

Supplementary materials for

# Modulation of the Antimelanoma Activity Imparted to Artemisinin Hybrids by the Monoterpene Counterpart

Elisa De Marchi <sup>1</sup>, Silvia Filippi <sup>1</sup>, Silvia Cesarini <sup>1</sup>, Beatrice Di Maio <sup>1</sup>, Bruno Mattia Bizzarri <sup>1</sup>, Raffaele Saladino <sup>1</sup> and Lorenzo Botta <sup>1,\*</sup>

<sup>1</sup> Department of Biological and Ecological Sciences, University of Viterbo, Via S.C. De Lellis s.n.c., 01100 Viterbo, Italy; elisa.demarchi@unitus.it; silvia.filippi@unitus.it; c.cesarinisilvia@gmail.com; beatrice.dimaio@studenti.unitus.it; bm.bizzarri@unitus.it; saladino@unitus.it

\* Correspondence: lorenzo.botta@unitus.it; Tel.: +39 0761-357206

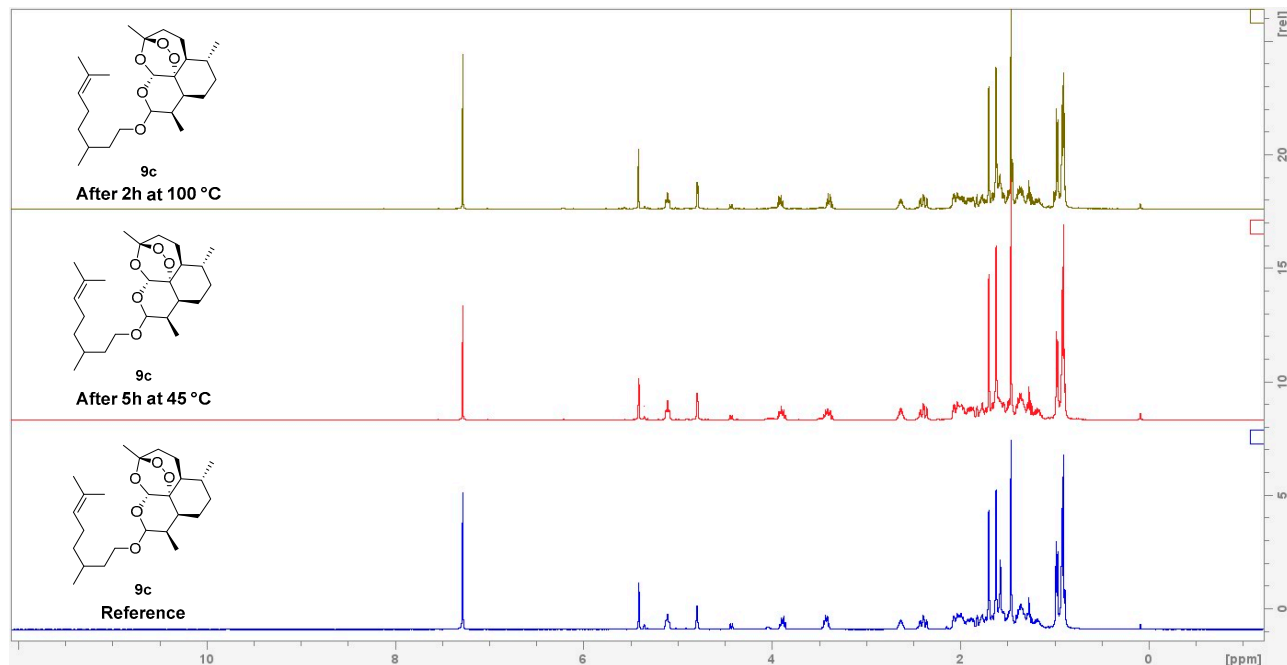
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**S1. Stability Experiments**

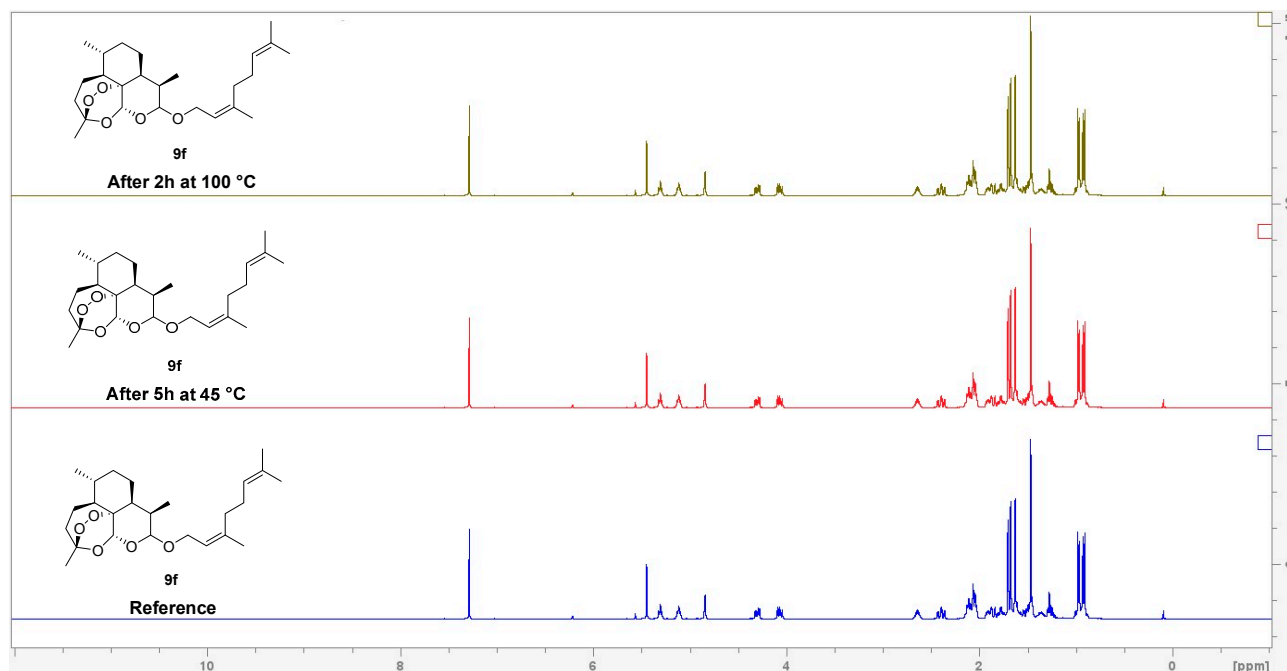
**S2. <sup>1</sup>H, <sup>13</sup>C NMR and IR spectra**

## S1. Stability Experiments

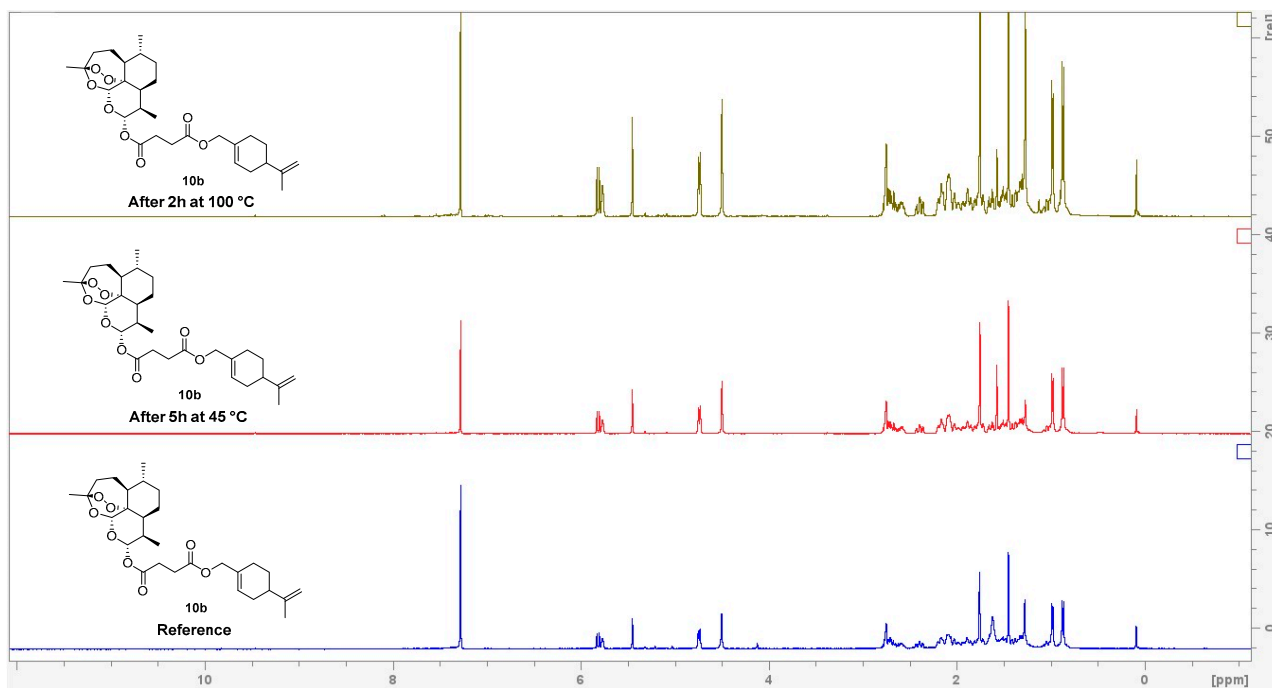
Stability experiments of hybrid compounds **9c**, **9f**, **10b** and **10f** were performed by  $^1\text{H}$ -NMR analysis on a Bruker Avance DRX400 (400 MHz). The selected hybrids were dissolved (8-9 mg) in  $\text{CDCl}_3$  and the NMR tubes heated for at least 8 h at 45 °C in an oil bath. The same NMR tubes were then heated for at least 2 h at 100 °C.



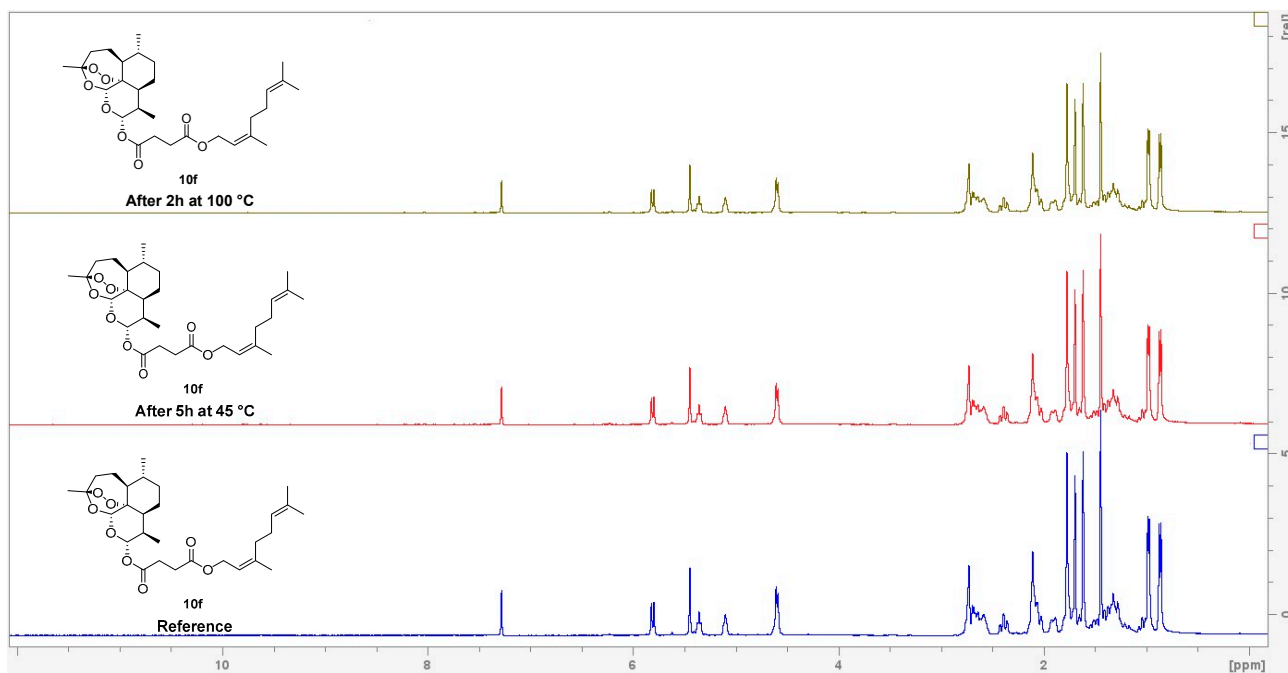
**Figure S1:**  $^1\text{H}$  NMR spectra of hybrid **9c** reference (bottom, coloured blue), after 5h at 45 °C (middle, coloured red) and after 2h at 100 °C (top, coloured gold).



**Figure S2:**  $^1\text{H}$  NMR spectra of hybrid **9f** reference (bottom, coloured blue), after 5h at 45 °C (middle, coloured red) and after 2h at 100 °C (top, coloured gold).



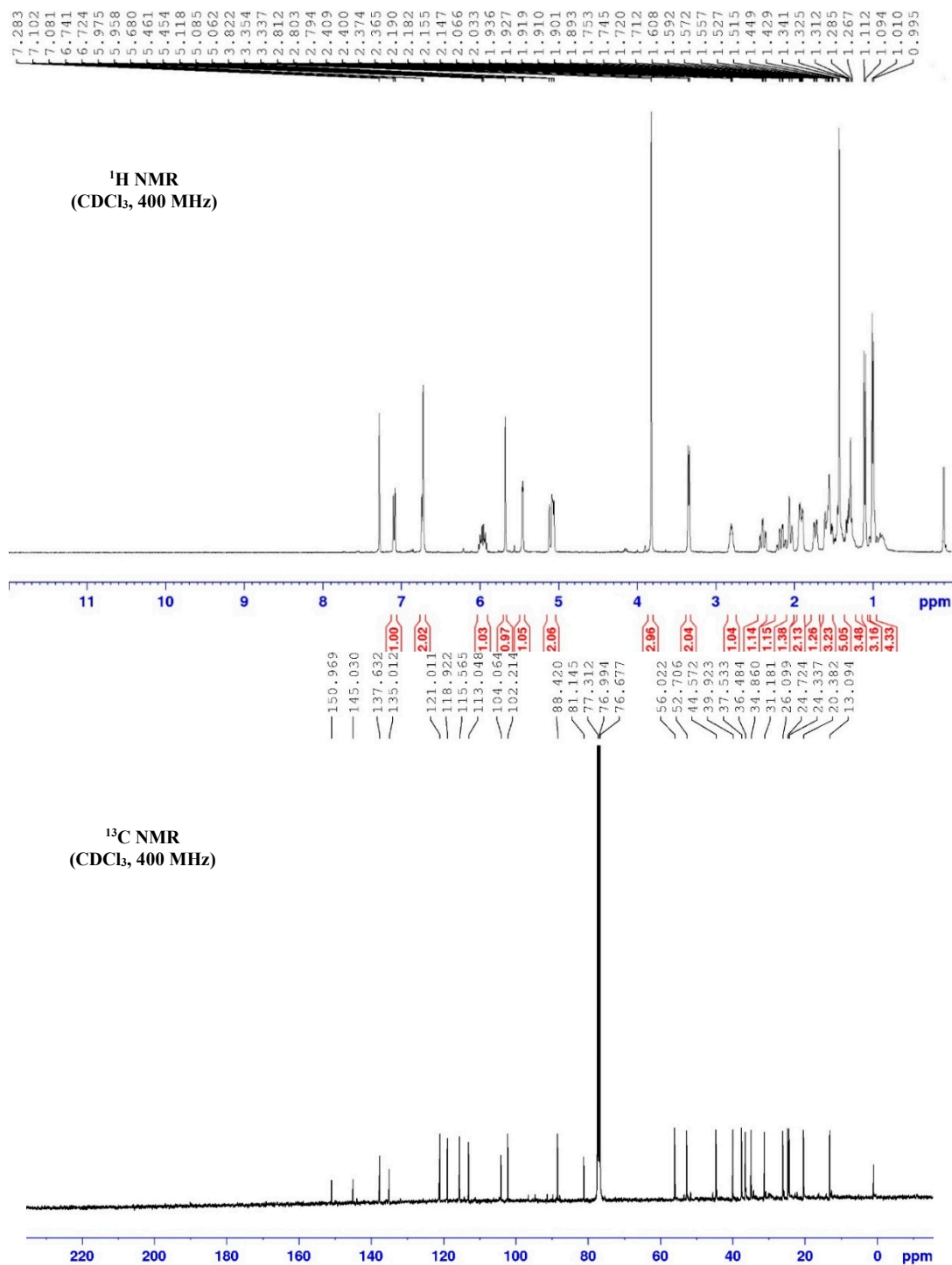
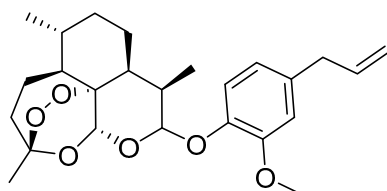
**Figure S3:**  $^1\text{H}$  NMR spectra of hybrid **10b** reference (bottom, coloured blue), after 5h at 45 °C (middle, coloured red) and after 2h at 100 °C (top, coloured gold).

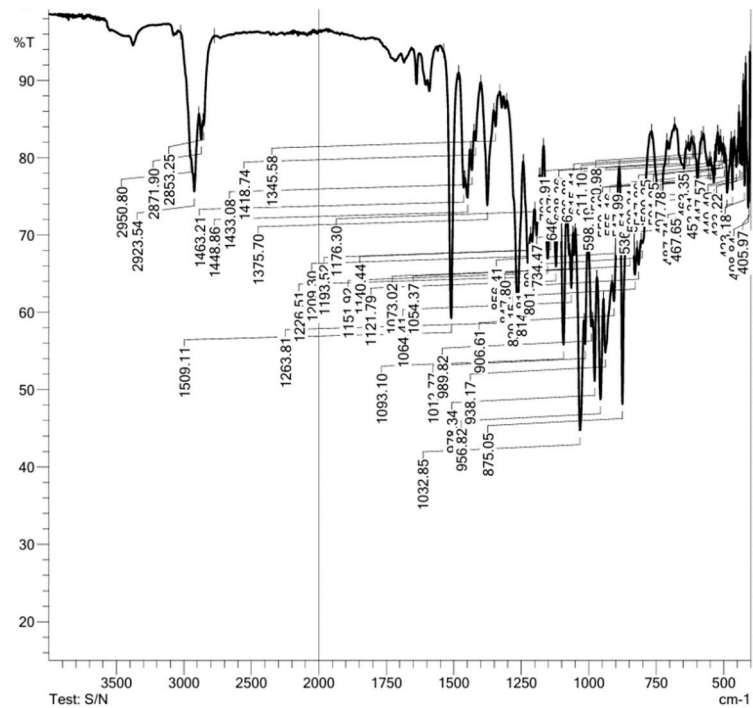


**Figure S4:**  $^1\text{H}$  NMR spectra of hybrid **10f** reference (bottom, coloured blue), after 5h at 45 °C (middle, coloured red) and after 2h at 100 °C (top, coloured gold).

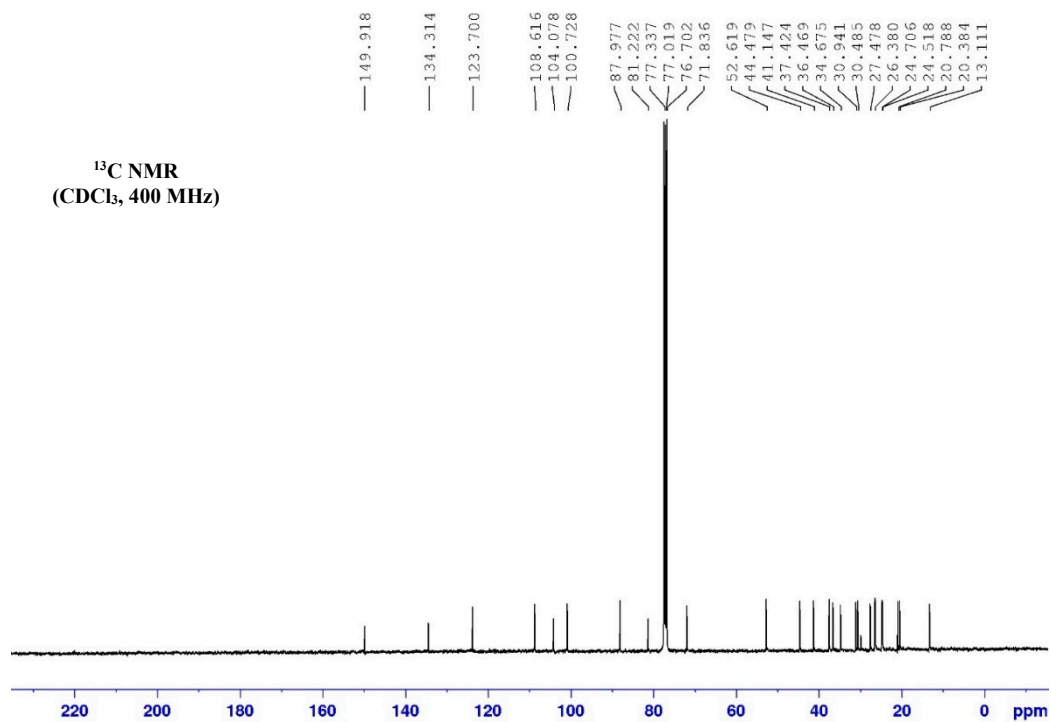
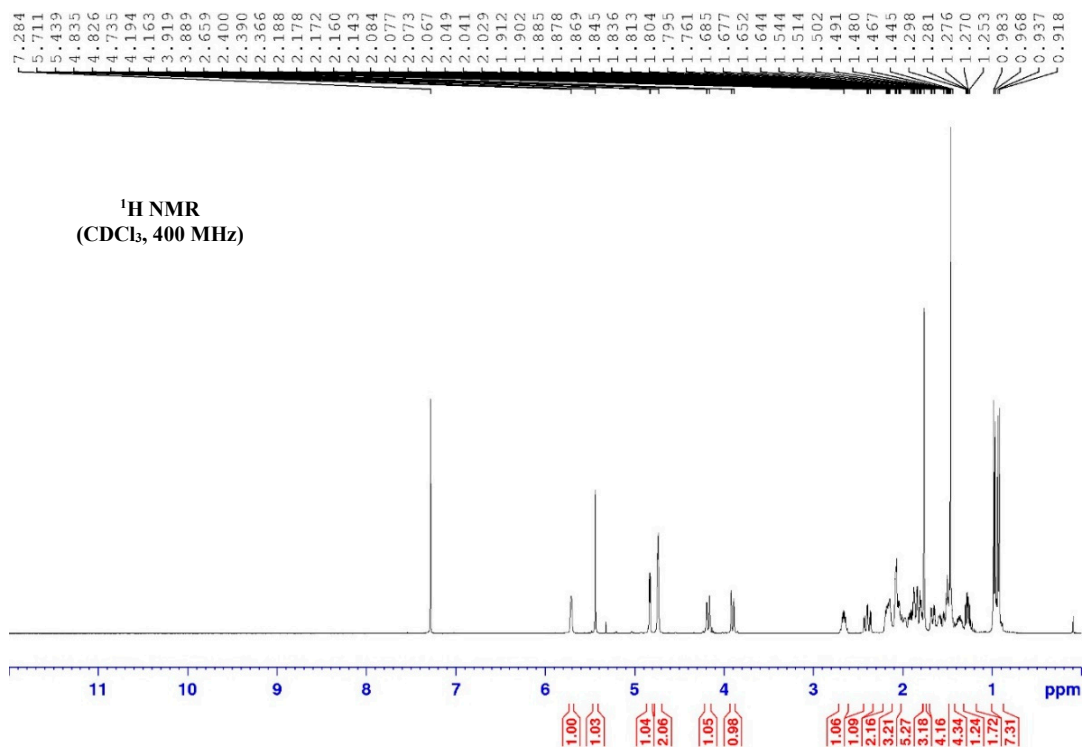
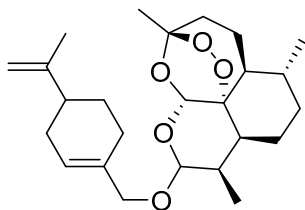
## S2. $^1\text{H}$ , $^{13}\text{C}$ NMR and IR spectra

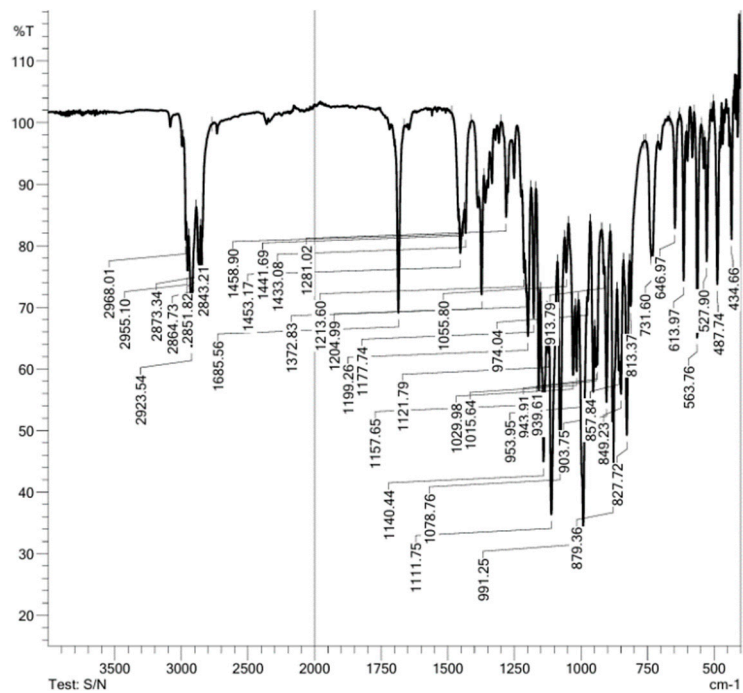
### Hybrid 9a



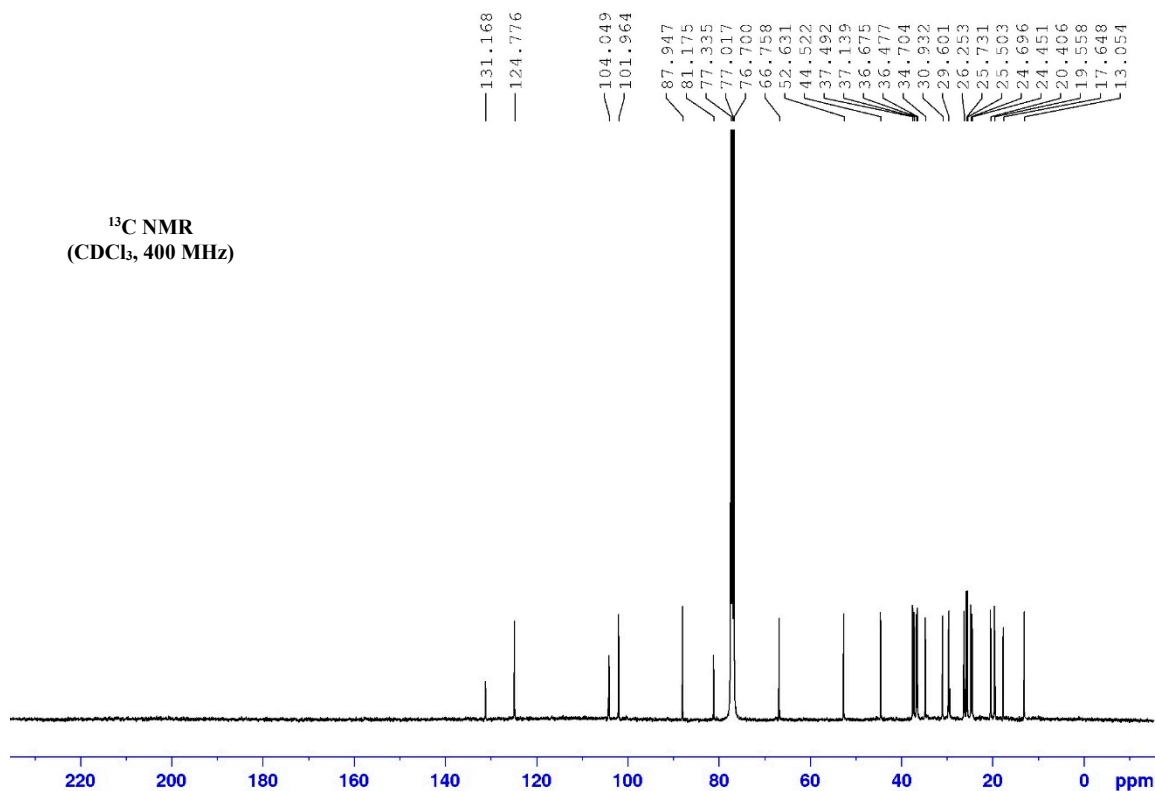
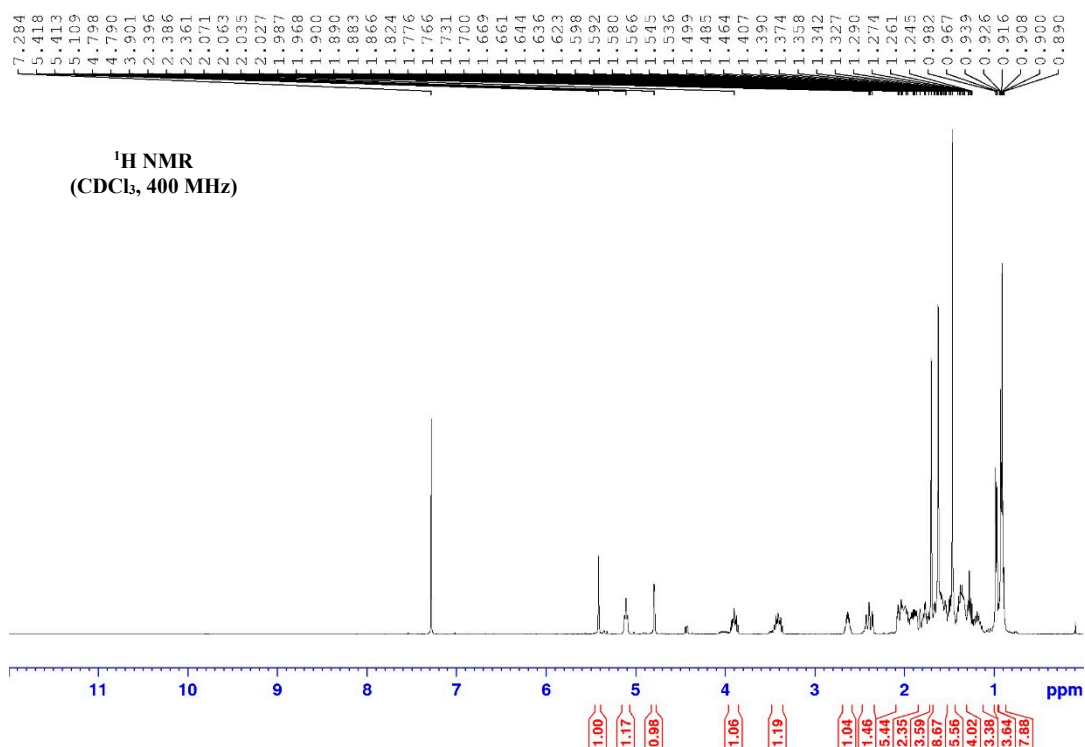
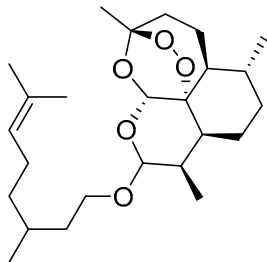


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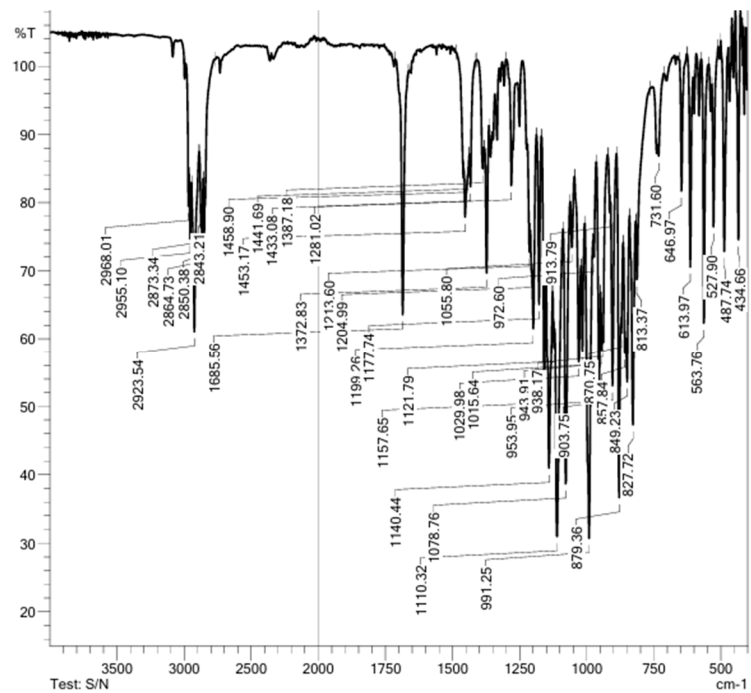




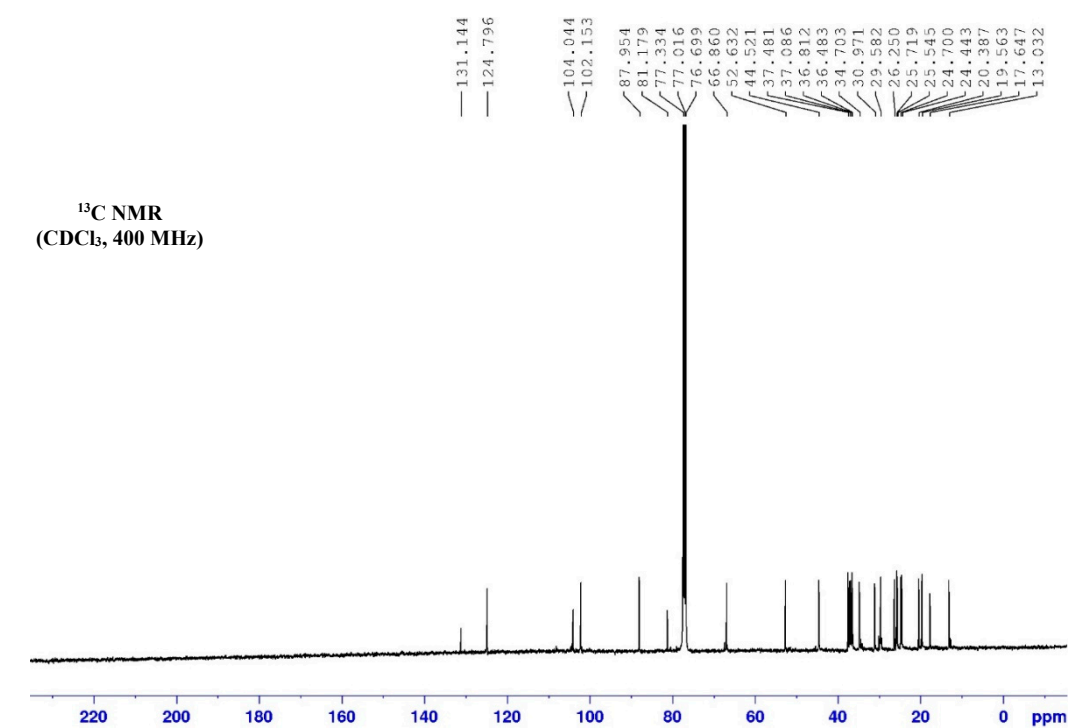
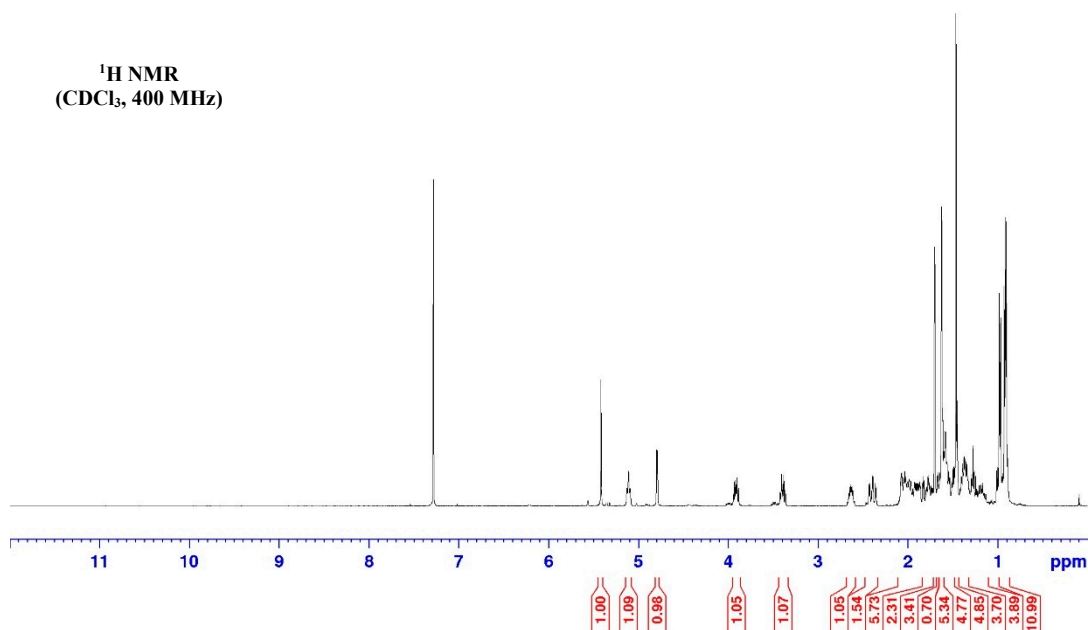
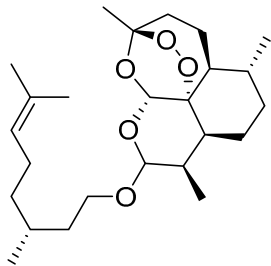
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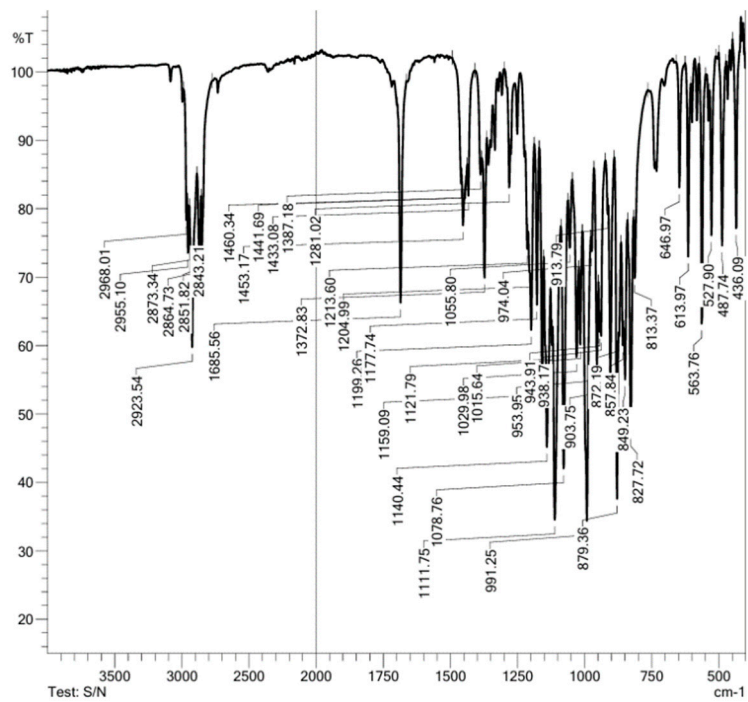




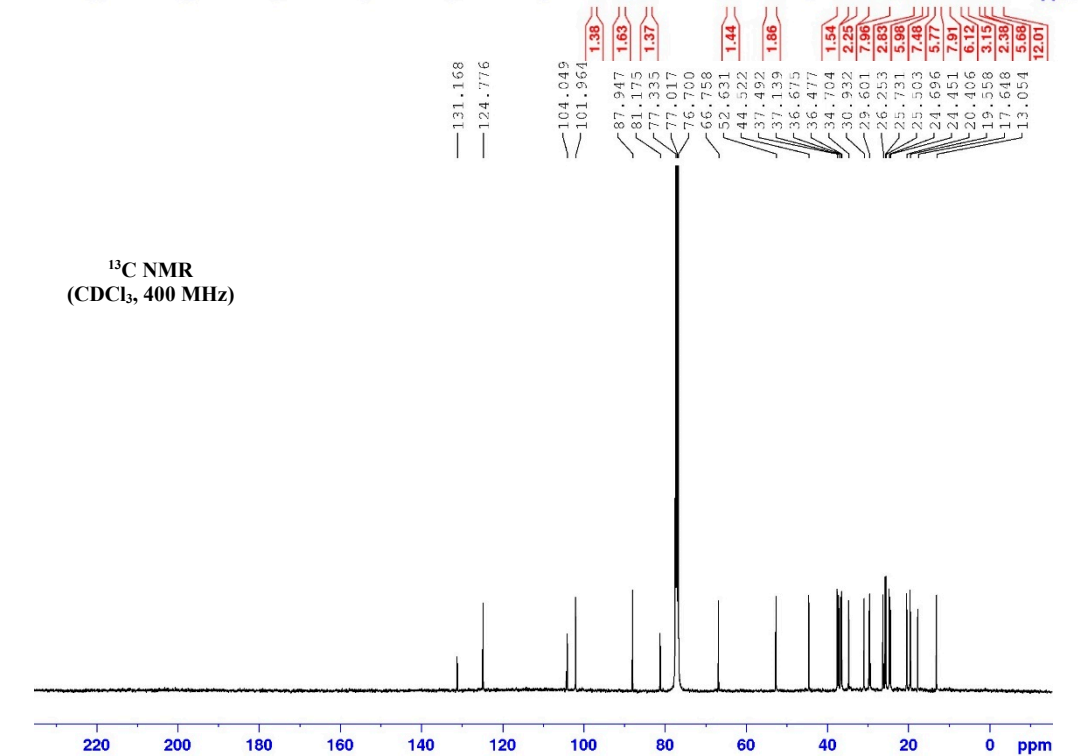
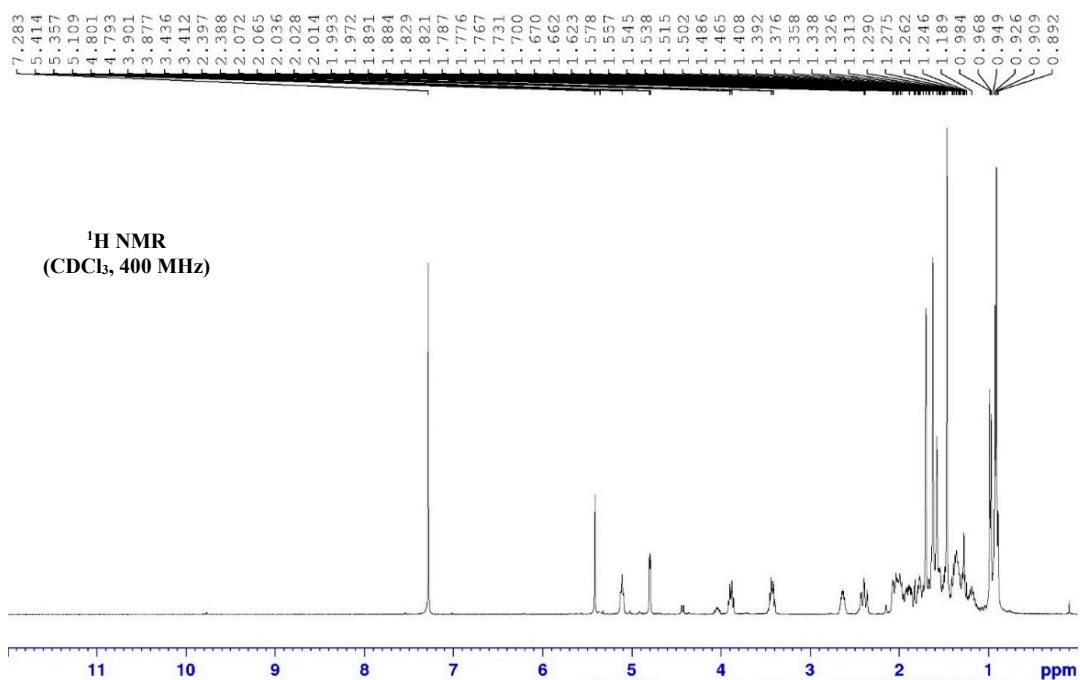
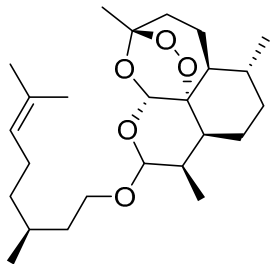


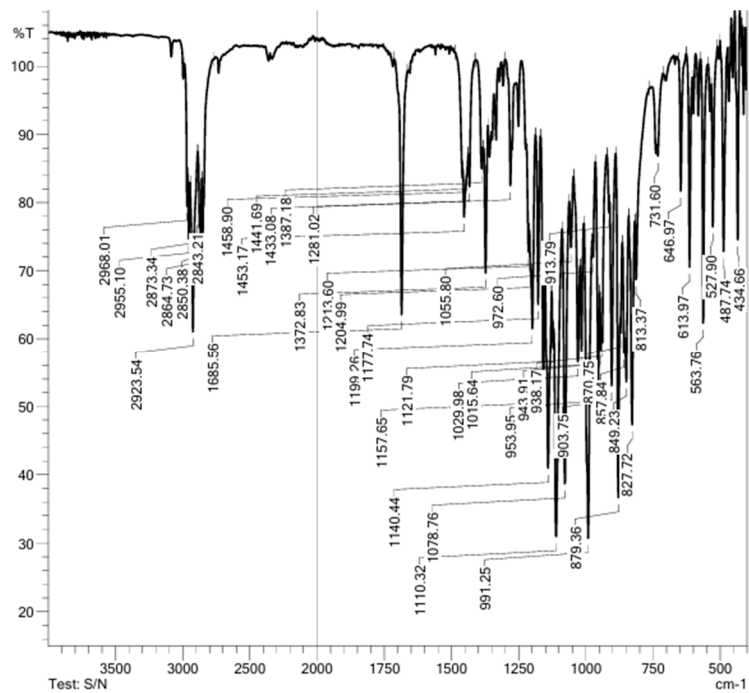
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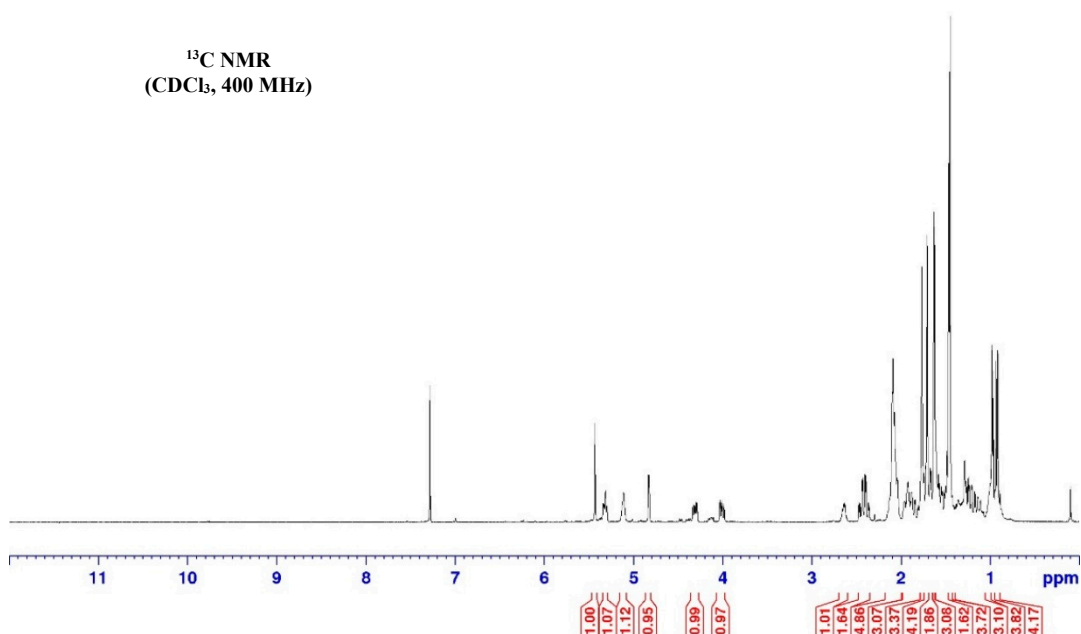
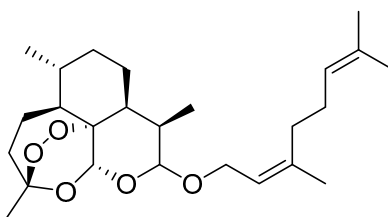


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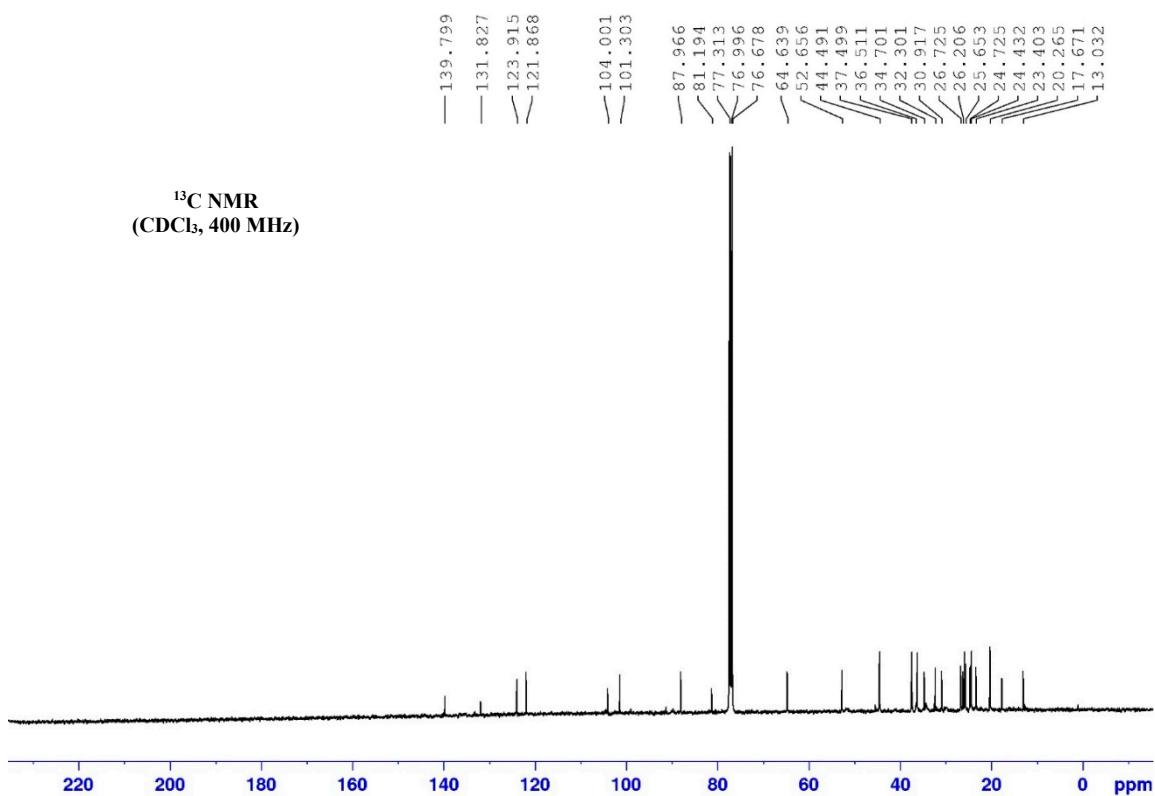


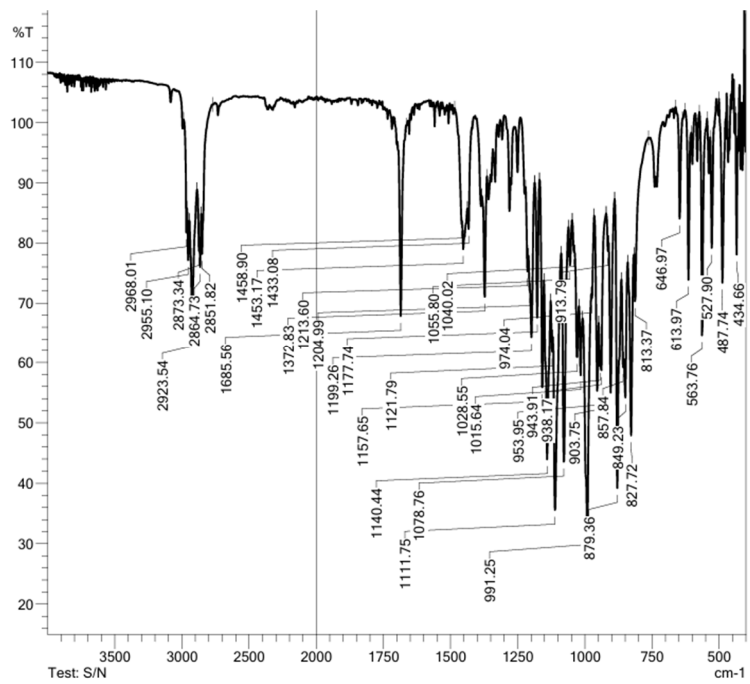


Hybrid 9f

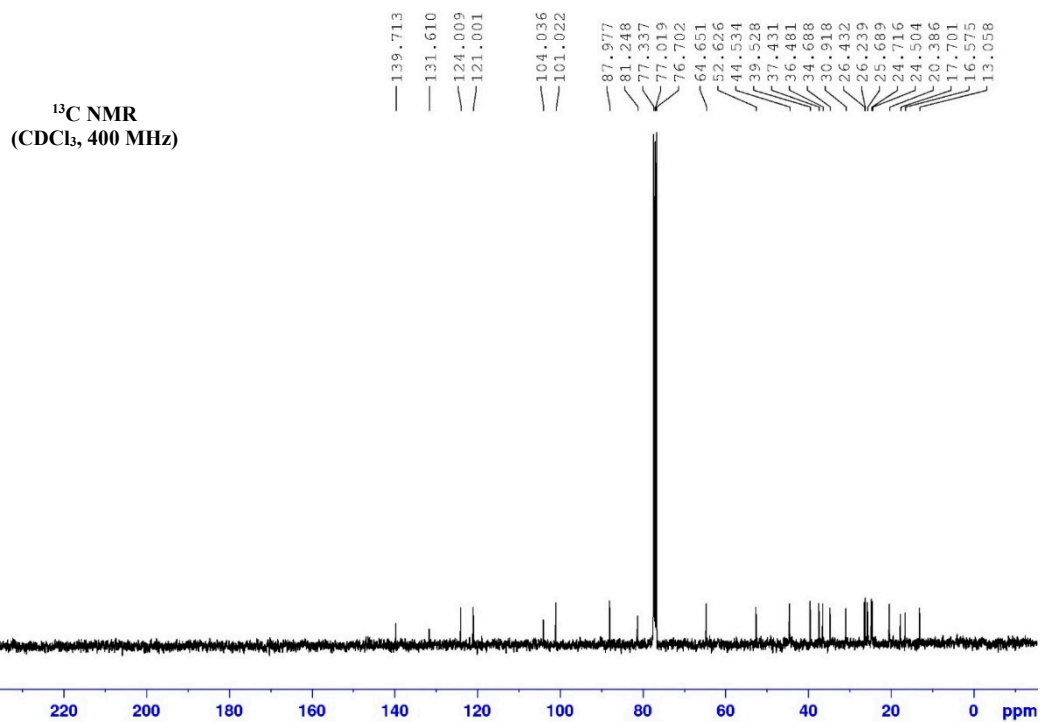
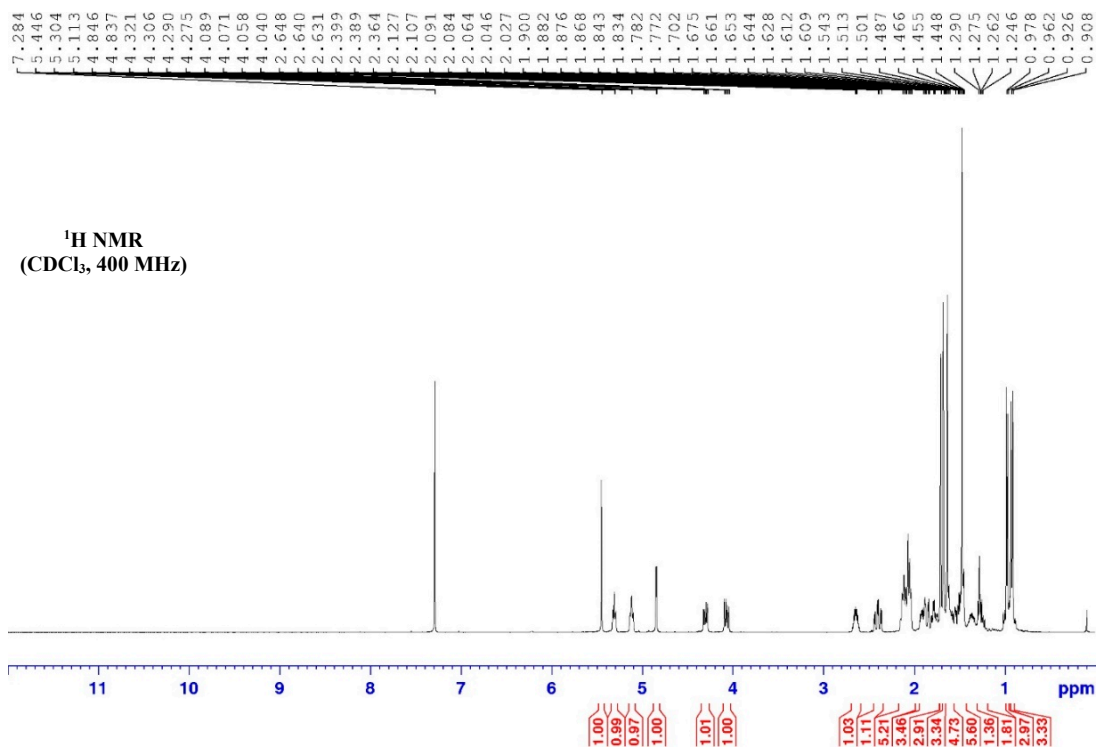
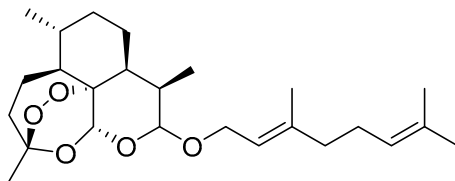


<sup>13</sup>C NMR (CDCl<sub>3</sub>, 400 MHz)

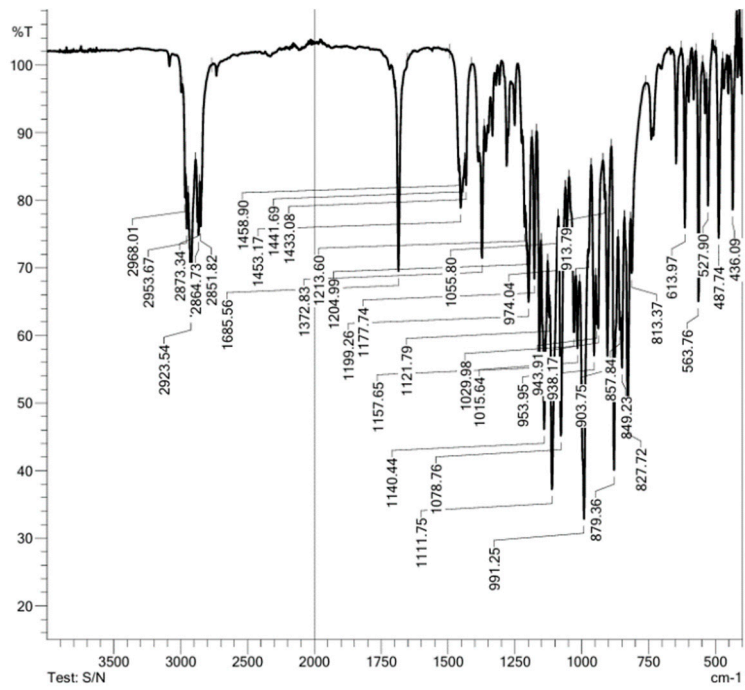




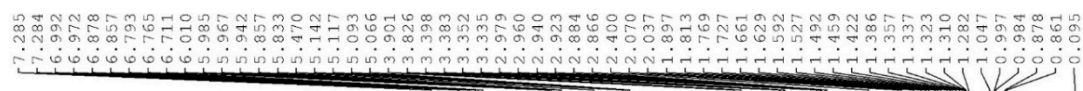
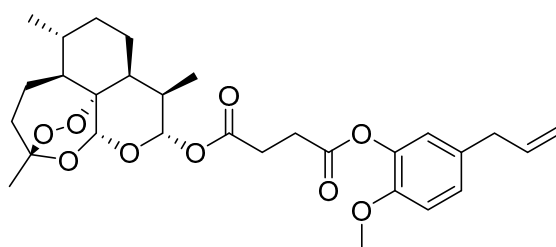
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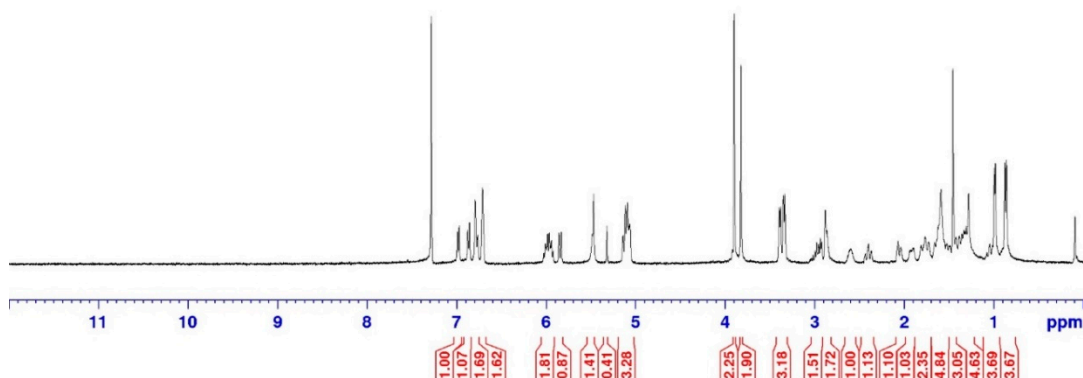




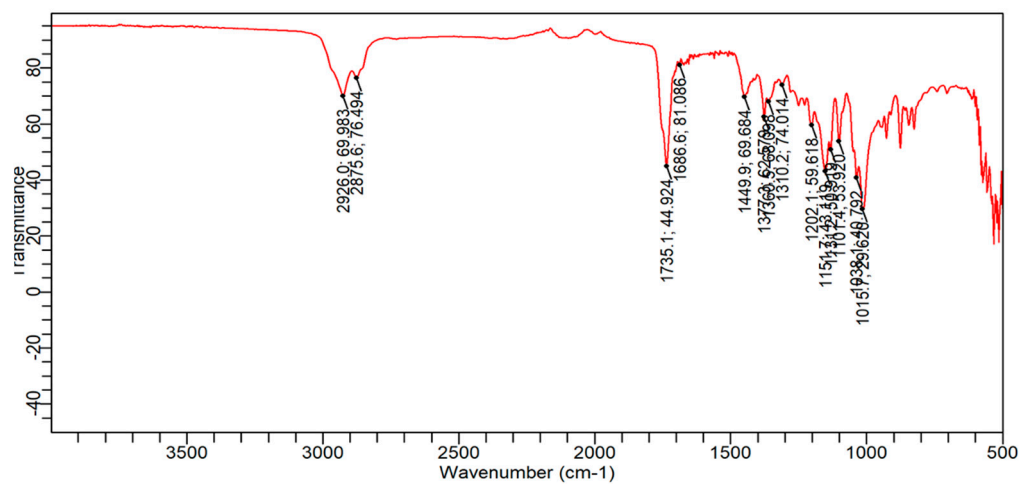
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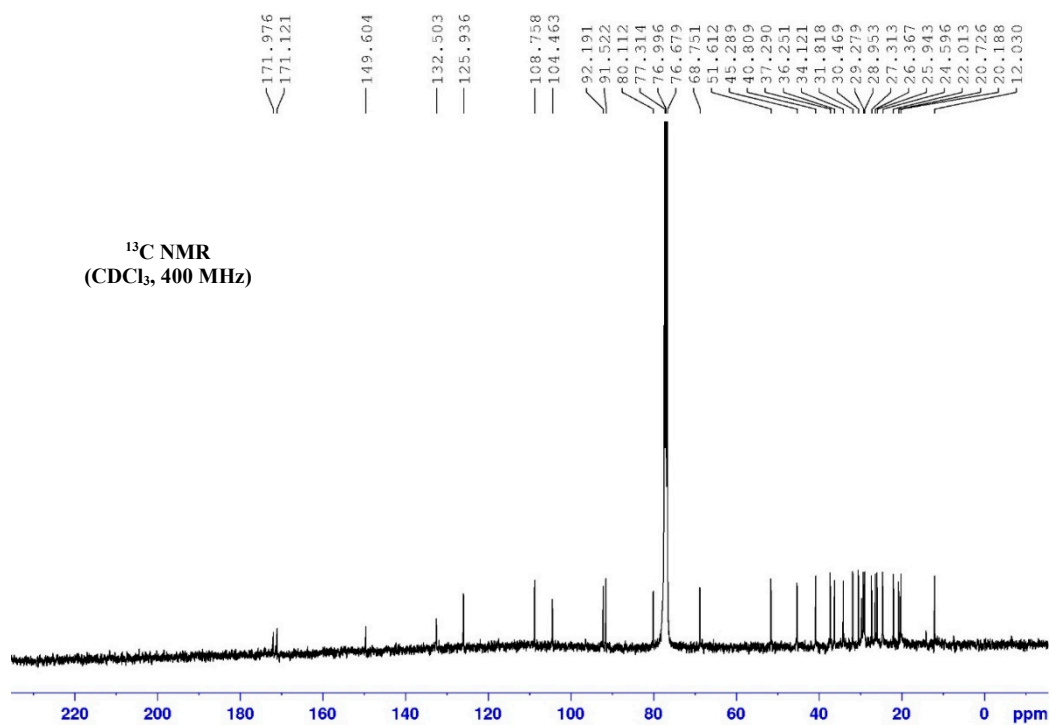
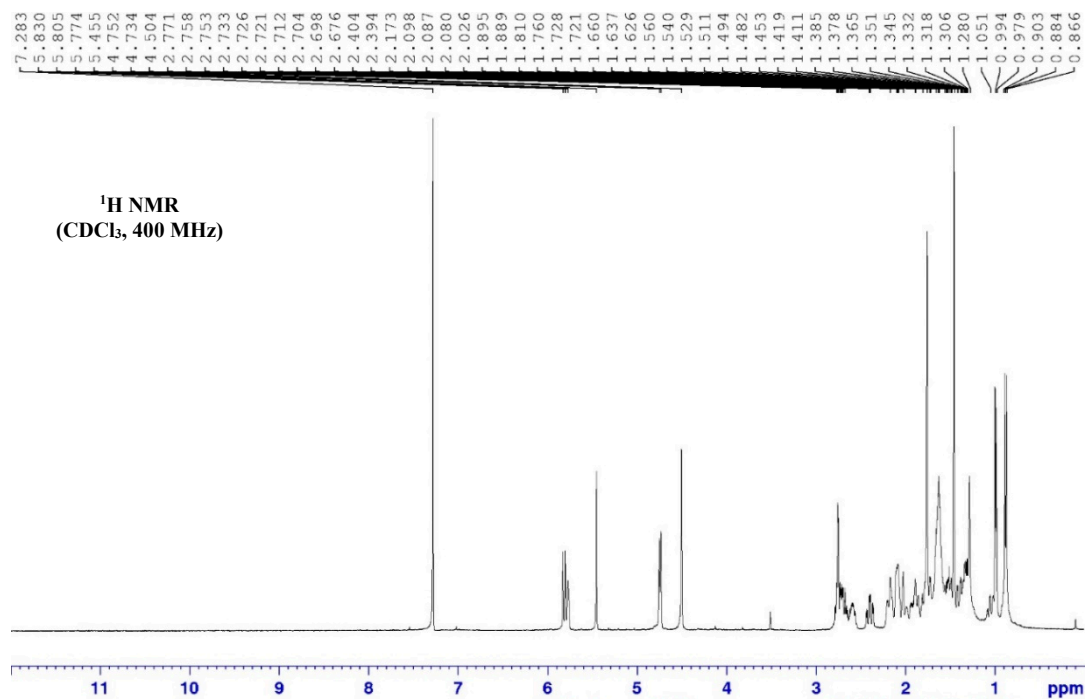
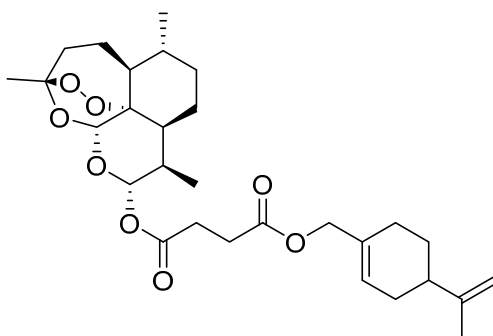
<sup>1</sup>H NMR  
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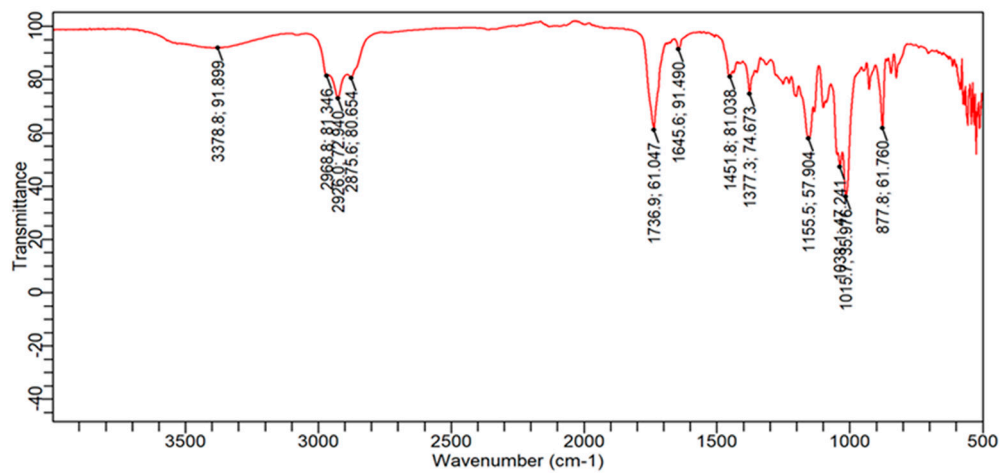


<sup>13</sup>C NMR  
(CDCl<sub>3</sub>, 400 MHz)

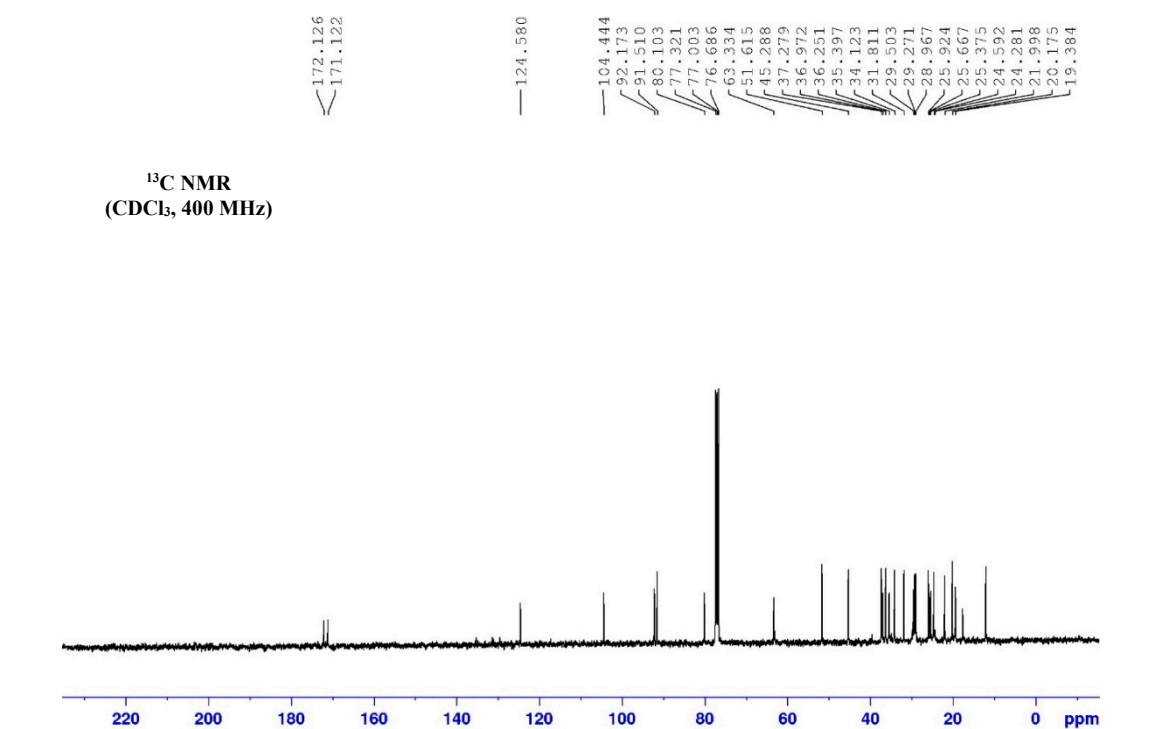
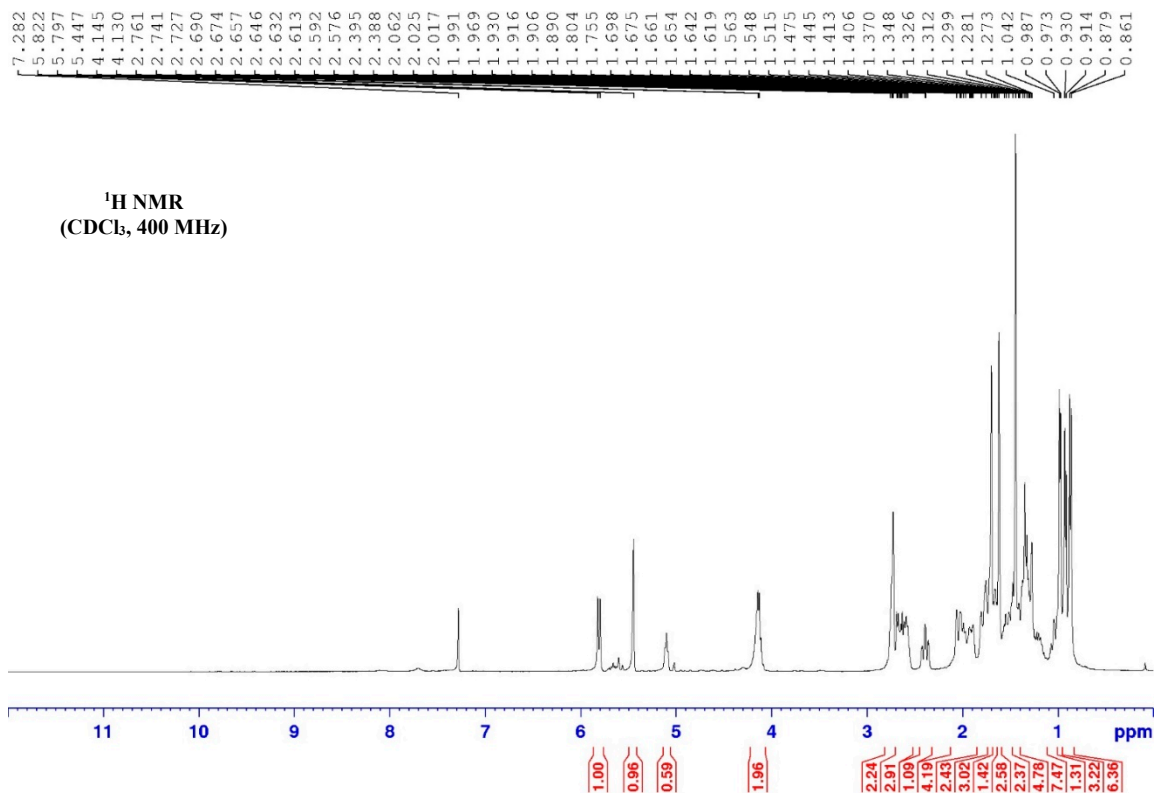
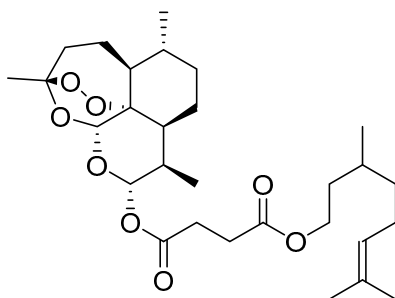


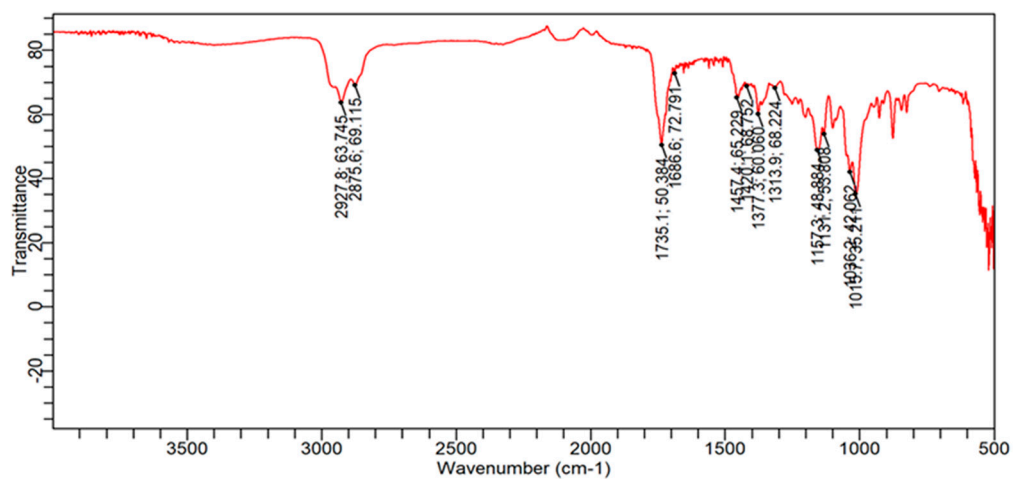
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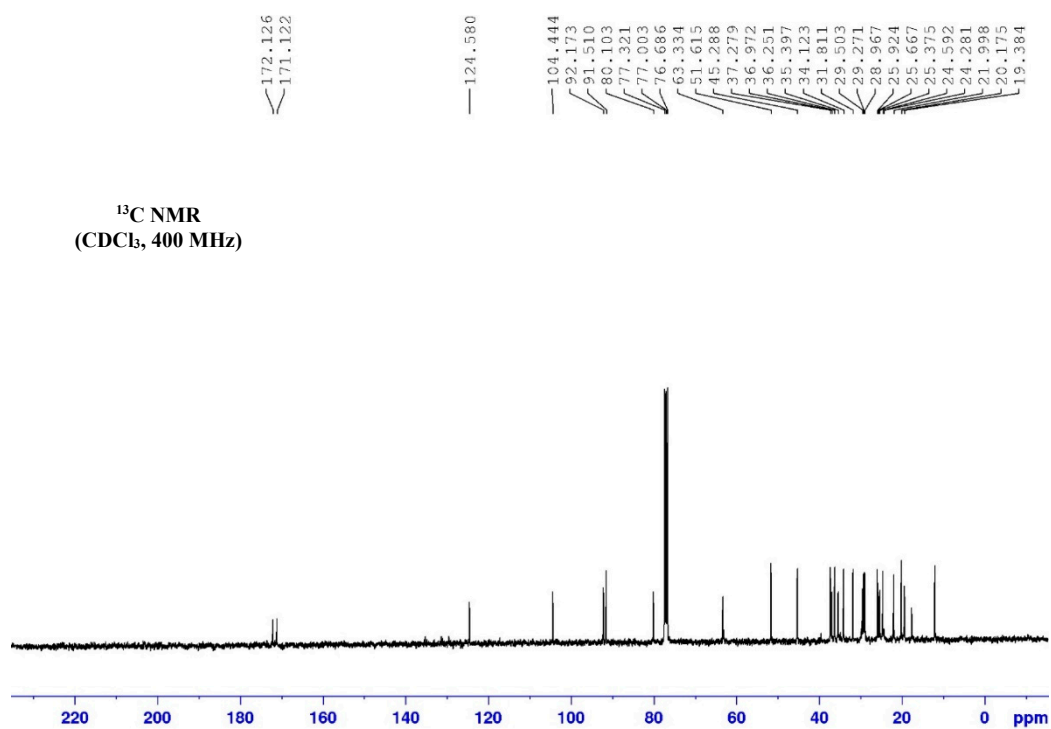
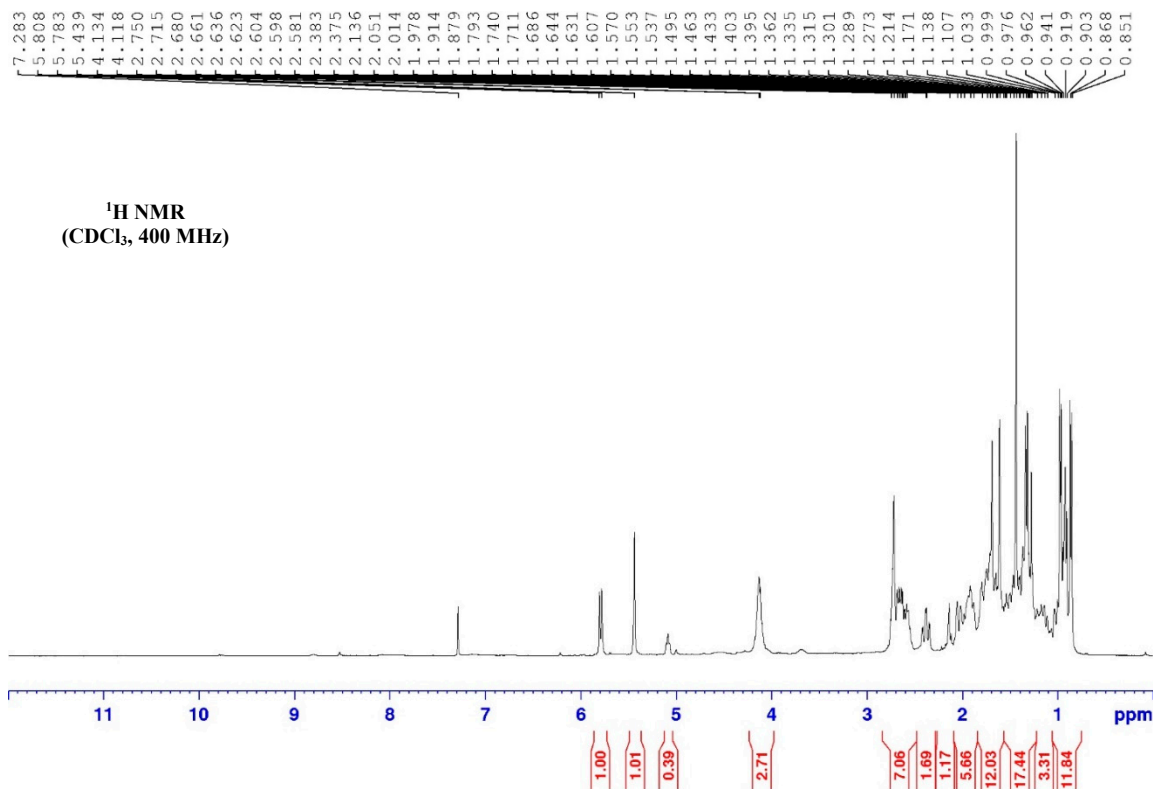
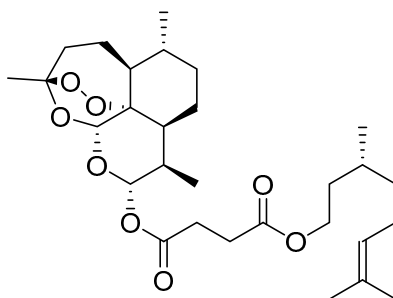


**Hybrid 10c**

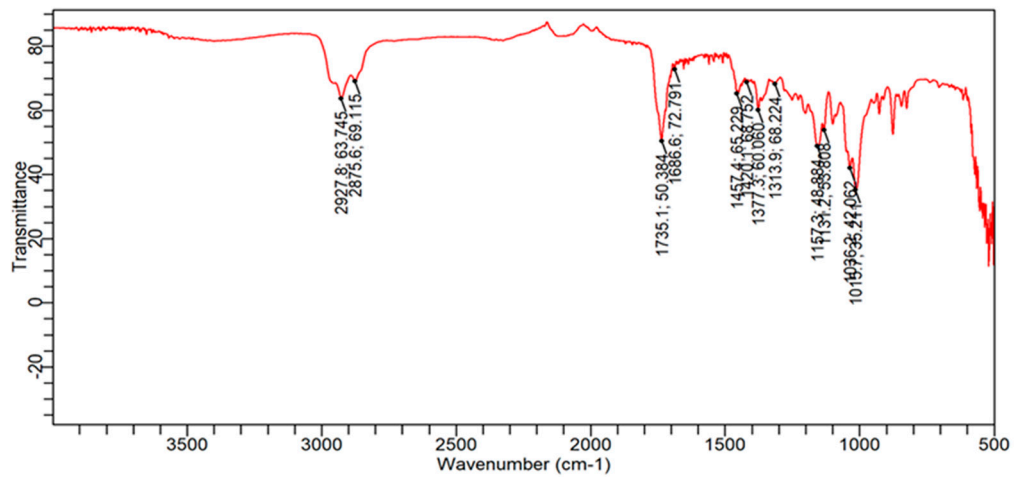




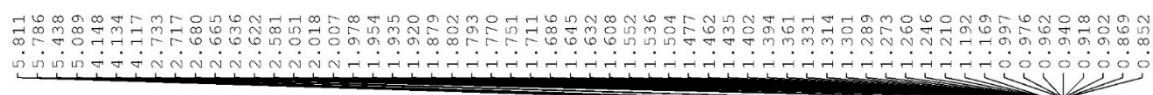
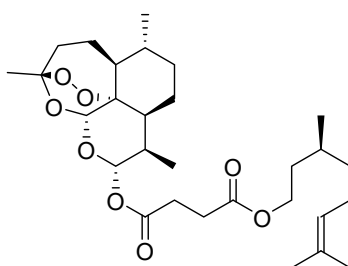
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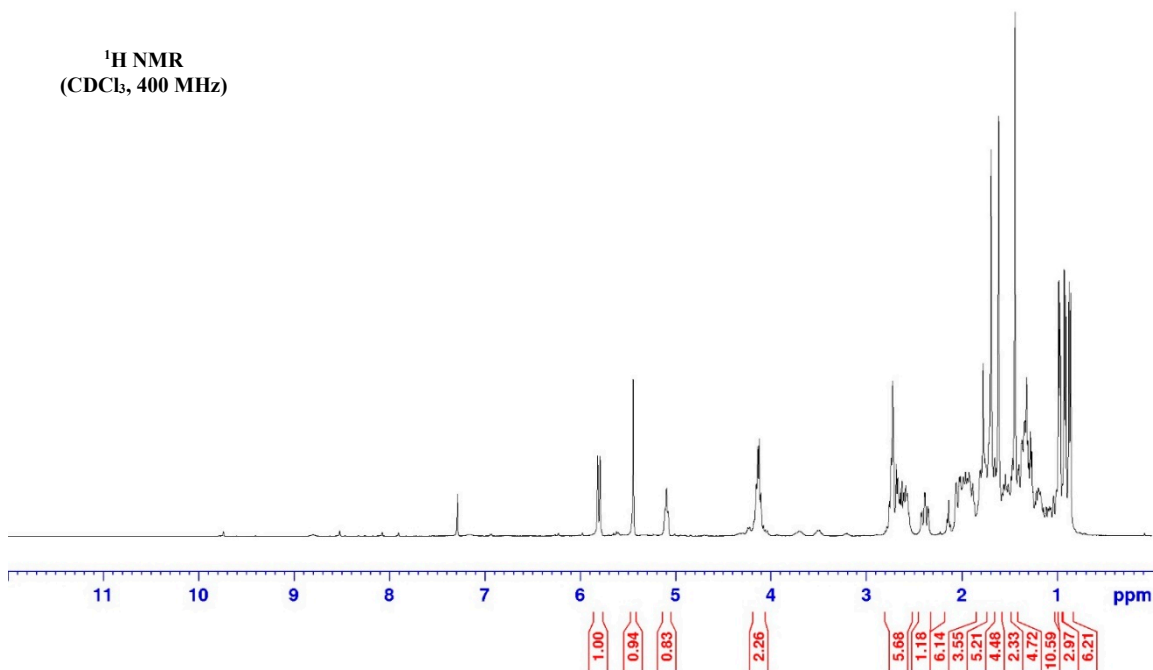




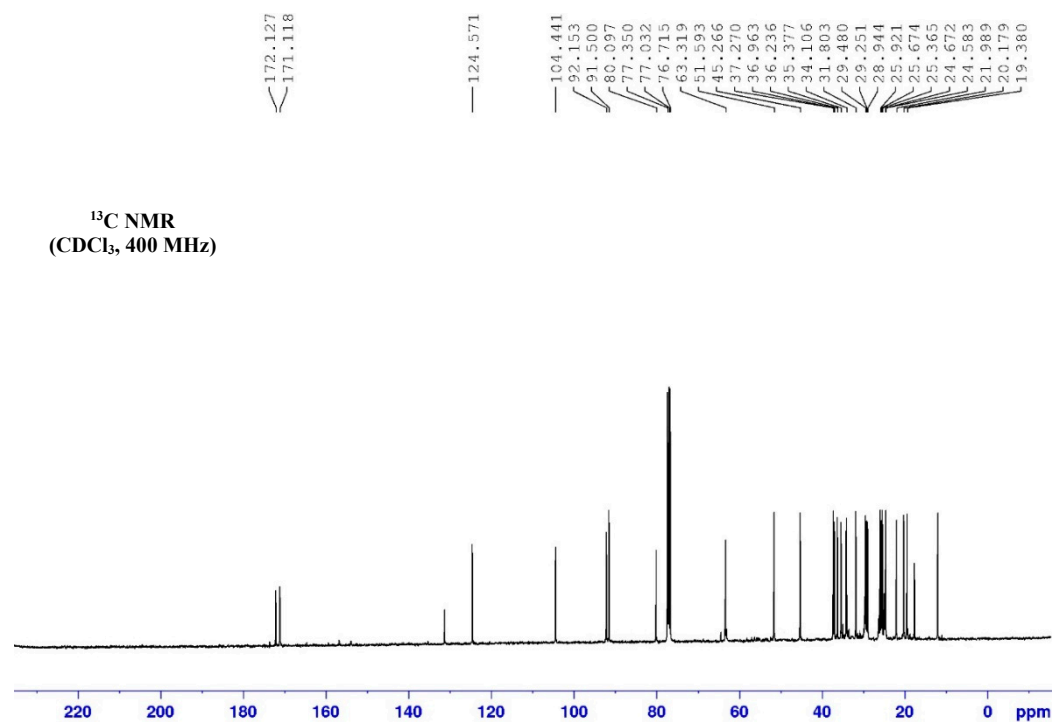
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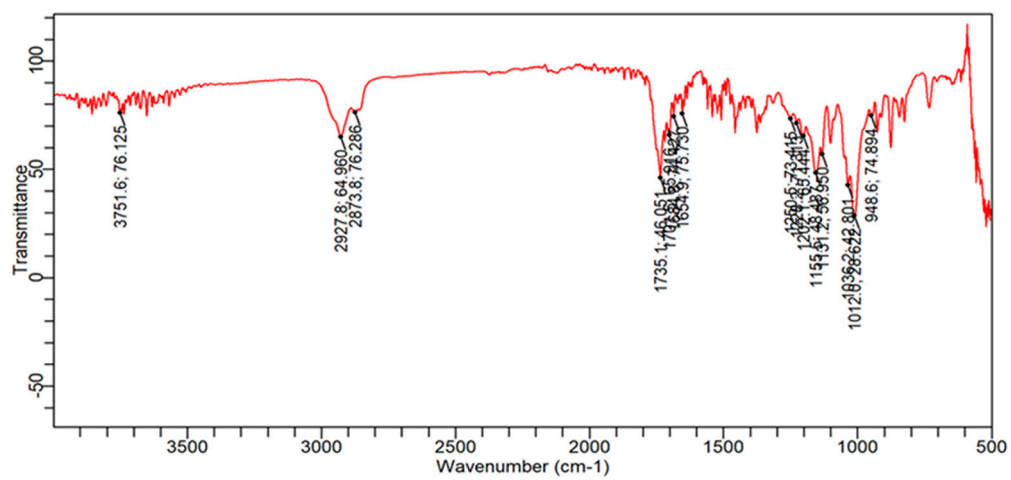


<sup>1</sup>H NMR  
(CDCl<sub>3</sub>, 400 MHz)

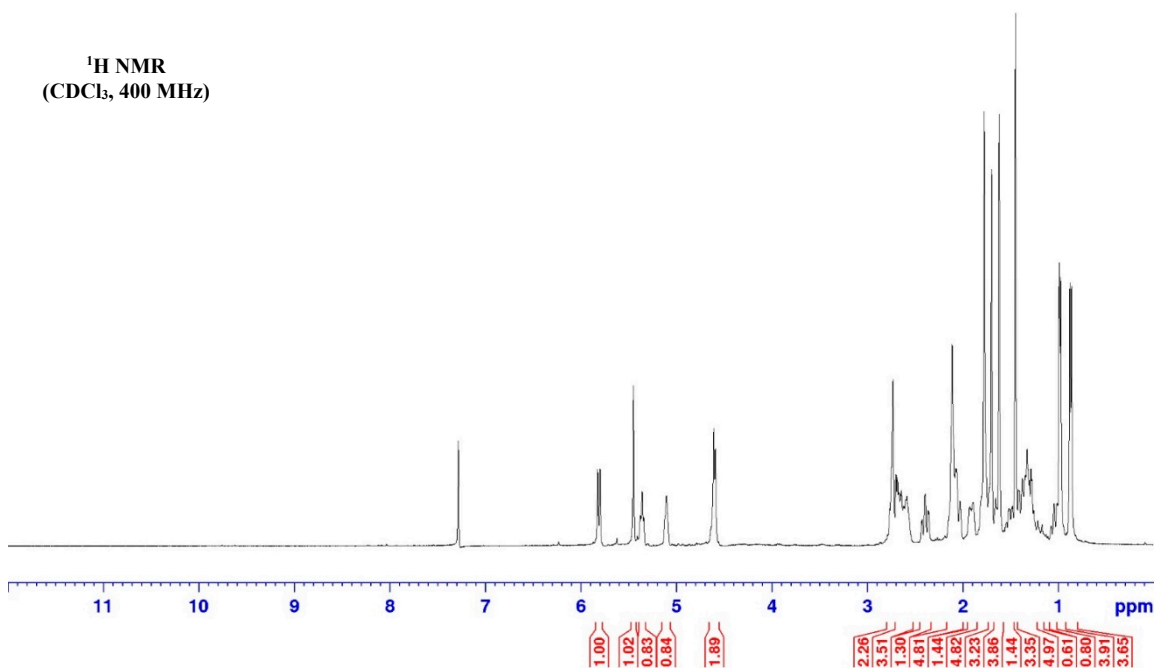
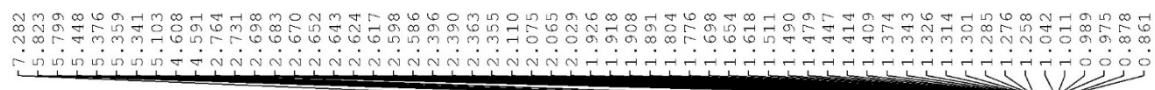
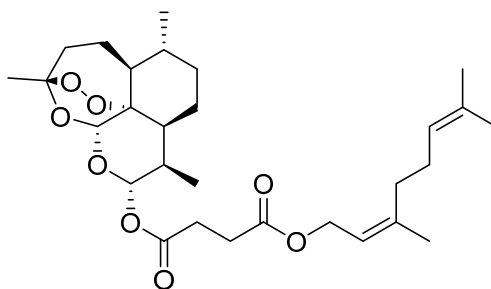


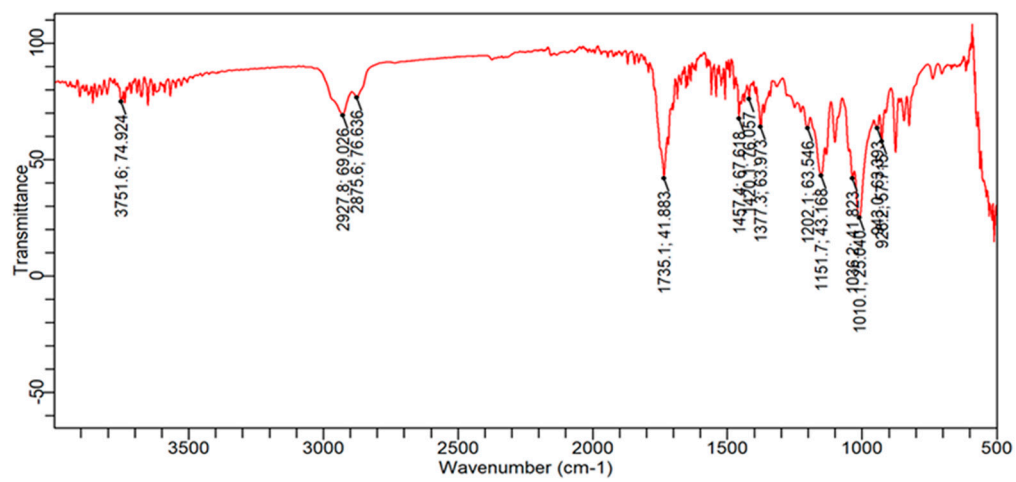
<sup>13</sup>C NMR  
(CDCl<sub>3</sub>, 400 MHz)



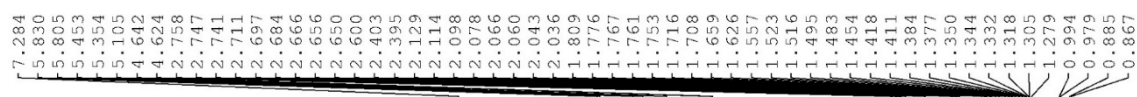
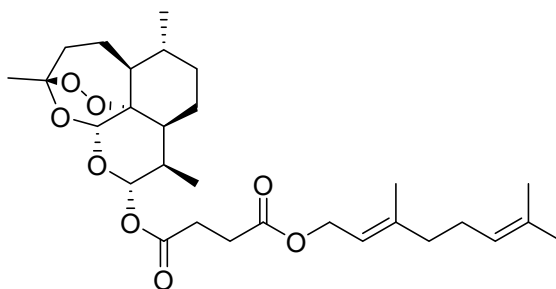


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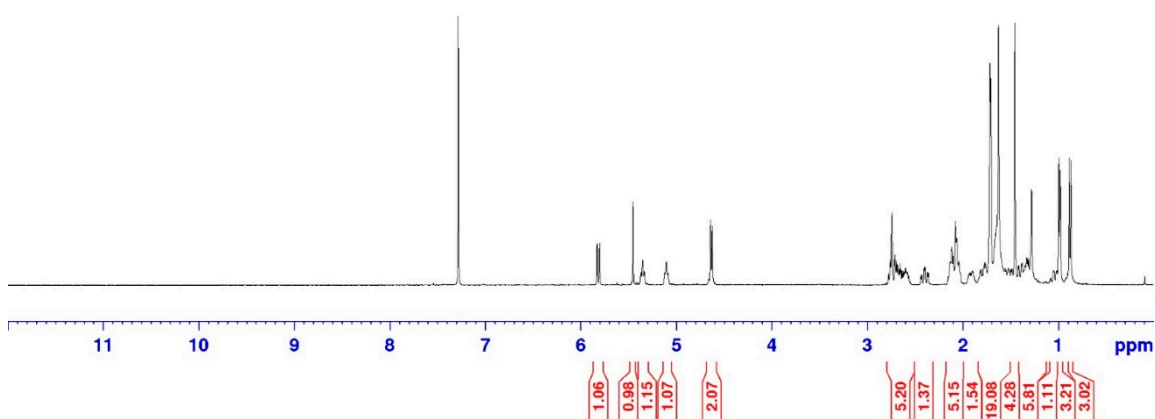




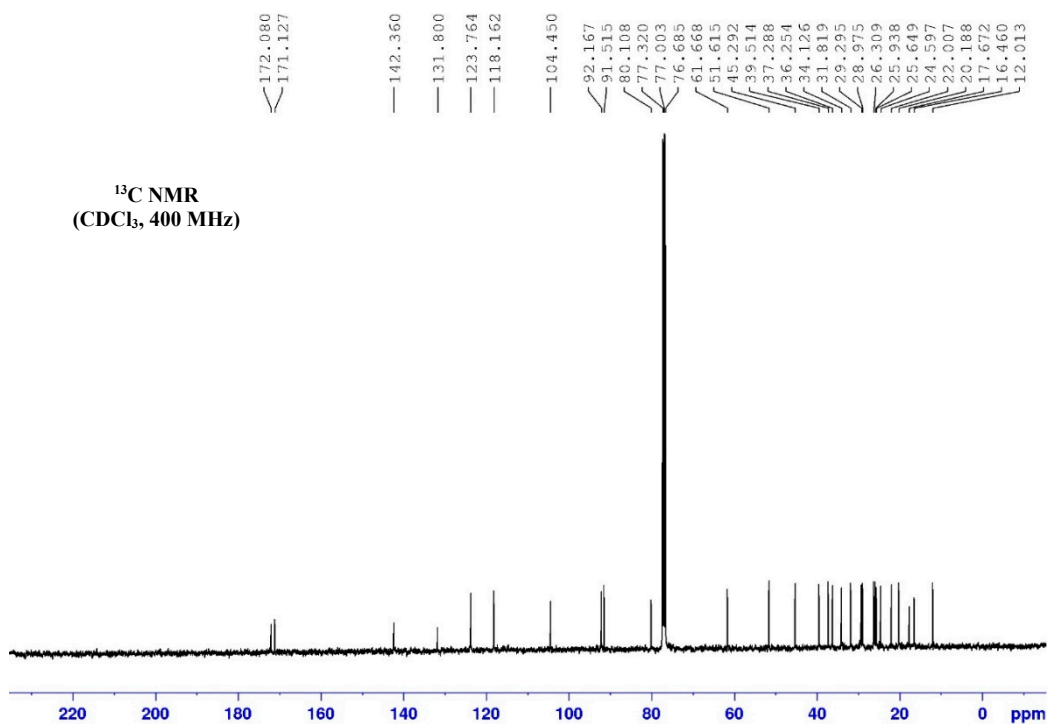
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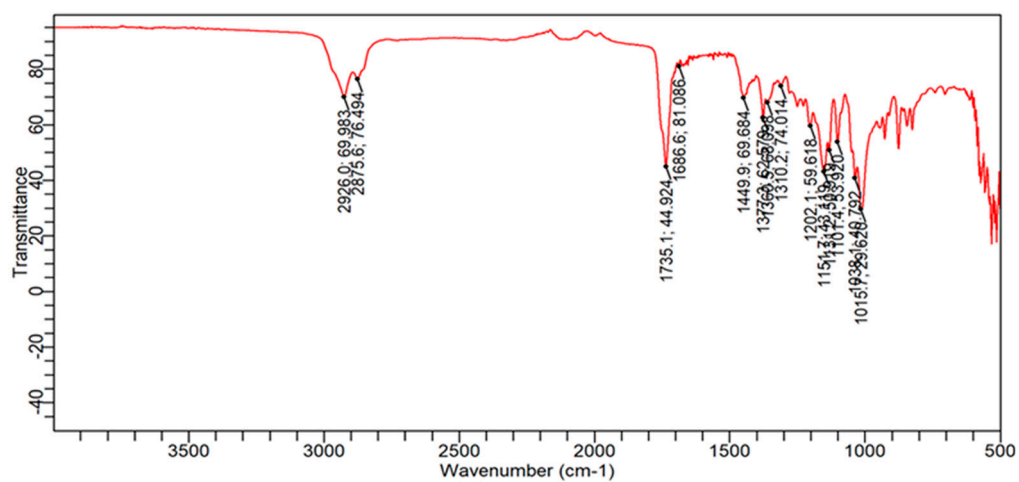


<sup>1</sup>H NMR  
(CDCl<sub>3</sub>, 400 MHz)

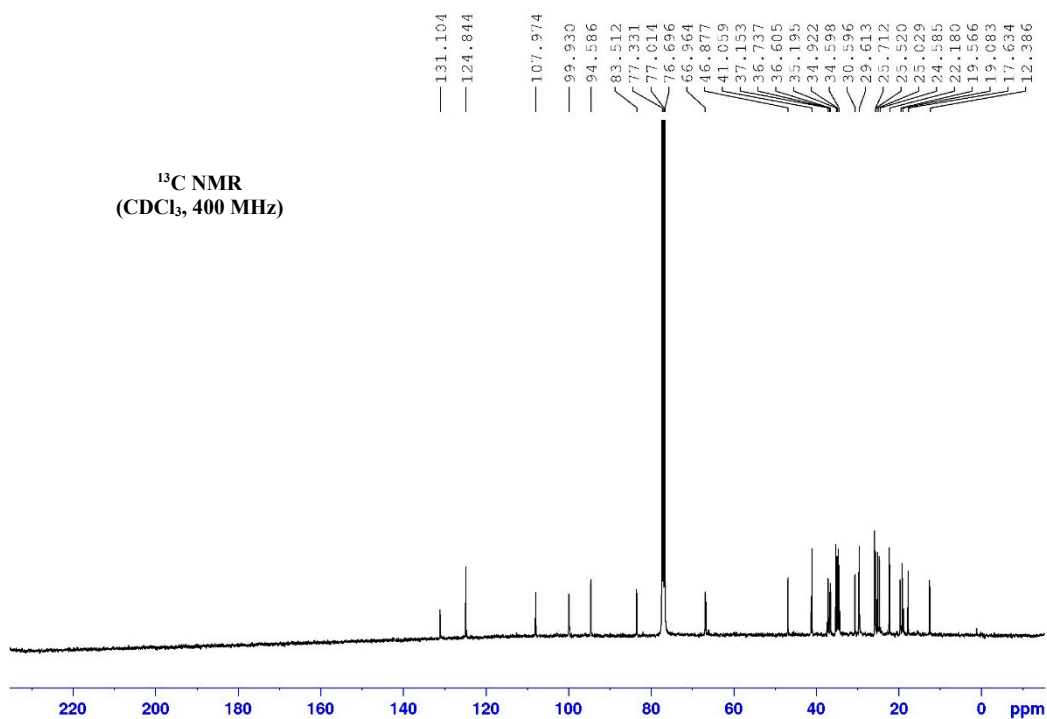
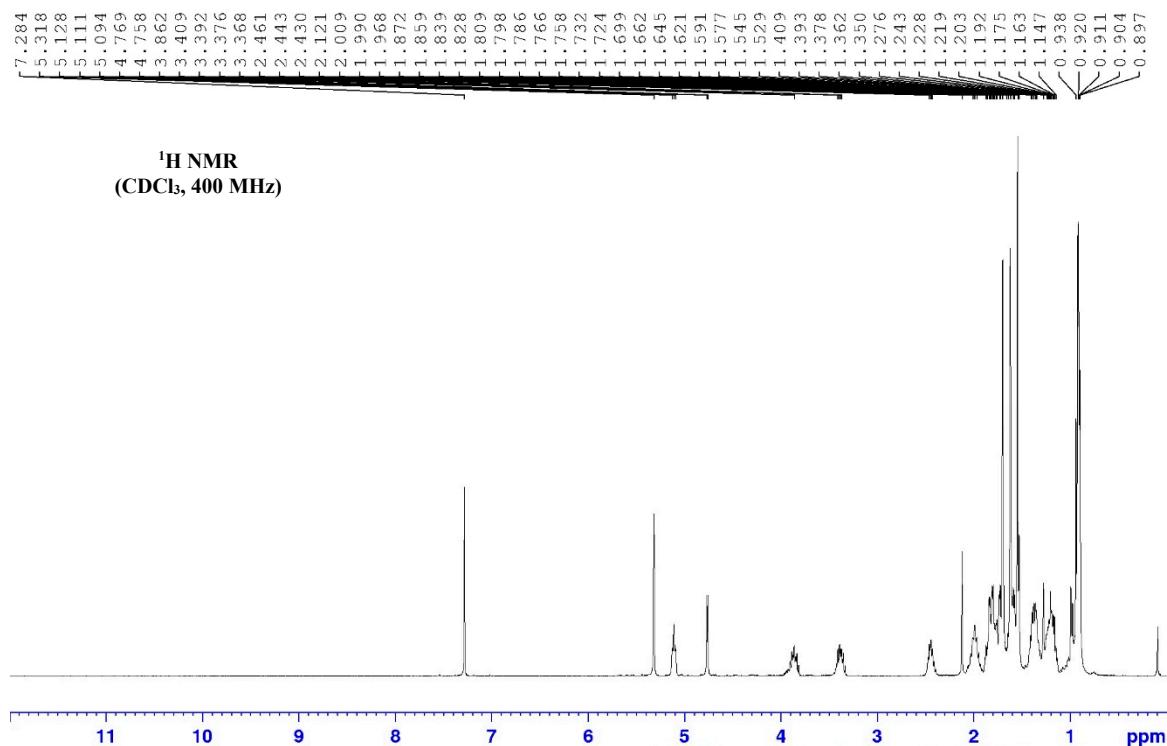
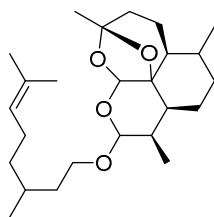


<sup>13</sup>C NMR  
(CDCl<sub>3</sub>, 400 MHz)





**2-deoxy-artemisinin derivatives 11c**





2-deoxy-artemisinin derivatives 11f

