

Supporting Information

Asymmetric Synthesis of *ent*-Fragransin C₁

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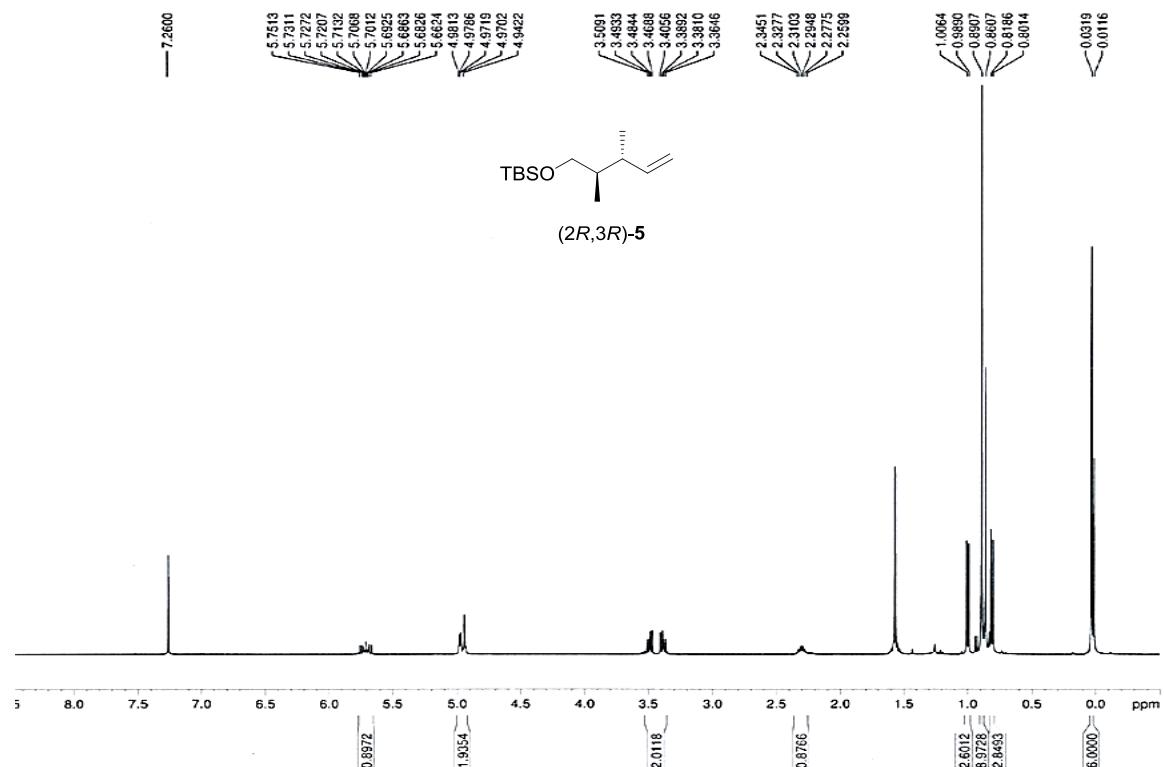
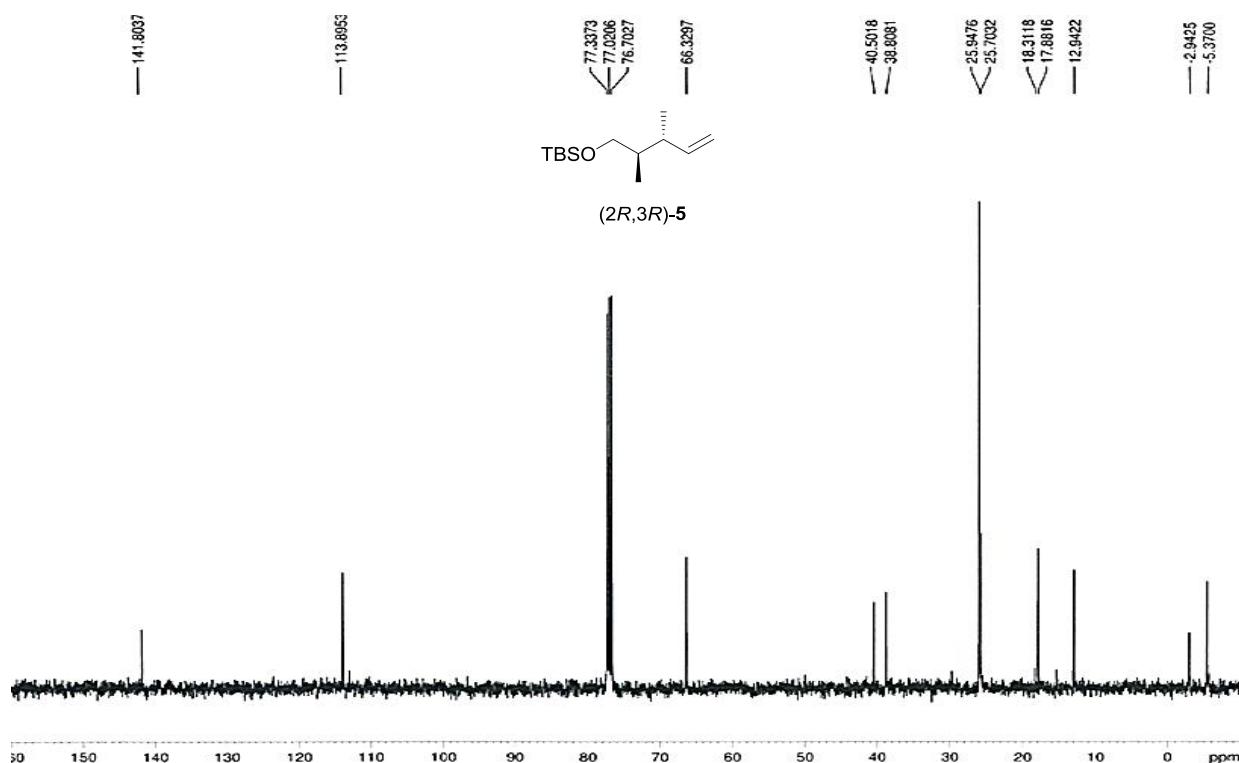
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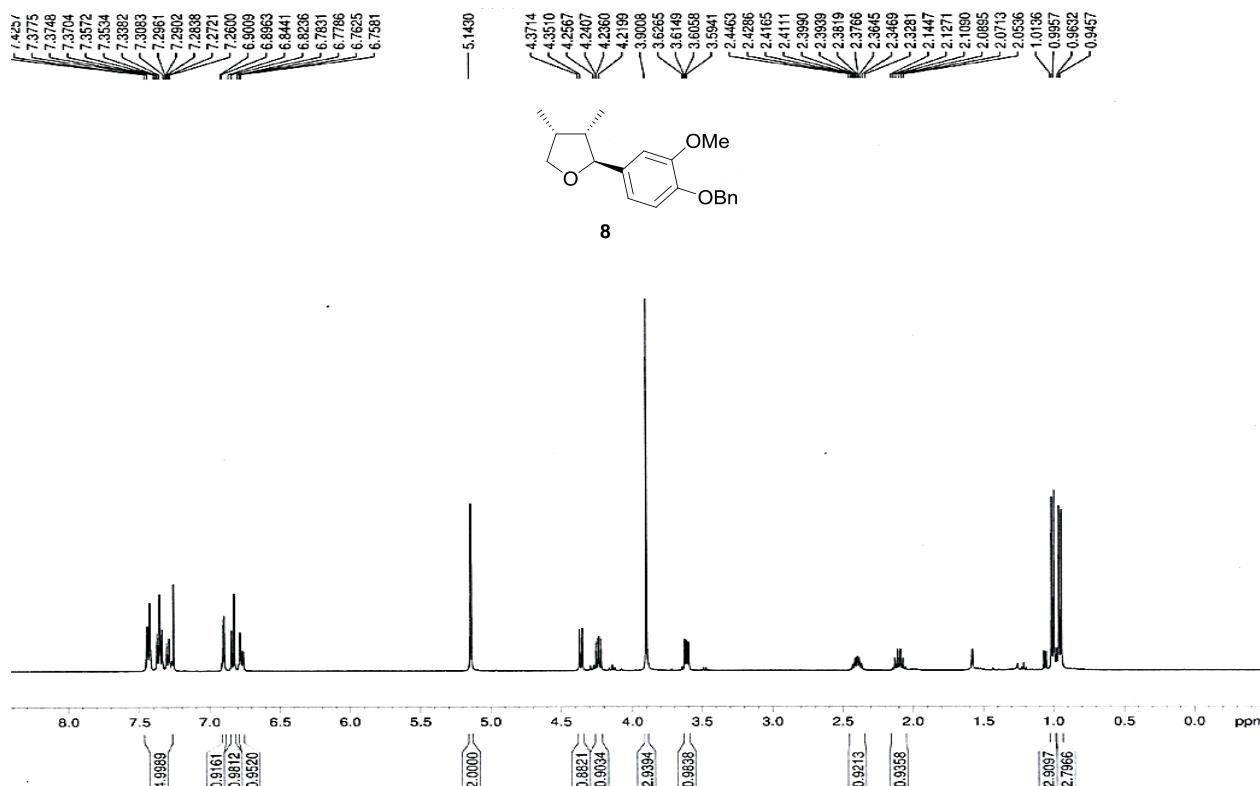
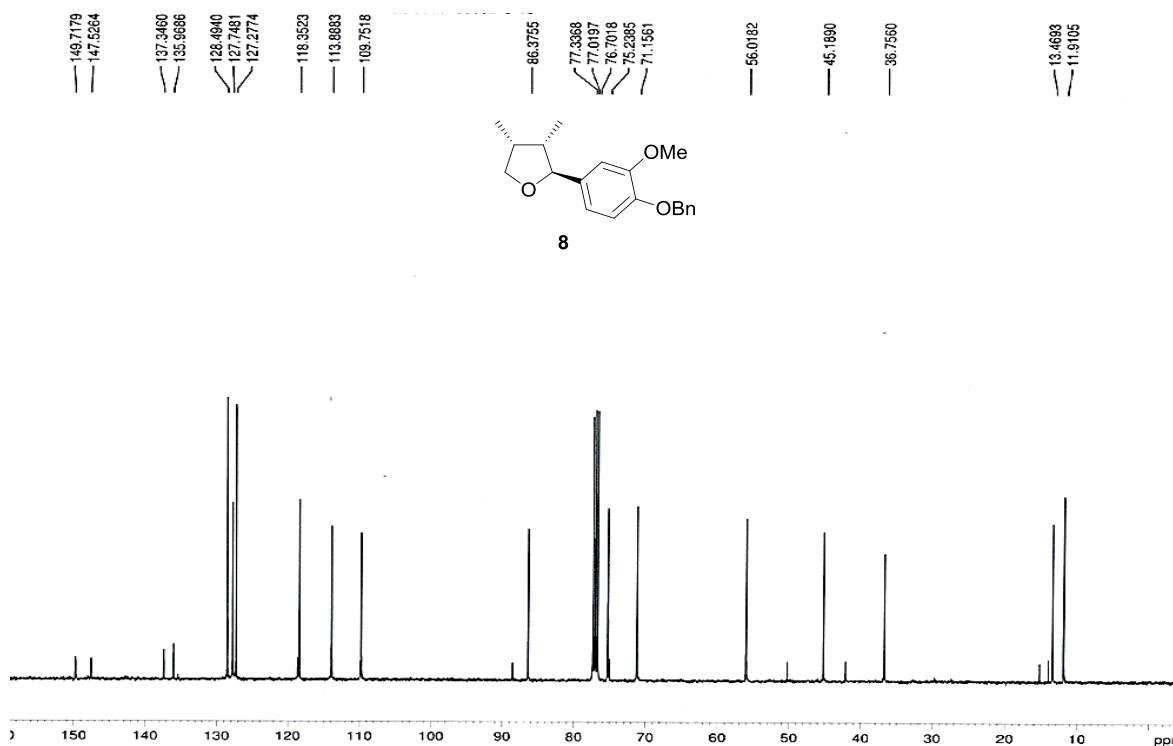
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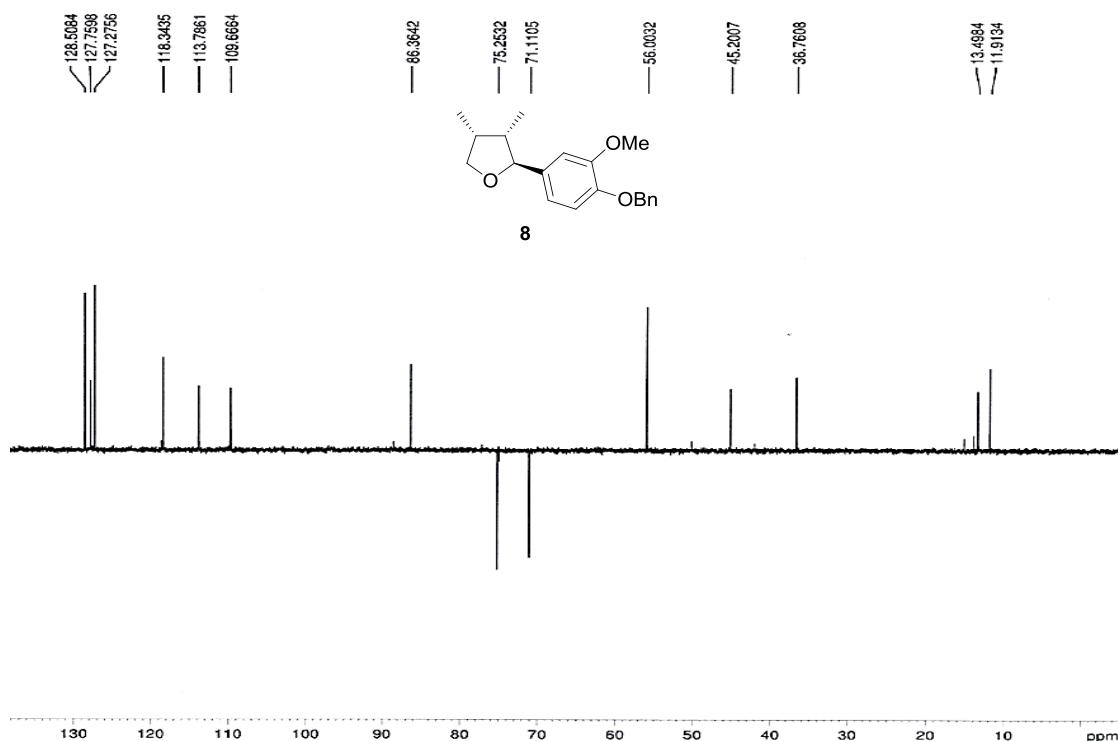
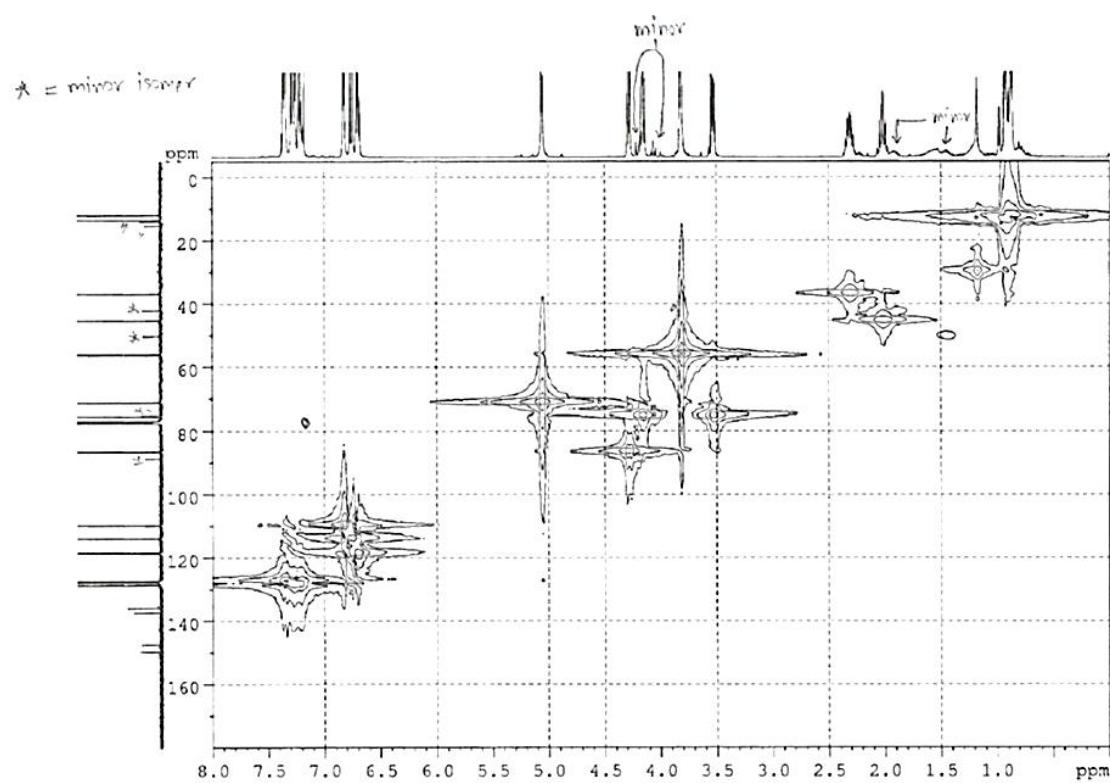
E-mail: darunee.soo@mahidol.ac.th

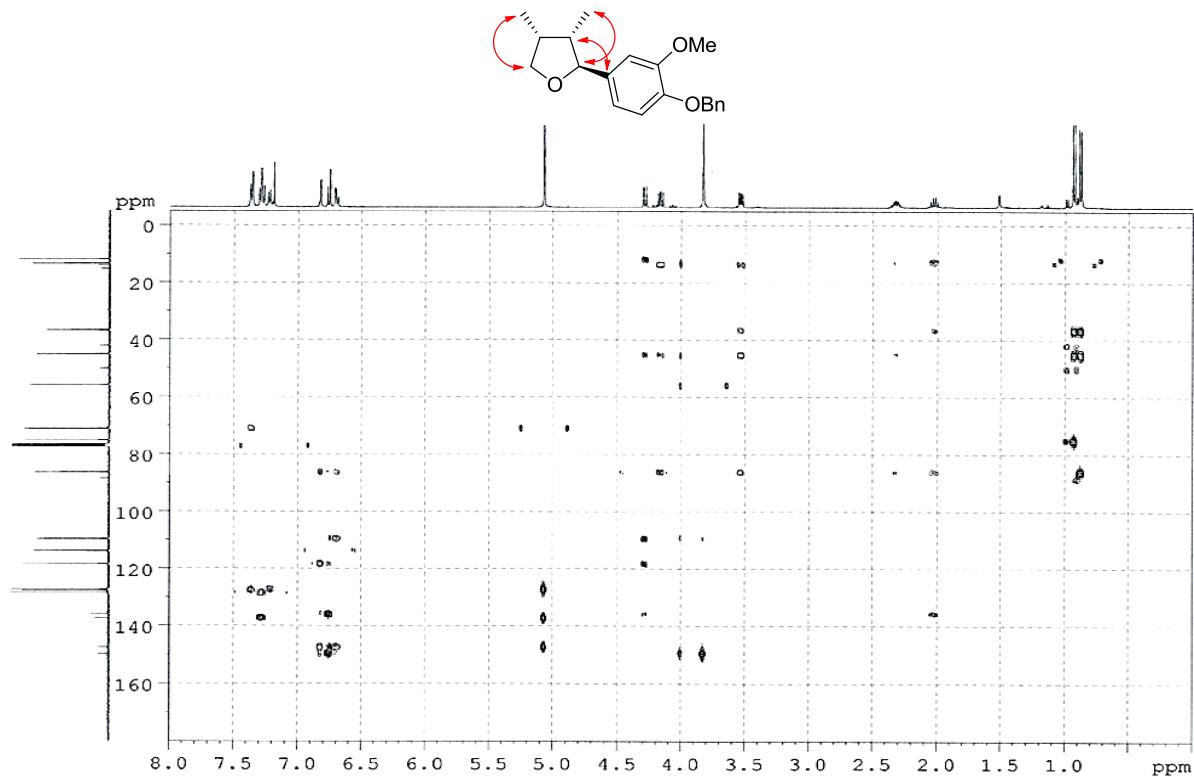
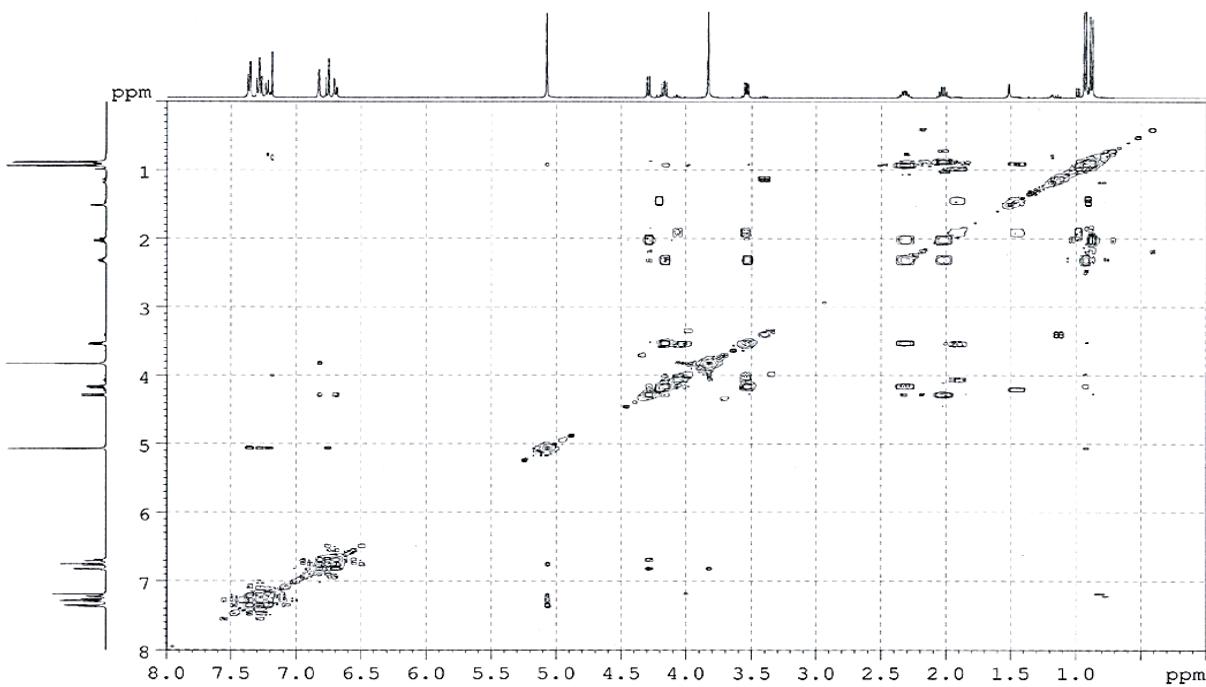
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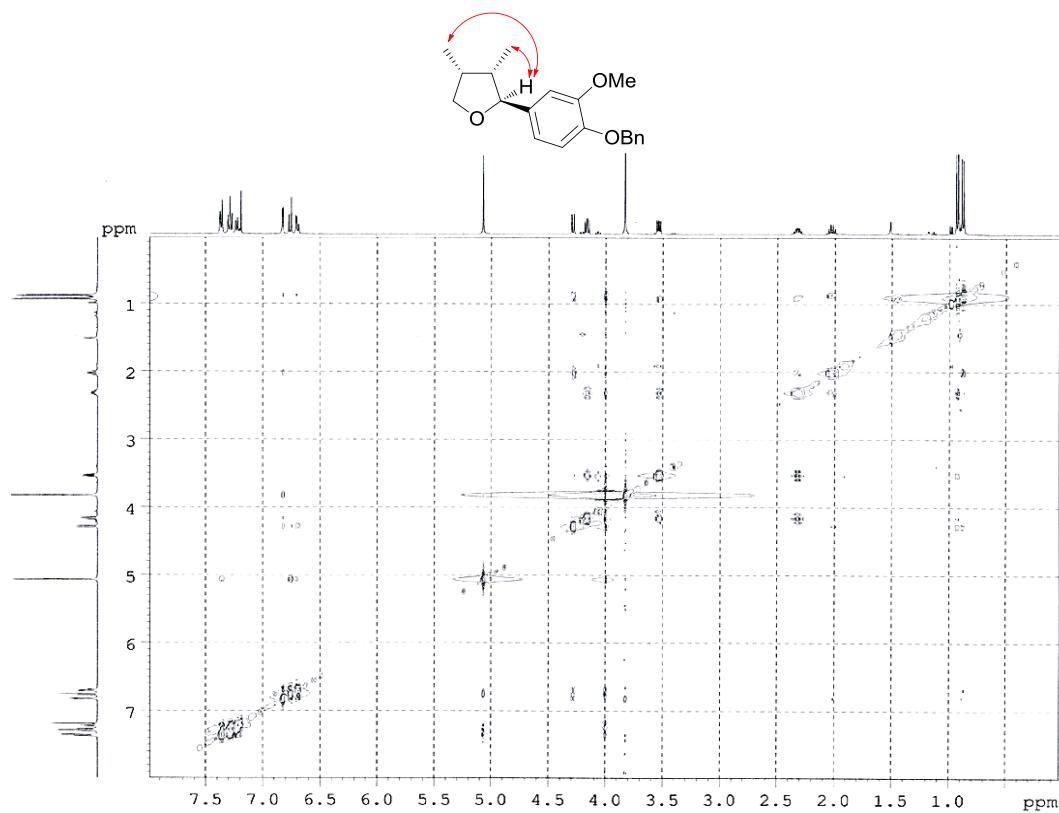
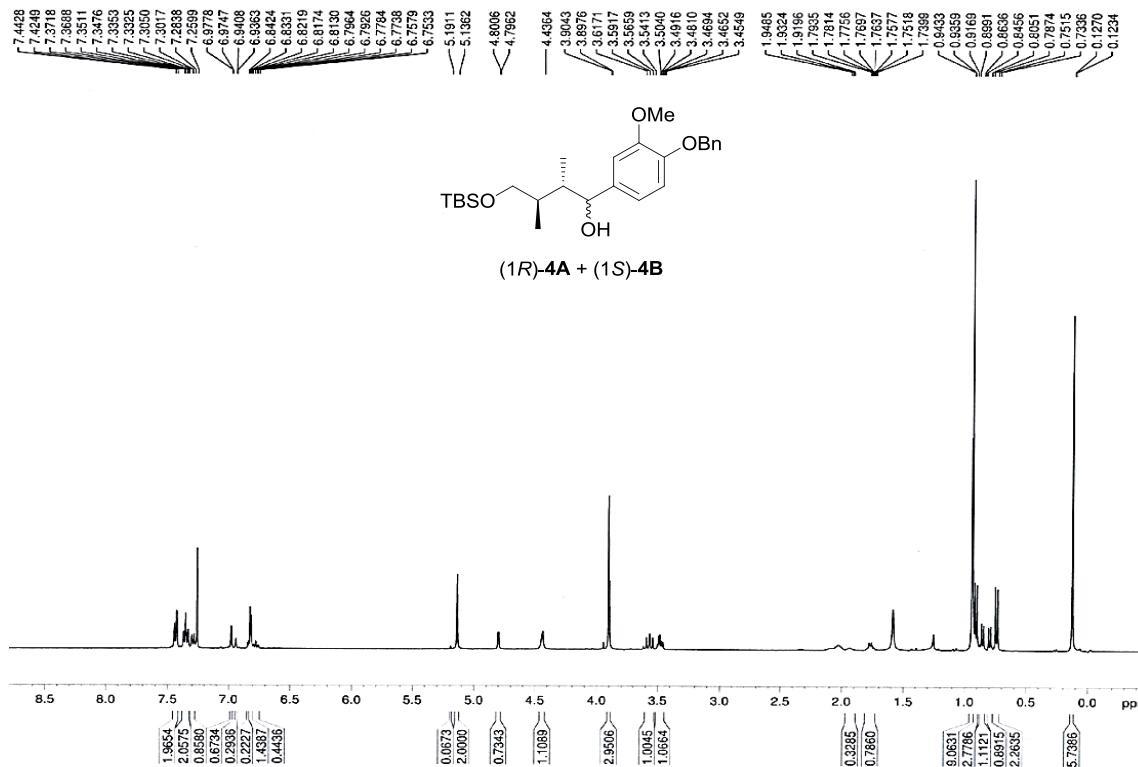
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¹H NMR spectrum of **5** (400 MHz, CDCl₃)¹³C NMR spectrum of **5** (100 MHz, CDCl₃)

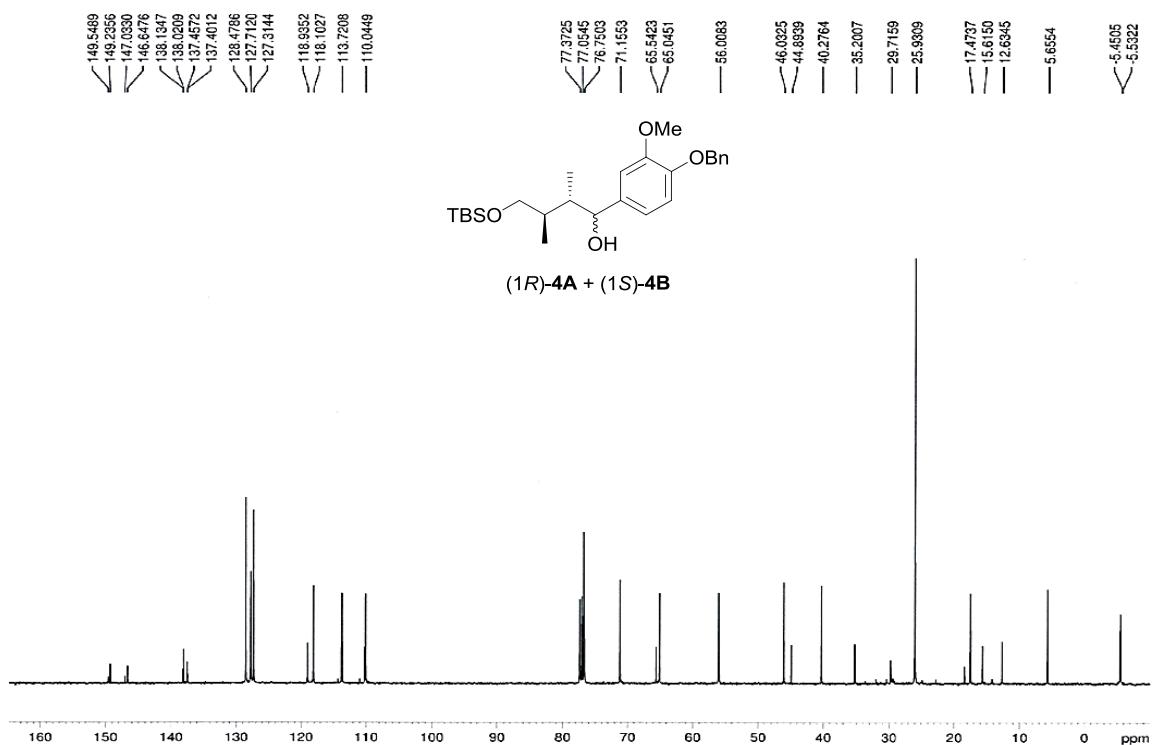
¹H NMR spectrum of **8** (400 MHz, CDCl₃)¹³C NMR spectrum of **8** (100 MHz, CDCl₃)

DEPT-135 spectrum of **8** (100 MHz, CDCl₃)HMQC of **8**

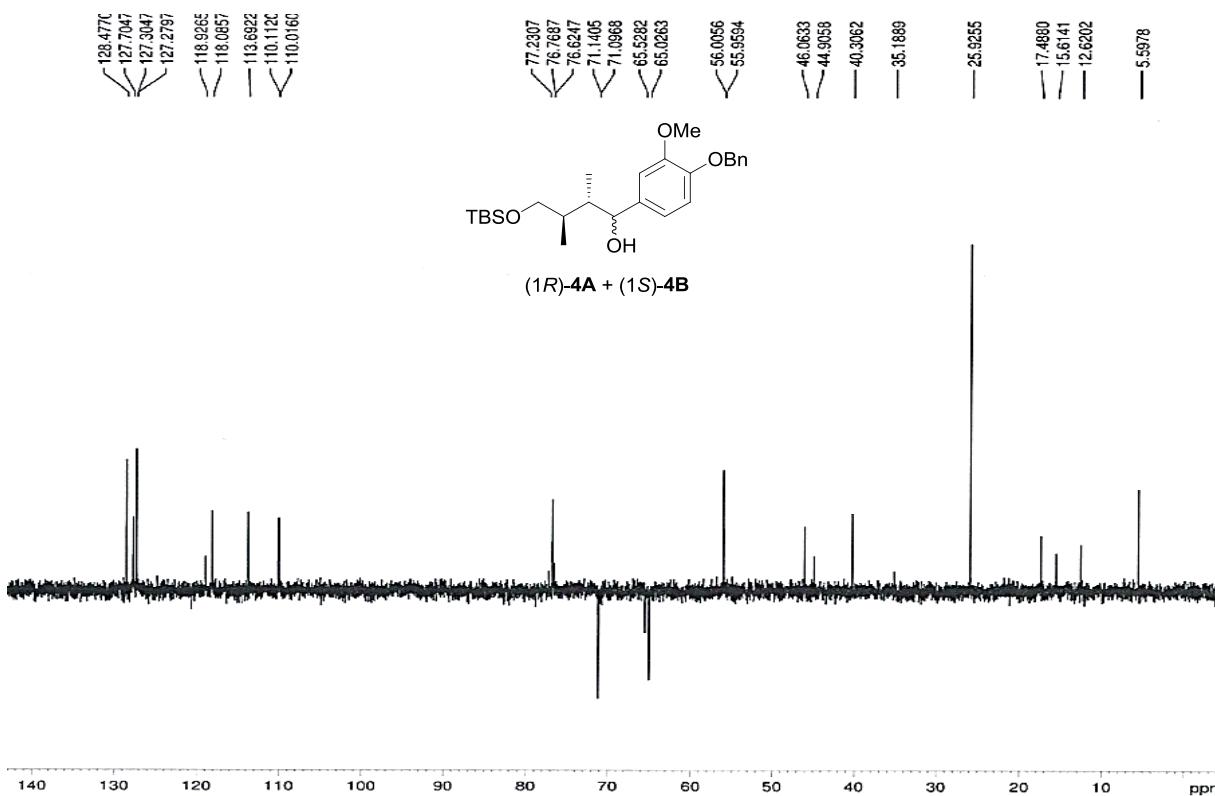
HMBC of **8**COSY of **8**

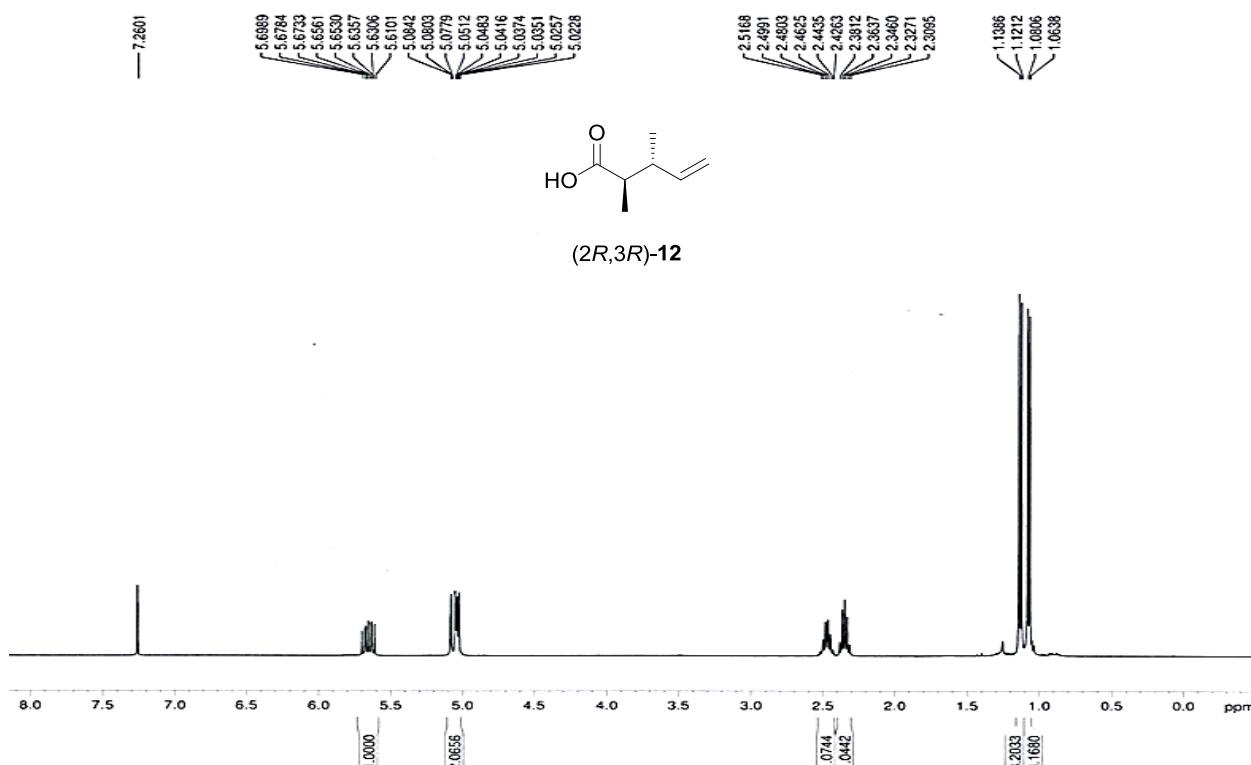
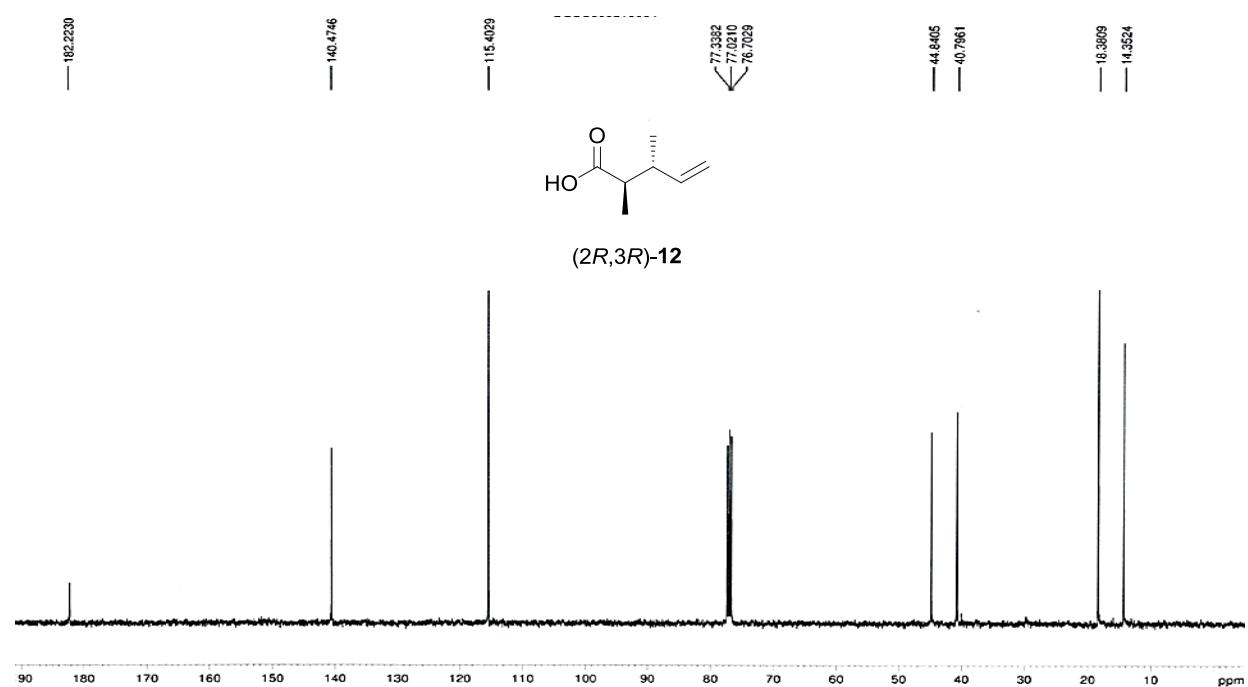
NOESY of **8**¹H NMR spectrum of **4** (400 MHz, CDCl₃)

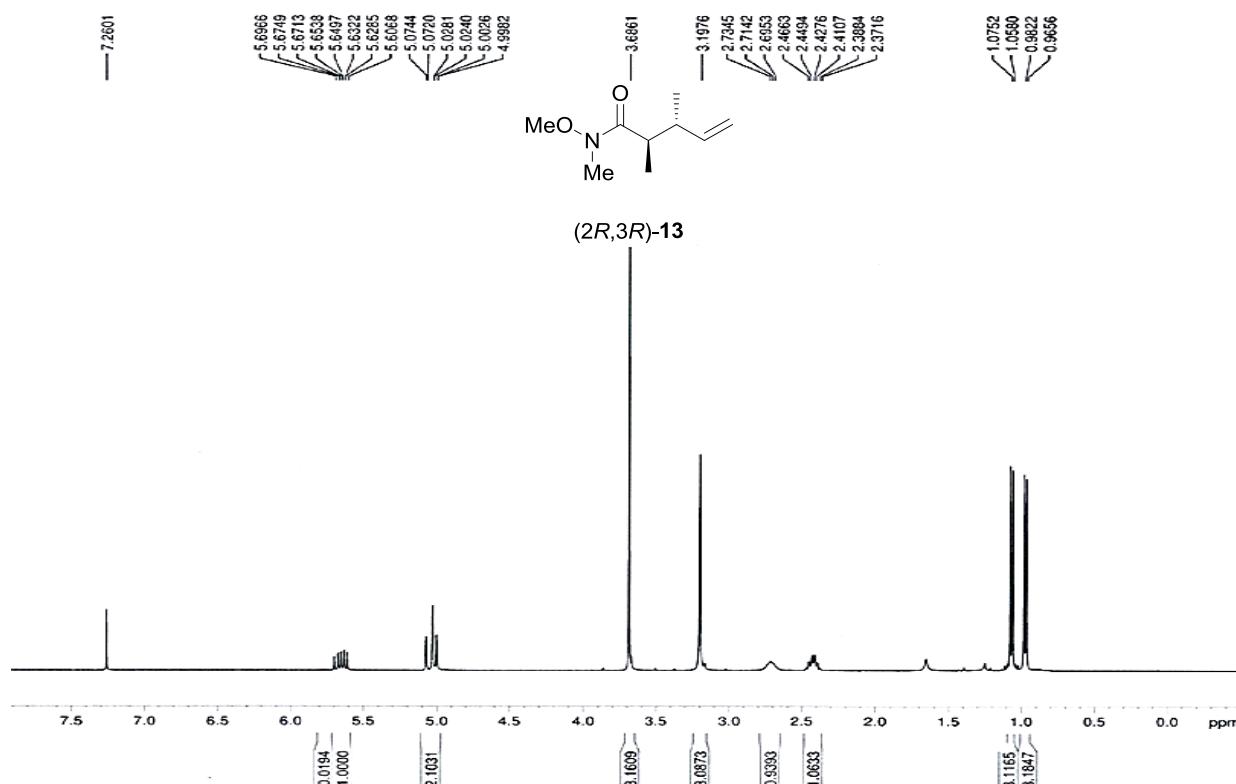
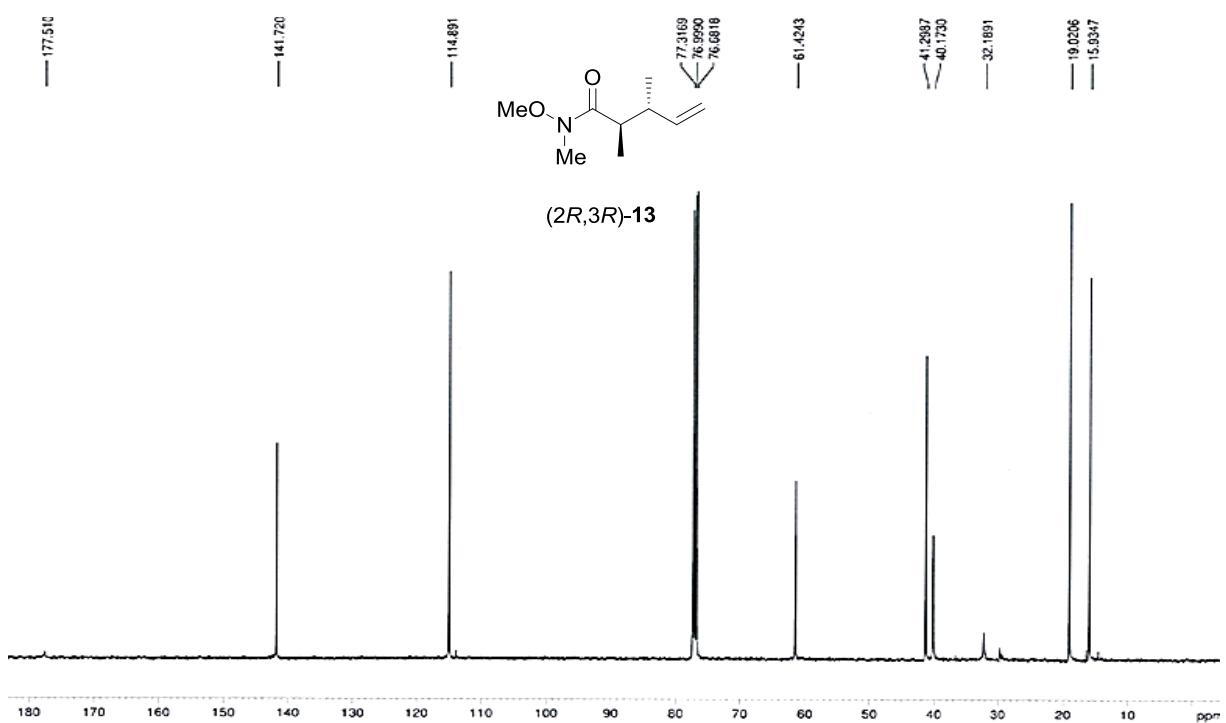
¹³C NMR spectrum of **4** (100 MHz, CDCl₃)

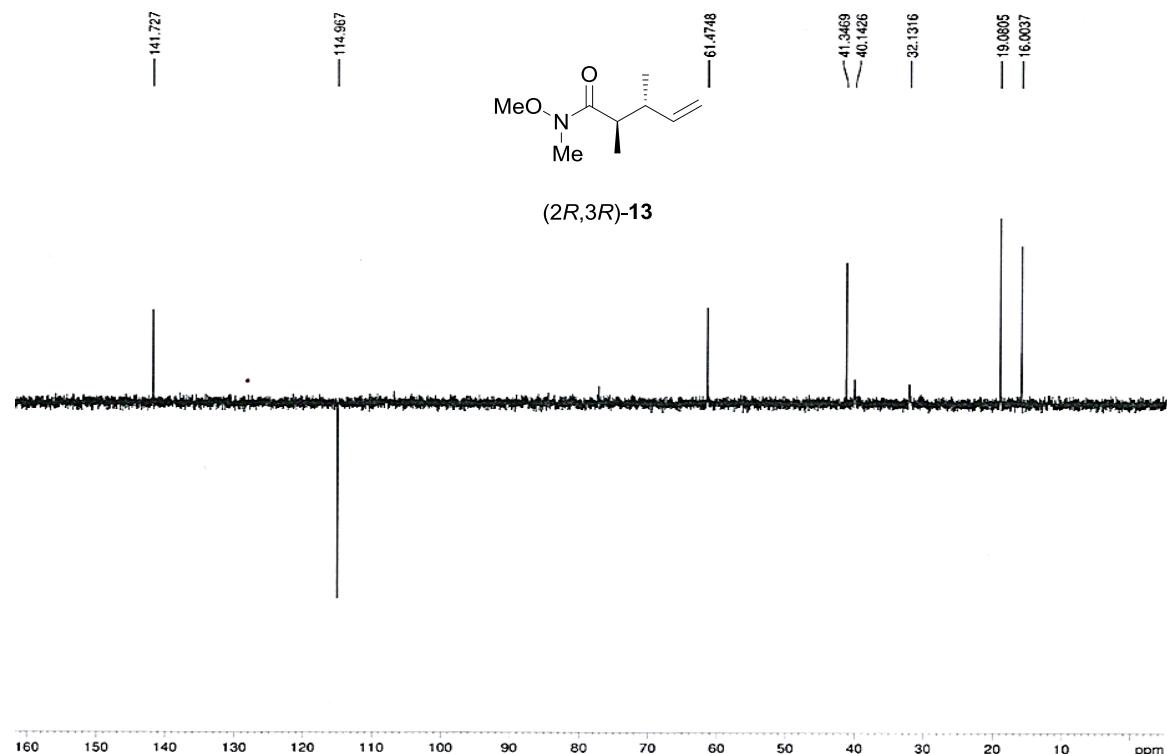
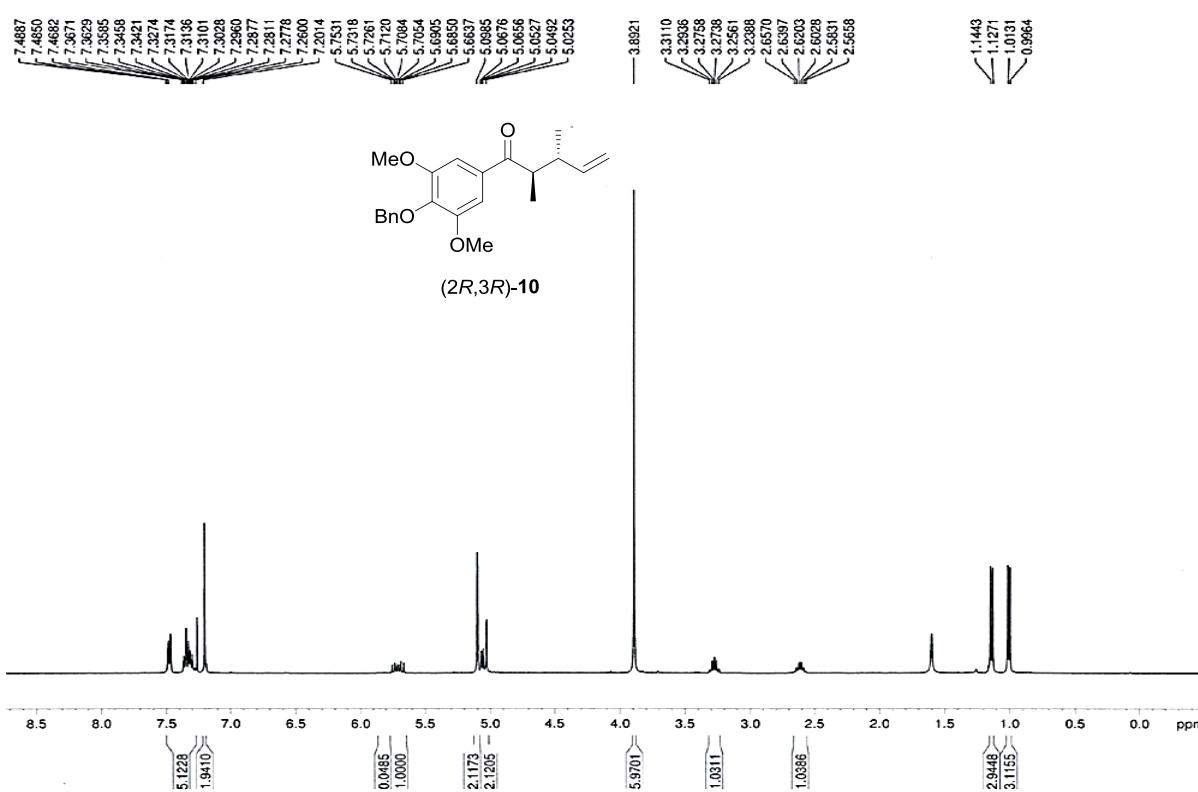


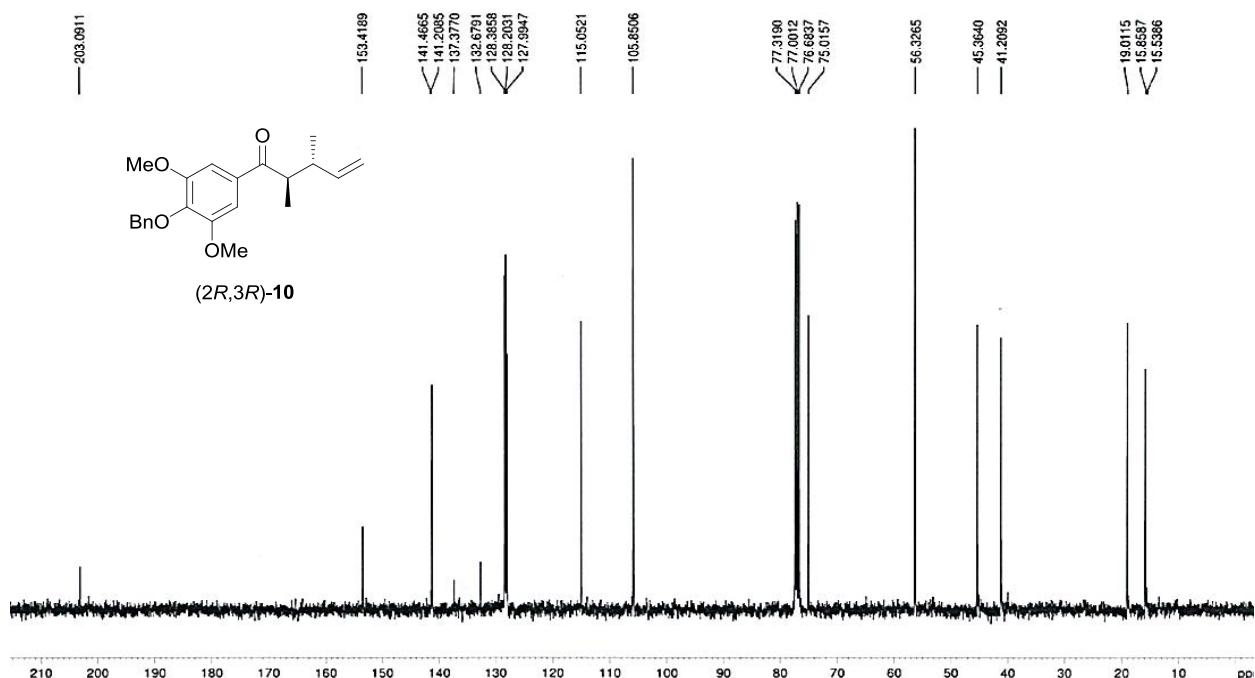
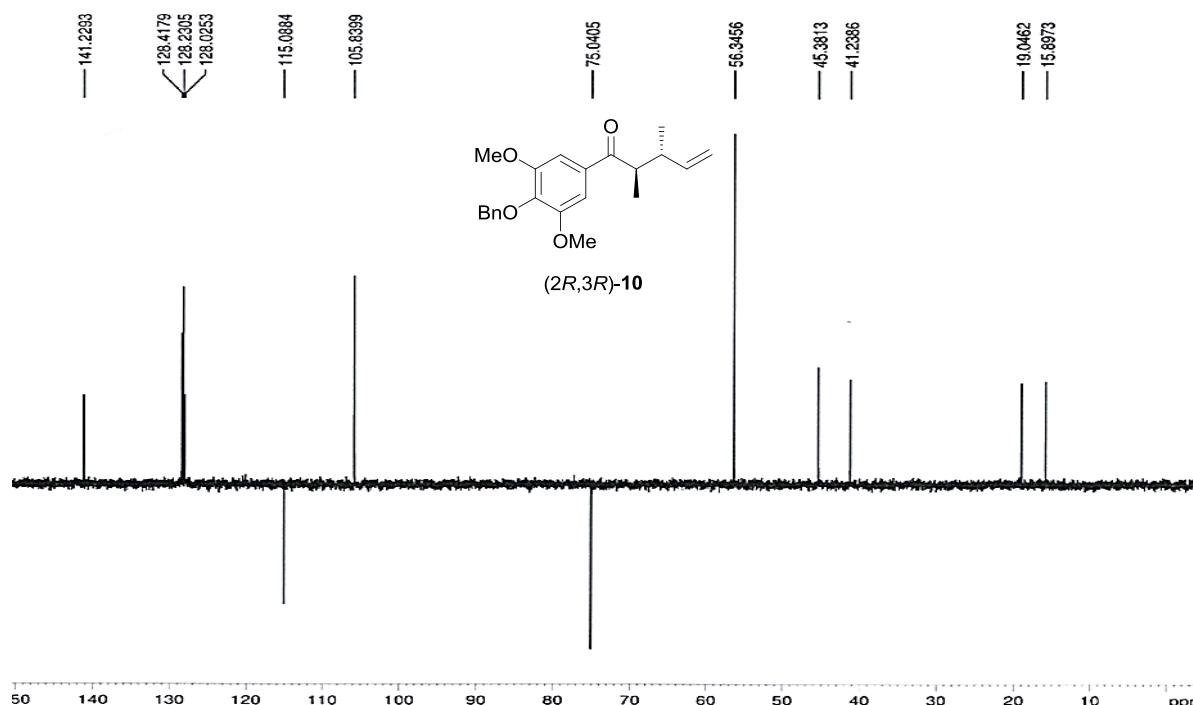
DEPT-135 spectrum of **4** (100 MHz, CDCl₃)



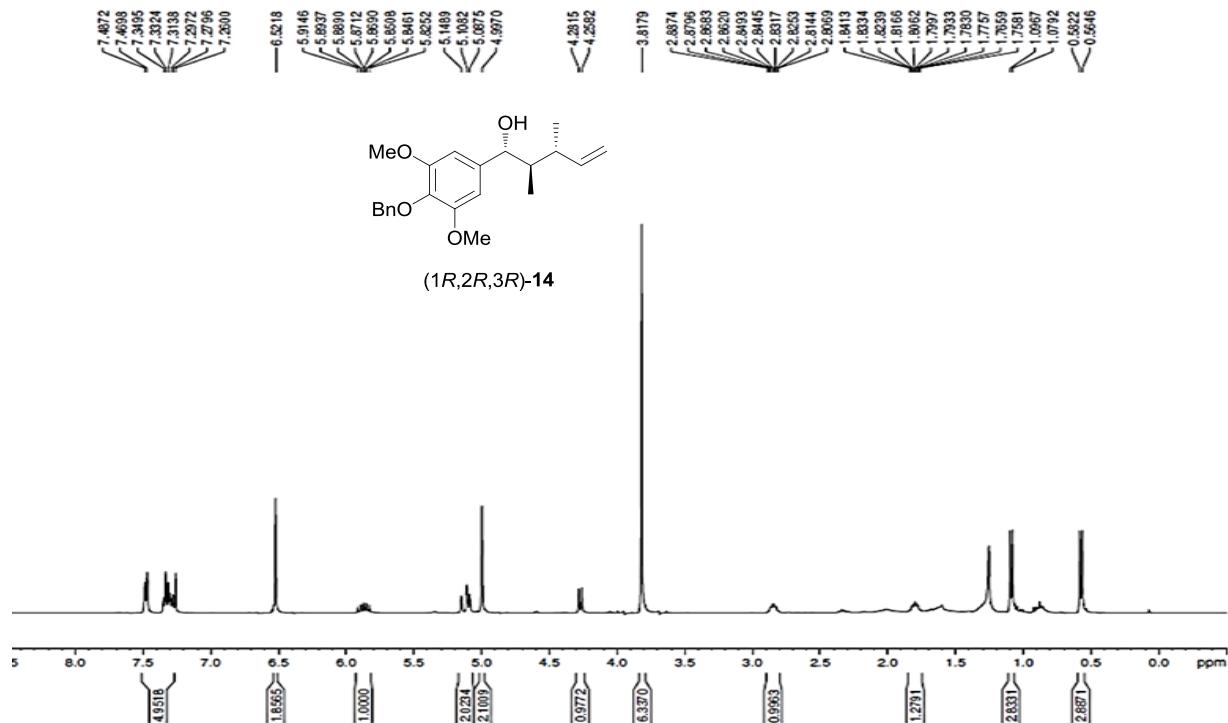
¹H NMR spectrum of **12** (400 MHz, CDCl₃)¹³C NMR spectrum of **12** (100 MHz, CDCl₃)

¹H NMR spectrum of **13** (400 MHz, CDCl₃)¹³C NMR spectrum of **13** (100 MHz, CDCl₃)

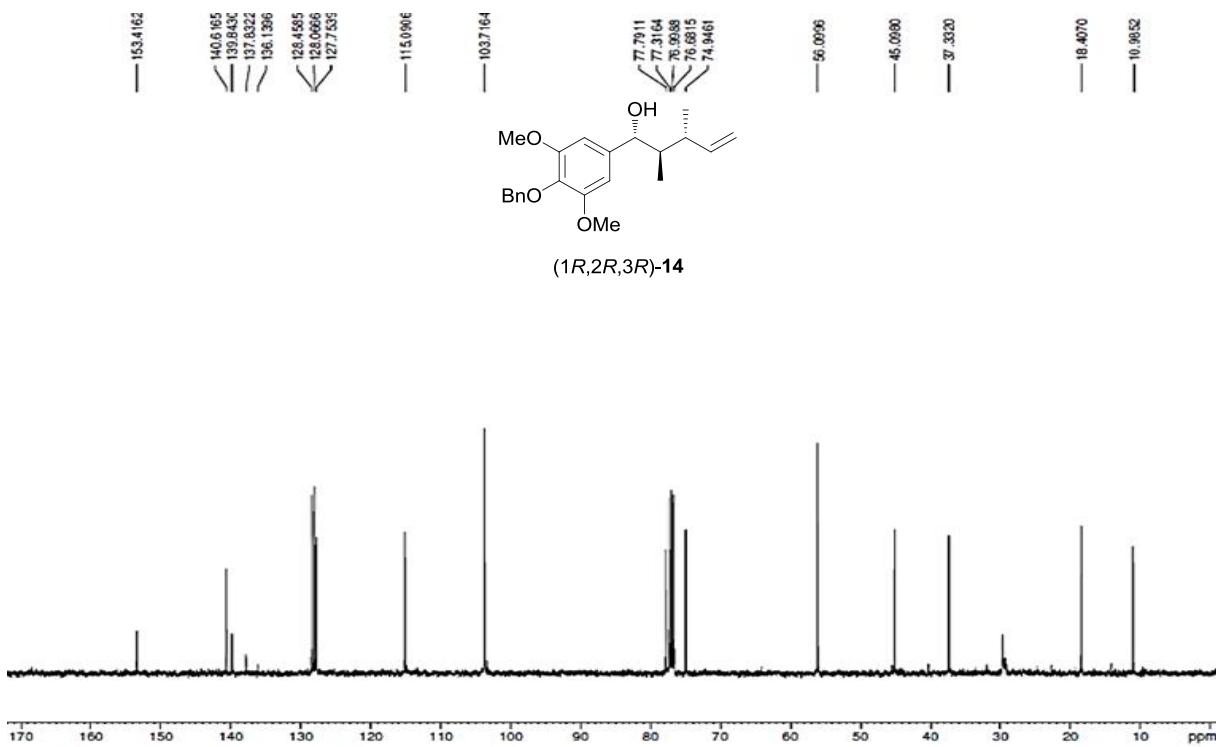
DEPT-135 spectrum of **13** (100 MHz, CDCl₃)¹H NMR spectrum of **10** (400 MHz, CDCl₃)

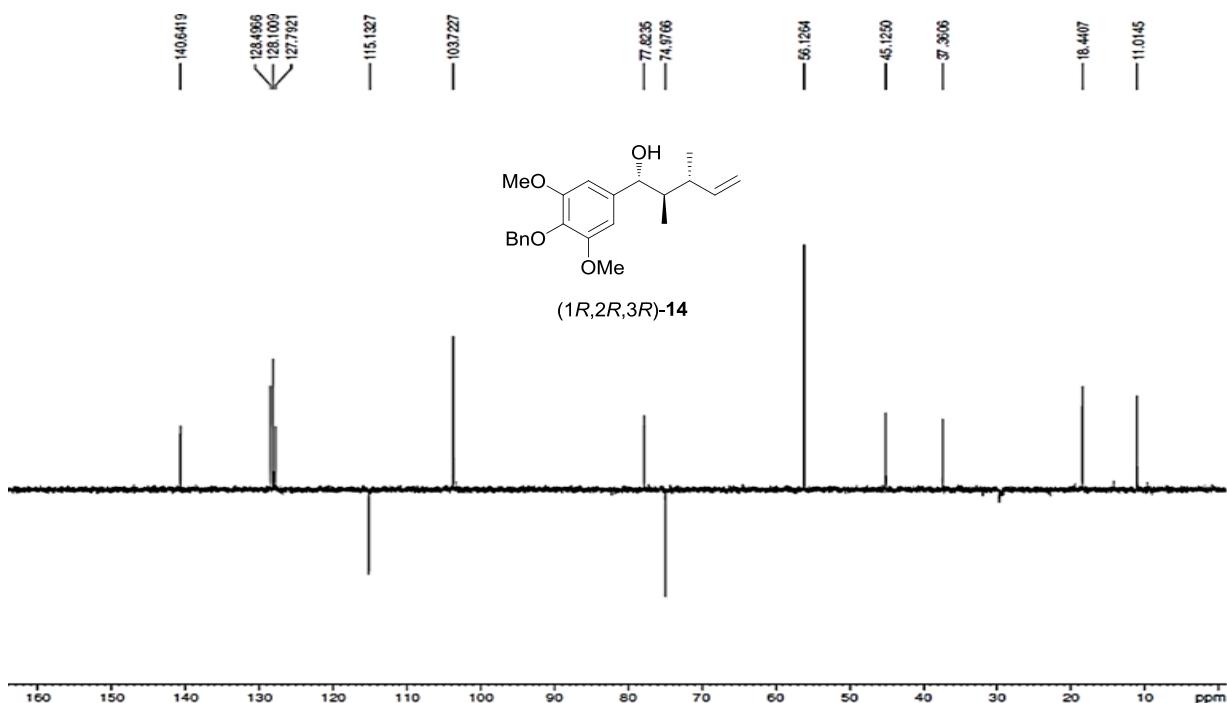
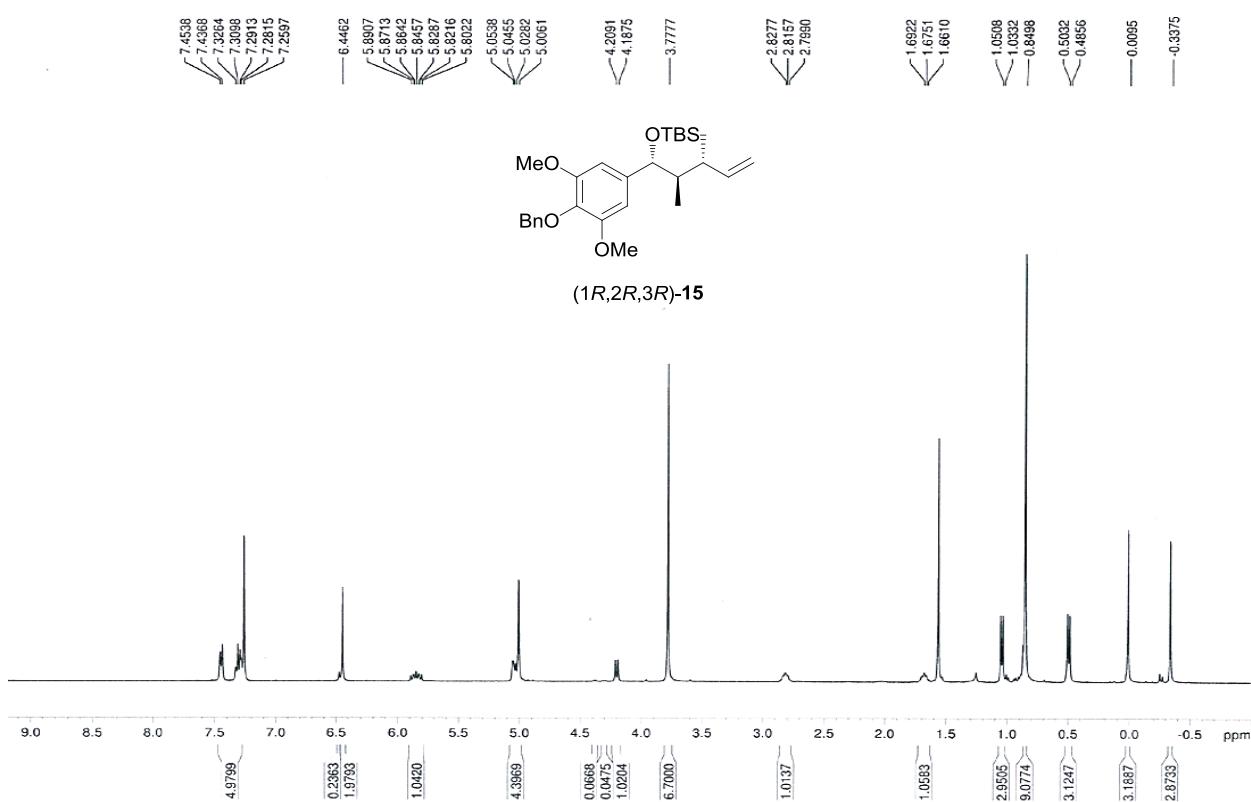
¹³C NMR spectrum of **10** (100 MHz, CDCl₃)DEPT-135 spectrum of **10** (100 MHz, CDCl₃)

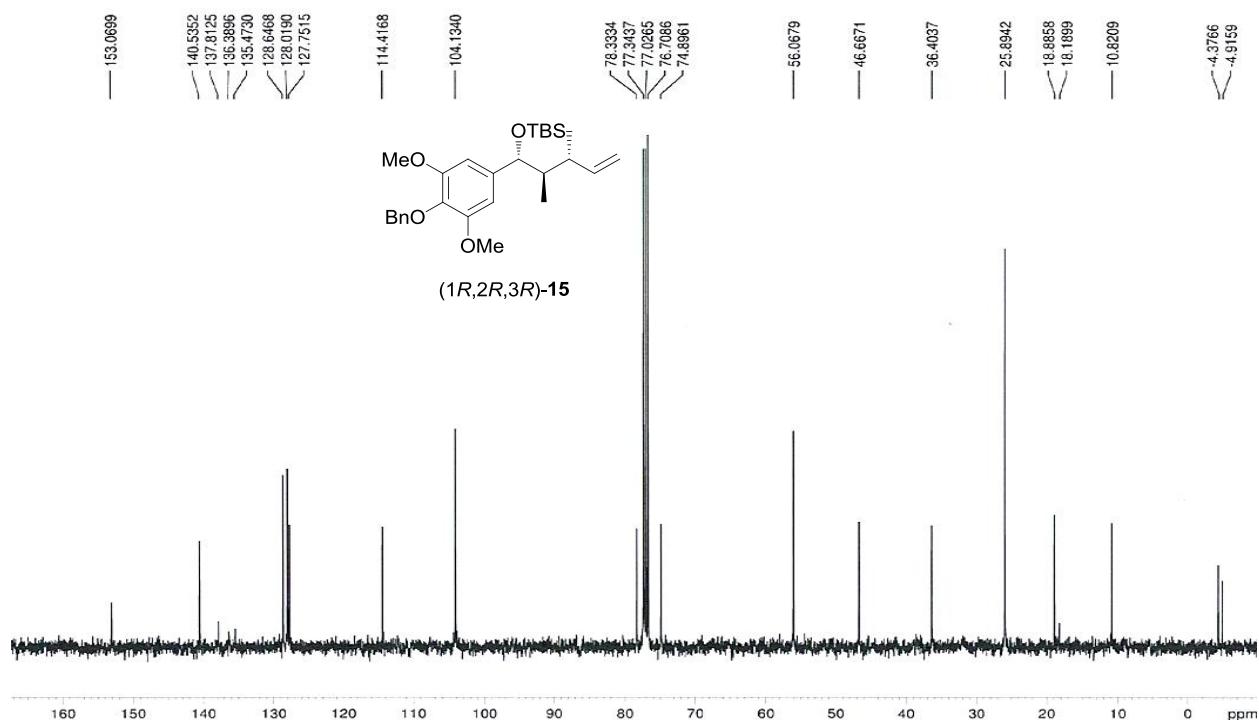
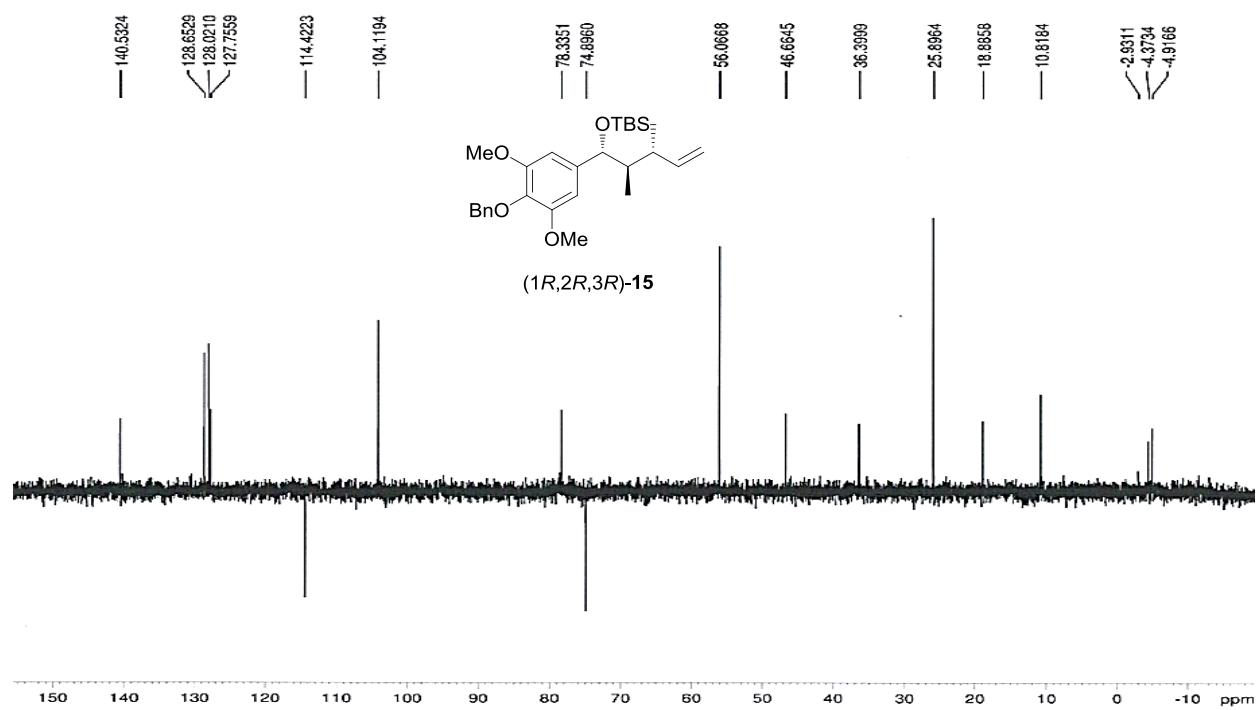
¹H NMR spectrum of **14** (400 MHz, CDCl₃)



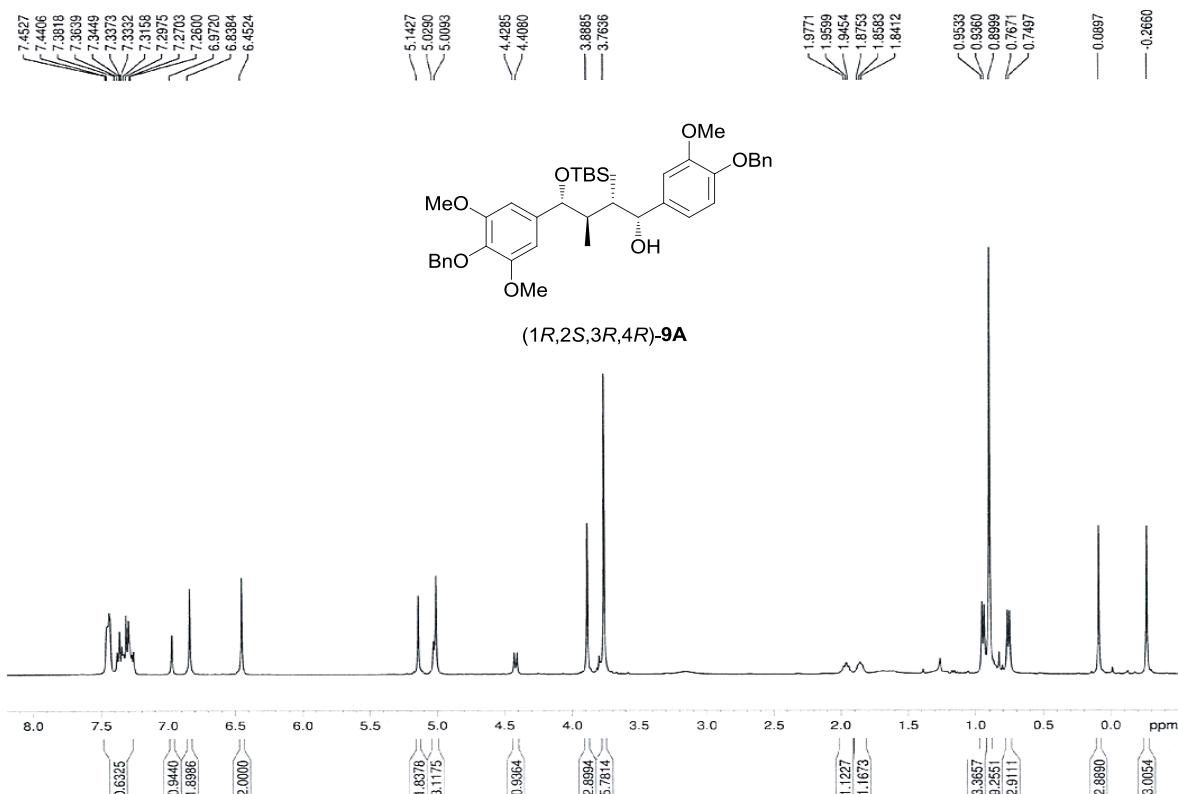
¹³C NMR spectrum of **14** (100 MHz, CDCl₃)



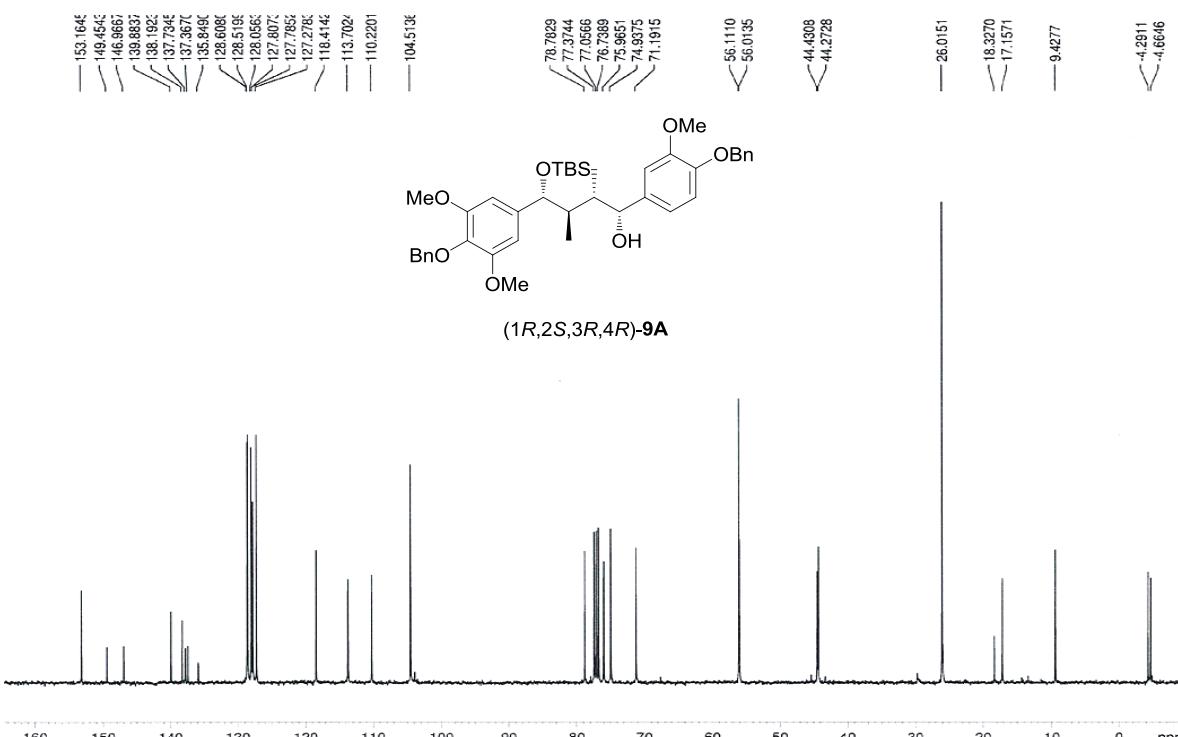
DEPT-135 spectrum of **14** (100 MHz, CDCl_3) ^1H NMR spectrum of **15** (400 MHz, CDCl_3)

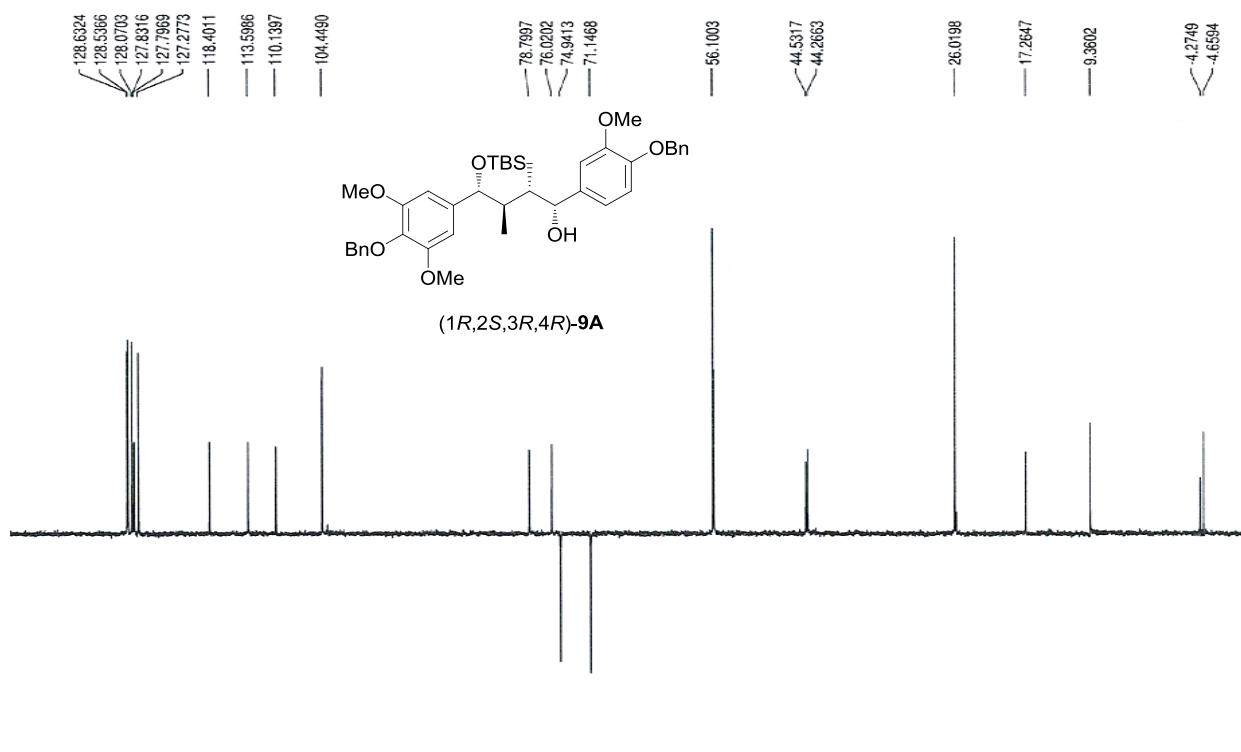
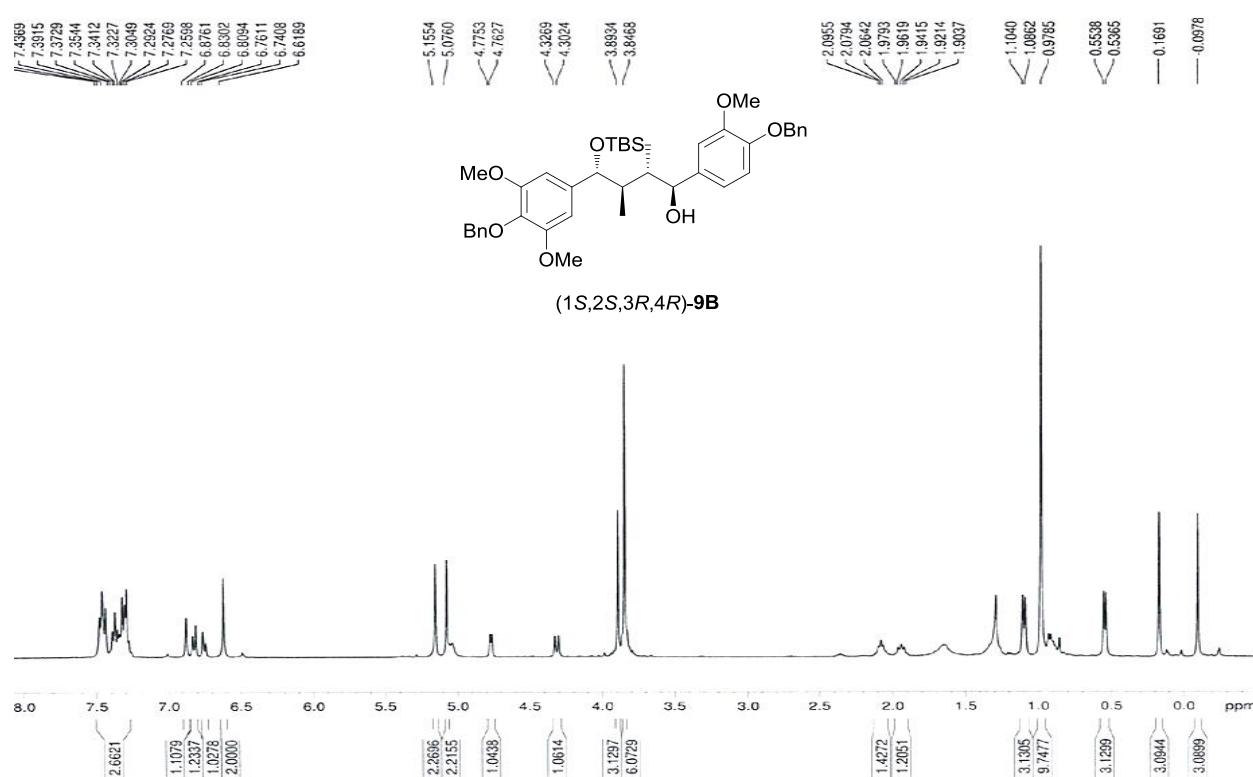
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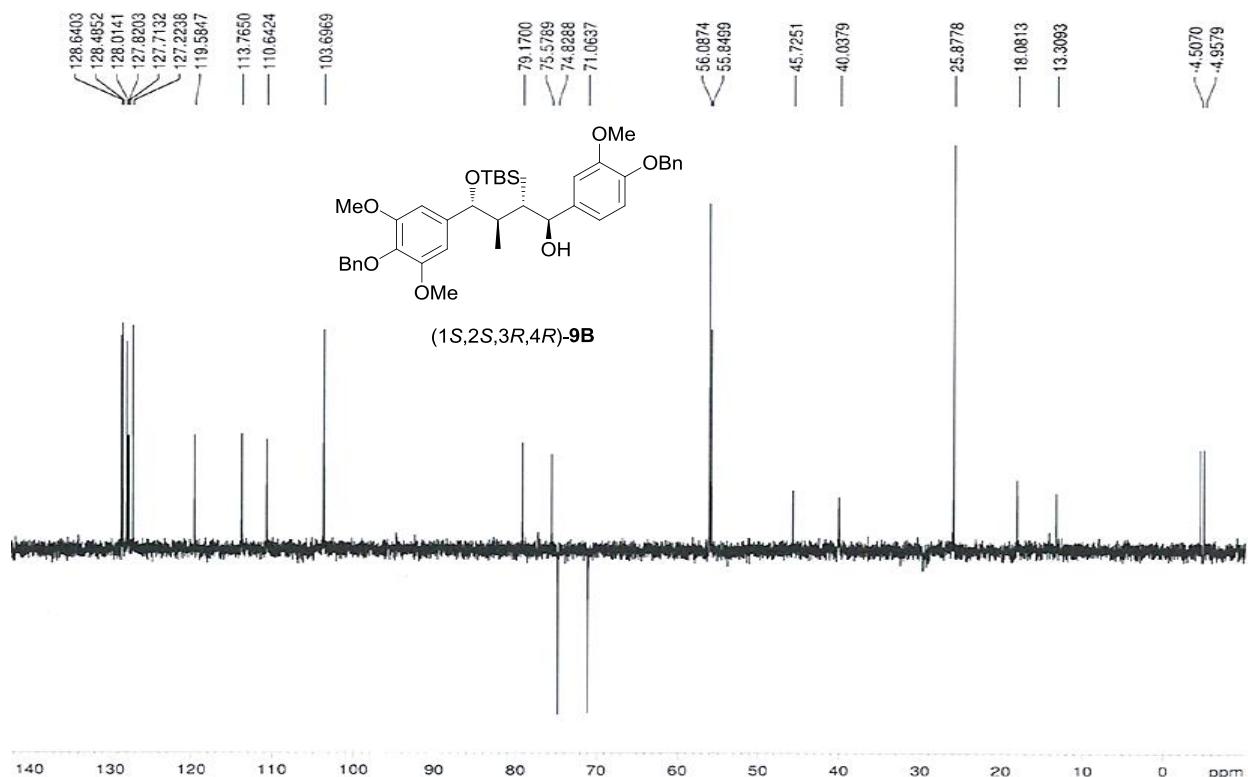
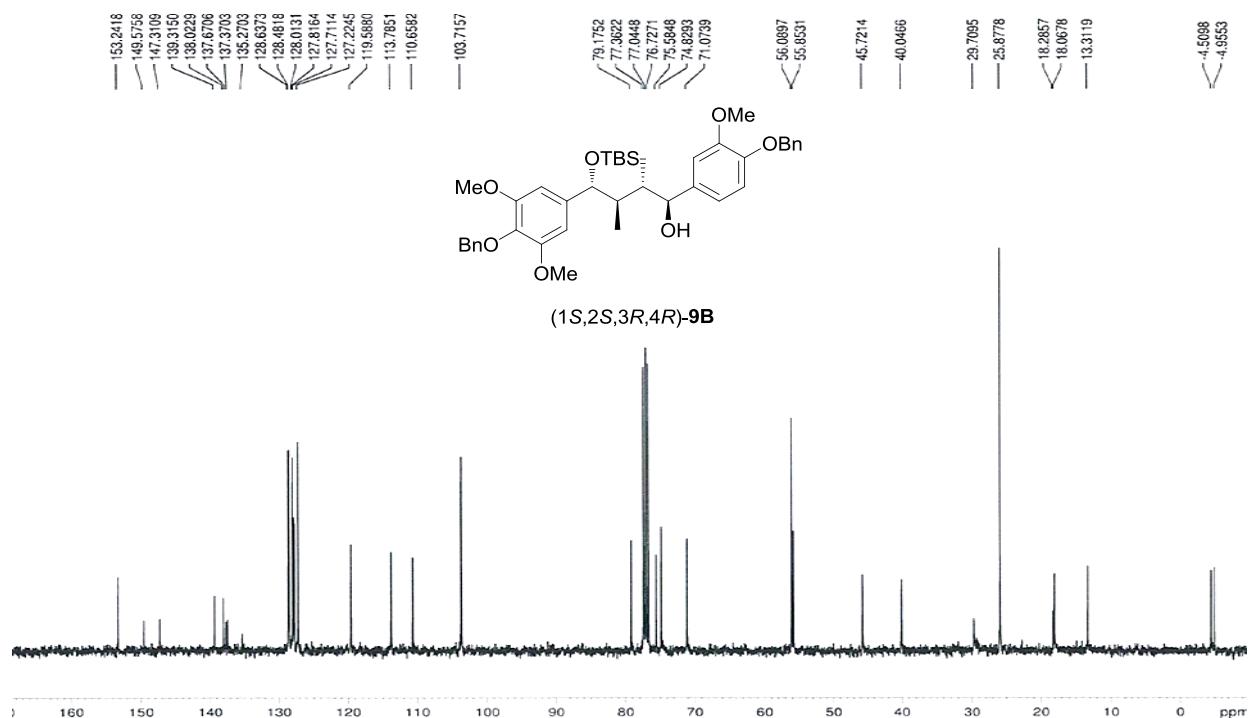
¹H NMR spectrum of **9A** (400 MHz, CDCl₃)

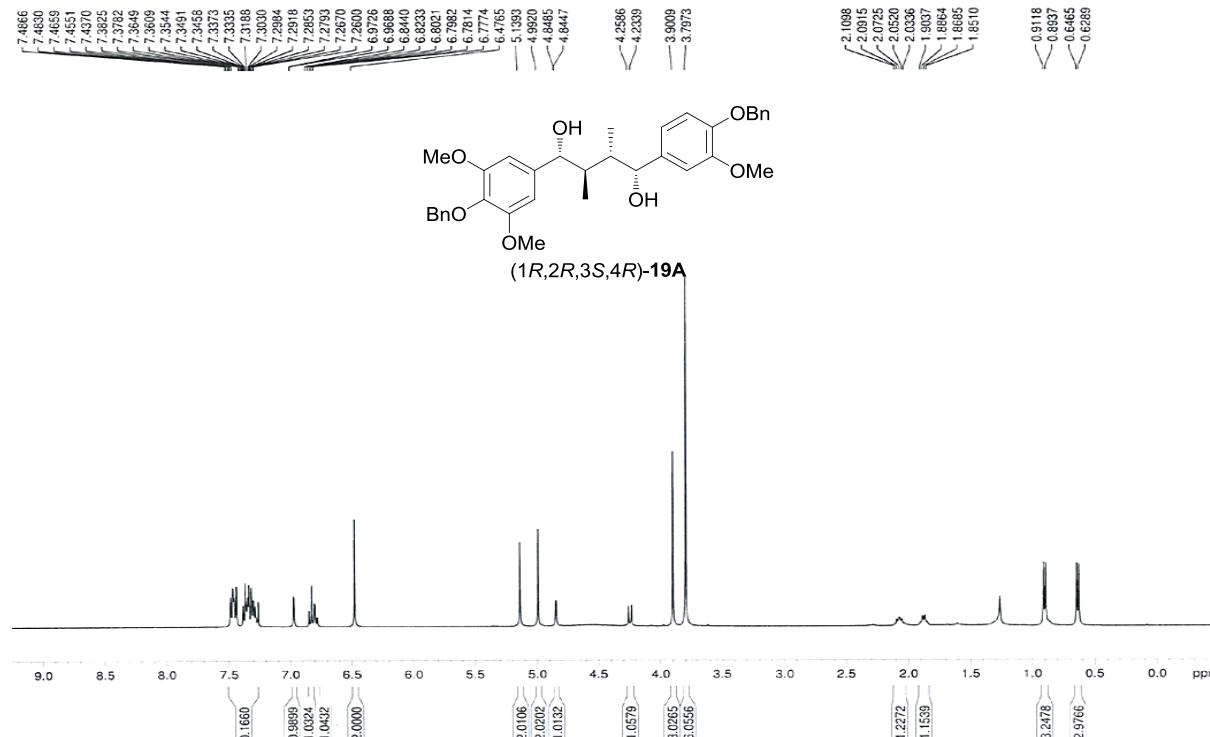
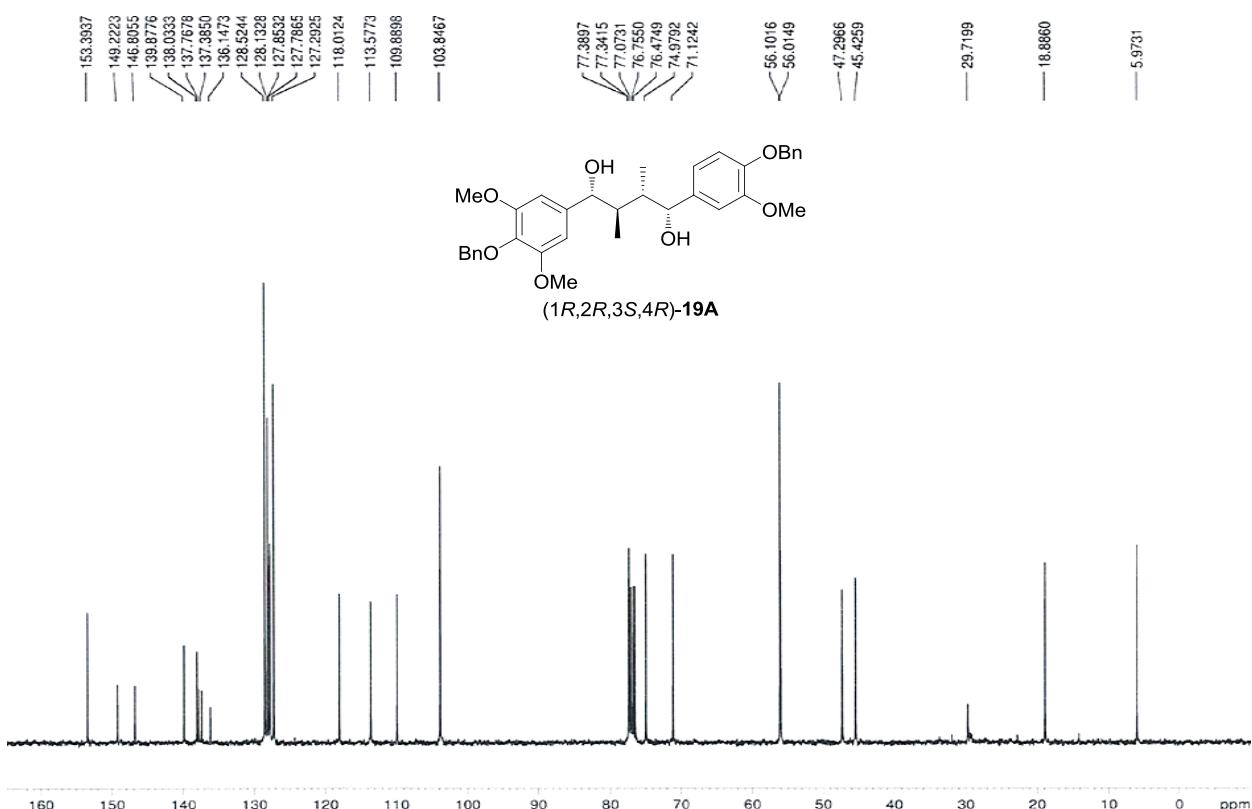


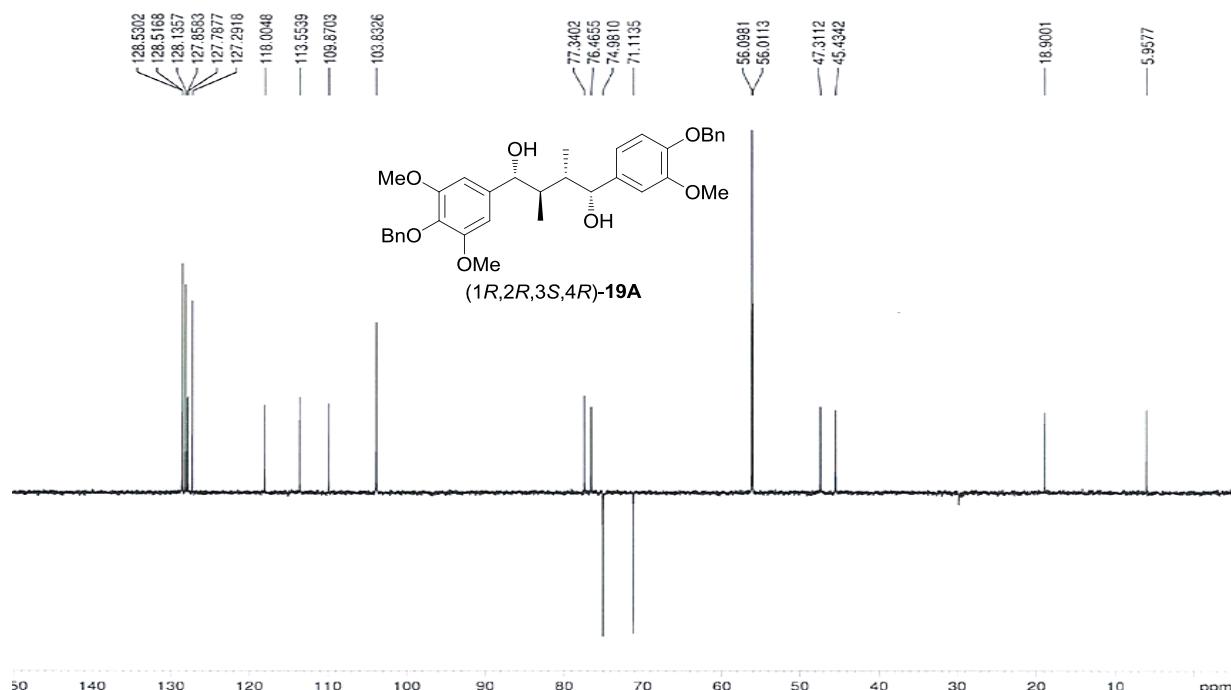
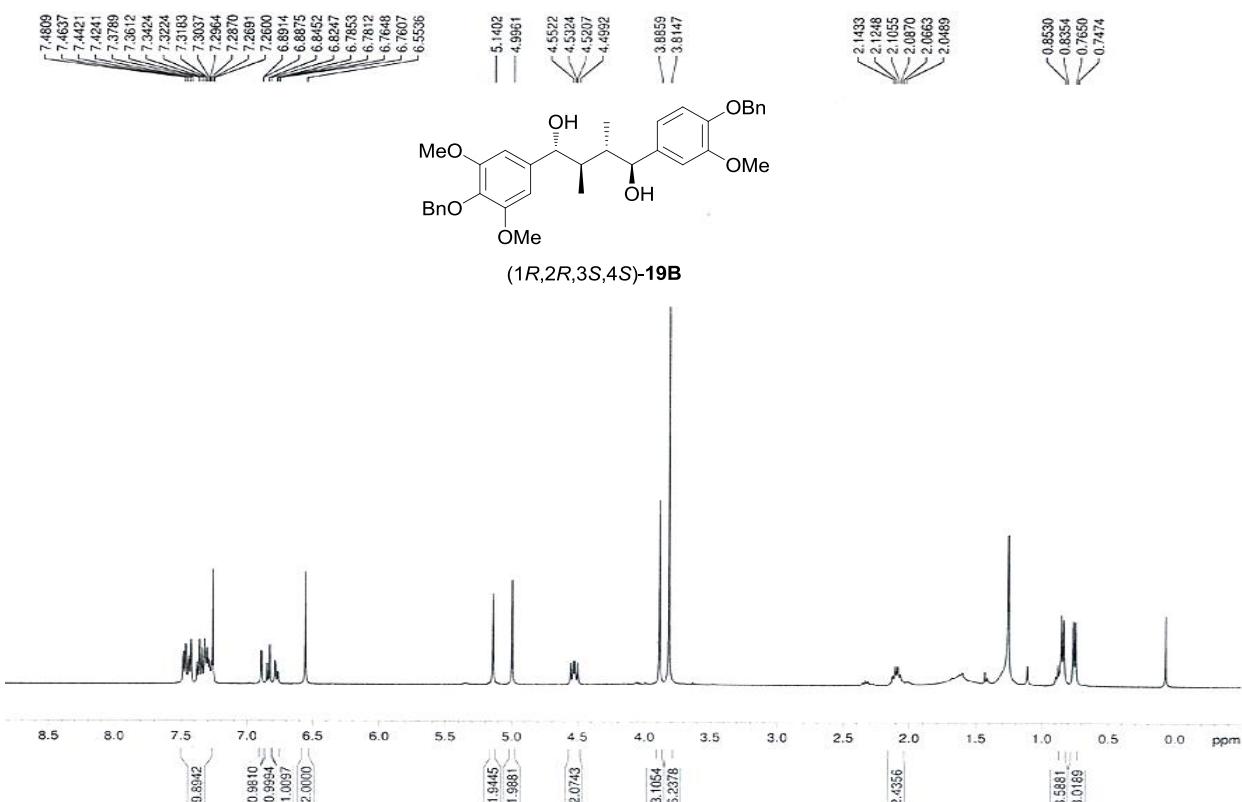
¹³C NMR spectrum of **9A** (100 MHz, CDCl₃)

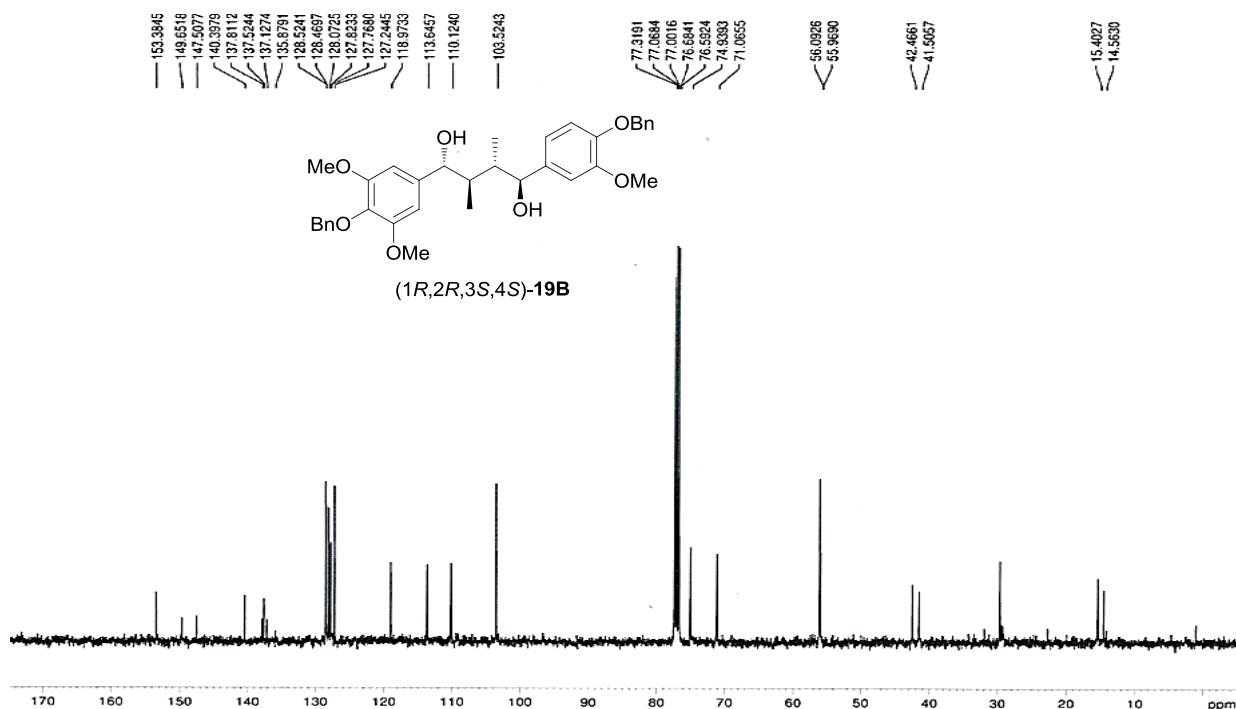
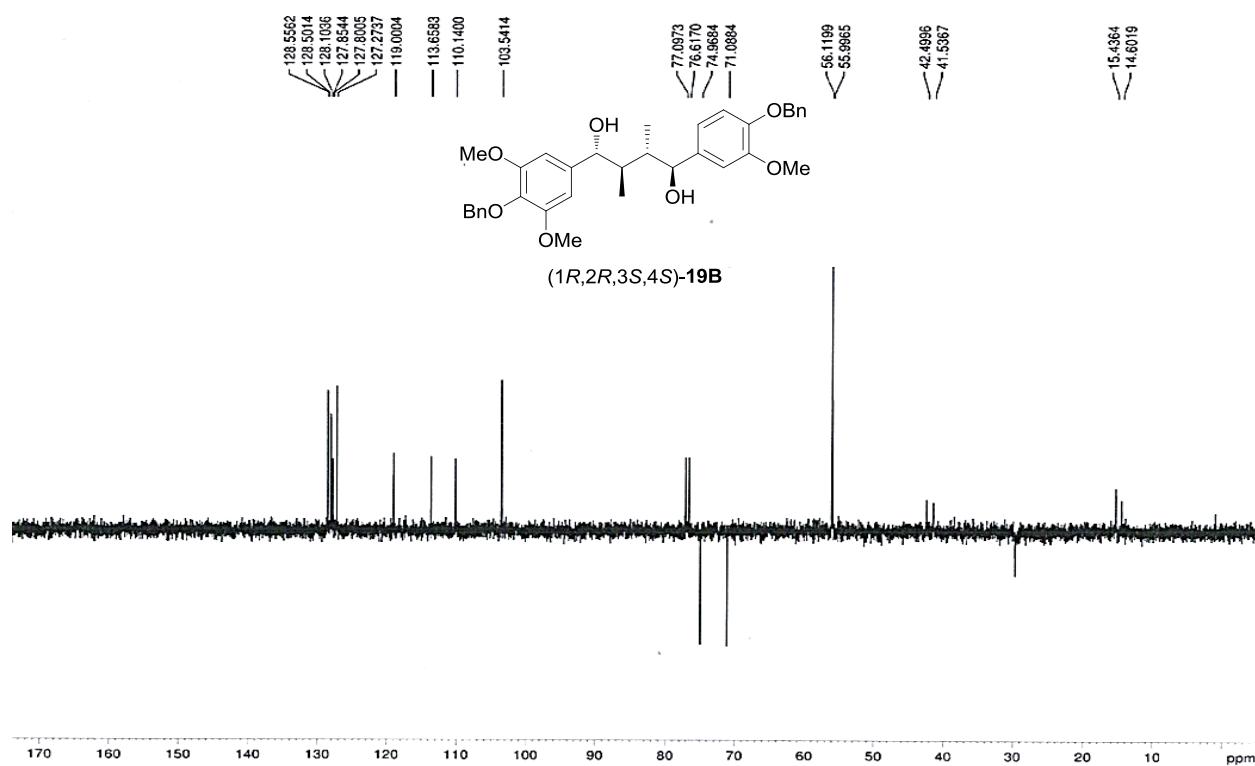


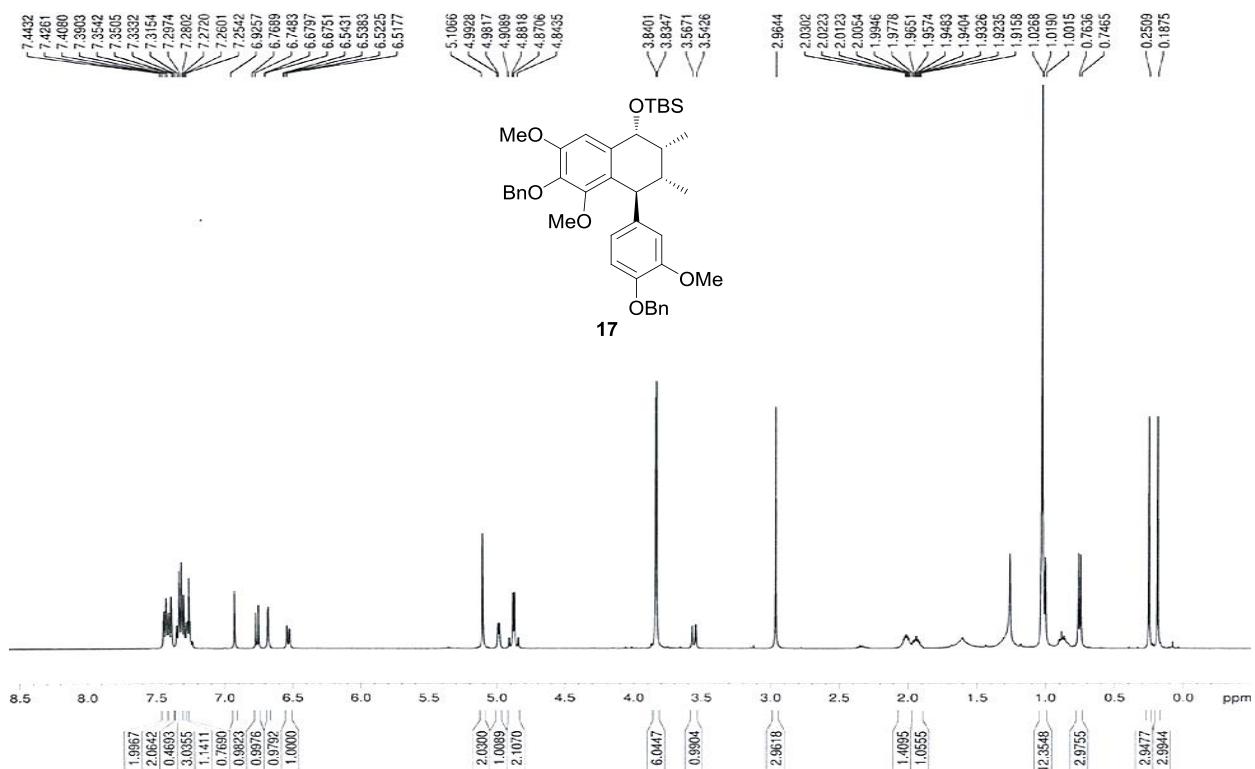
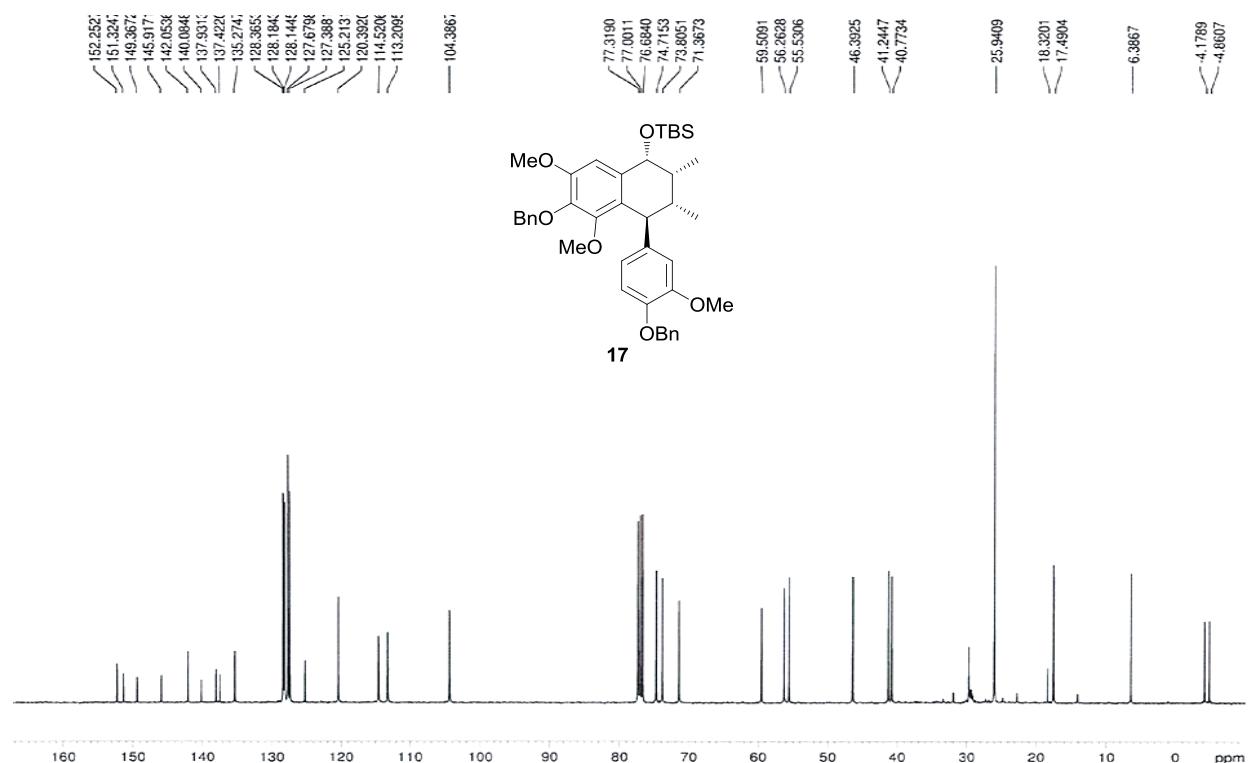
DEPT-135 spectrum of **9A** (100 MHz, CDCl₃)¹H NMR spectrum of **9B** (400 MHz, CDCl₃)

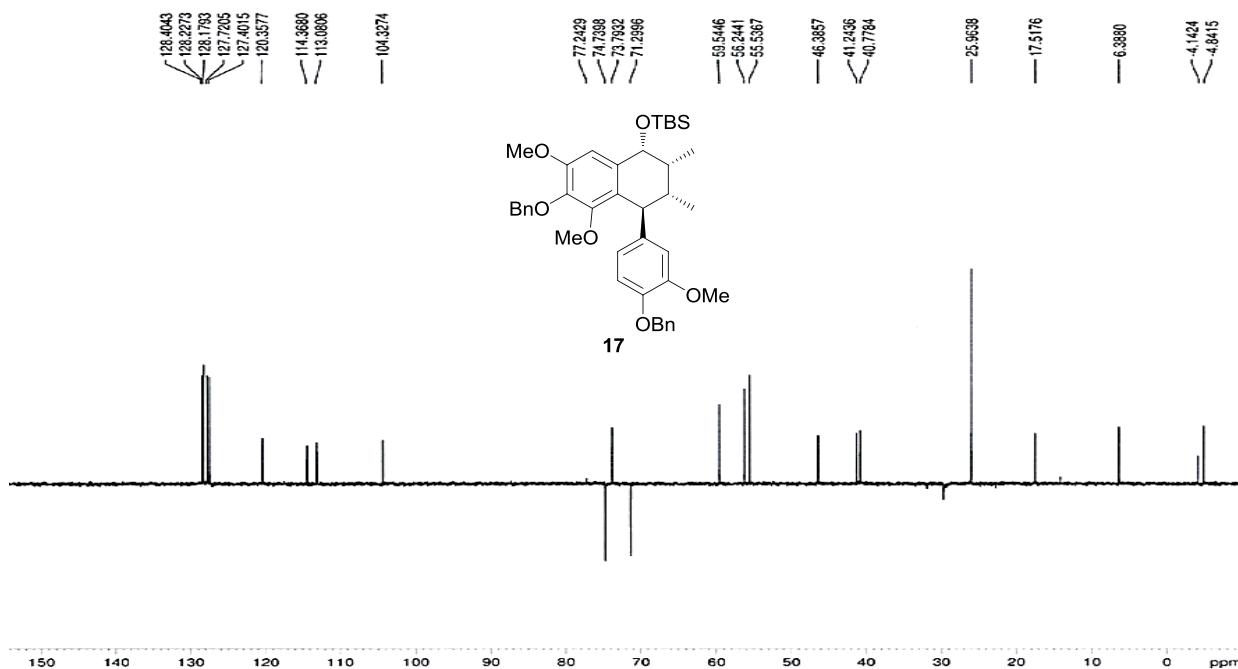
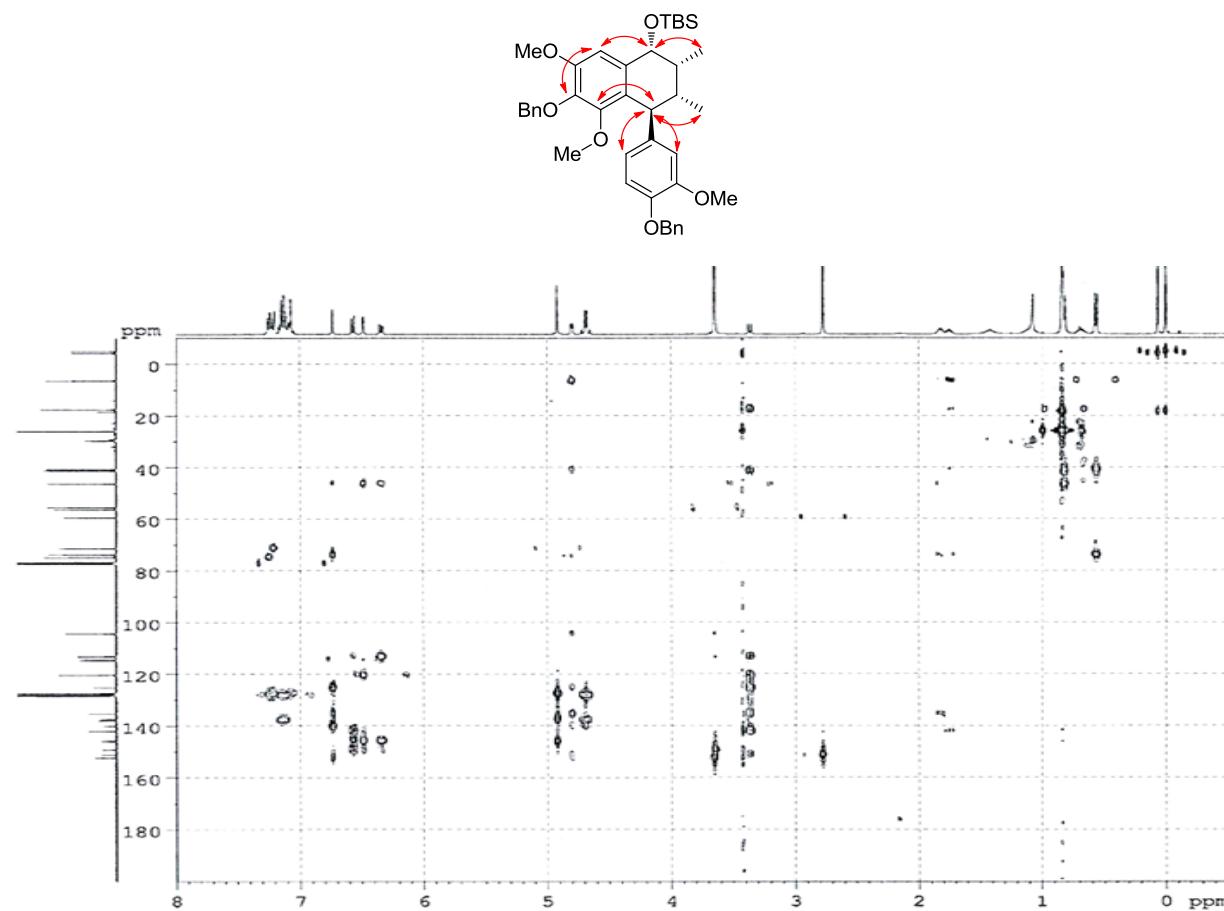
¹³C NMR spectrum of **9B** (100 MHz, CDCl₃)

¹H NMR spectrum of **19A** (400 MHz, CDCl₃)¹³C NMR spectrum of **19A** (100 MHz, CDCl₃)

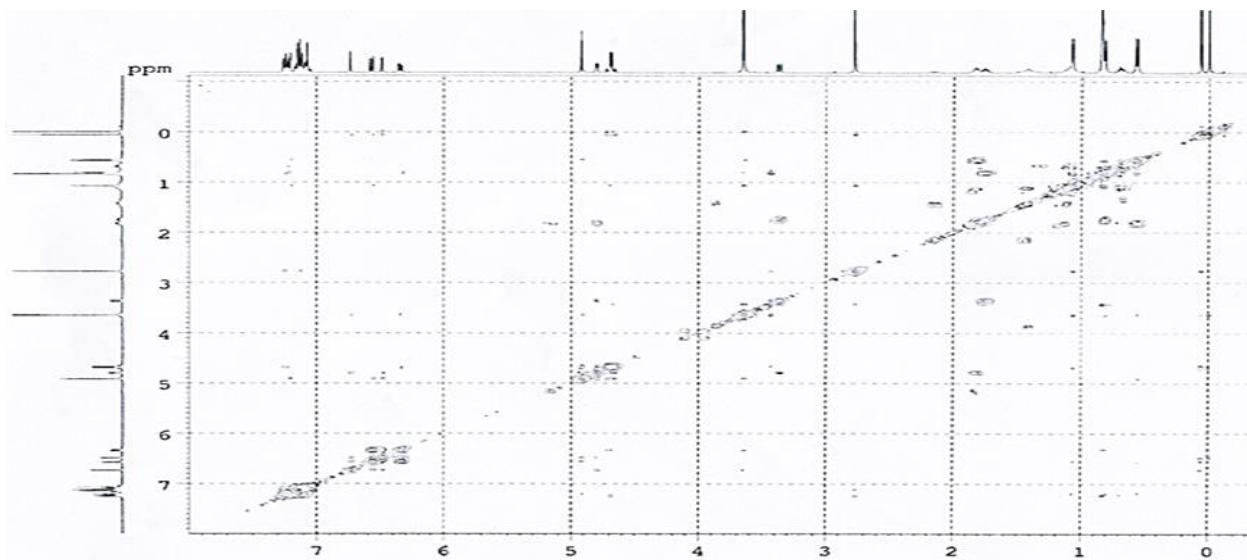
DEPT-135 spectrum of **19A** (100 MHz, CDCl₃)¹H NMR spectrum of **19B** (400 MHz, CDCl₃)

¹³C NMR spectrum of **19B** (100 MHz, CDCl₃)DEPT-135 spectrum of **19A** (100 MHz, CDCl₃)

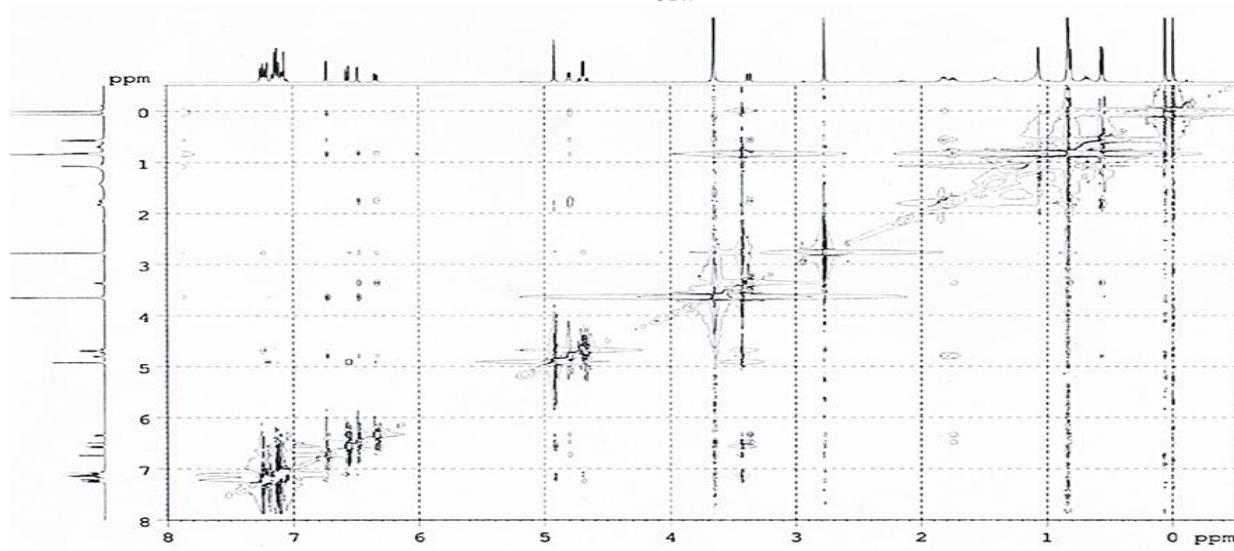
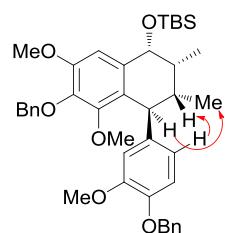
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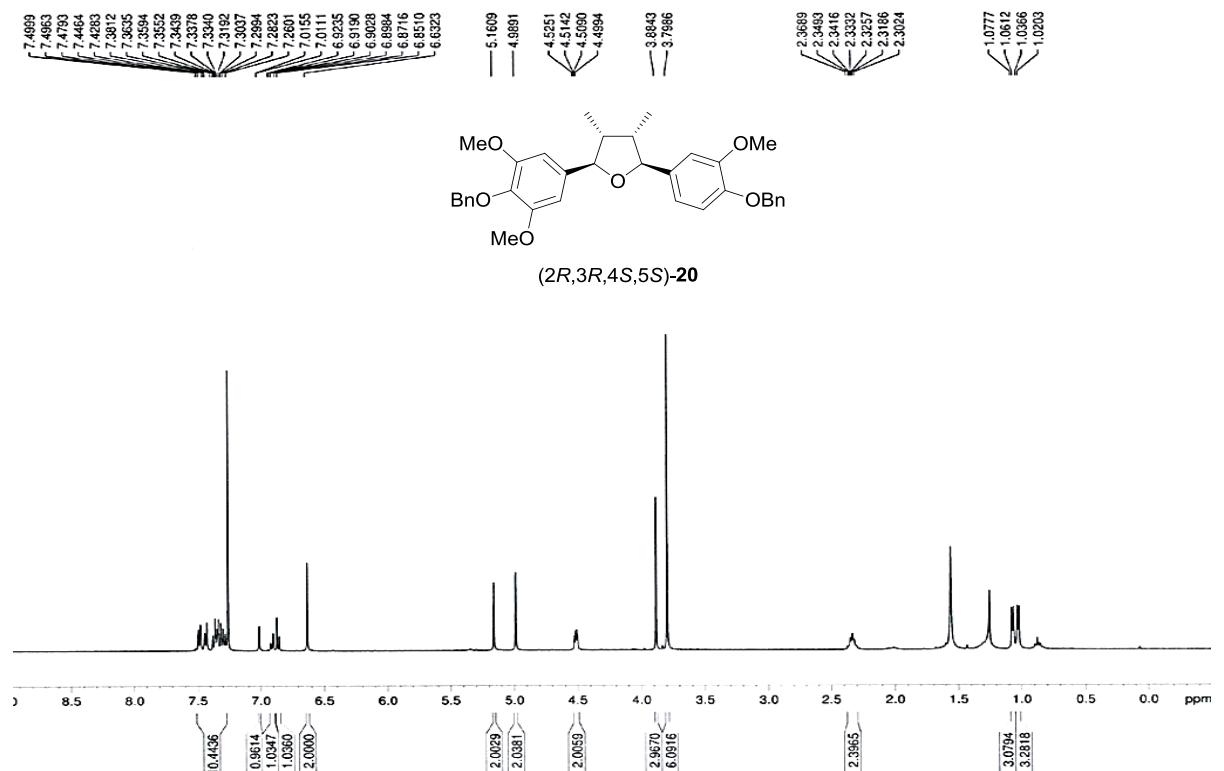
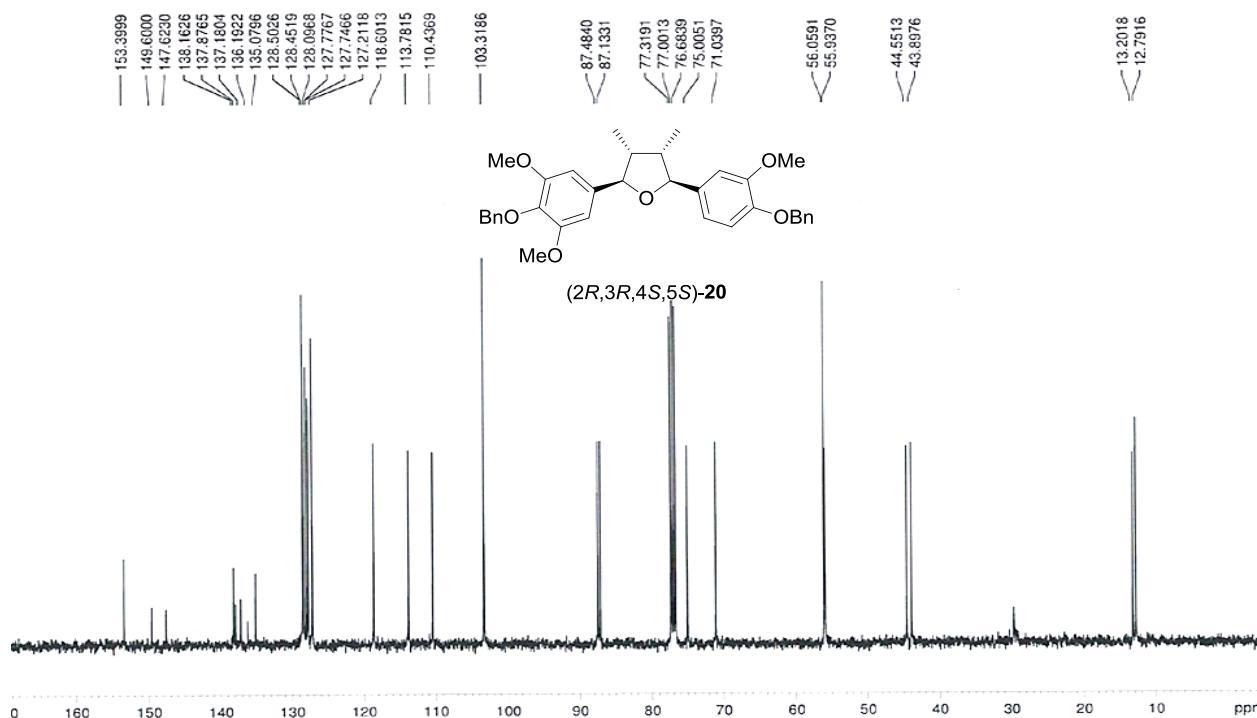
DEPT-135 spectrum of **17** (100 MHz, CDCl₃)HMBC of **17**

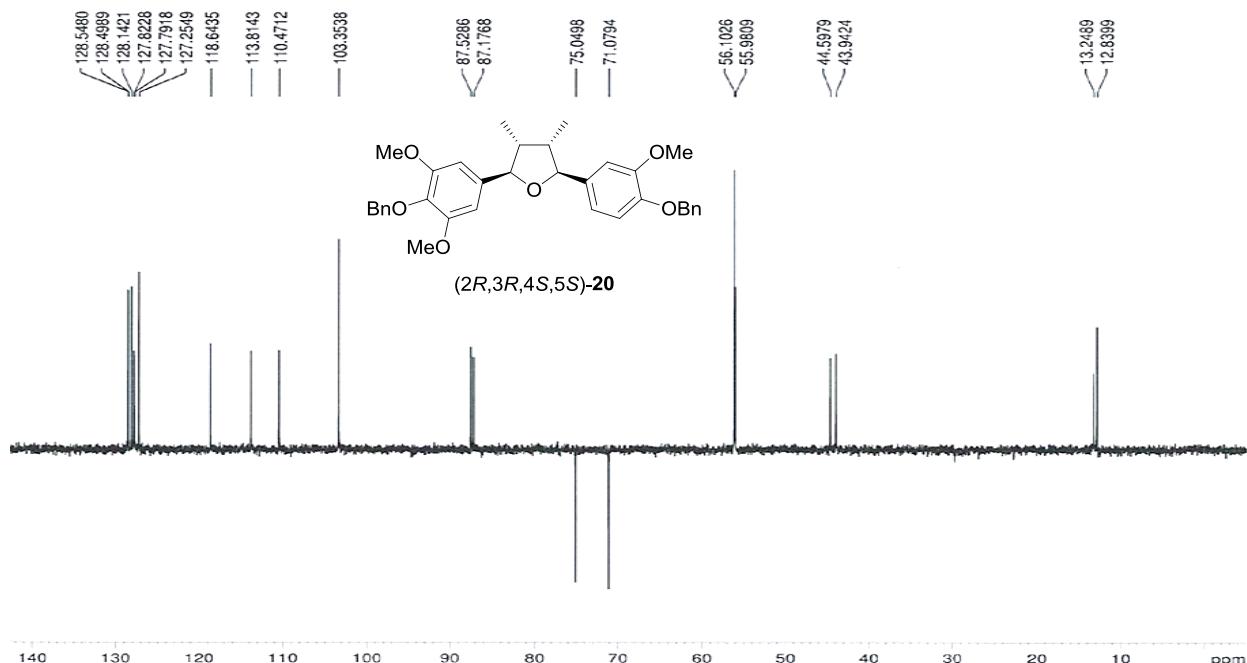
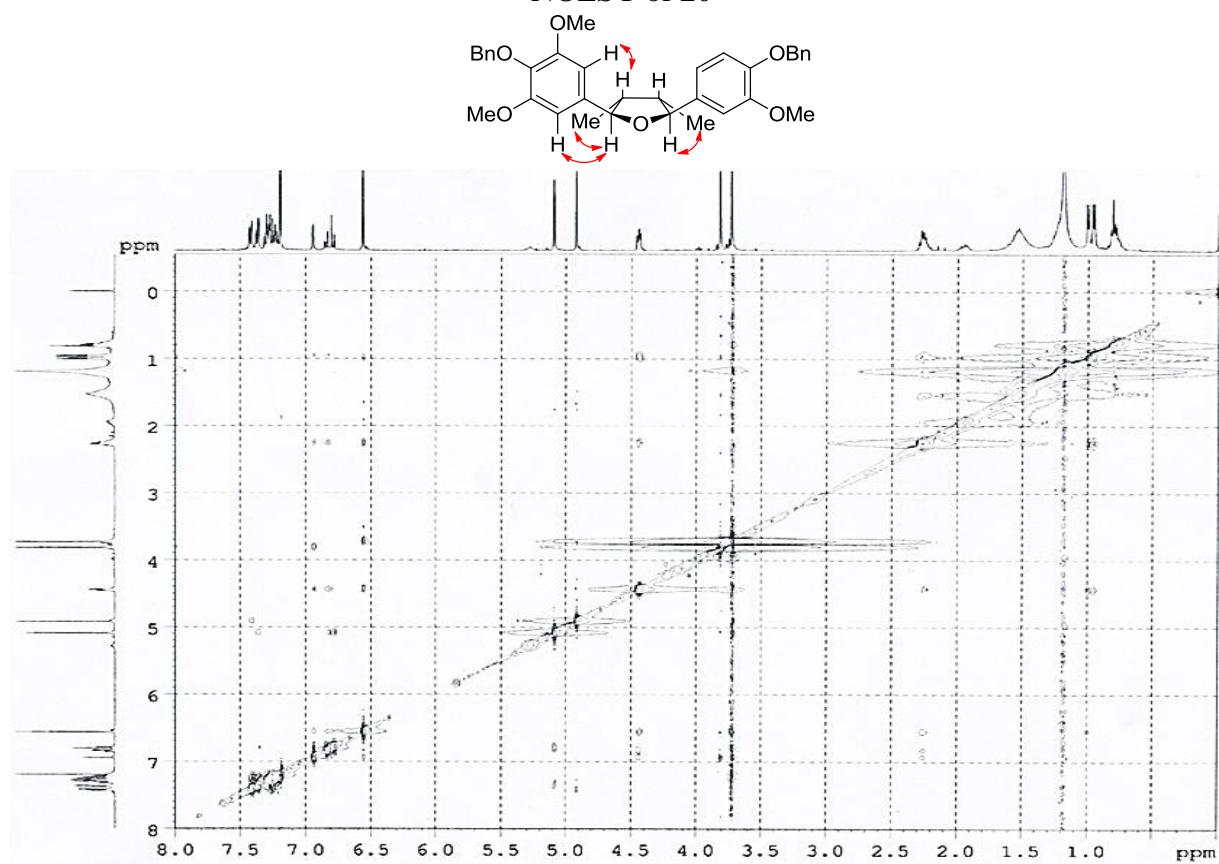
COSY of 17

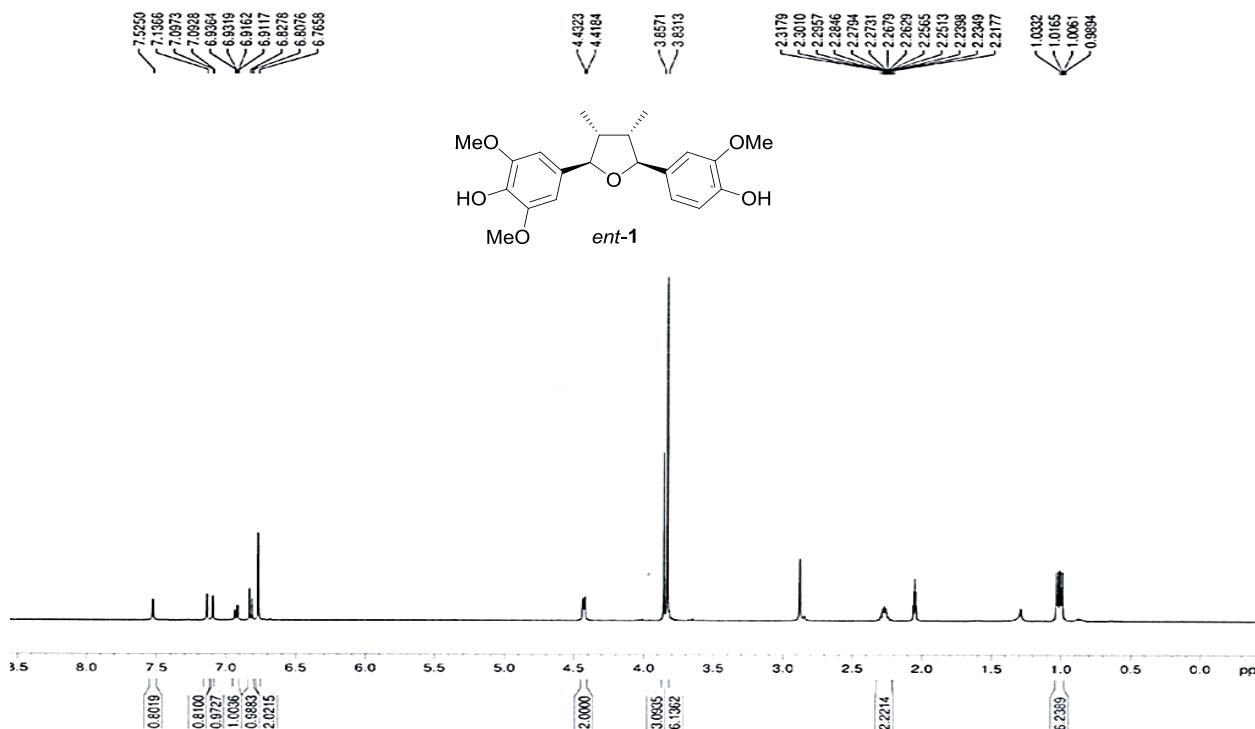
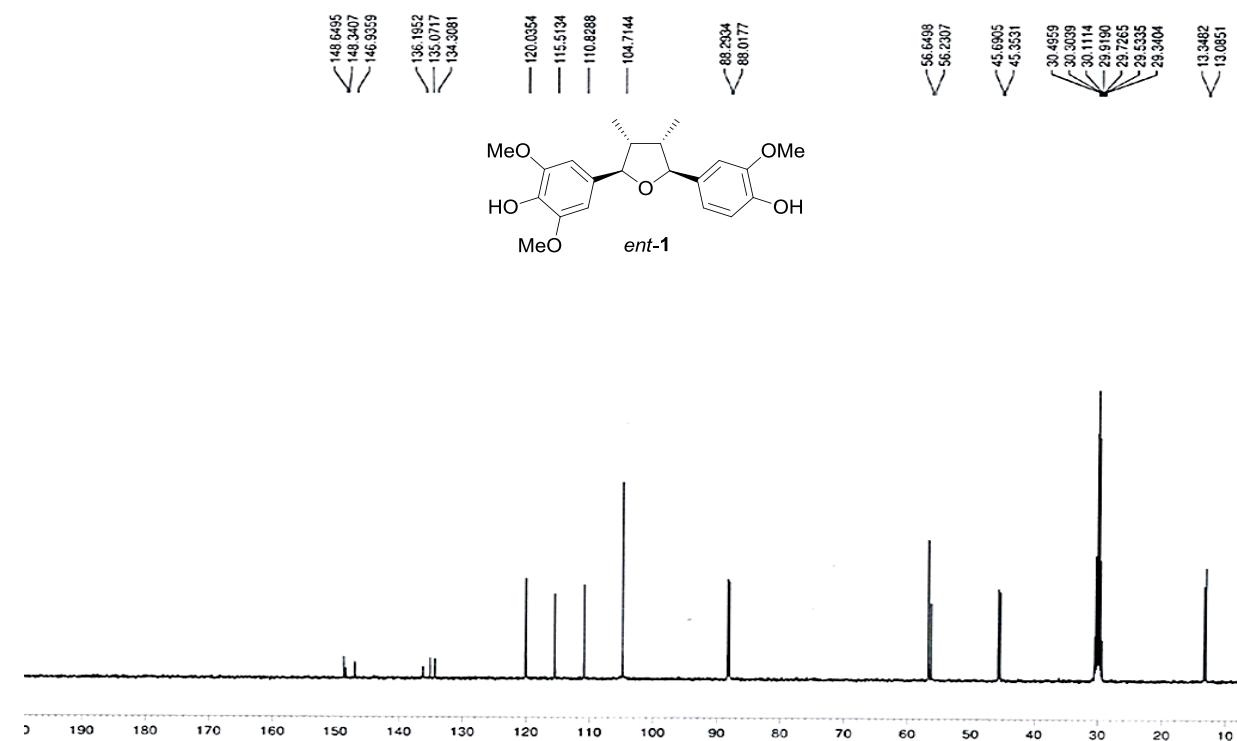


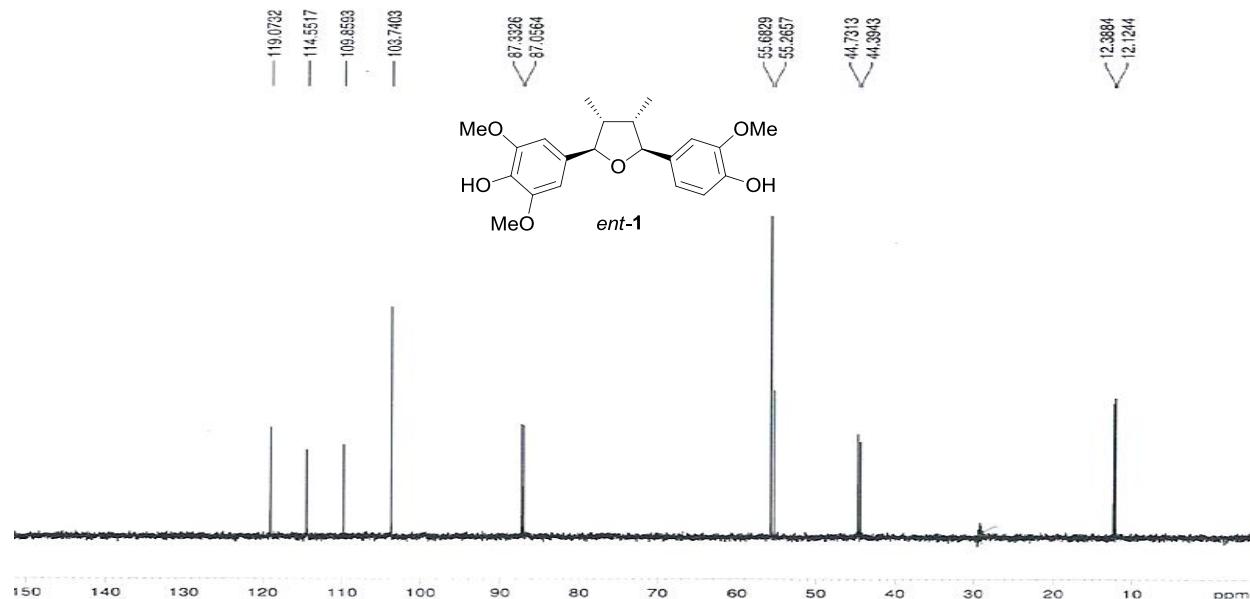
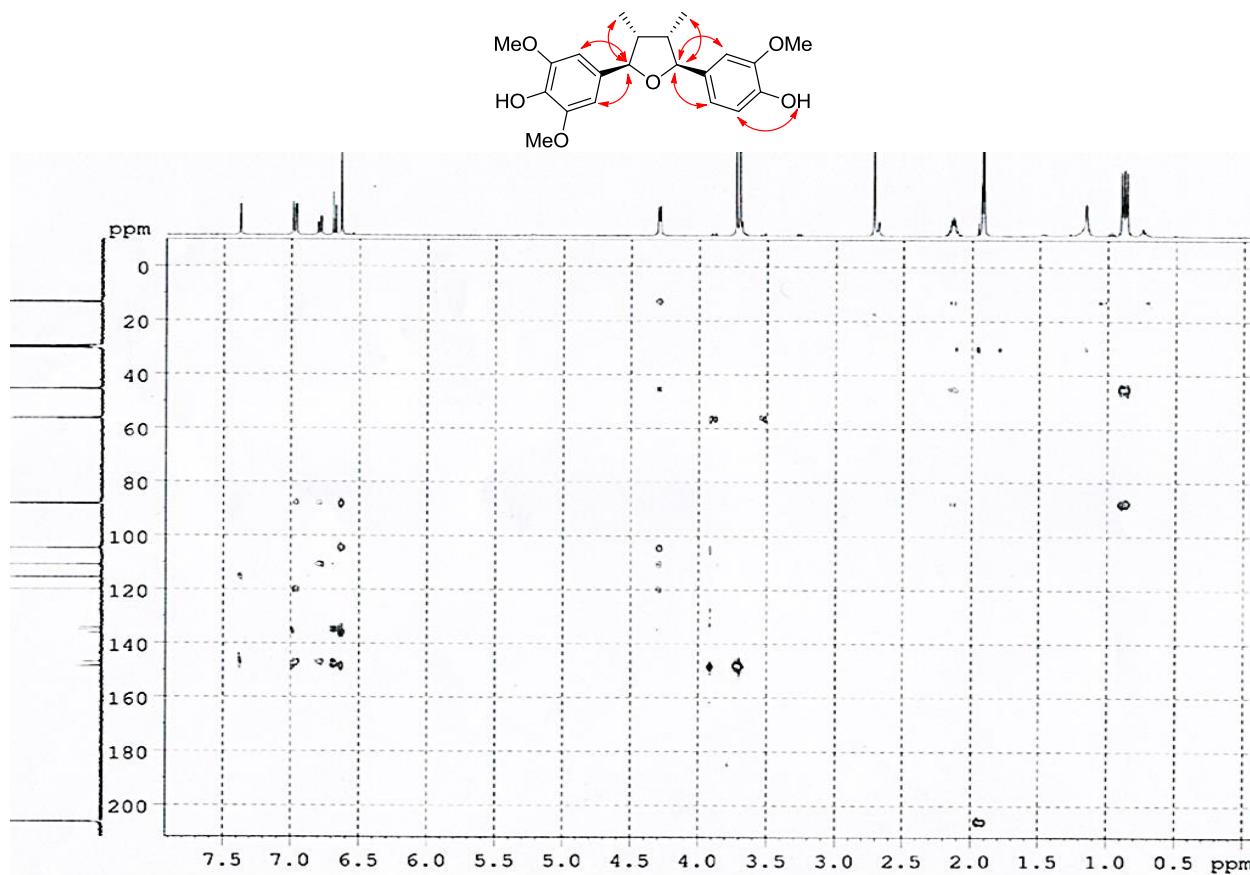
NOESY of 17

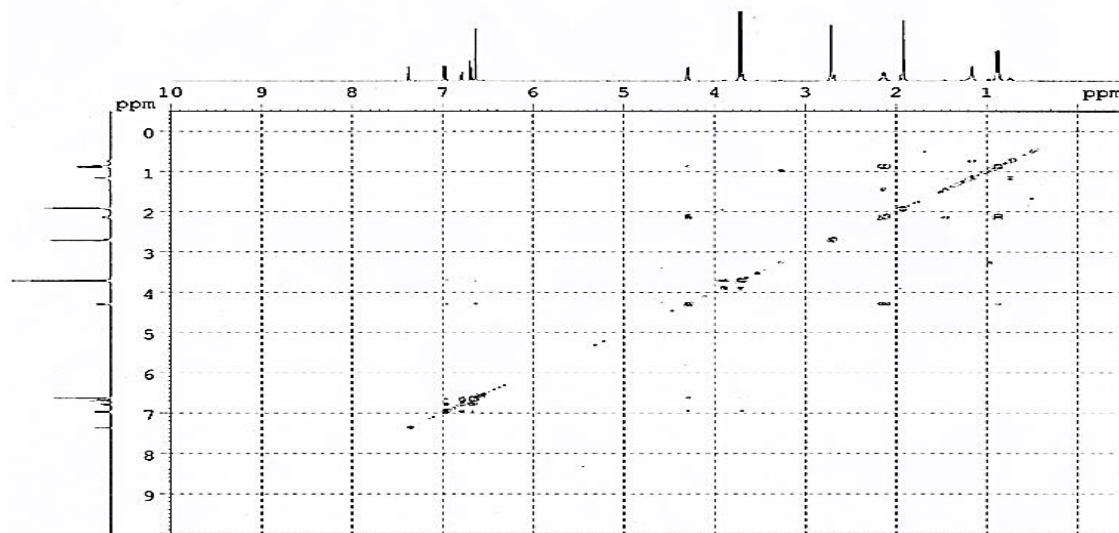
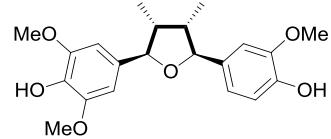
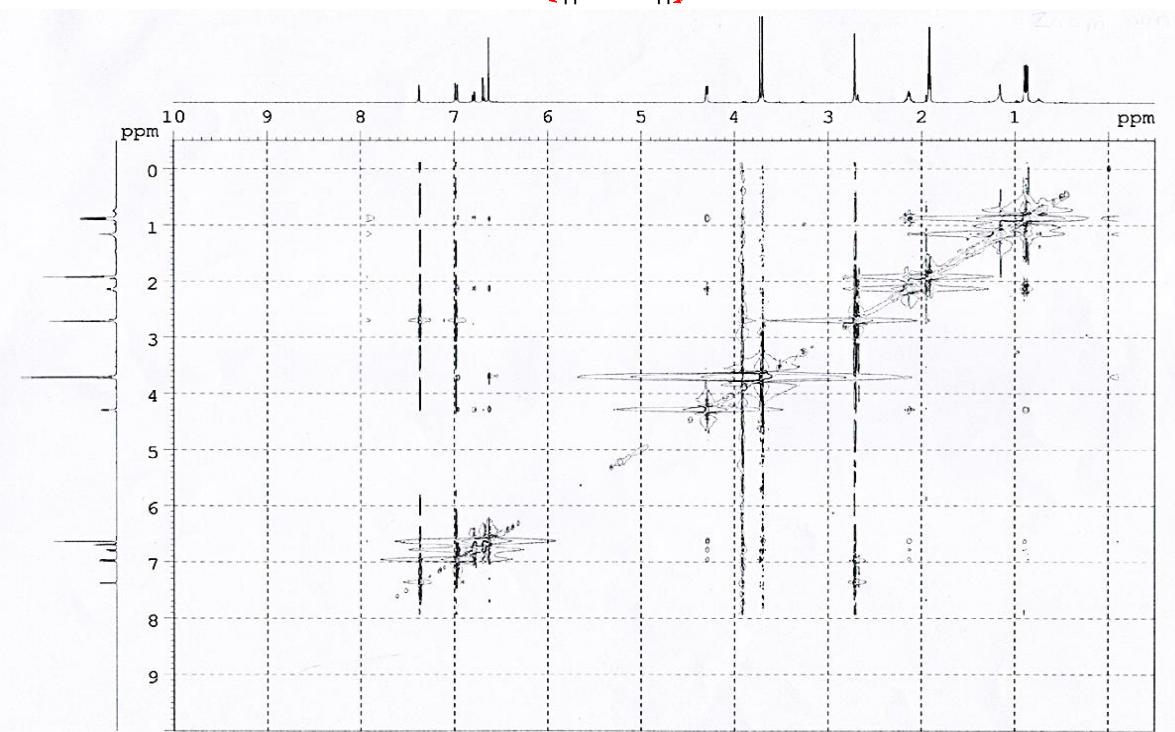
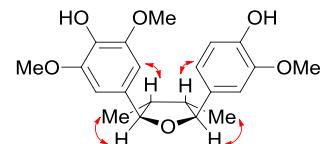


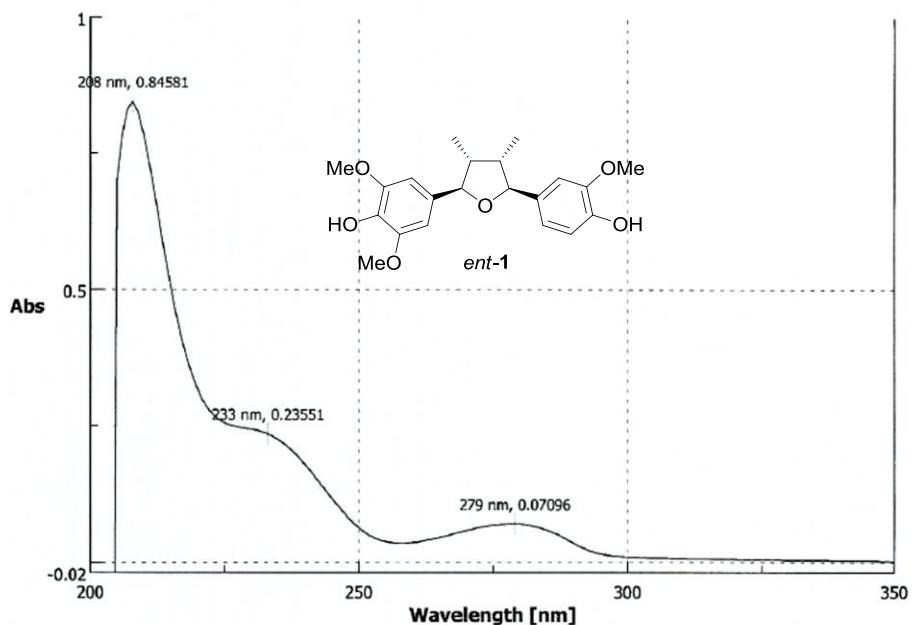
¹H NMR spectrum of **20** (400 MHz, CDCl₃)¹³C NMR spectrum of **20** (100 MHz, CDCl₃)

DEPT-135 spectrum of **20** (100 MHz, CDCl_3)NOESY of **20**

¹H NMR spectrum of ent-1 (400 MHz, acetone-*d*₆)¹³C NMR spectrum of ent-1 (100 MHz, acetone-*d*₆)

DEPT-135 spectrum of *ent*-1 (100 MHz, acetone-*d*₆)HMBC of *ent*-1

COSY of *ent*-1NOESY of *ent*-1

UV Spectrum of *ent*-1CD Spectrum of *ent*-1