

## **Supporting Information**

**(<sup>1</sup>H and <sup>13</sup>C NMR Spectral Data)**

### **Stereocontrolled Synthesis of (+)-Methoxyphenylkainic acid and (+)-Phenylkainic acid**

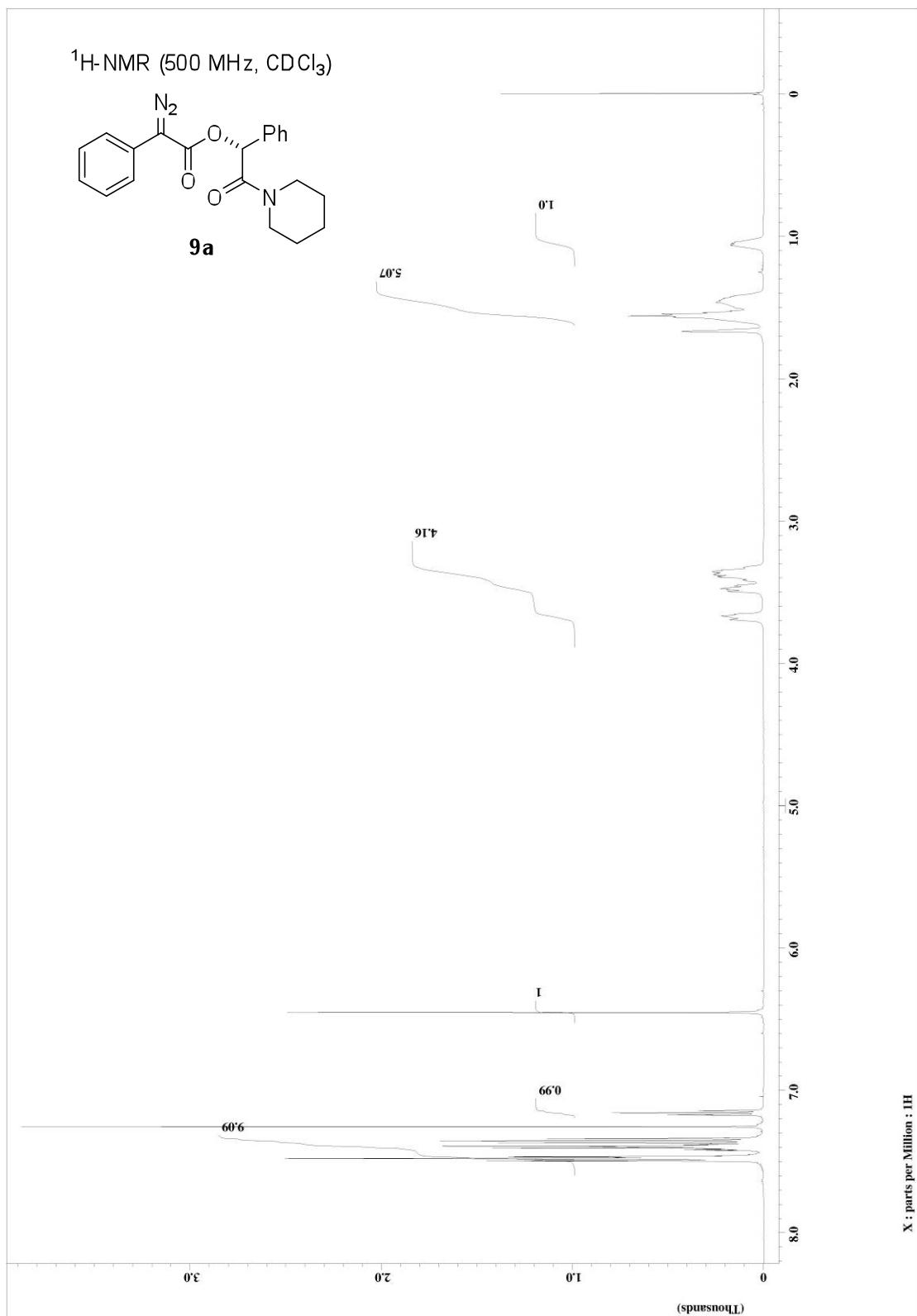
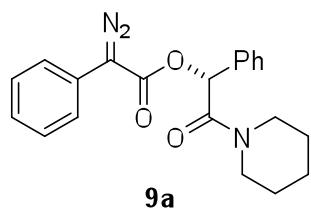
<sup>†</sup>Takumi Higashi, <sup>†</sup>Yoichiro Isobe, <sup>†</sup>Hitoshi Ouchi, <sup>†</sup>Hiroto Suzuki, <sup>†</sup>Yuko Okazaki  
<sup>†</sup>Tomohiro Asakawa, <sup>‡</sup>Takumi Furuta, <sup>§</sup>Toshiyuki Wakimoto, <sup>†</sup>Toshiyuki Kan\*

<sup>†</sup>School of Pharmaceutical Sciences and University of Shizuoka and Global COE Program  
52-1 Yada, Suruga-ku, SHIZUOKA 422-8526 (Japan)  
Fax: (+81) 54-264-5745  
E-mail: [kant@u-shizuoka-ken.ac.jp](mailto:kant@u-shizuoka-ken.ac.jp)

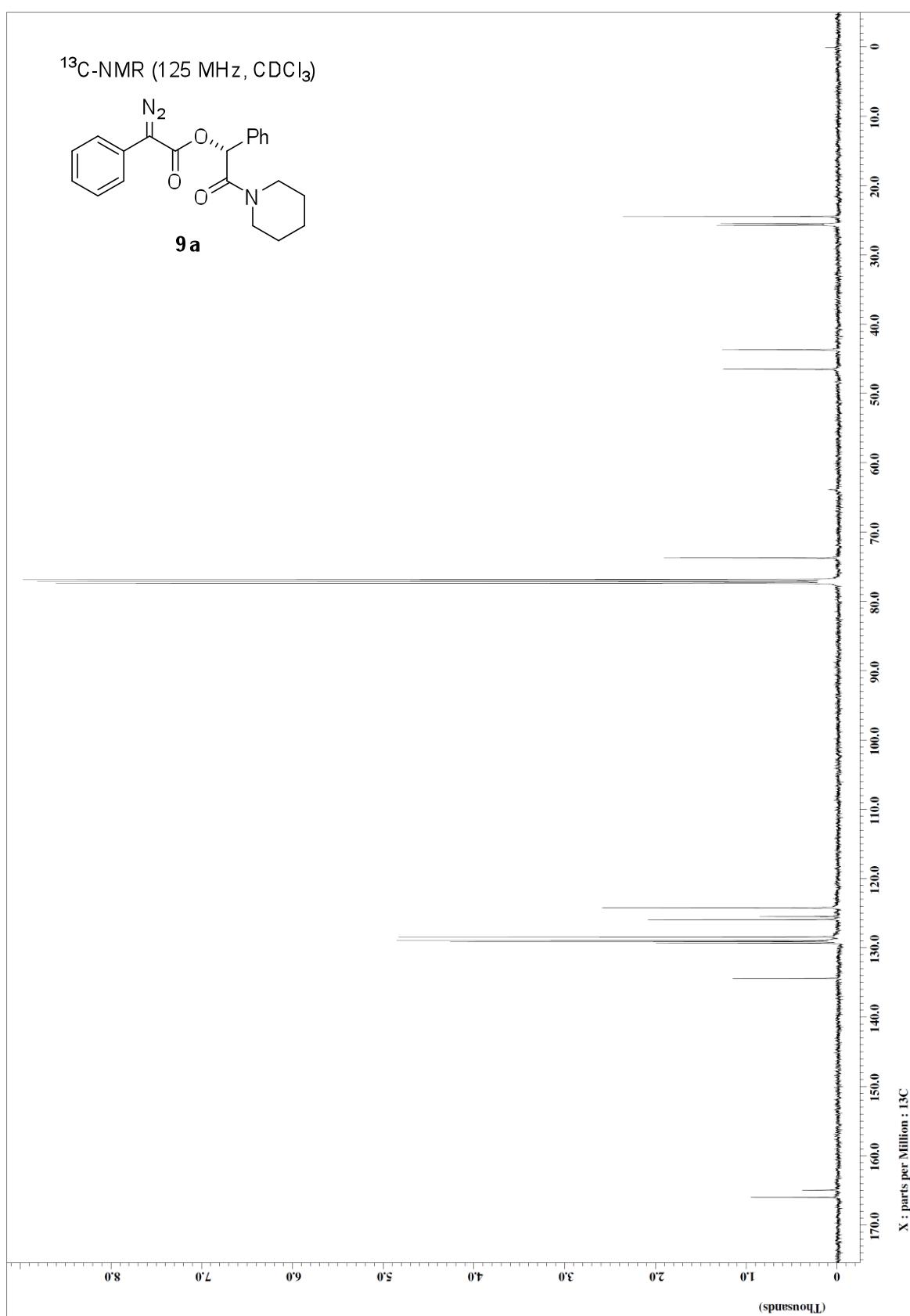
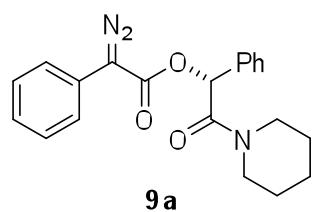
<sup>‡</sup>Institute for Chemical Research, Kyoto University, Uji, Kyoto 611-0011, Japan

<sup>§</sup>Graduate School of Pharmaceutical Sciences, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo,  
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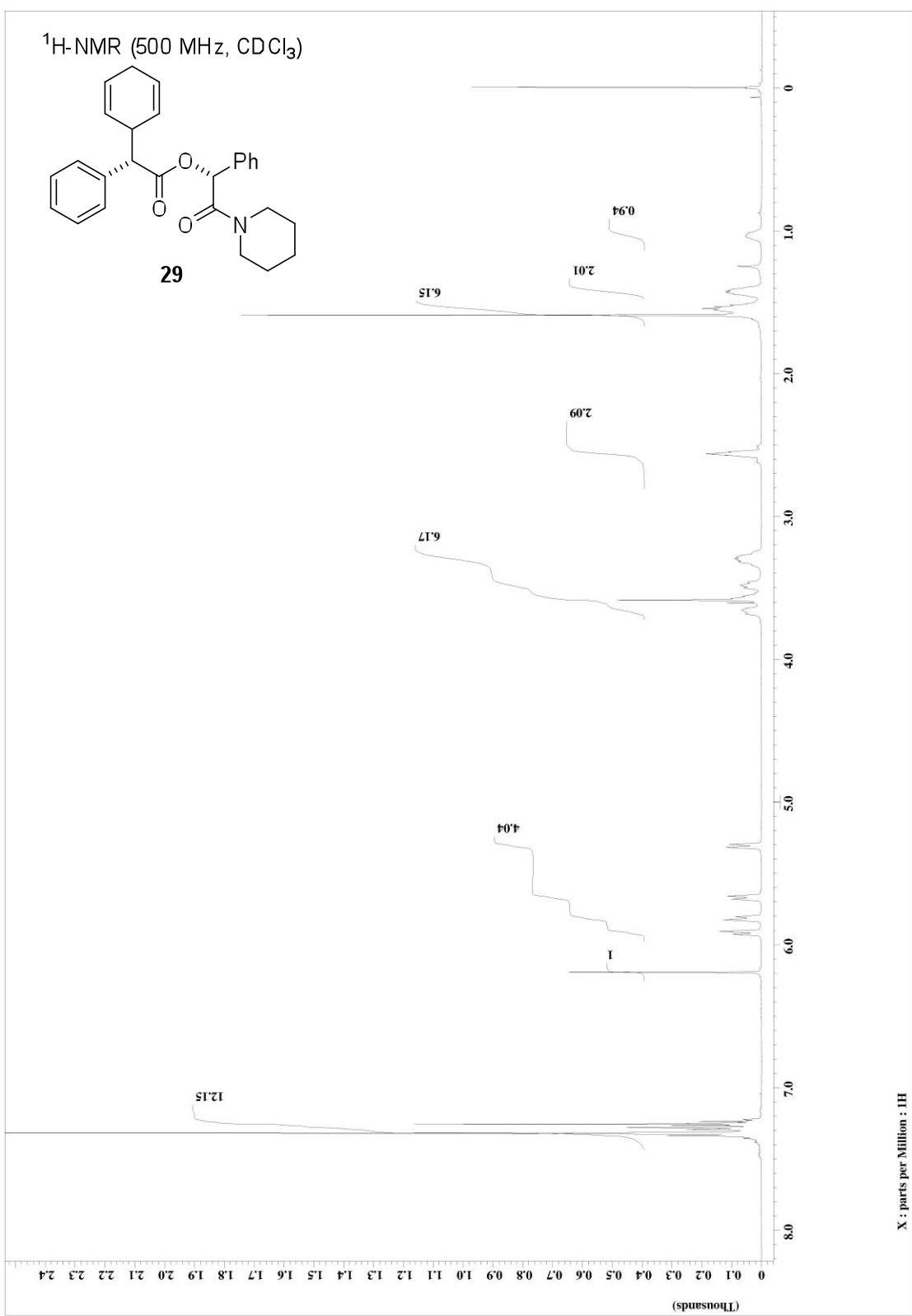
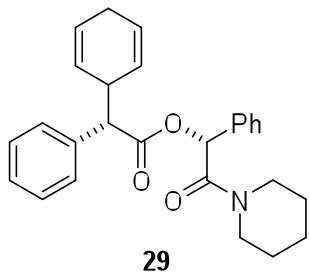
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



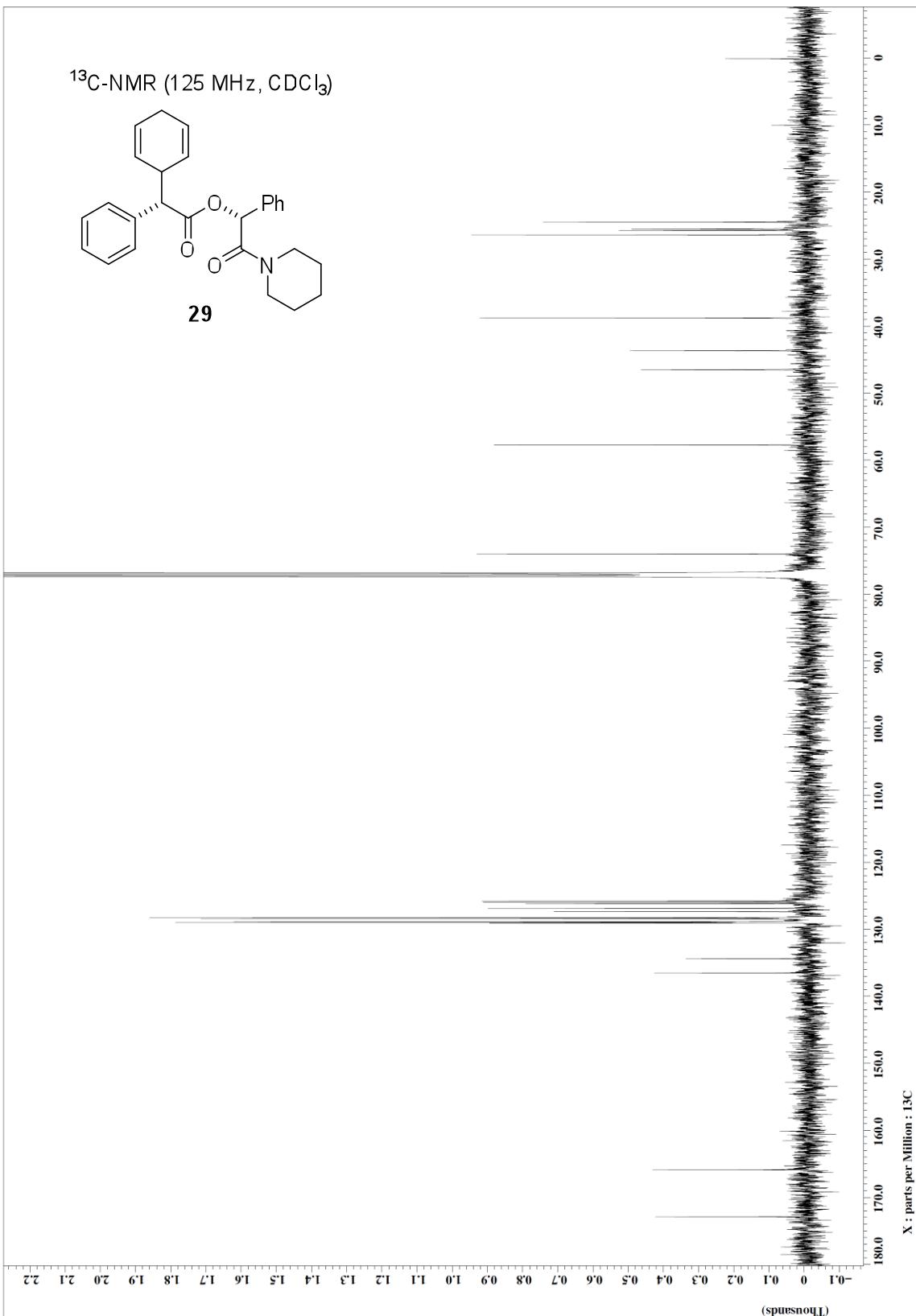
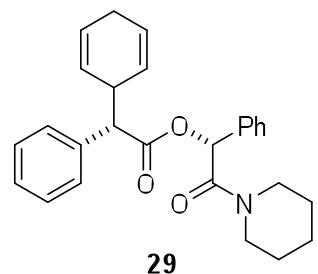
<sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>)



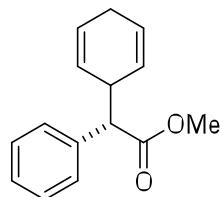
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



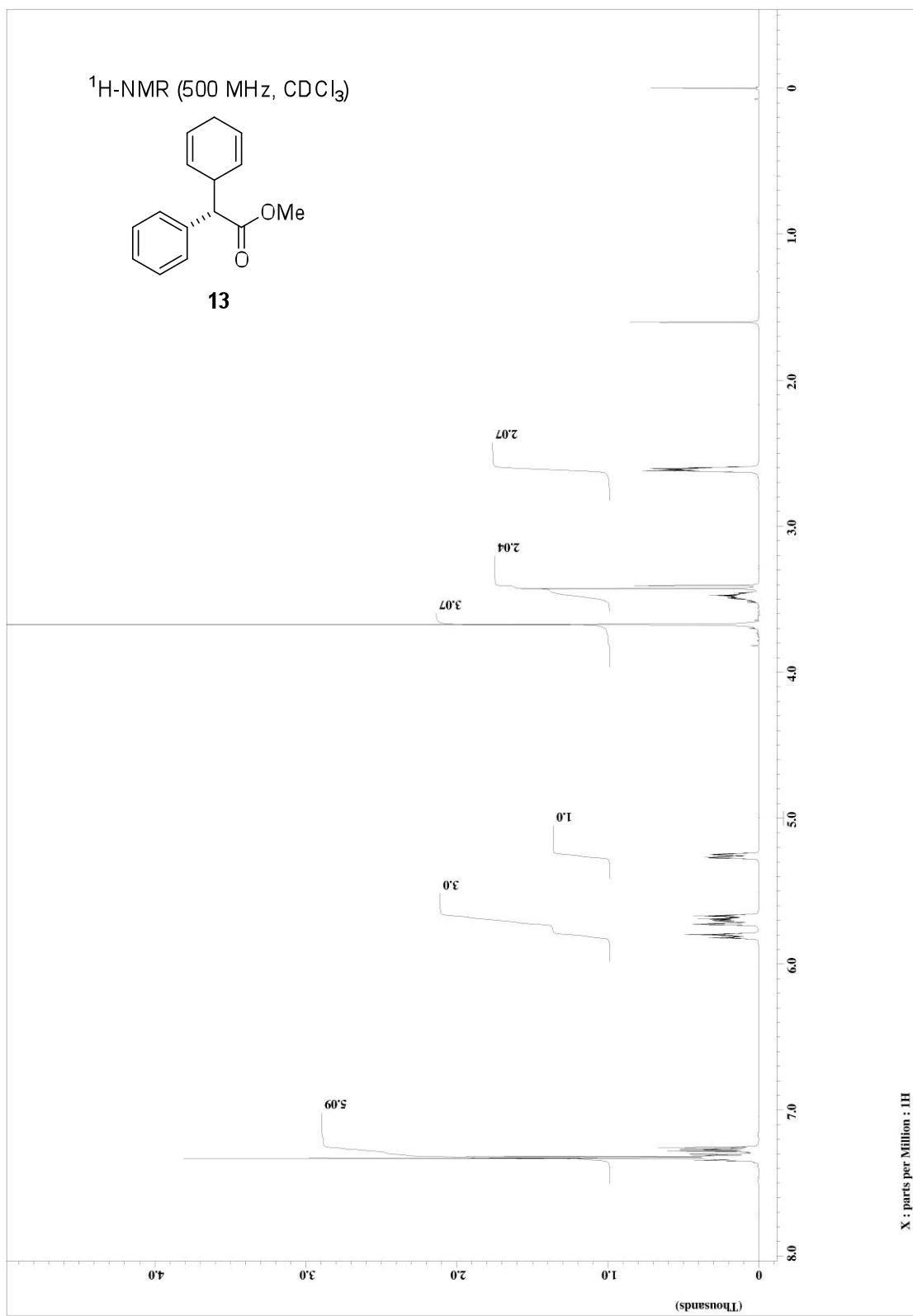
<sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>)



$^1\text{H-NMR}$  (500 MHz,  $\text{CDCl}_3$ )

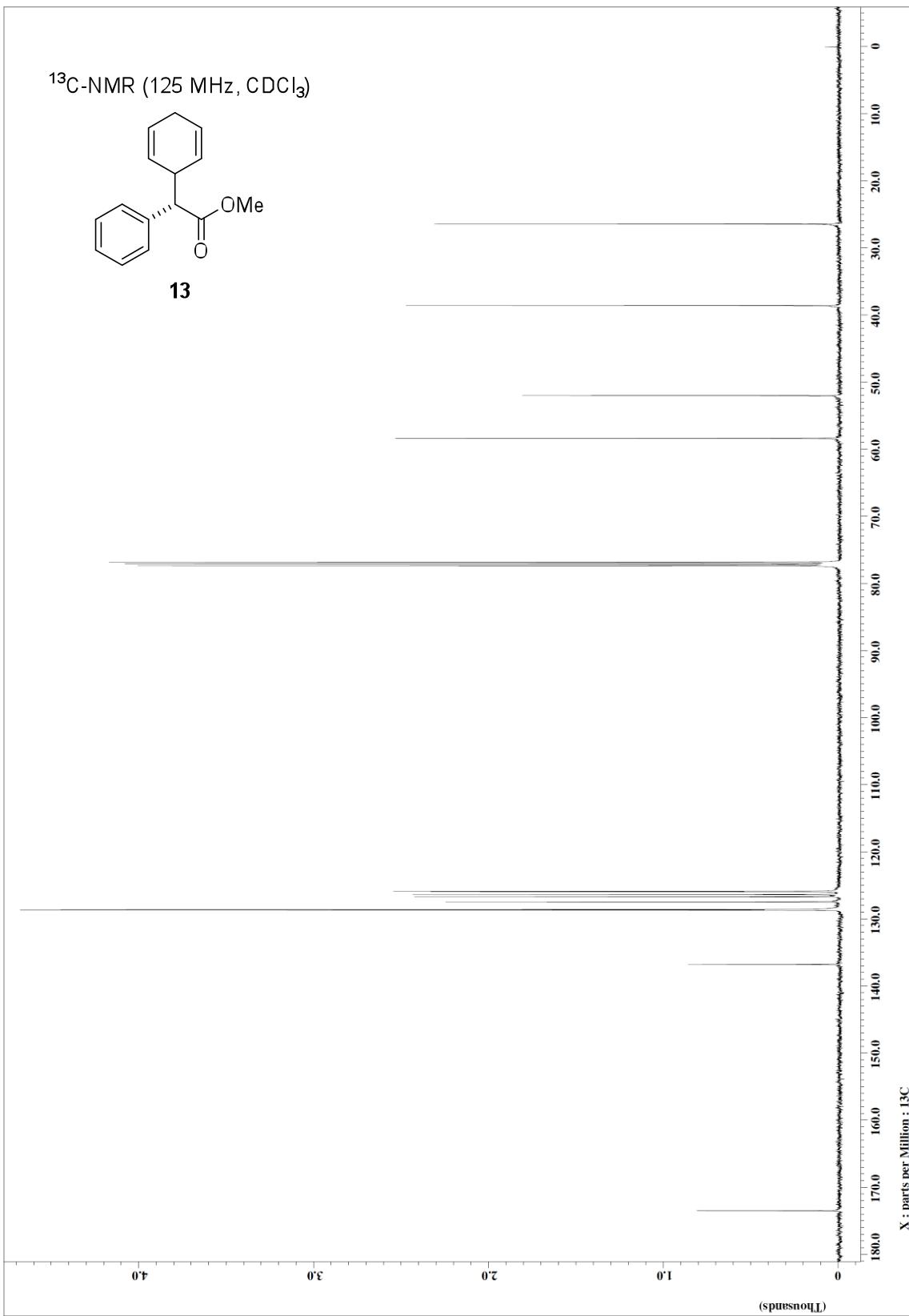
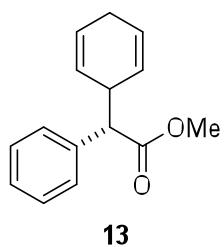


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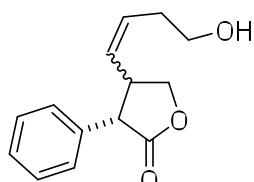


X : parts per Million :  $^1\text{H}$

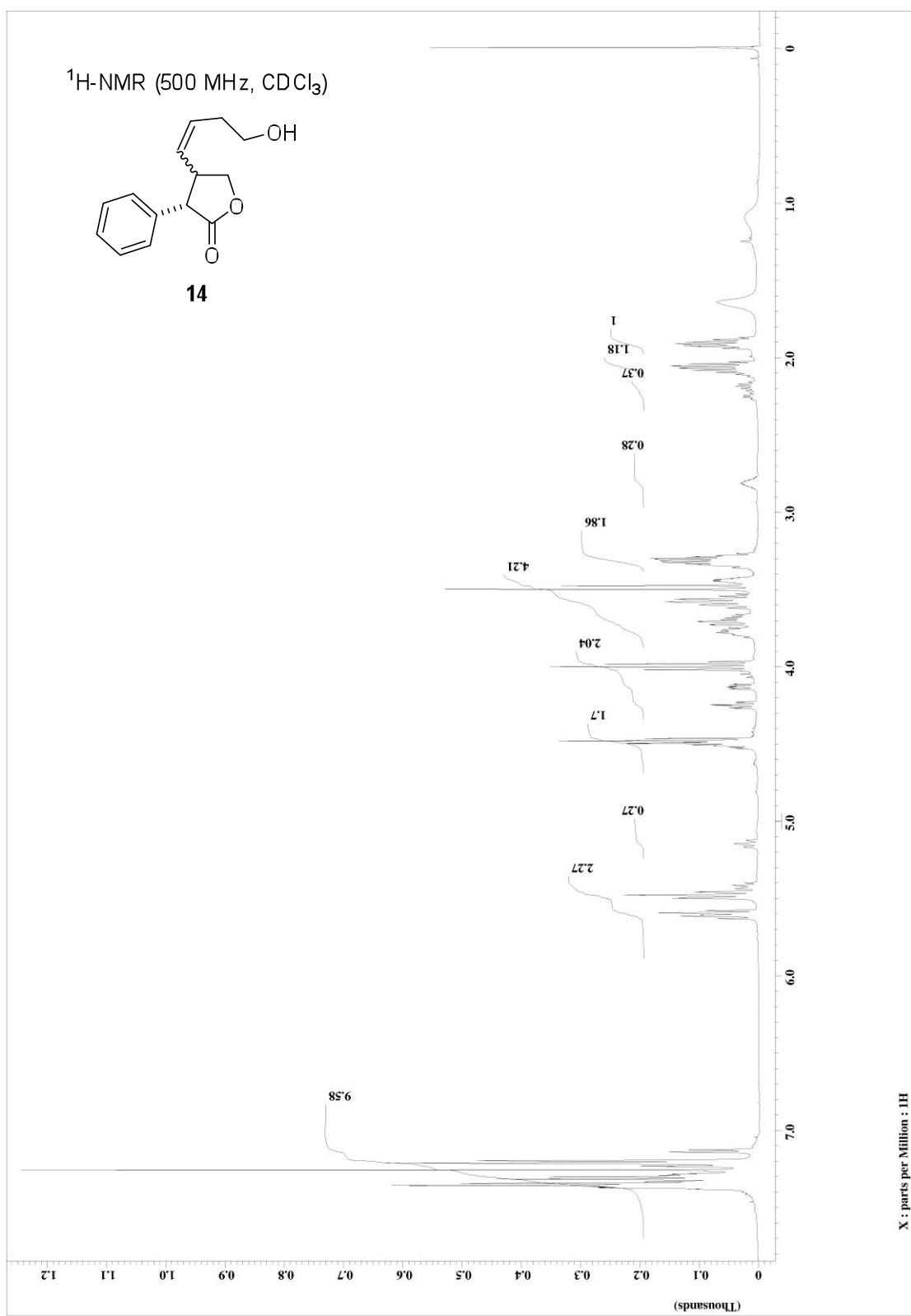
<sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>)



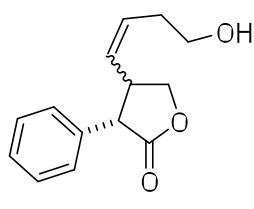
$^1\text{H-NMR}$  (500 MHz,  $\text{CDCl}_3$ )



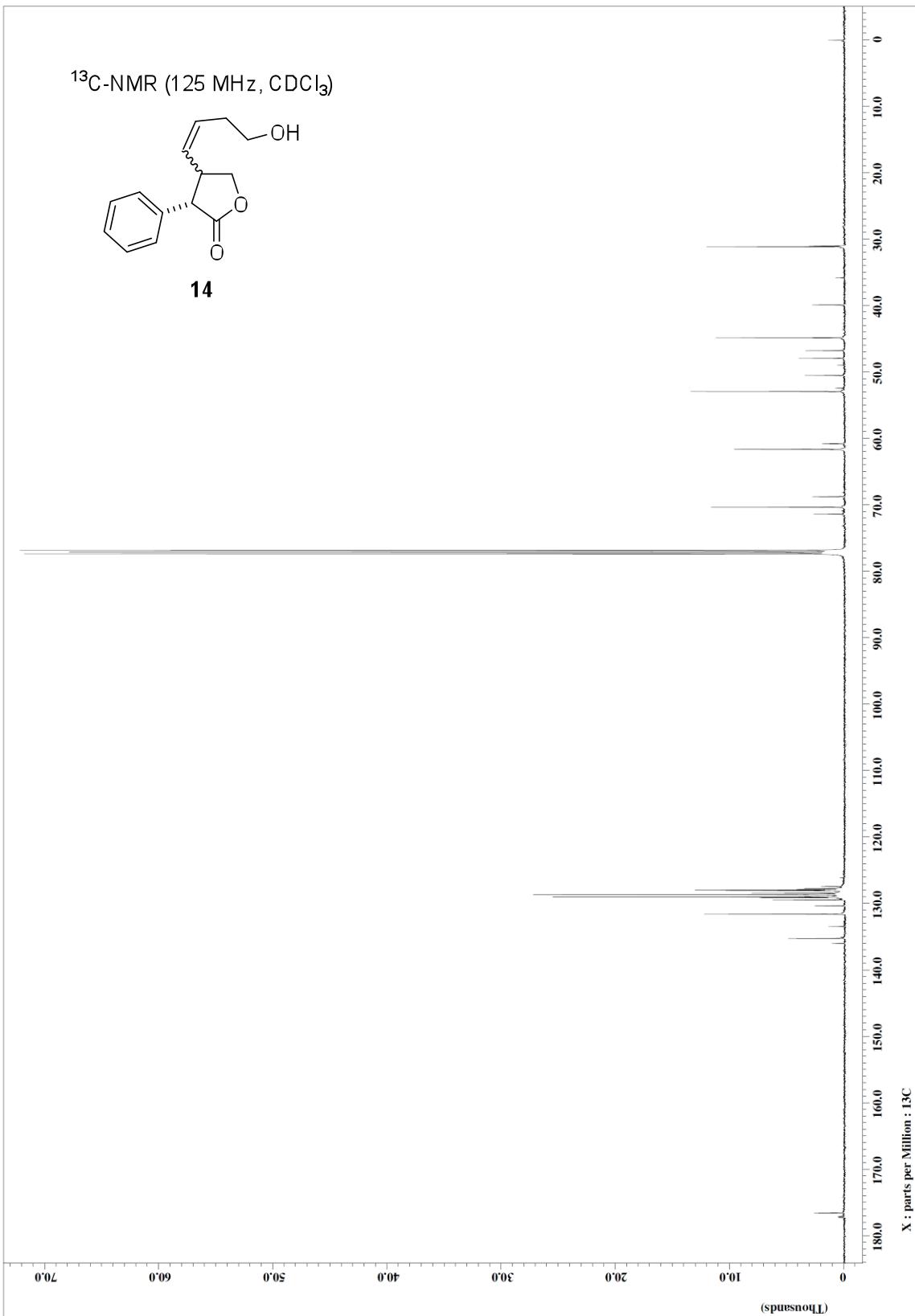
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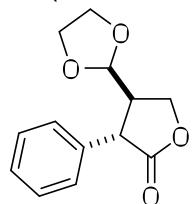
$^{13}\text{C}$ -NMR (125 MHz,  $\text{CDCl}_3$ )



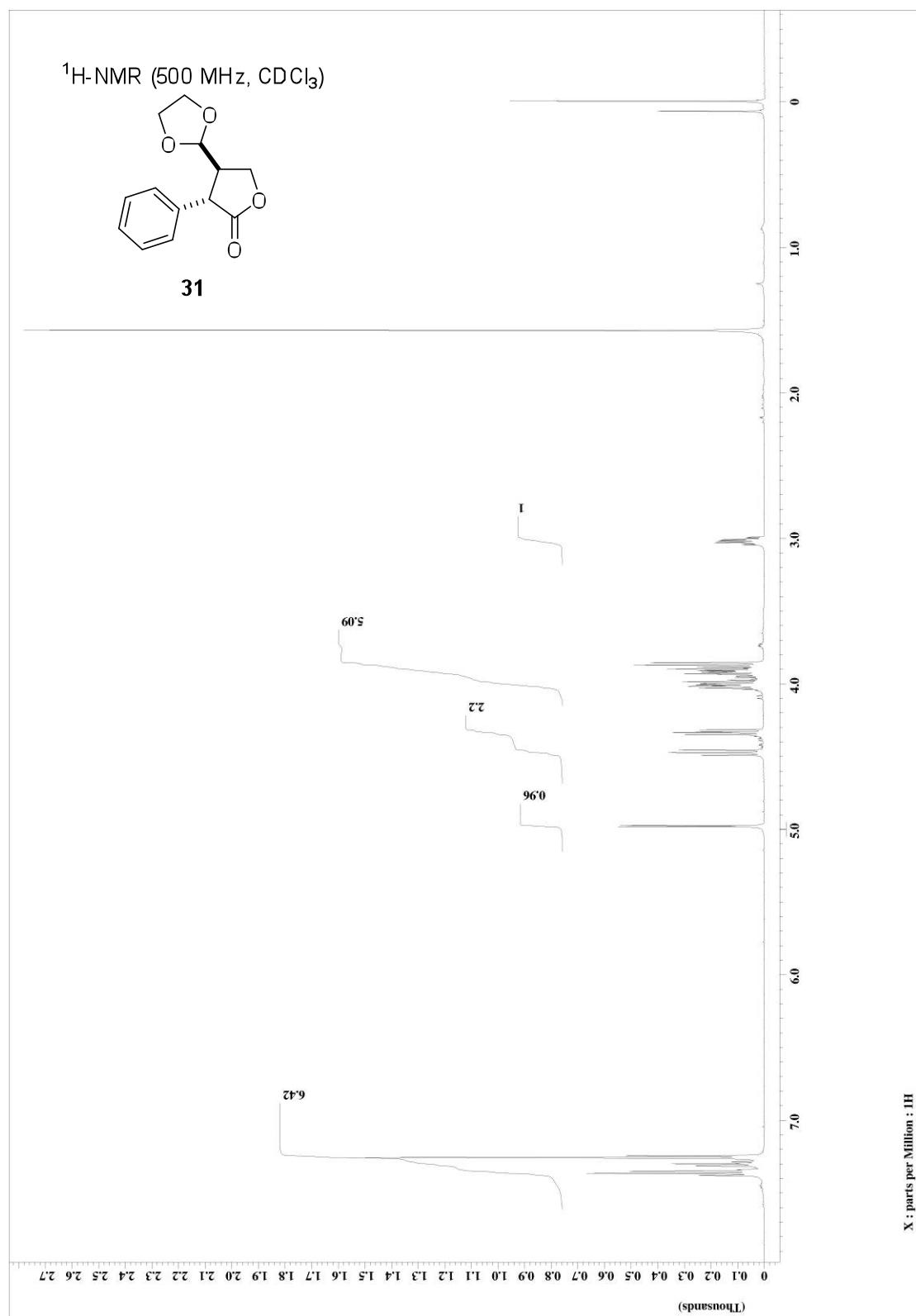
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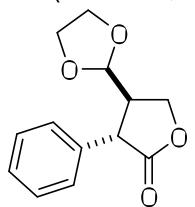
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



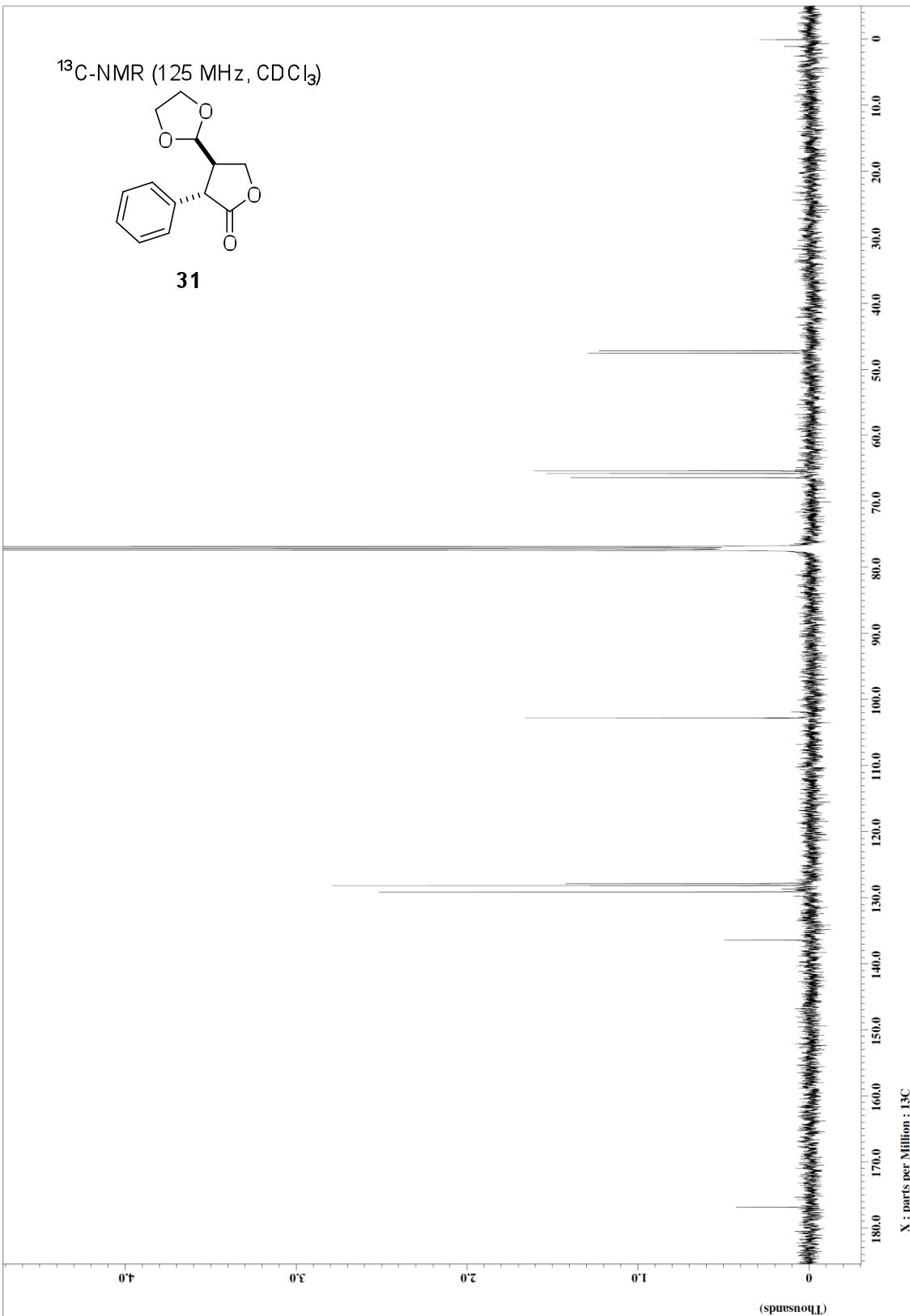
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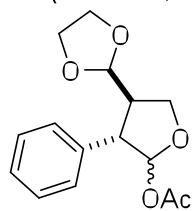
<sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>)



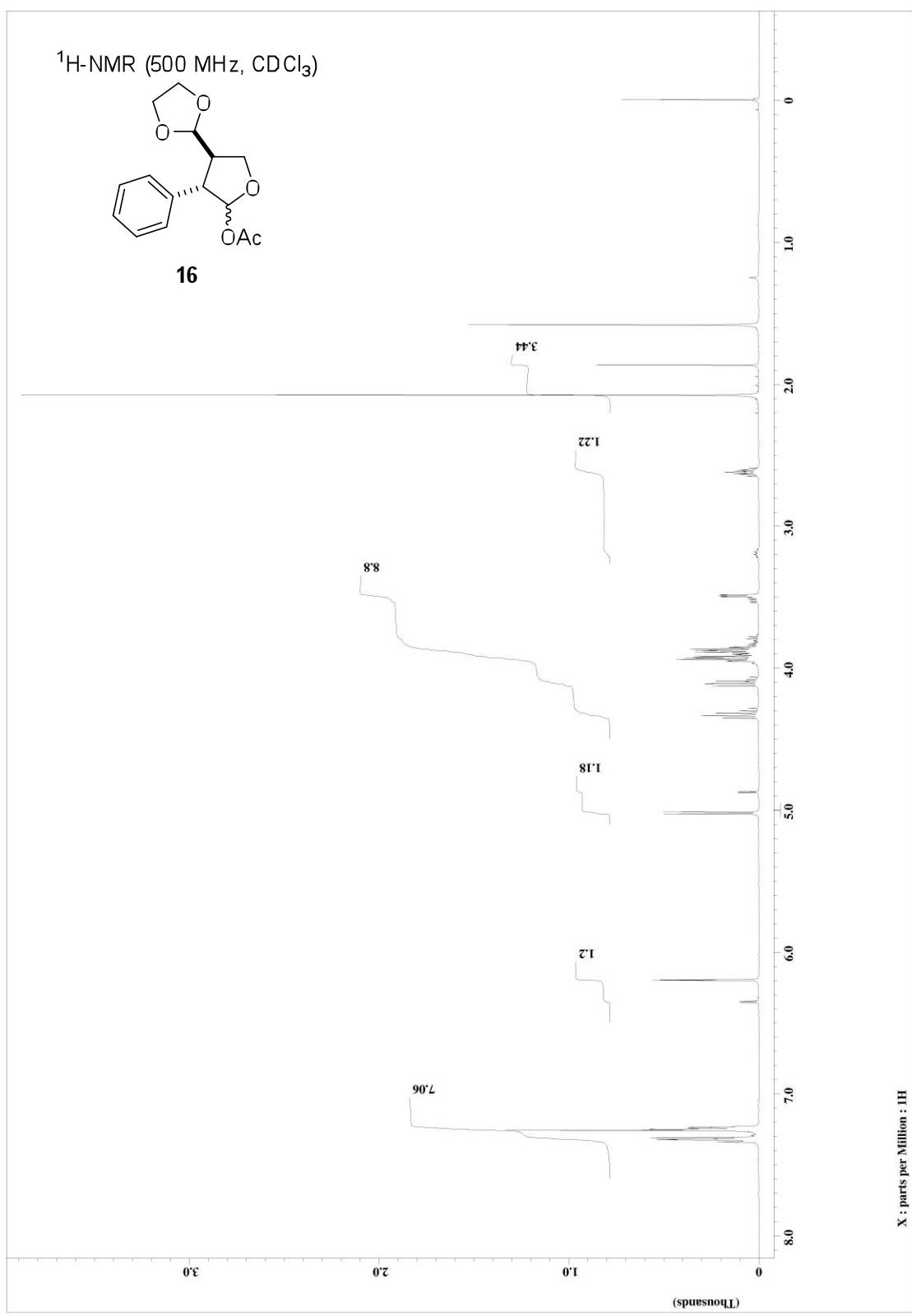
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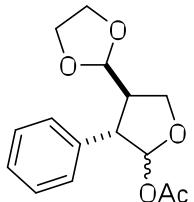
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



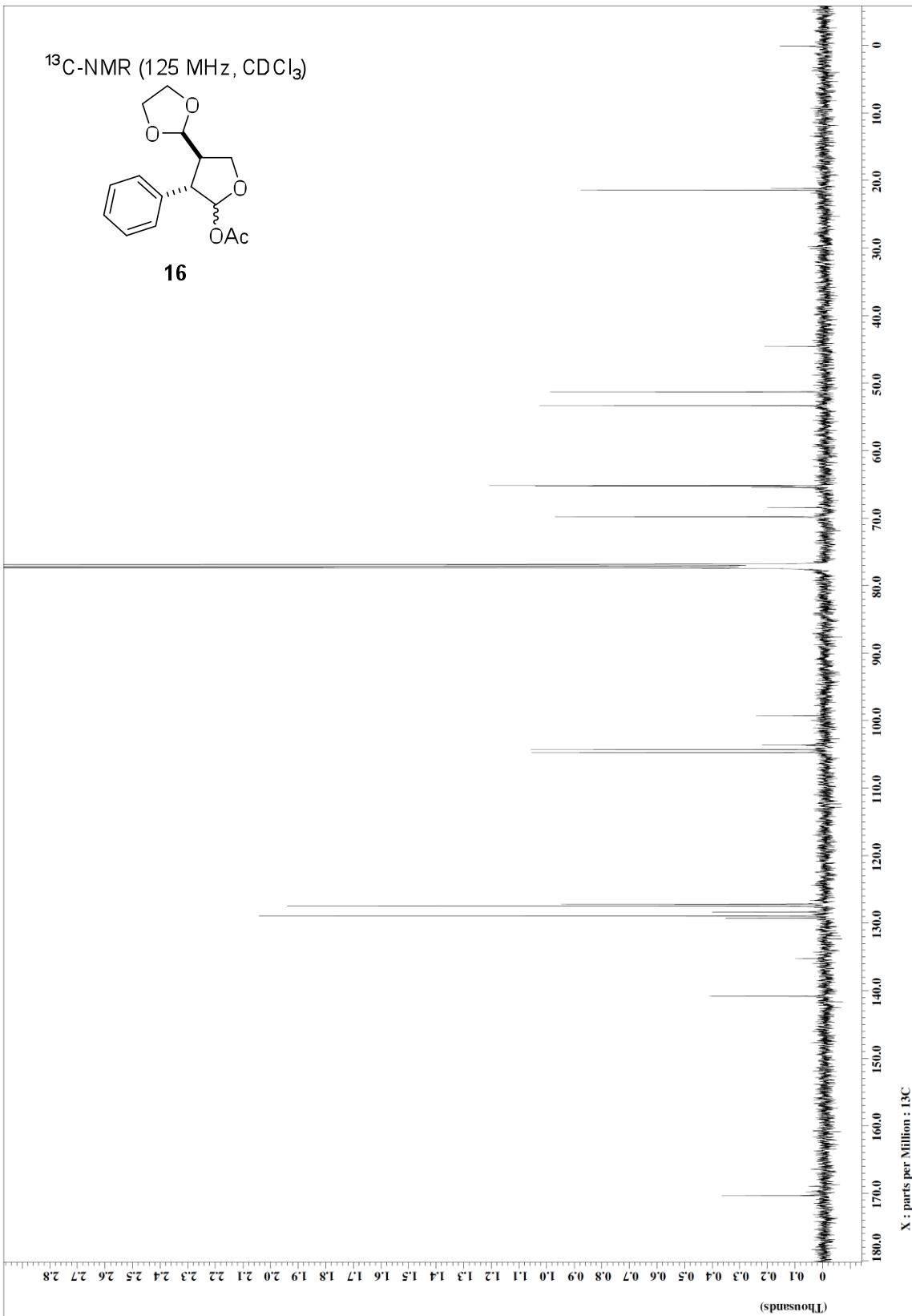
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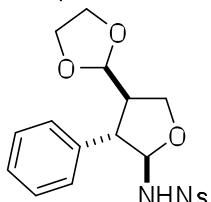
<sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>)



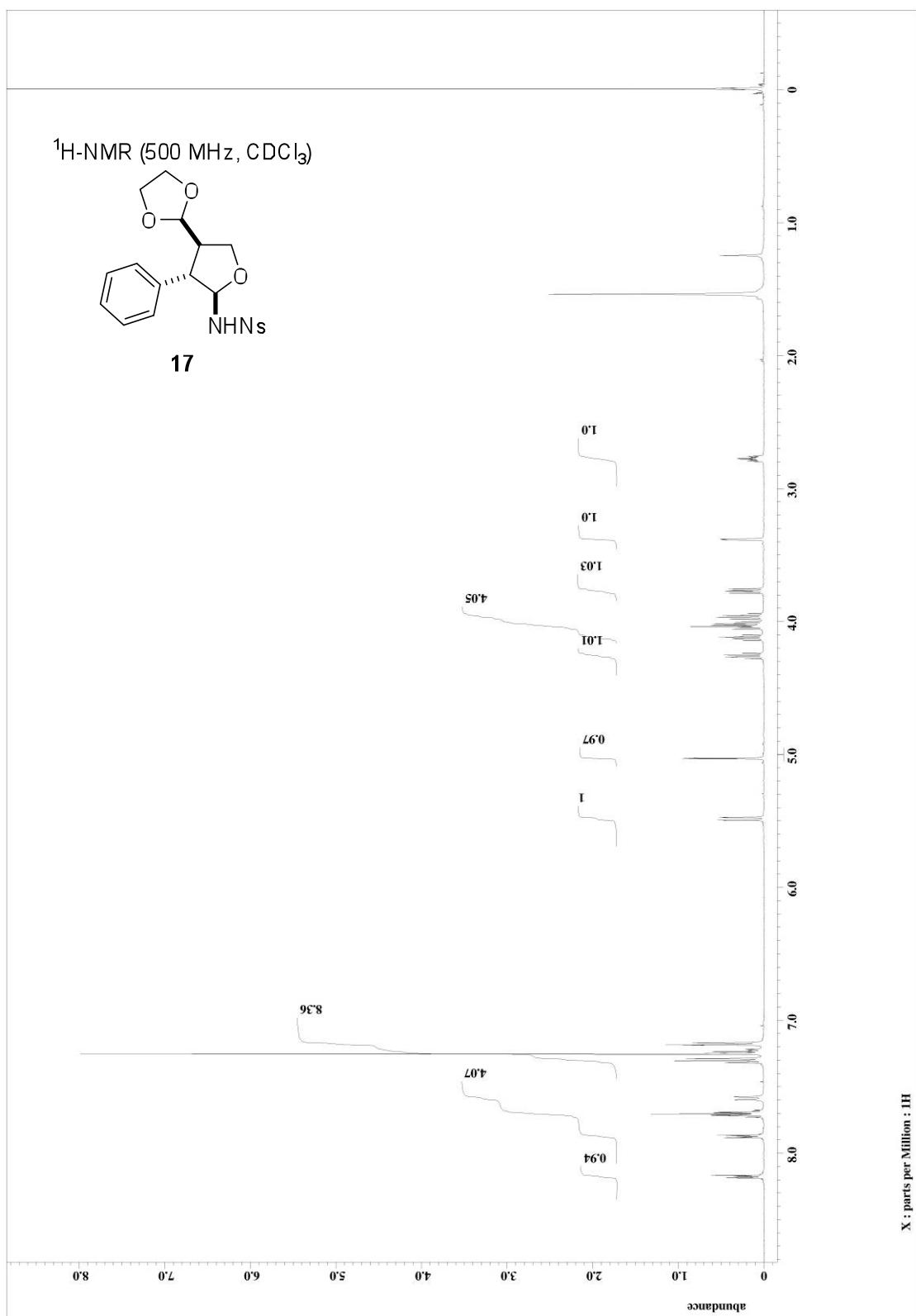
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$^1\text{H-NMR}$  (500 MHz,  $\text{CDCl}_3$ )

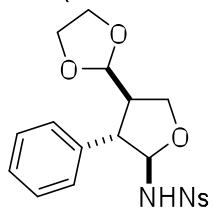


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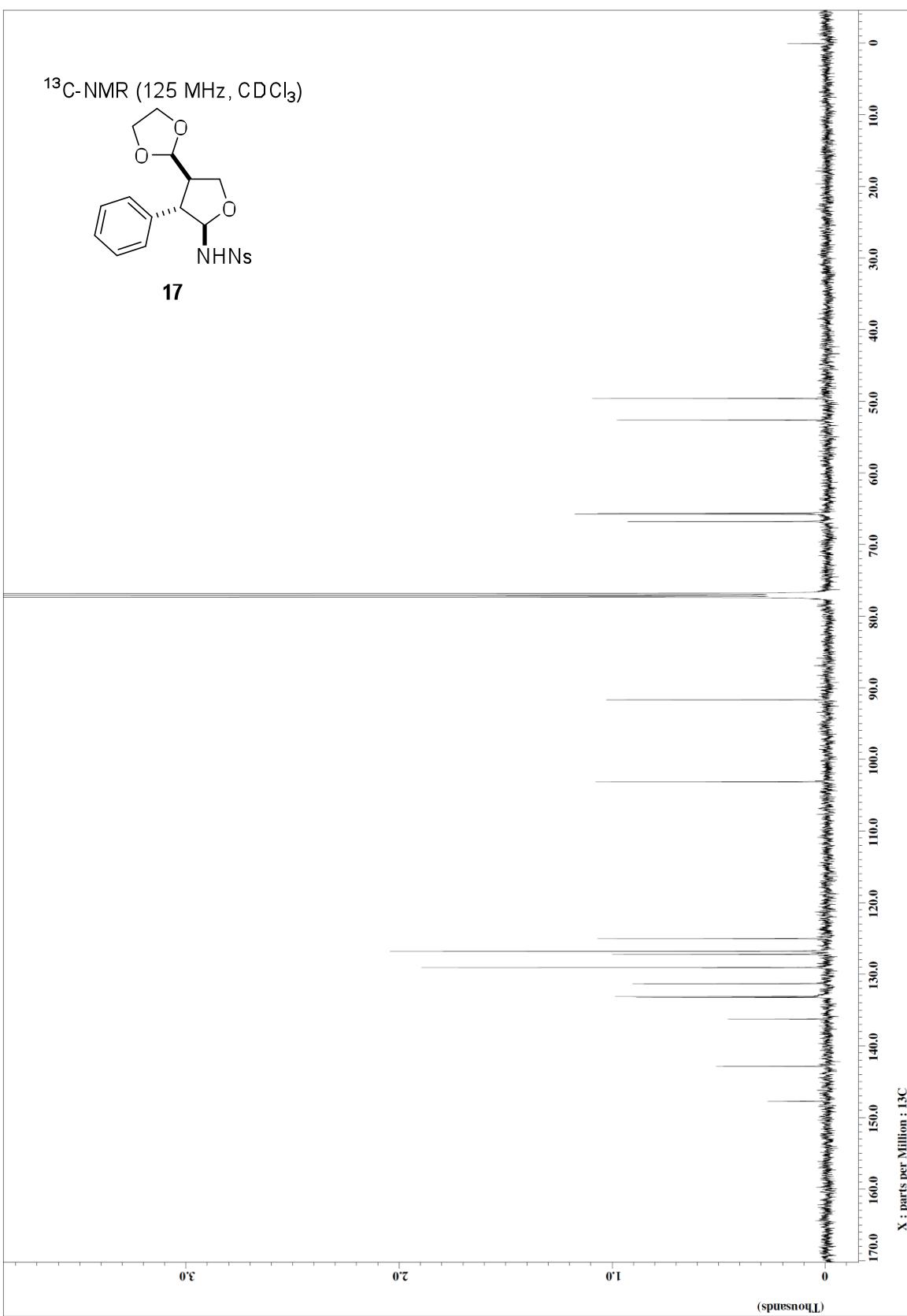


X : parts per Million : 1H

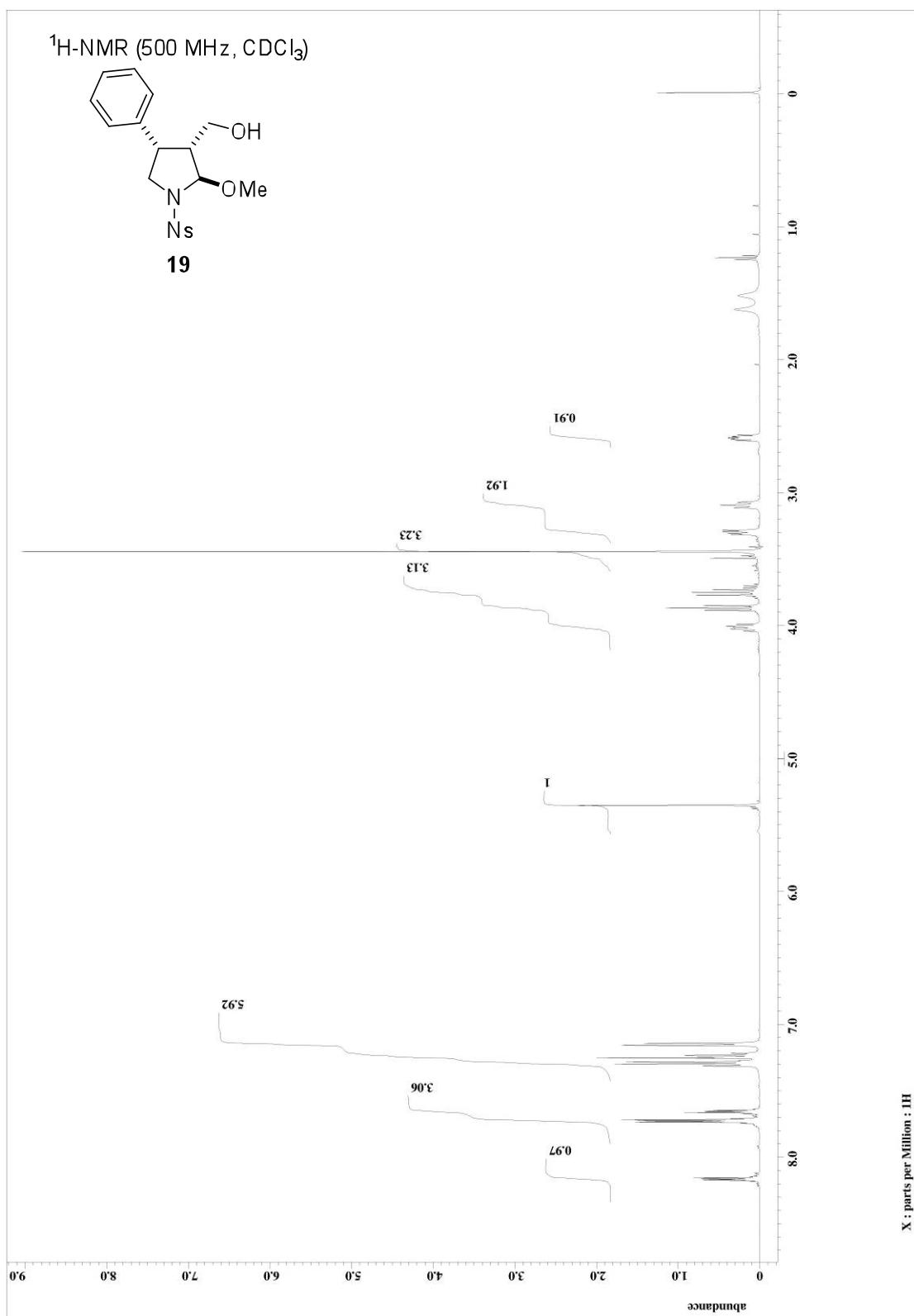
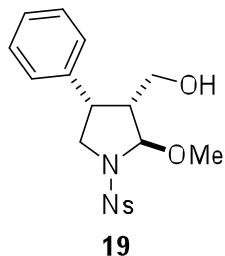
<sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>)



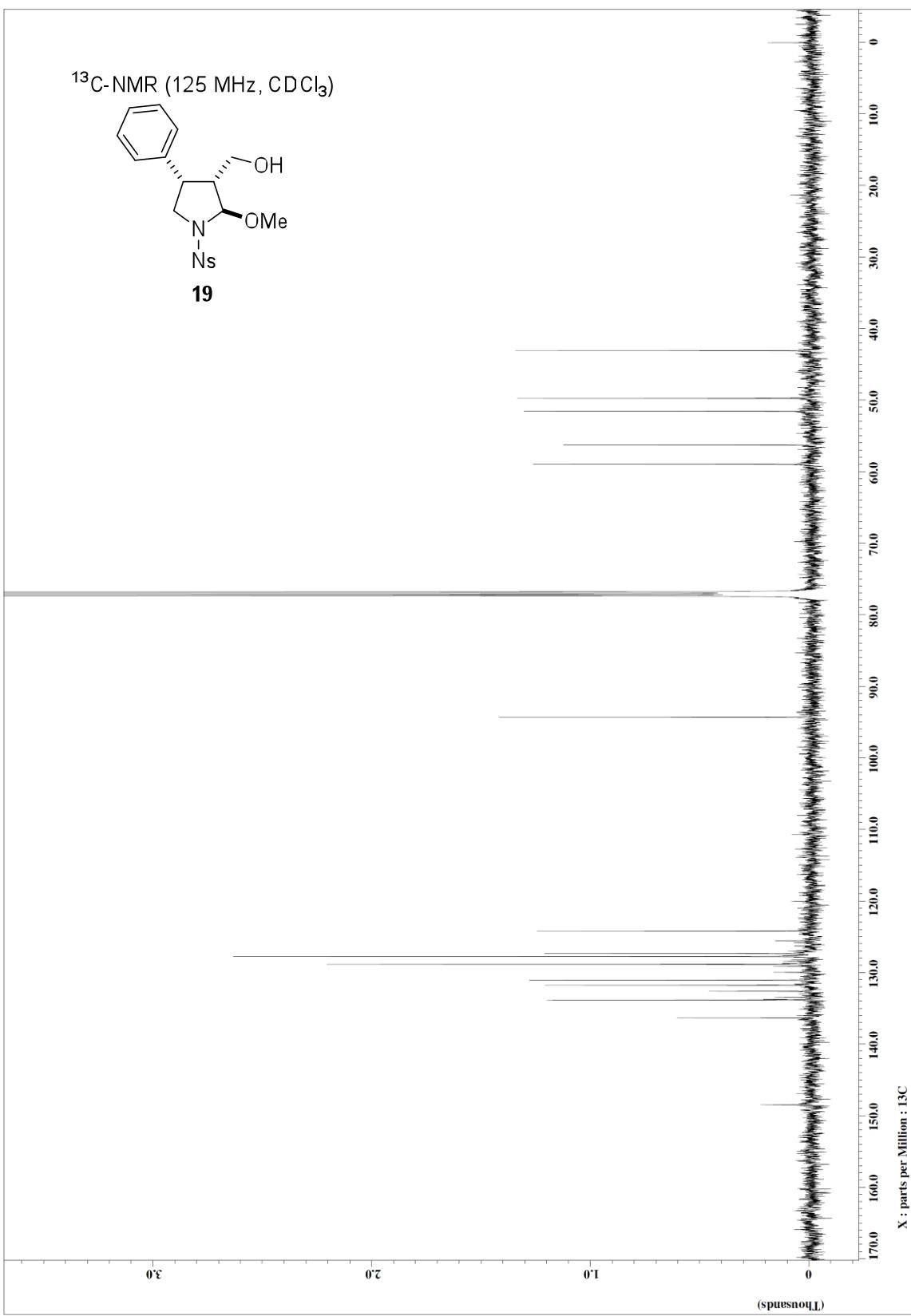
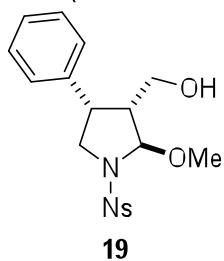
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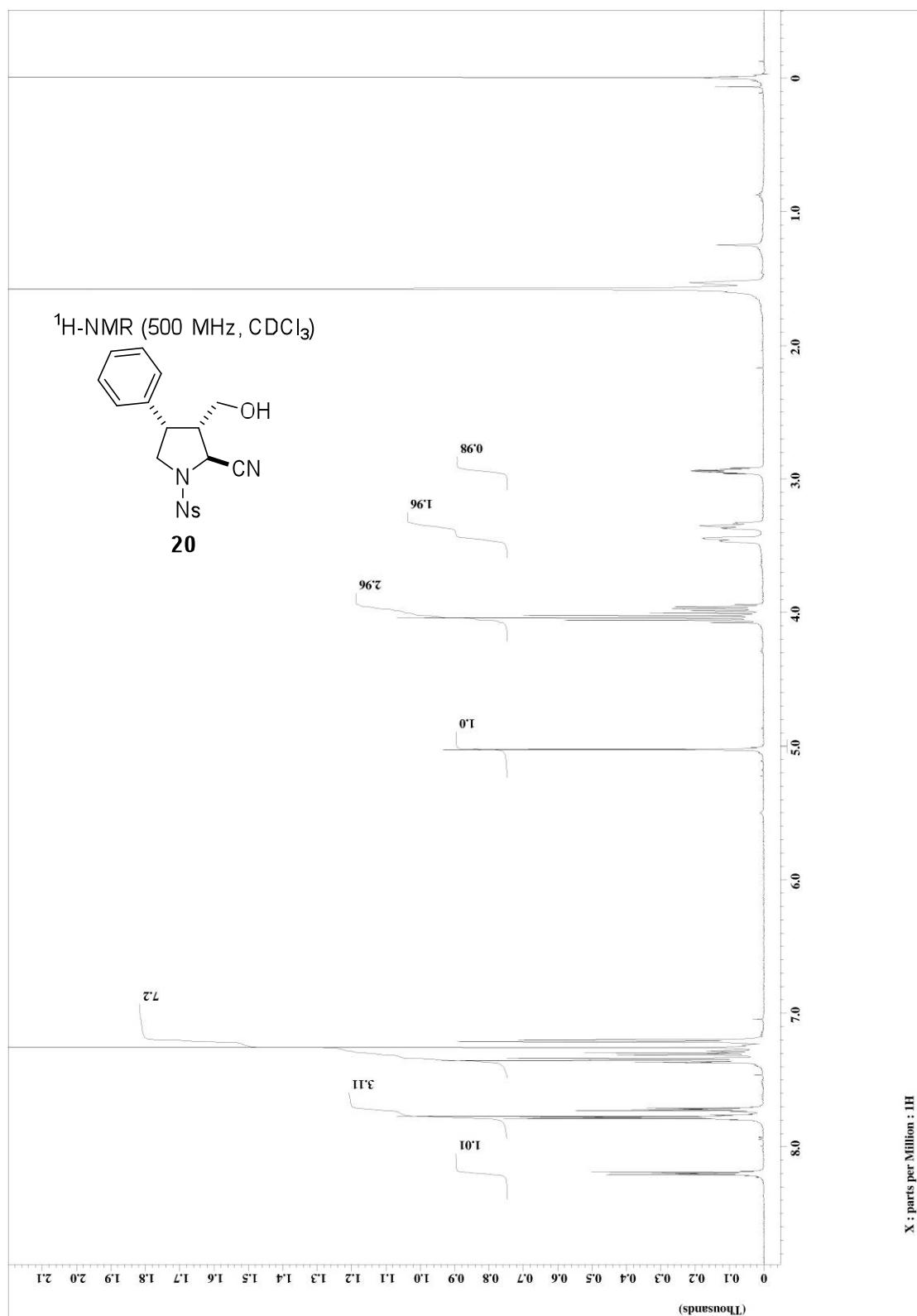


<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)

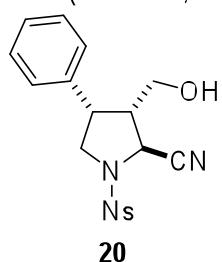


<sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>)

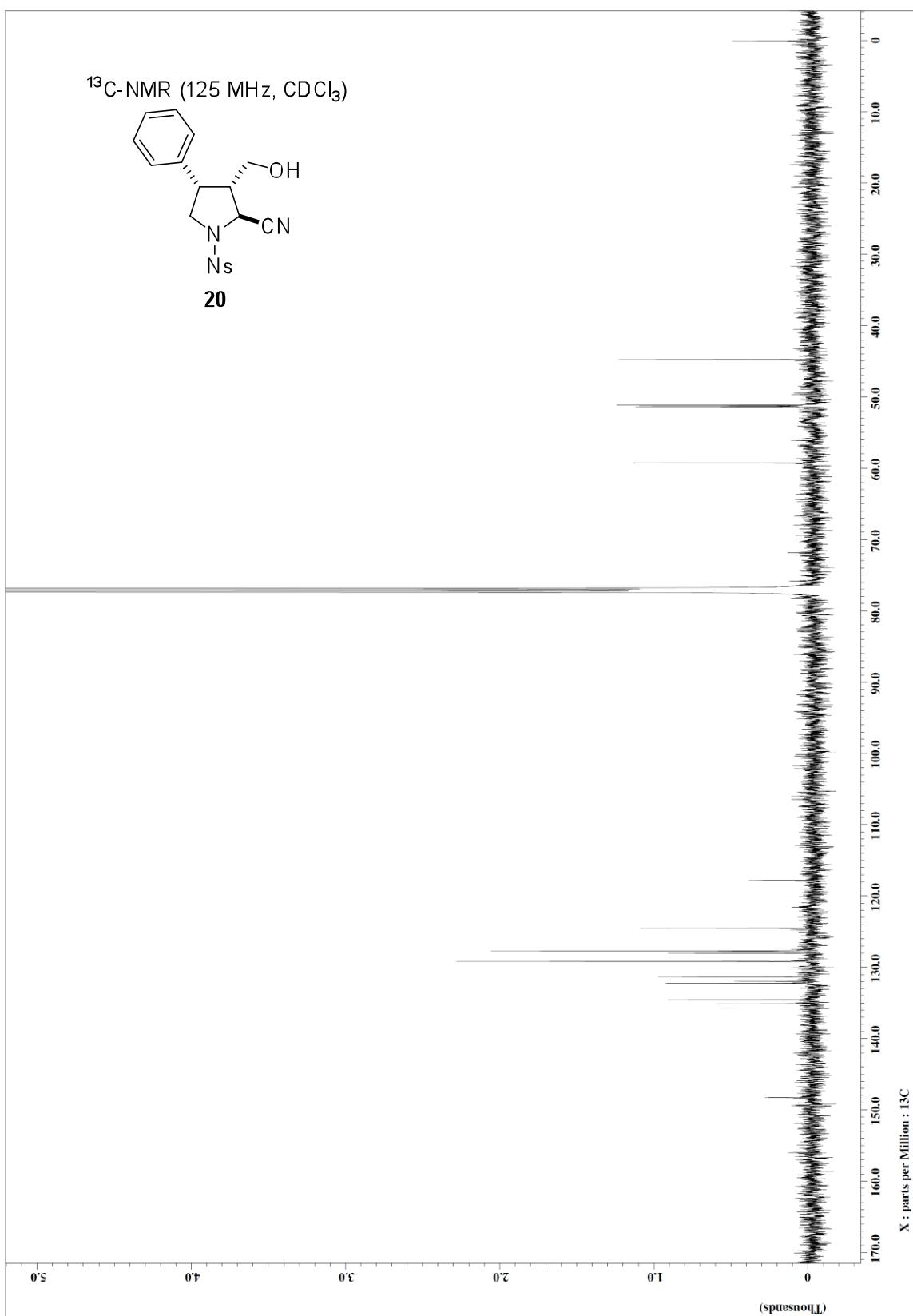




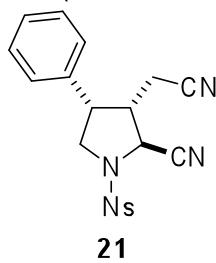
<sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>)



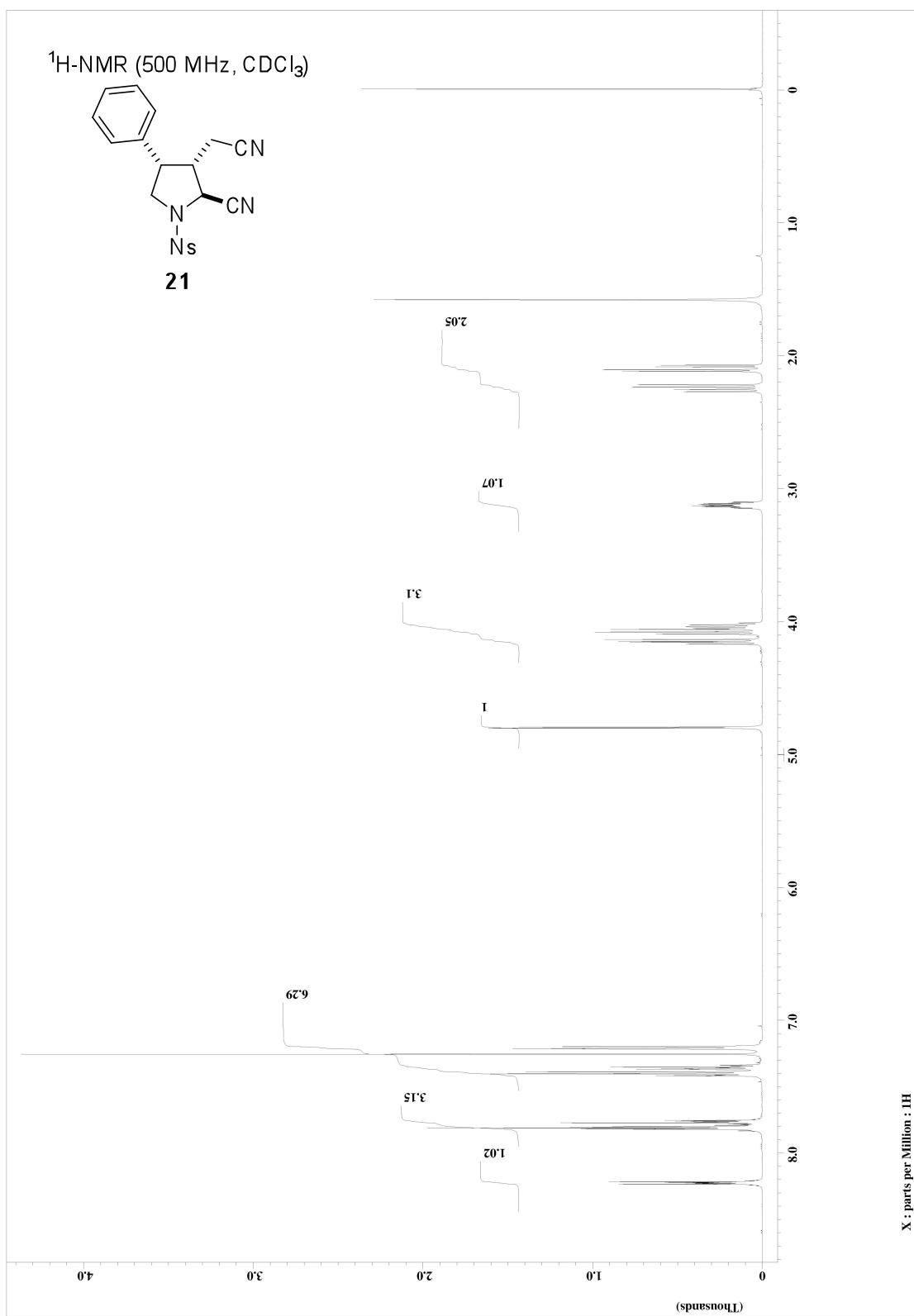
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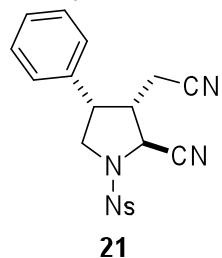
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



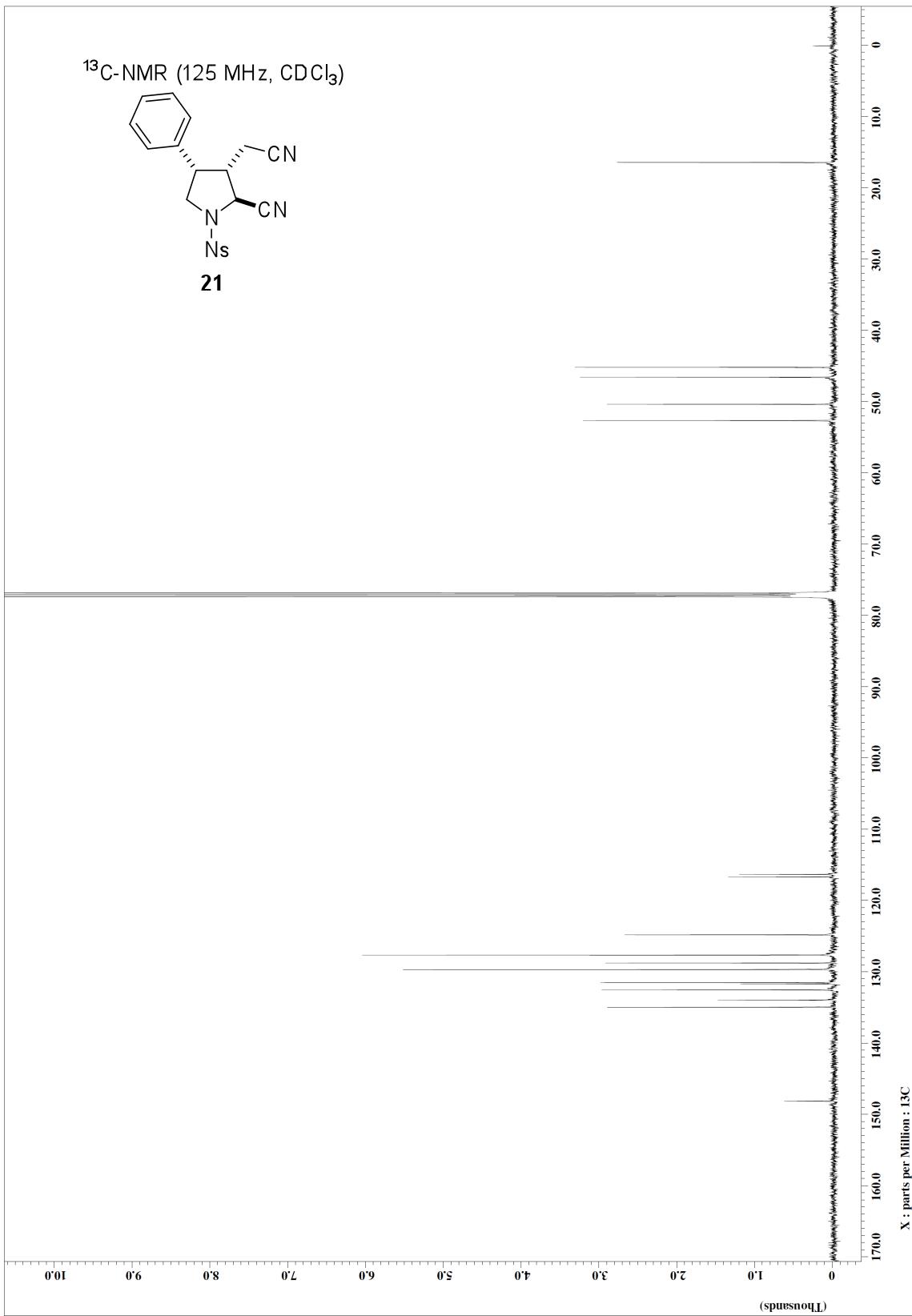
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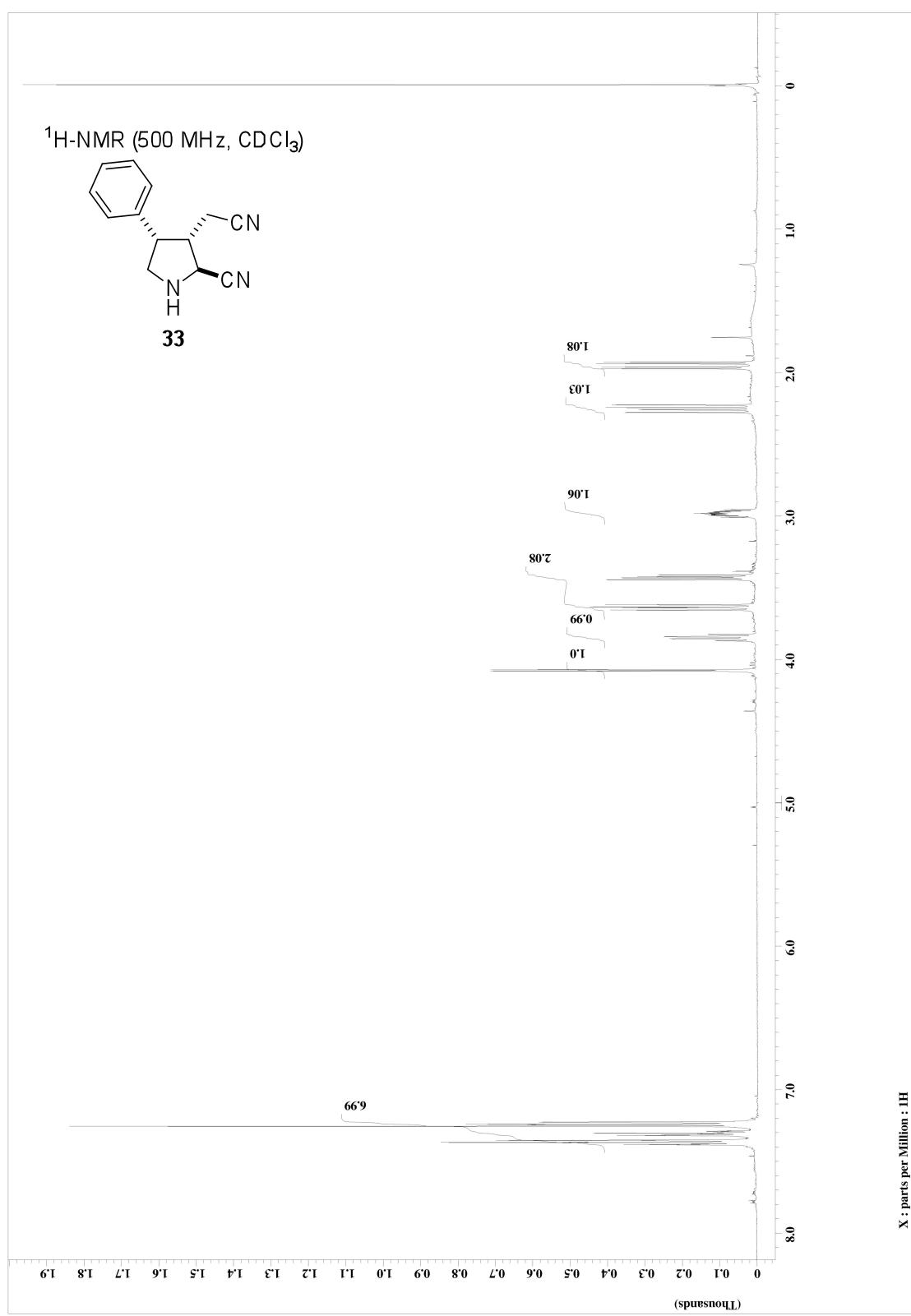


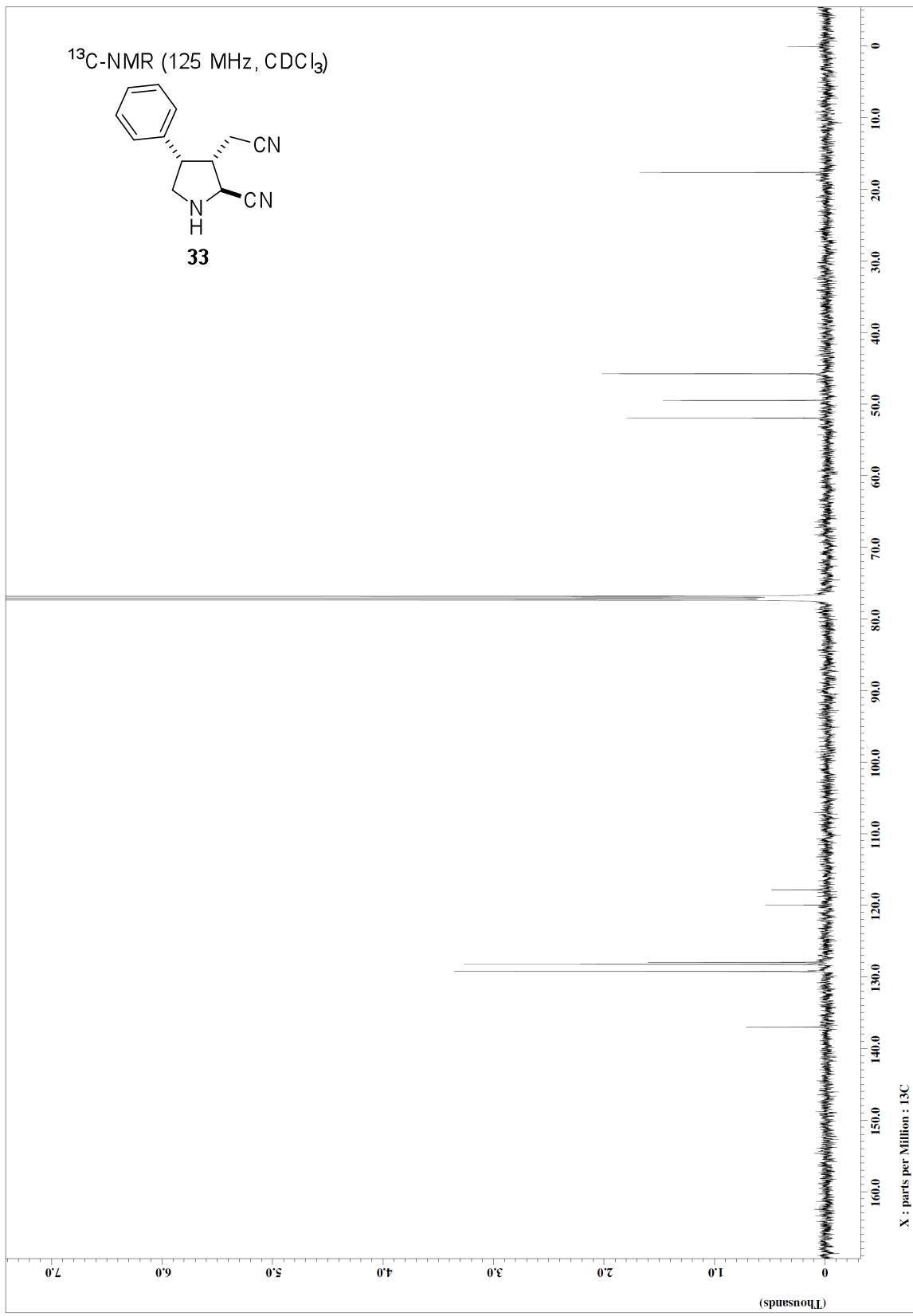
<sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>)



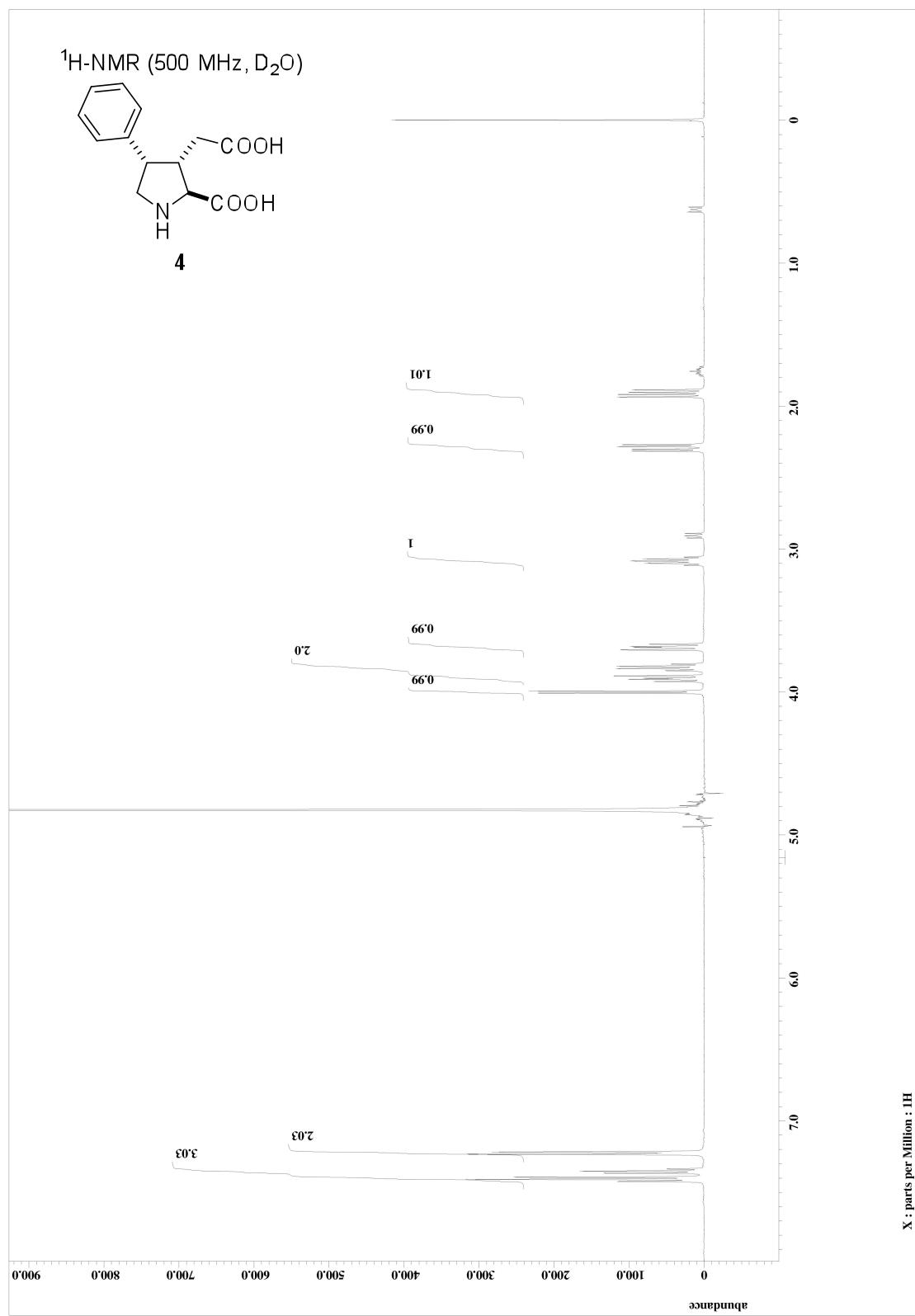
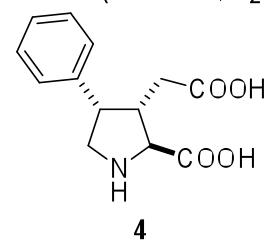
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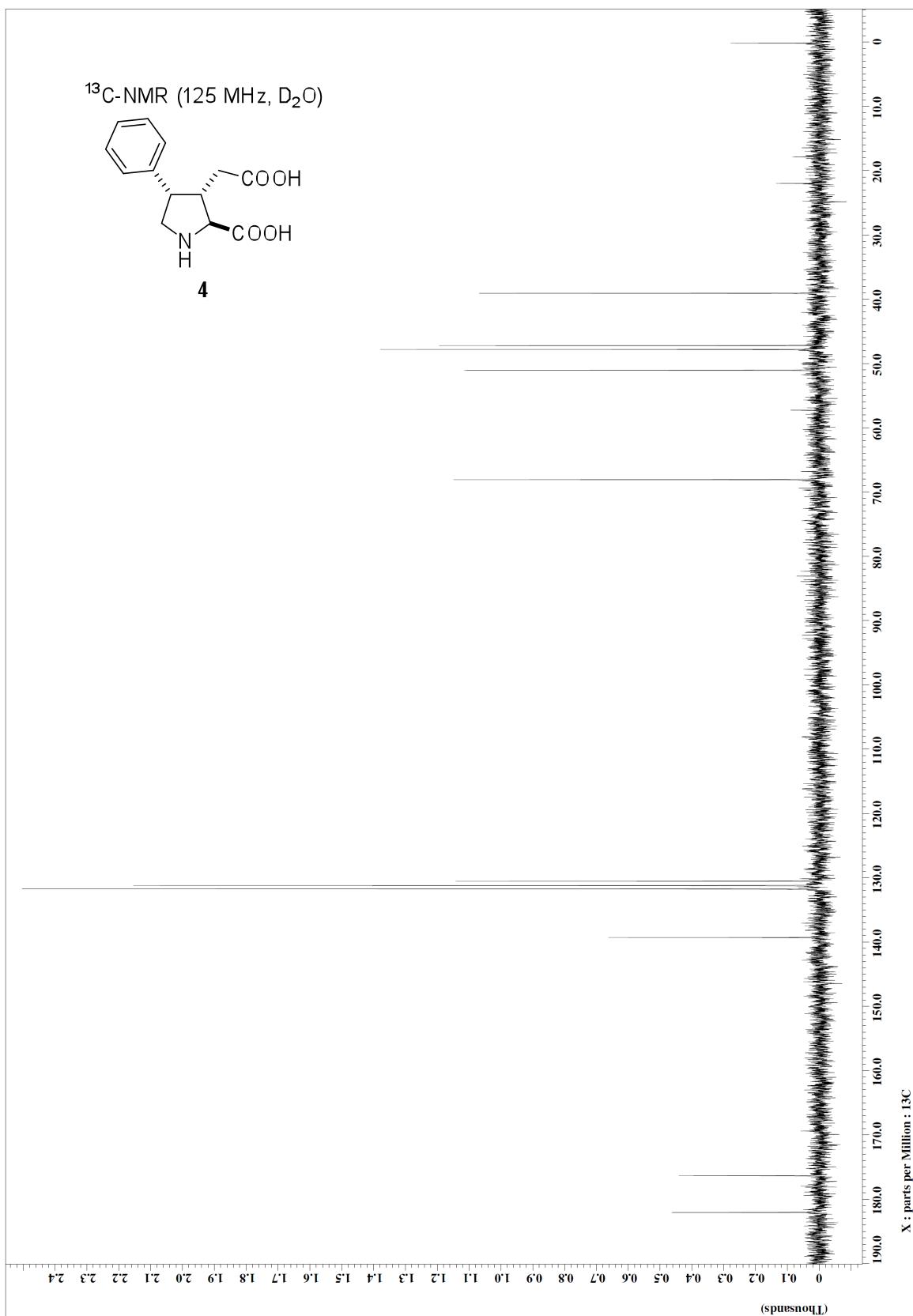
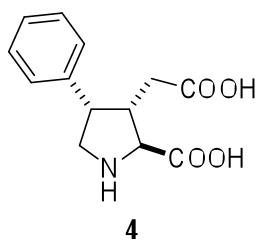




<sup>1</sup>H-NMR (500 MHz, D<sub>2</sub>O)

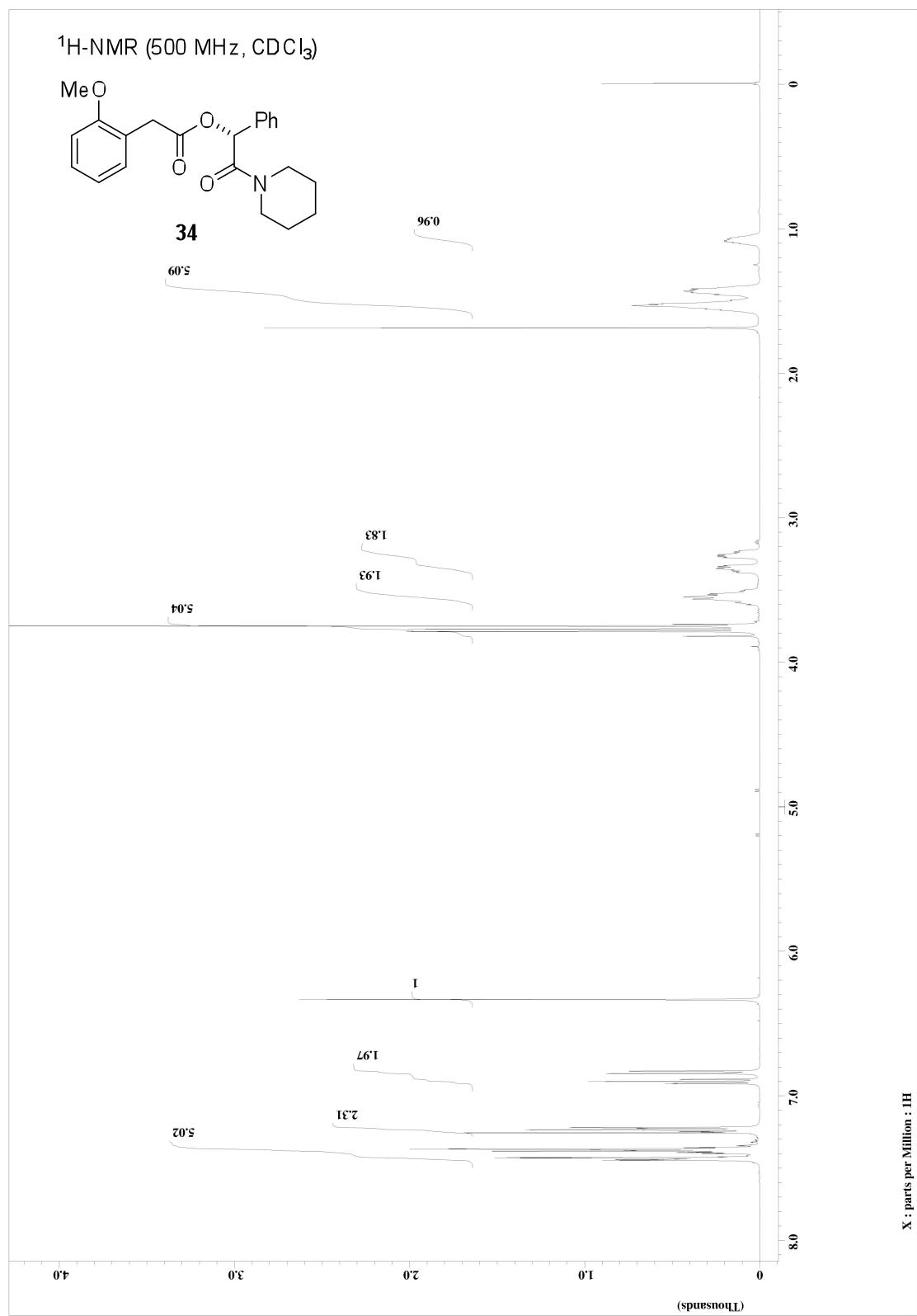


<sup>13</sup>C-NMR (125 MHz, D<sub>2</sub>O)

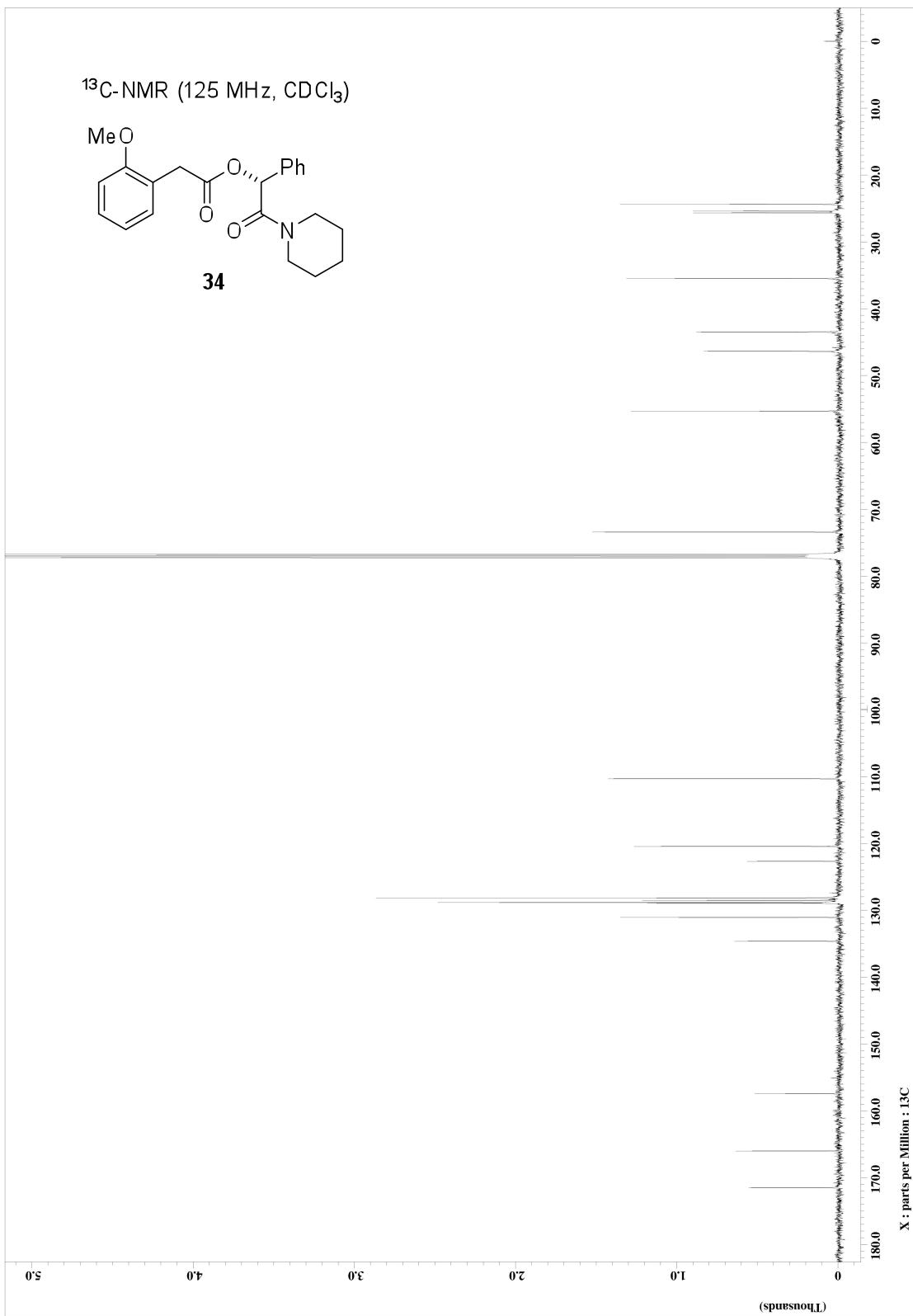
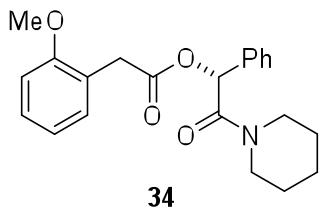


X : parts per Million : <sup>13</sup>C

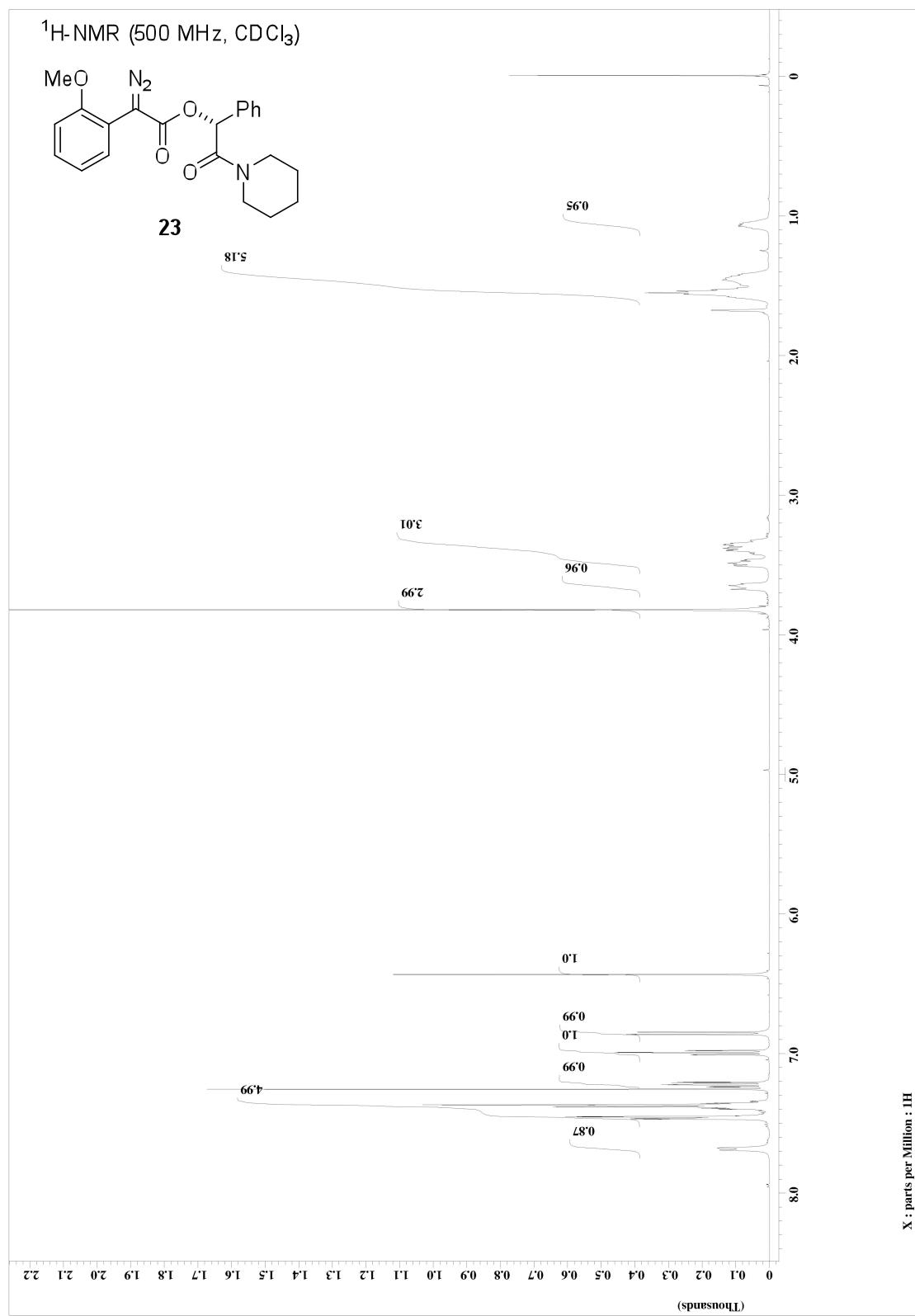
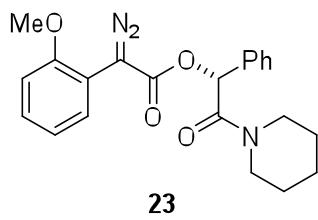
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



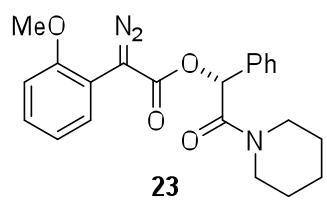
$^{13}\text{C}$ -NMR (125 MHz,  $\text{CDCl}_3$ )



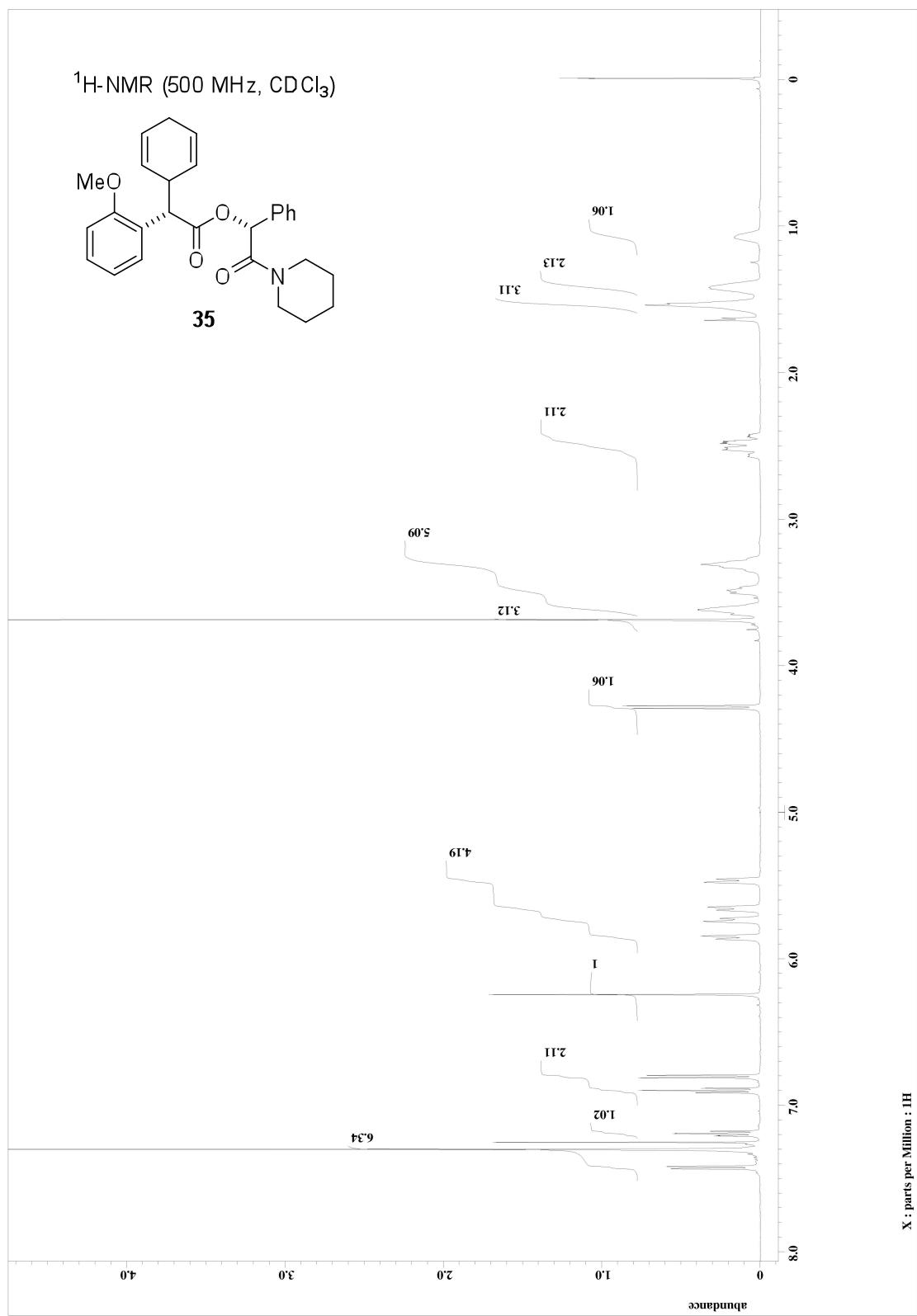
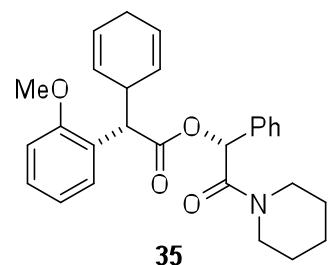
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



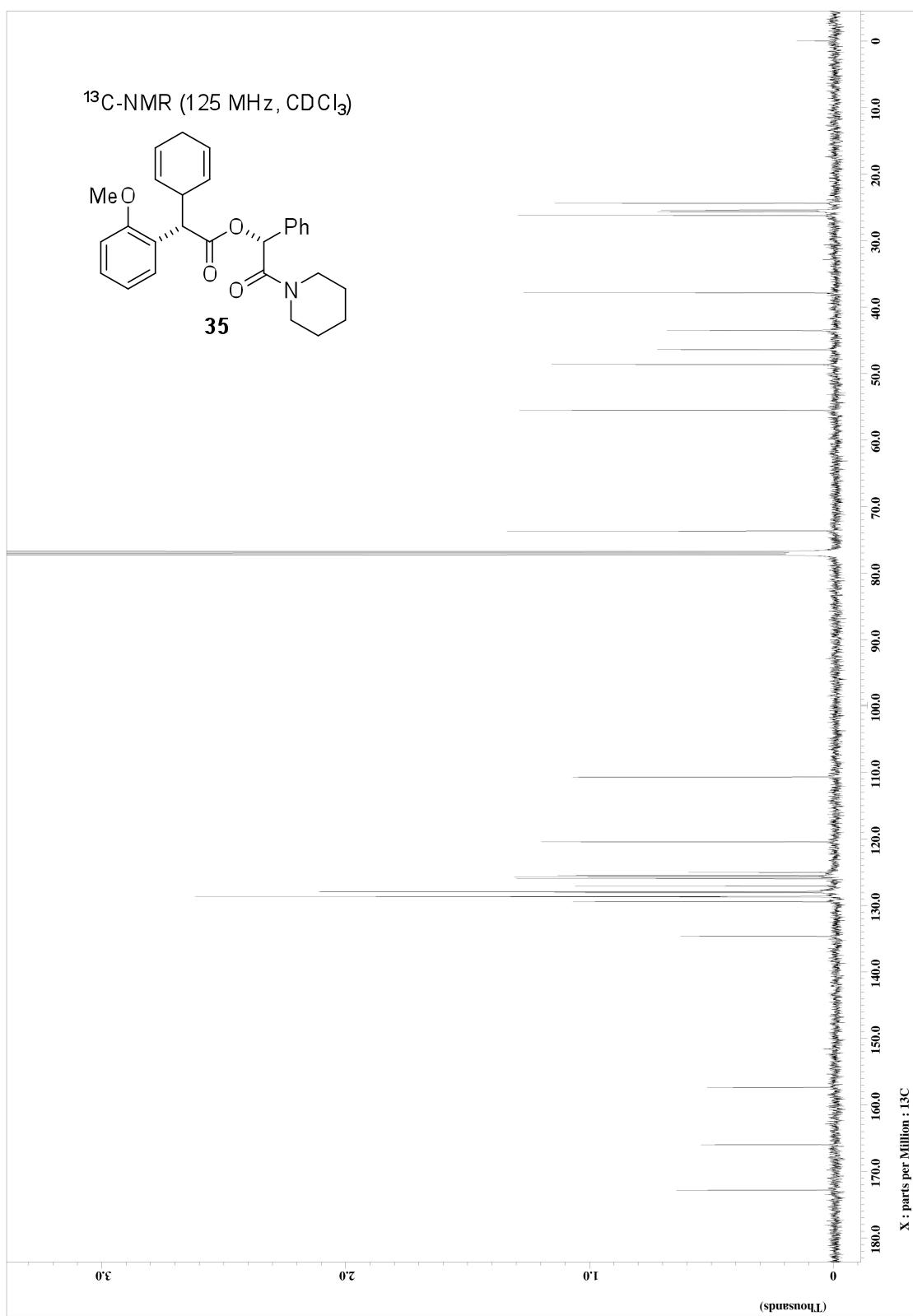
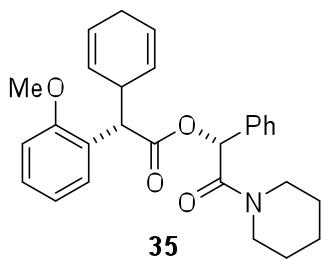
<sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>)



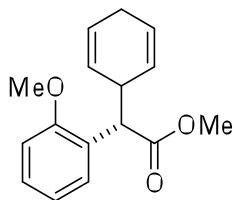
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



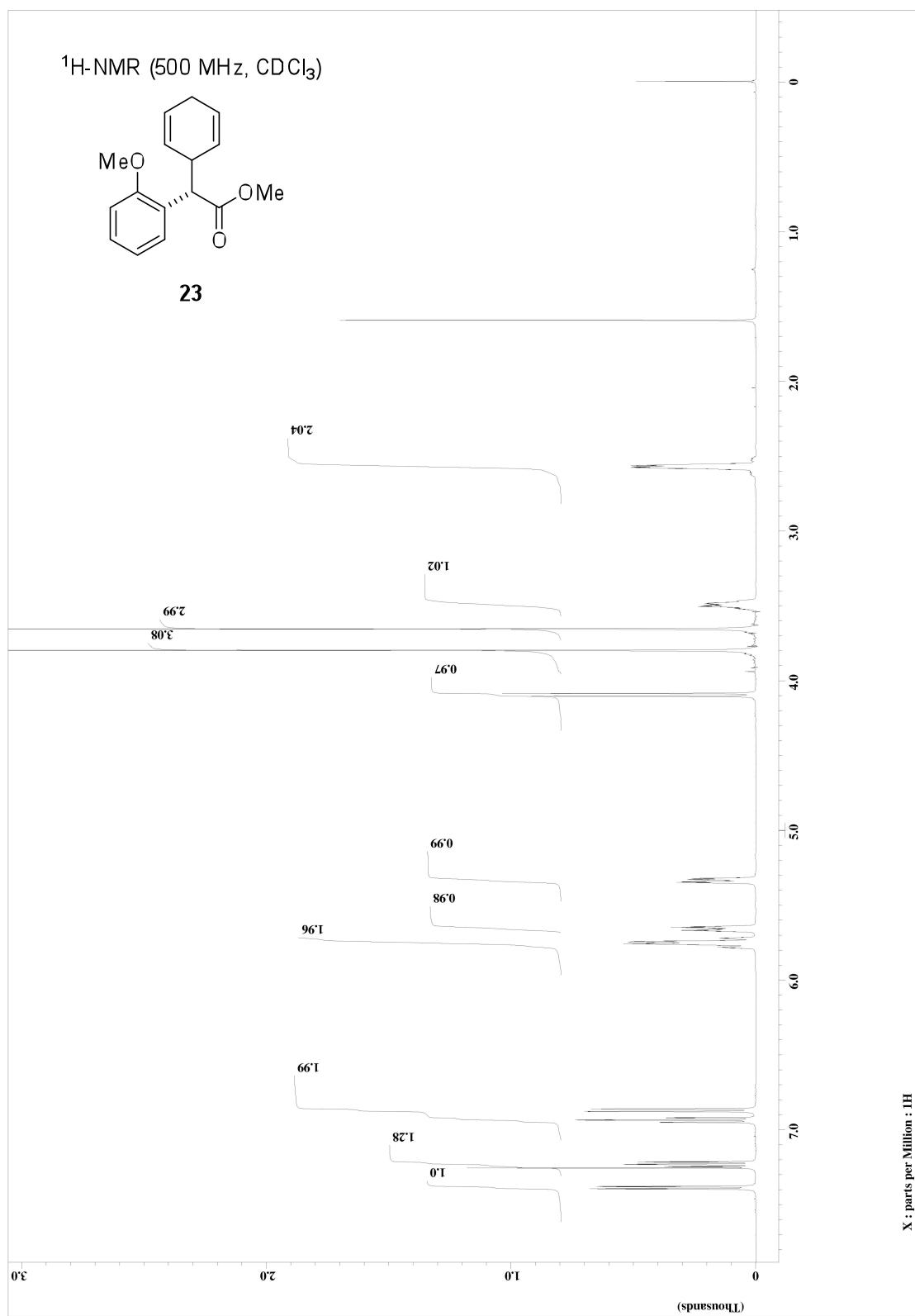
$^{13}\text{C}$ -NMR (125 MHz,  $\text{CDCl}_3$ )



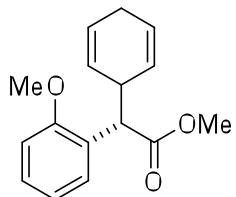
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



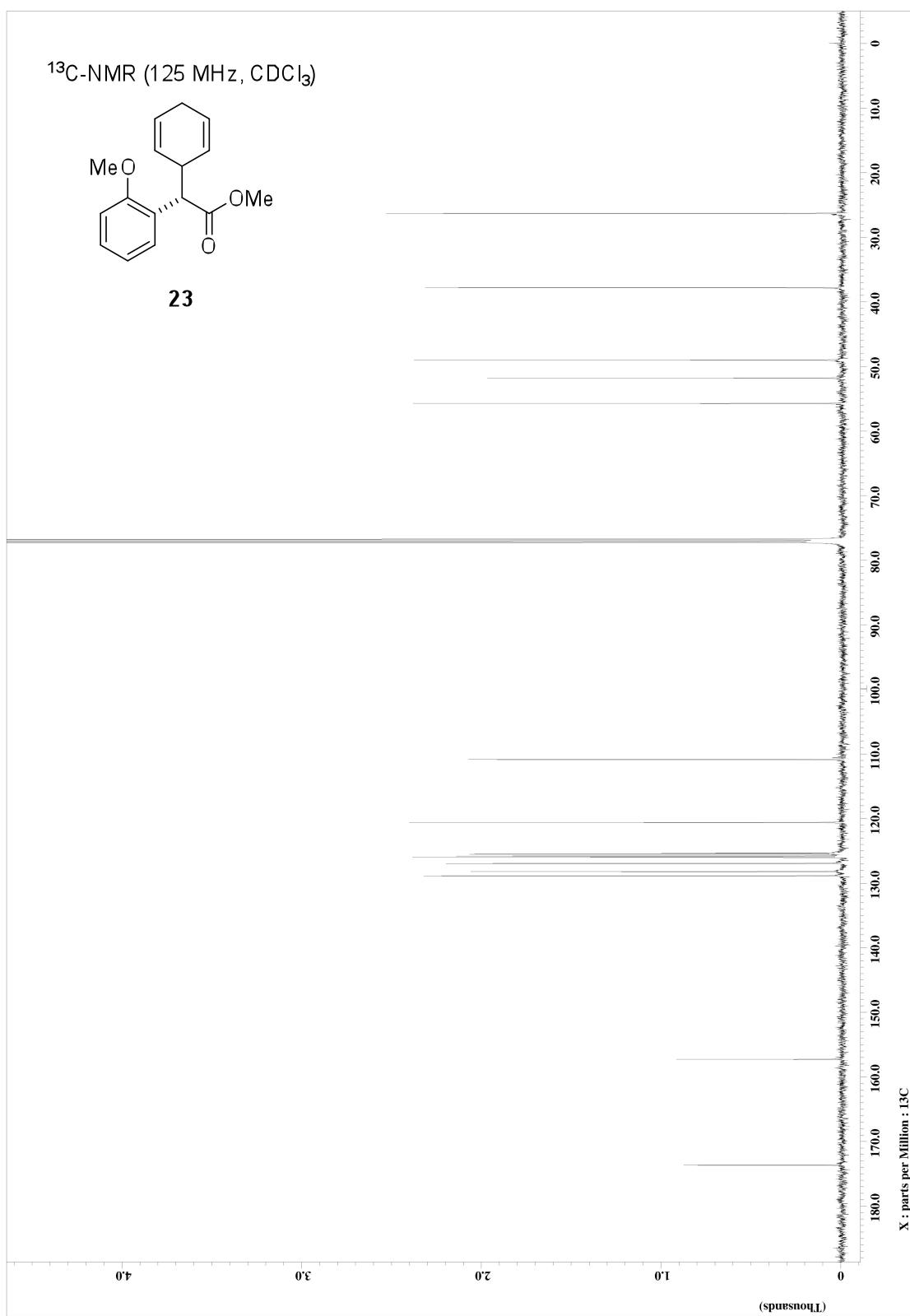
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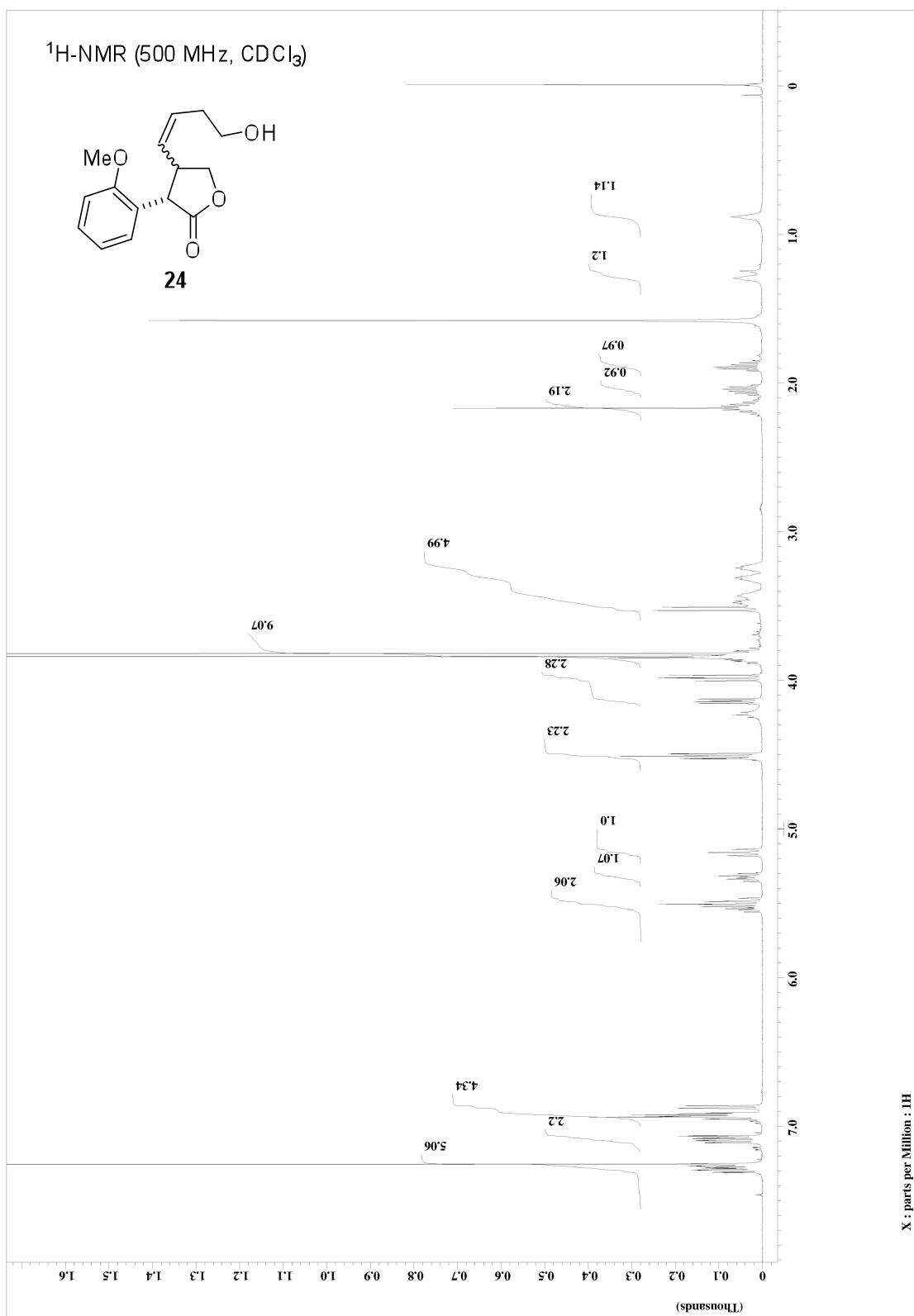
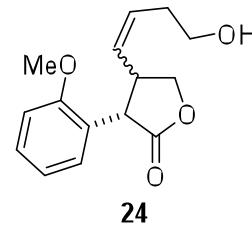
$^{13}\text{C}$ -NMR (125 MHz,  $\text{CDCl}_3$ )



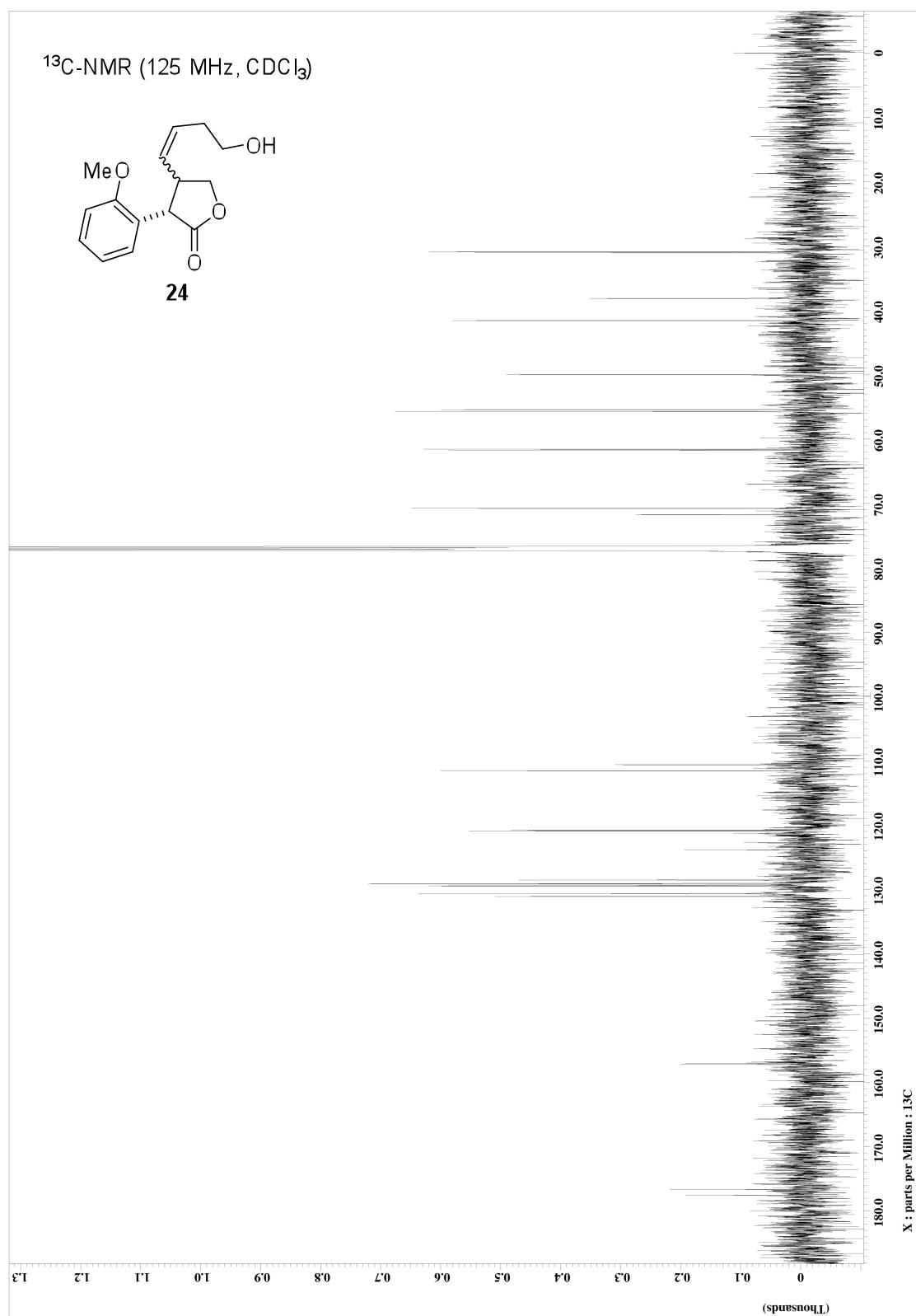
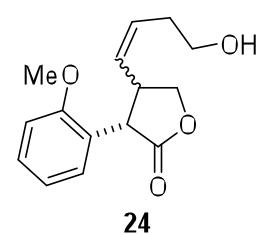
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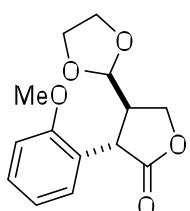
$^1\text{H-NMR}$  (500 MHz,  $\text{CDCl}_3$ )



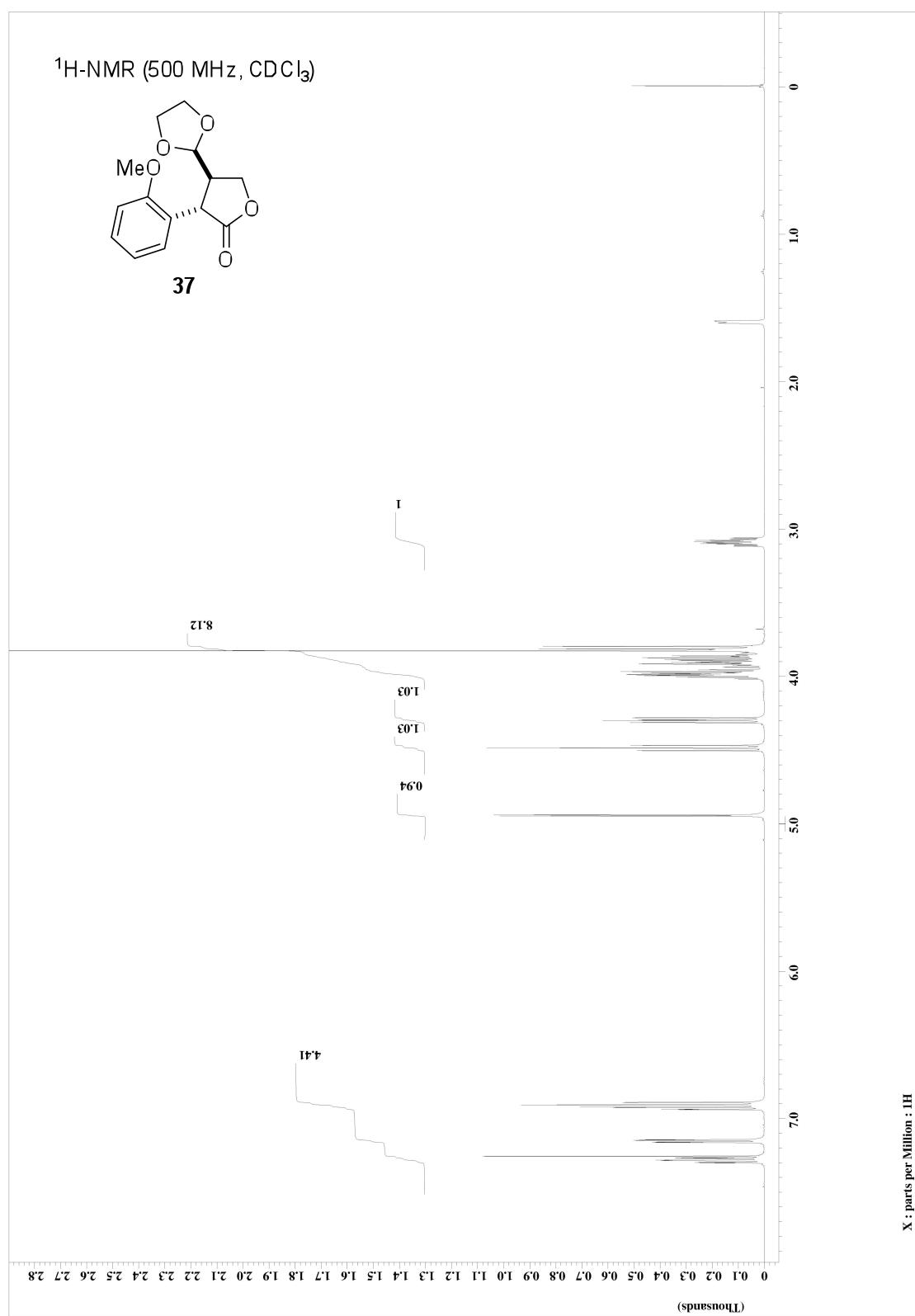
<sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>)



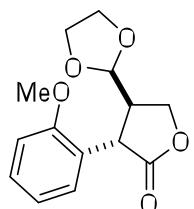
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



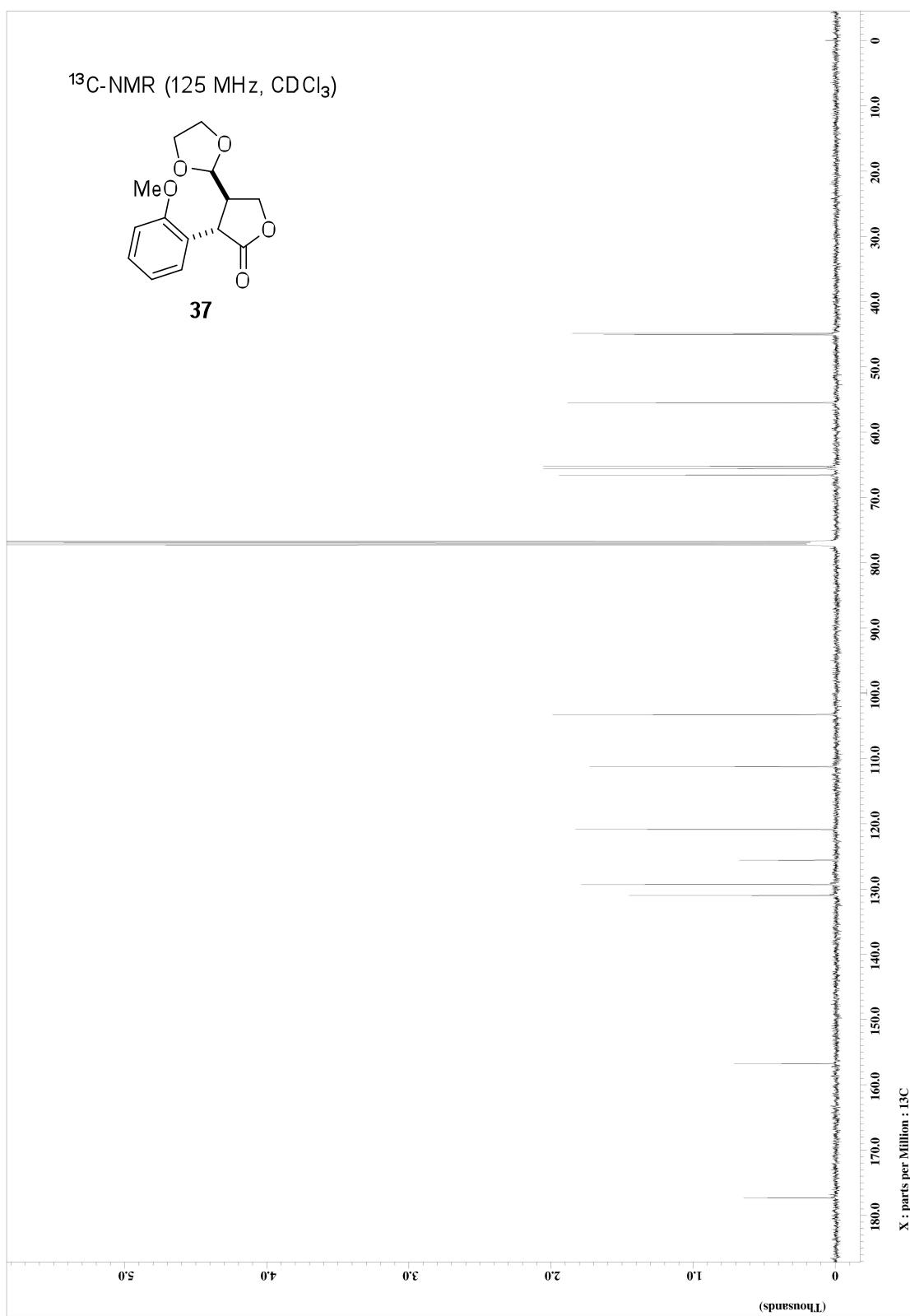
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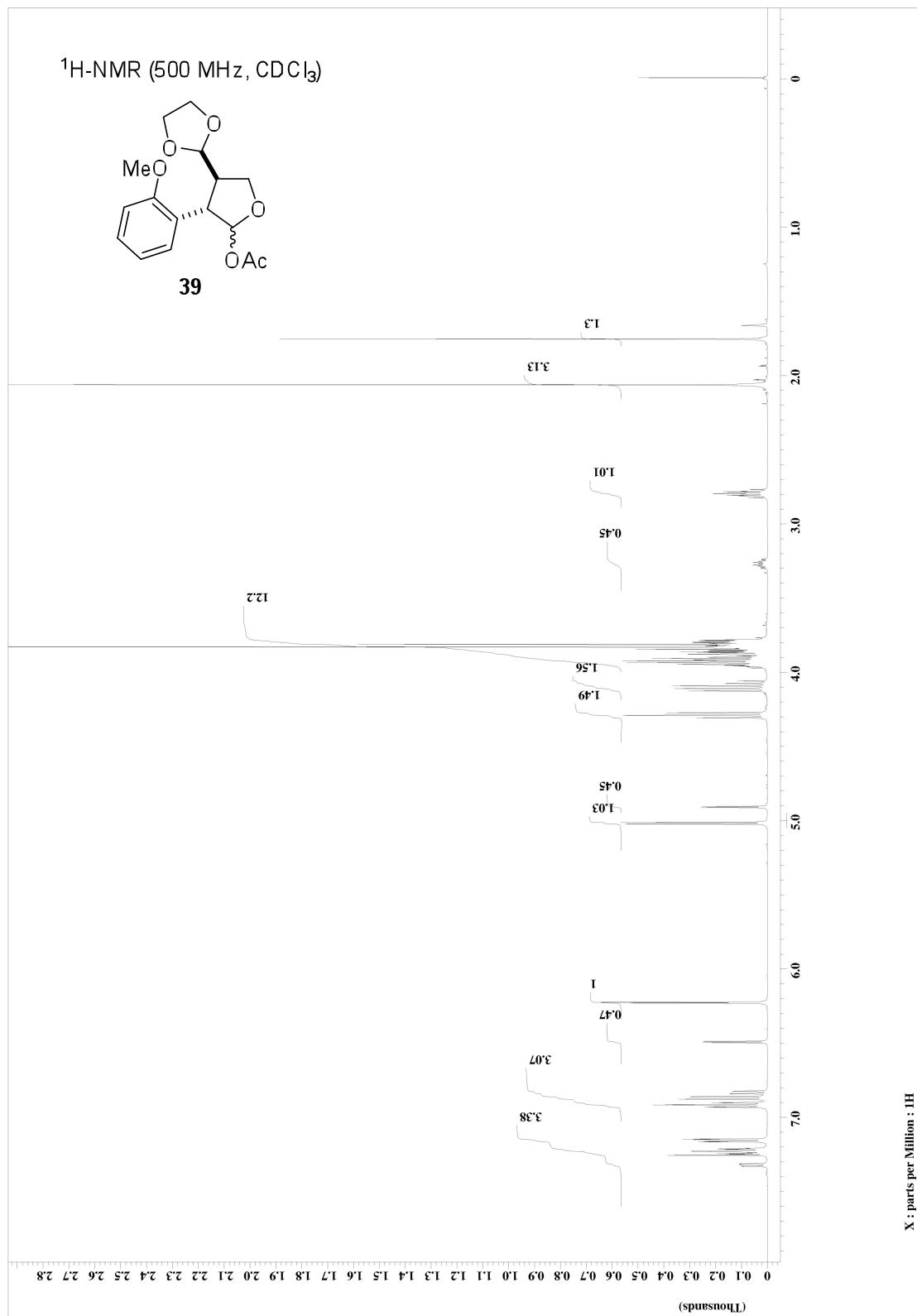
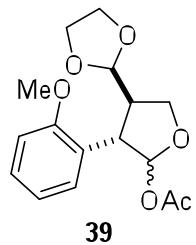
$^{13}\text{C}$ -NMR (125 MHz,  $\text{CDCl}_3$ )



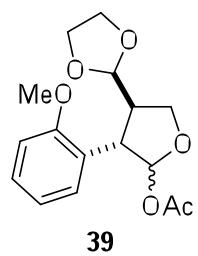
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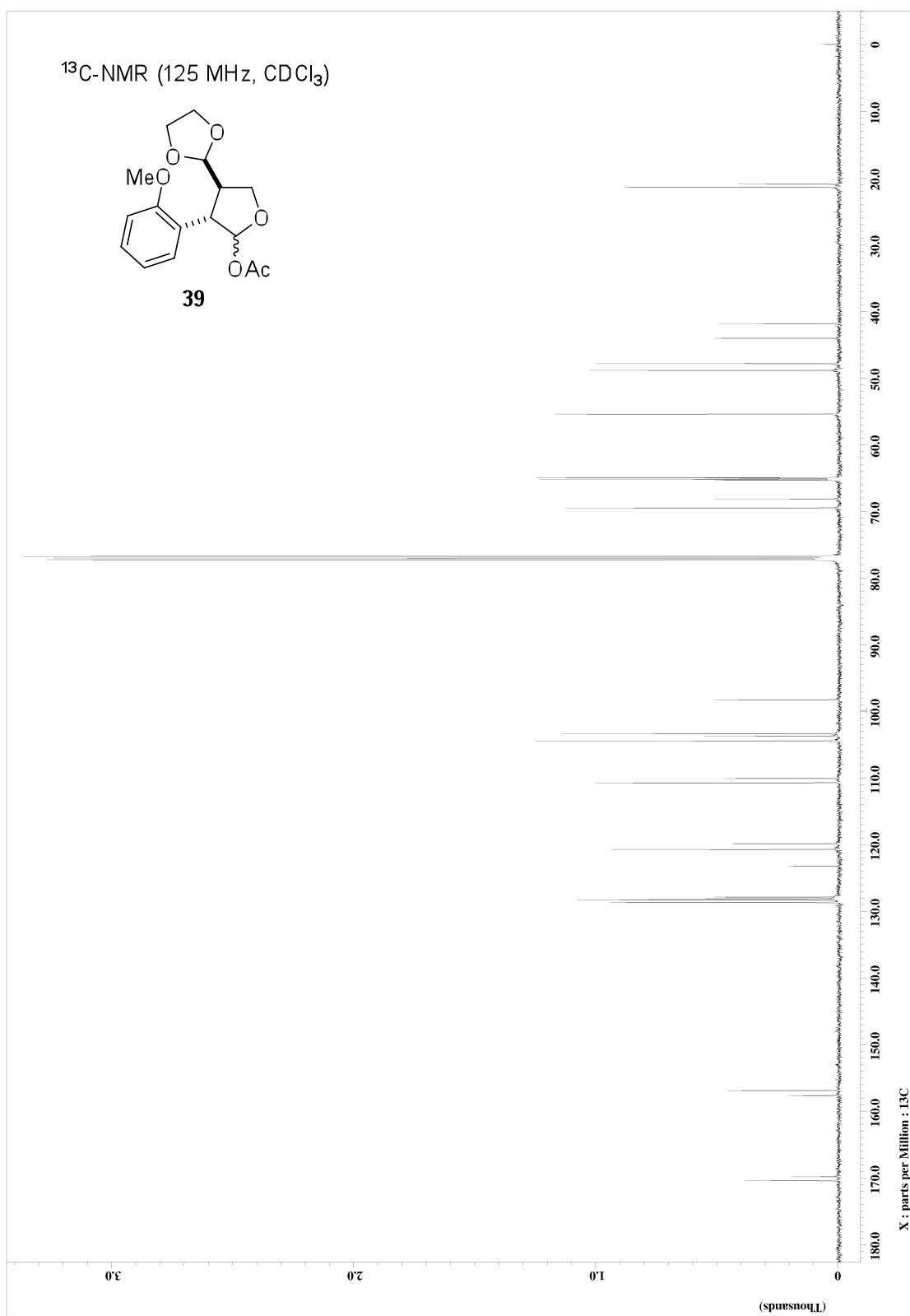
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



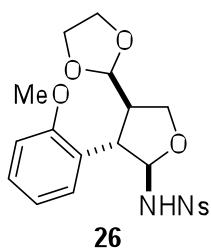
$^{13}\text{C}$ -NMR (125 MHz,  $\text{CDCl}_3$ )



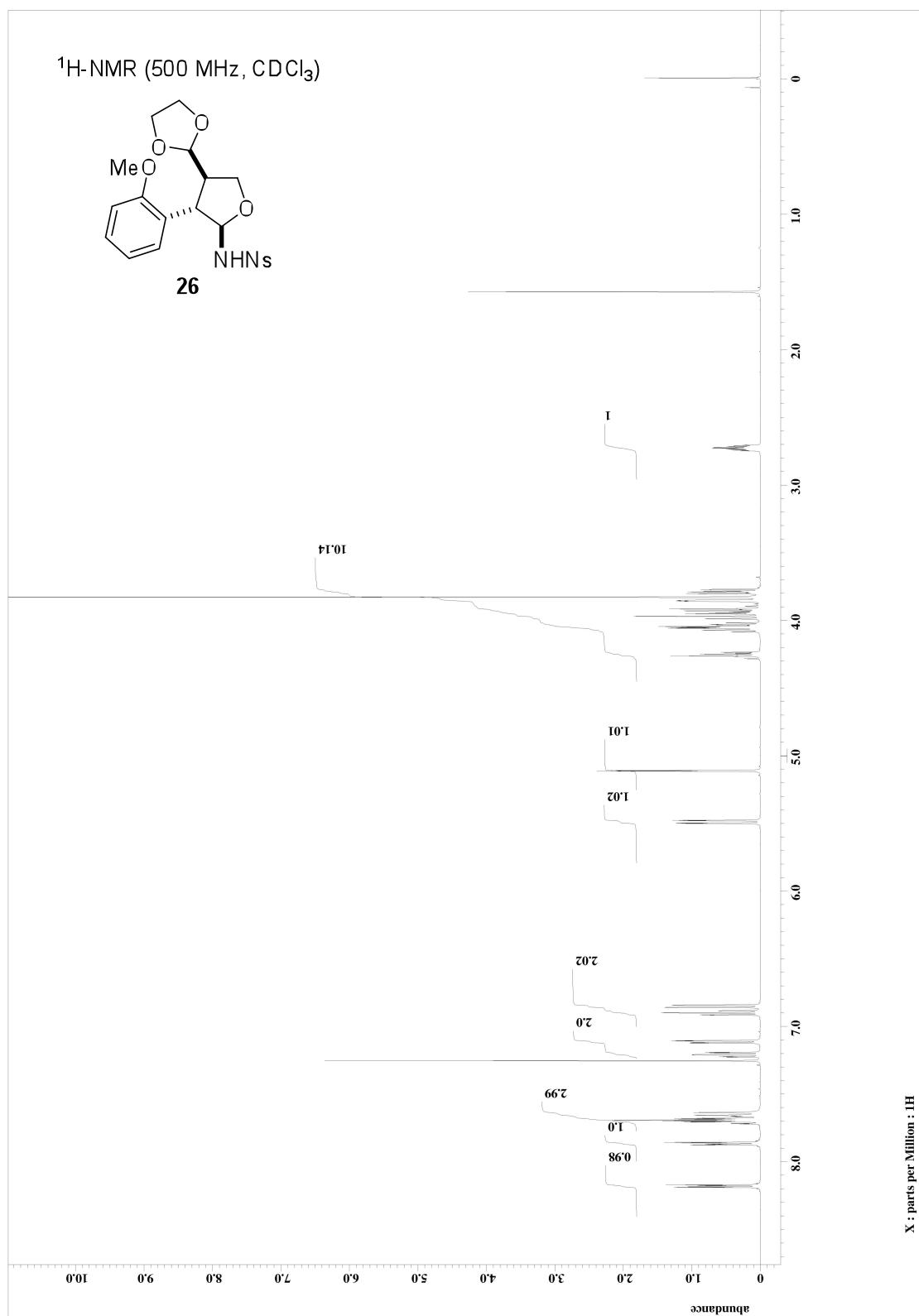
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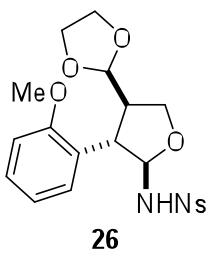
$^1\text{H-NMR}$  (500 MHz,  $\text{CDCl}_3$ )



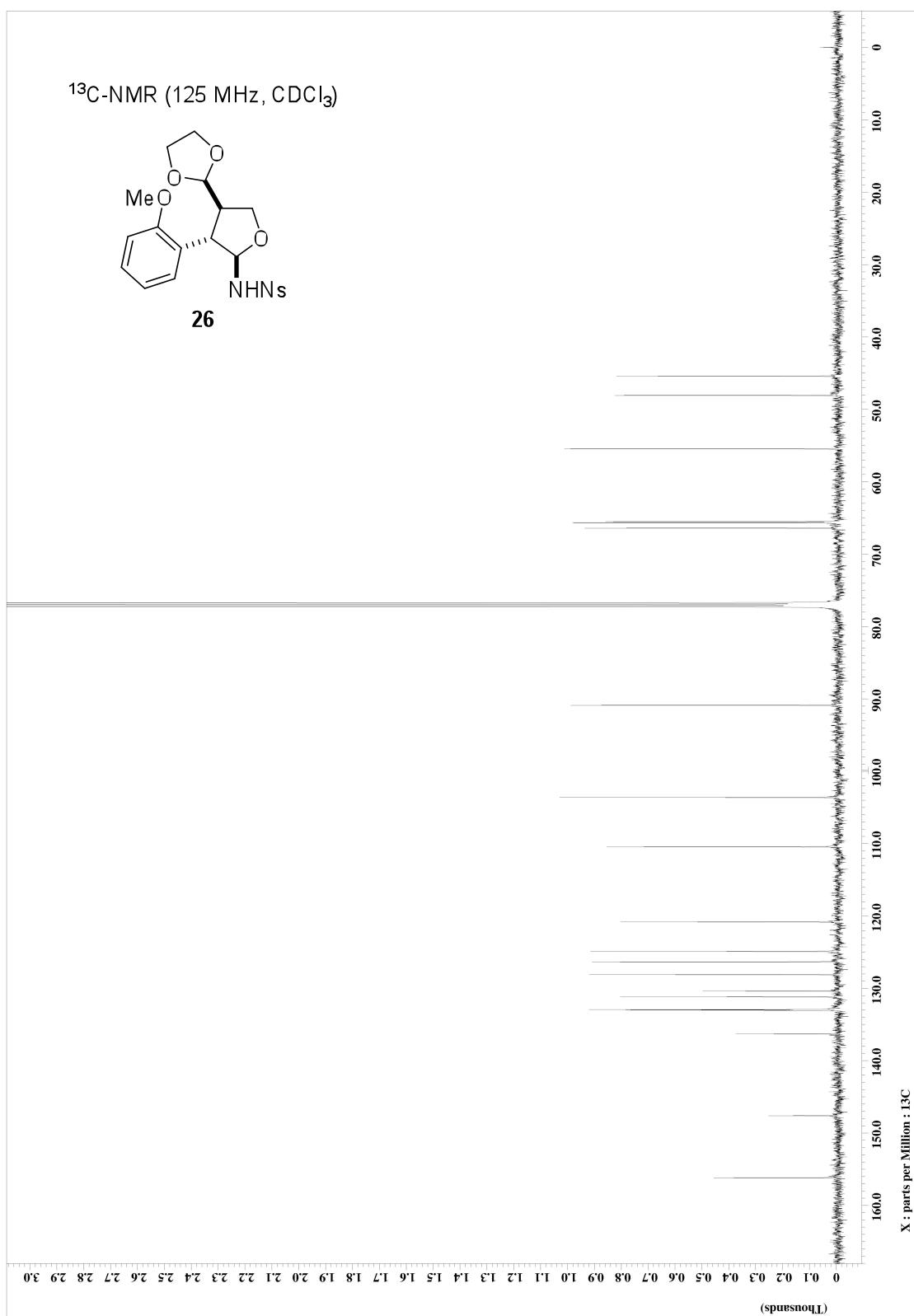
**26**



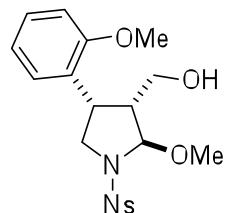
$^{13}\text{C}$ -NMR (125 MHz,  $\text{CDCl}_3$ )



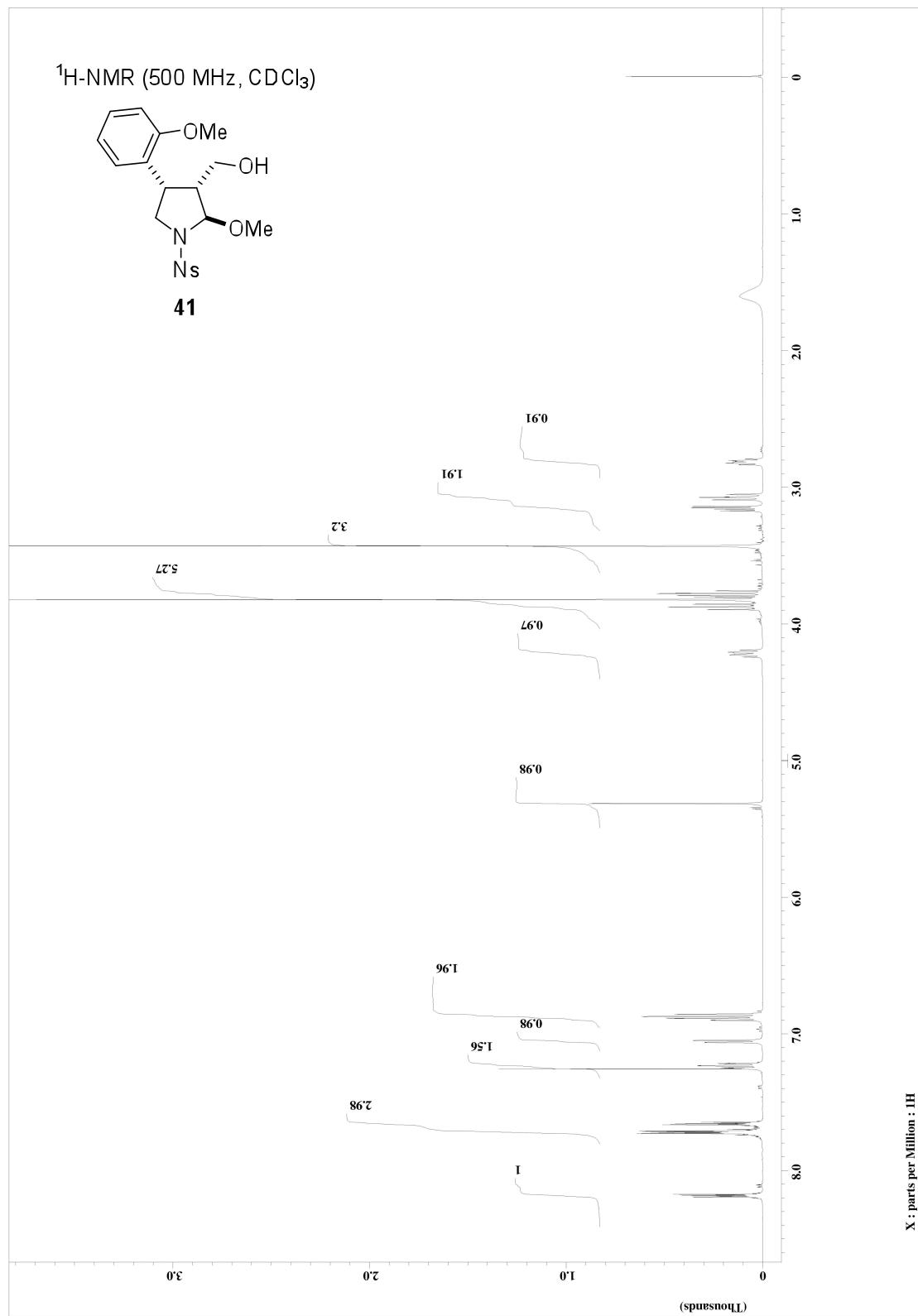
26



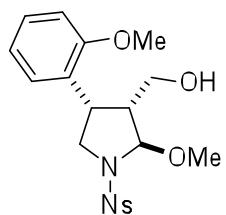
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



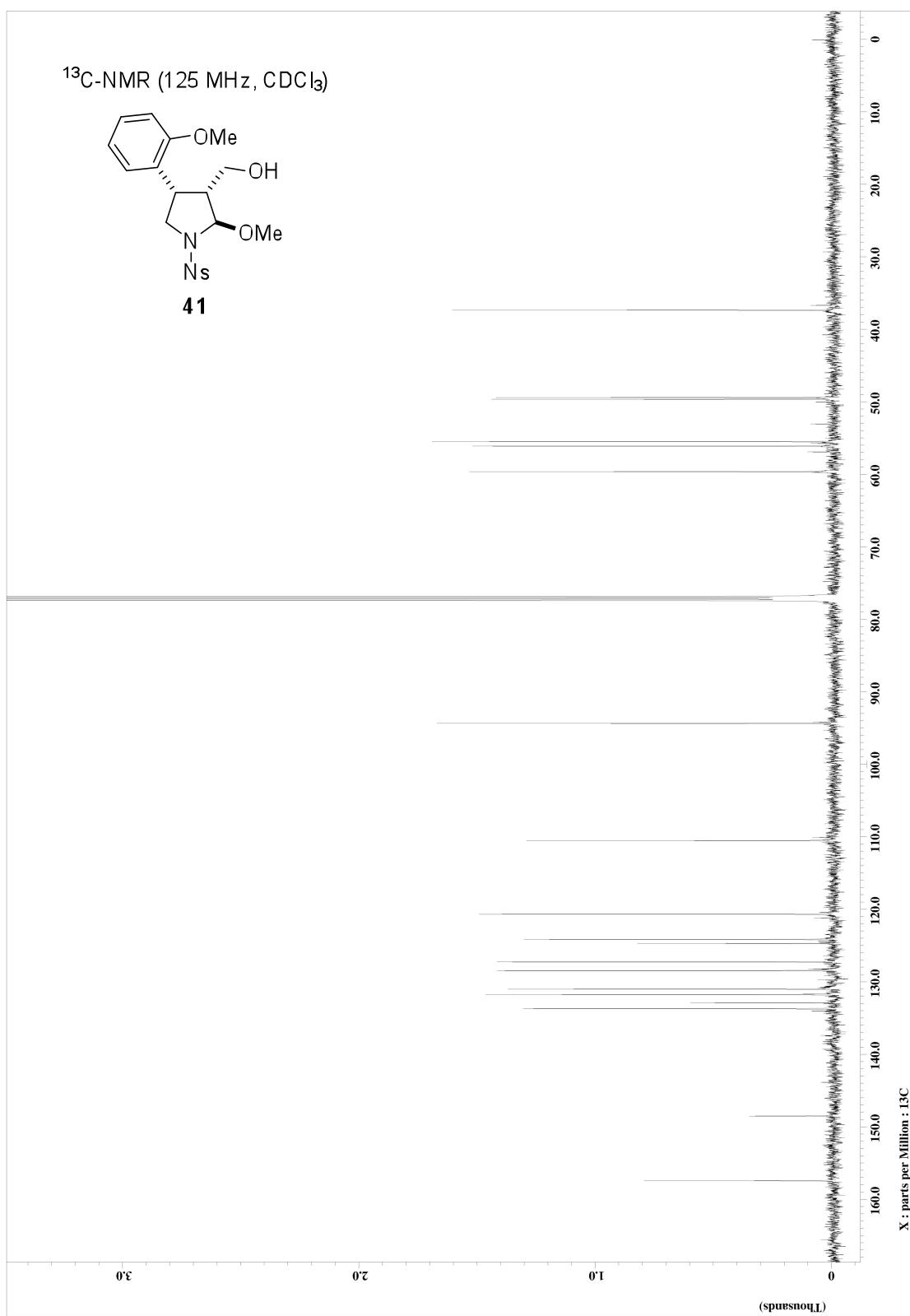
**41**



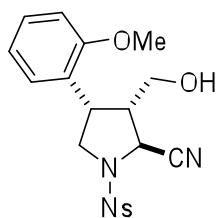
<sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>)



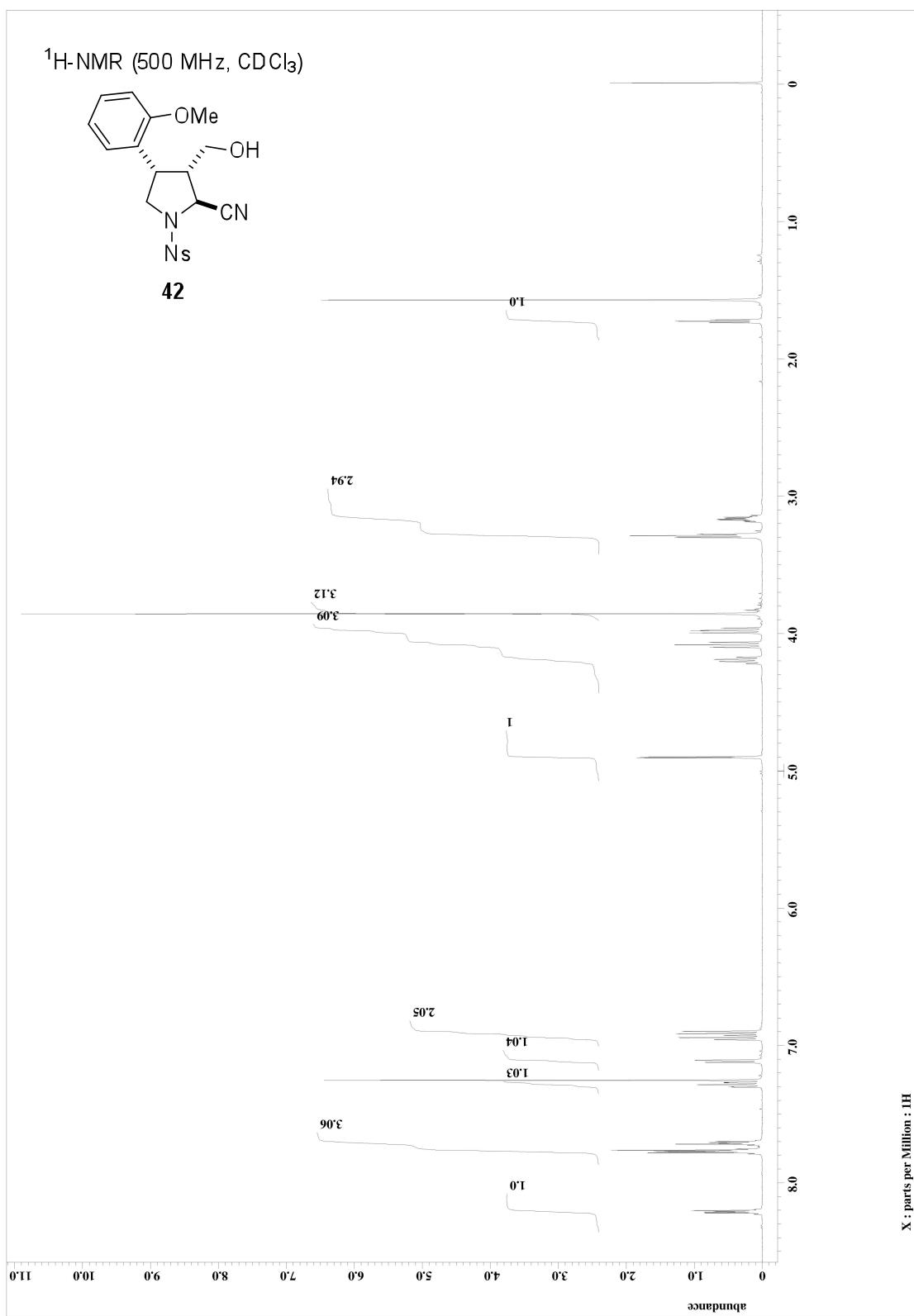
**41**



<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)

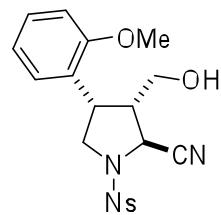


**42**

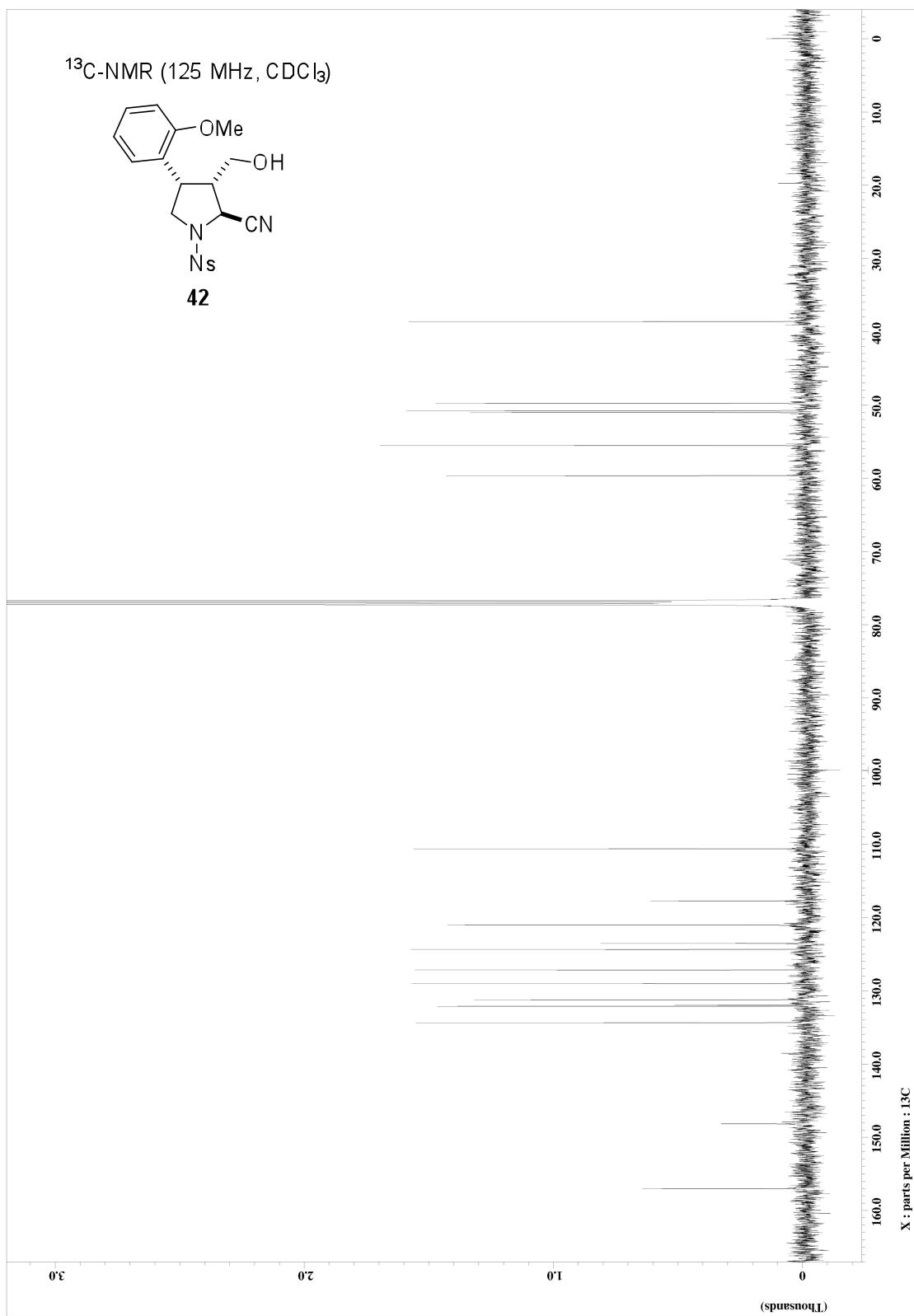


X : parts per Million : 1H

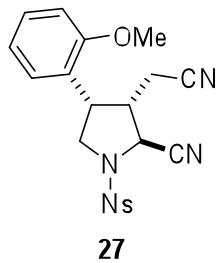
<sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>)



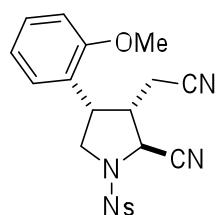
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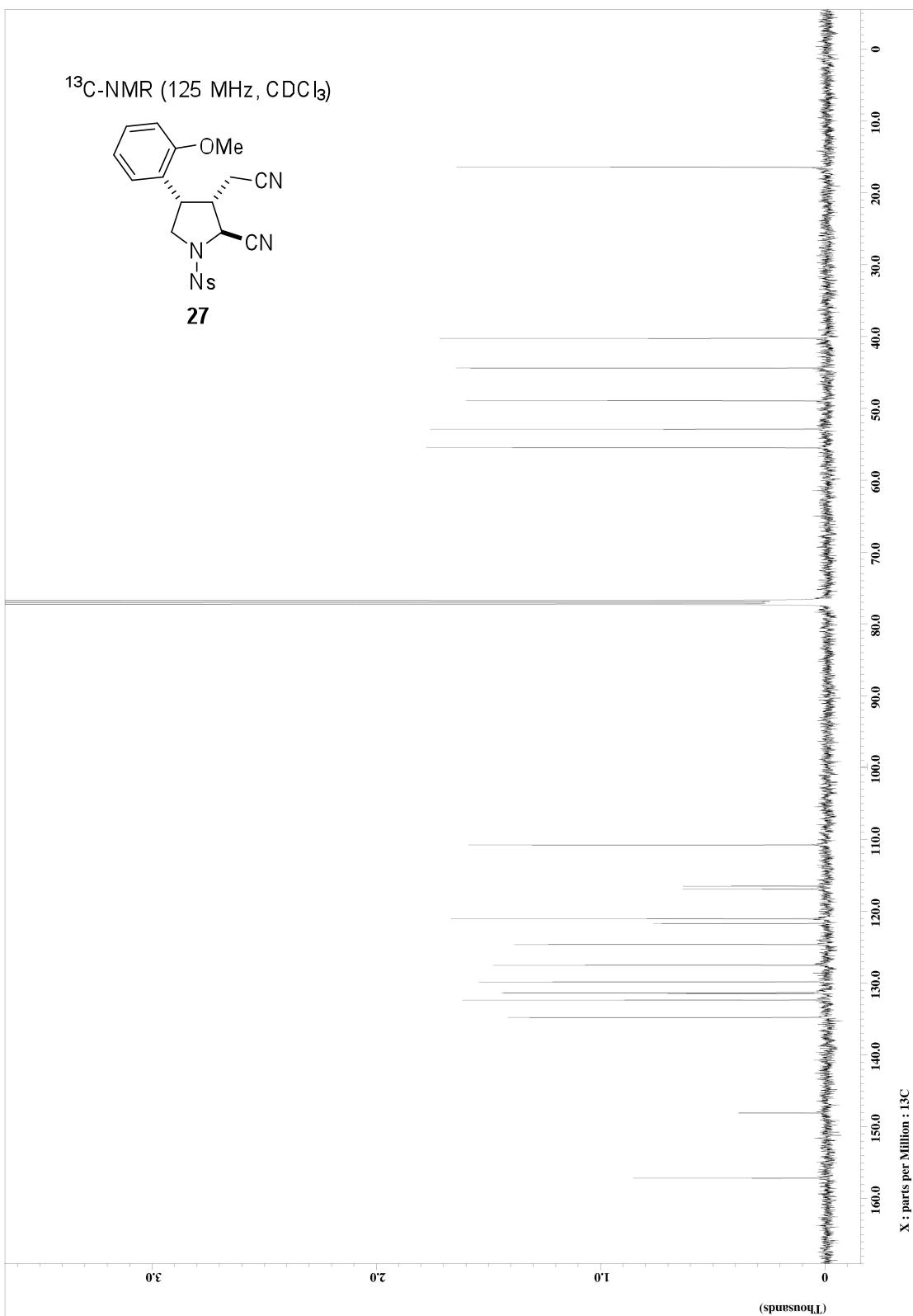
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



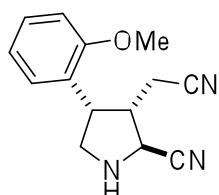
$^{13}\text{C}$ -NMR (125 MHz,  $\text{CDCl}_3$ )



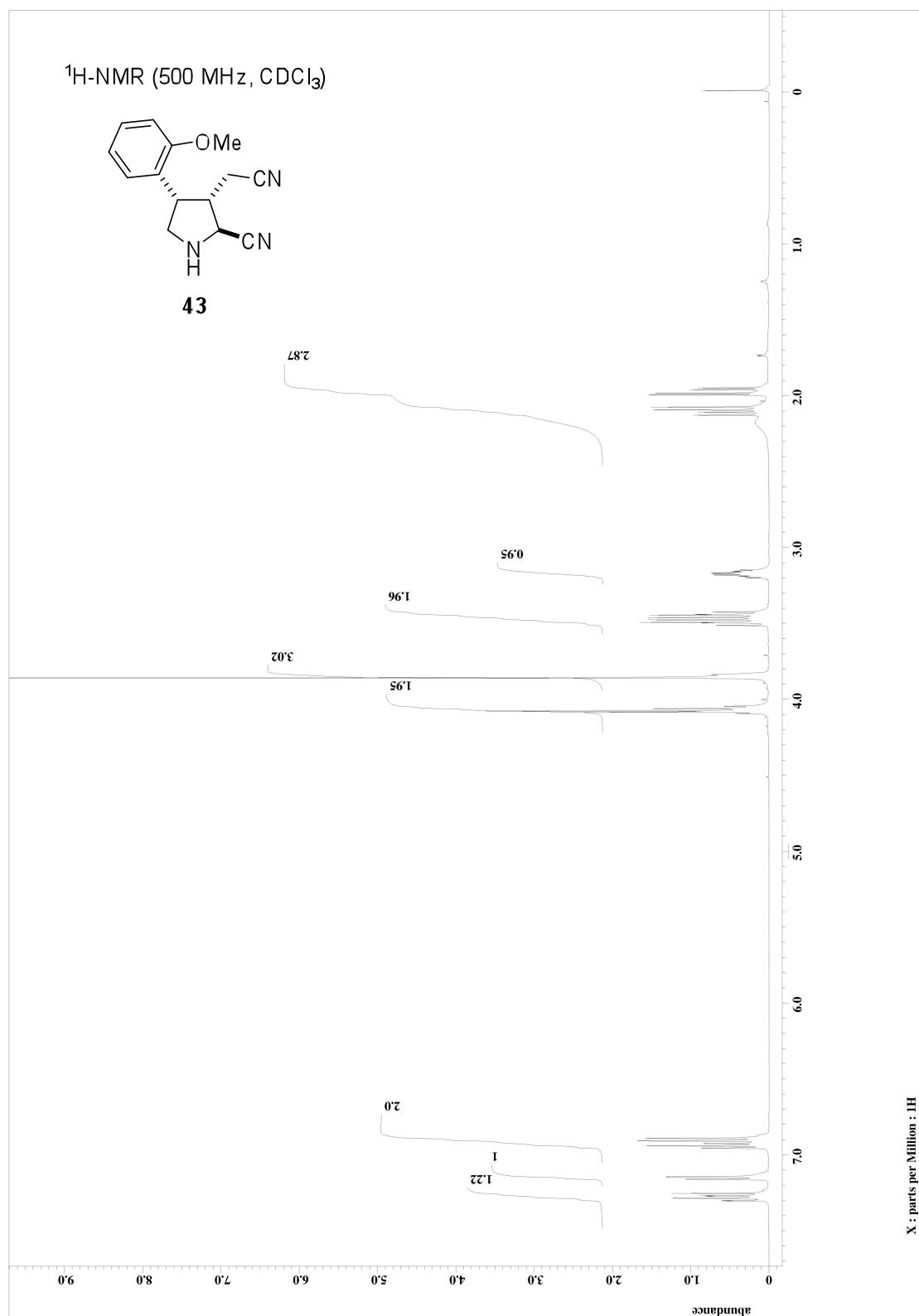
27



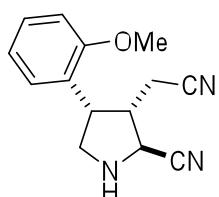
<sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>)



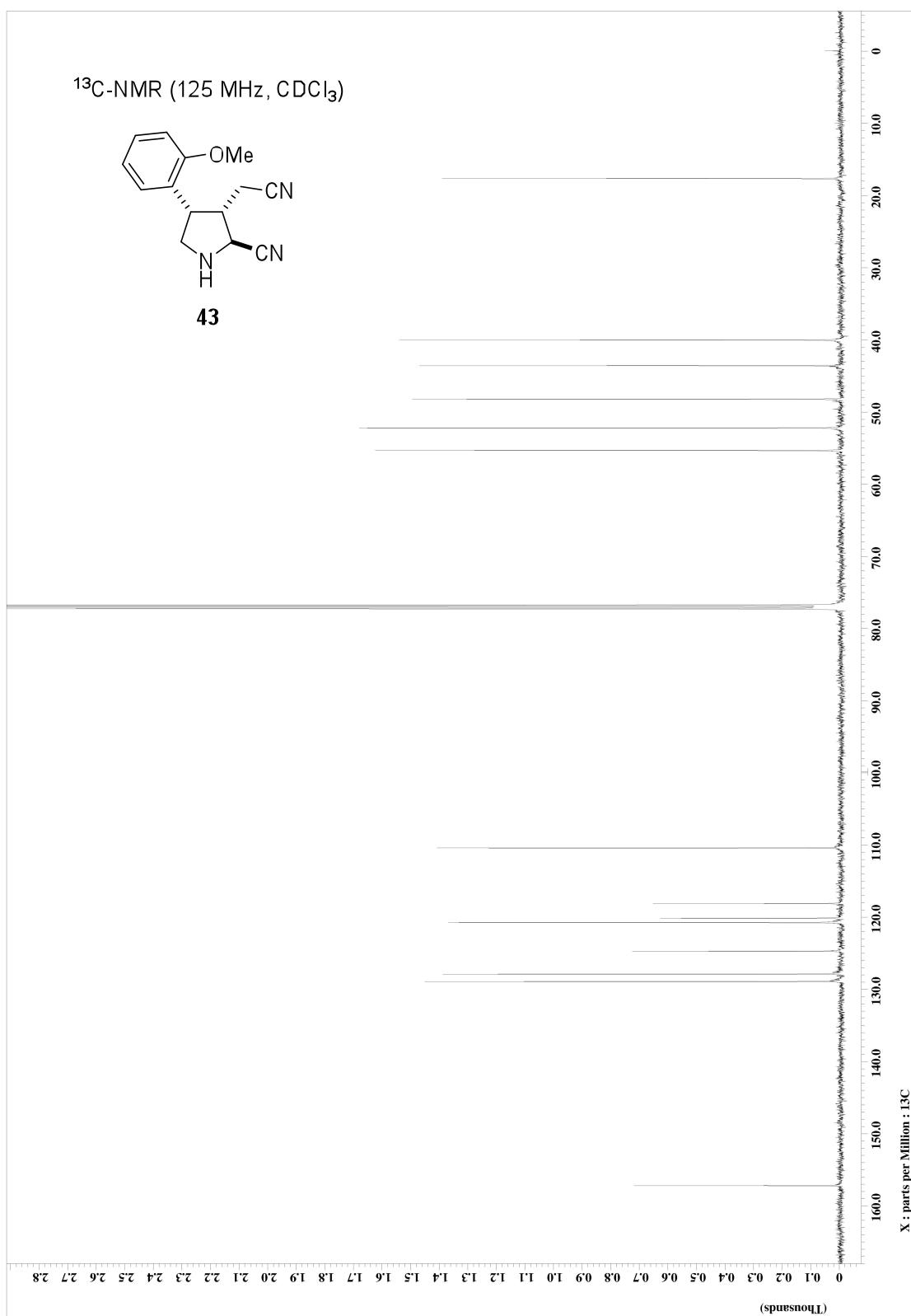
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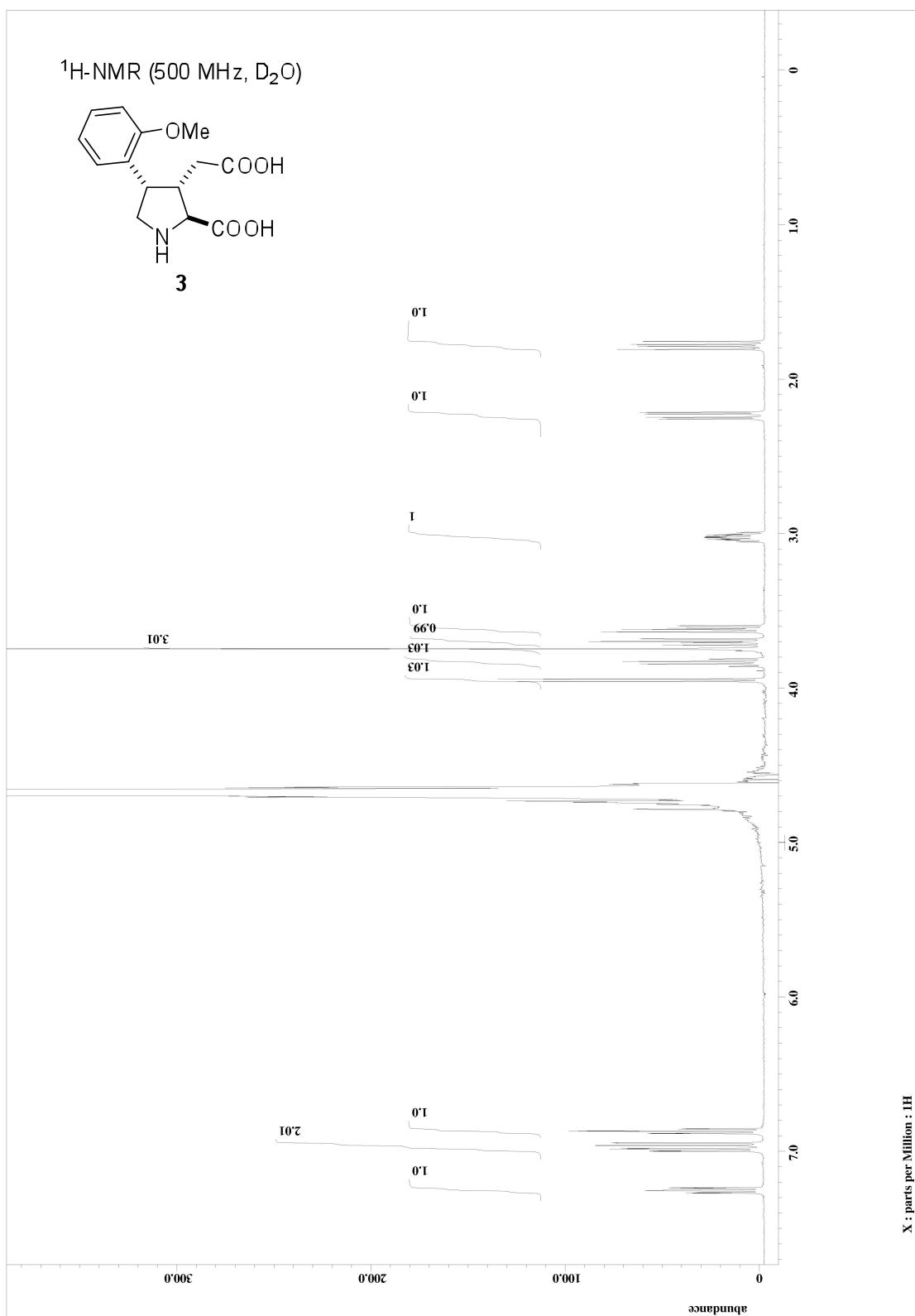
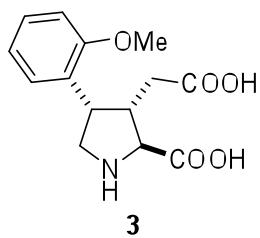
$^{13}\text{C}$ -NMR (125 MHz,  $\text{CDCl}_3$ )



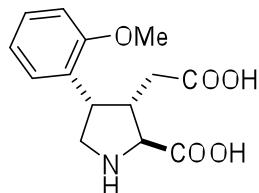
**43**



<sup>1</sup>H-NMR (500 MHz, D<sub>2</sub>O)



$^{13}\text{C}$ -NMR (125 MHz,  $\text{D}_2\text{O}$ )



**3**

