

Supplementary Materials for

Total Synthesis of Loroxanthin

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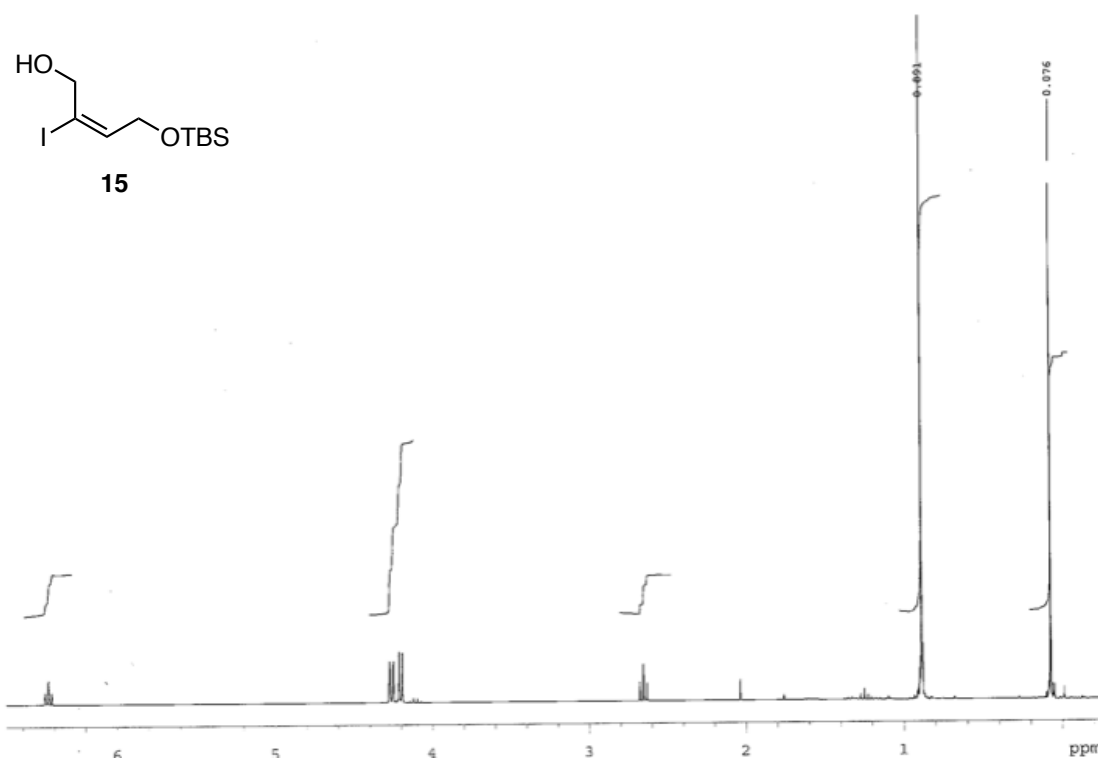


Figure S1. ¹H-NMR spectrum (CDCl₃, 300 MHz) of compound **15**

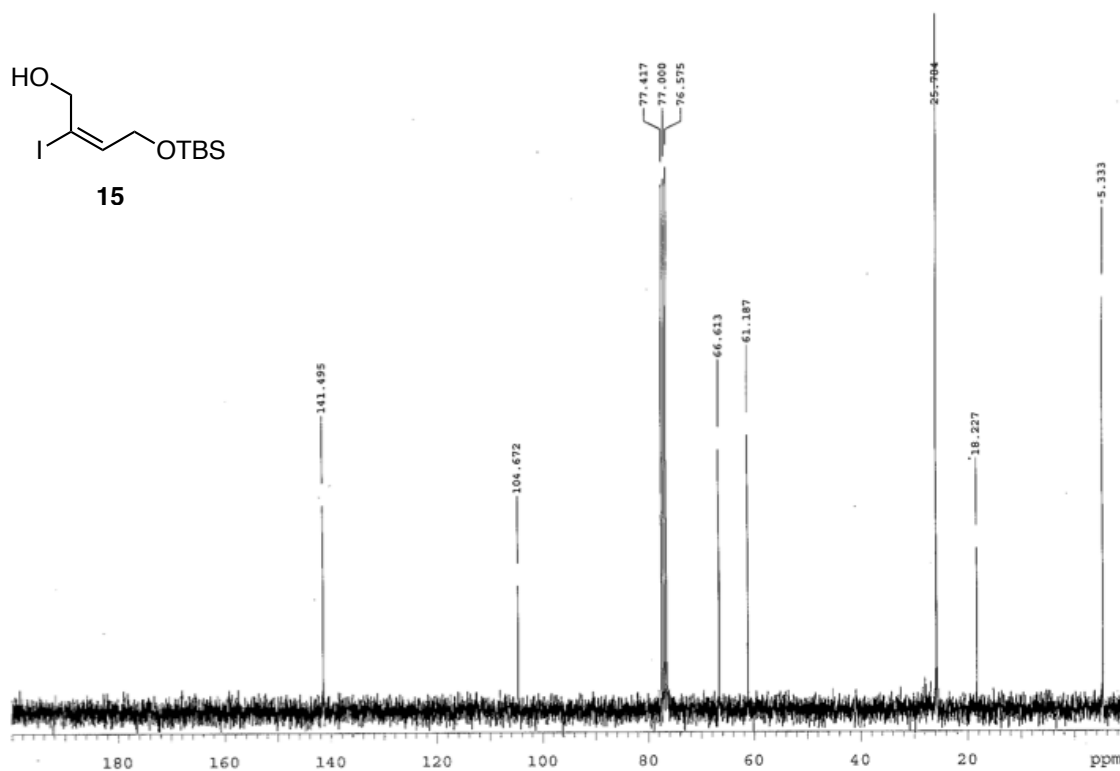


Figure S2. ¹³C-NMR spectrum (CDCl₃, 75 MHz) of compound **15**

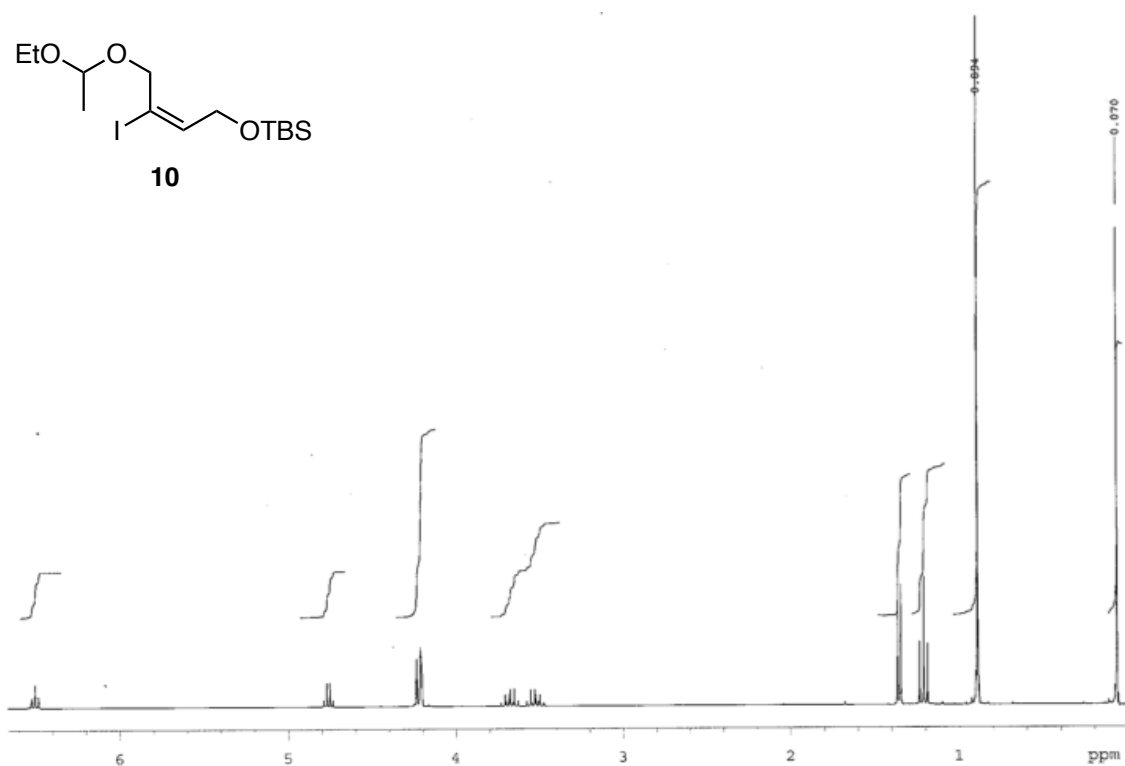


Figure S3. ¹H-NMR spectrum (CDCl₃, 300 MHz) of compound **10**

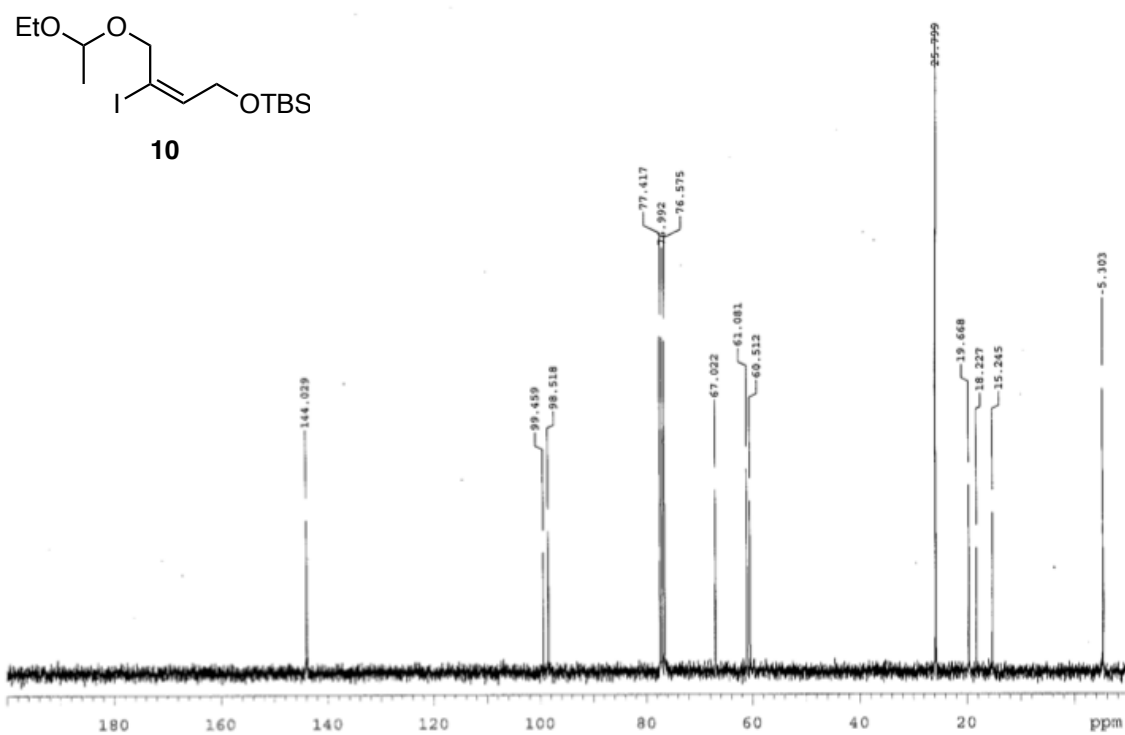


Figure S4. ¹³C-NMR spectrum (CDCl₃, 75 MHz) of compound **10**

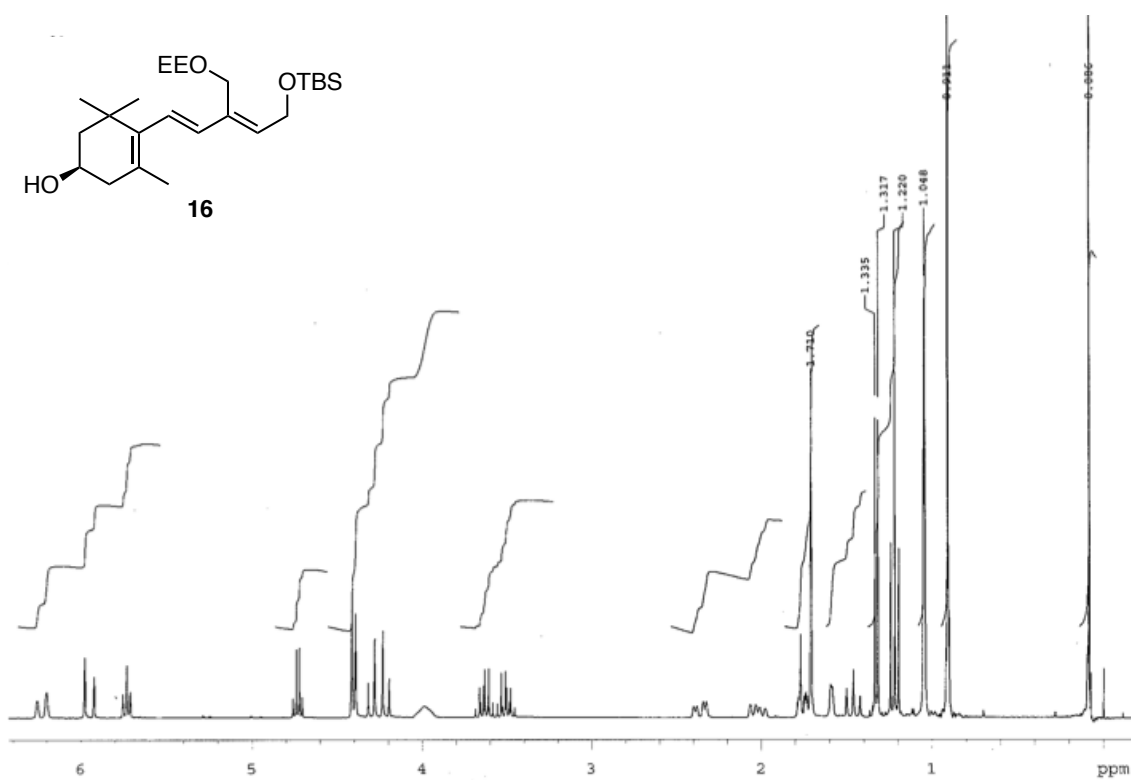


Figure S5. ^1H -NMR spectrum (CDCl₃, 300 MHz) of compound **16**

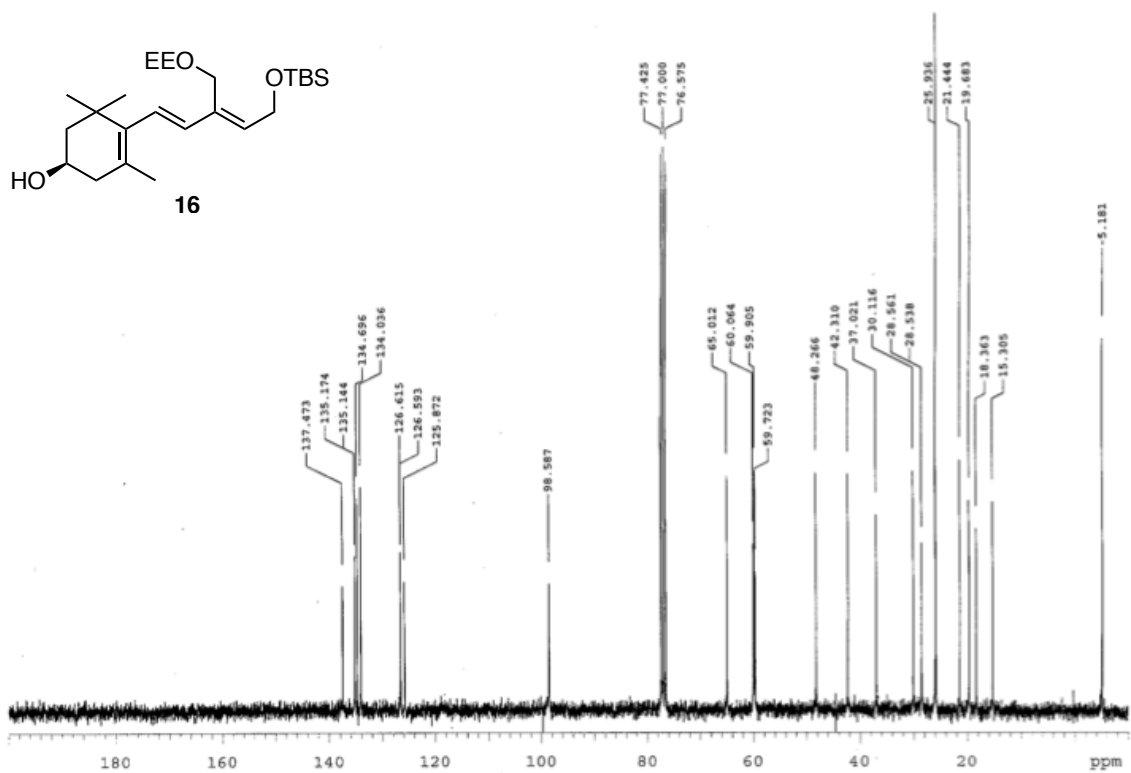


Figure S6. ^{13}C -NMR spectrum (CDCl₃, 75 MHz) of compound **16**

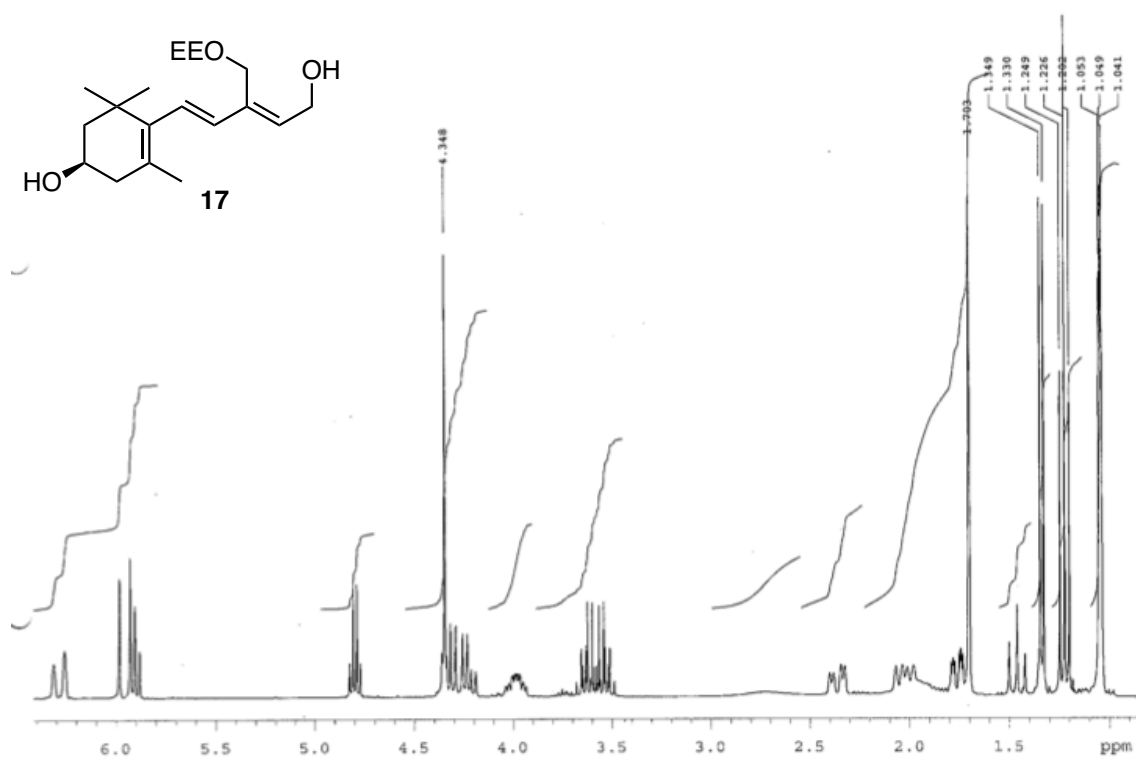


Figure S7. ¹H-NMR spectrum (CDCl₃, 300 MHz) of compound 17

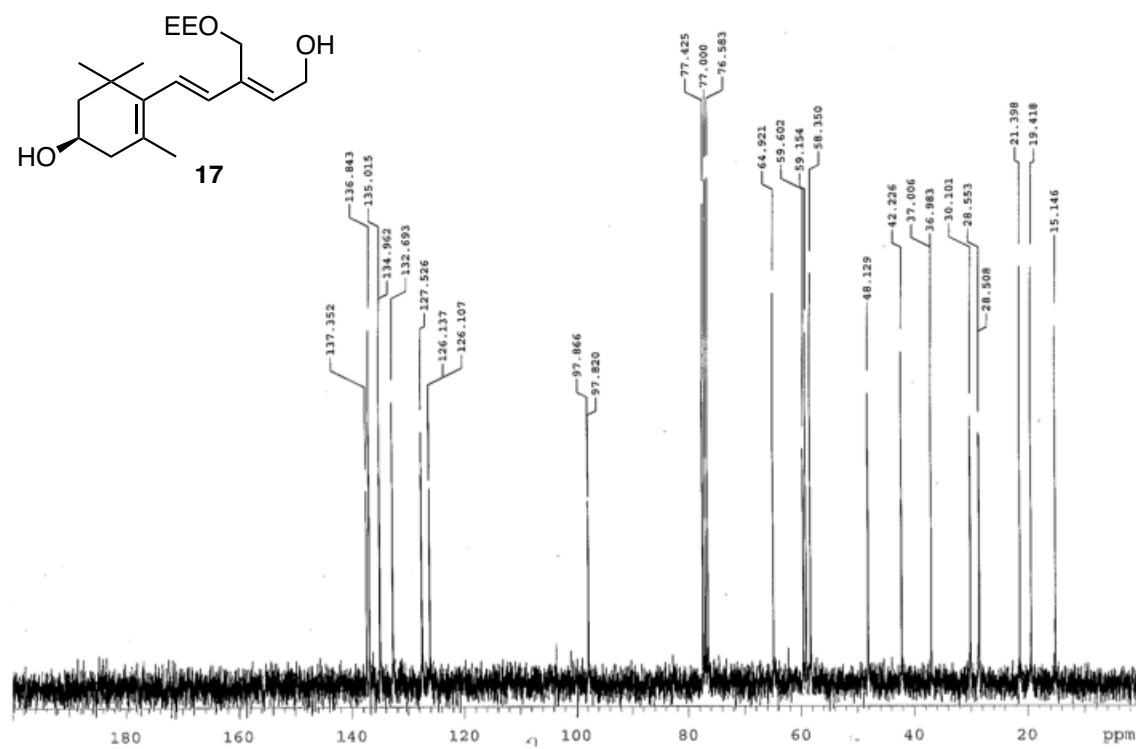


Figure S8. ¹³C-NMR spectrum (CDCl₃, 75 MHz) of compound 17

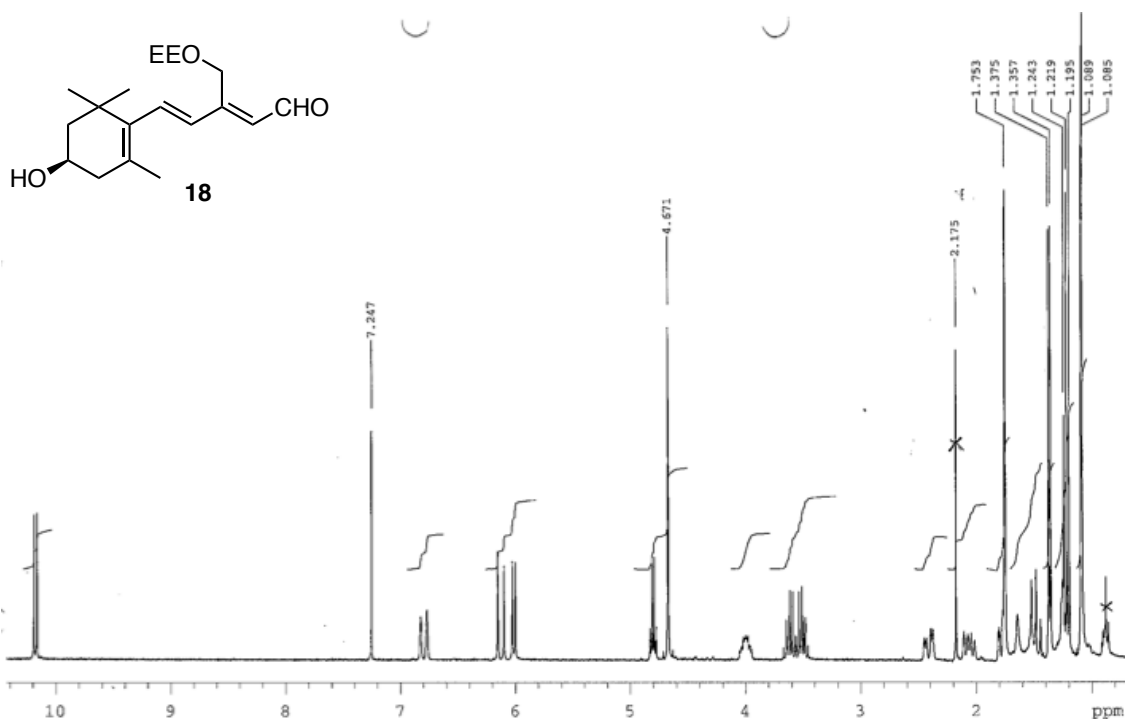


Figure S9. ¹H-NMR spectrum (CDCl₃, 300 MHz) of compound **18**

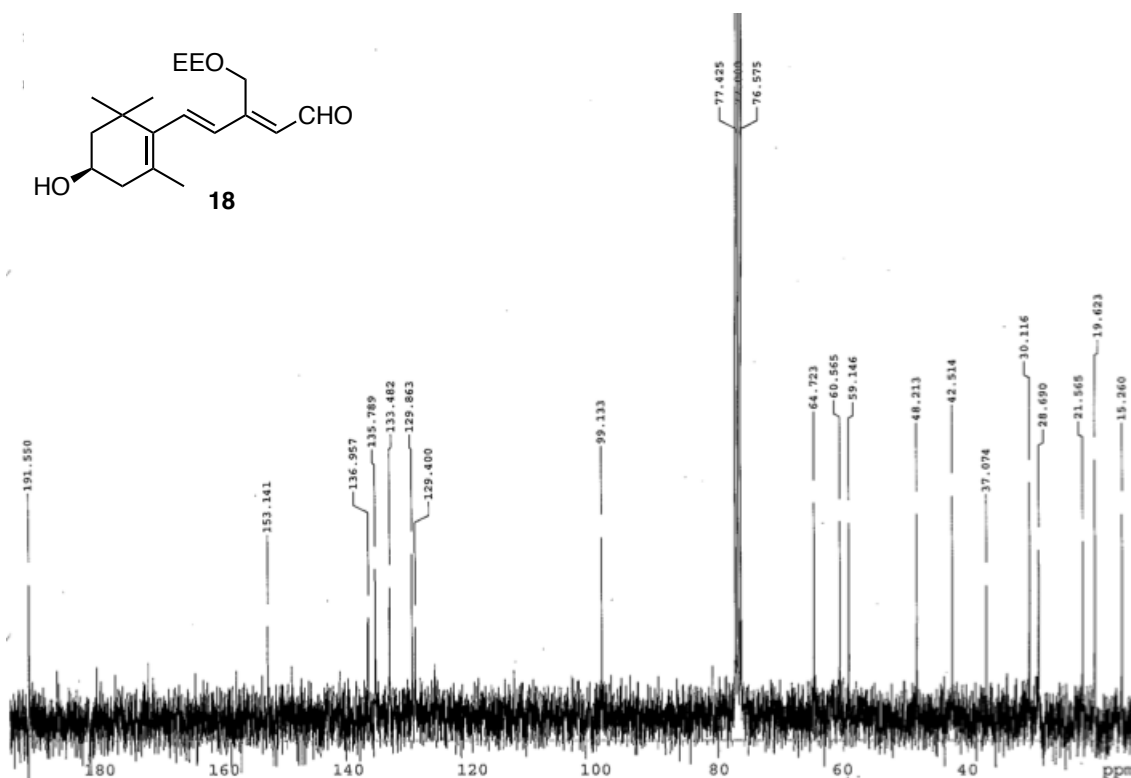
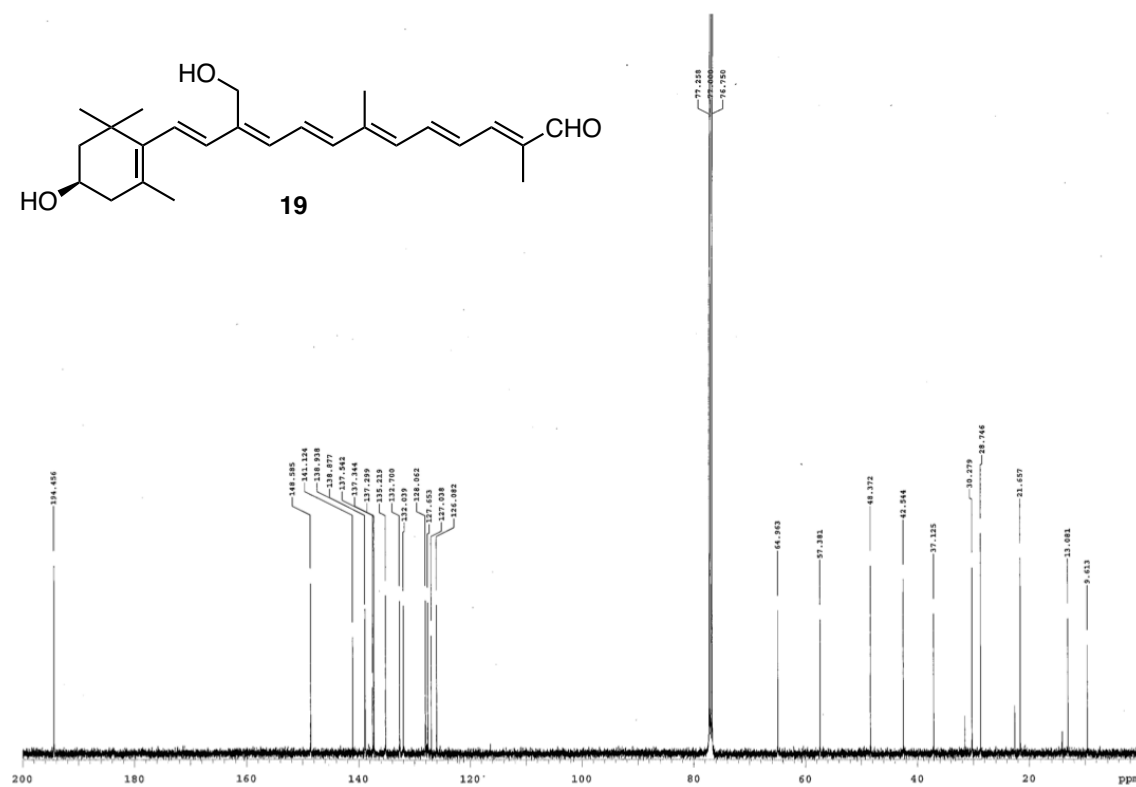
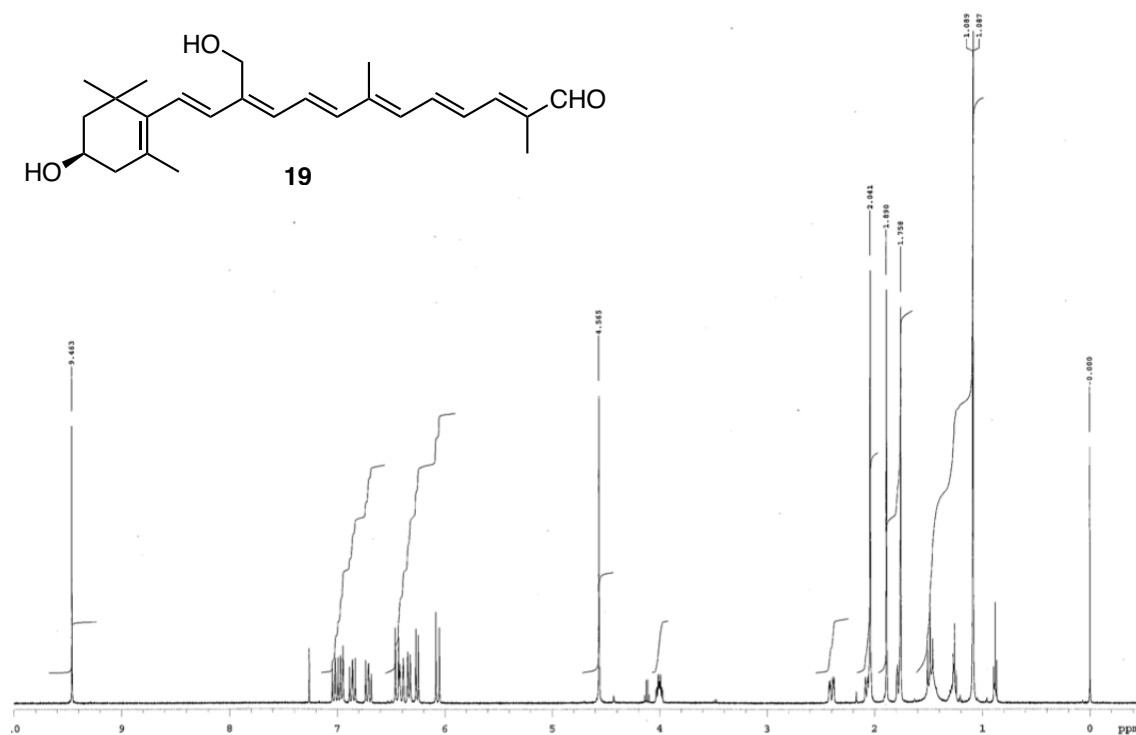


Figure S10. ¹³C-NMR spectrum (CDCl₃, 75 MHz) of compound **18**



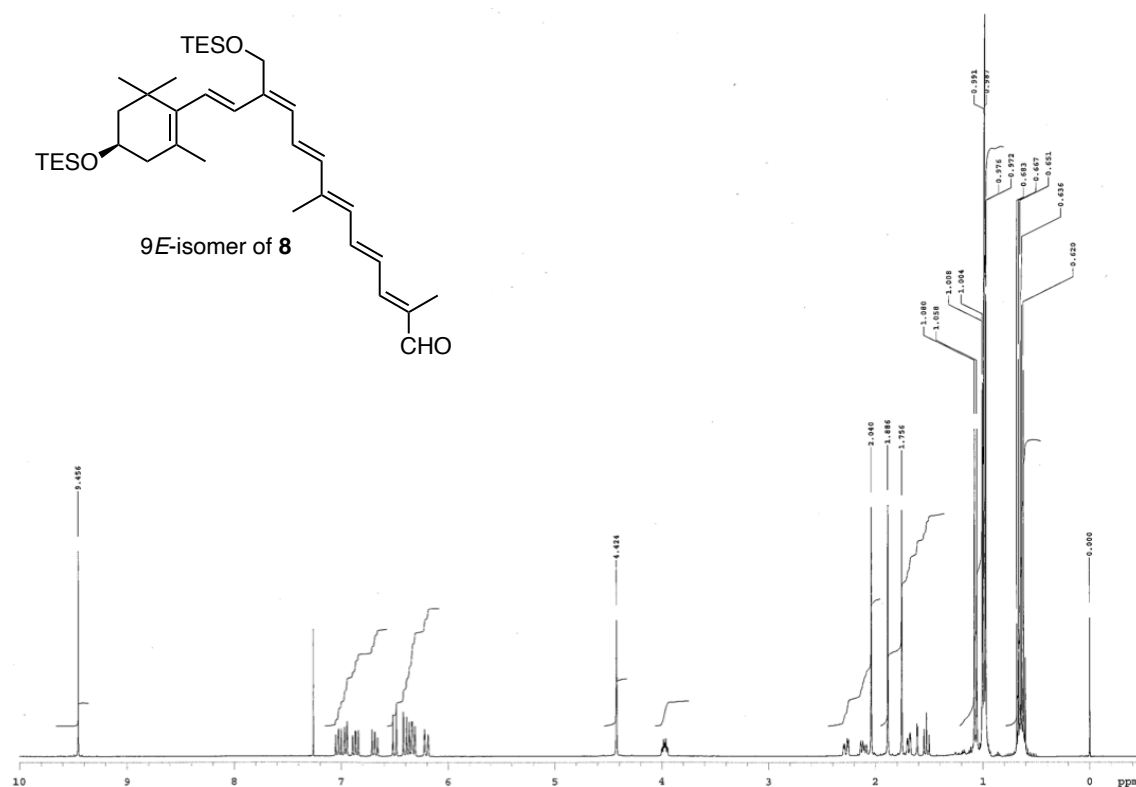


Figure S15. ^1H -NMR spectrum (CDCl₃, 500 MHz) of 9E-isomer of compound 8

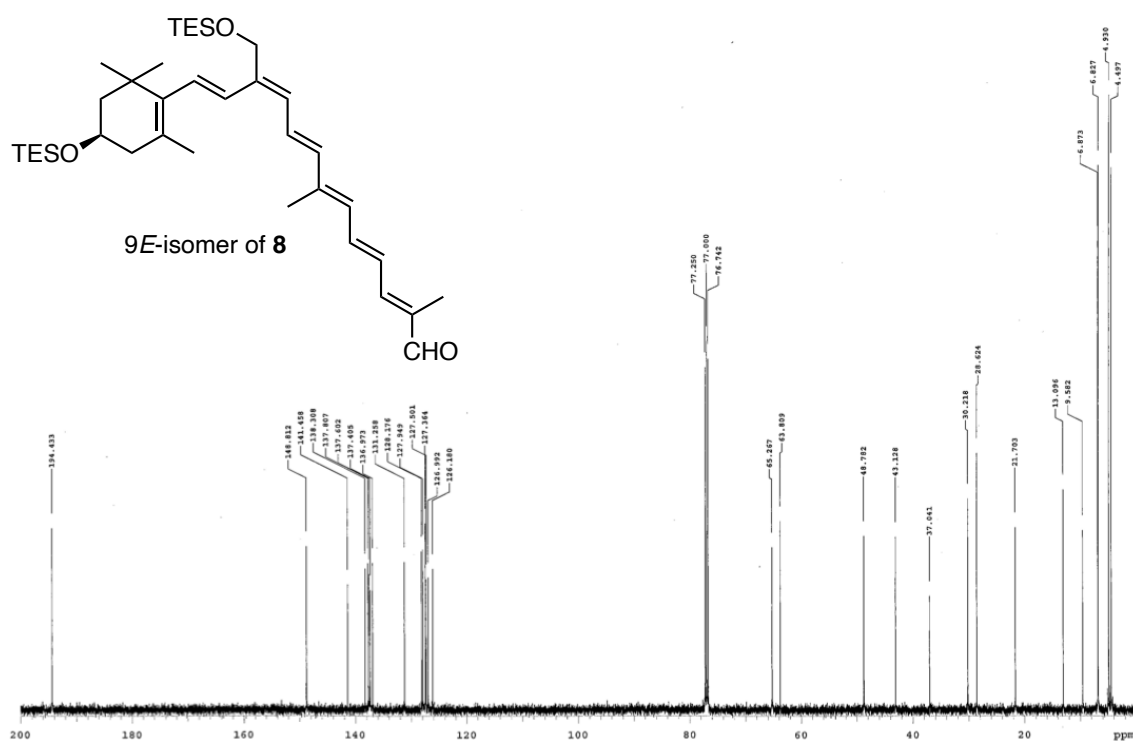


Figure S16. ^{13}C -NMR spectrum (CDCl₃, 125 MHz) of 9E-isomer of compound 8

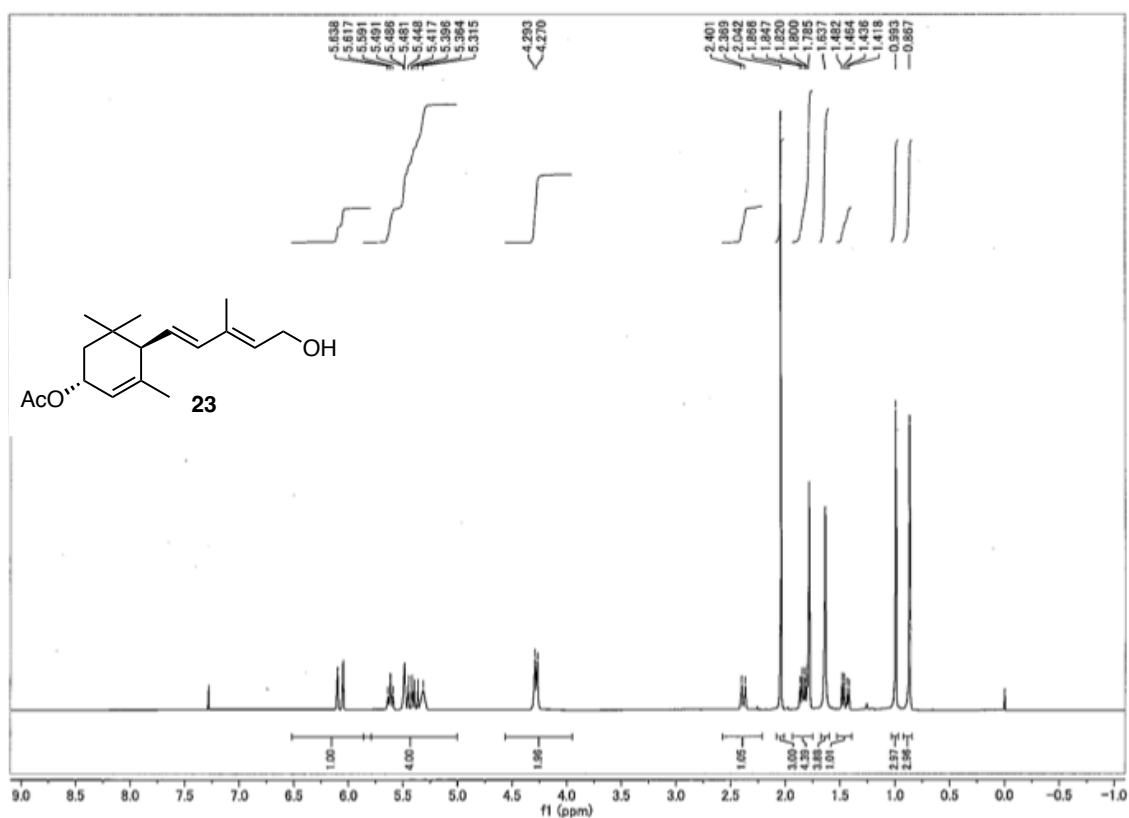


Figure S17. ¹H-NMR spectrum (CDCl₃, 300 MHz) of compound **23**

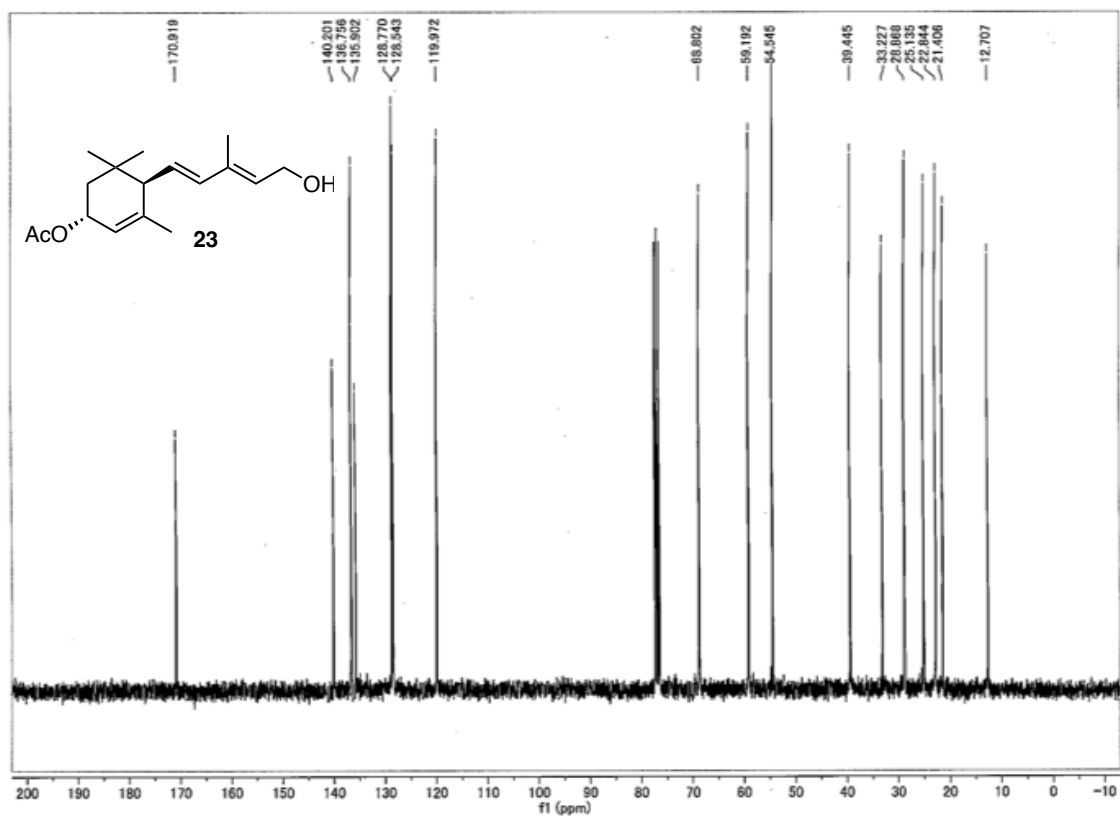


Figure S18. ¹³C-NMR spectrum (CDCl₃, 75 MHz) of compound **23**

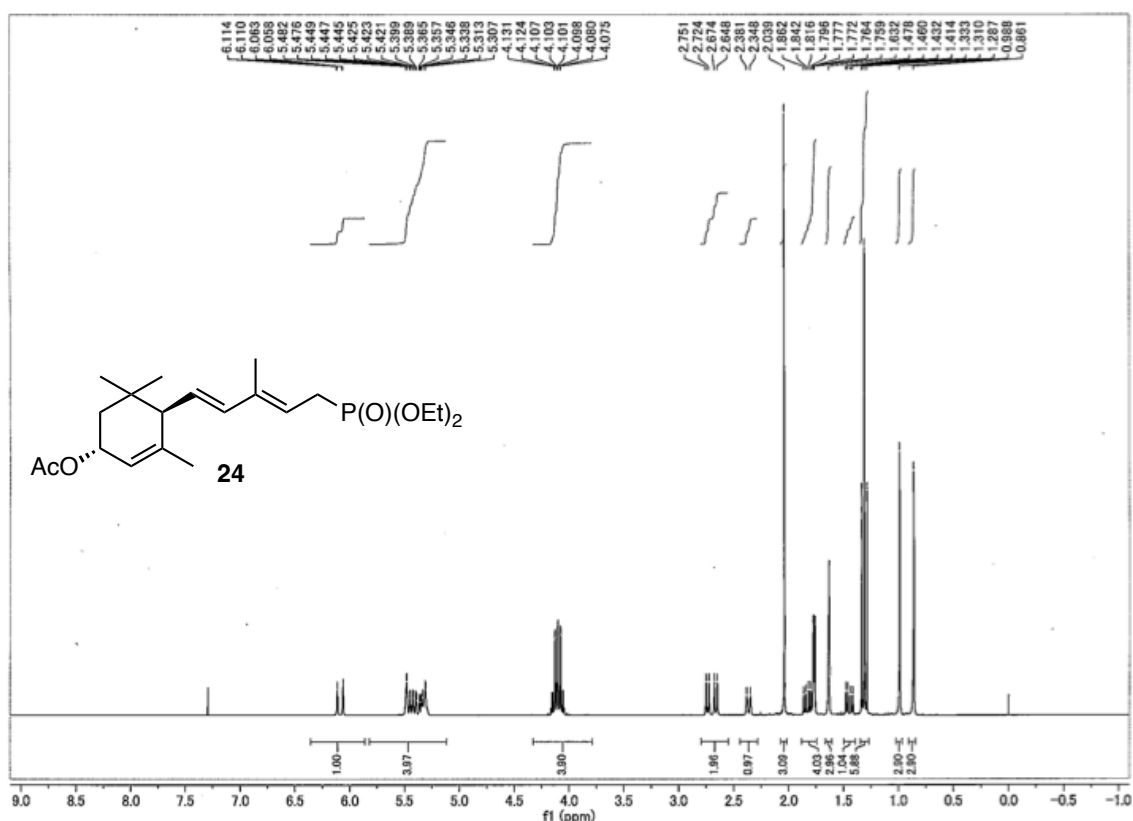


Figure S19. ¹H-NMR spectrum (CDCl₃, 300 MHz) of compound 24

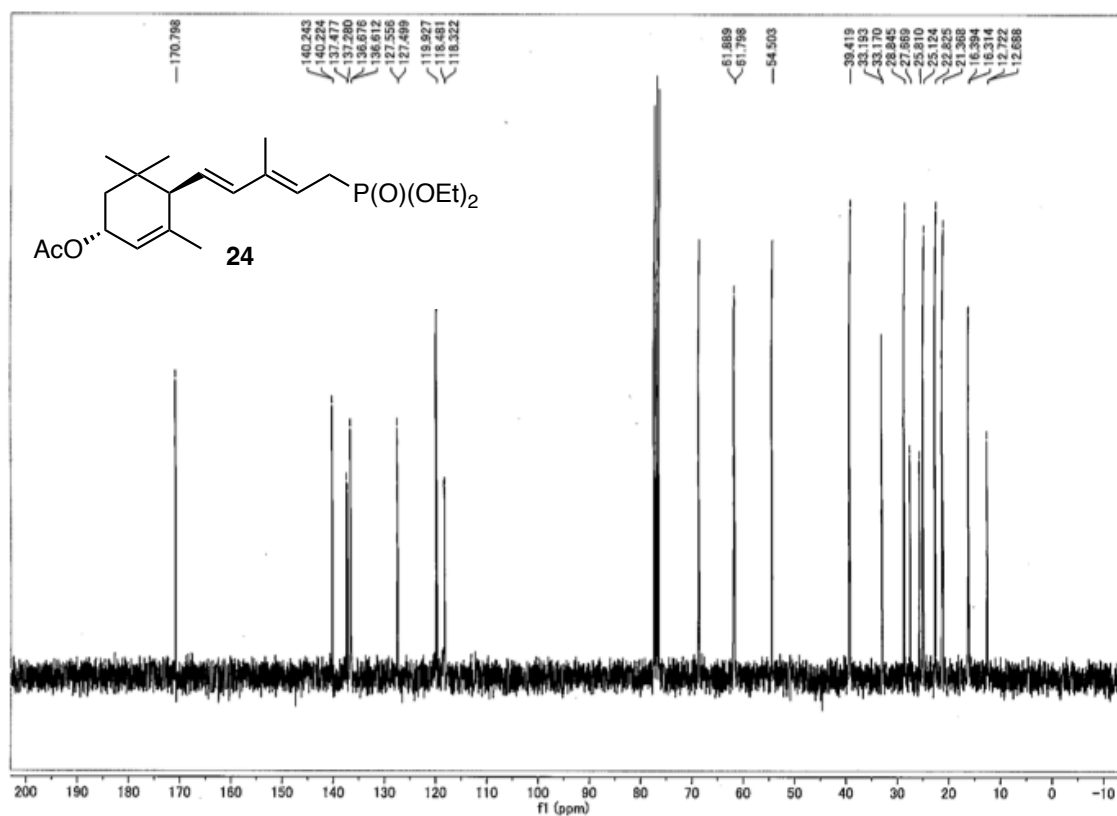


Figure S20. ¹³C-NMR spectrum (CDCl₃, 75 MHz) of compound 24

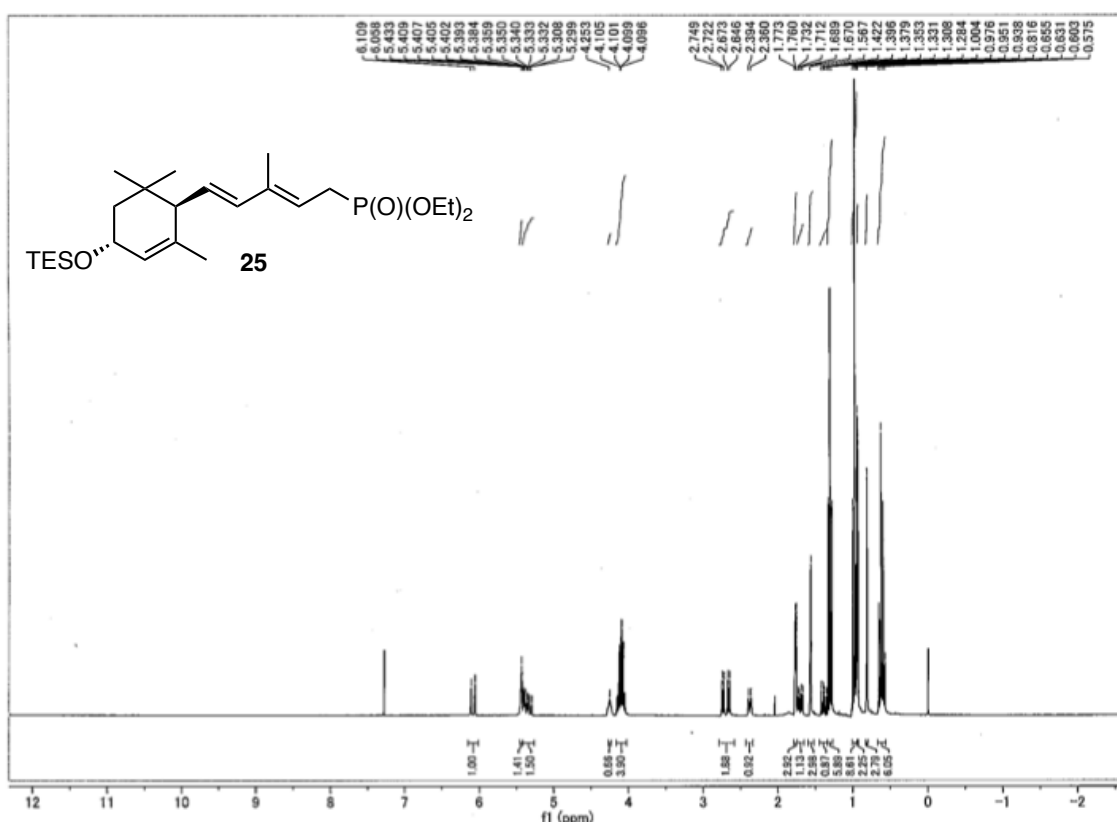


Figure S21. ¹H-NMR spectrum (CDCl₃, 300 MHz) of compound **25**

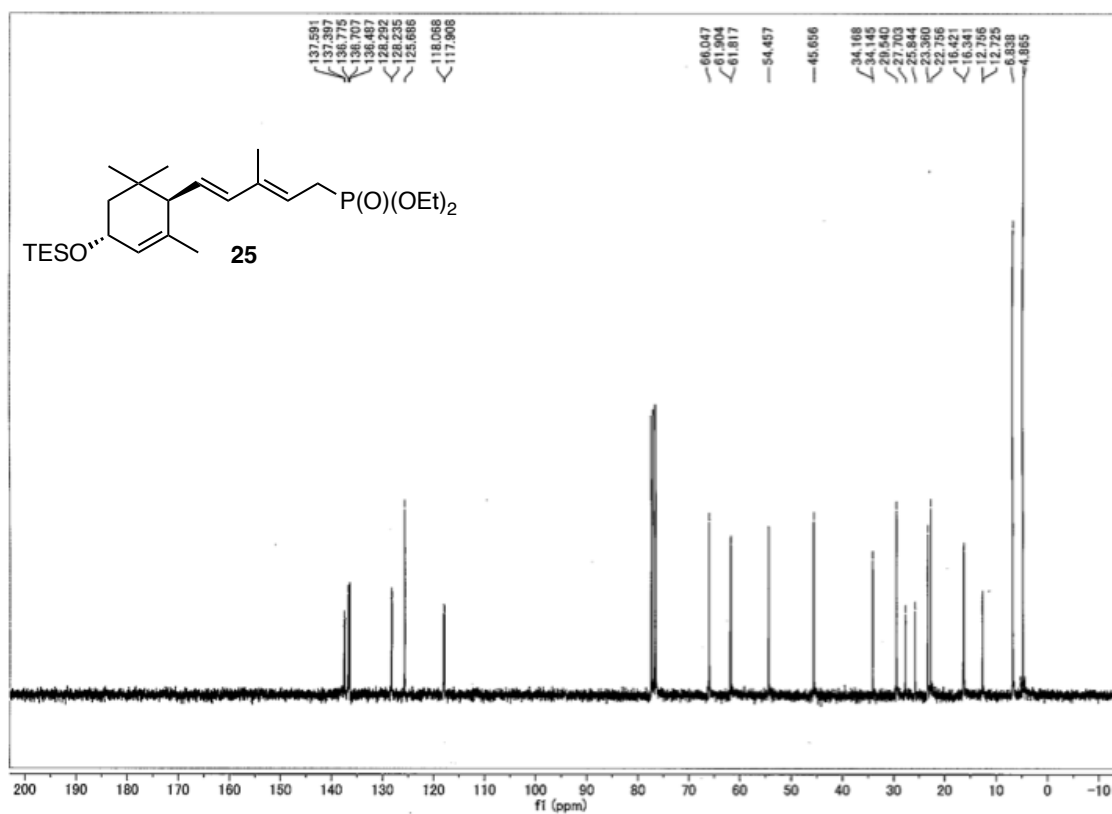


Figure S22. ¹³C-NMR spectrum (CDCl₃, 75 MHz) of compound **25**

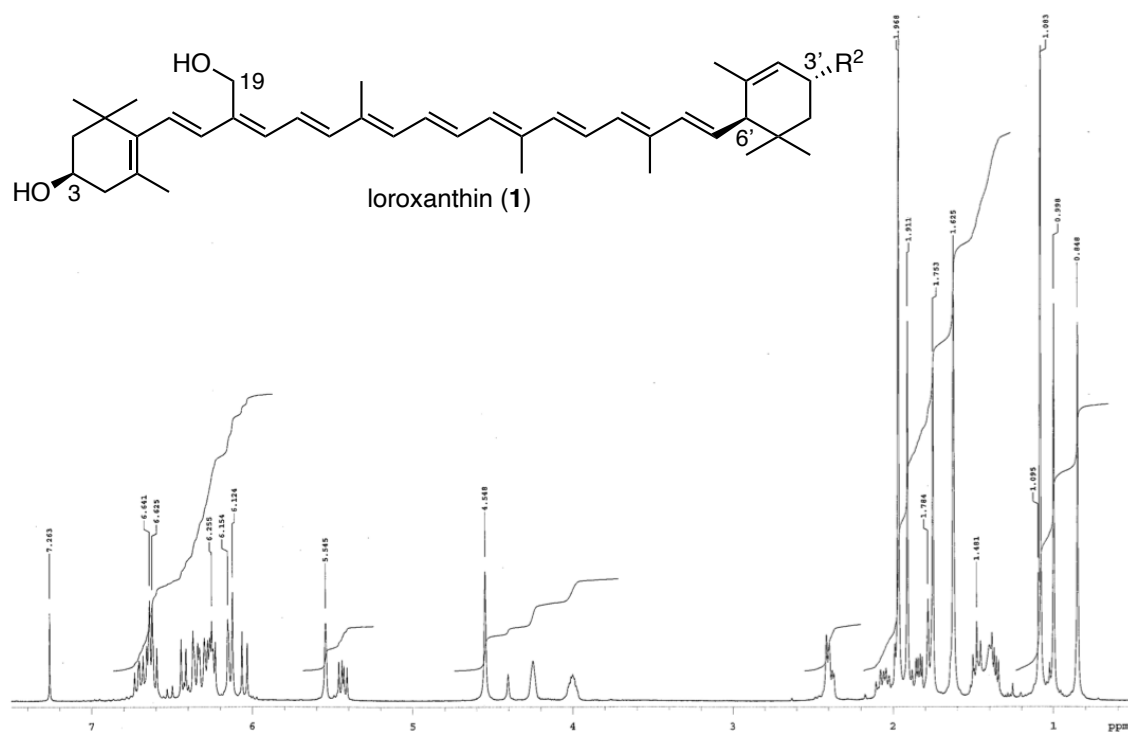


Figure S19. ^1H -NMR spectrum (CDCl_3 , 500 MHz) of loroxanthin (**1**)

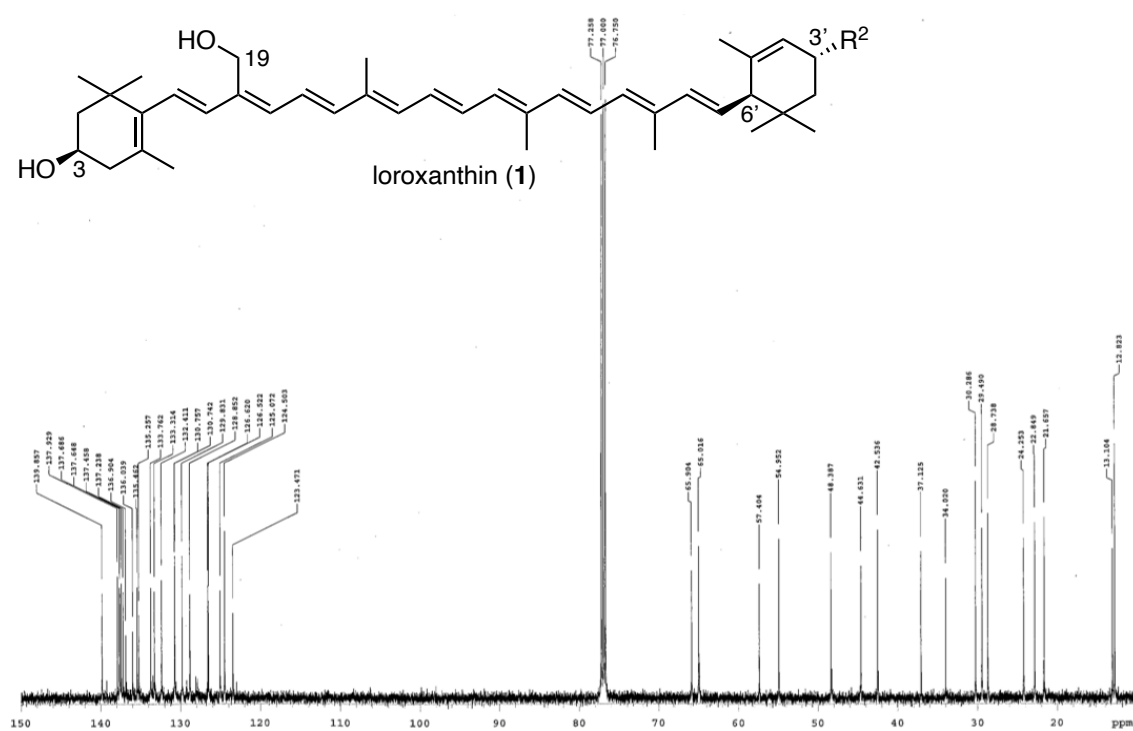


Figure S20. ^{13}C -NMR spectrum (CDCl_3 , 125 MHz) of loroxanthin (**1**)