Studies on the Synthesis of Apoptolidin: Synthesis of a C_1-C_{27} Fragment of Apoptolidin D

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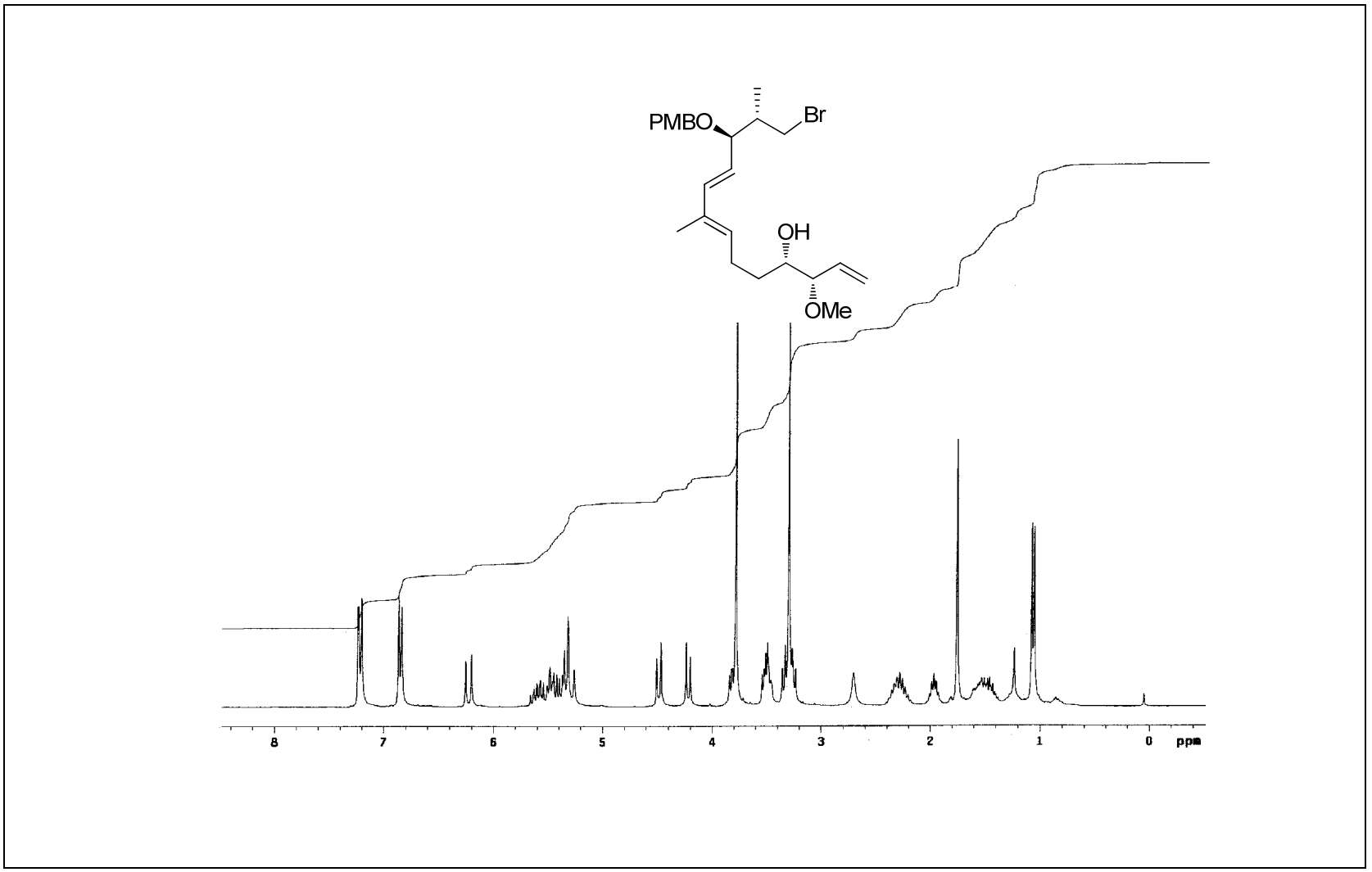
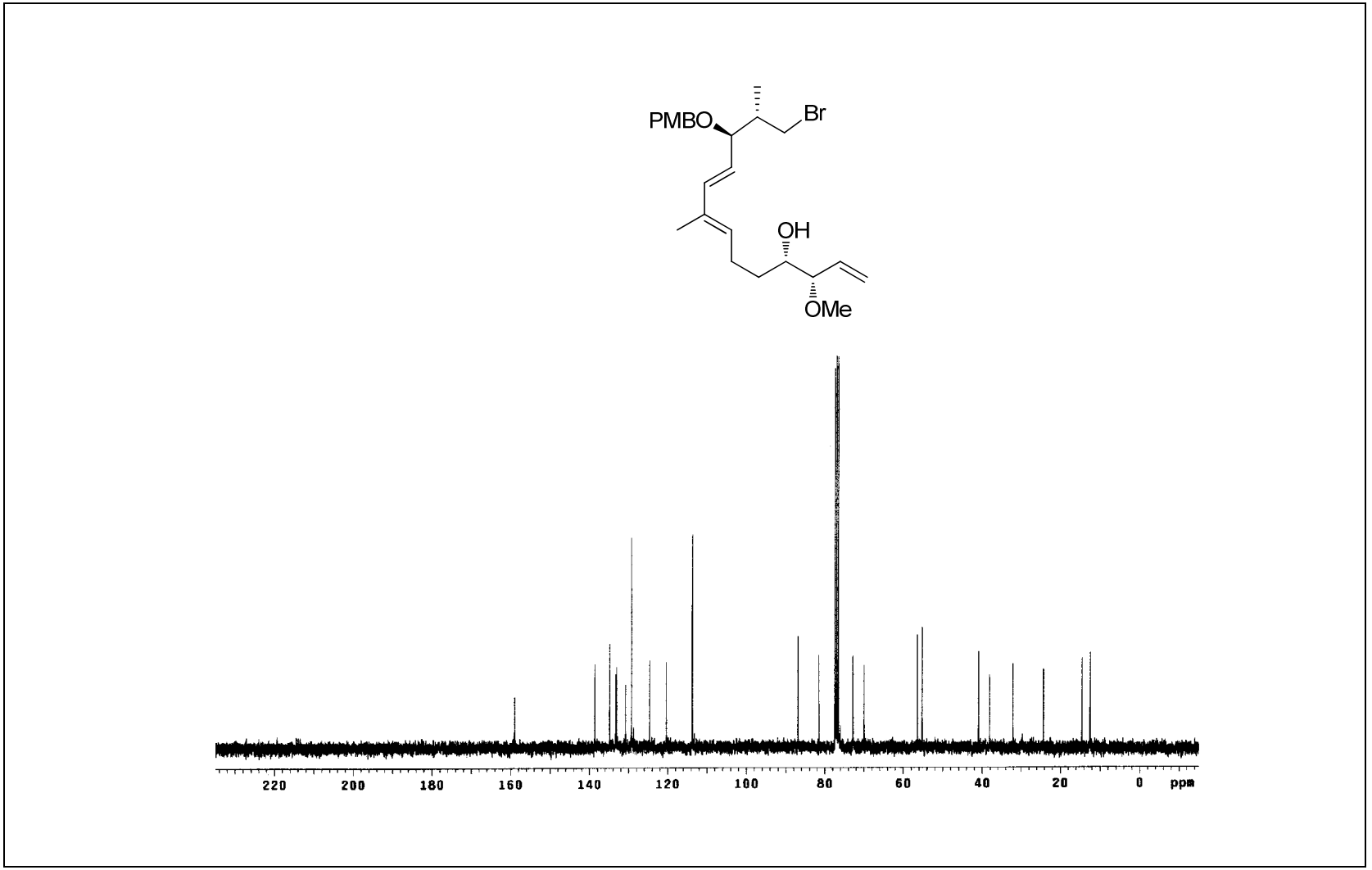
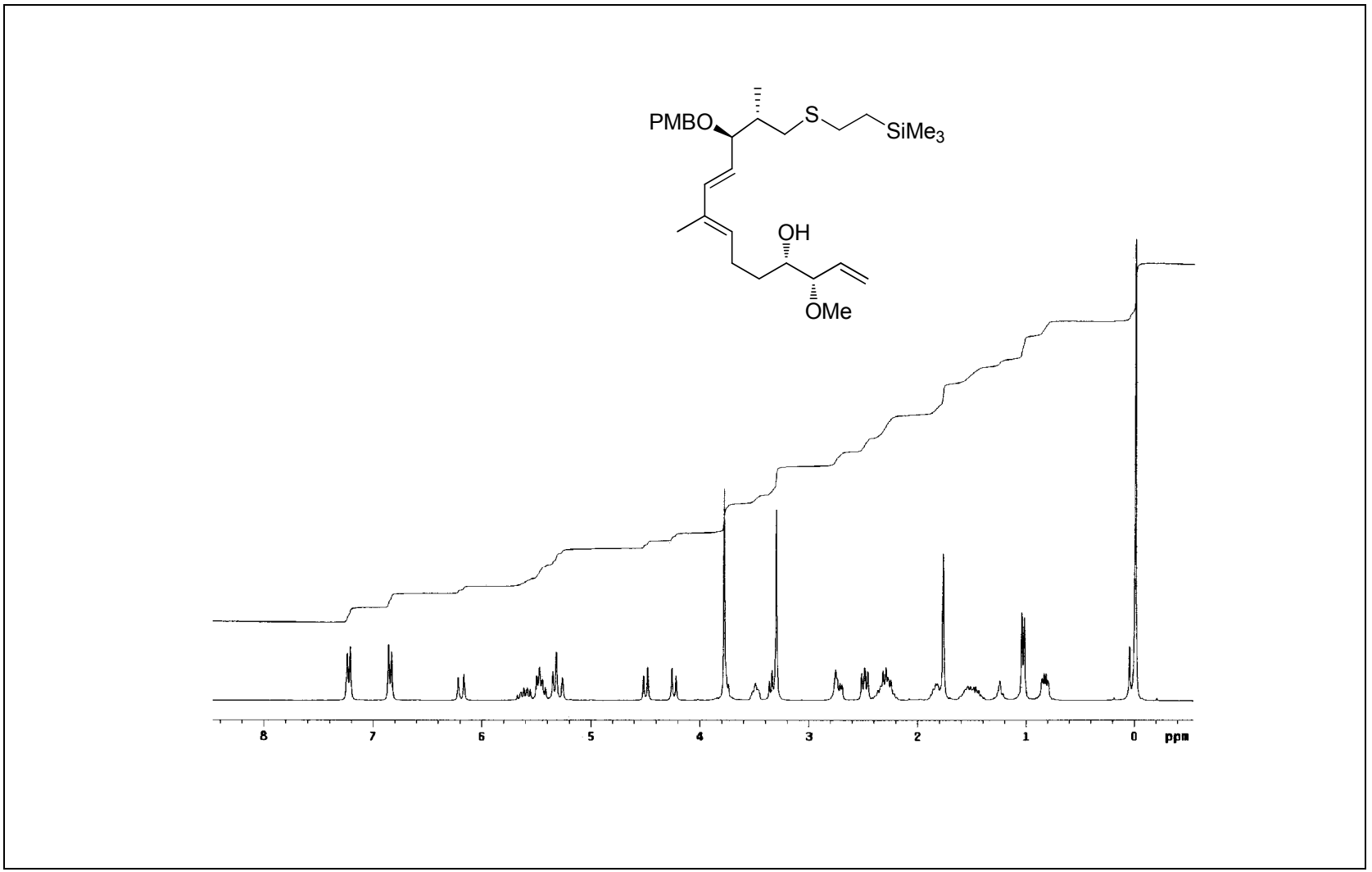


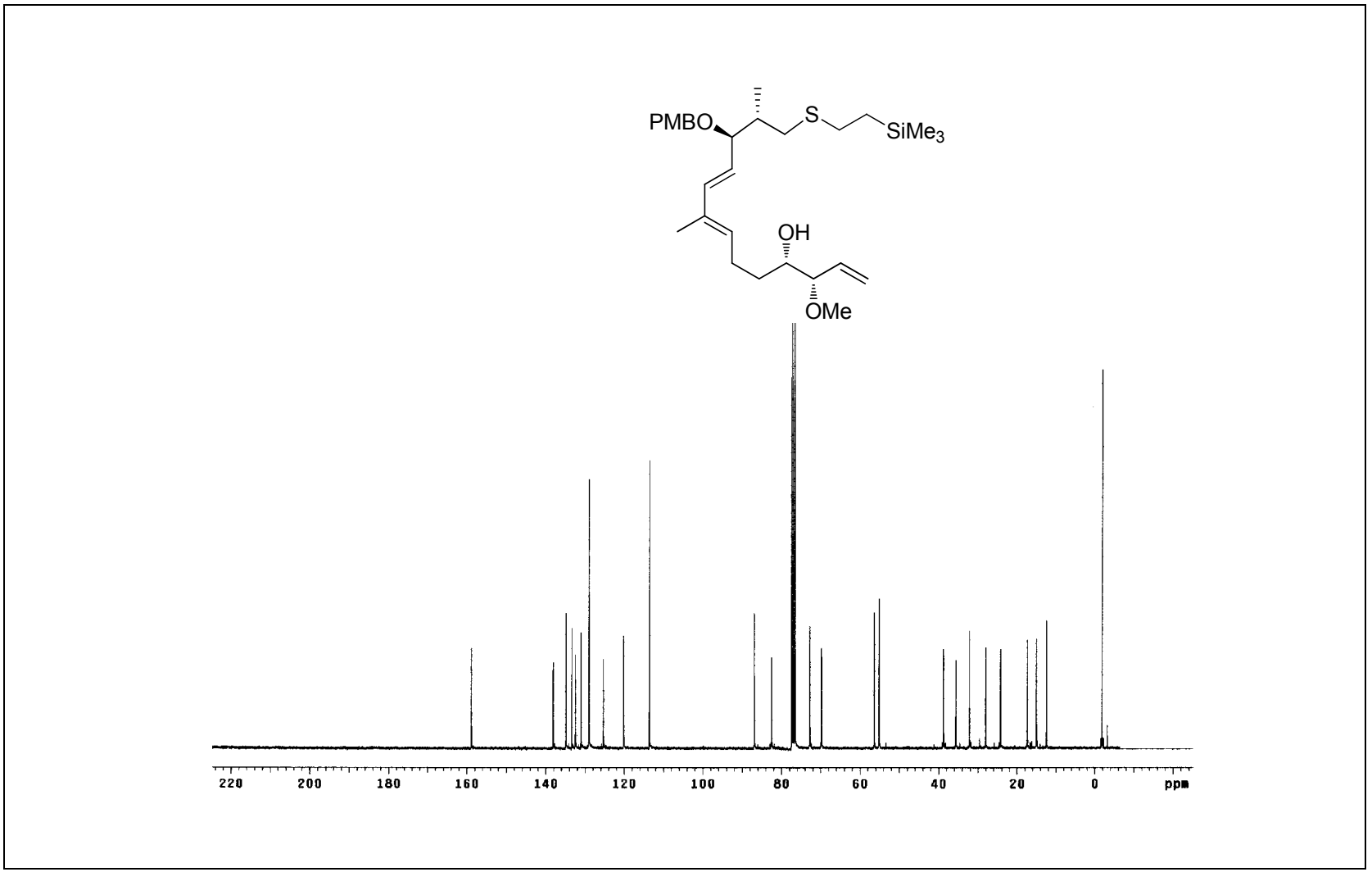
300 MHz ^{1}H NMR of compound **9** in $CDCl_3$



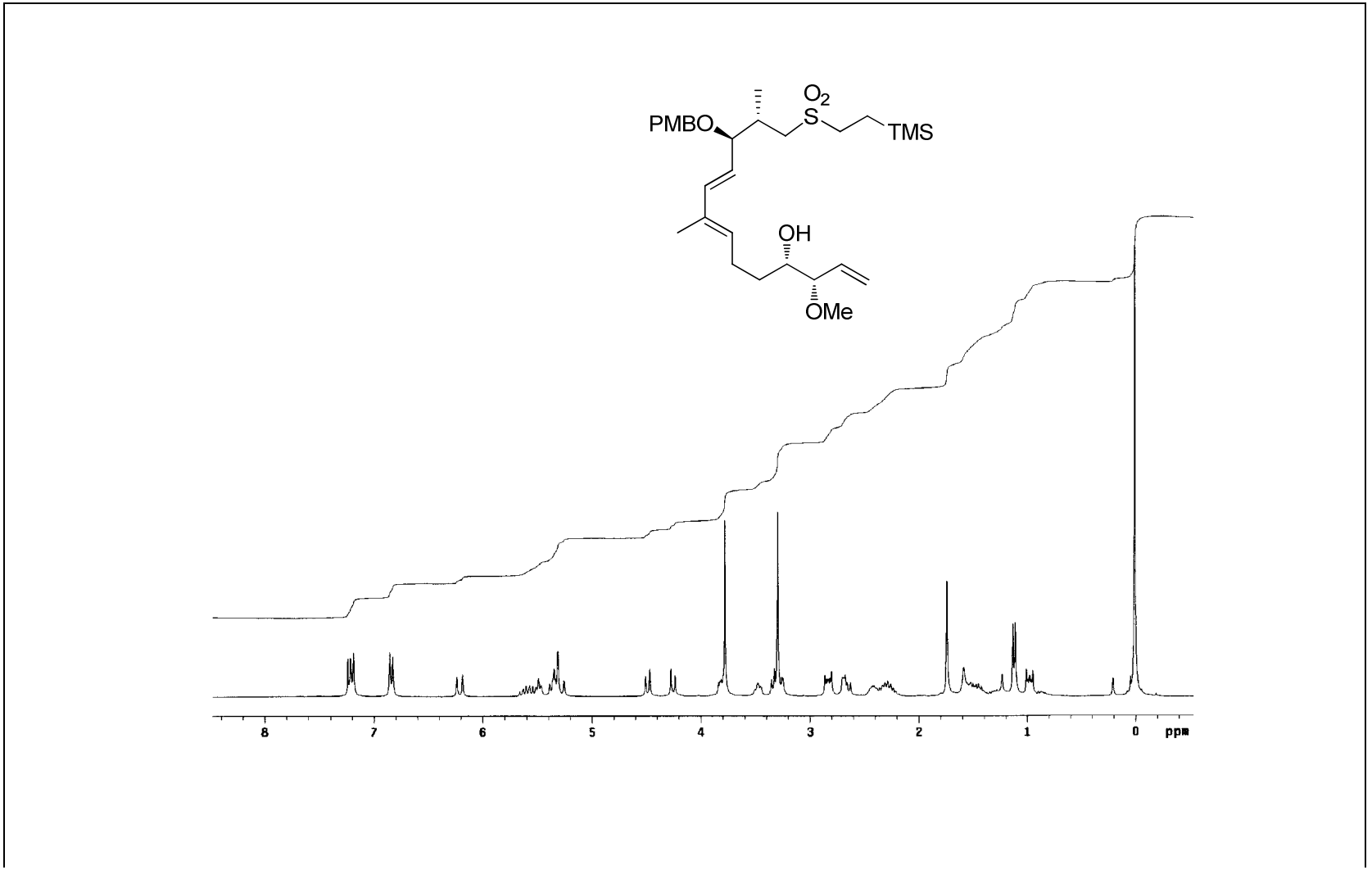
75 MHz ^{13}C NMR of compound **9** in $CDCl_3$



300 MHz ^{1}H NMR of compound **10** in $CDCl_3$



75 MHz ^{13}C NMR of compound **10** in $CDCl_3$



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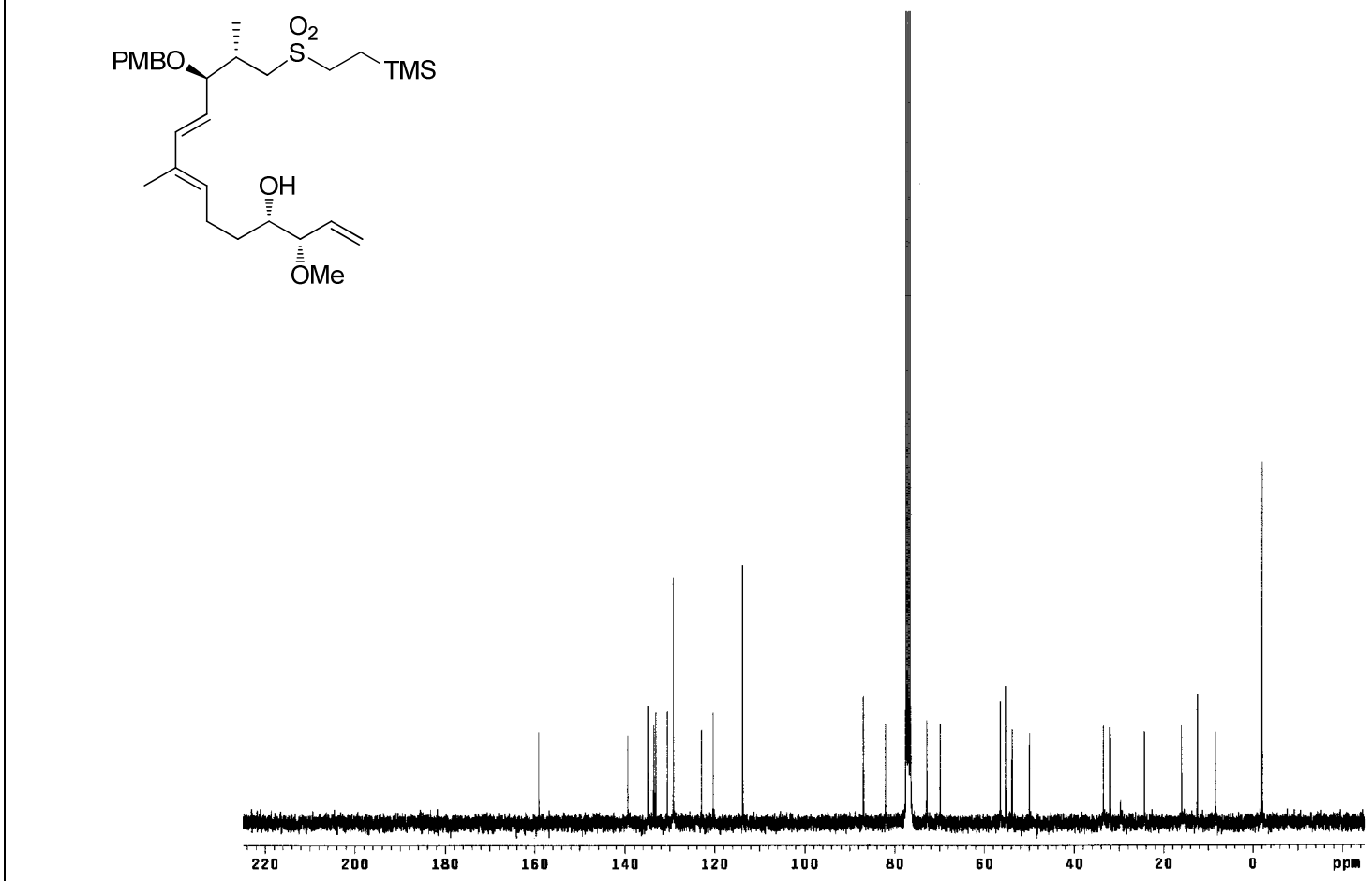

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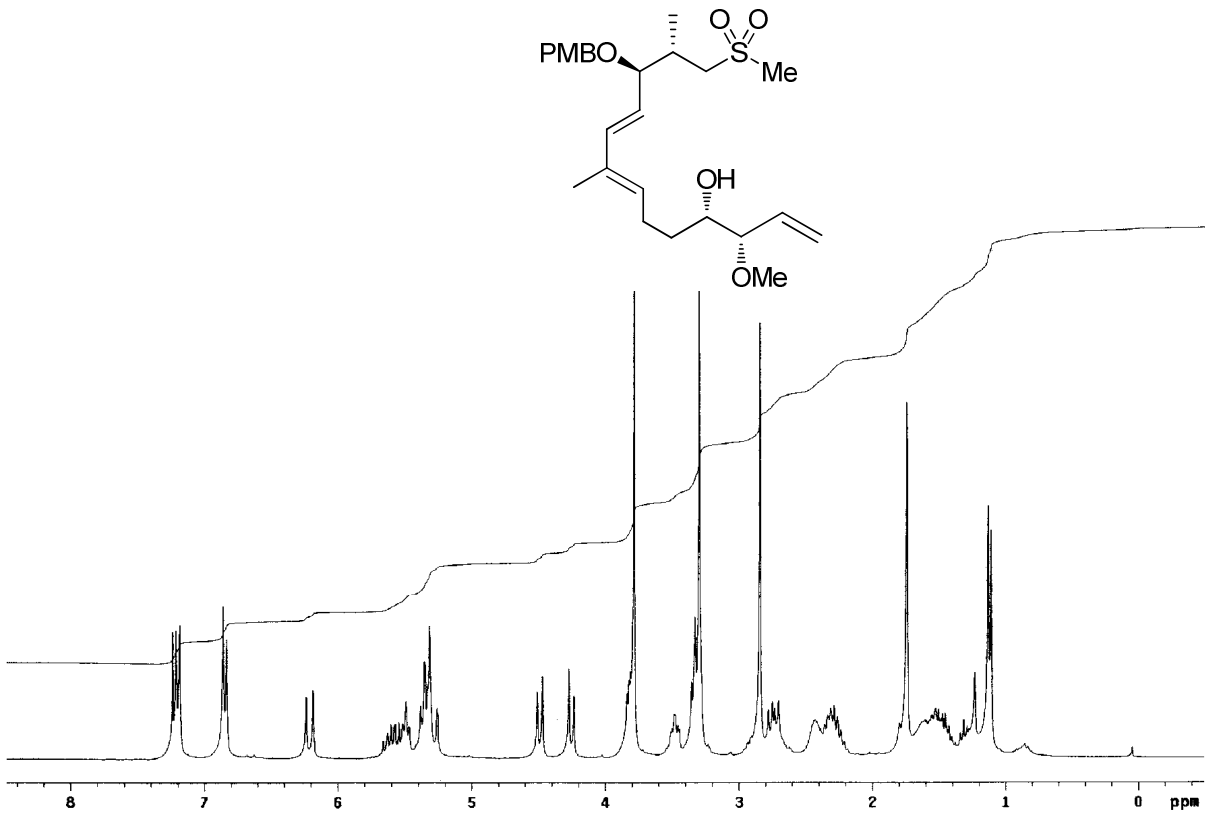

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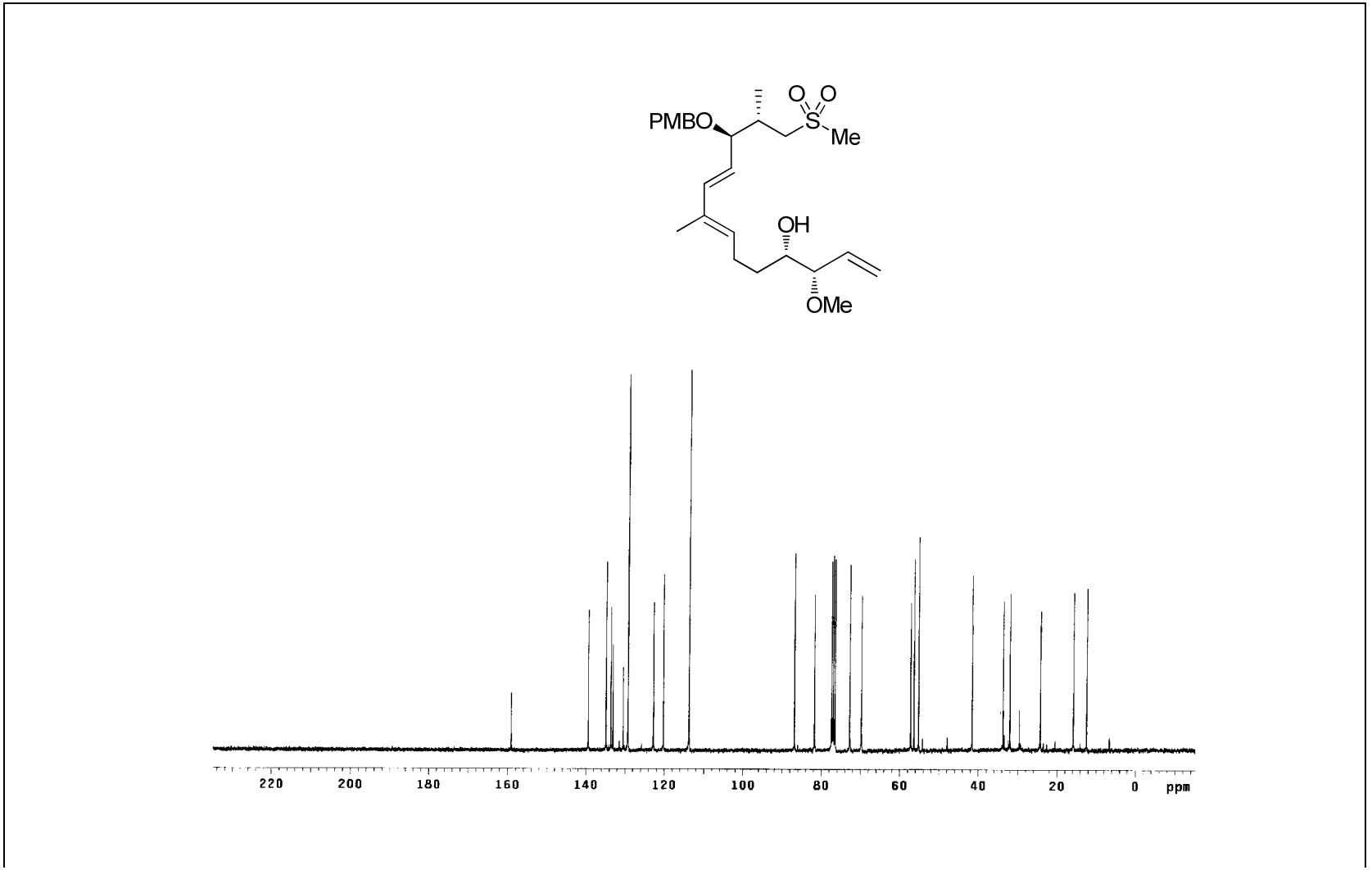

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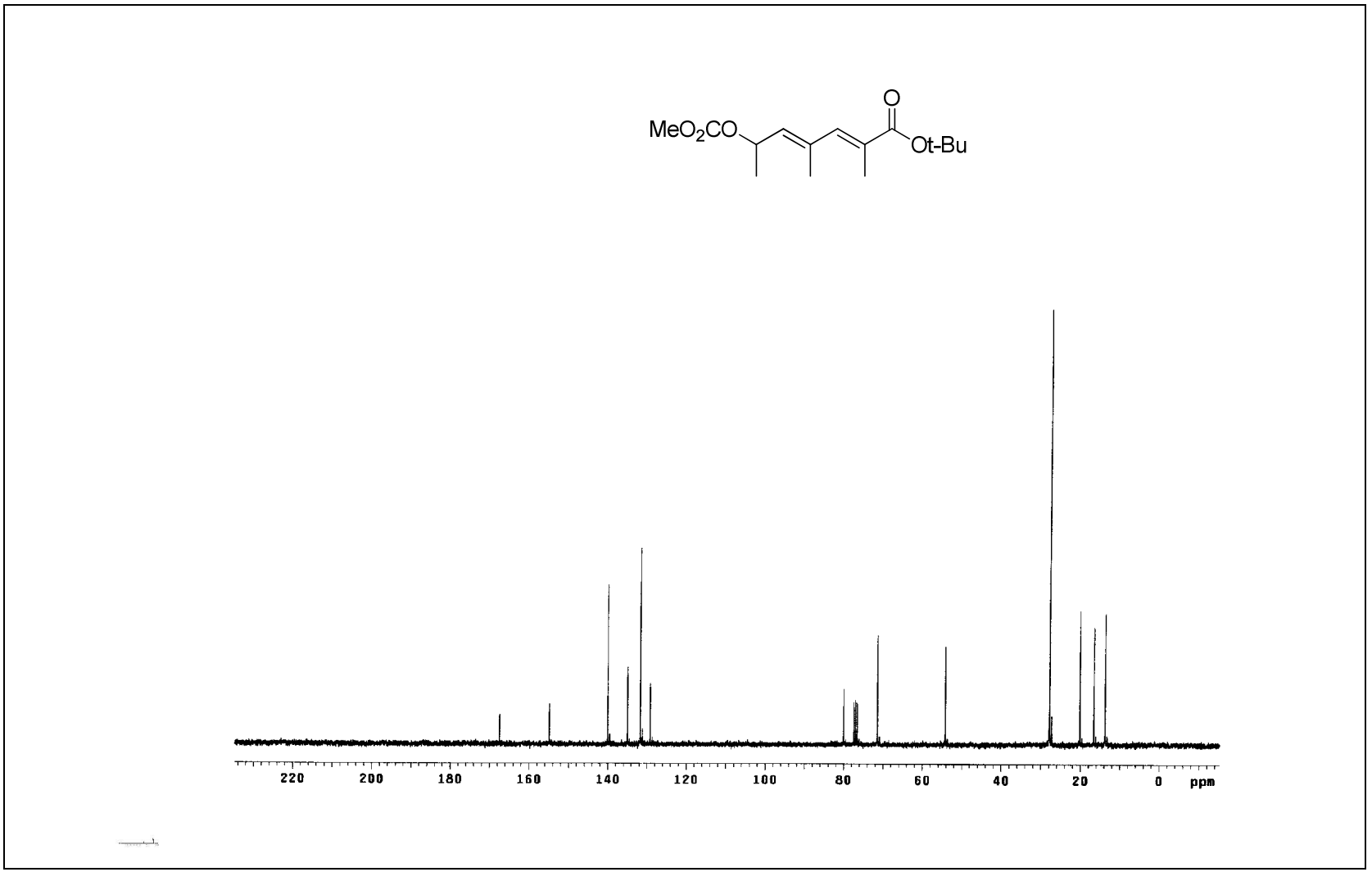

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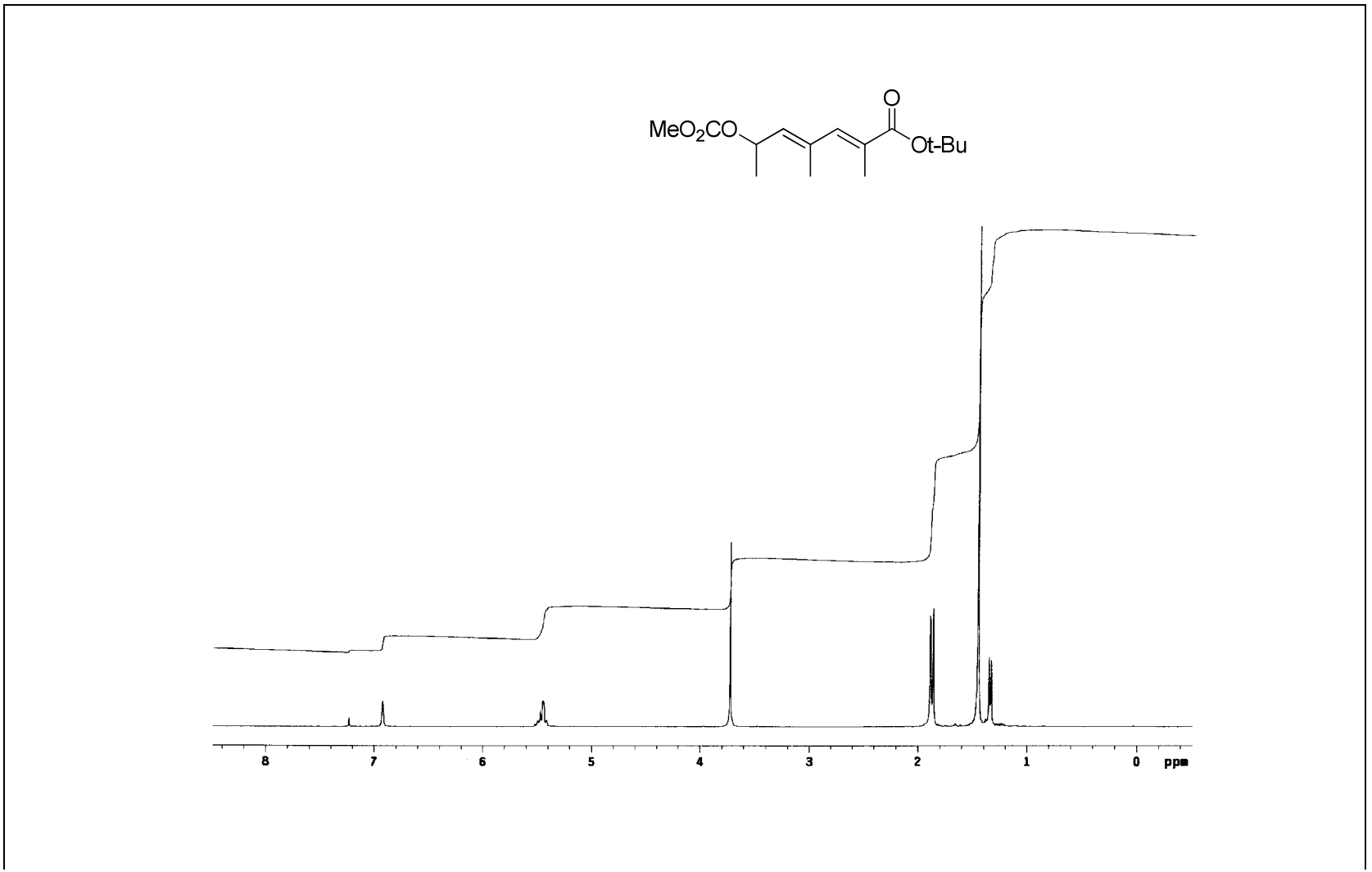

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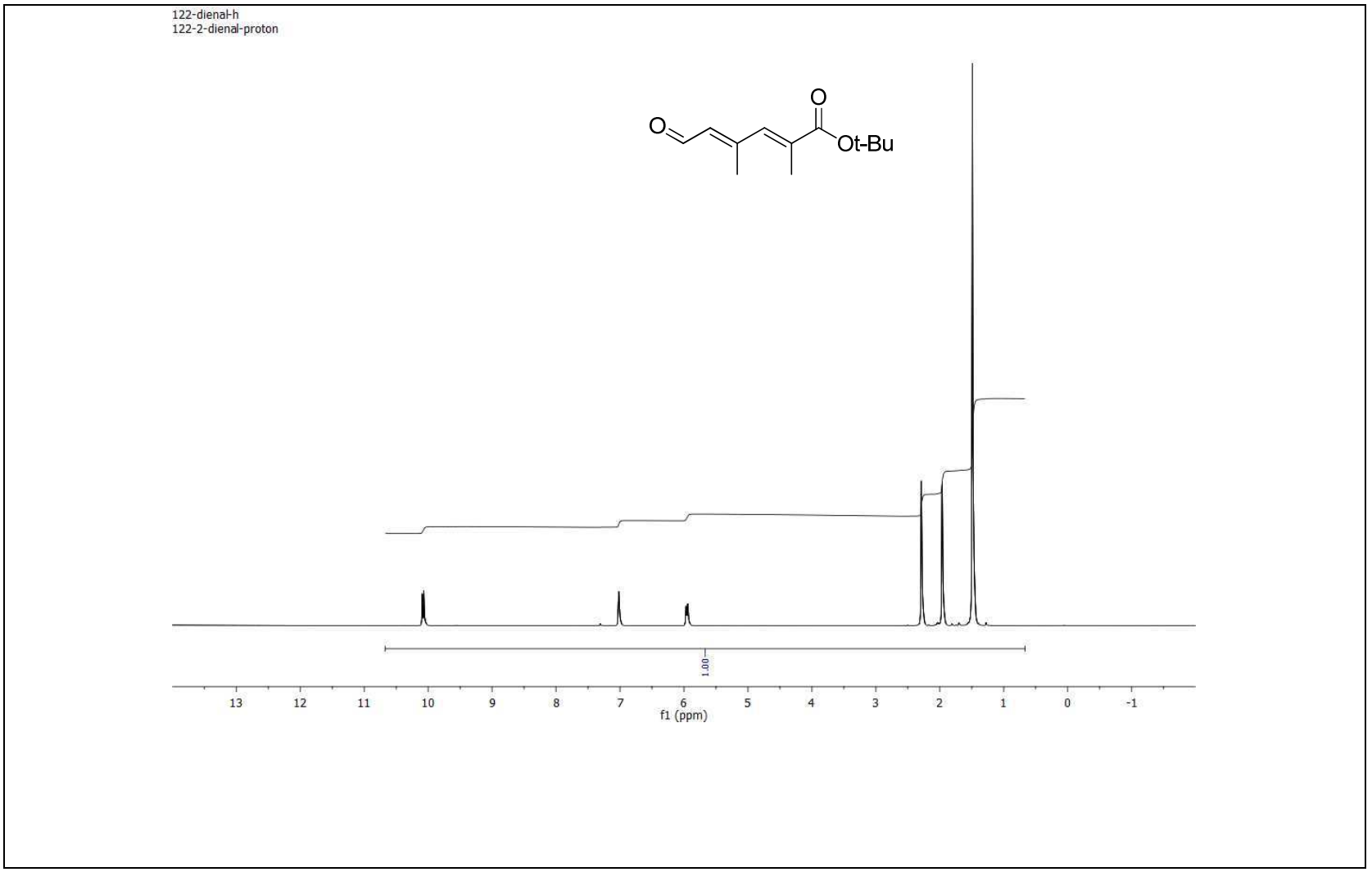

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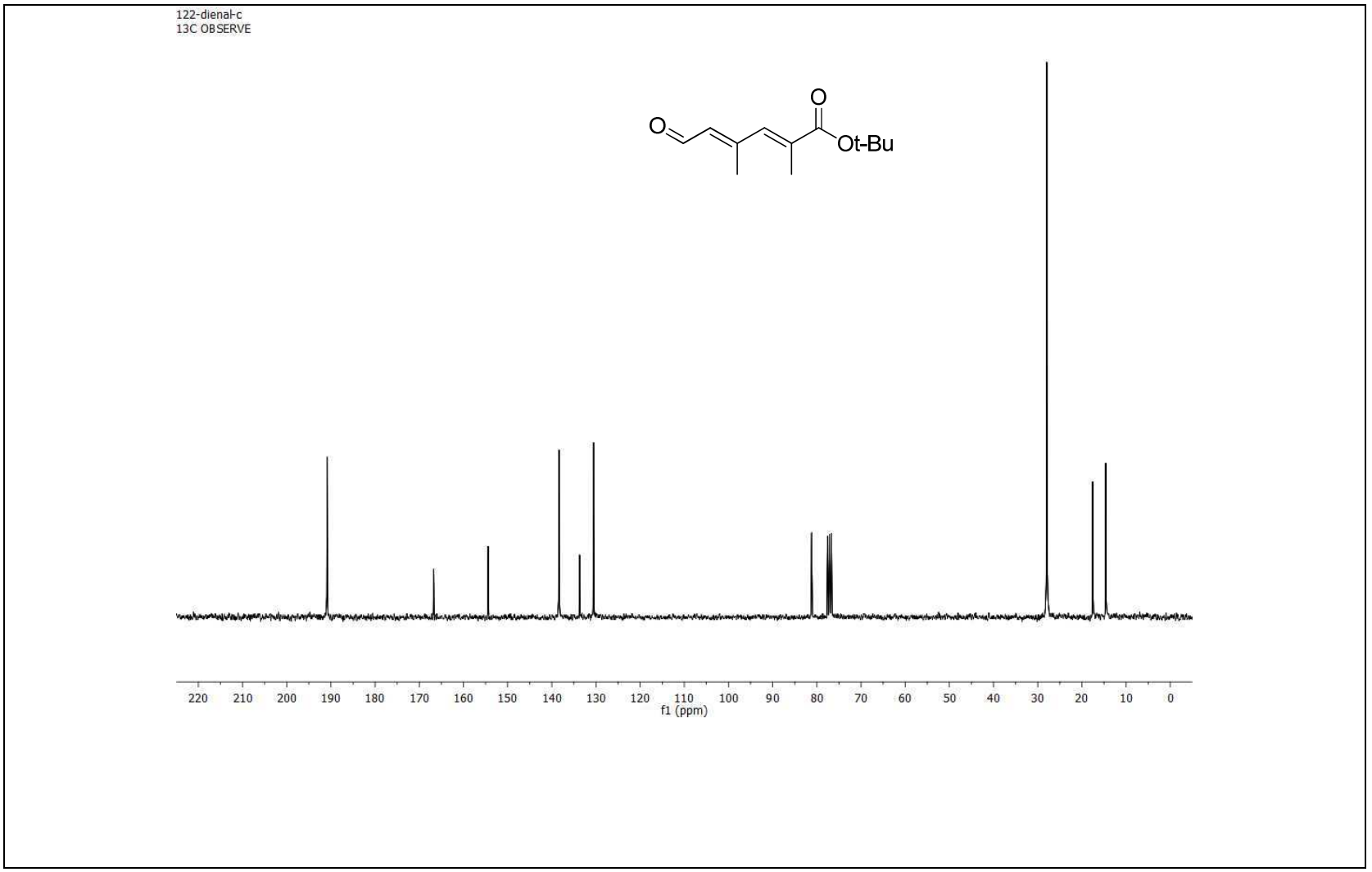

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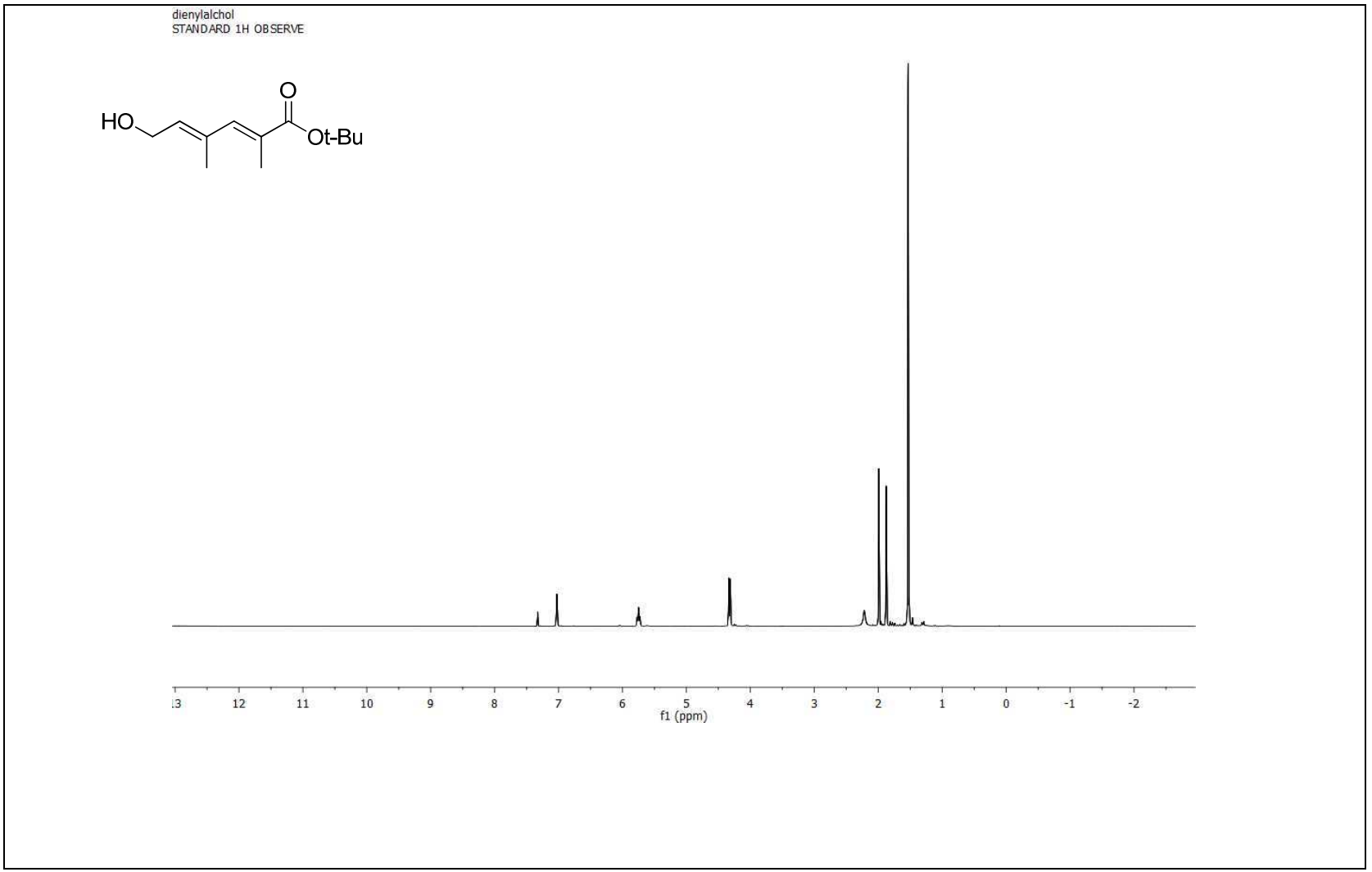

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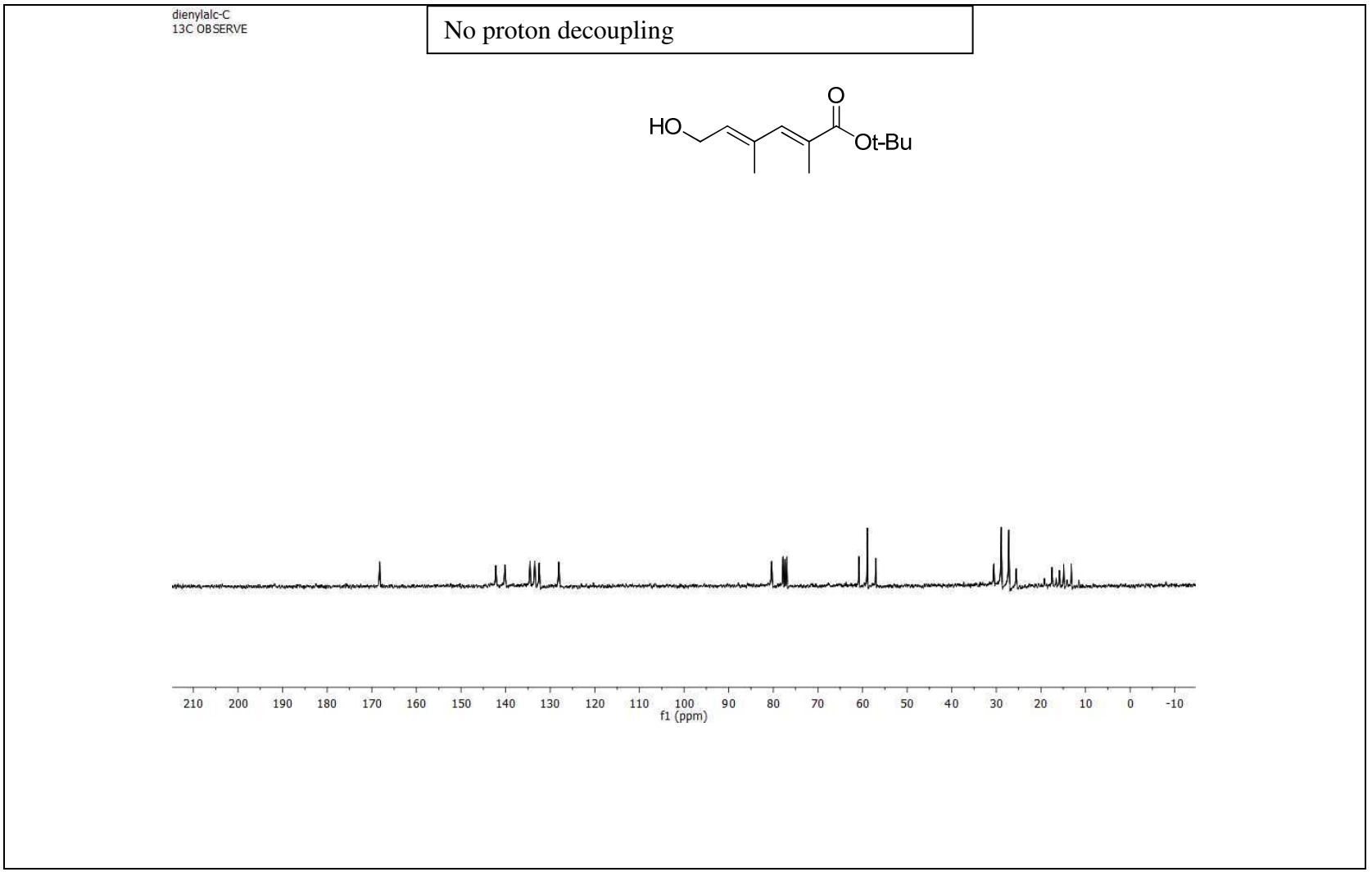
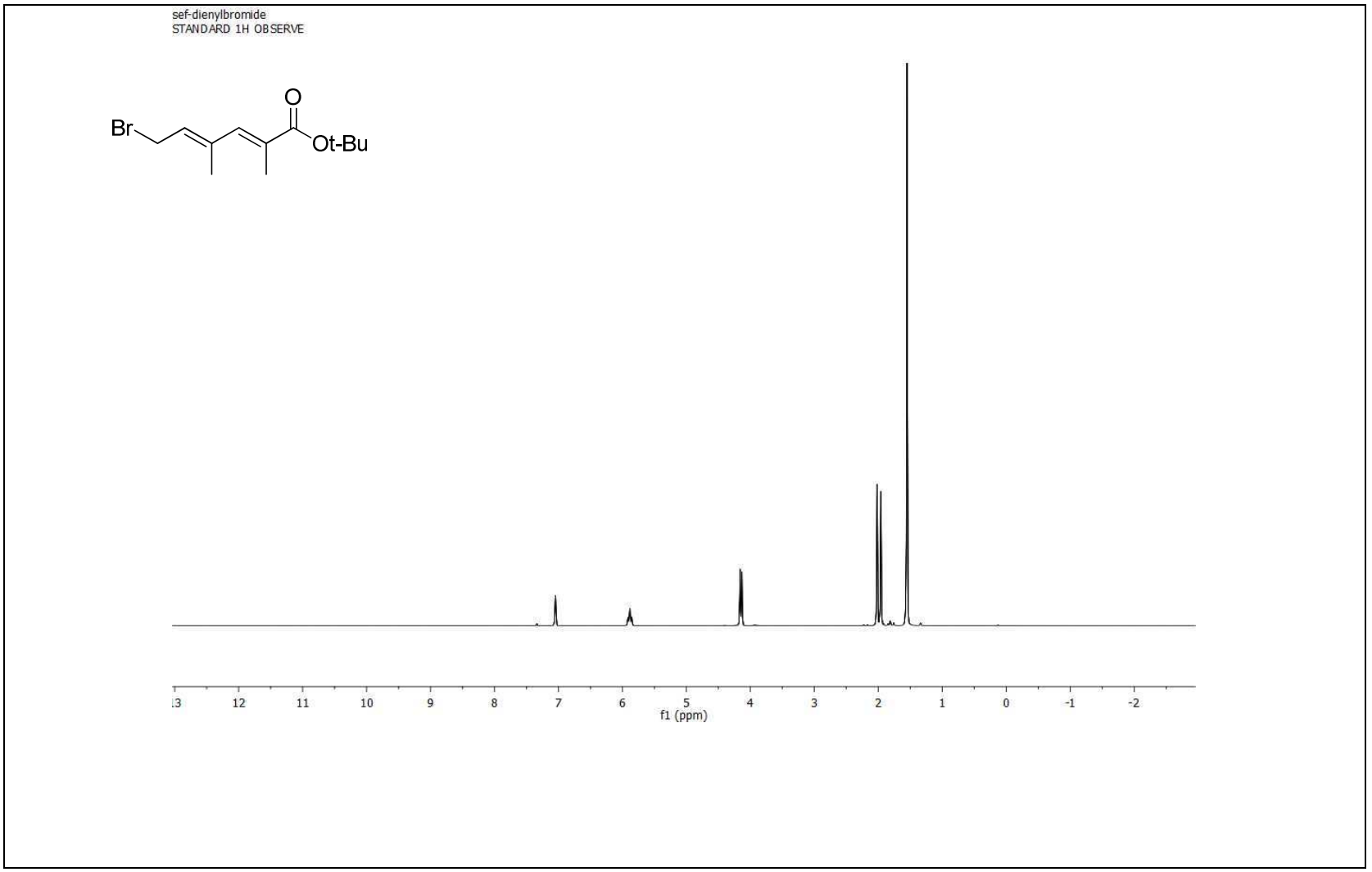


75 MHz ^{13}C NMR of compound **16** in $CDCl_3$



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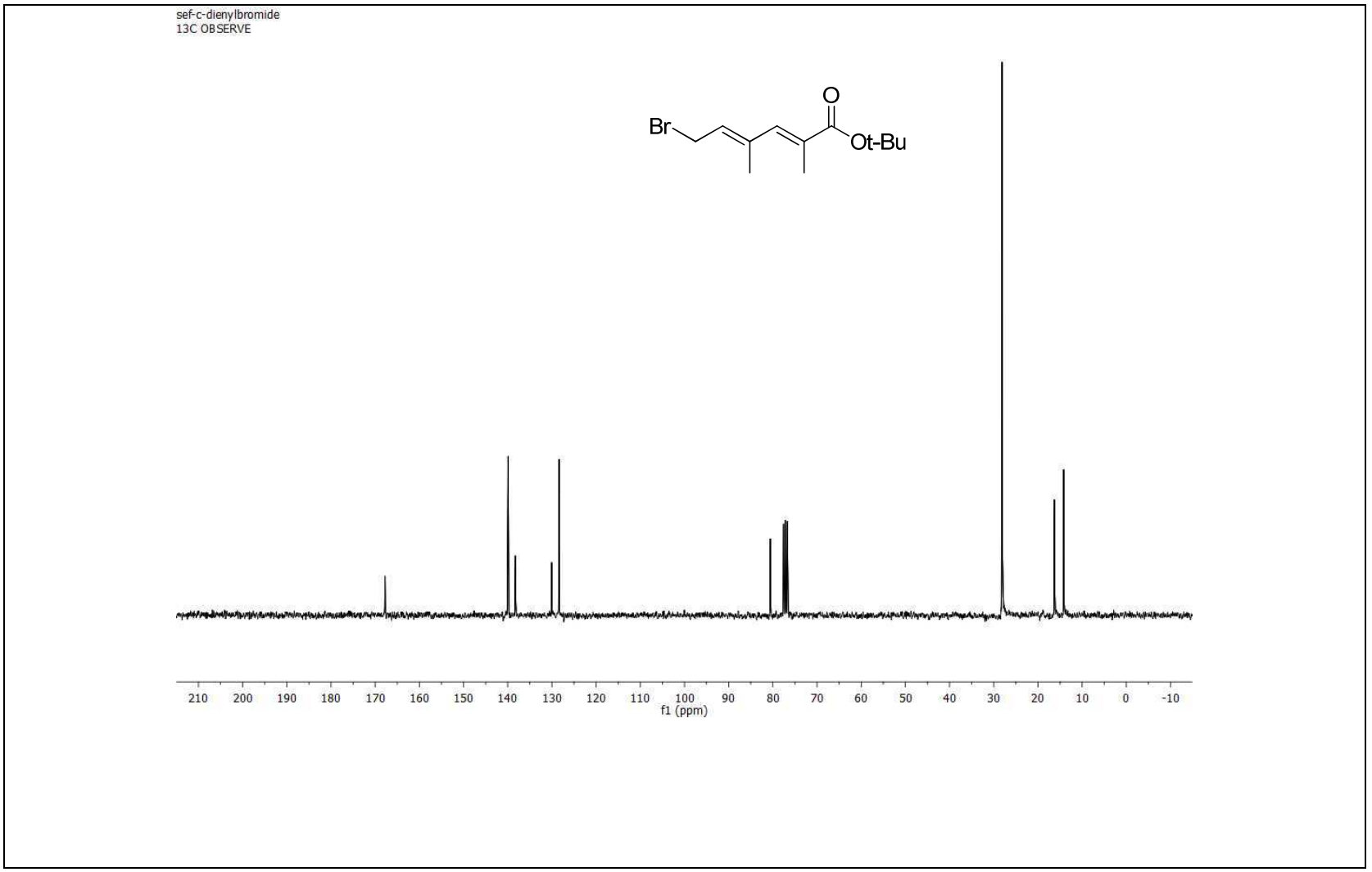

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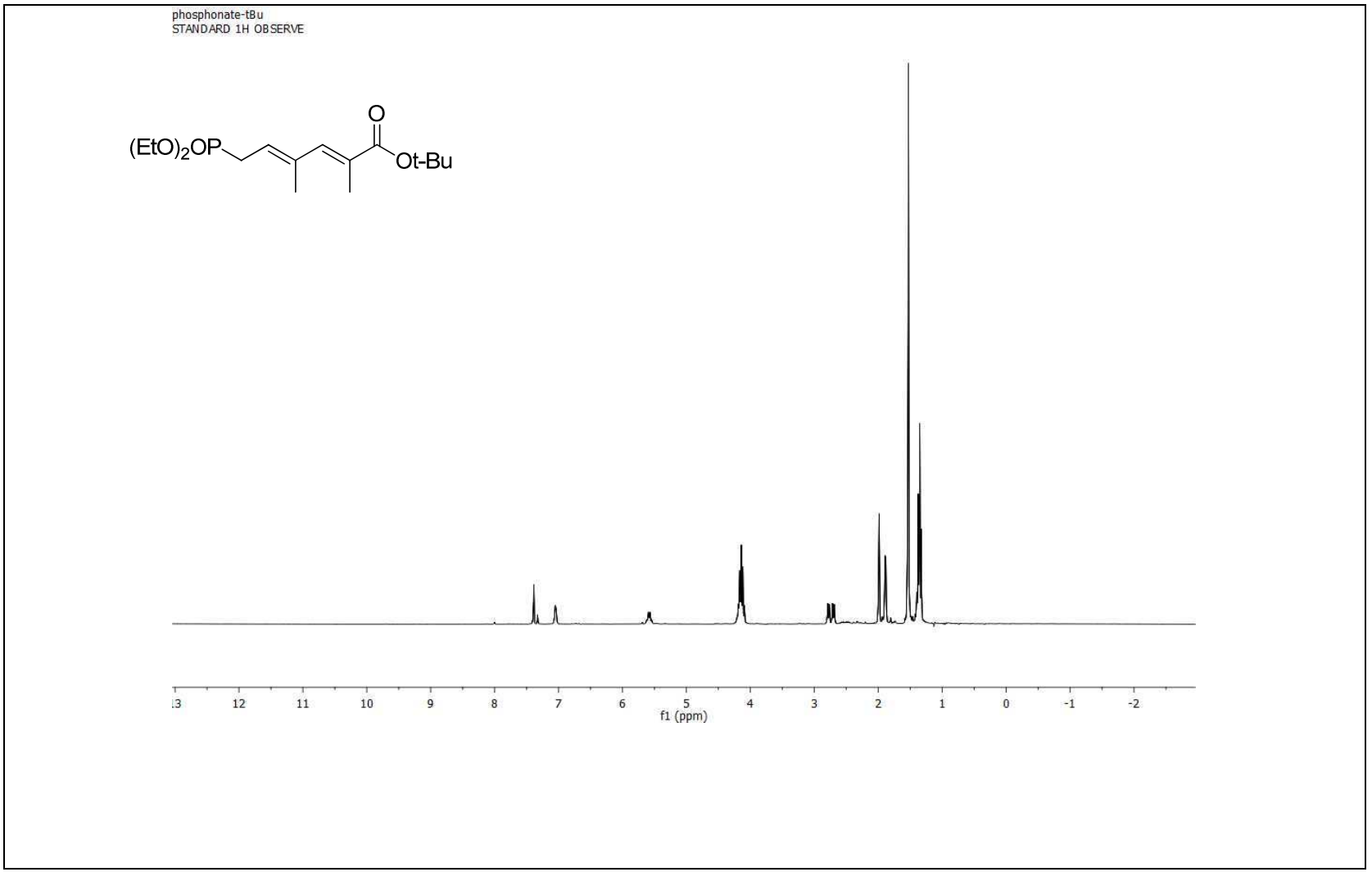

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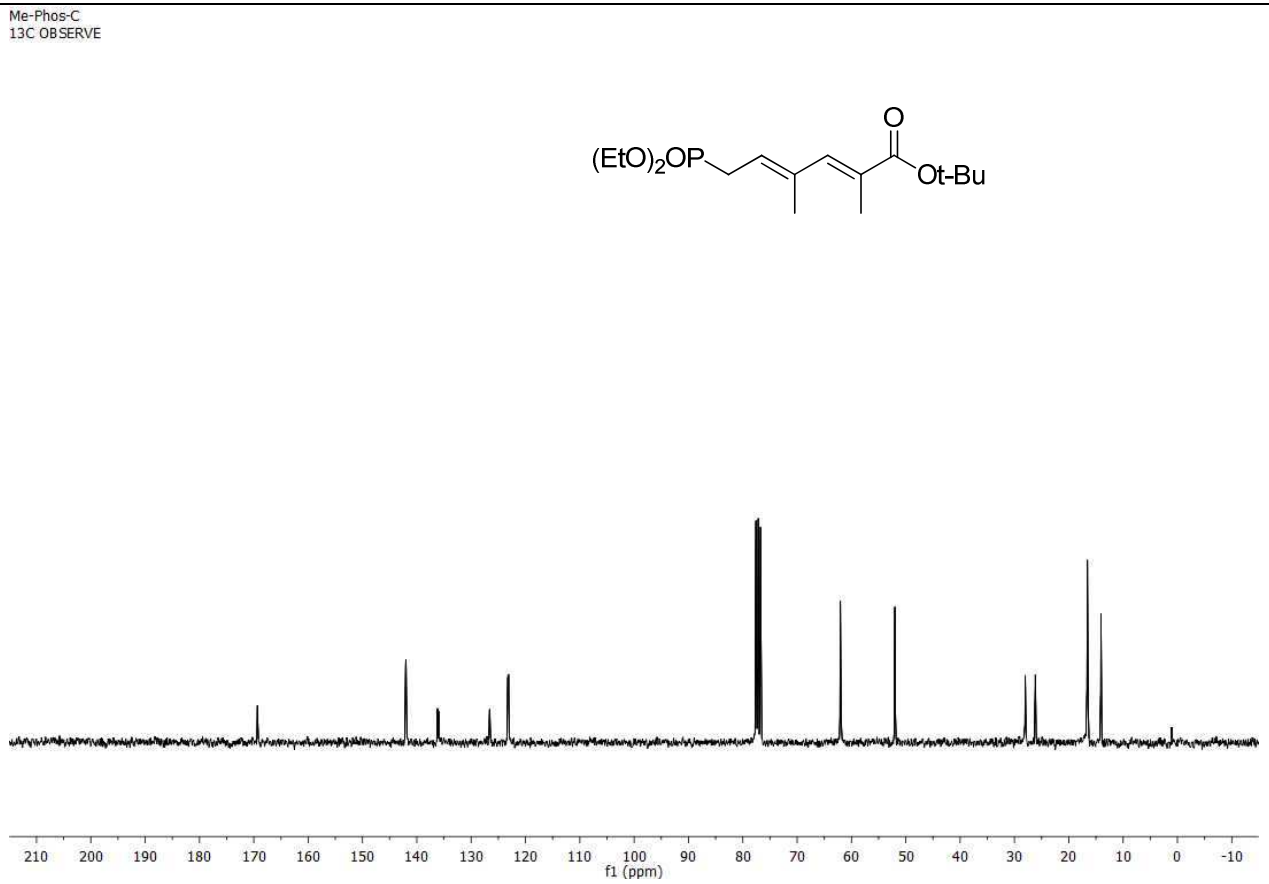

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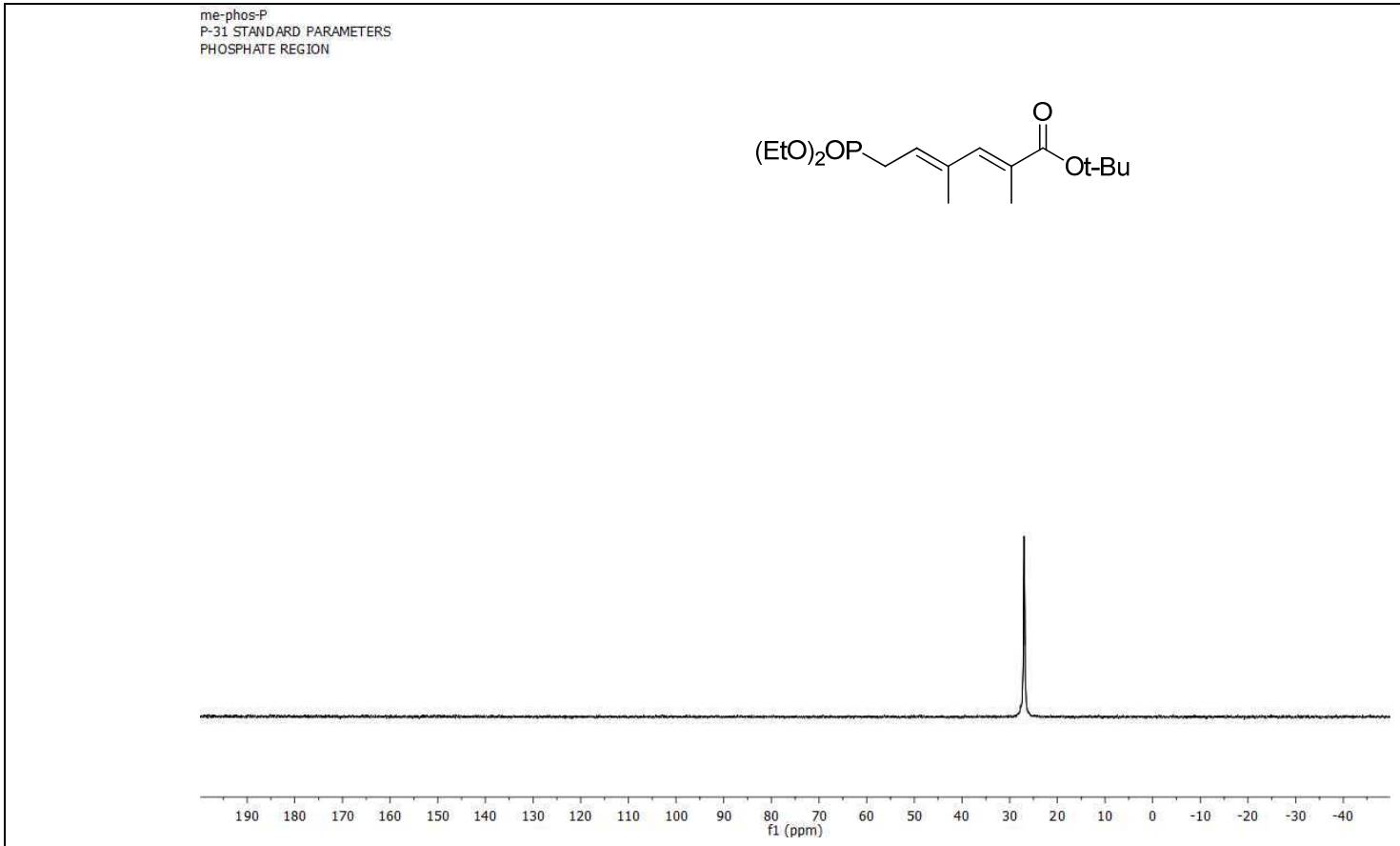

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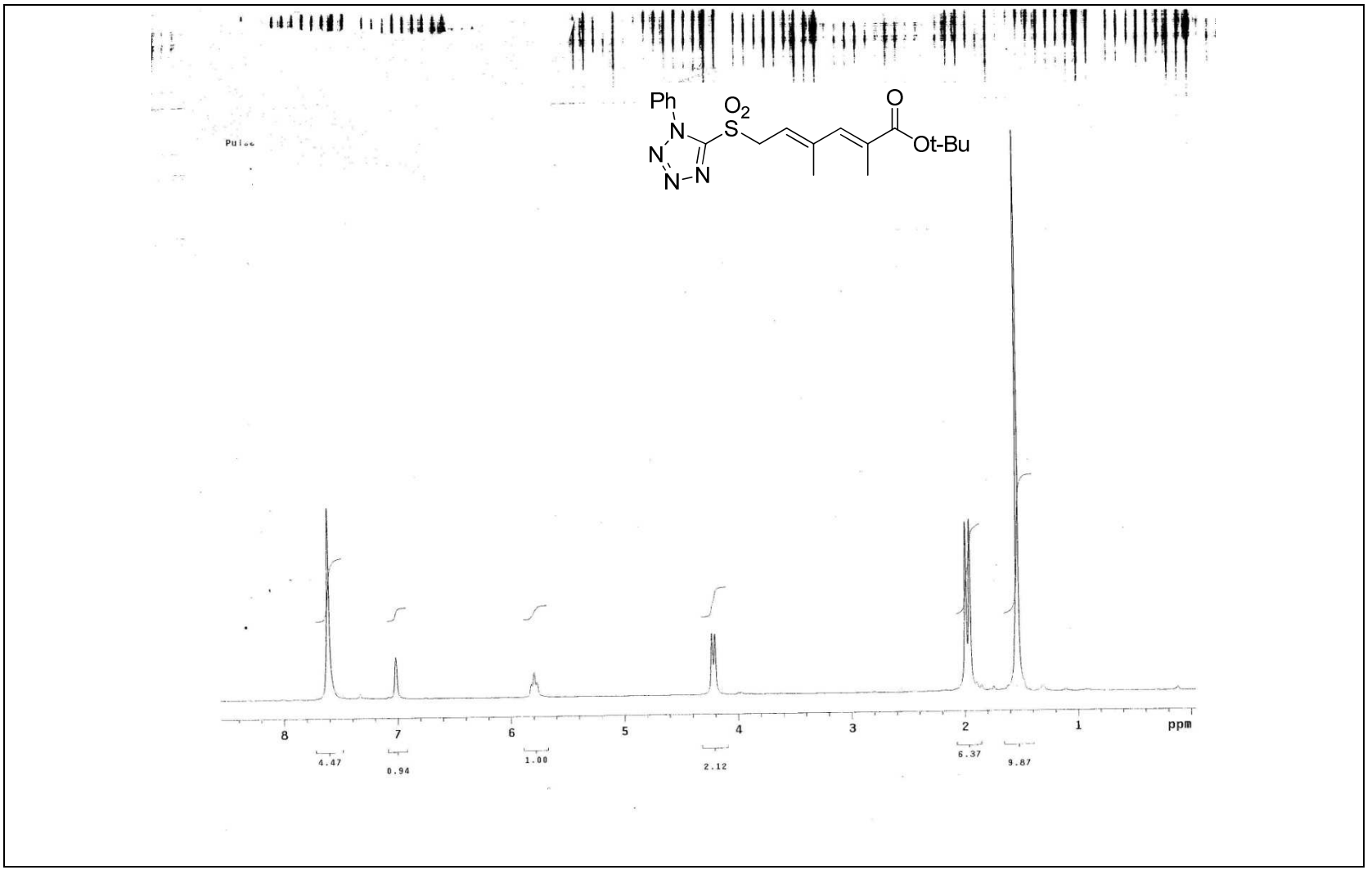

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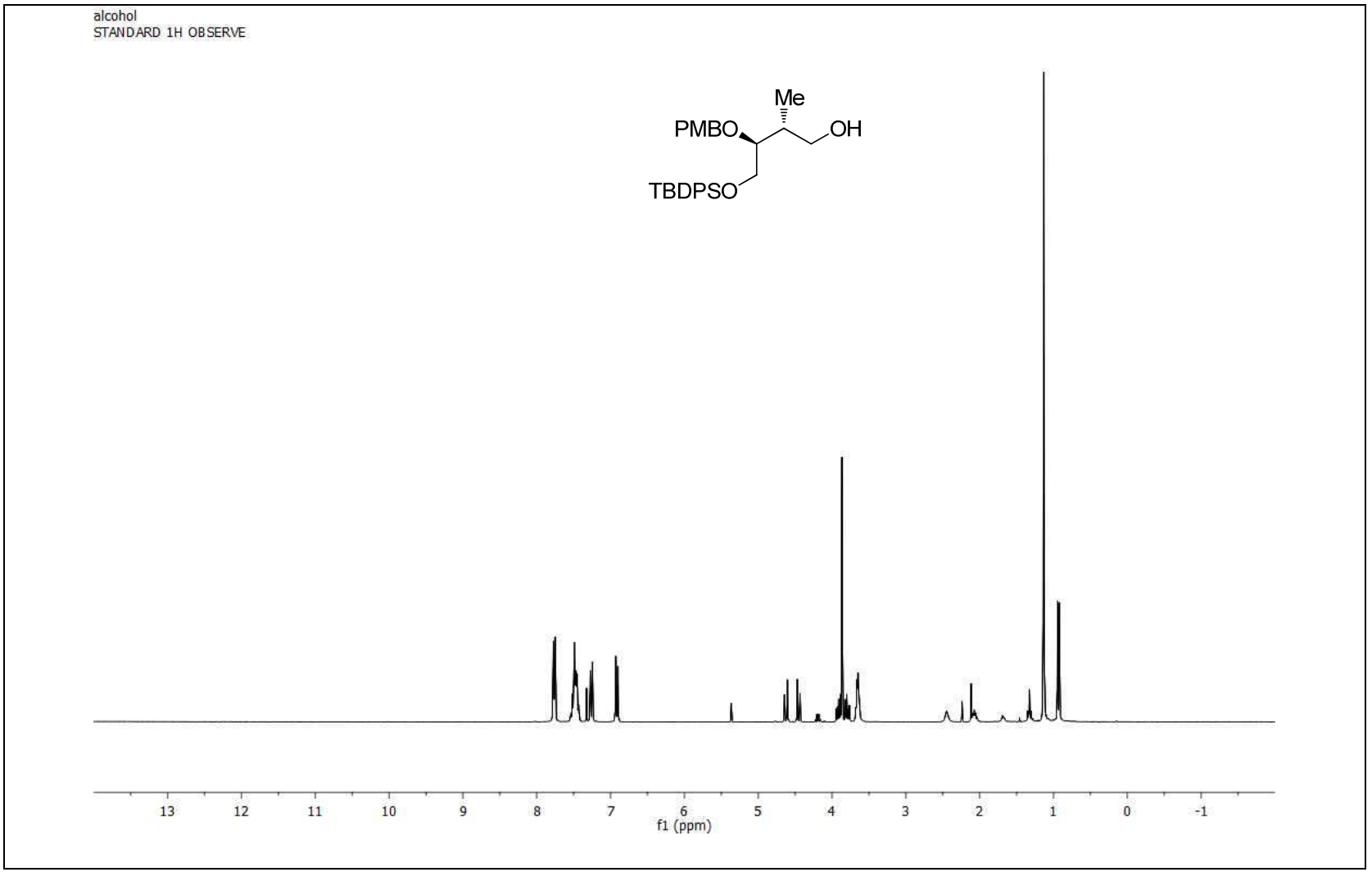
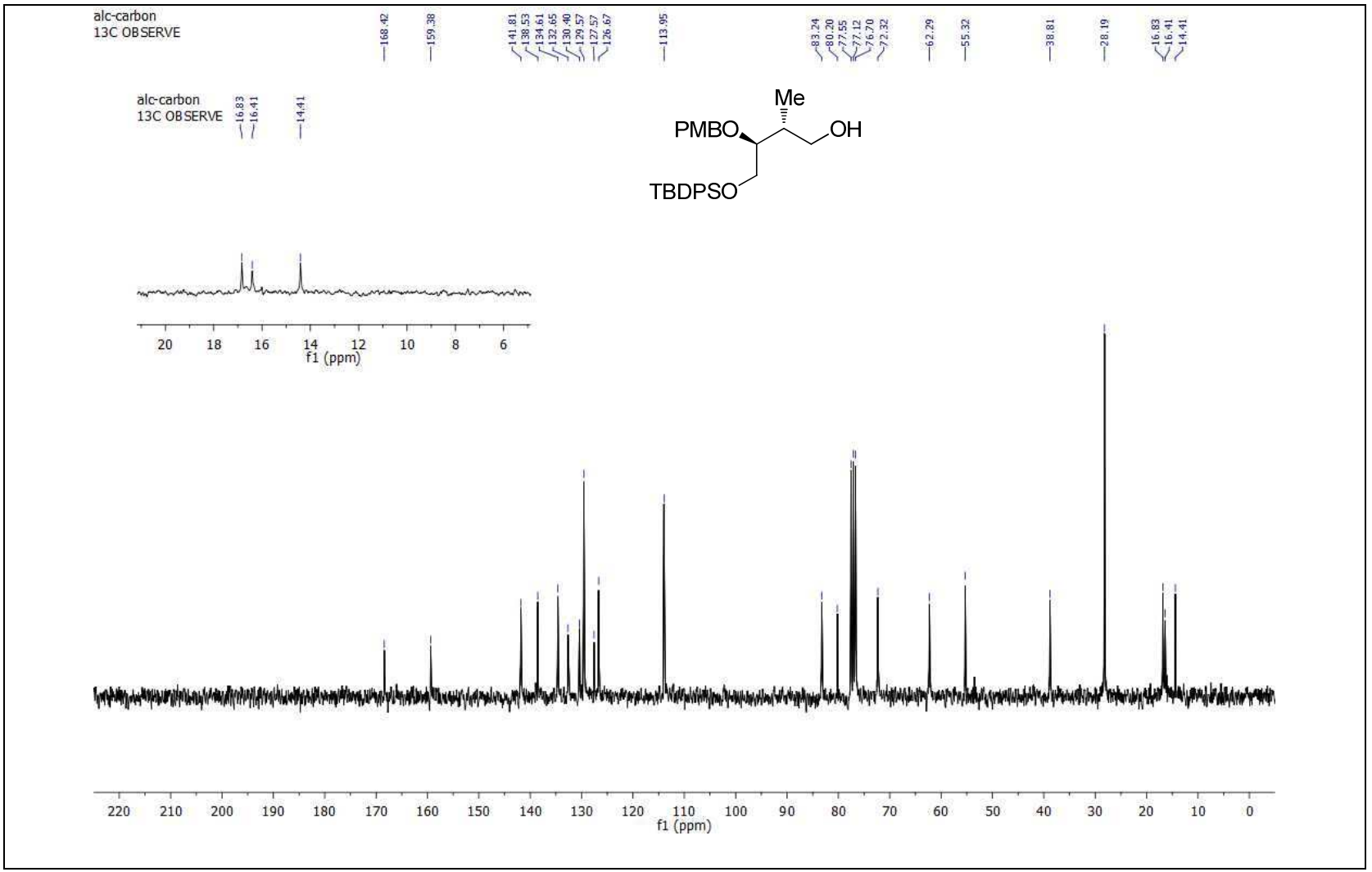
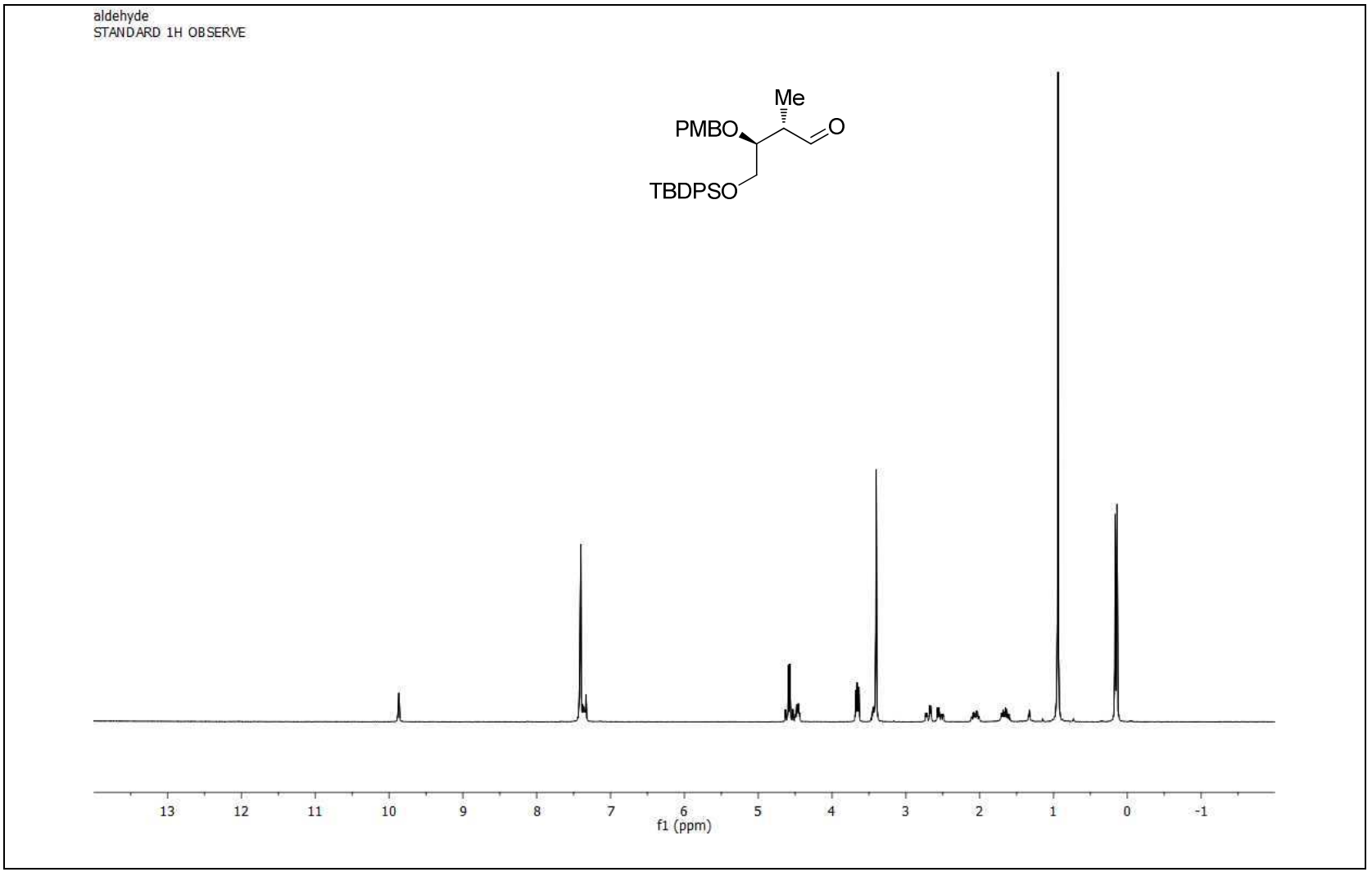


300 MHz ^{1}H NMR of compound **24** in $CDCl_3$



75 MHz ^{13}C NMR of compound **24** in $CDCl_3$



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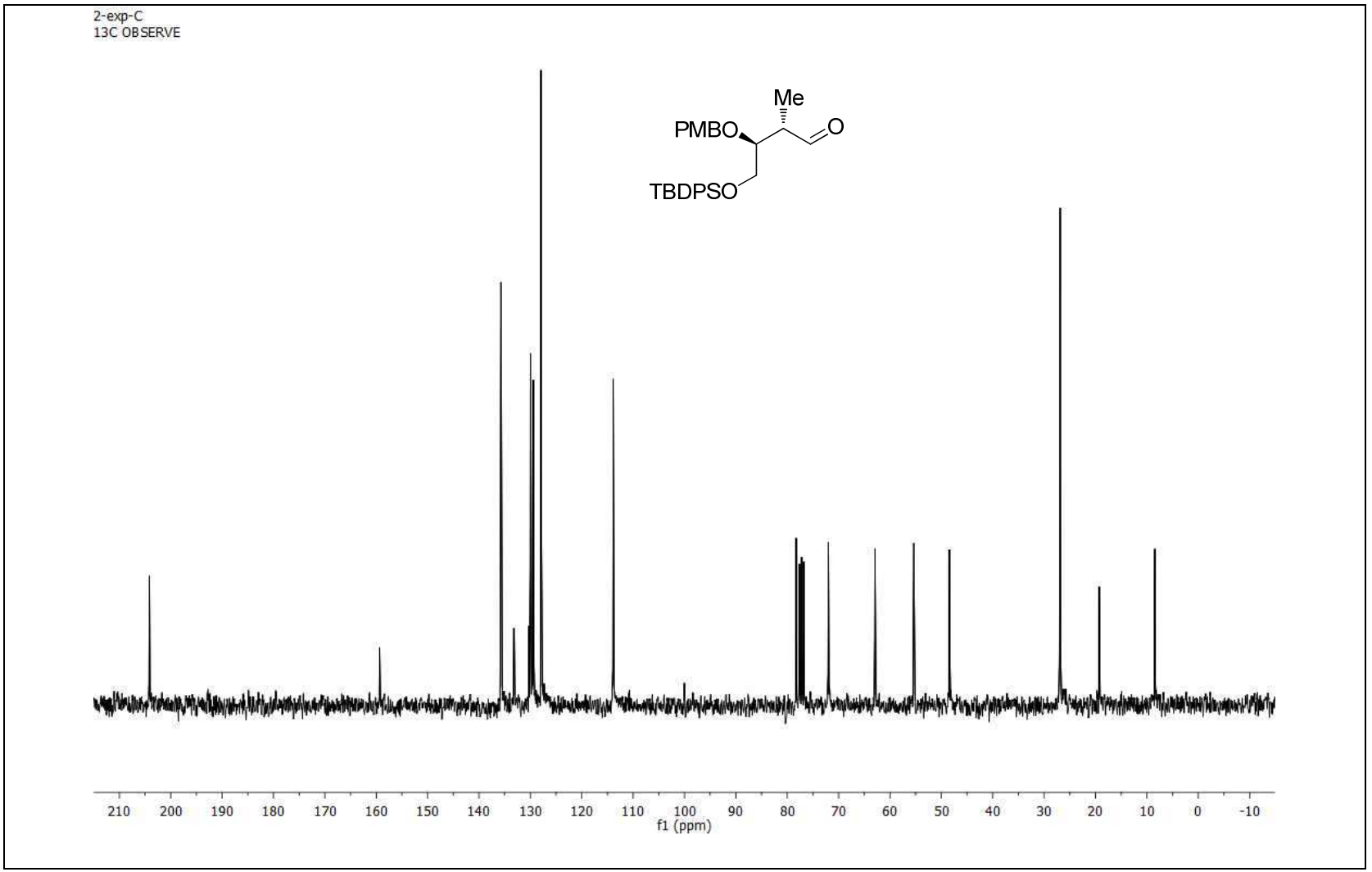
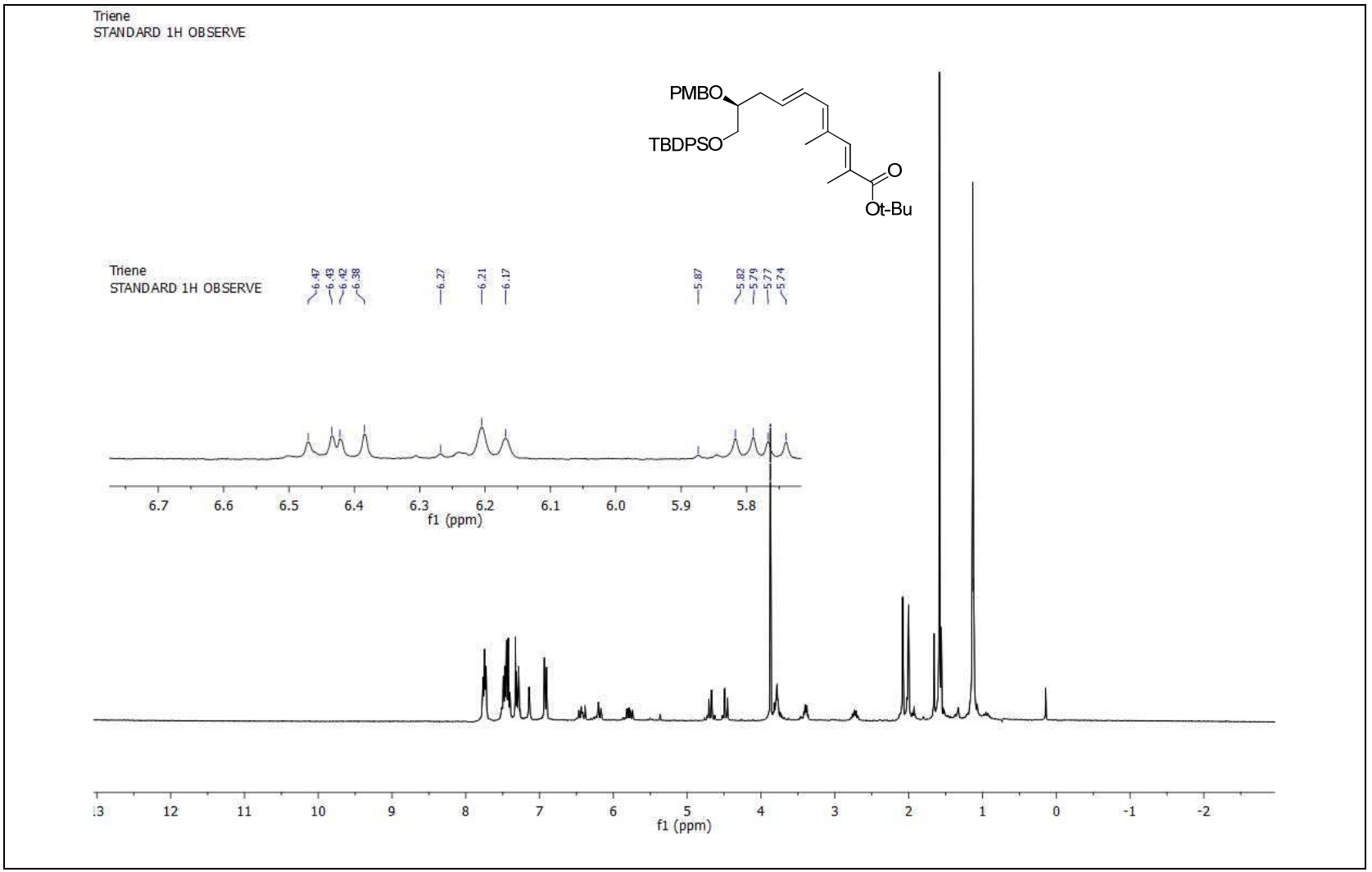


75 MHz ^{13}C NMR of compound **25** in $CDCl_3$



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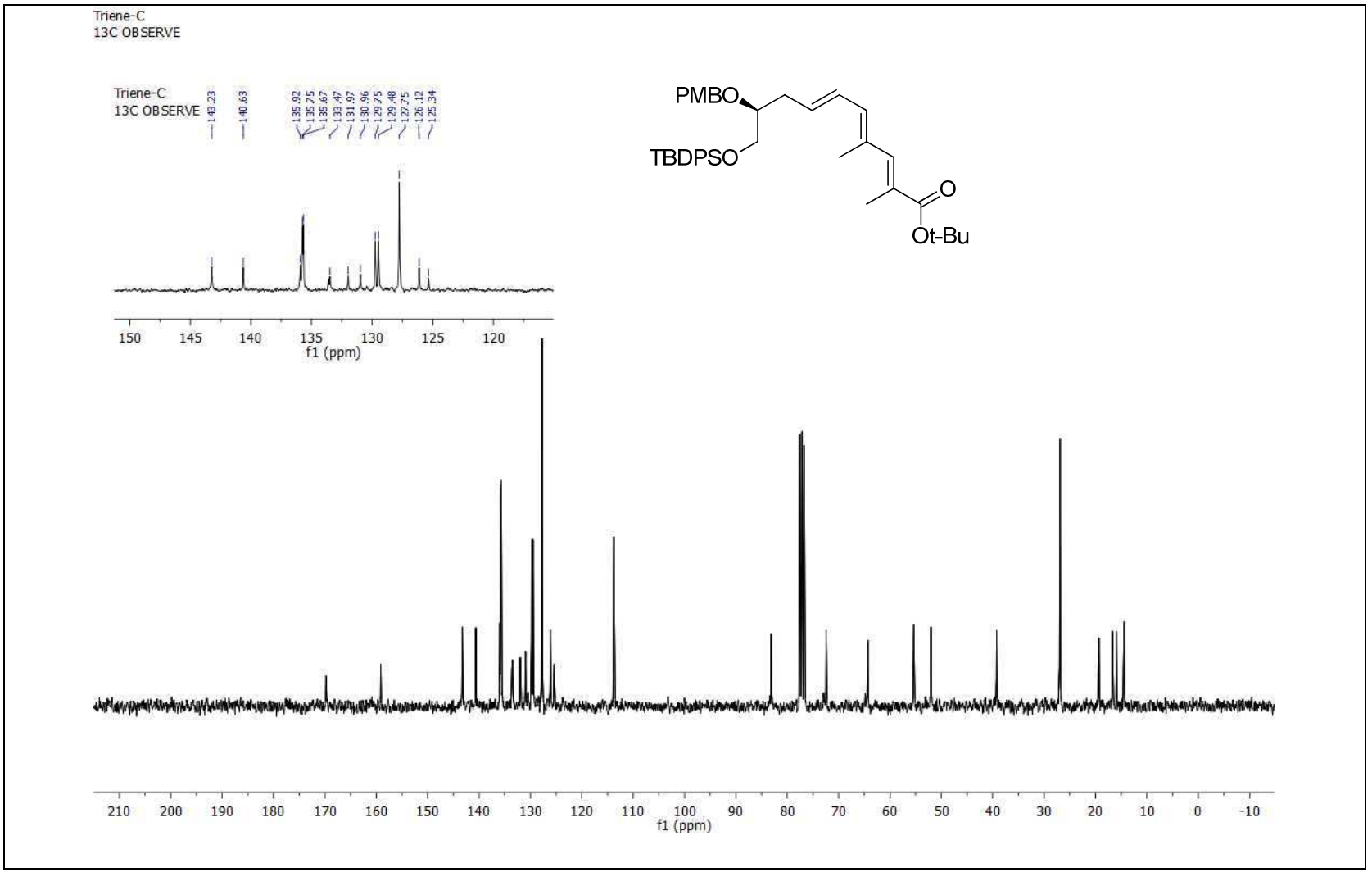
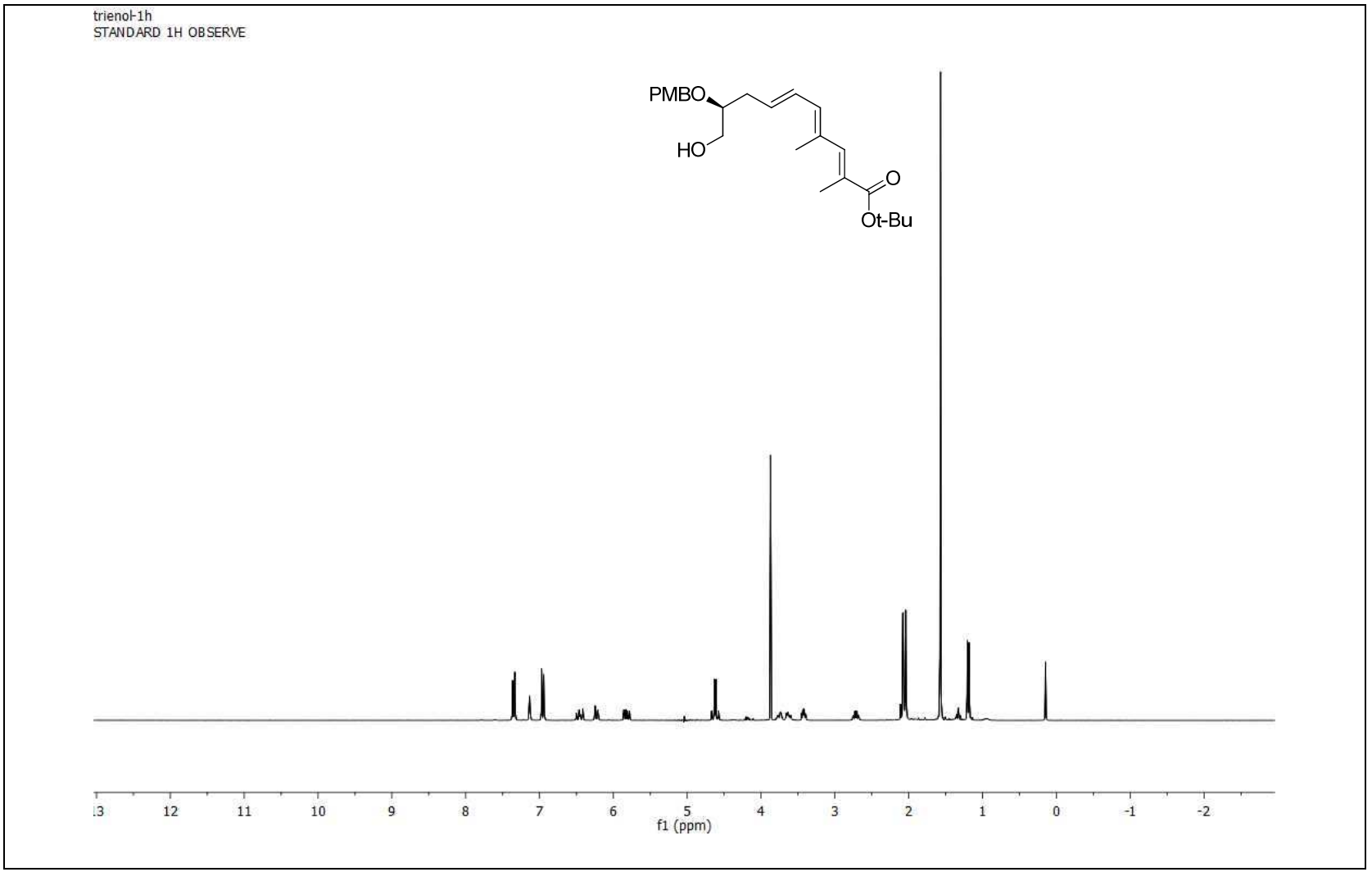


75 MHz ^{13}C NMR of compound **26** in $CDCl_3$



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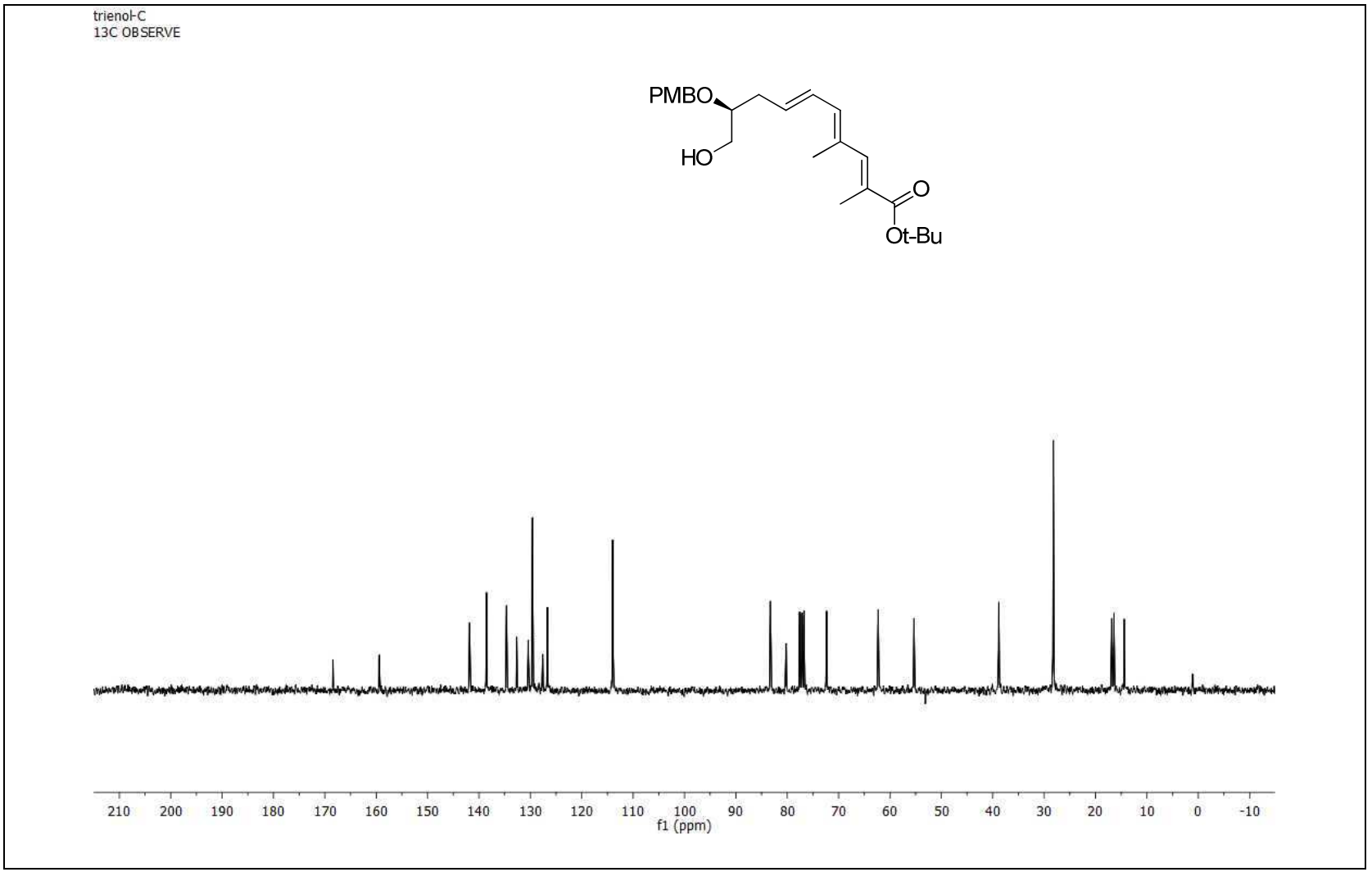
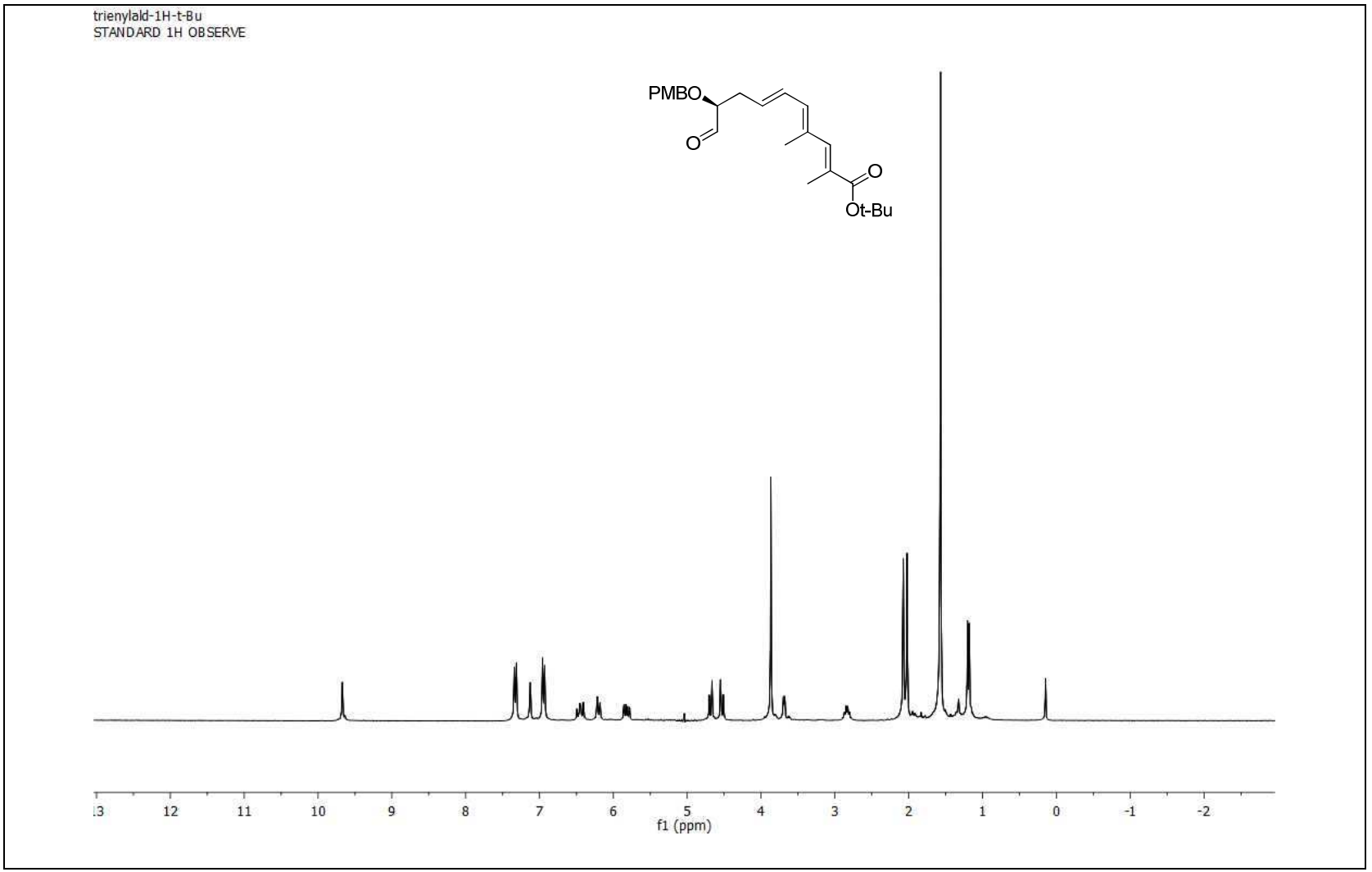
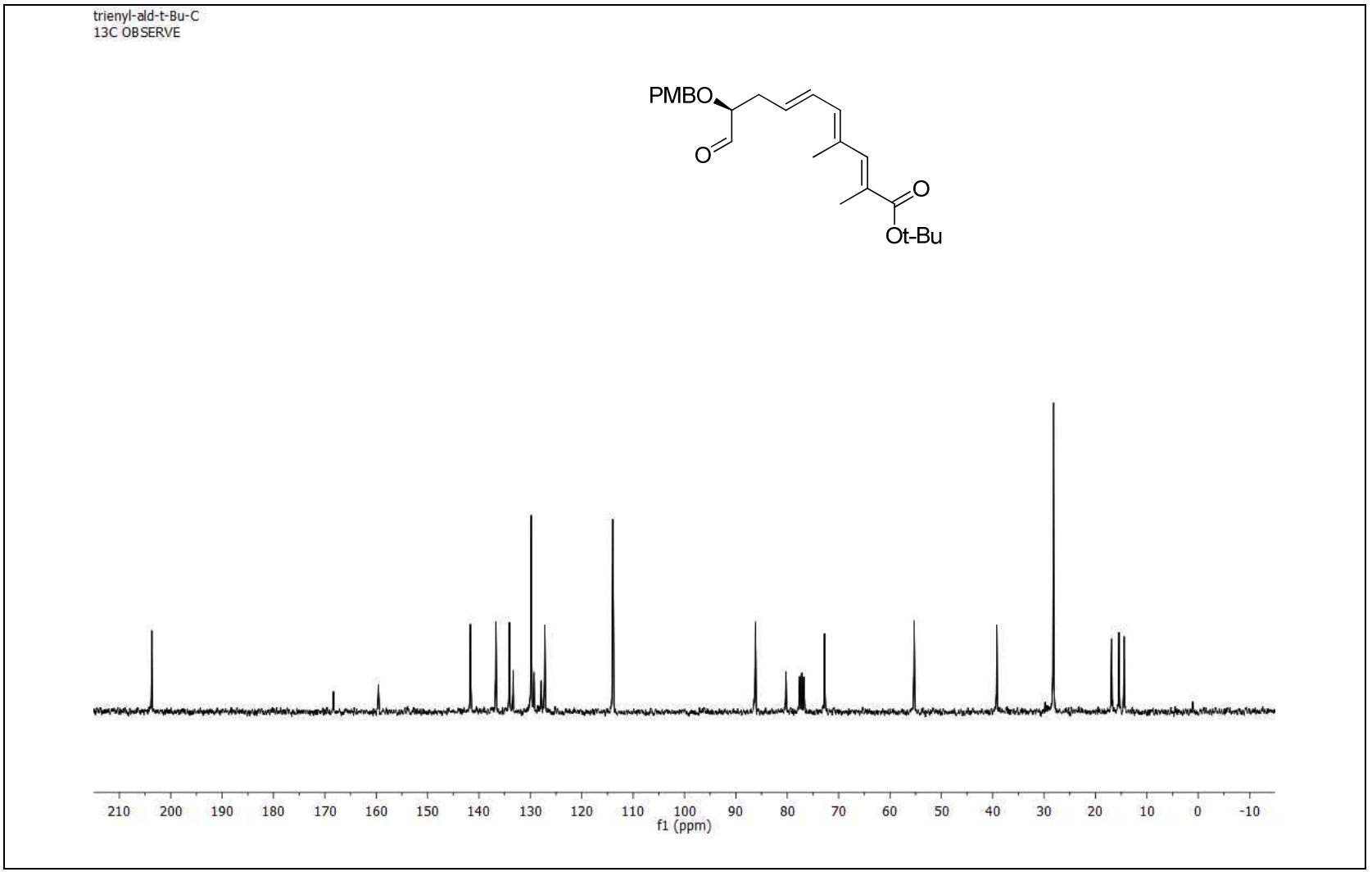


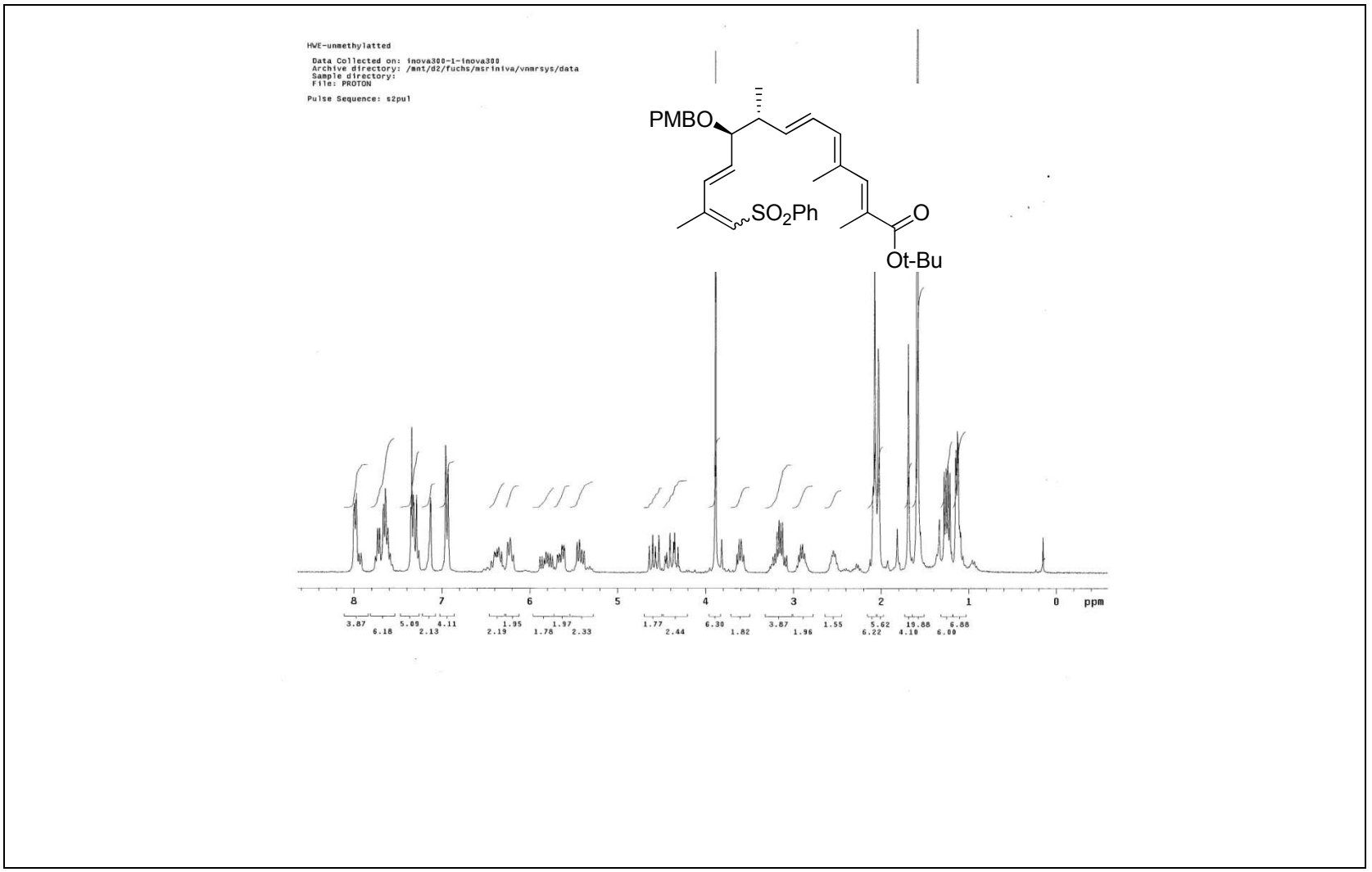
75 MHz ^{13}C NMR of compound **27** in $CDCl_3$



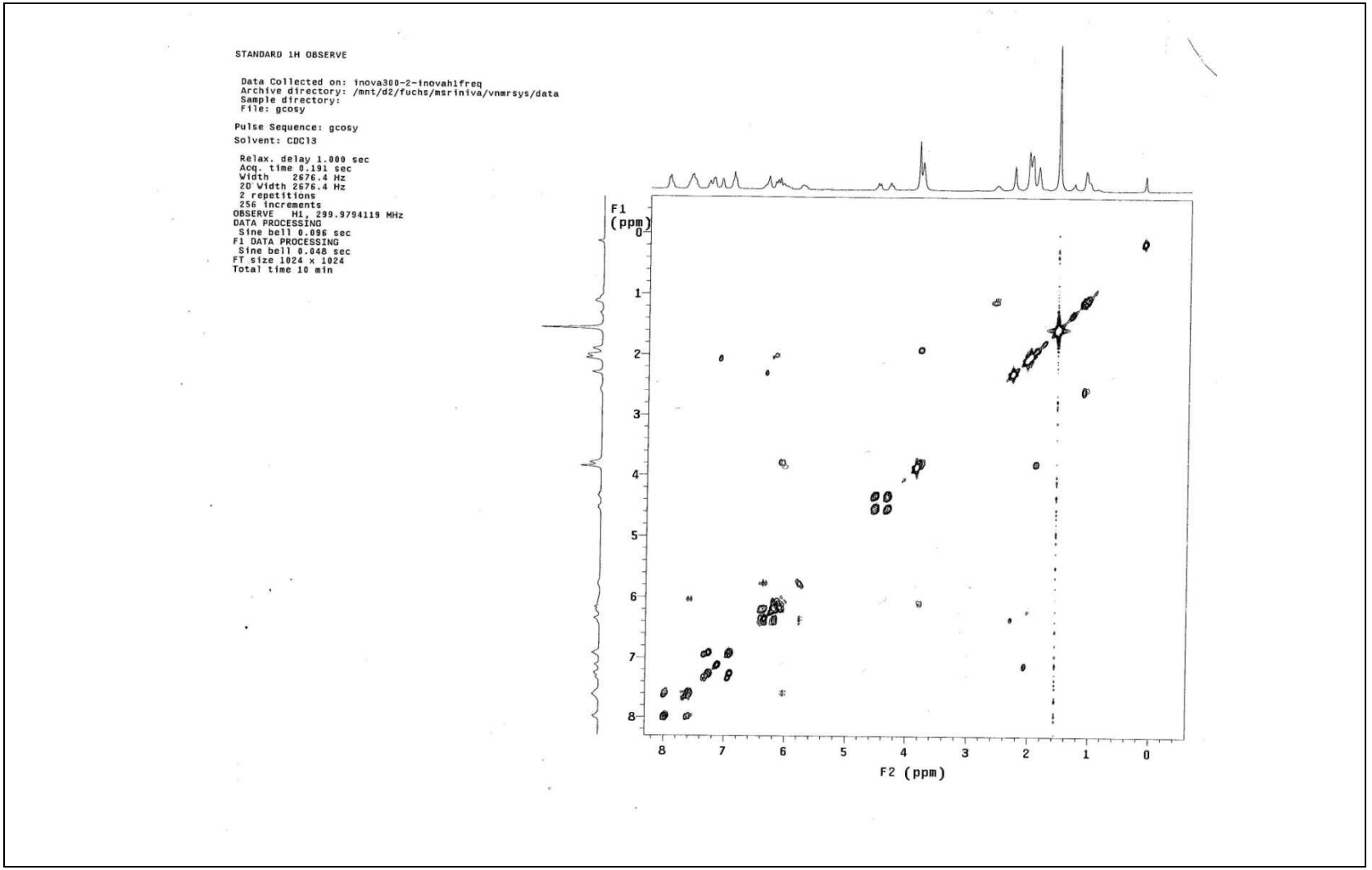
300 MHz ^{1}H NMR of compound **28** in $CDCl_3$



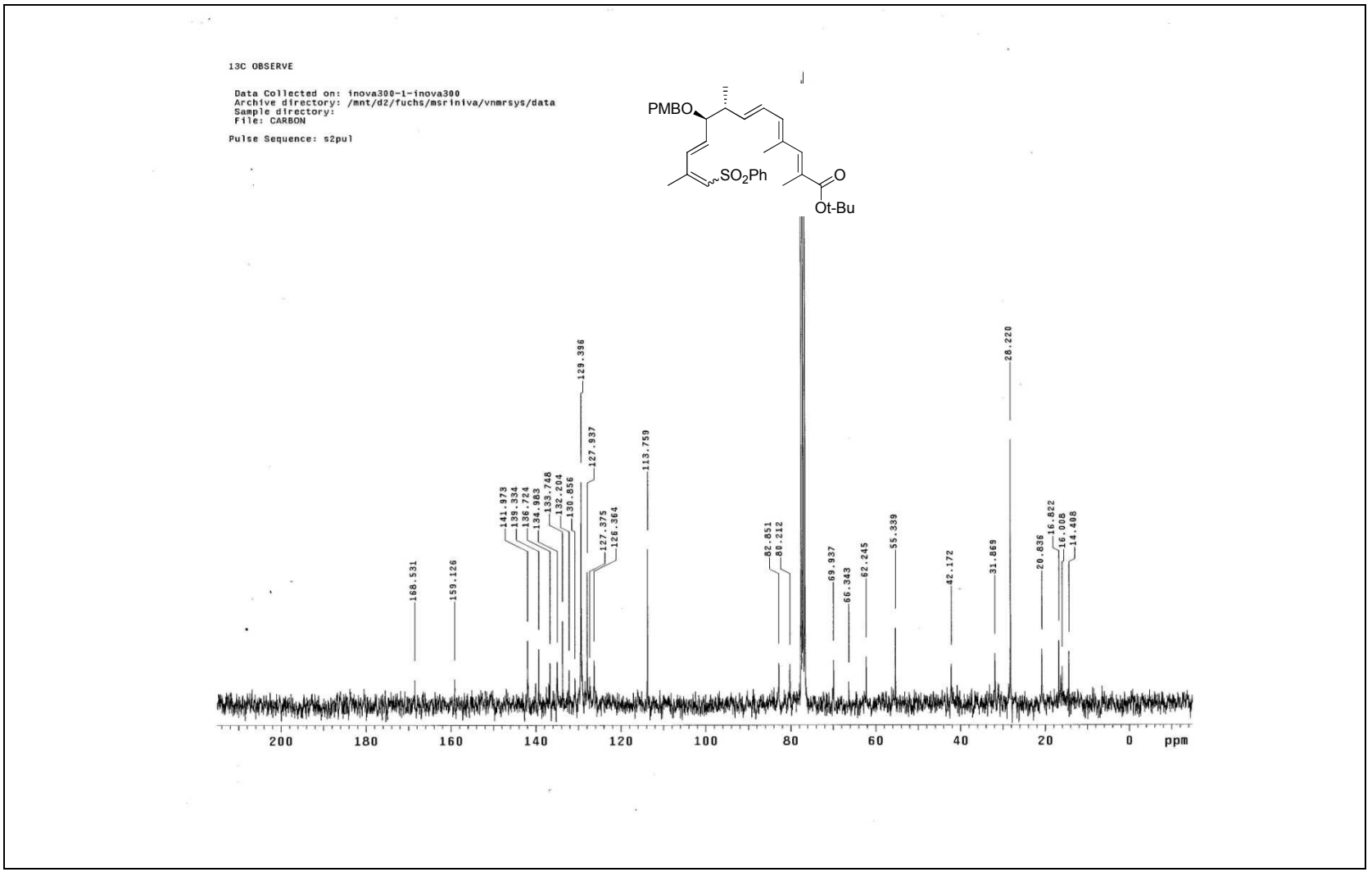
75 MHz ^{13}C NMR of compound **28** in $CDCl_3$



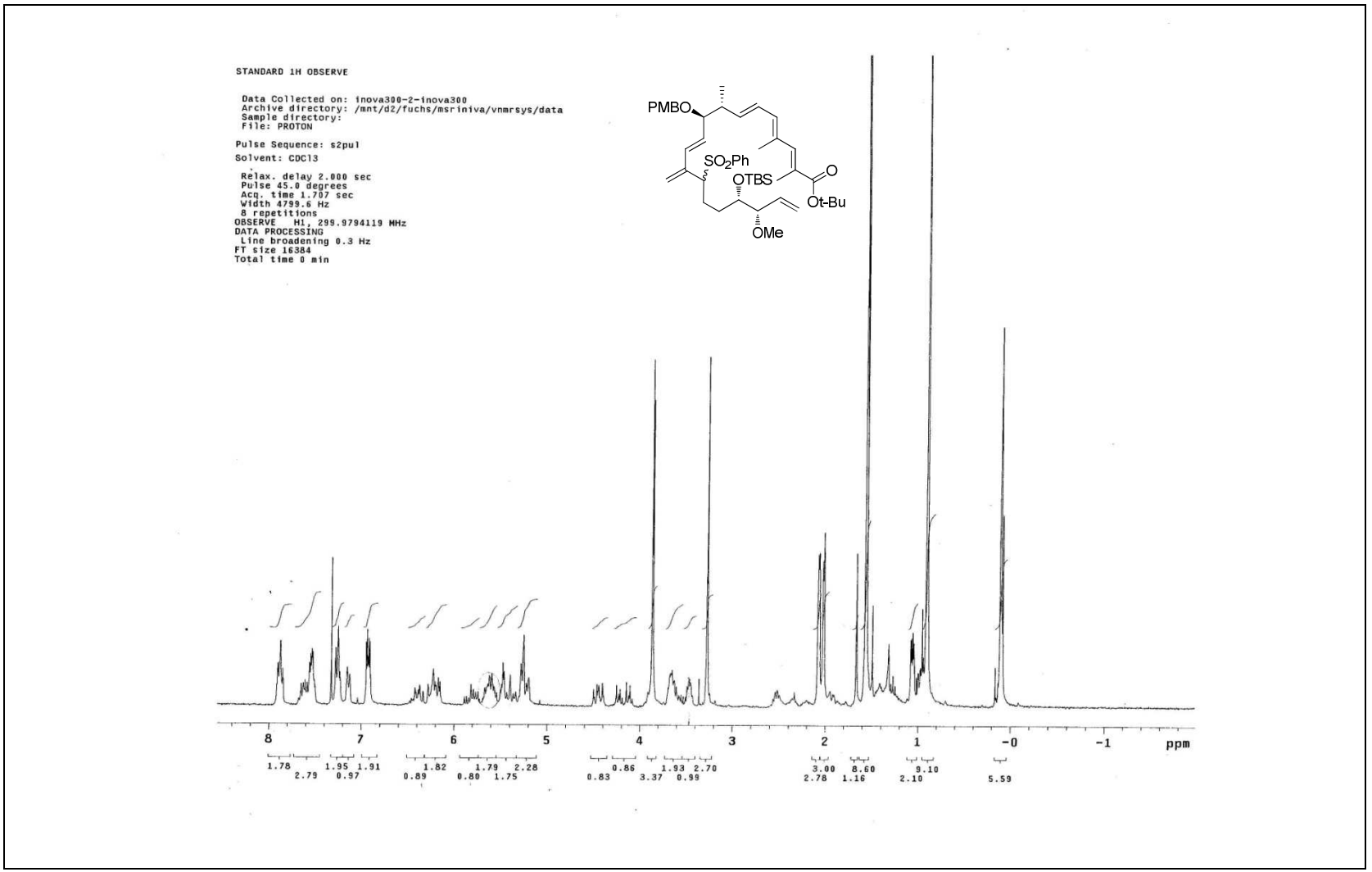
300 MHz ^{1}H NMR of compound **30** in $CDCl_3$



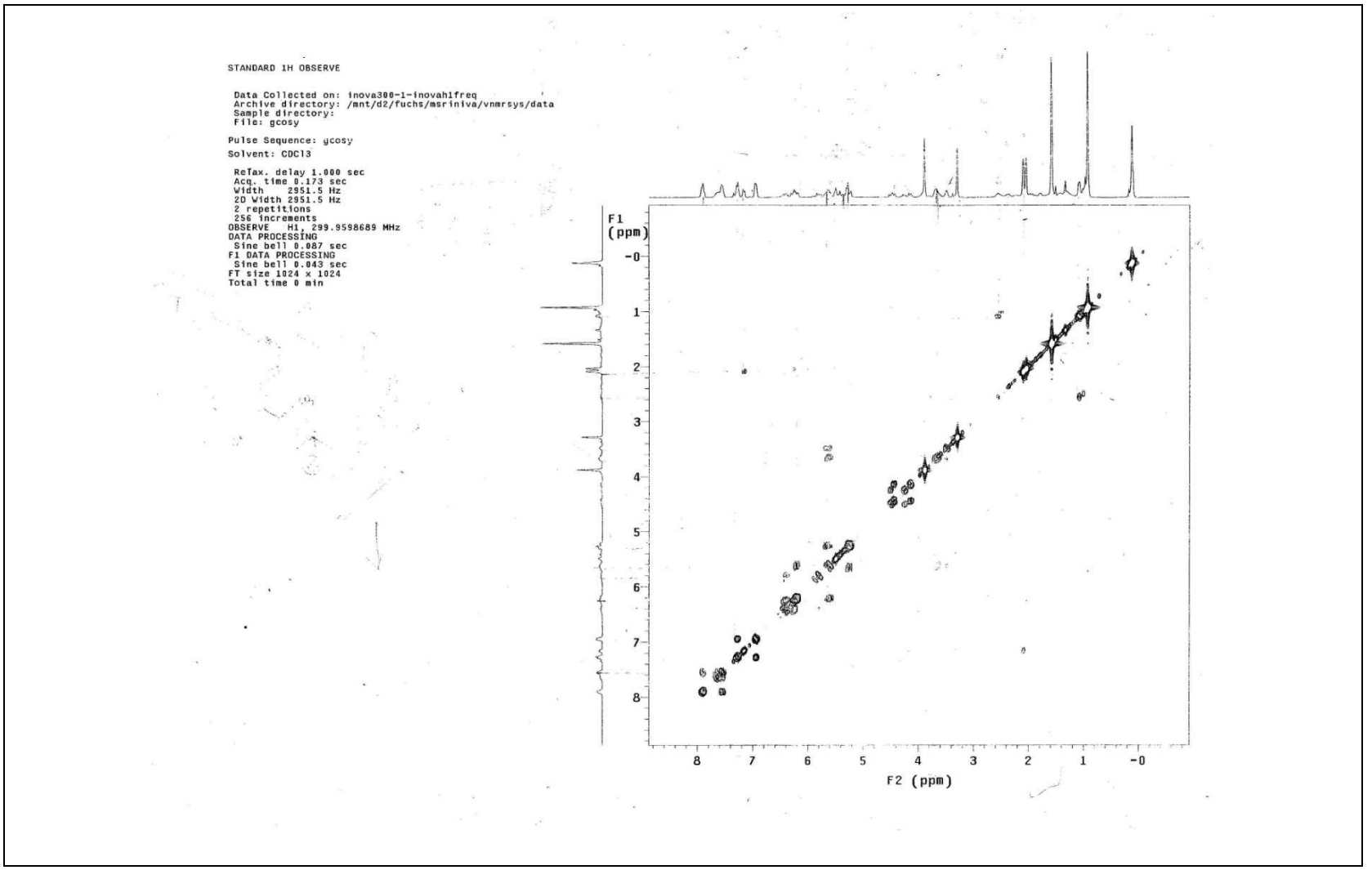
300 MHz ^{1}H-^{1}H COSY NMR of compound **30** in $CDCl_3$



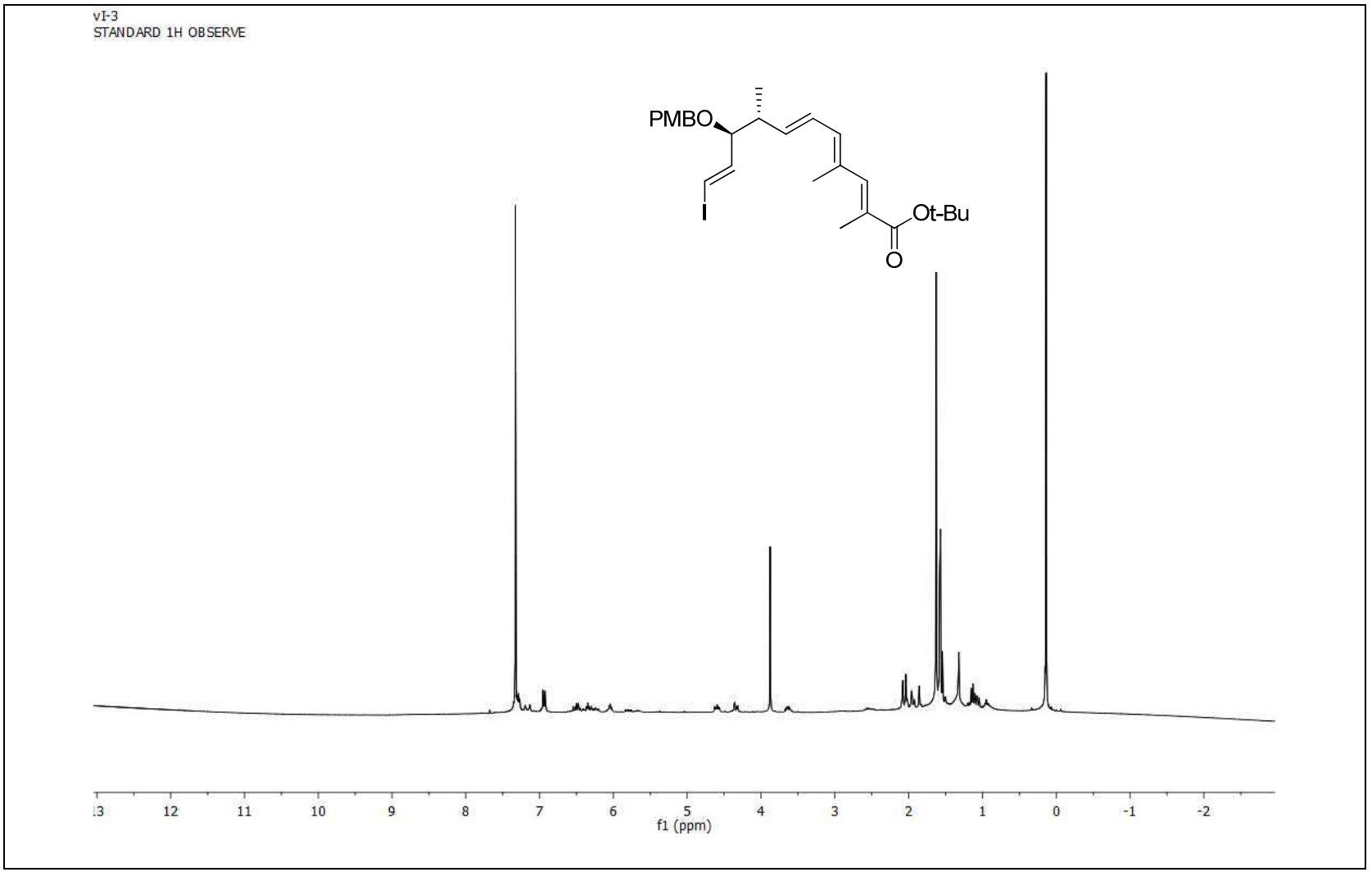
75 MHz ^{13}C NMR of compound **30** in $CDCl_3$



300 MHz ^{1}H NMR of compound **34** in $CDCl_3$



^{1}H-^{1}H-COSY NMR of compound **34** in $CDCl_3$



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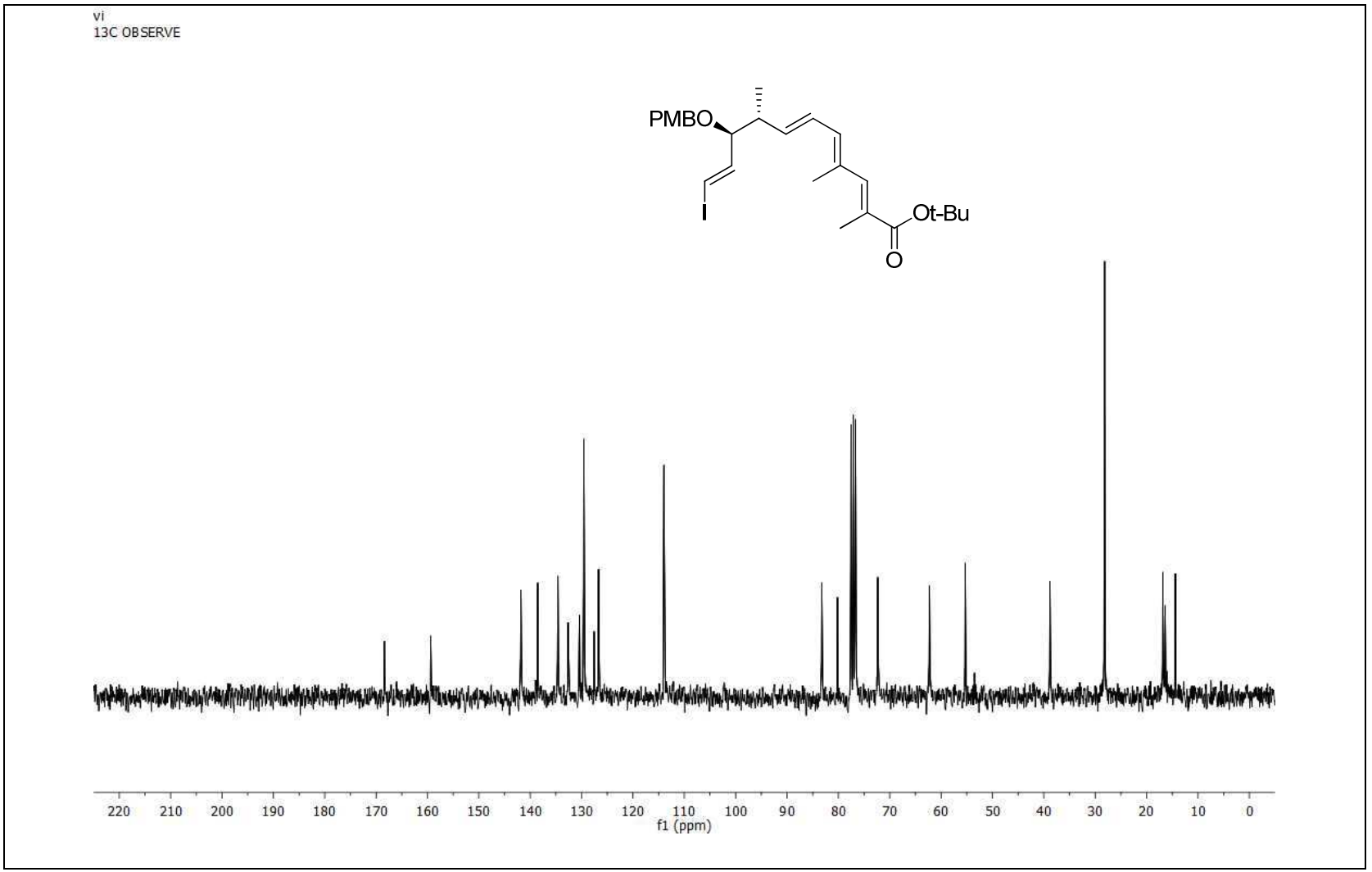
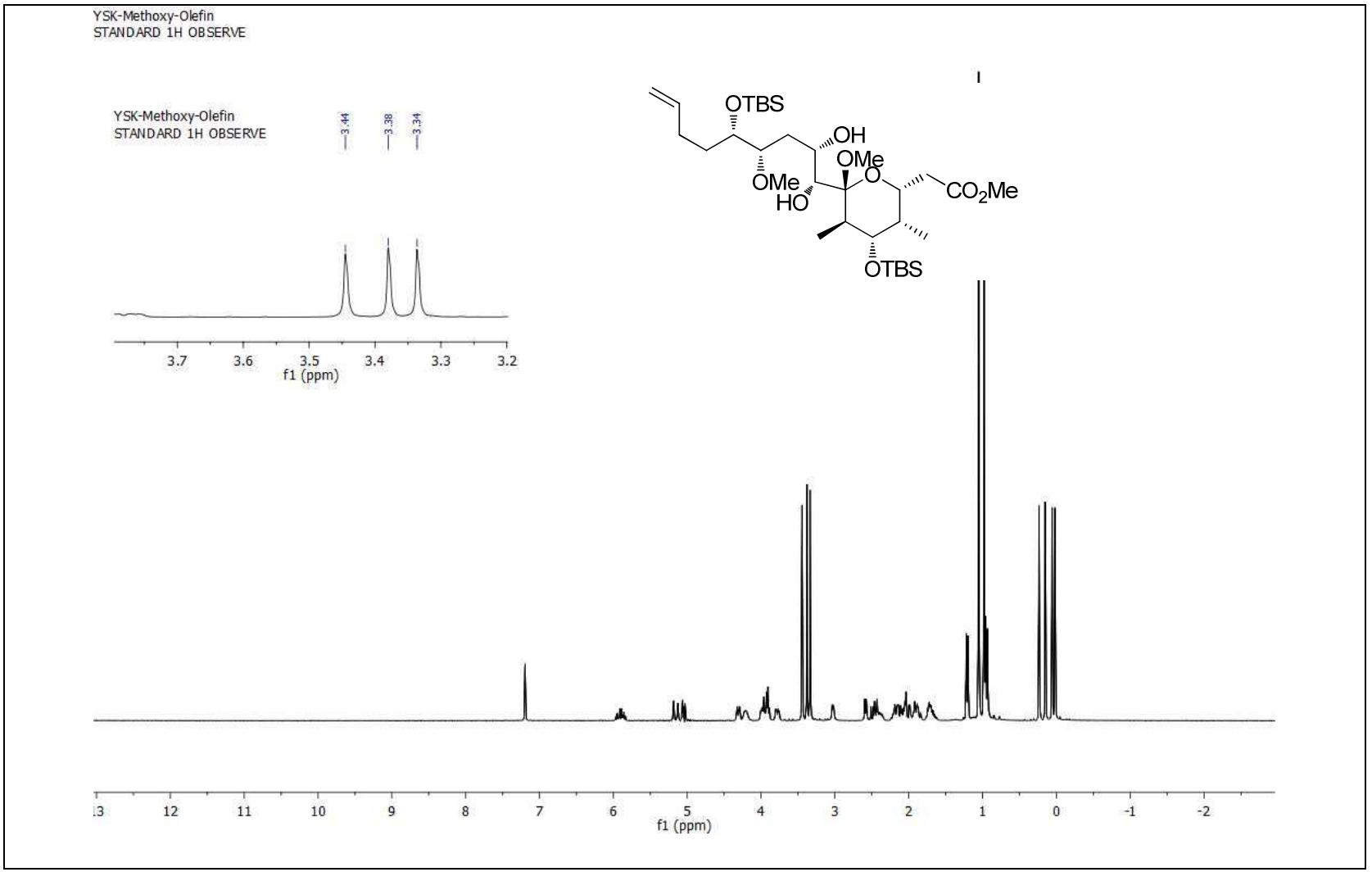
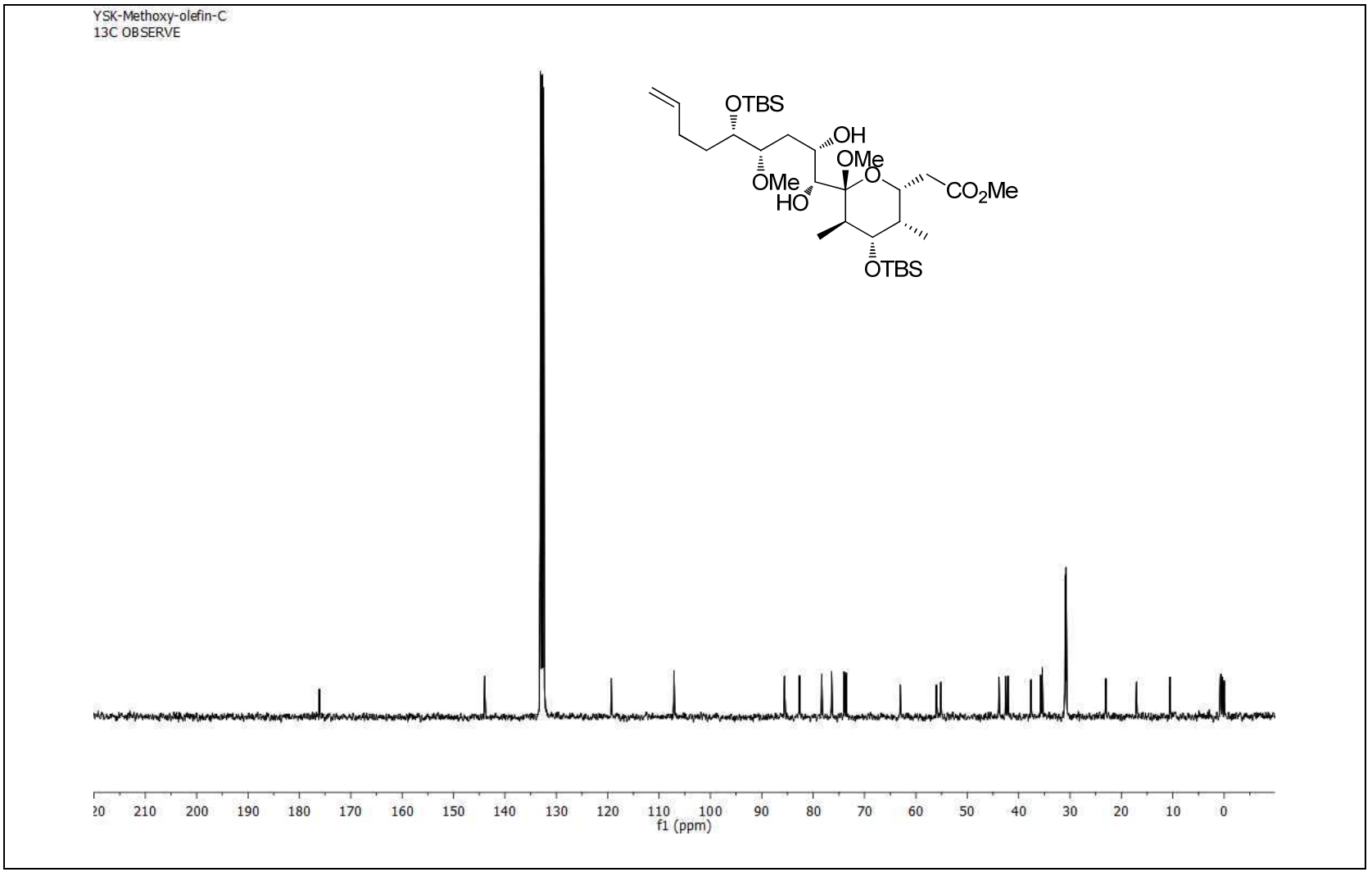


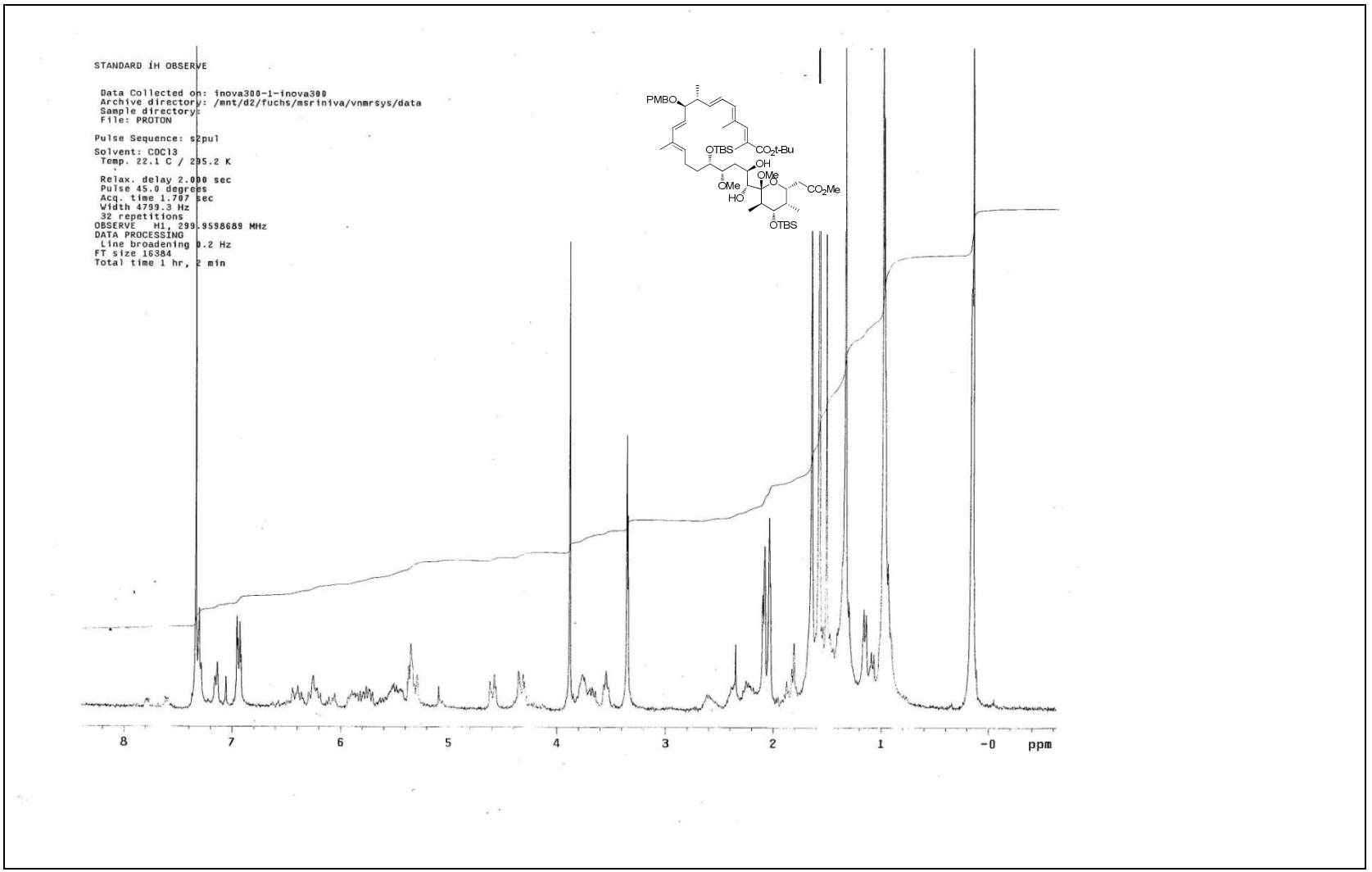
75 MHz ^{13}C NMR of compound **35** in $CDCl_3$



300 MHz ^{1}H NMR of compound **37** in C_6D_6



75 MHz ^{13}C NMR of compound **37** in C_6D_6



300 MHz ^{1}H NMR of compound **3** in $CDCl_3$