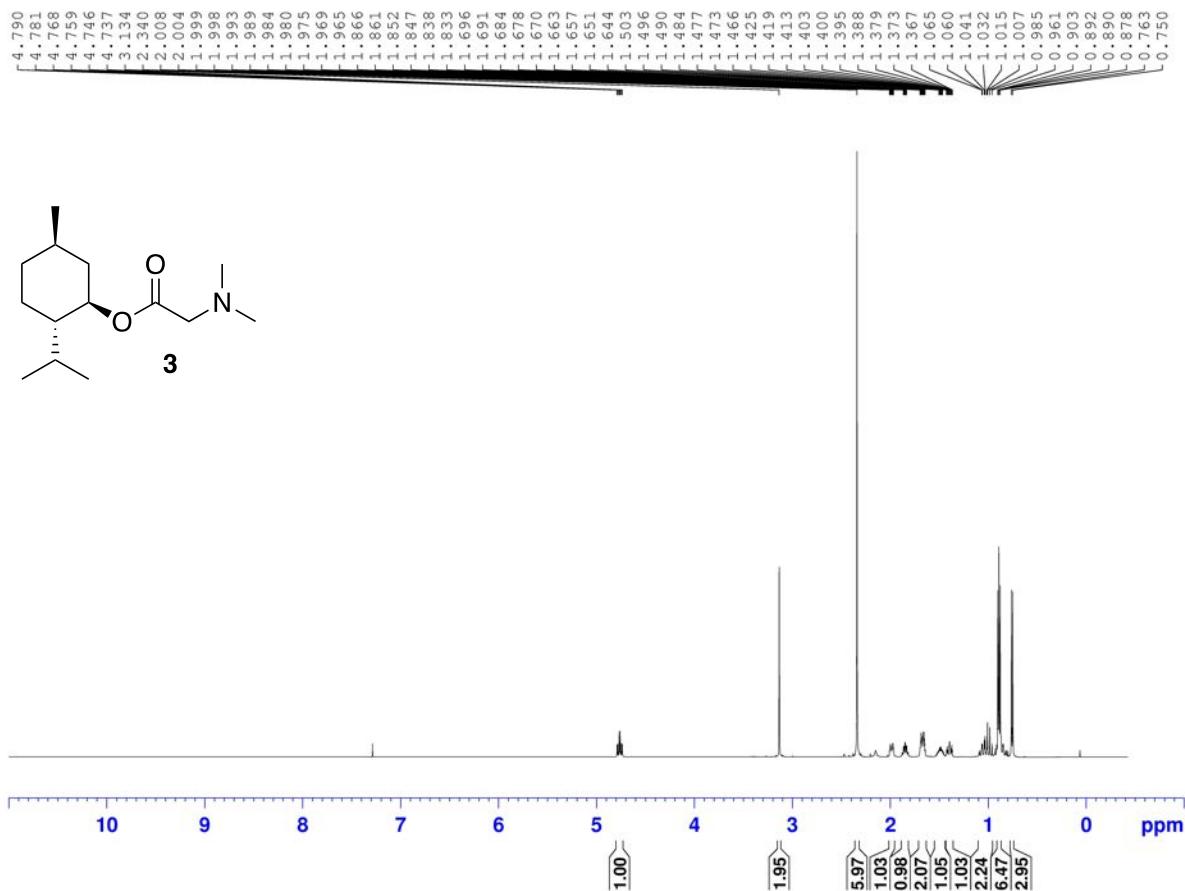
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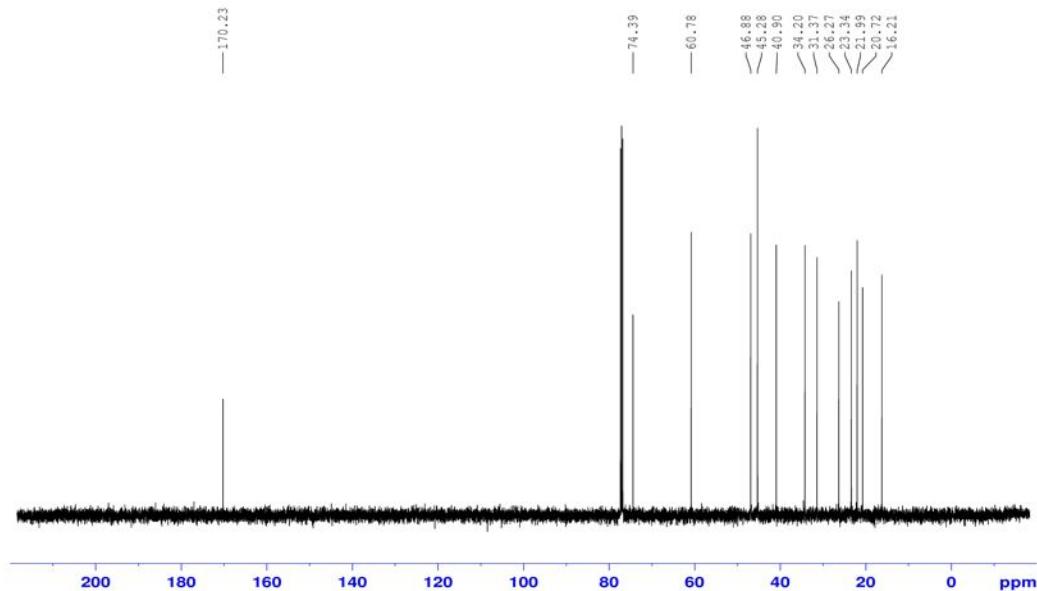
**Figure S1.**  $^1\text{H}$  NMR of compound **2** ( $\text{CDCl}_3$ , 300 MHz).



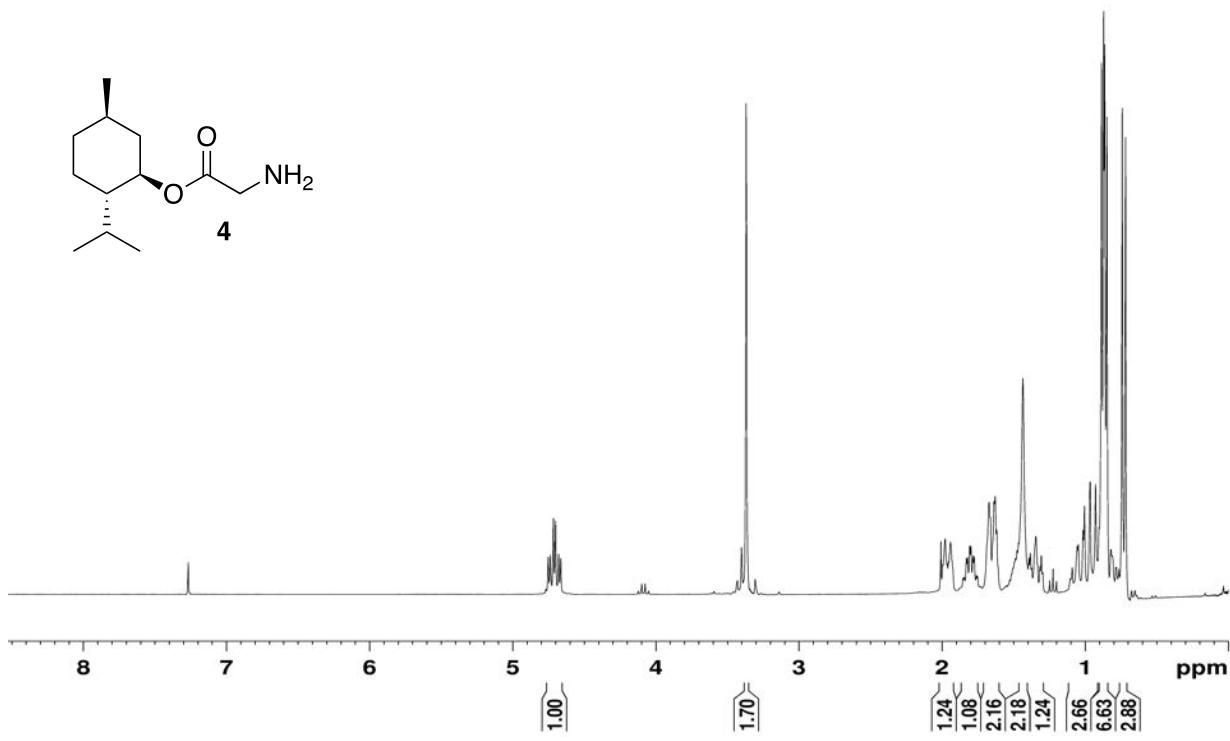
**Figure S2.**  $^{13}\text{C}$  NMR of compound **2** ( $\text{CDCl}_3$ , 75 MHz).



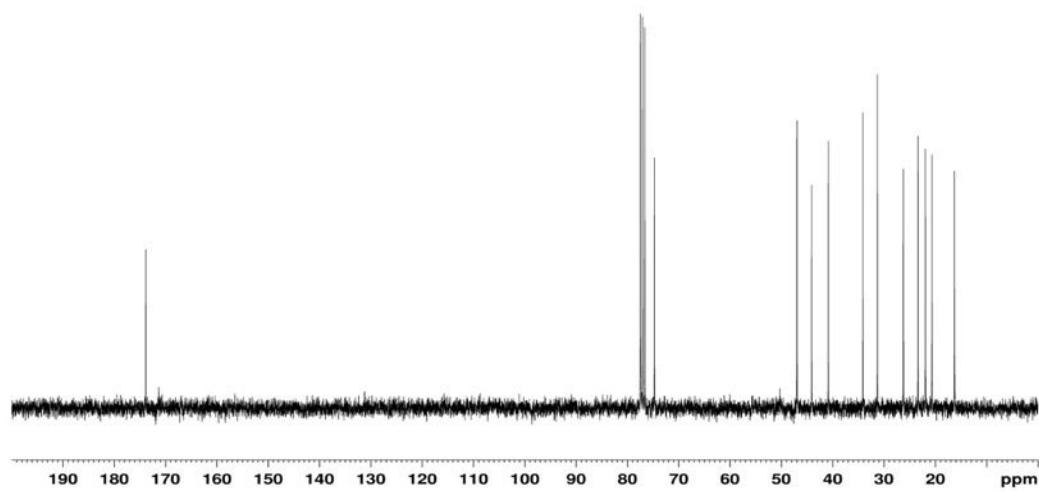
**Figure S3.**  $^1\text{H}$  NMR of compound **3** ( $\text{CDCl}_3$ , 300 MHz).



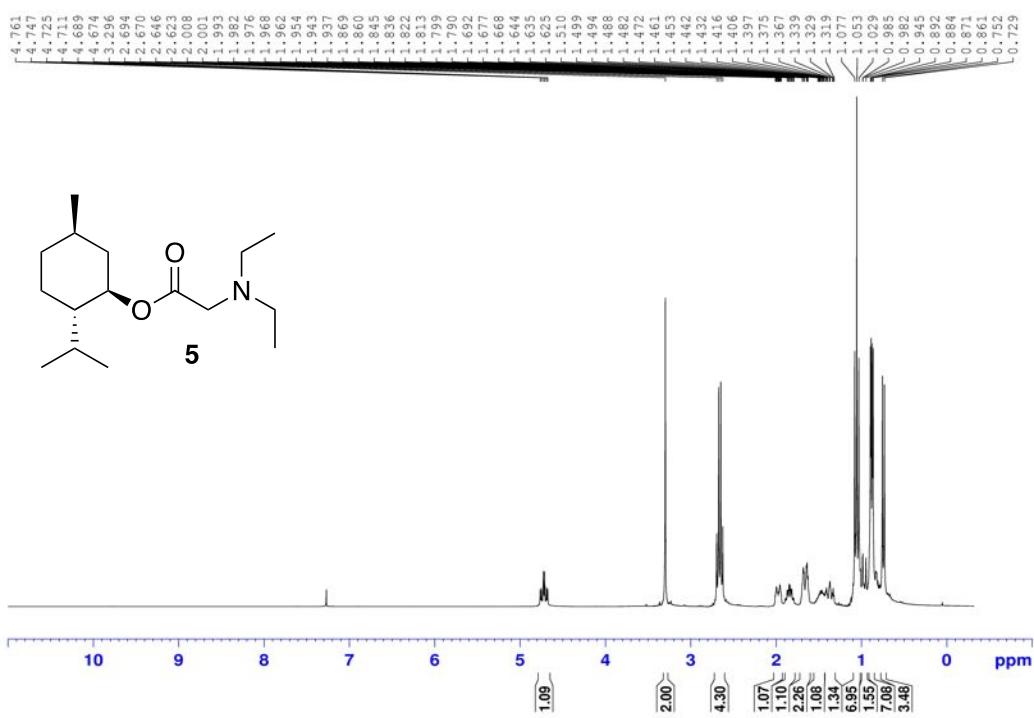
**Figure S4.**  $^{13}\text{C}$  NMR of compound **3** ( $\text{CDCl}_3$ , 75 MHz).



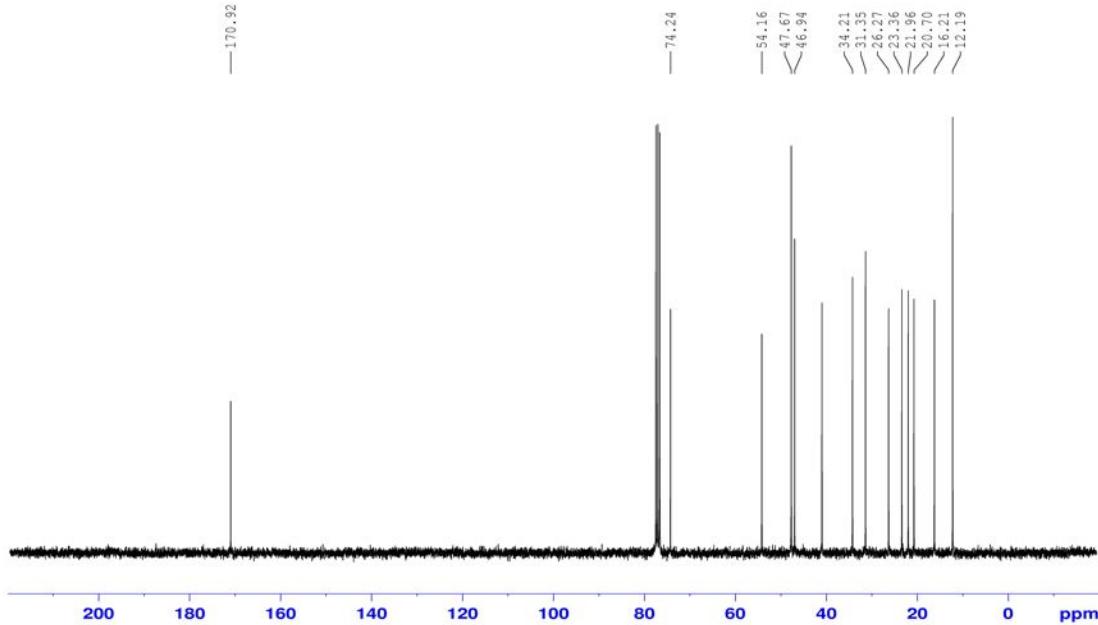
**Figure S5.** <sup>1</sup>H NMR of compound 4 (CDCl<sub>3</sub>, 300 MHz).



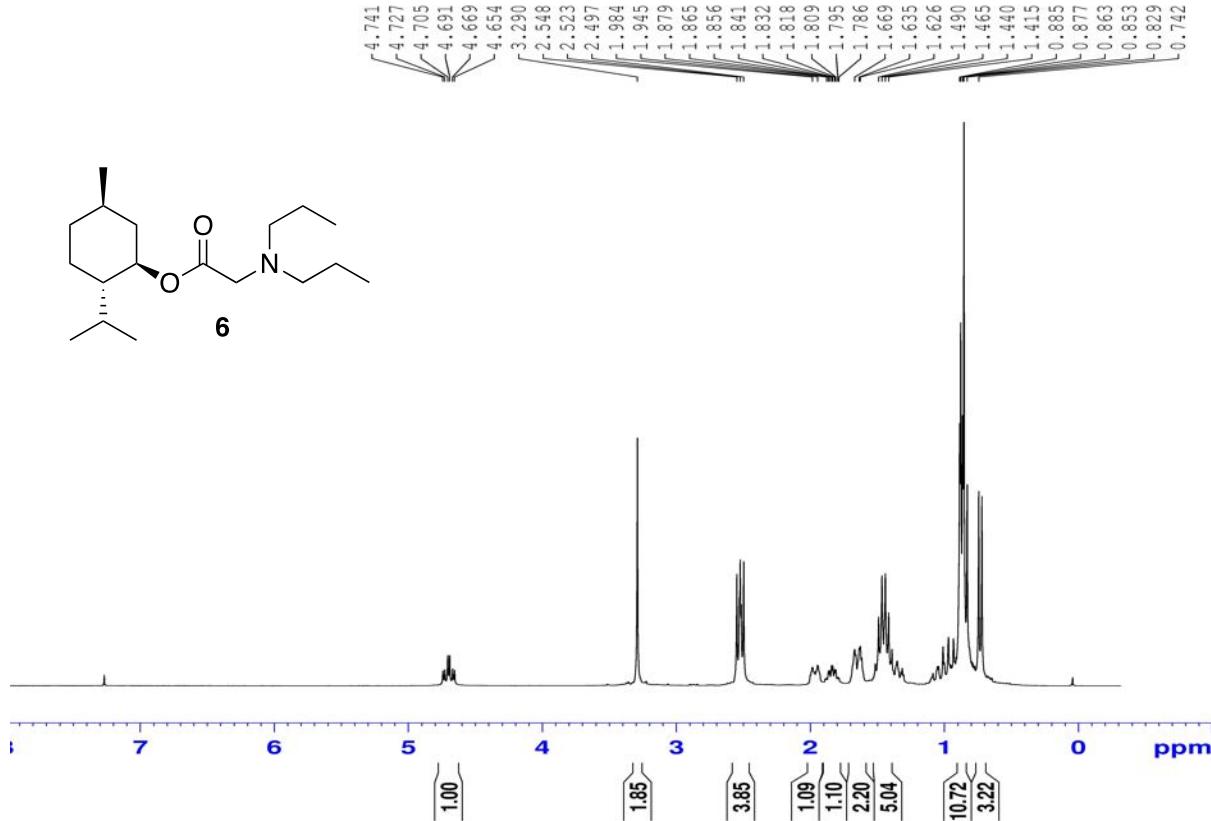
**Figure S6.** <sup>13</sup>C NMR of compound 4 (CDCl<sub>3</sub>, 75 MHz).



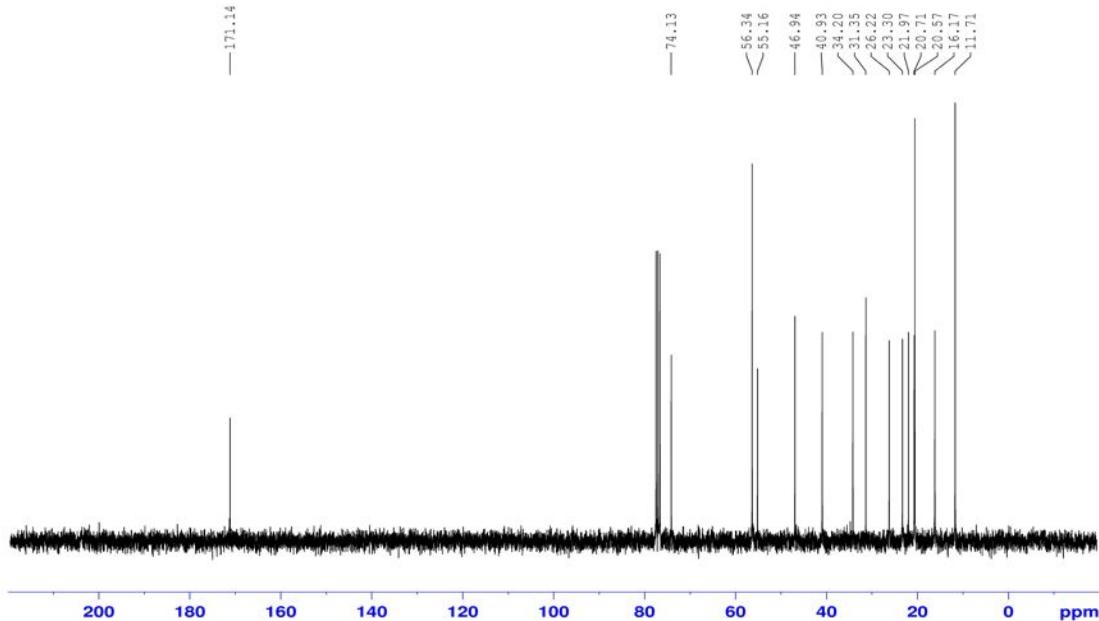
**Figure S7.**  $^1\text{H}$  NMR of compound **5** ( $\text{CDCl}_3$ , 300 MHz).



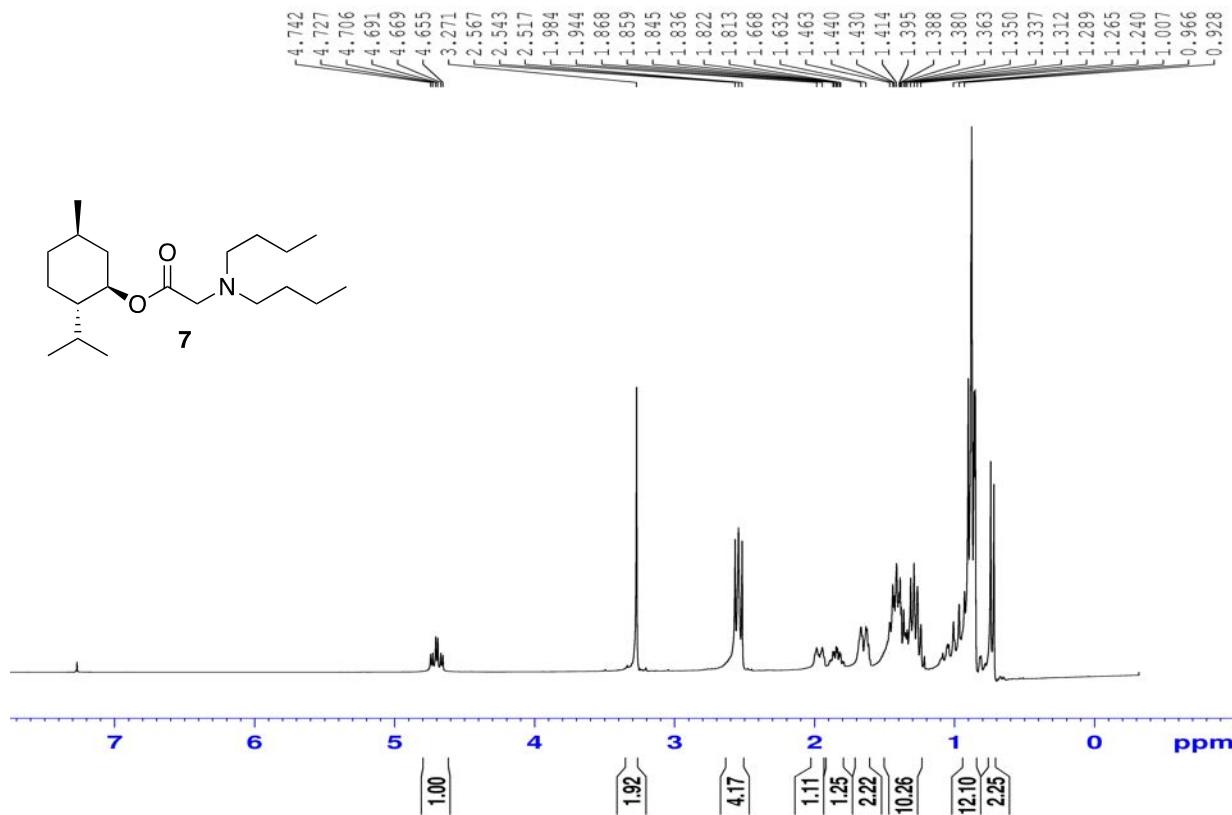
**Figure S8.**  $^{13}\text{C}$  NMR of compound **5** ( $\text{CDCl}_3$ , 75 MHz).



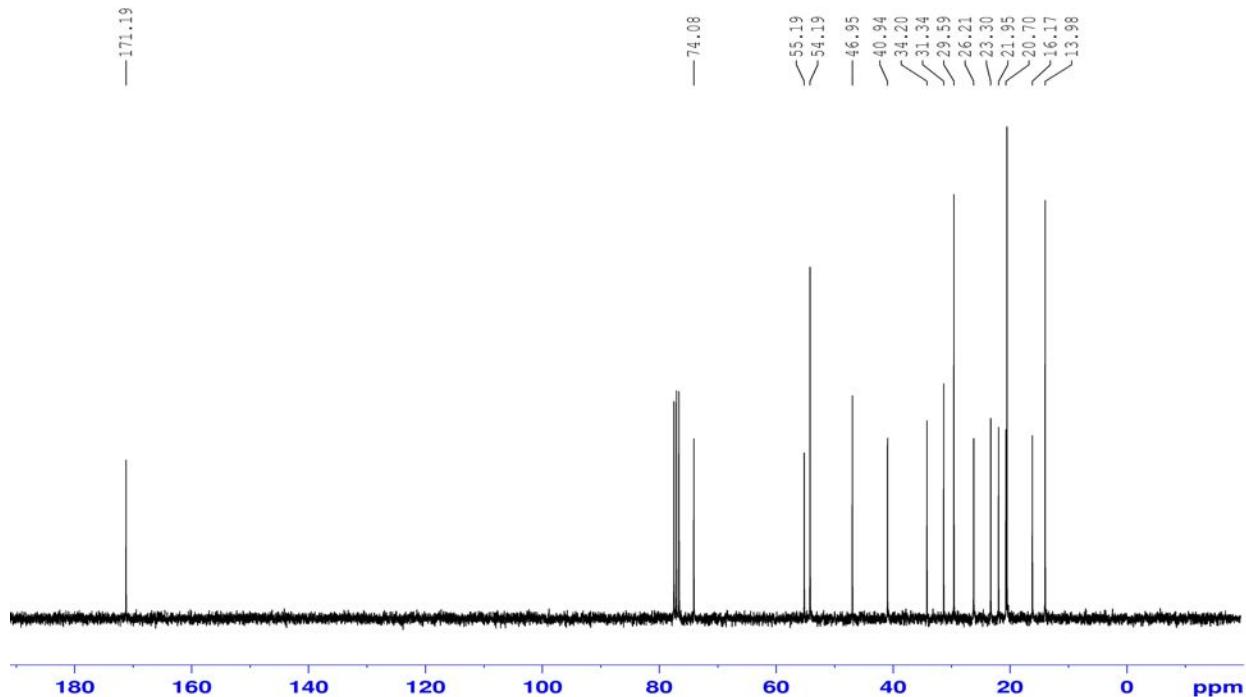
**Figure S9.**  $^1\text{H}$  NMR of compound **6** ( $\text{CDCl}_3$ , 300 MHz).



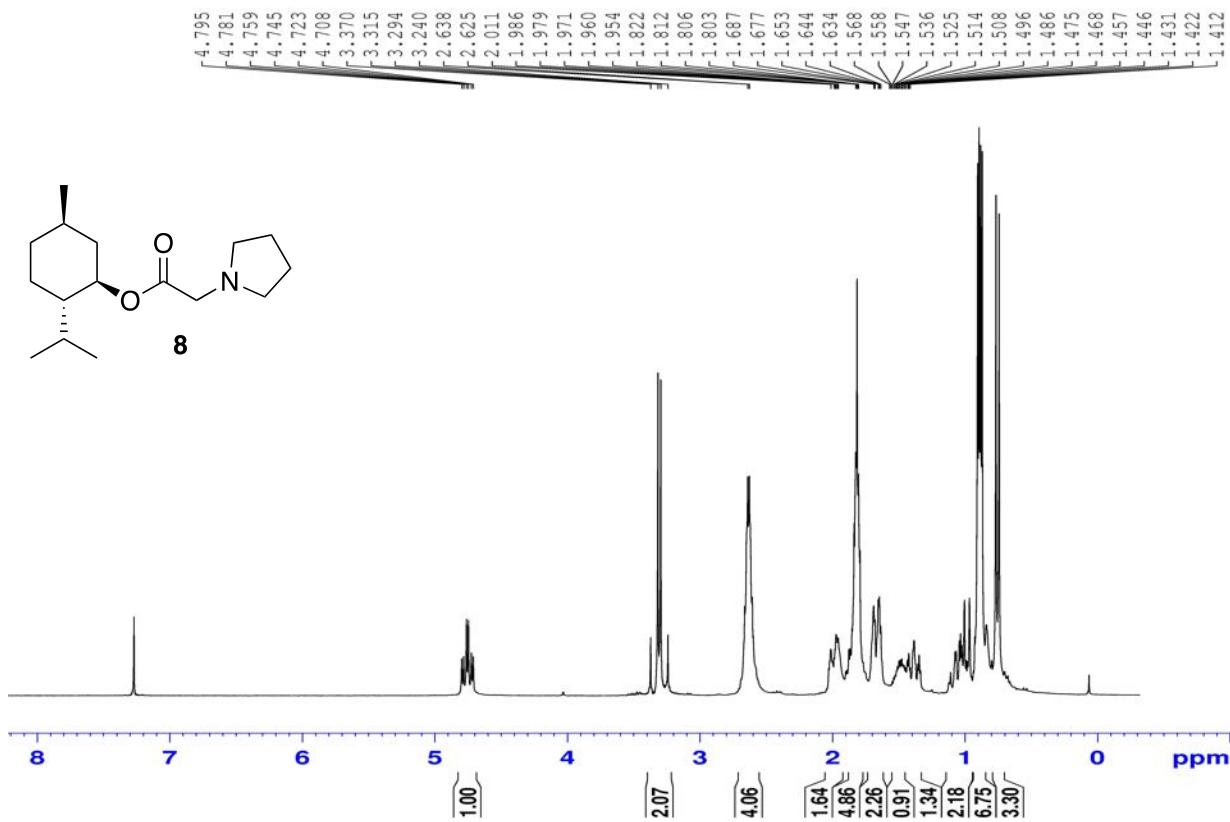
**Figure S10.**  $^{13}\text{C}$  NMR of compound **6** ( $\text{CDCl}_3$ , 75 MHz).



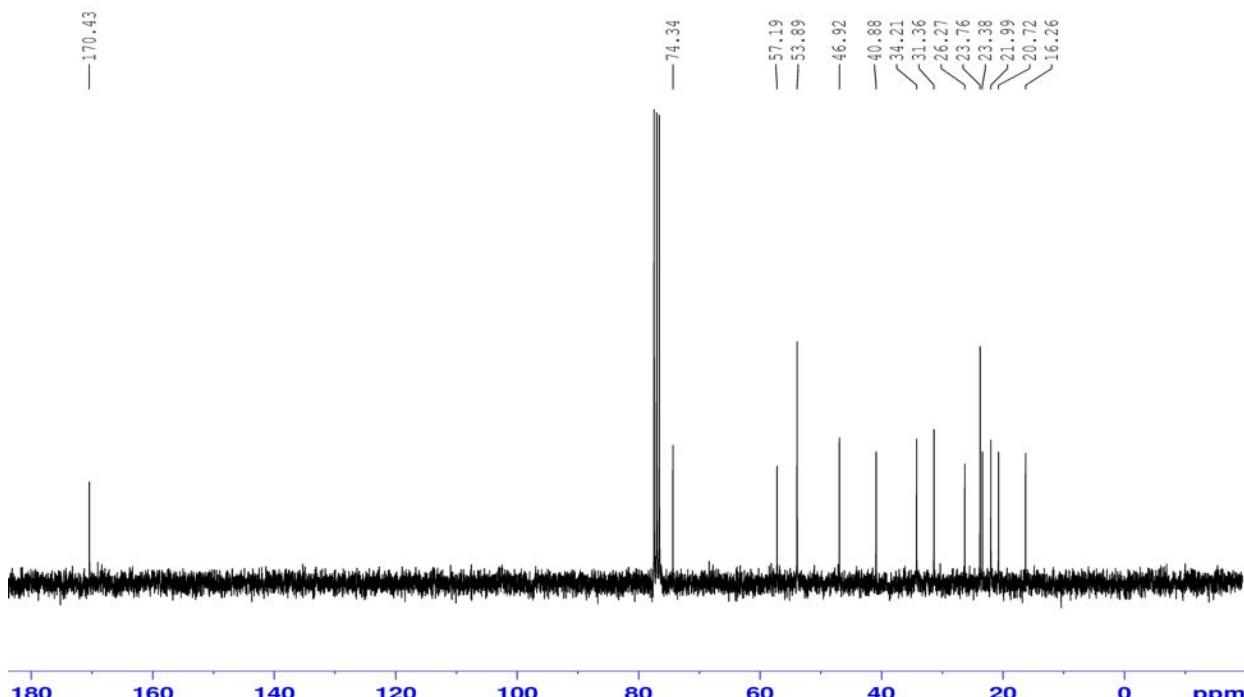
**Figure S11.**  $^1\text{H}$  NMR of compound **7** ( $\text{CDCl}_3$ , 300 MHz).



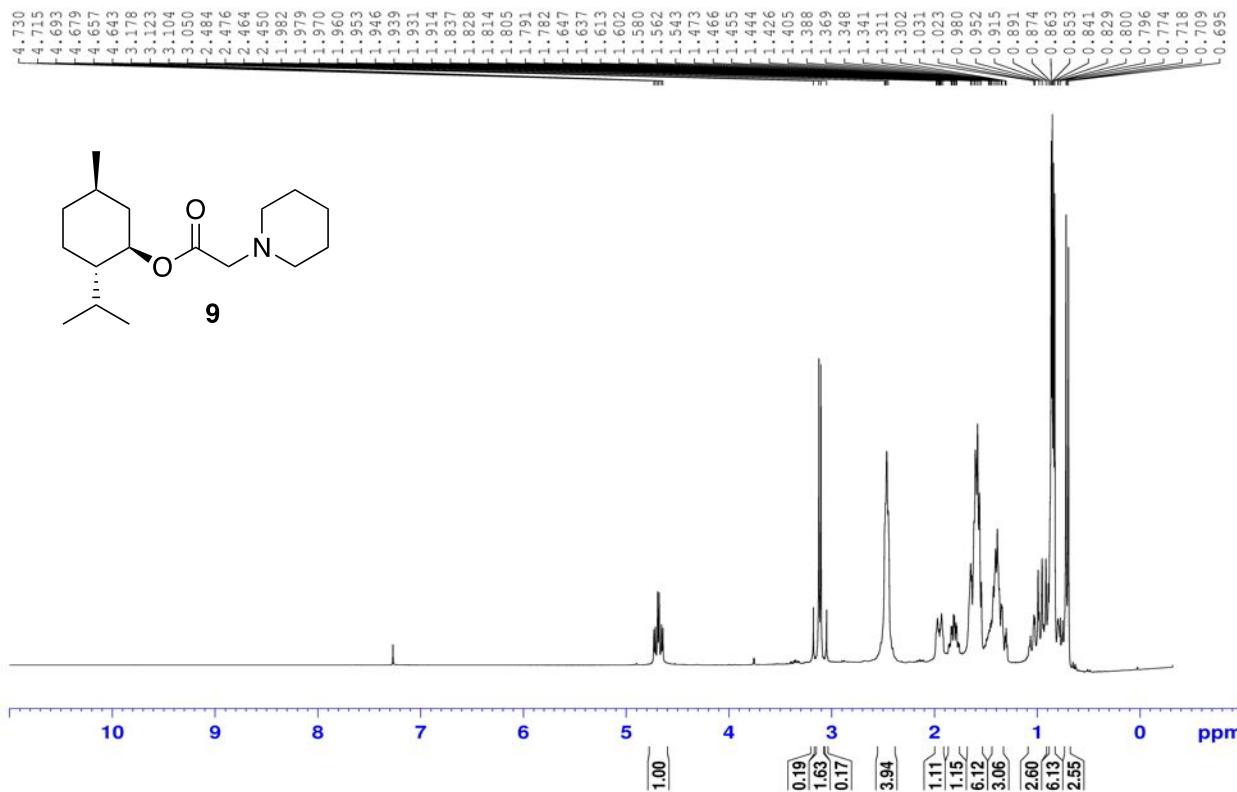
**Figure S12.**  $^{13}\text{C}$  NMR of compound **7** ( $\text{CDCl}_3$ , 75 MHz).



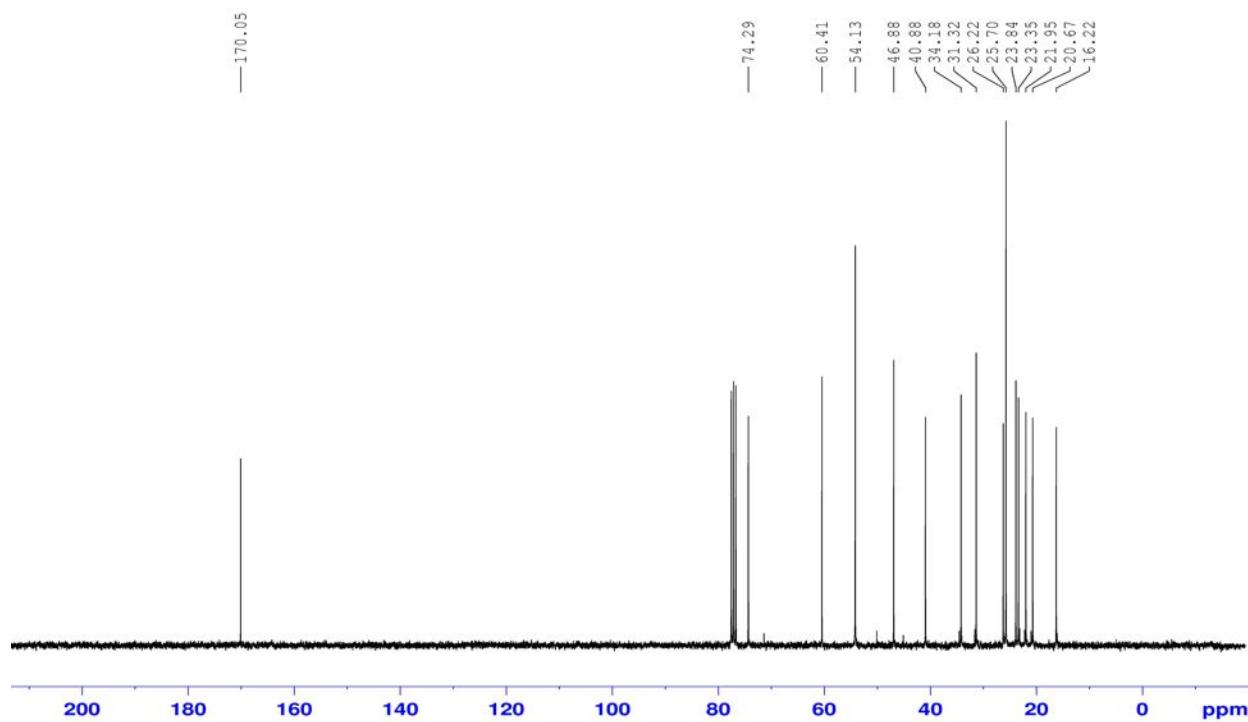
**Figure S13.**  $^1\text{H}$  NMR of compound **8** ( $\text{CDCl}_3$ , 300 MHz).



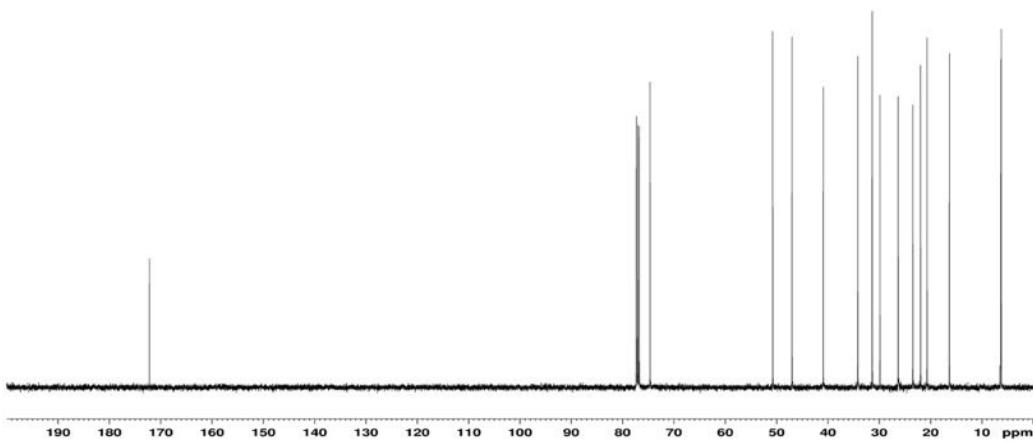
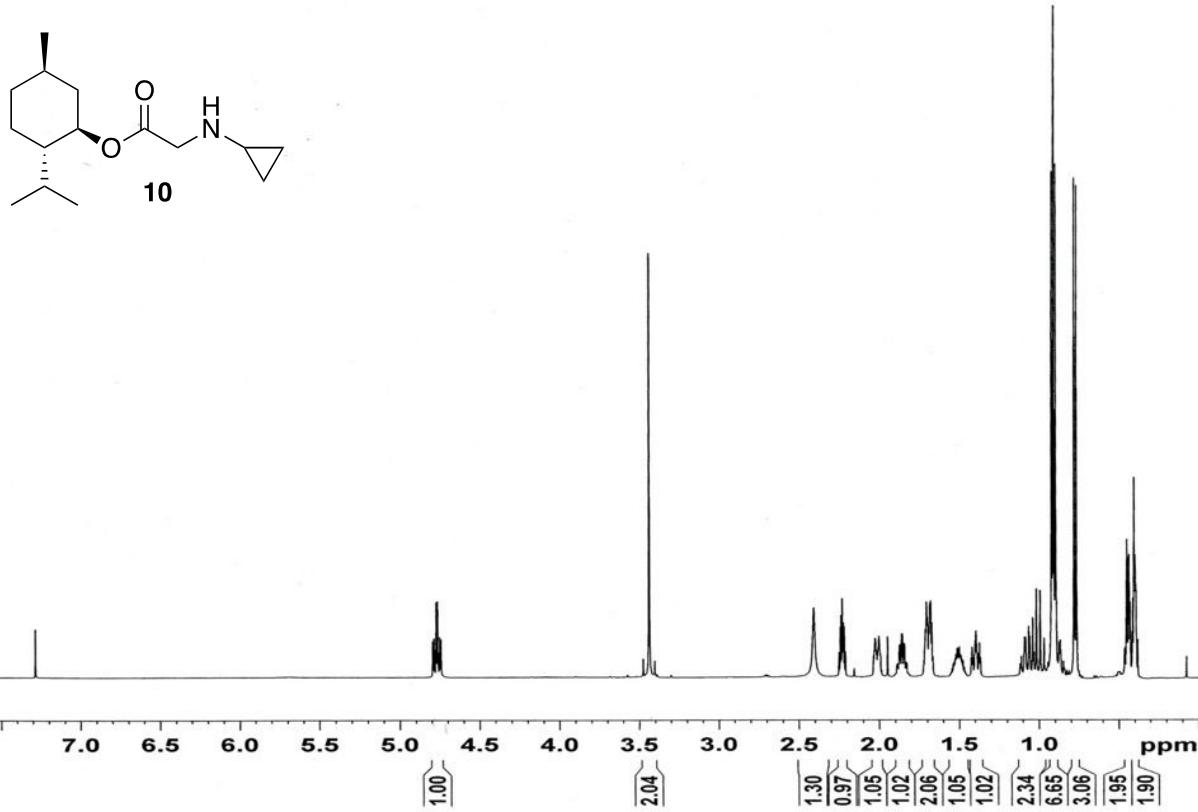
**Figure S14.**  $^{13}\text{C}$  NMR of compound **8** ( $\text{CDCl}_3$ , 75 MHz).

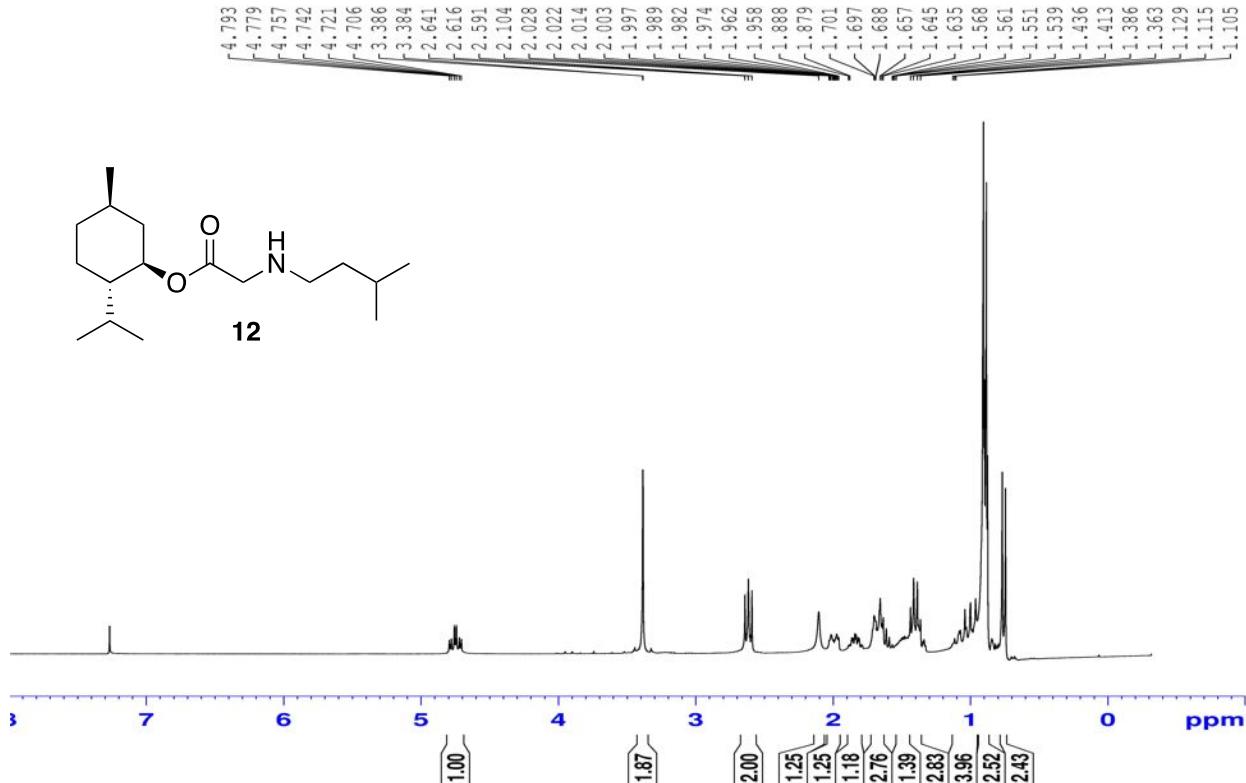


**Figure S15.**  $^1\text{H}$  NMR of compound **9** ( $\text{CDCl}_3$ , 300 MHz).

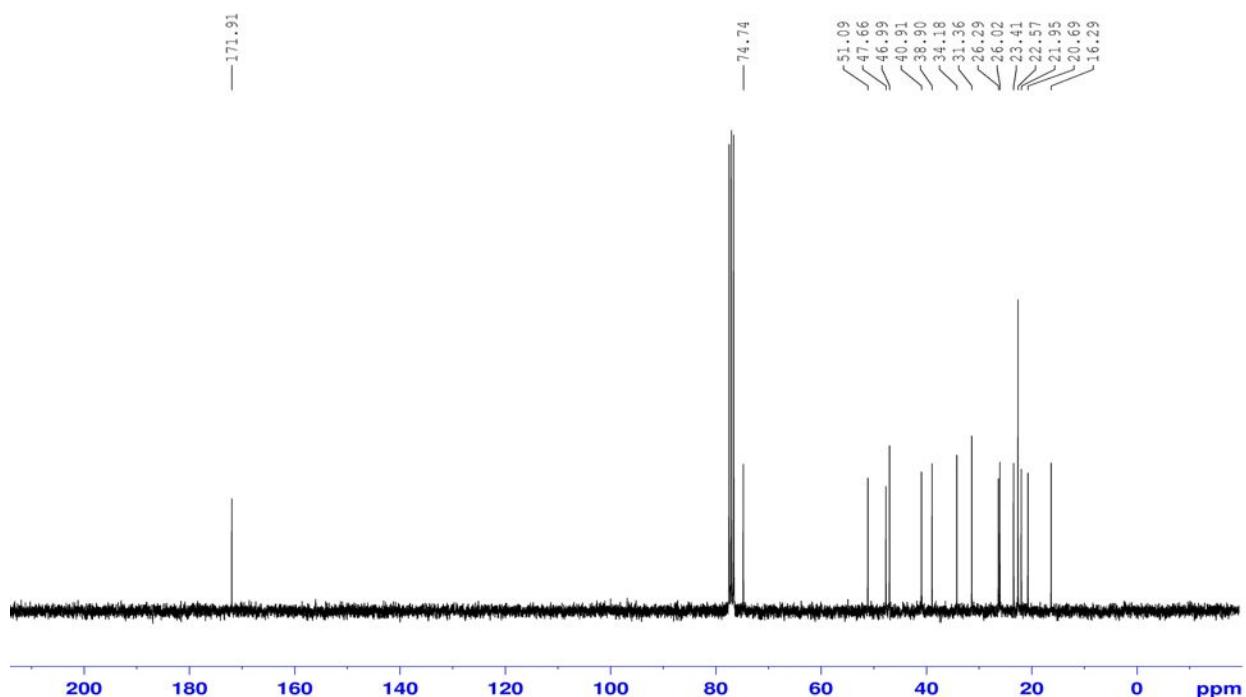


**Figure S16.**  $^1\text{H}$  NMR of compound **9** ( $\text{CDCl}_3$ , 75 MHz).

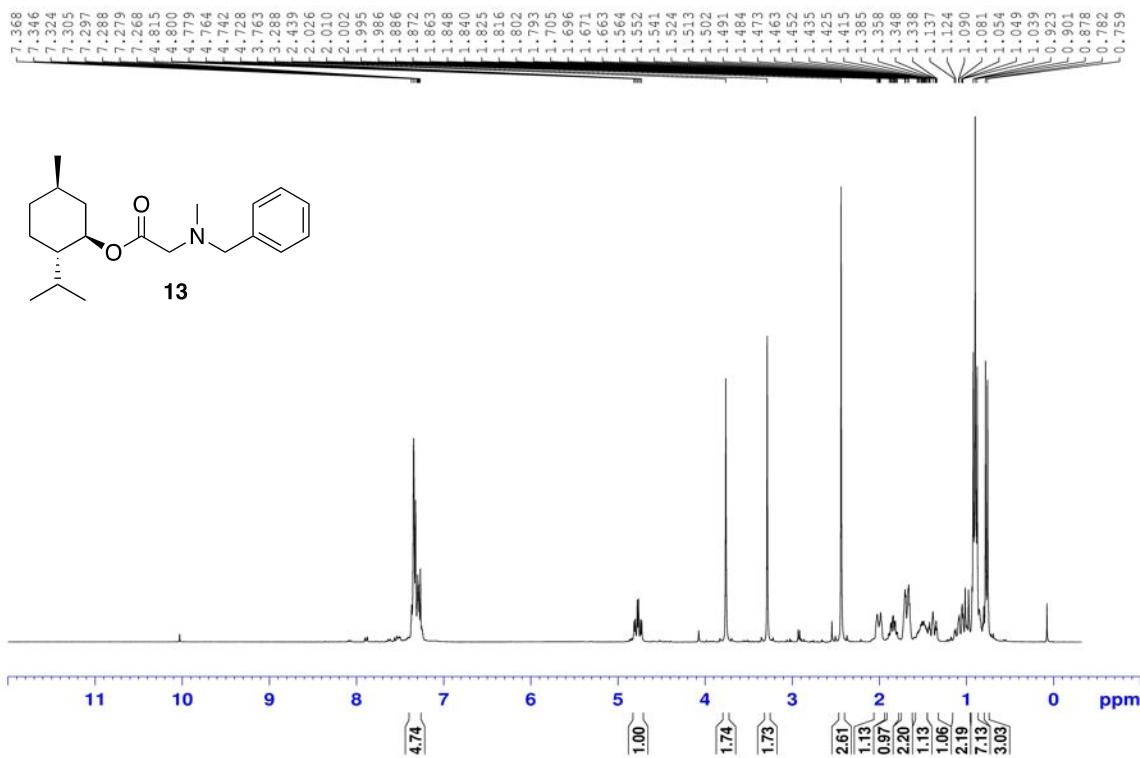




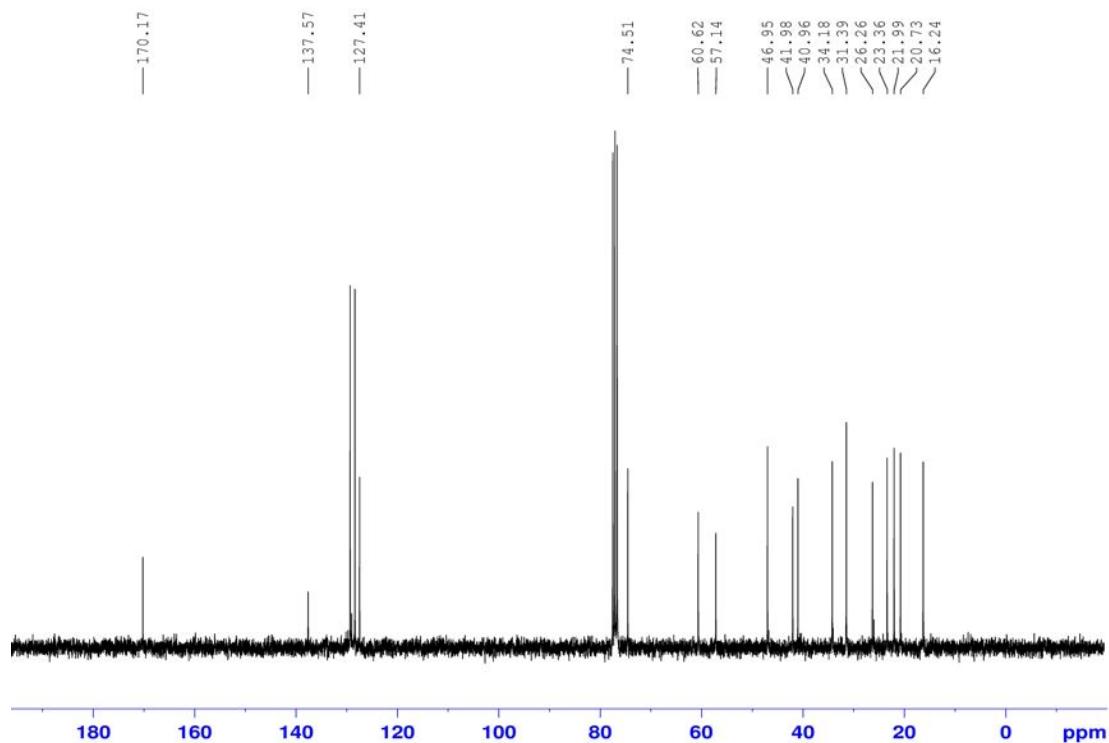
**Figure S19.**  $^1\text{H}$  NMR of compound **12** ( $\text{CDCl}_3$ , 300 MHz).



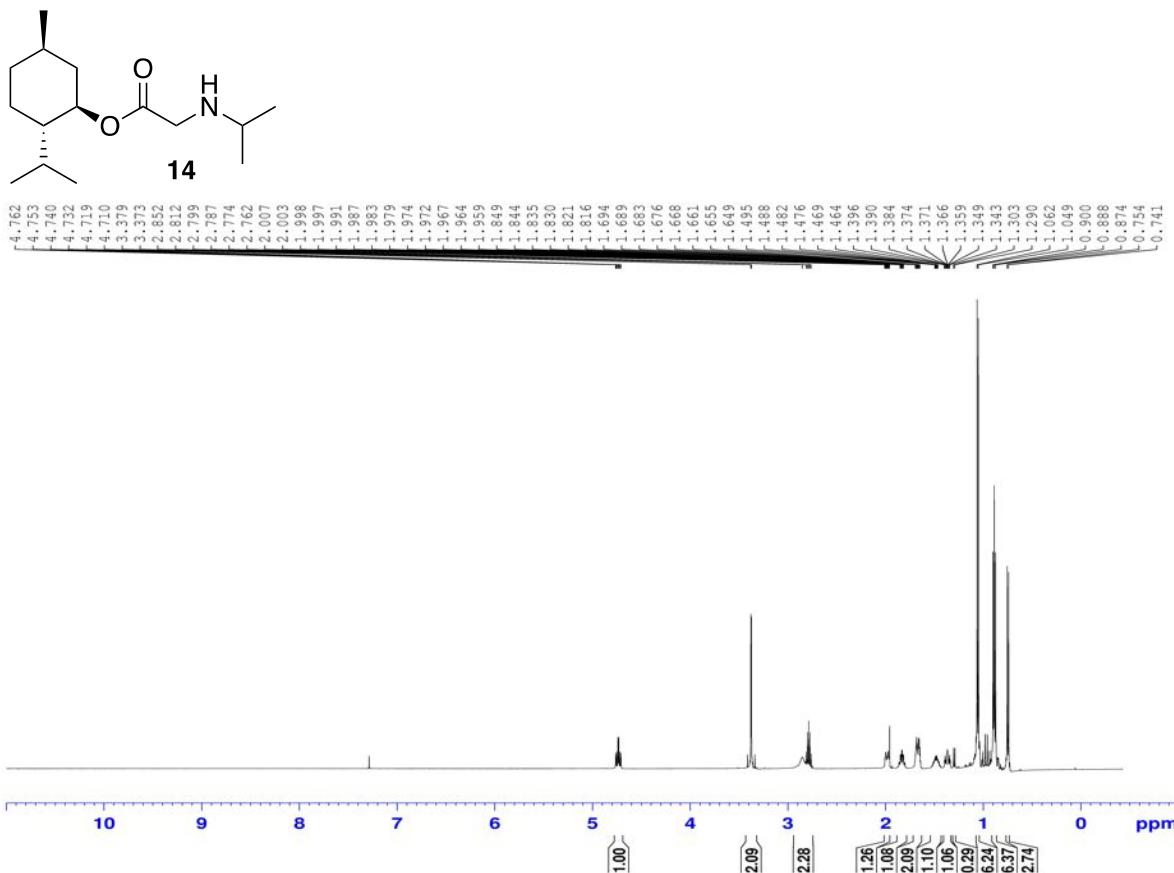
**Figure S20.**  $^1\text{H}$  NMR of compound **12** ( $\text{CDCl}_3$ , 75 MHz).



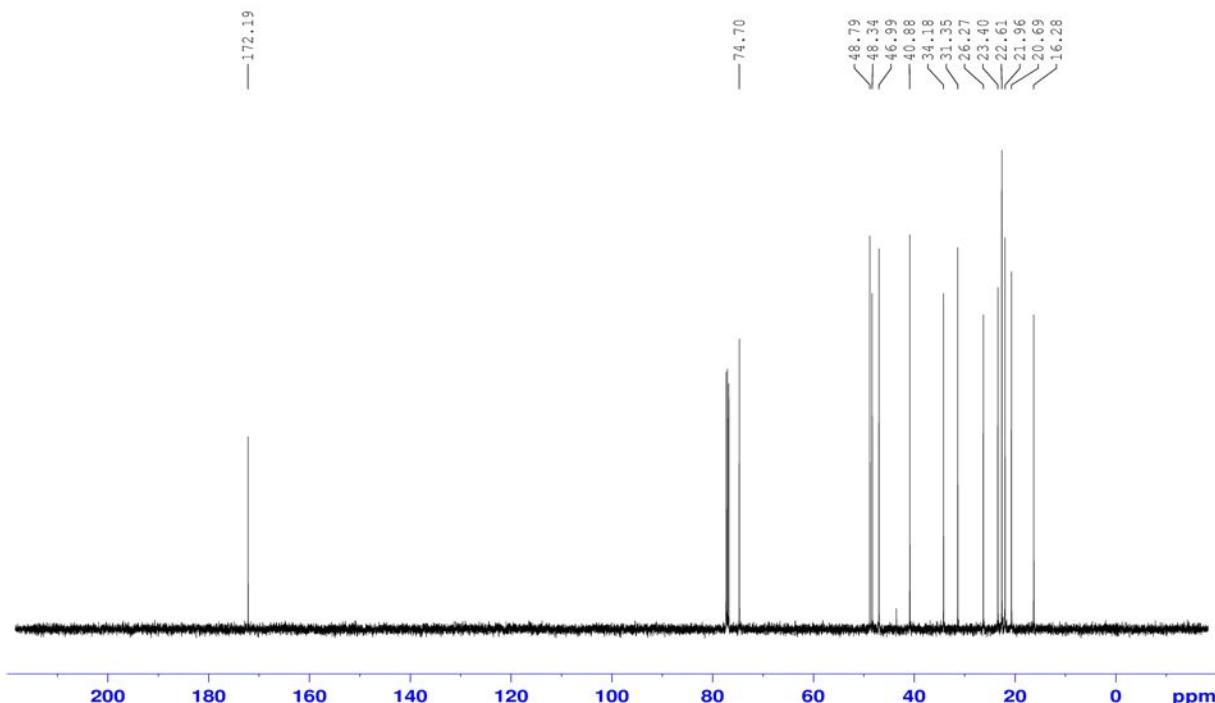
**Figure S21.**  $^1\text{H}$  NMR of compound **13** ( $\text{CDCl}_3$ , 300 MHz).



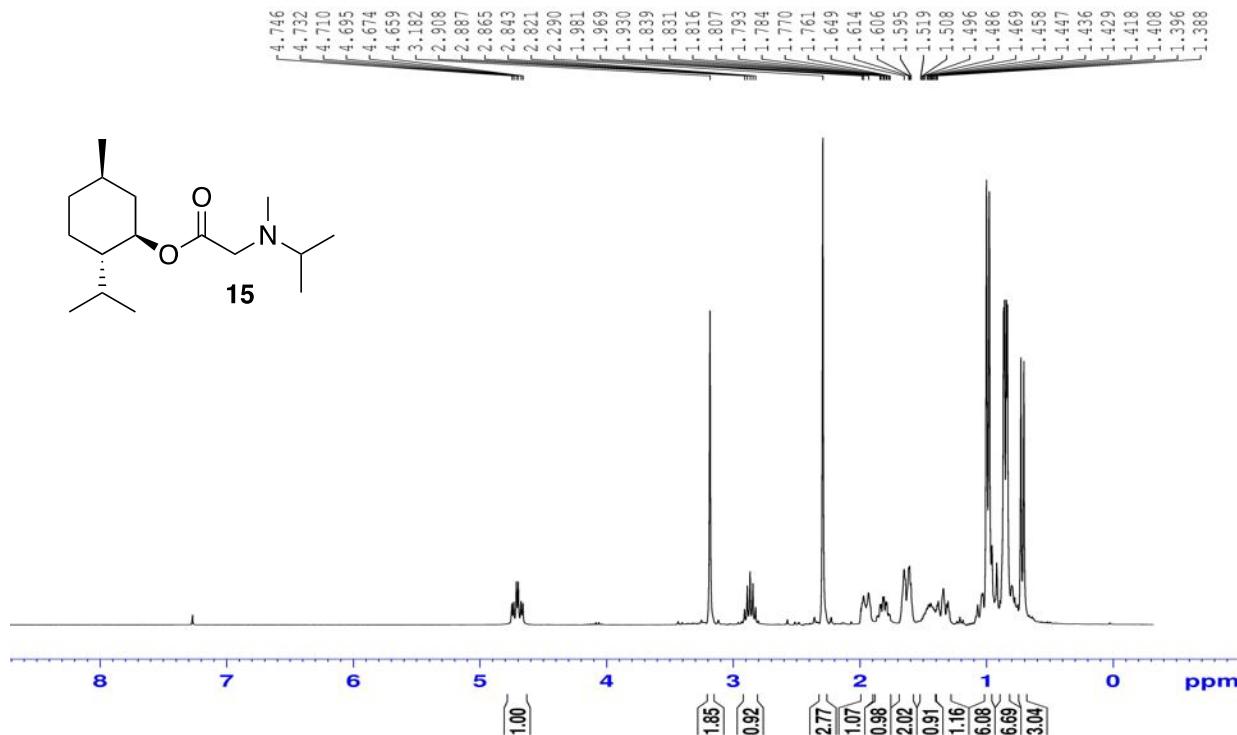
**Figure S22.**  $^{13}\text{C}$  NMR of compound **2** ( $\text{CDCl}_3$ , 75 MHz).



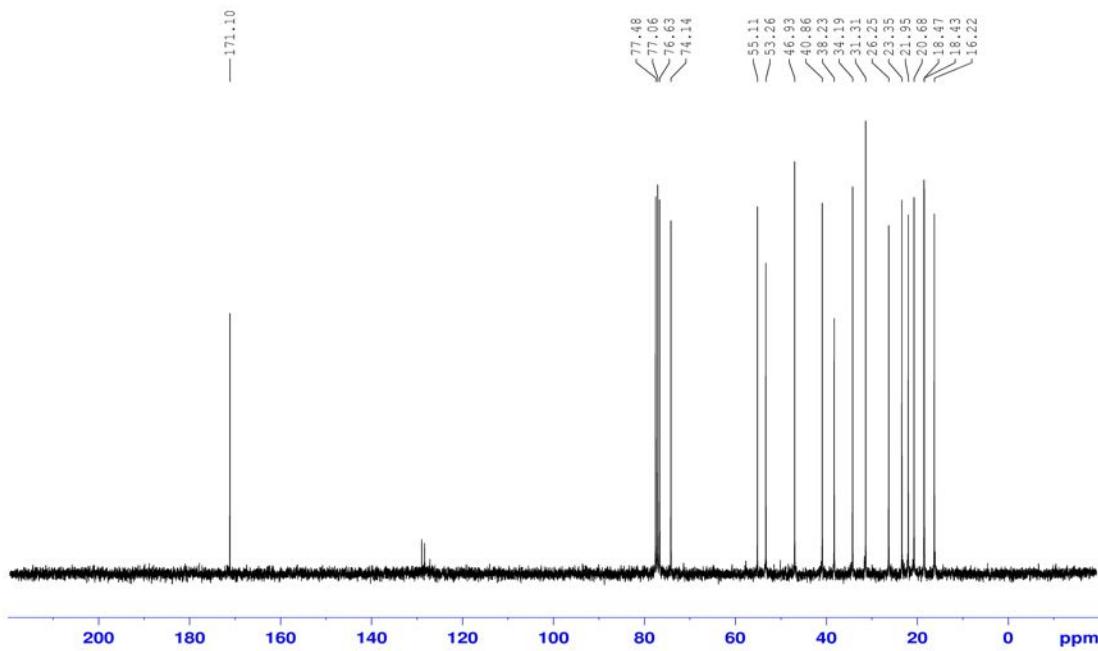
**Figure S23.**  $^1\text{H}$  NMR of compound **14** ( $\text{CDCl}_3$ , 300 MHz).



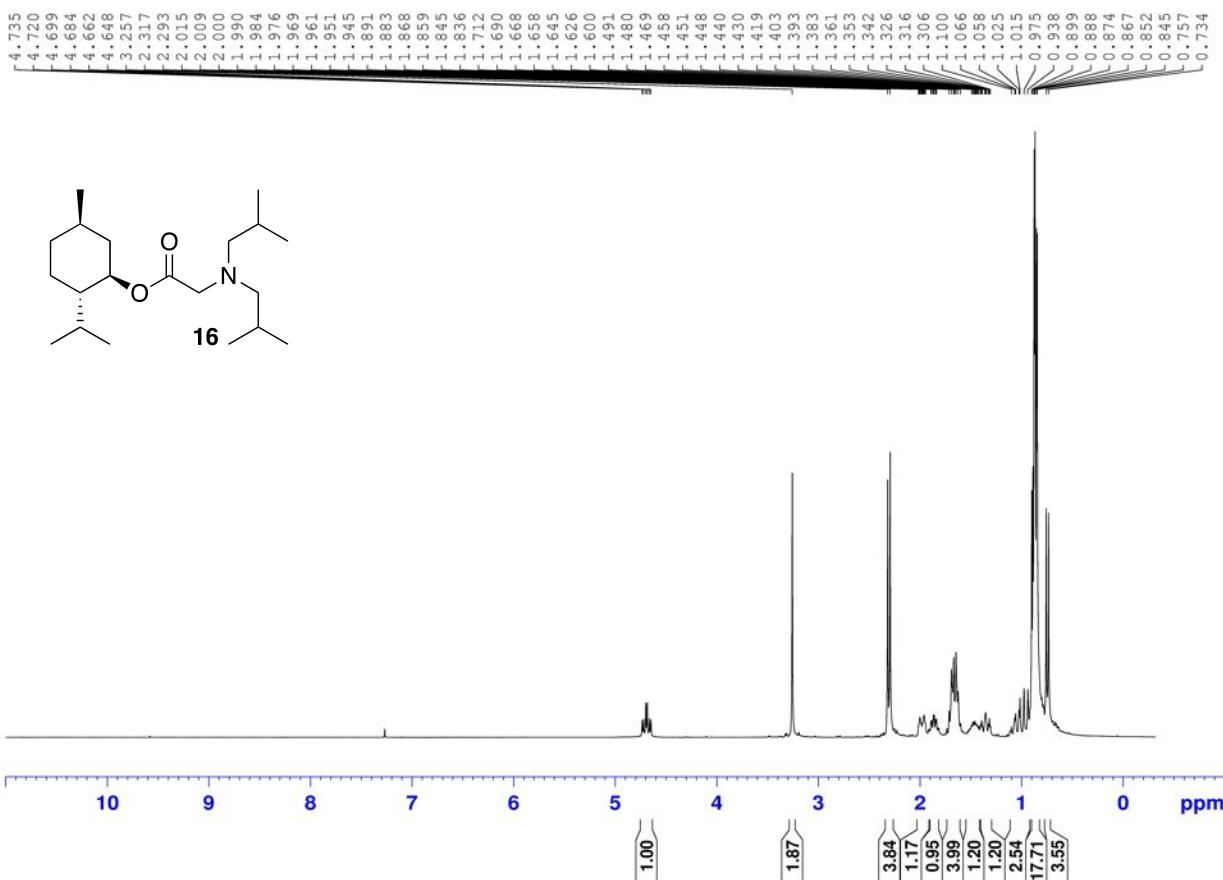
**Figure S24.**  $^{13}\text{C}$  NMR of compound **14** ( $\text{CDCl}_3$ , 75 MHz).



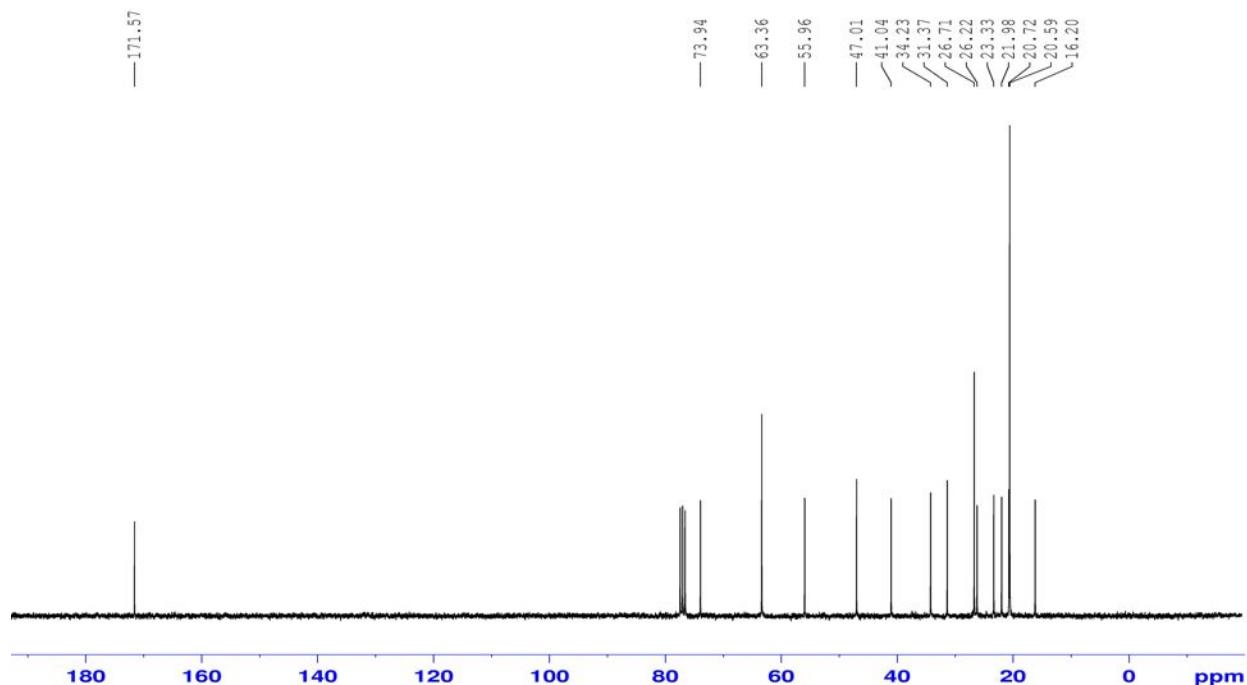
**Figure S25.**  $^1\text{H}$  NMR of compound **15** ( $\text{CDCl}_3$ , 300 MHz).



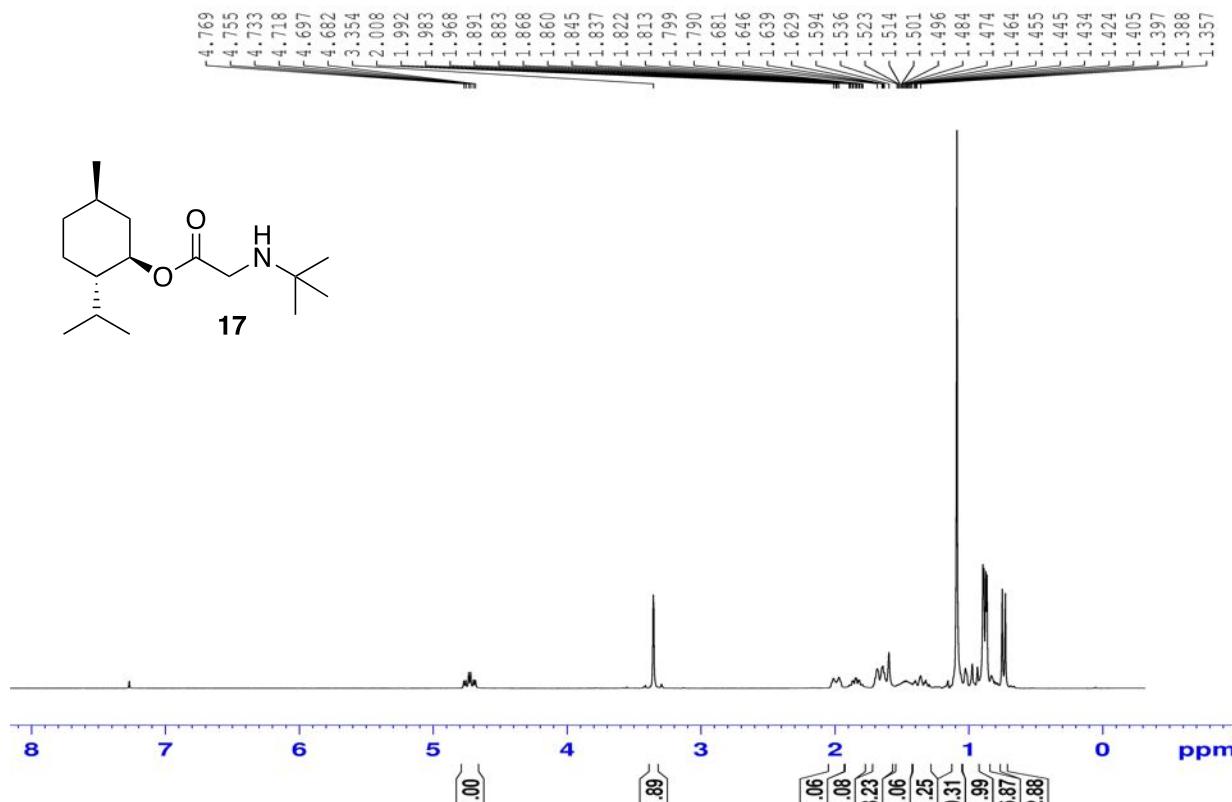
**Figure S26.**  $^{13}\text{C}$  NMR of compound **15** ( $\text{CDCl}_3$ , 75 MHz).



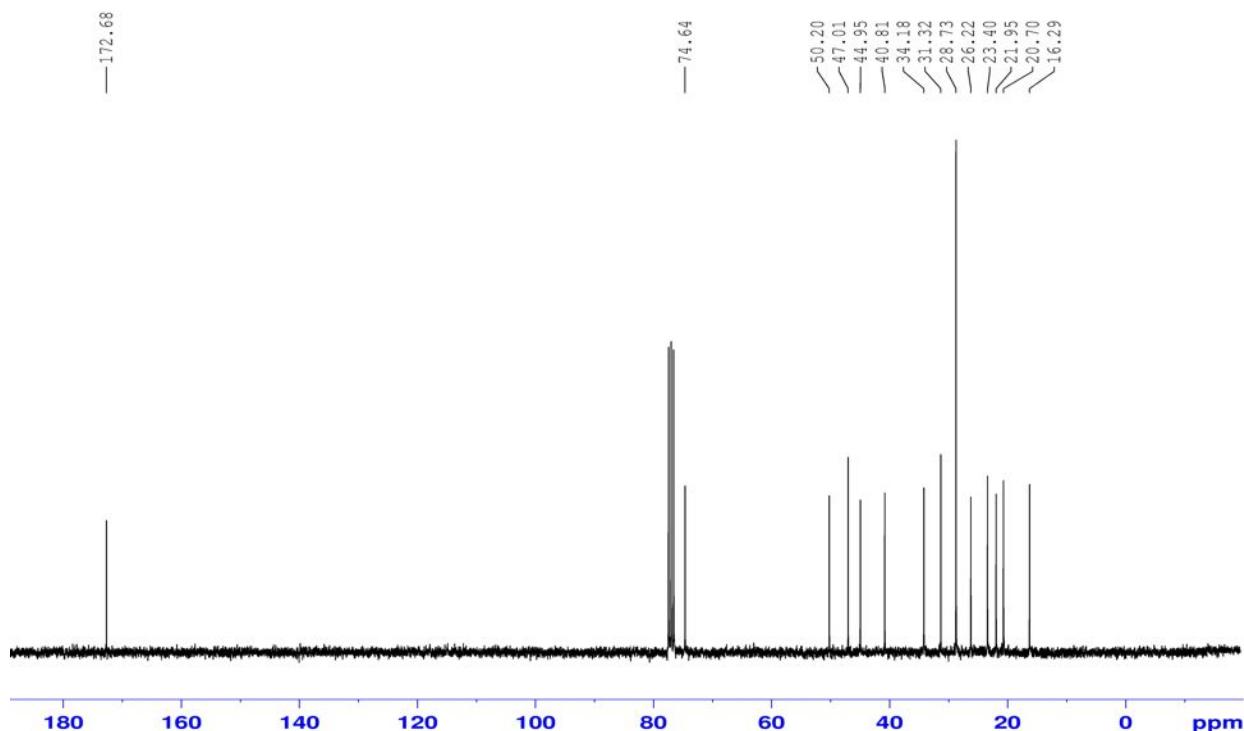
**Figure S27.**  $^1\text{H}$  NMR of compound **16** ( $\text{CDCl}_3$ , 300 MHz).



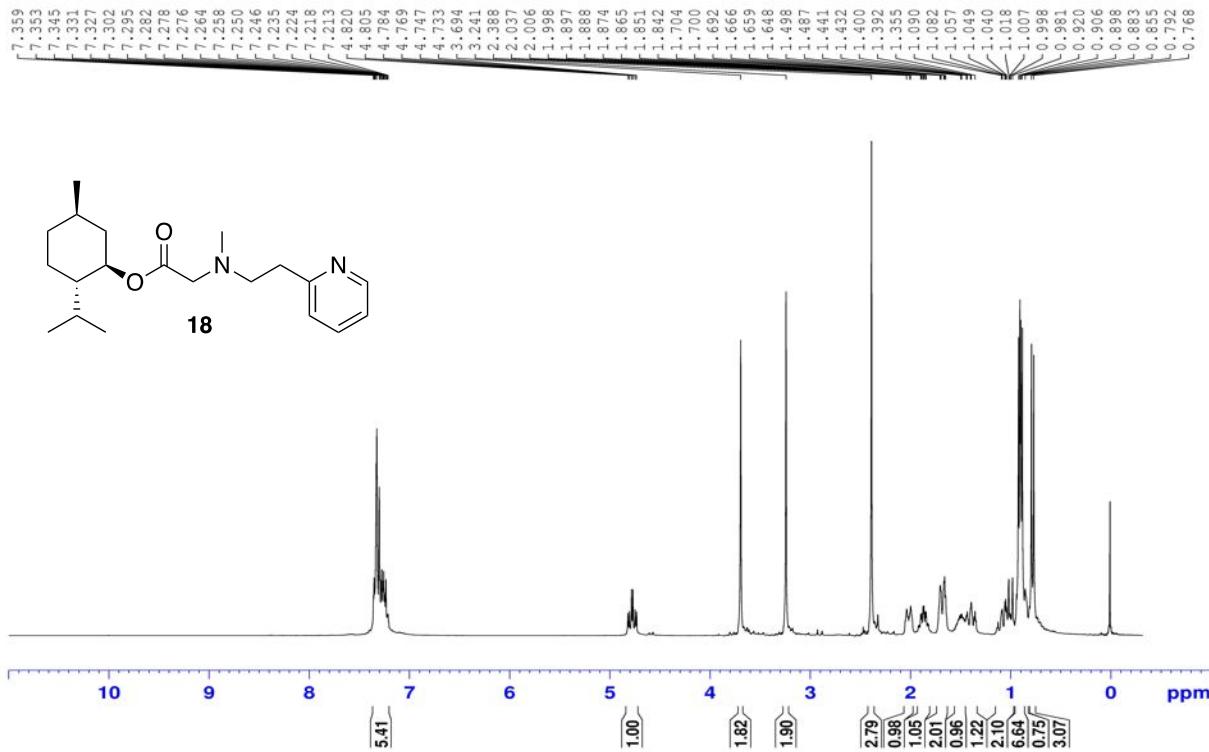
**Figure S28.**  $^{13}\text{C}$  NMR of compound **16** ( $\text{CDCl}_3$ , 75 MHz).



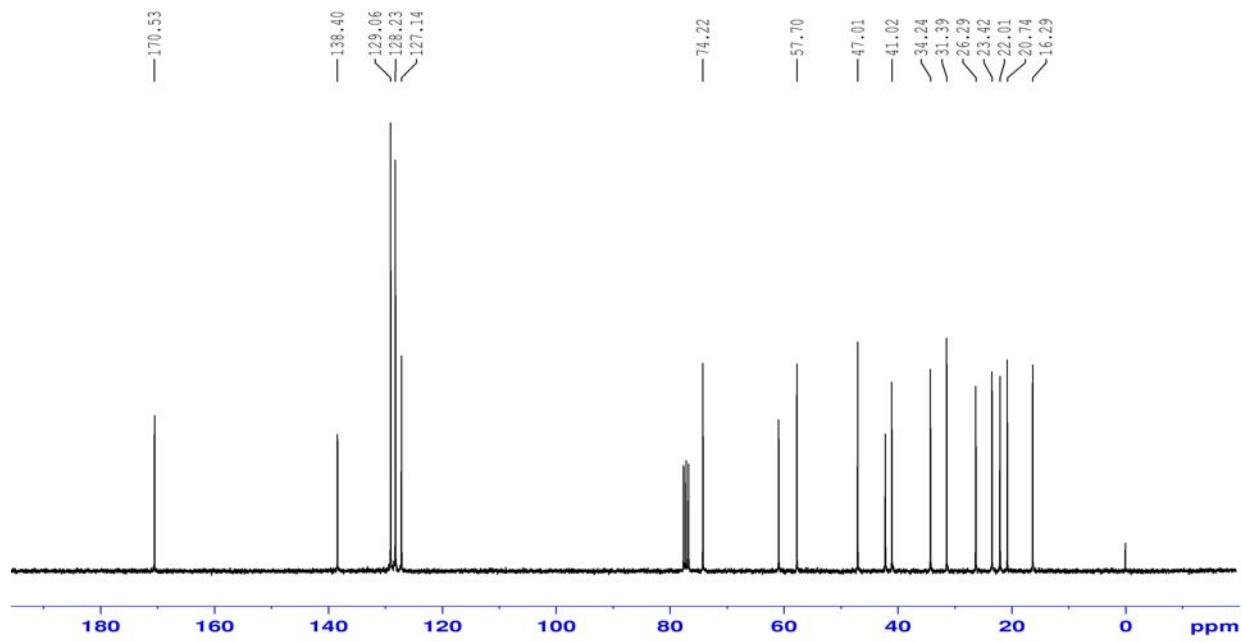
**Figure S29.**  $^1\text{H}$  NMR of compound **17** ( $\text{CDCl}_3$ , 300 MHz).



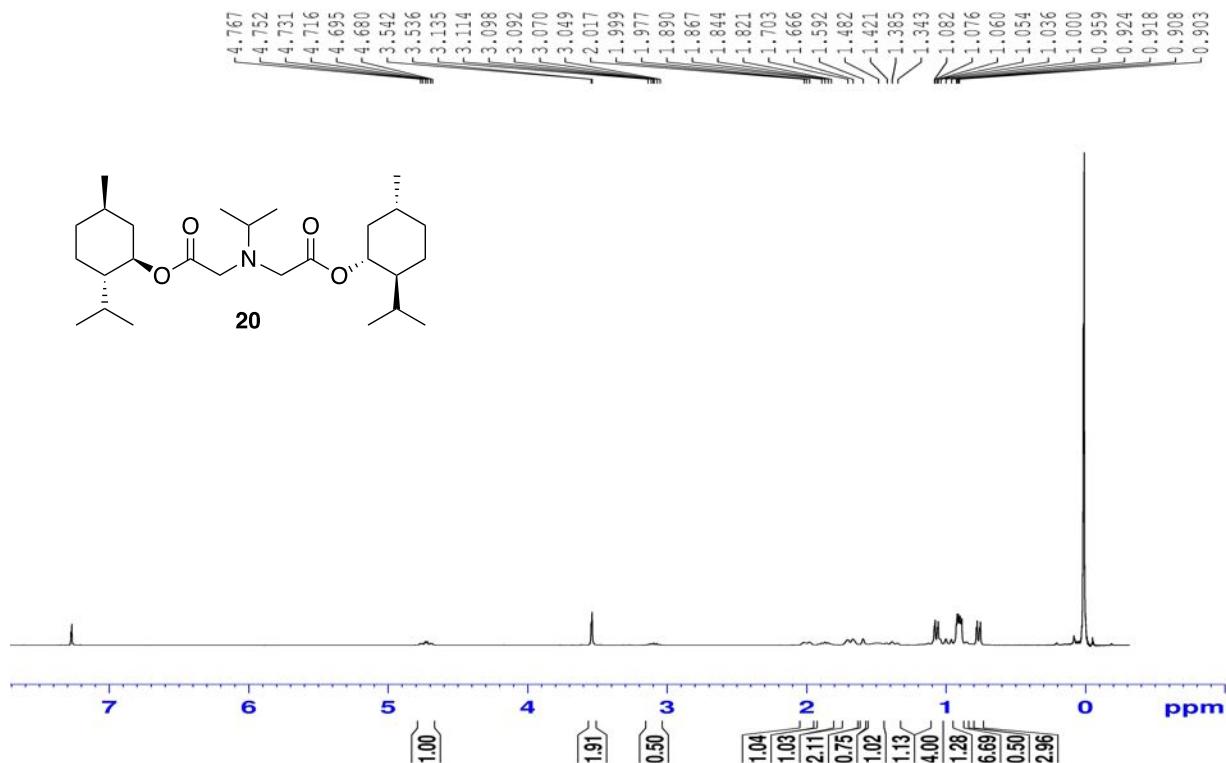
**Figure S30.**  $^{13}\text{C}$  NMR of compound **17** ( $\text{CDCl}_3$ , 75 MHz).



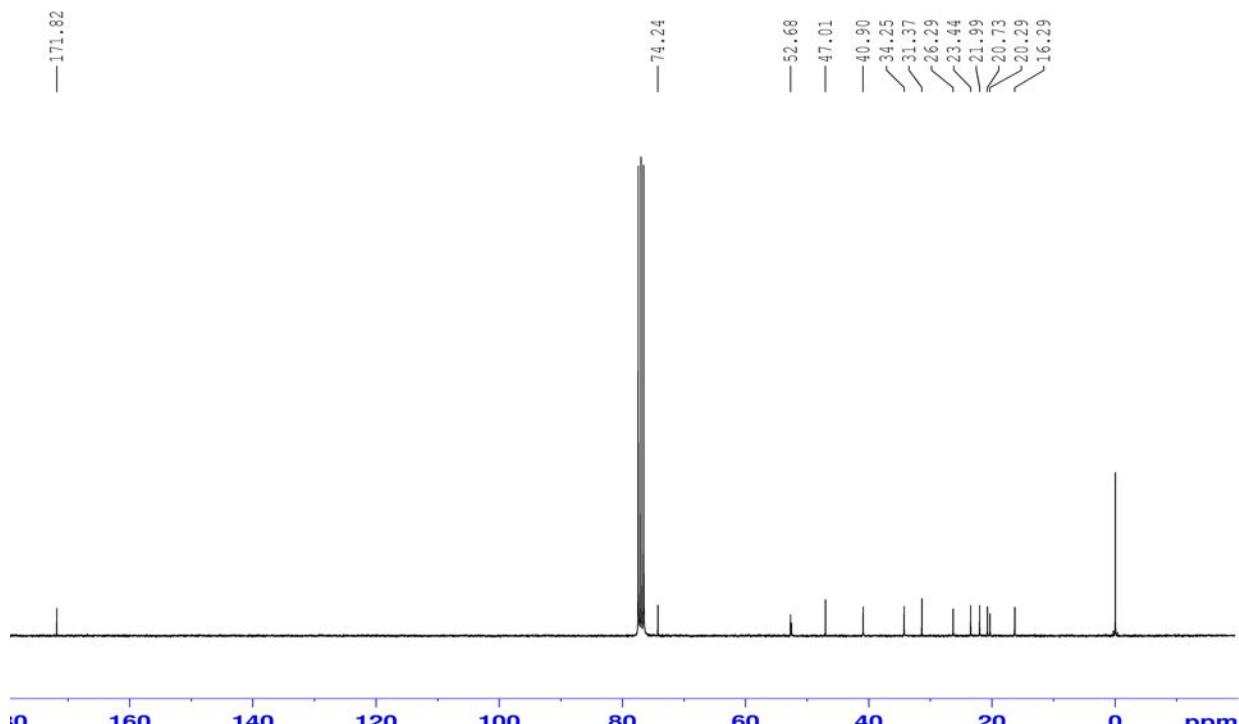
**Figure S31.**  $^1\text{H}$  NMR of compound **18** ( $\text{CDCl}_3$ , 300 MHz).



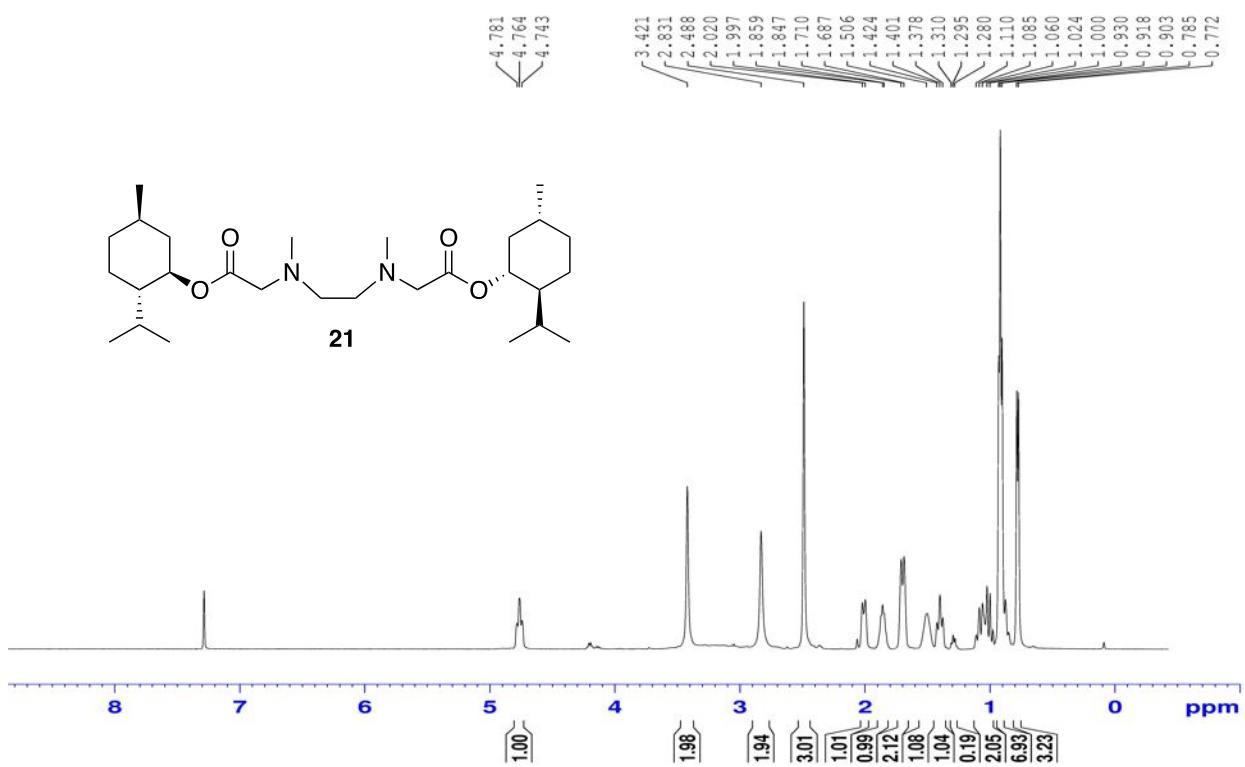
**Figure S32.**  $^{13}\text{C}$  NMR of compound **18** ( $\text{CDCl}_3$ , 75 MHz).



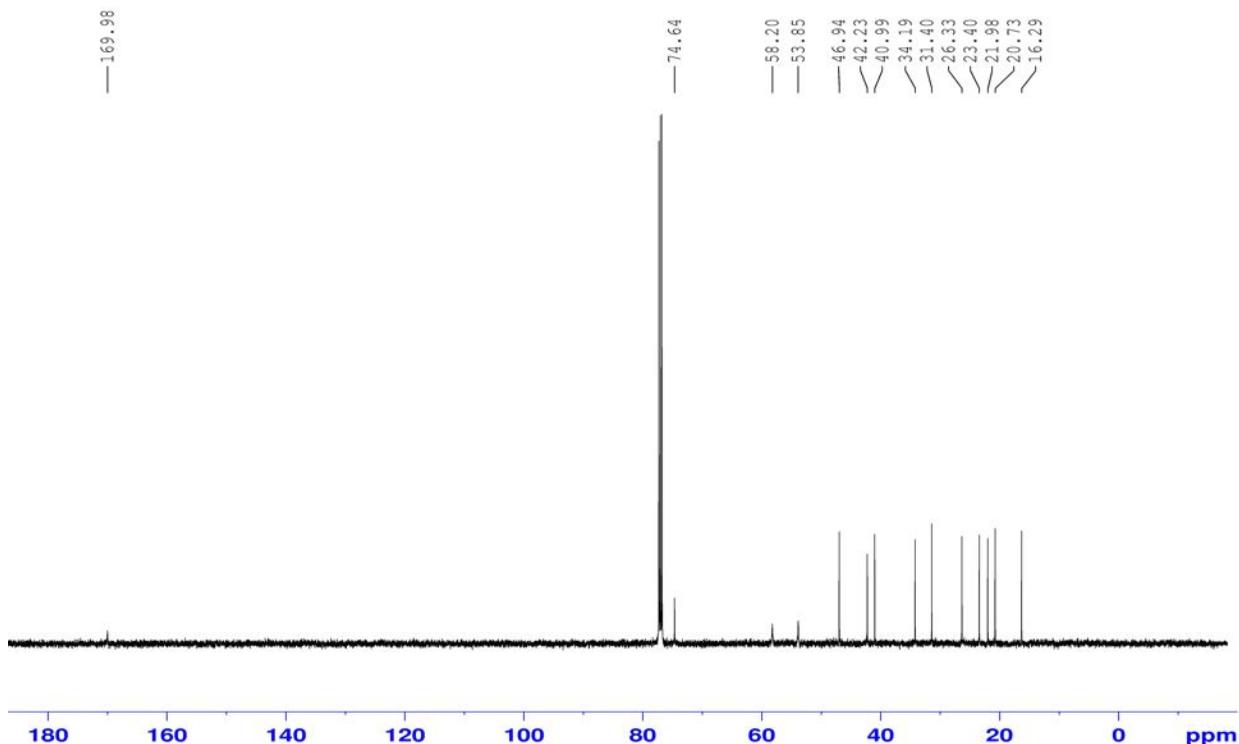
**Figure S33.**  $^1\text{H}$  NMR of compound **20** ( $\text{CDCl}_3$ , 300 MHz).



**Figure S34.**  $^{13}\text{C}$  NMR of compound **20** ( $\text{CDCl}_3$ , 75 MHz).



**Figure S35.**  $^1\text{H}$  NMR of compound **21** ( $\text{CDCl}_3$ , 300 MHz).



**Figure S36.**  $^{13}\text{C}$  NMR of compound **21** ( $\text{CDCl}_3$ , 75 MHz).