

Electronic Supplementary Material (ESI) for Organic & Biomolecular Chemistry.
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Electronic Supplementary Information

"Synthetic Studies on Palmerolide C: Synthesis of the Advanced Intermediate Towards Revised Structure of Palmerolide C"

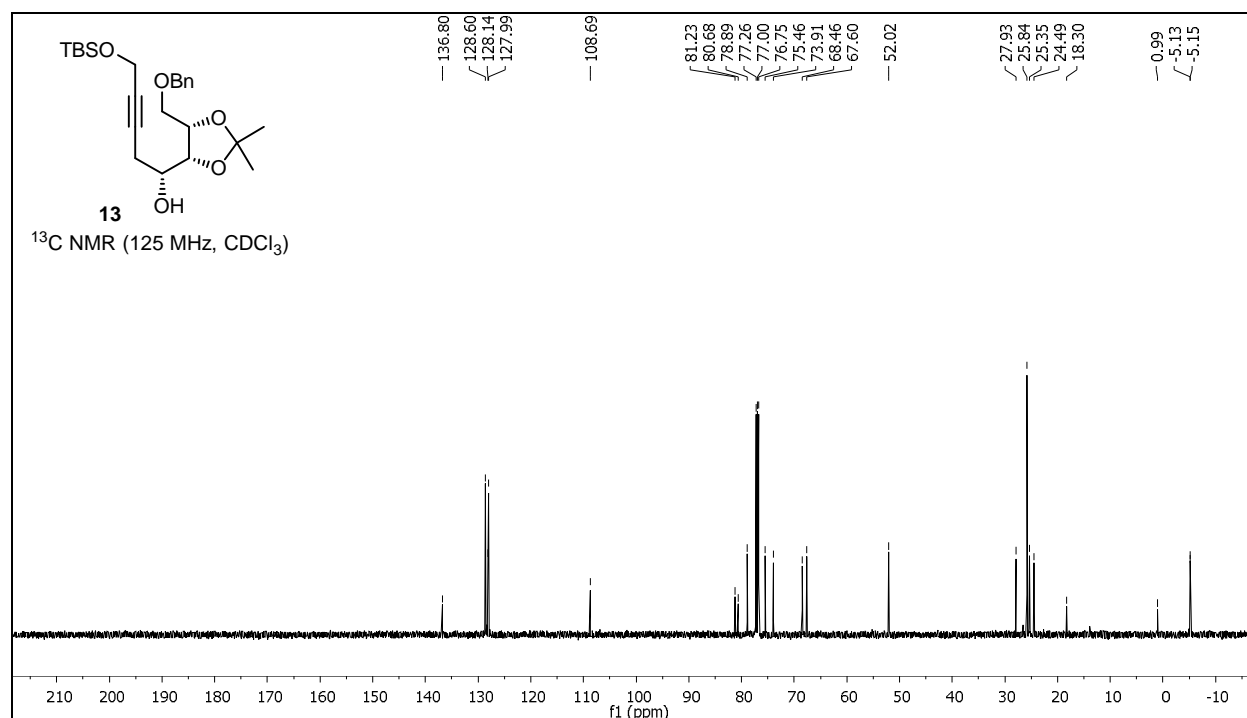
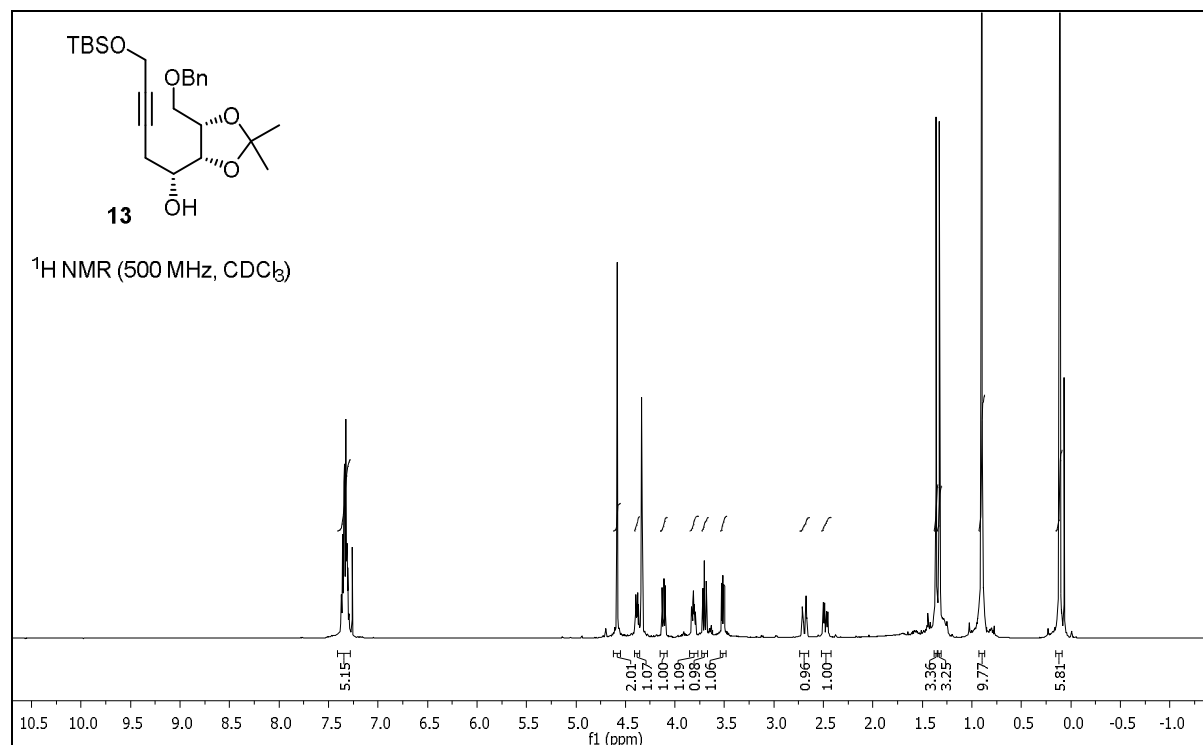
Ashik A. Sayyad, Khushboo Kaim and Krishna P. Kaliappan*

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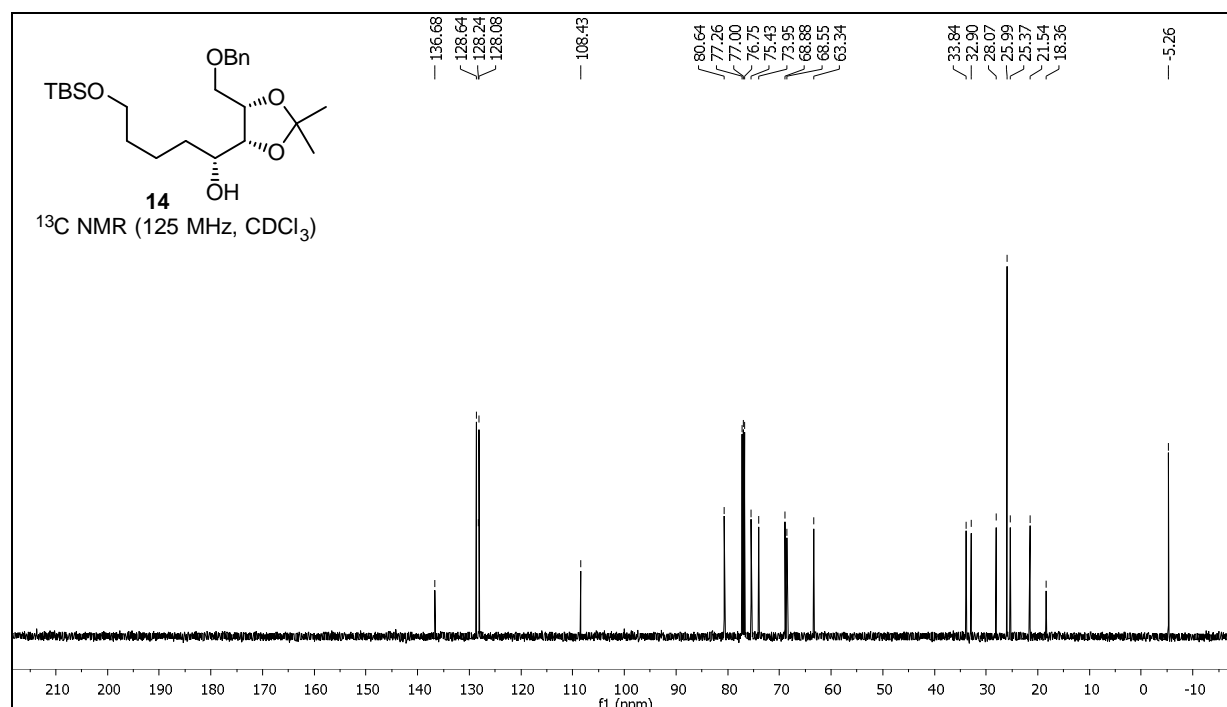
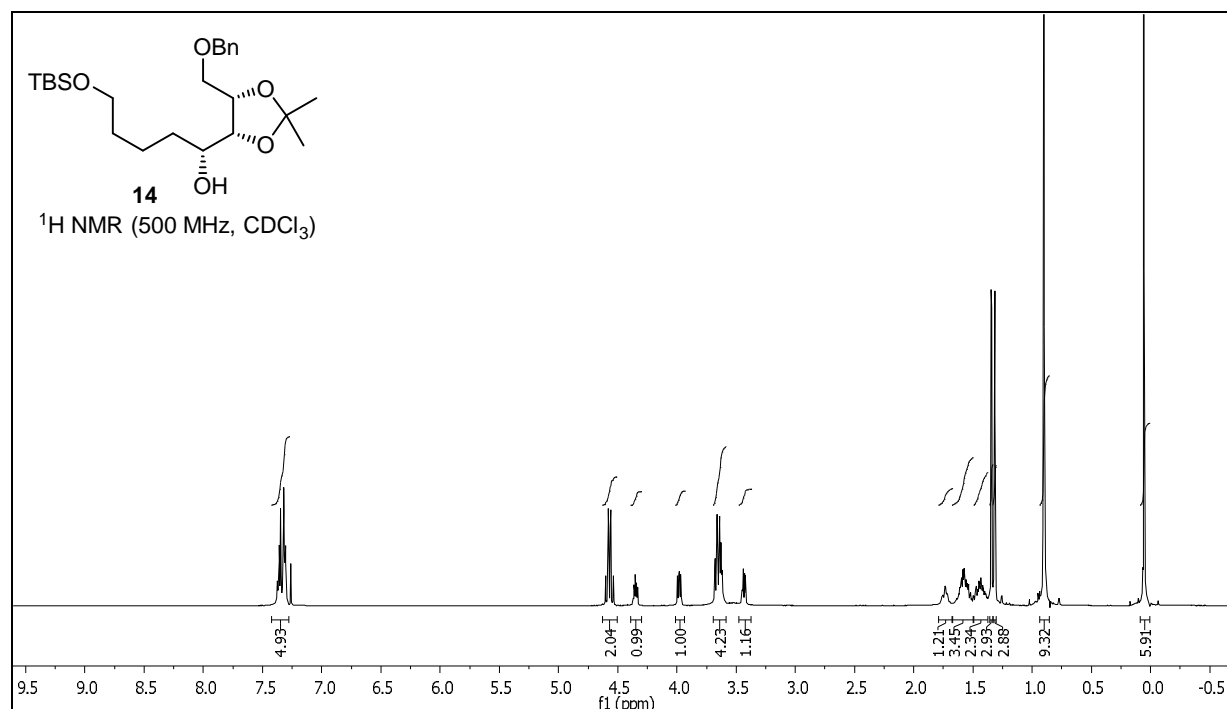
*E-mail: kpk@chem.iitb.ac.in

Copies of ^1H and ^{13}C NMR Spectra

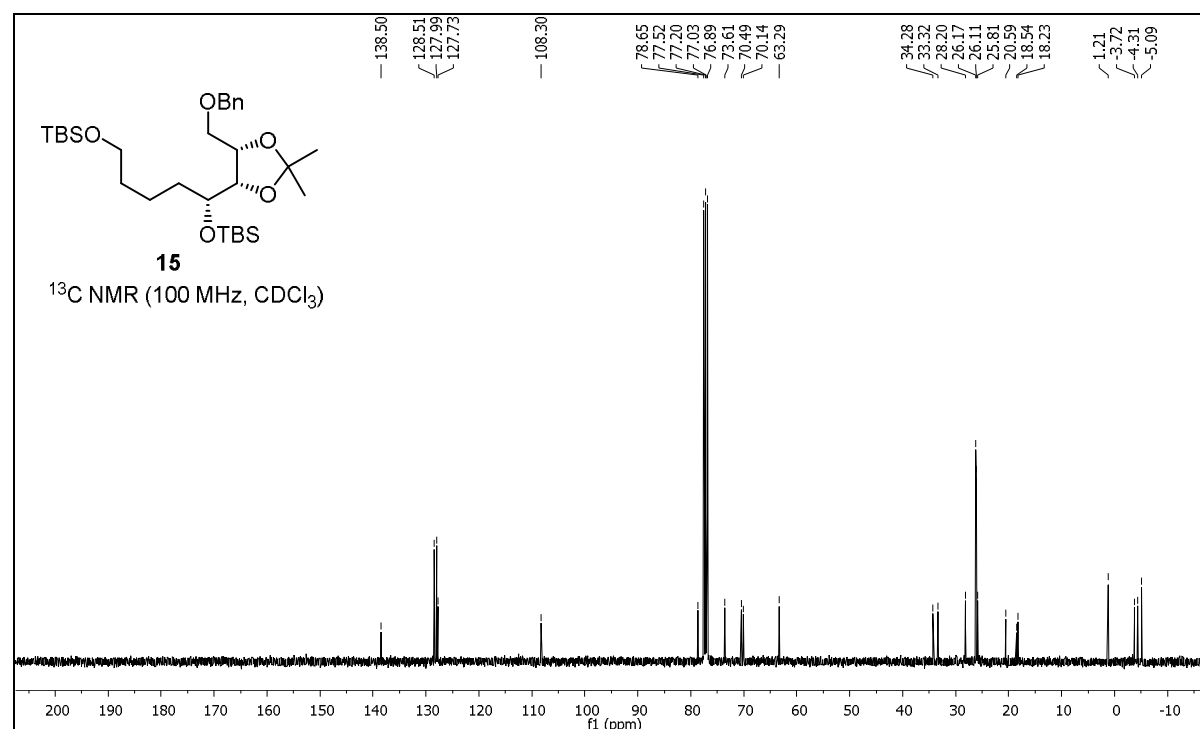
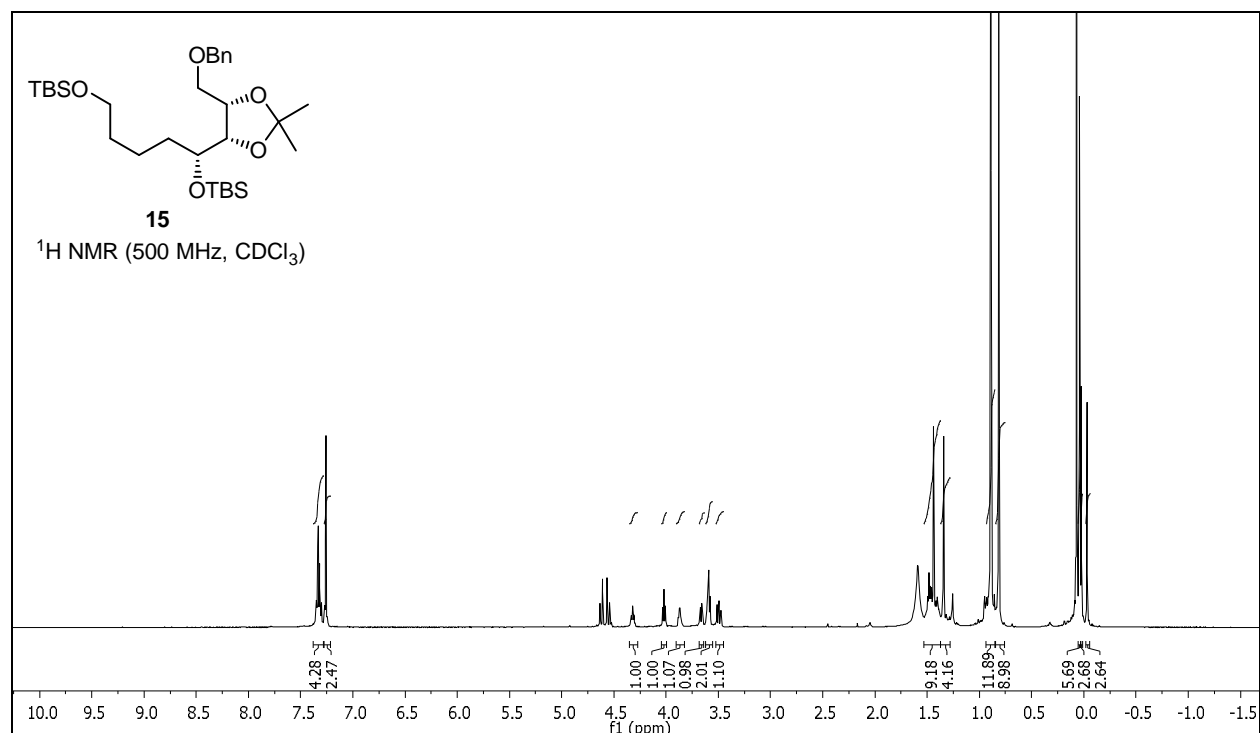
(R)-1-((4R,5S)-5-(benzyloxymethyl)-2,2-dimethyl-1,3-dioxolan-4-yl)-5-(tert-butyldimethylsilyloxy)pent-3-yn-1-ol (13)



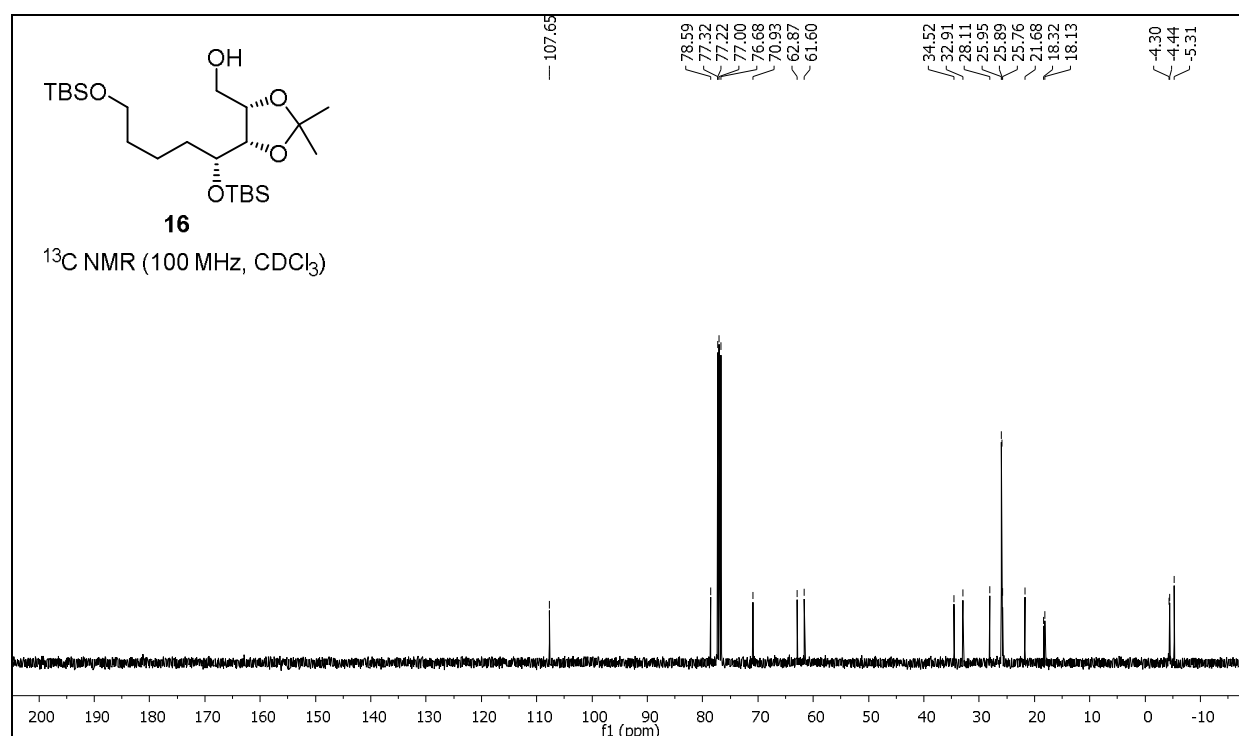
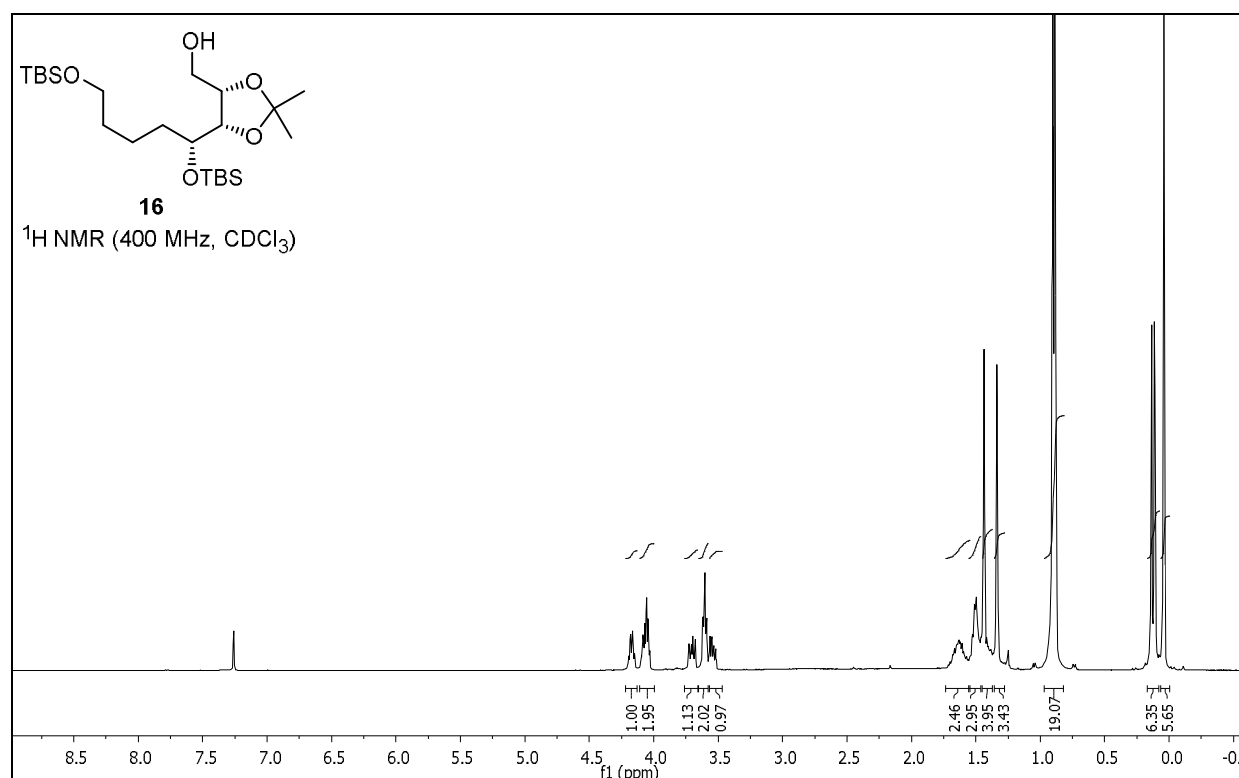
(R)-1-((4R,5S)-5-(benzyloxymethyl)-2,2-dimethyl-1,3-dioxolan-4-yl)-5-(tert-butyldimethylsilyloxy)pentan-1-ol (14)



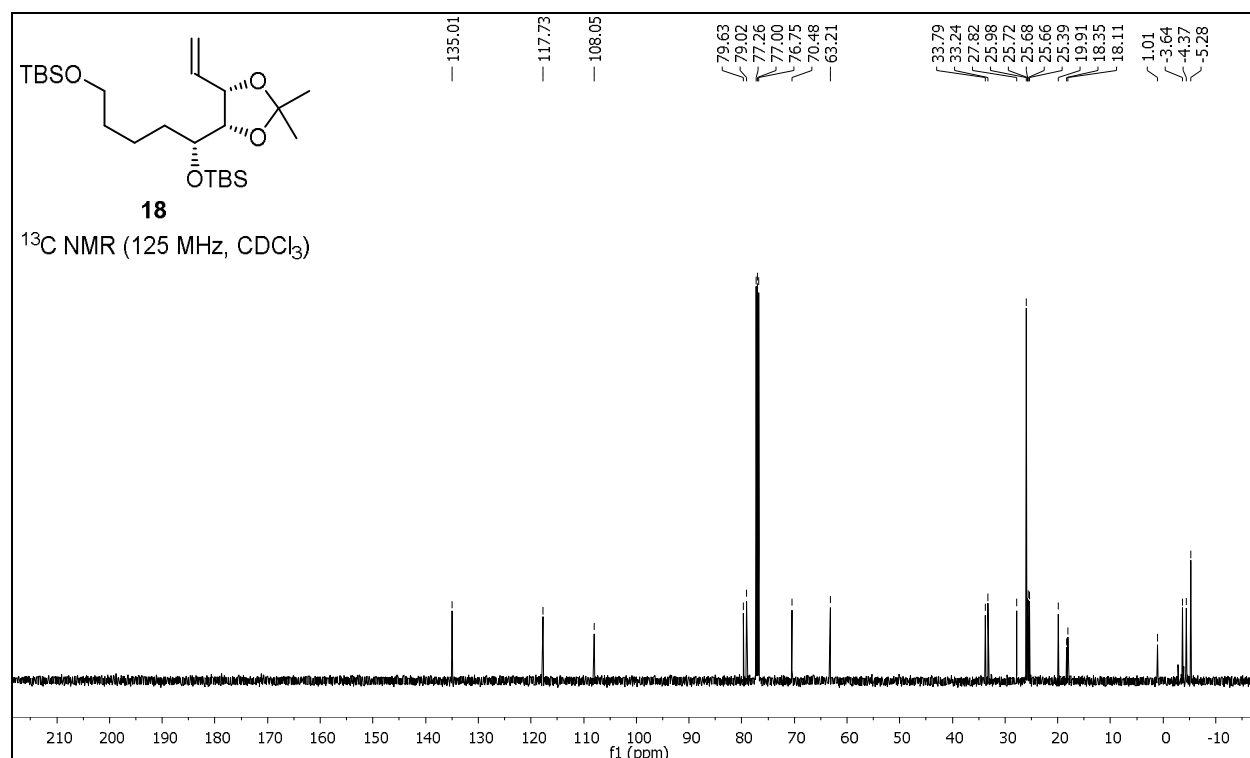
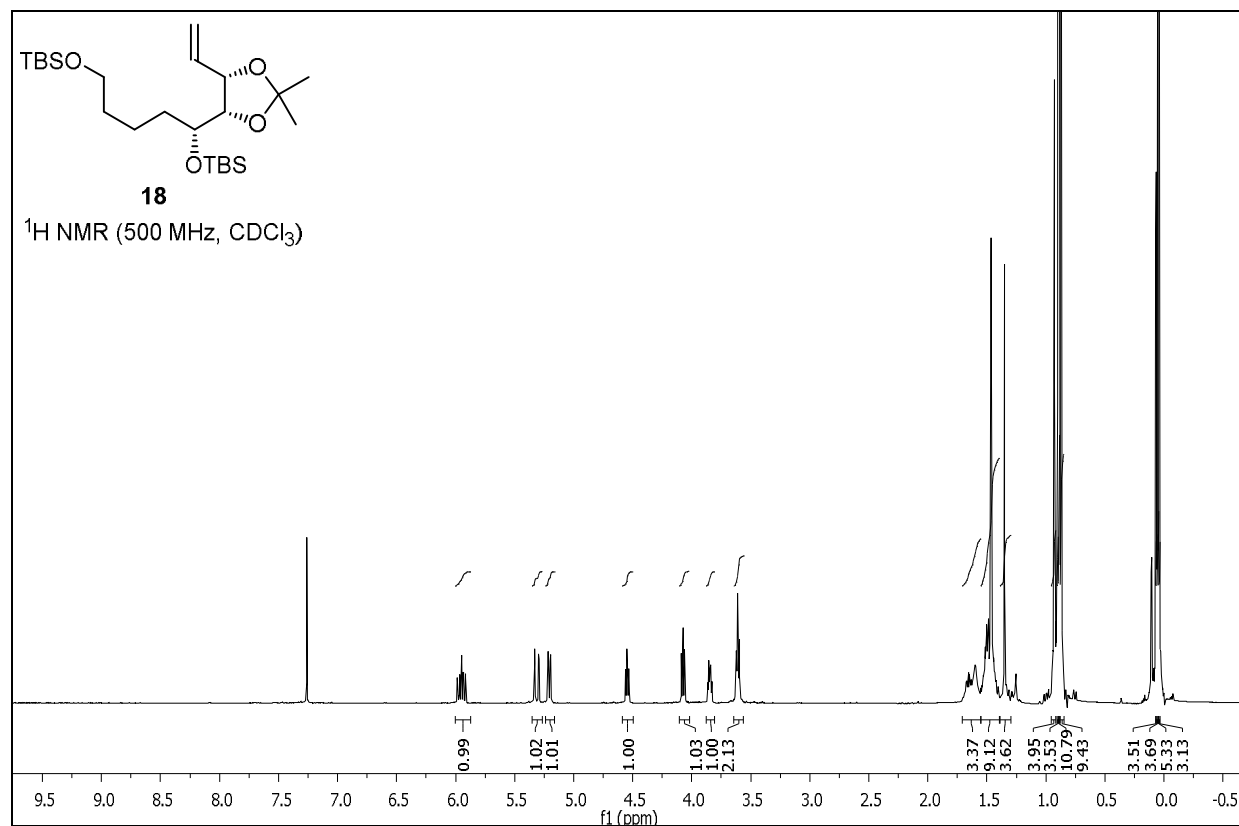
(R)-5-((4S,5S)-5-(benzyloxymethyl)-2,2-dimethyl-1,3-dioxolan-4-yl)-2,2,3,3,11,11,12,12-octamethyl-4,10-dioxo-3,11-disilatridecane (15)



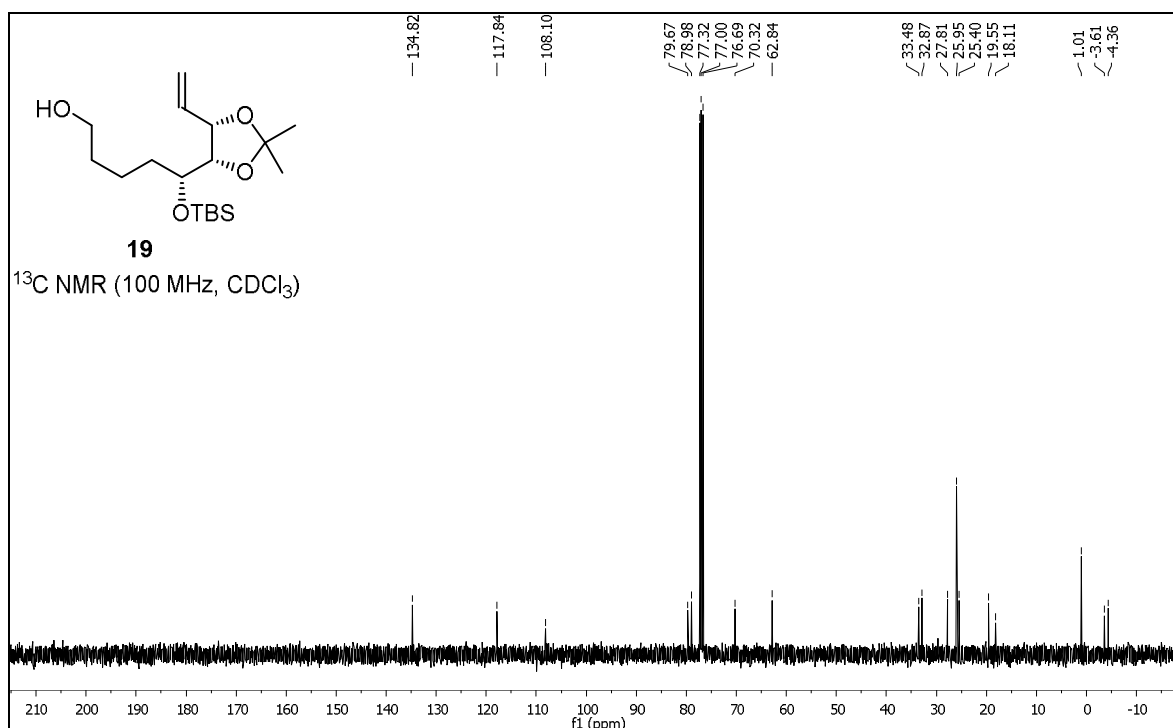
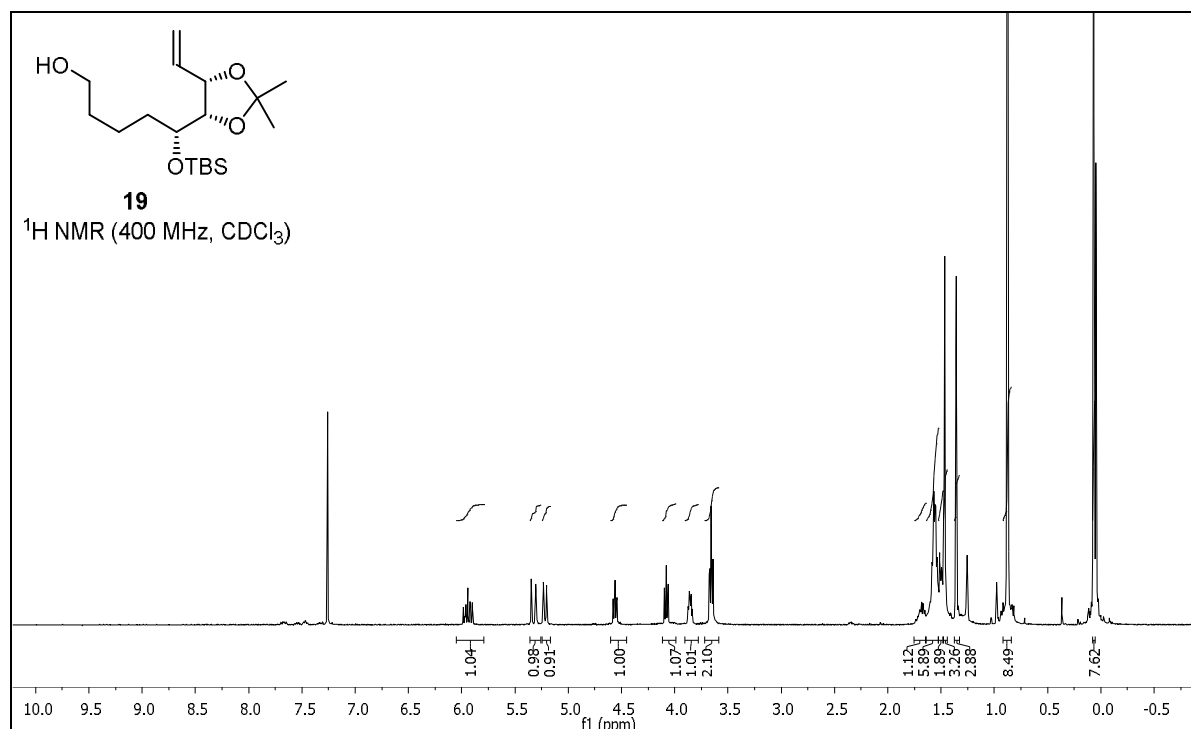
((4*S*,5*S*)-2,2-dimethyl-5-((*R*)-2,2,3,3,11,11,12,12-octamethyl-4,10-dioxo-3,11-disilatridecan-5-yl)-1,3-dioxolan-4-yl)methanol (**16**)



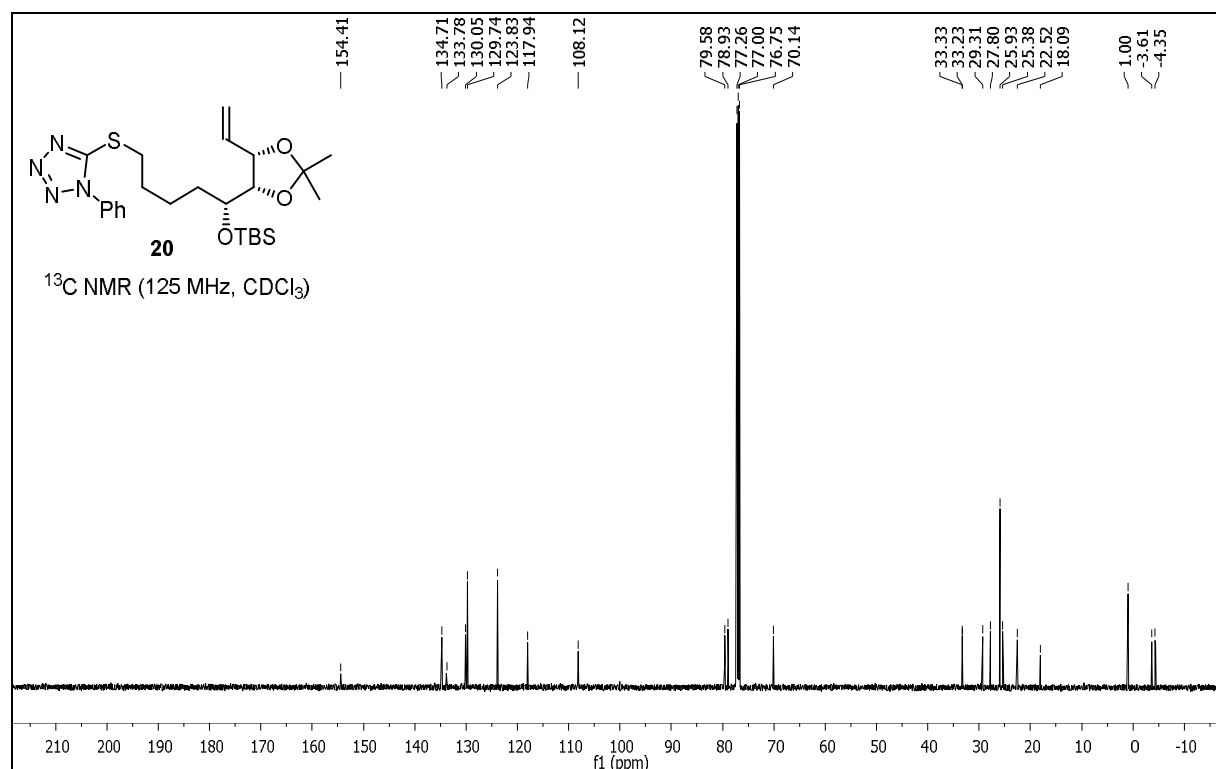
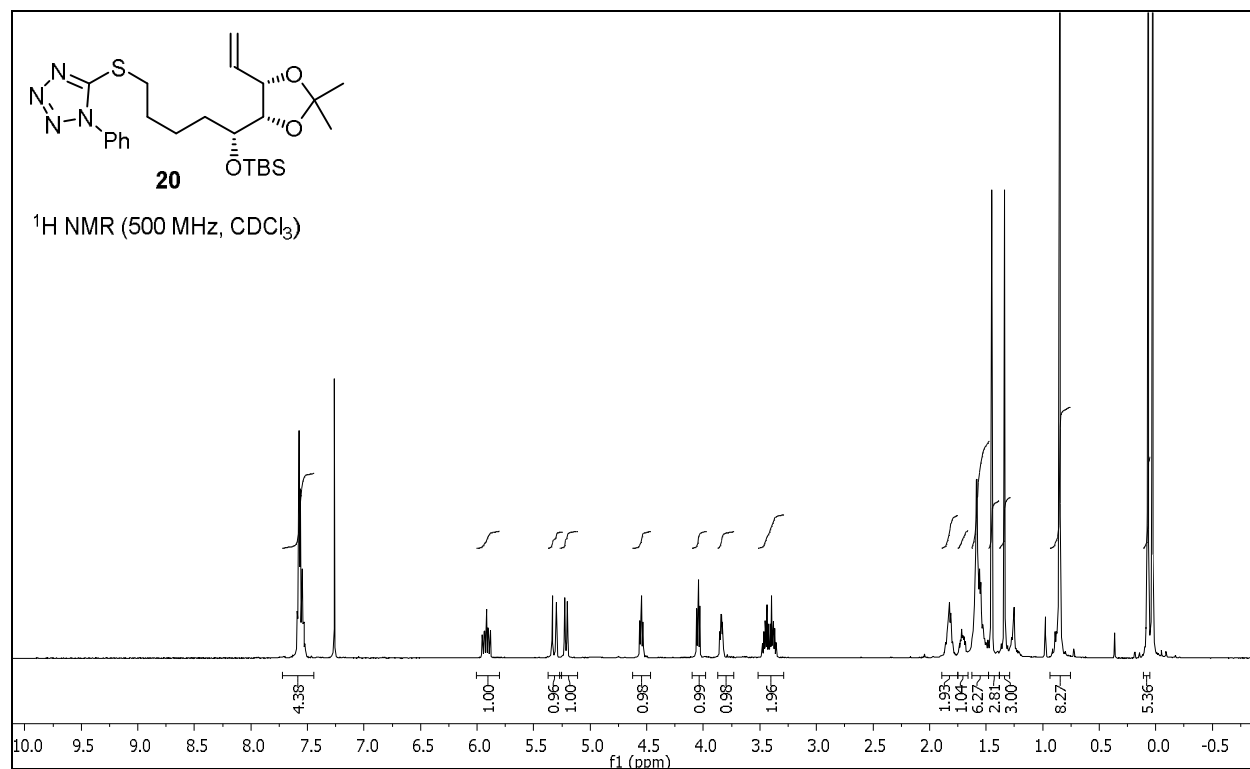
(*R*)-5-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)-2,2,3,3,11,11,12,12-octamethyl-4,10-dioxo-3,11-disilatridecane (**18**)



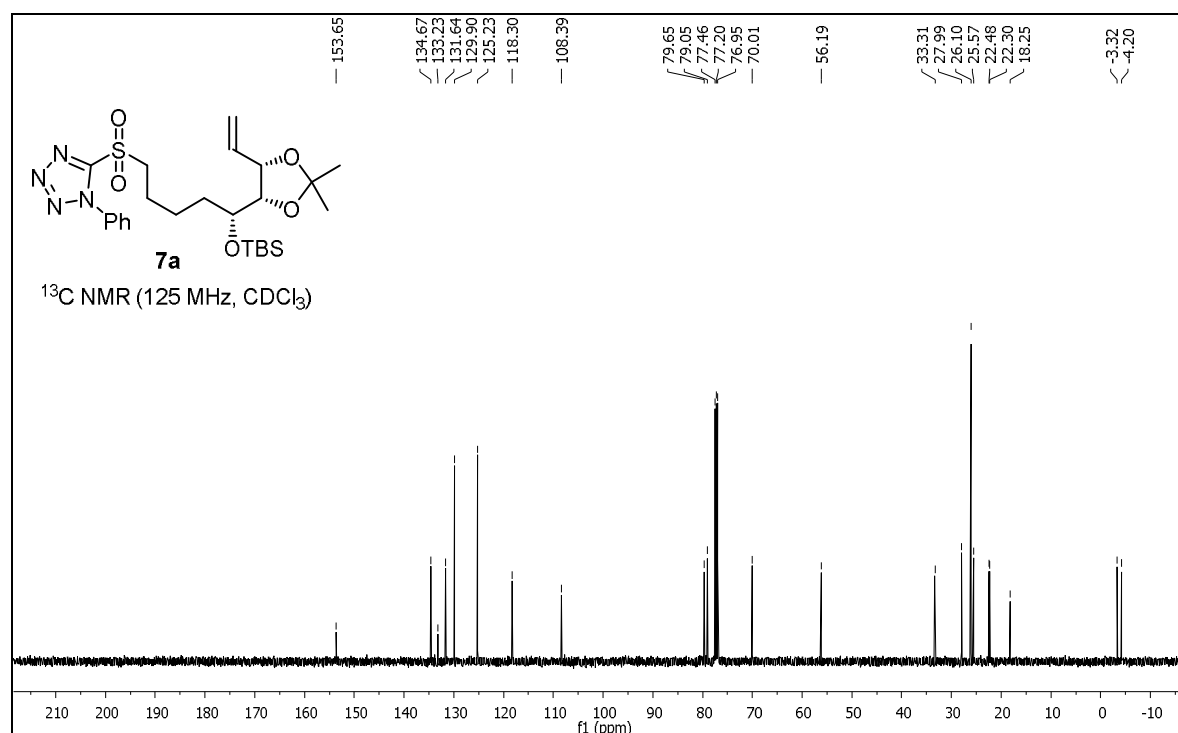
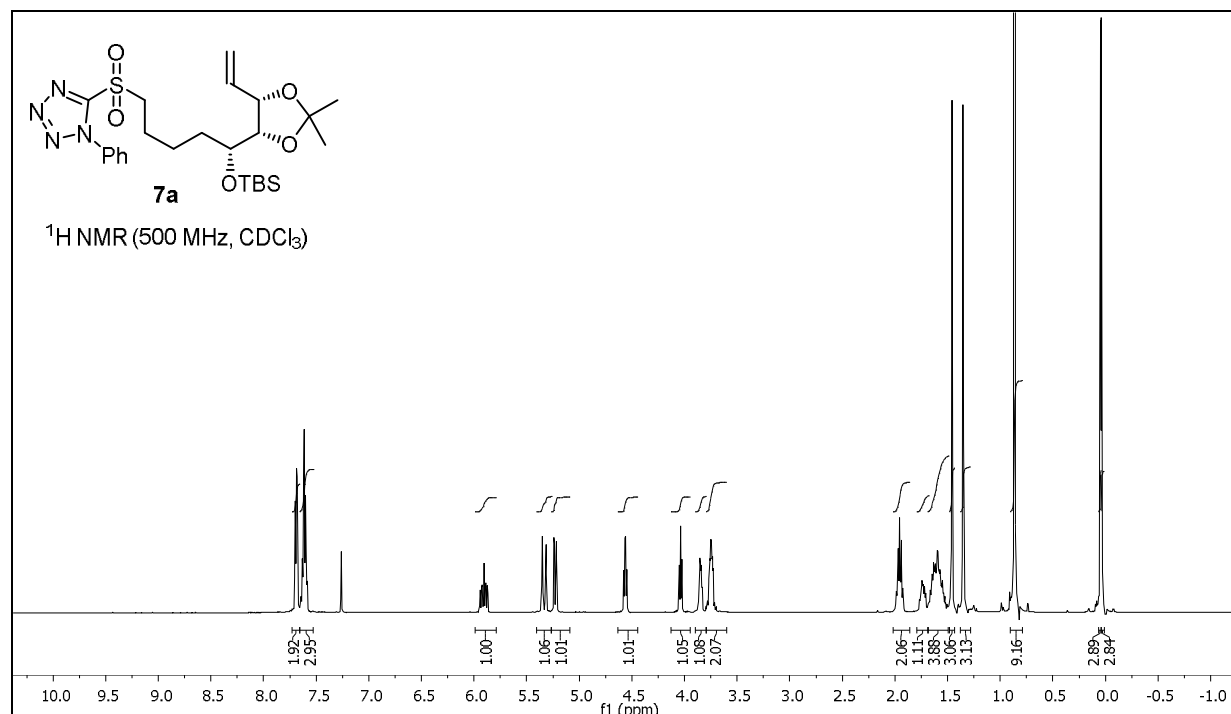
(R)-5-(tert-butyldimethylsilyloxy)-5-((4S,5S)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)pentan-1-ol (19)



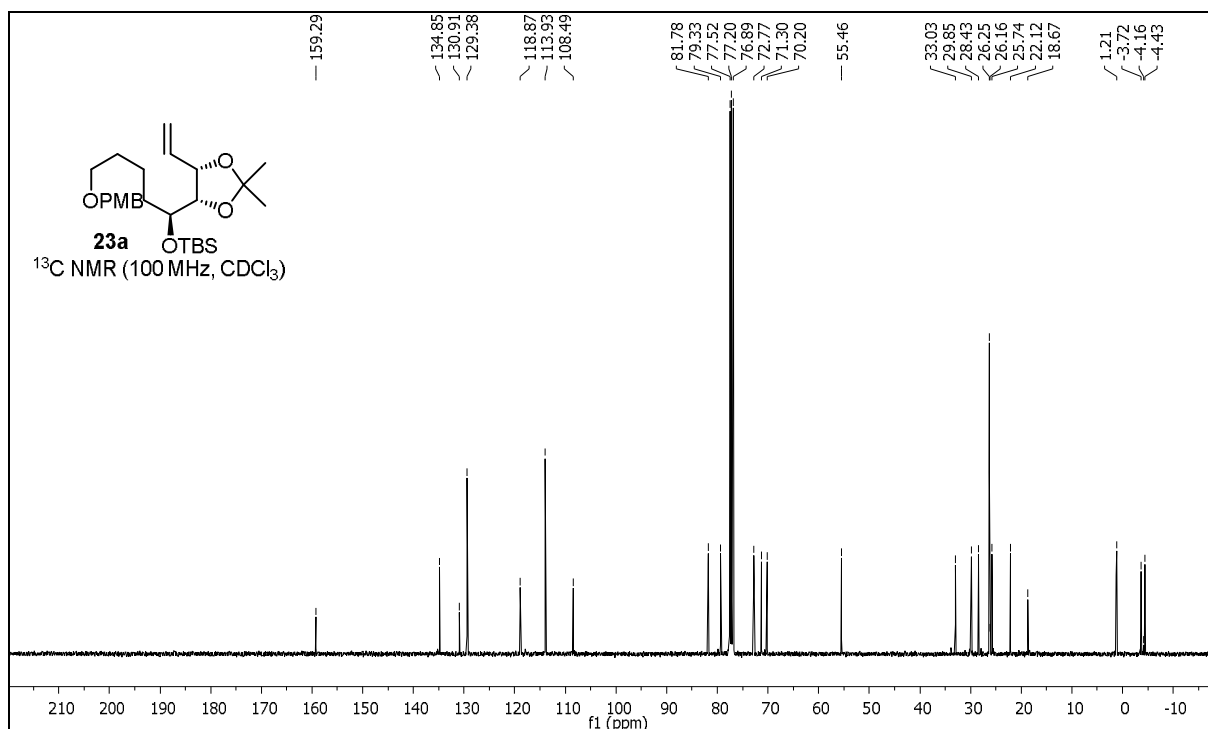
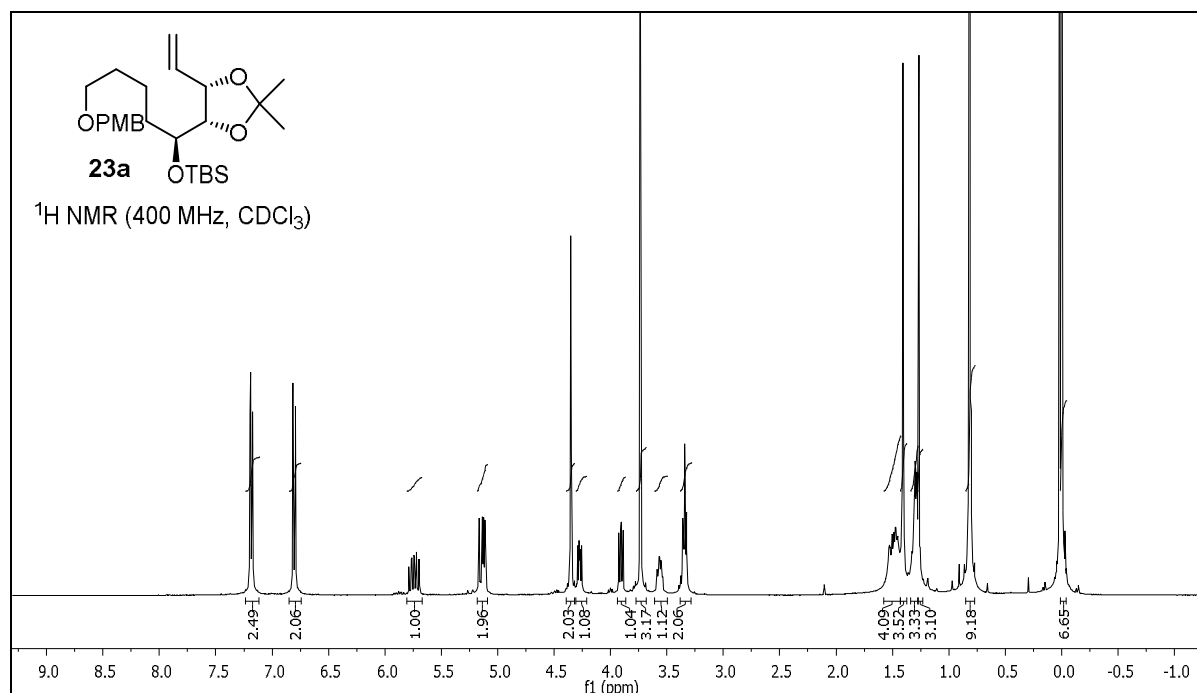
5-((*R*)-5-(tert-butyldimethylsilyloxy)-5-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)pentylthio)-1-phenyl-1H-tetrazole
(20)



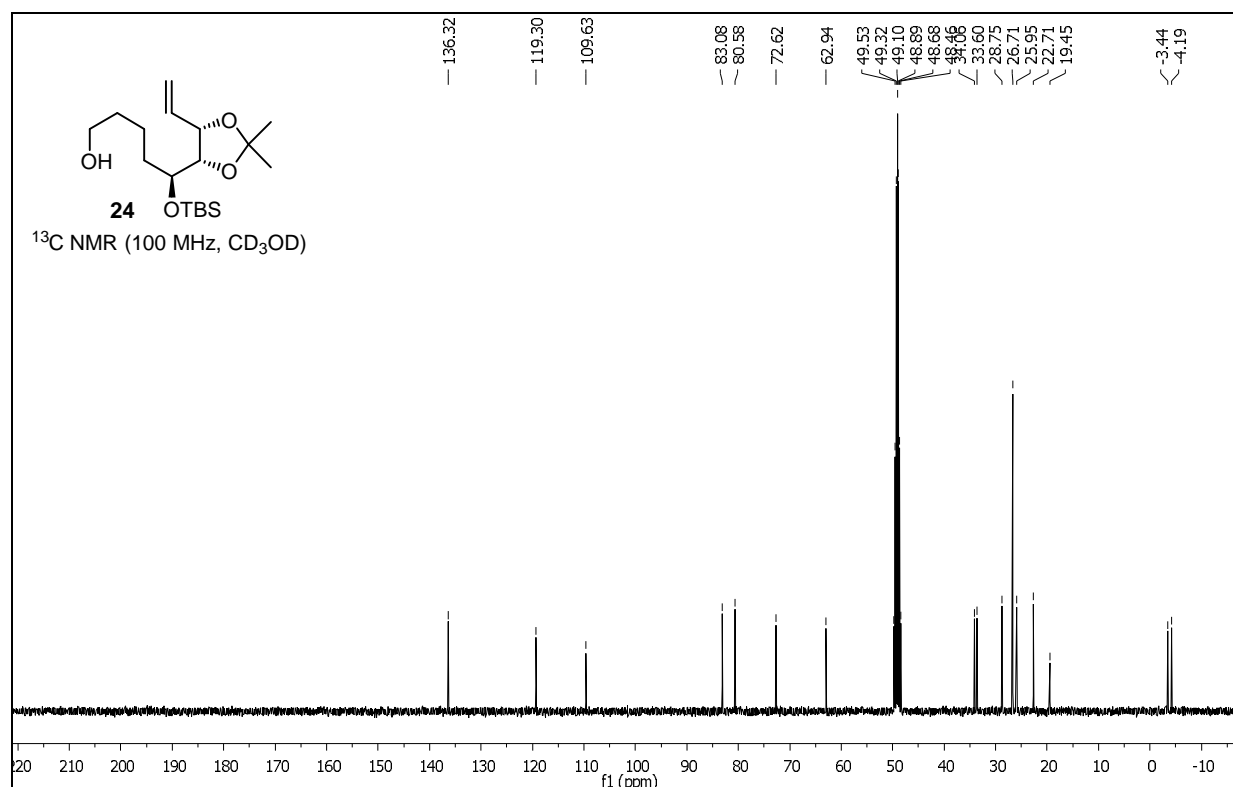
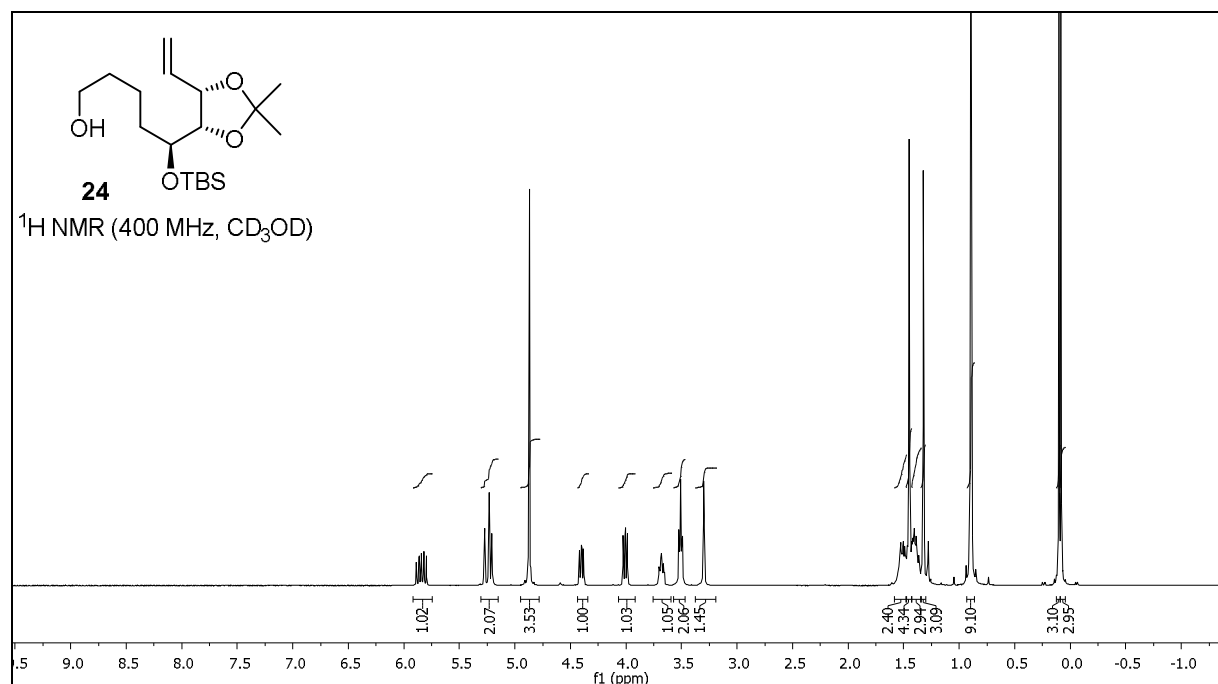
5-((*R*)-5-(tert-butyldimethylsilyloxy)-5-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)pentylsulfonyl)-1-phenyl-1H-tetrazole (**7a**)



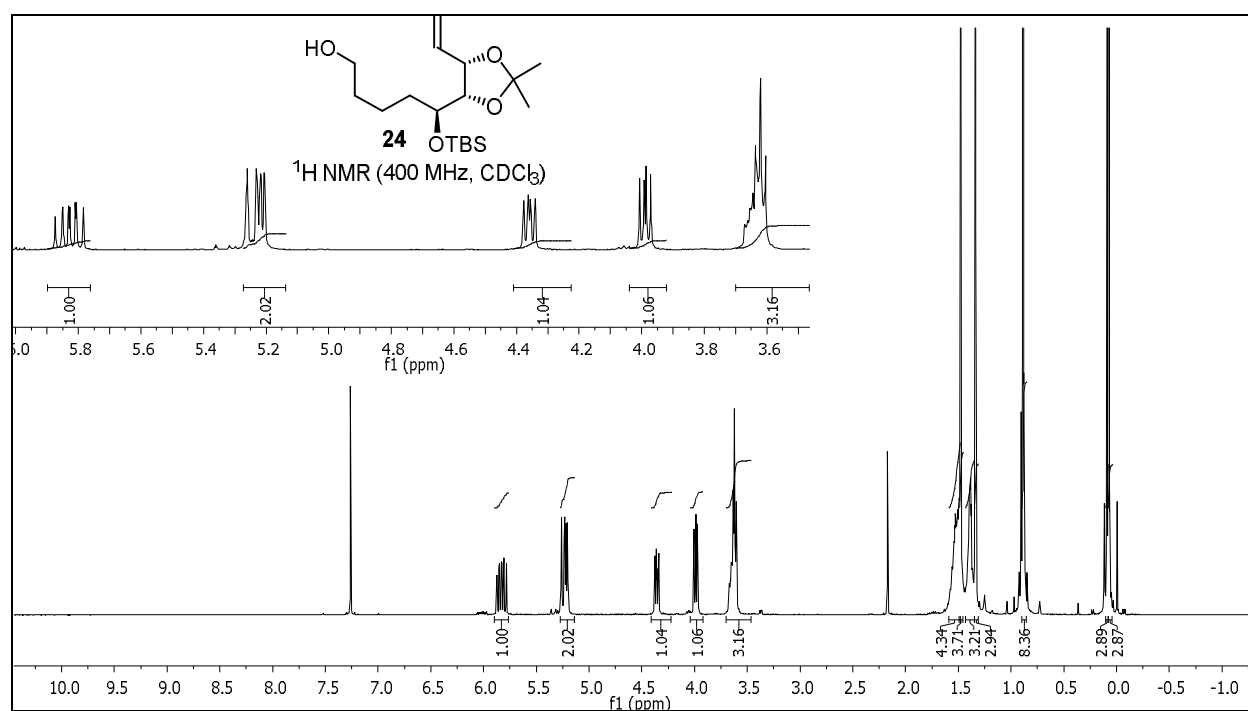
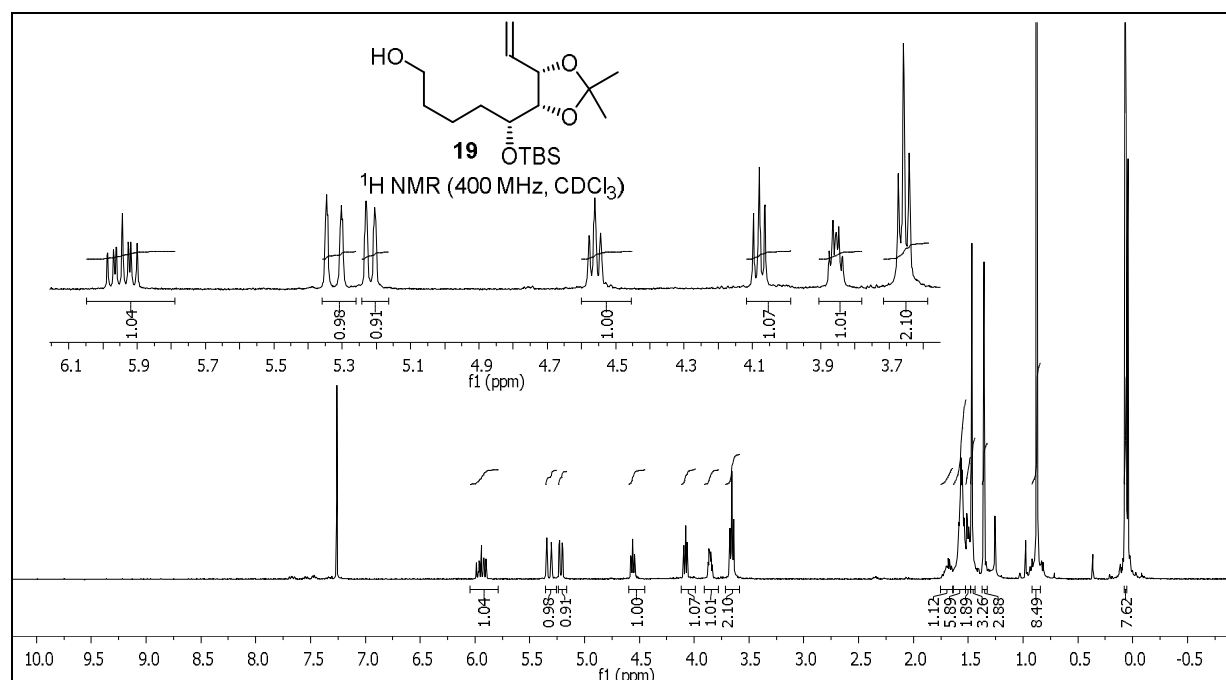
tert-butyl((*S*)-1-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)-5-(4-methoxy benzyloxy)pentyloxy)dimethylsilane (**23a**)



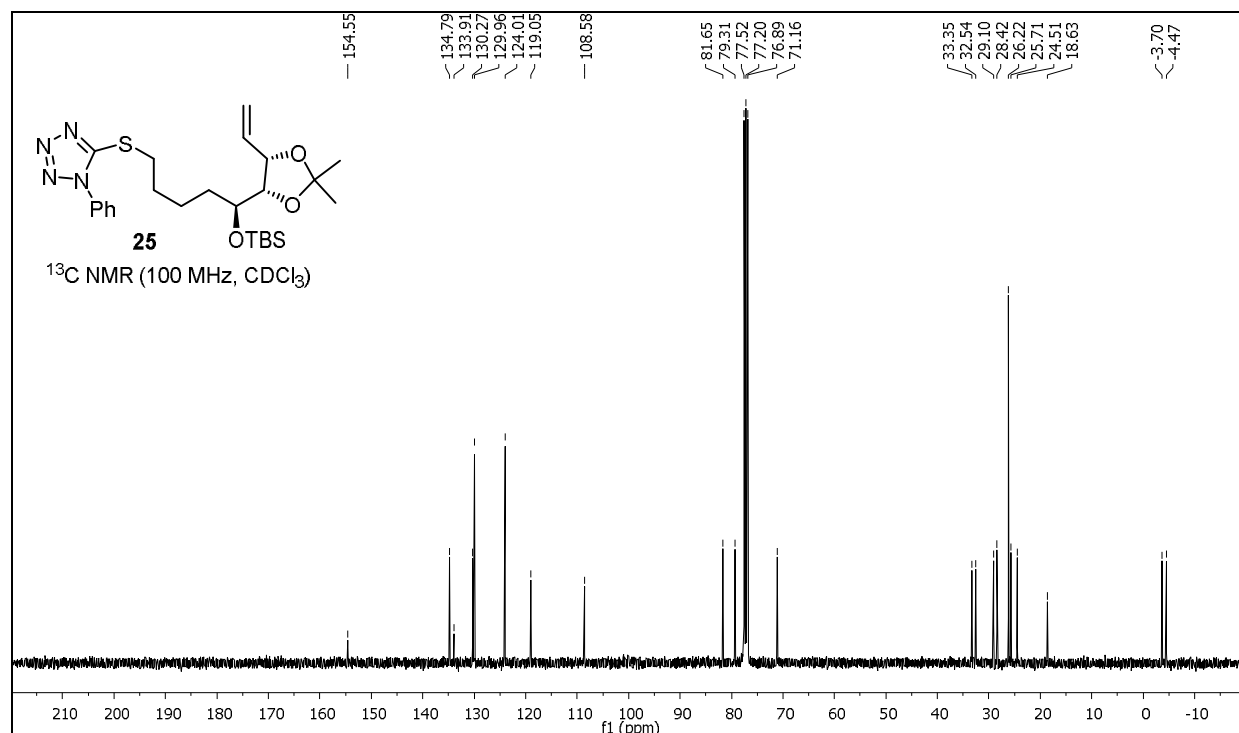
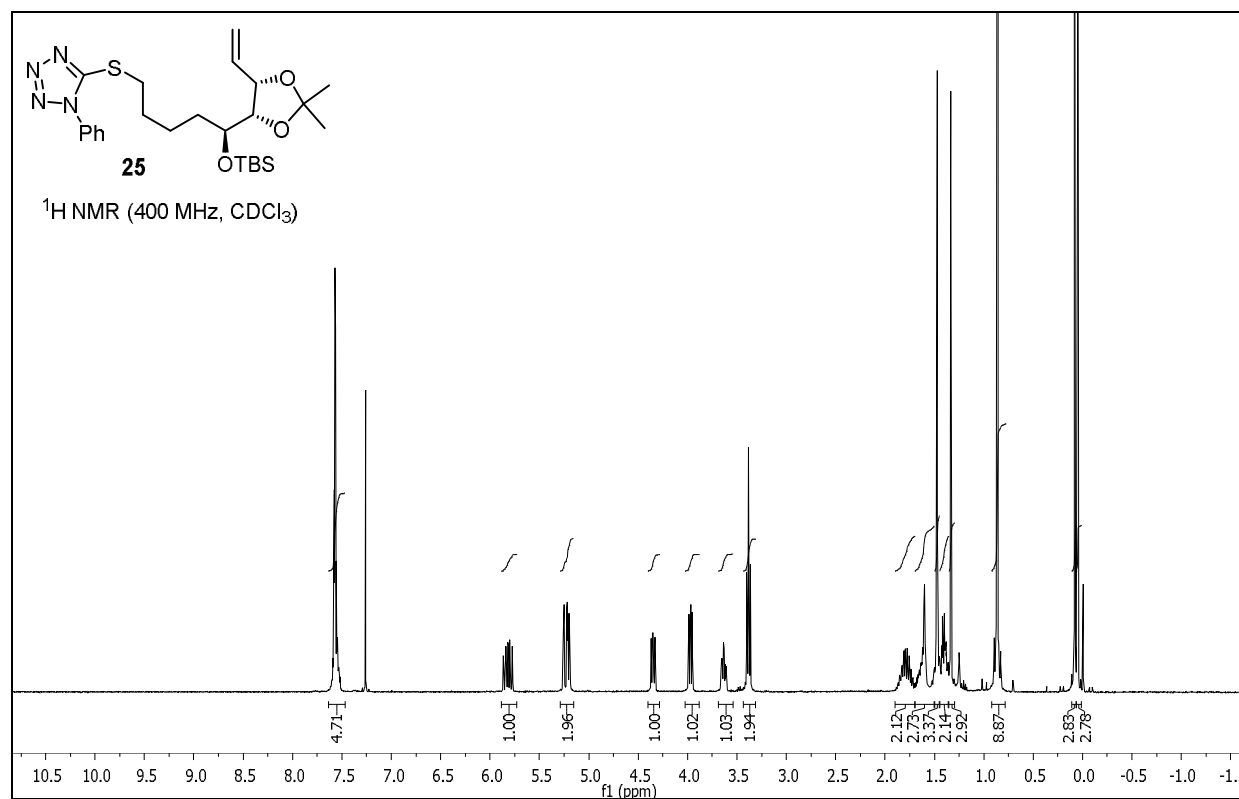
(5S)-5-(tert-butyldimethylsilyloxy)-5-((4S,5S)-2-methyl-5-vinyl-1,3-dioxolan-4-yl)pentan-1-ol (**24**)



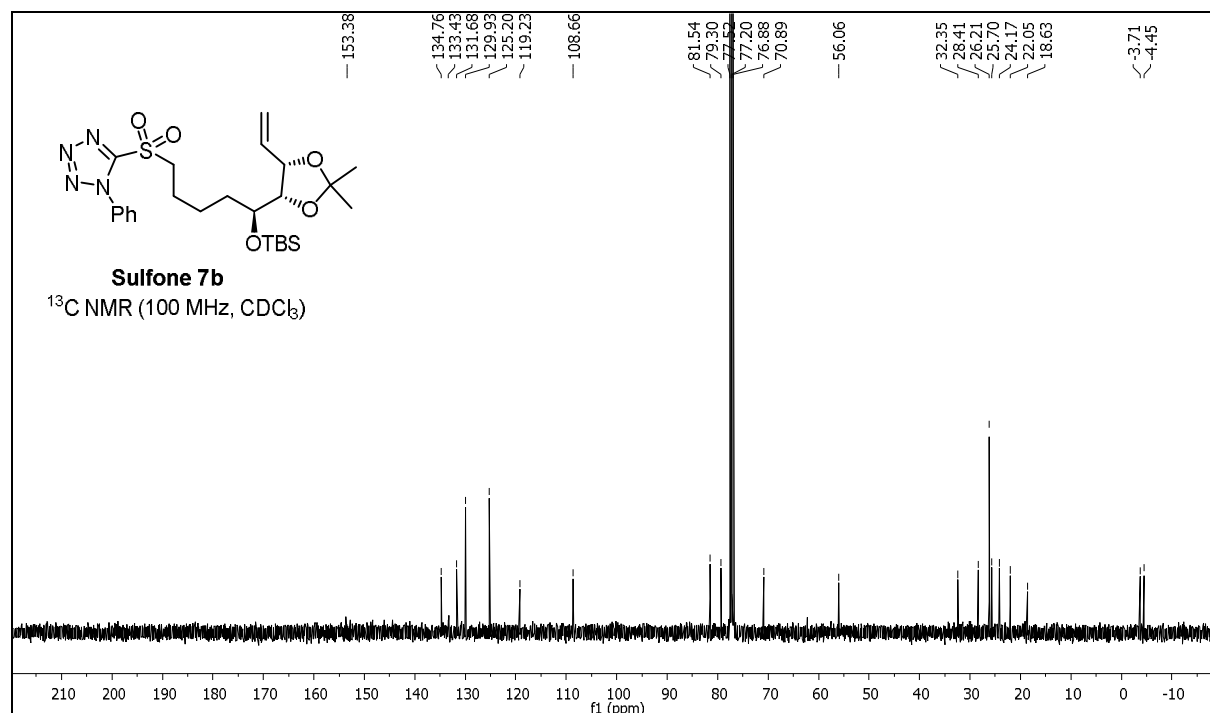
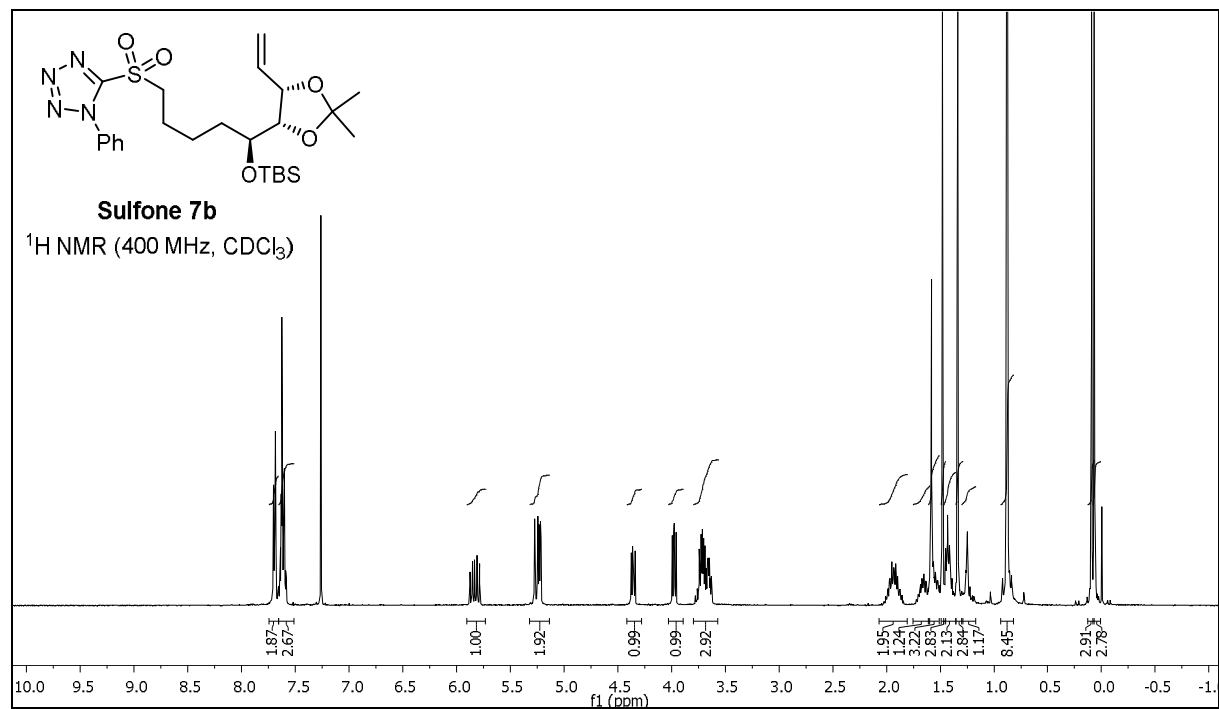
Comparison of ^1H NMR of diastereomeric alcohols **19** and **24**



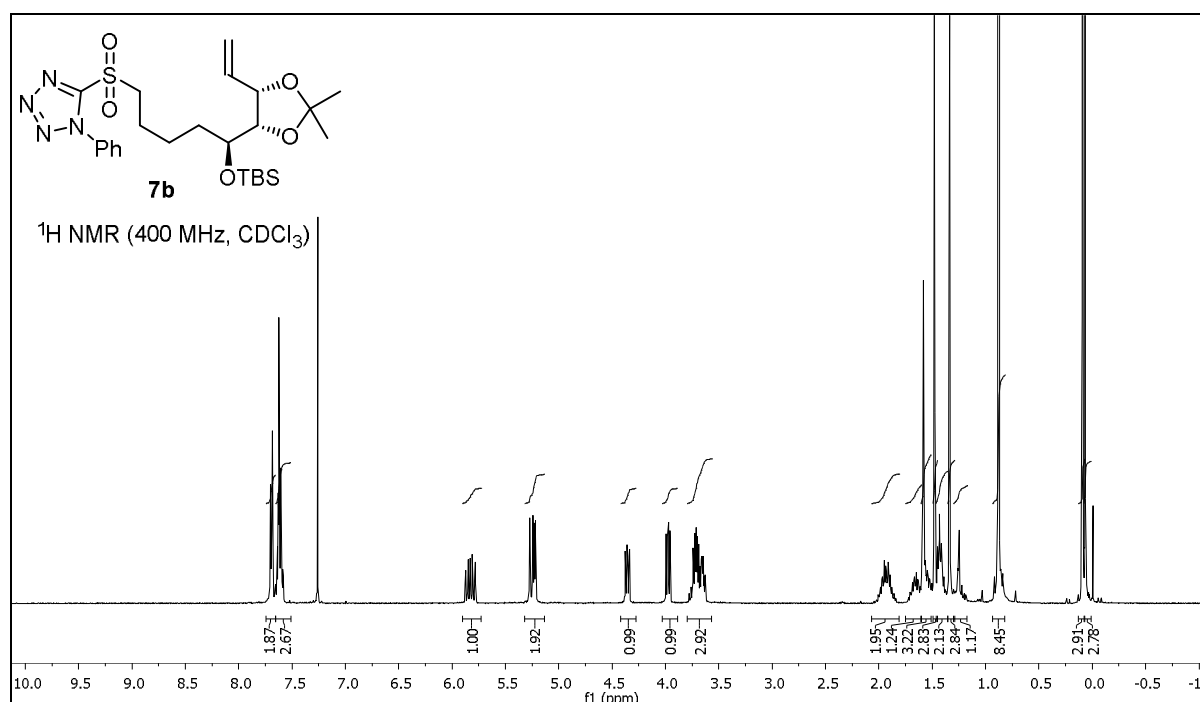
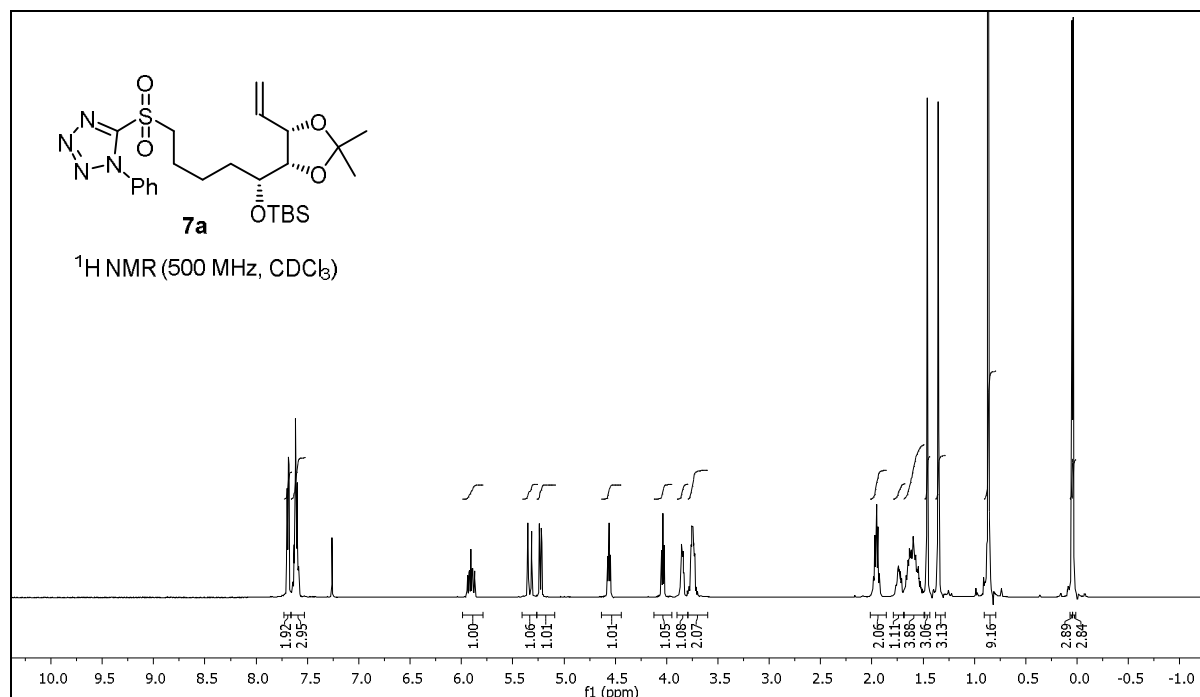
5-((*S*)-5-(*tert*-butyldimethylsilyloxy)-5-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)pentylthio)-1-phenyl-1*H*-tetrazole
(25)



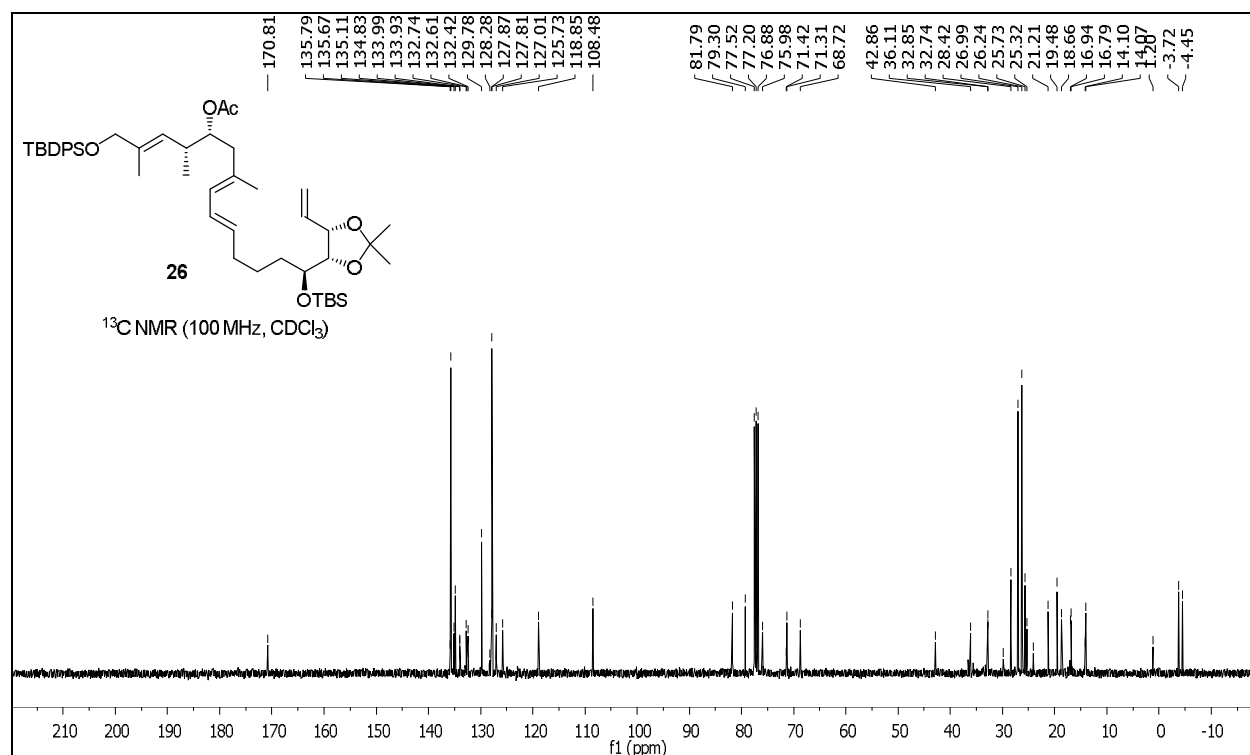
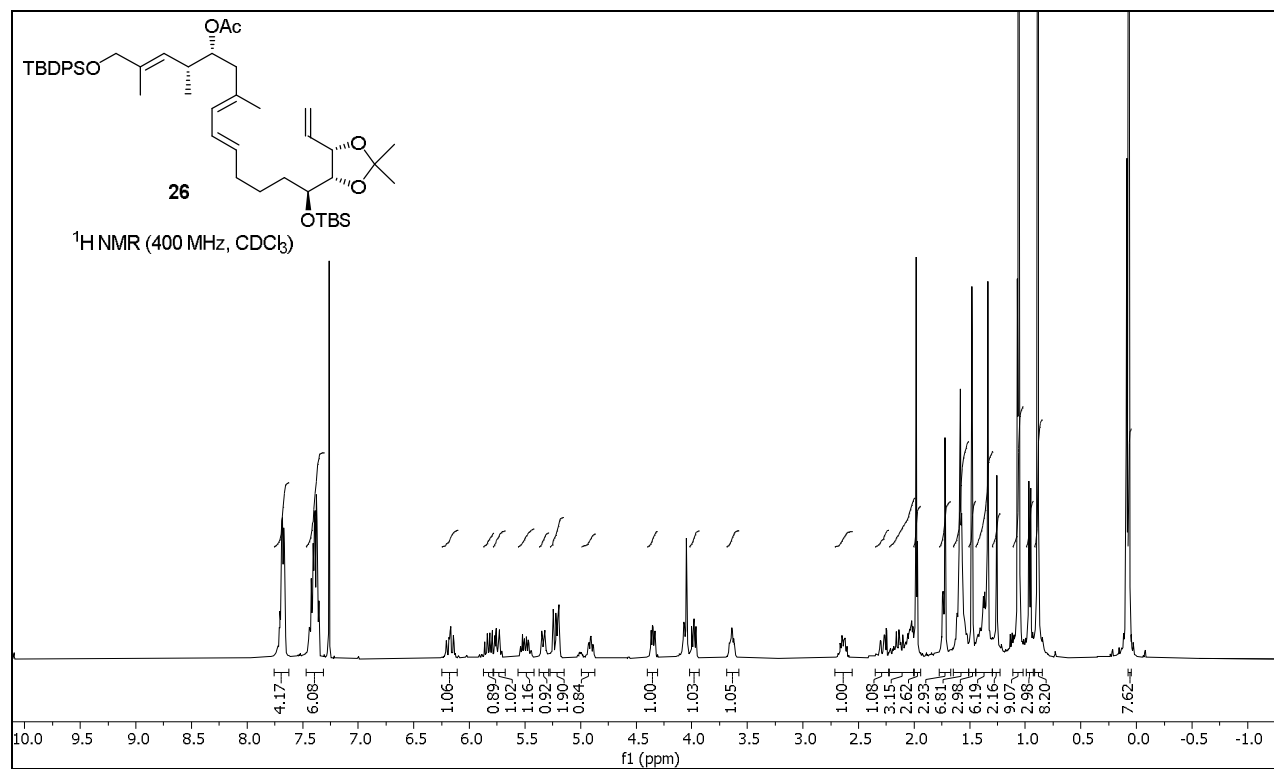
5-((*S*)-5-(*tert*-butyldimethylsilyloxy)-5-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)pentylsulfonyl)-1-phenyl-1H-tetrazole (**7b**)



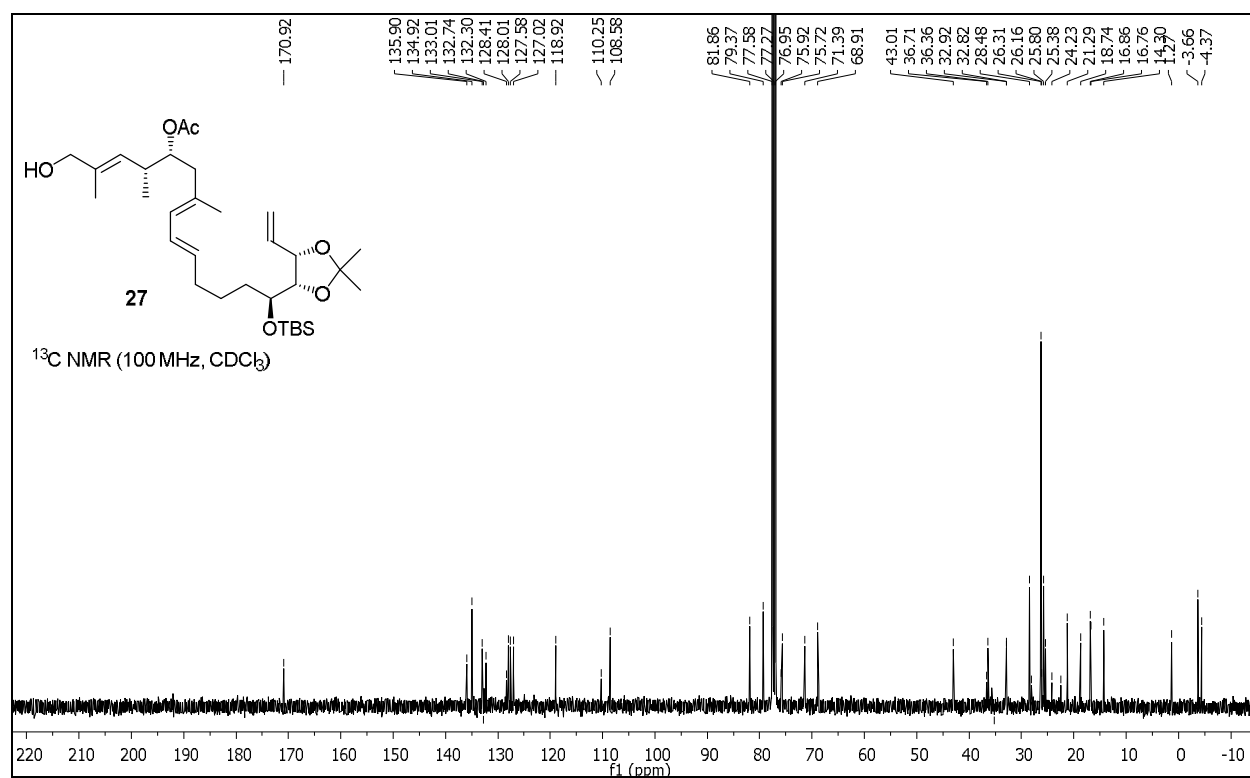
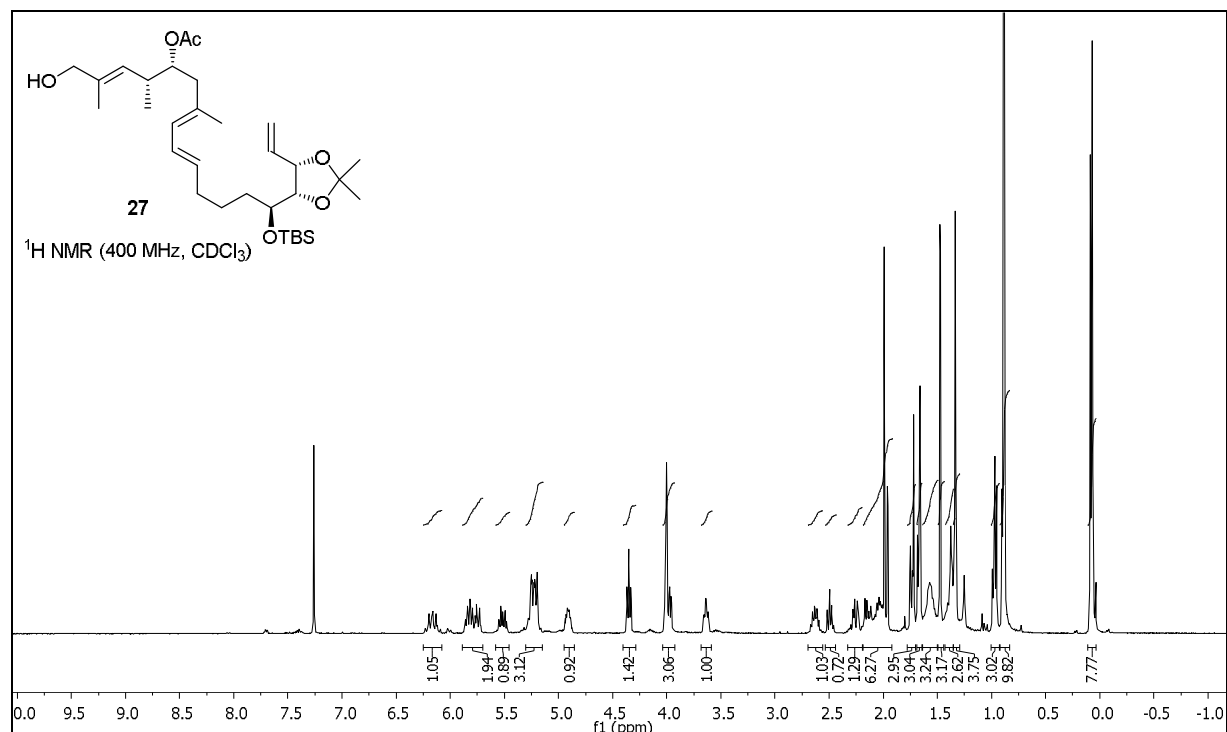
Comparison of ^1H NMR of diastereomeric sulfones **7a** and **7b**



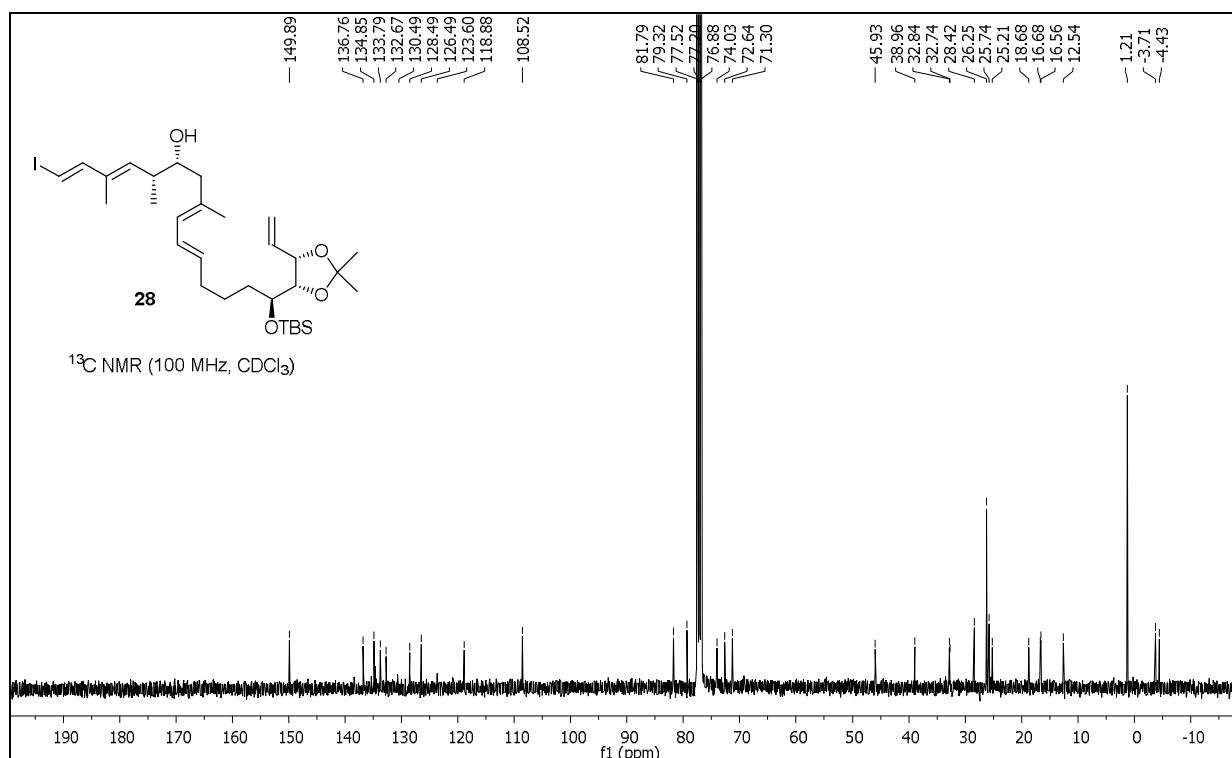
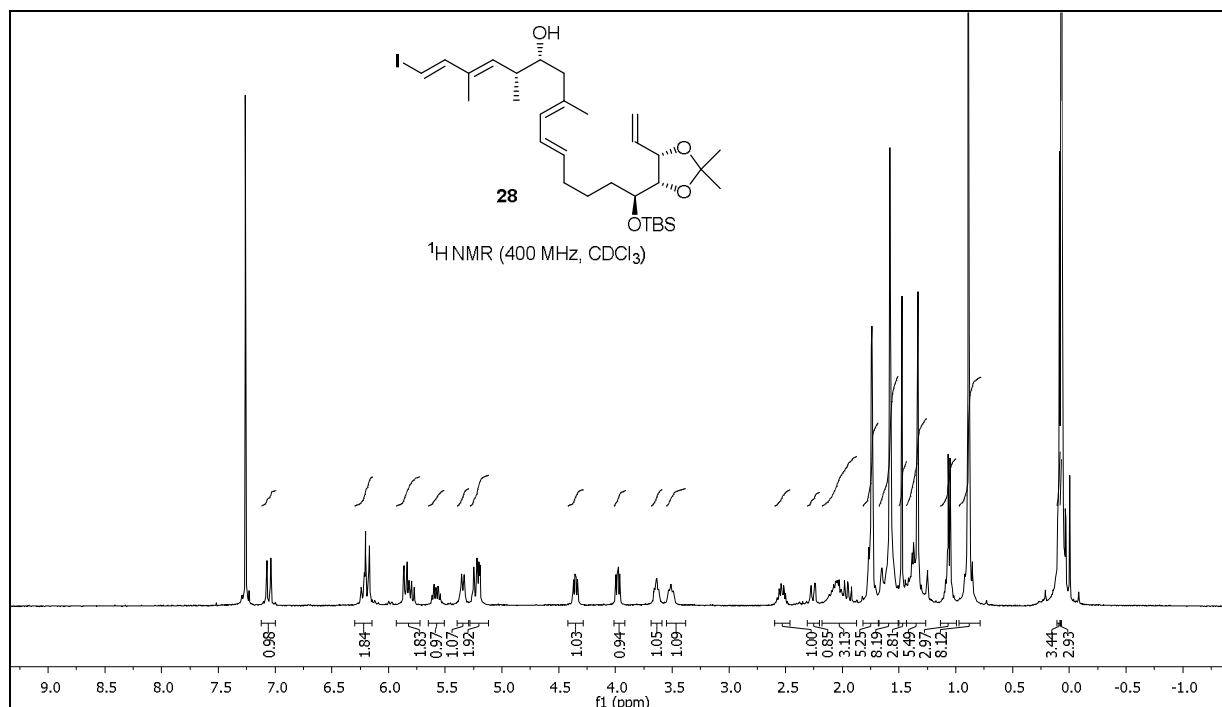
(6*E*,8*R*,9*R*,11*E*,13*E*,18*S*)-18-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)-2,2,6,8,11,20,20,21,21-nonamethyl-3,3-diphenyl-4,19-dioxo-3,20-disiladocosa-6,11,13-trien-9-yl acetate (26)



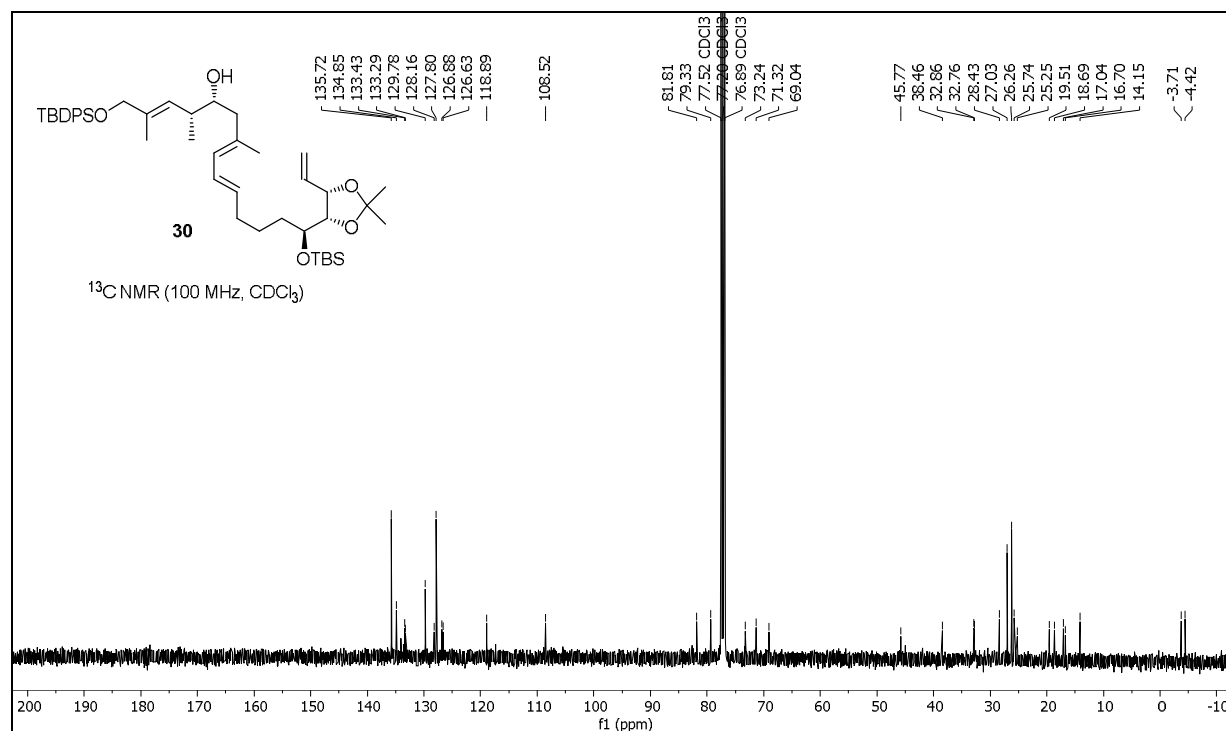
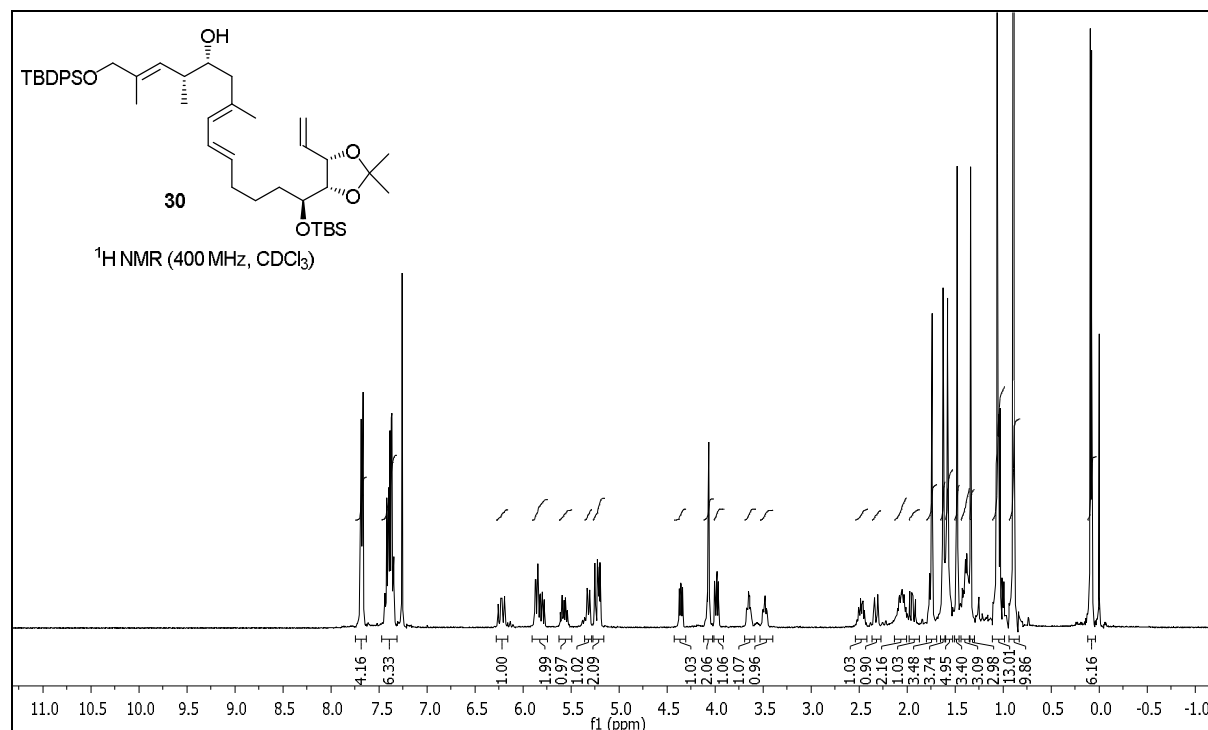
(2*E*,4*R*,5*R*,7*E*,9*E*,14*S*)-14-(tert-butyldimethylsilyloxy)-14-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)-1-hydroxy-2,4,7-trimethyltetradeca-2,7,9-trien-5-yl acetate (27)



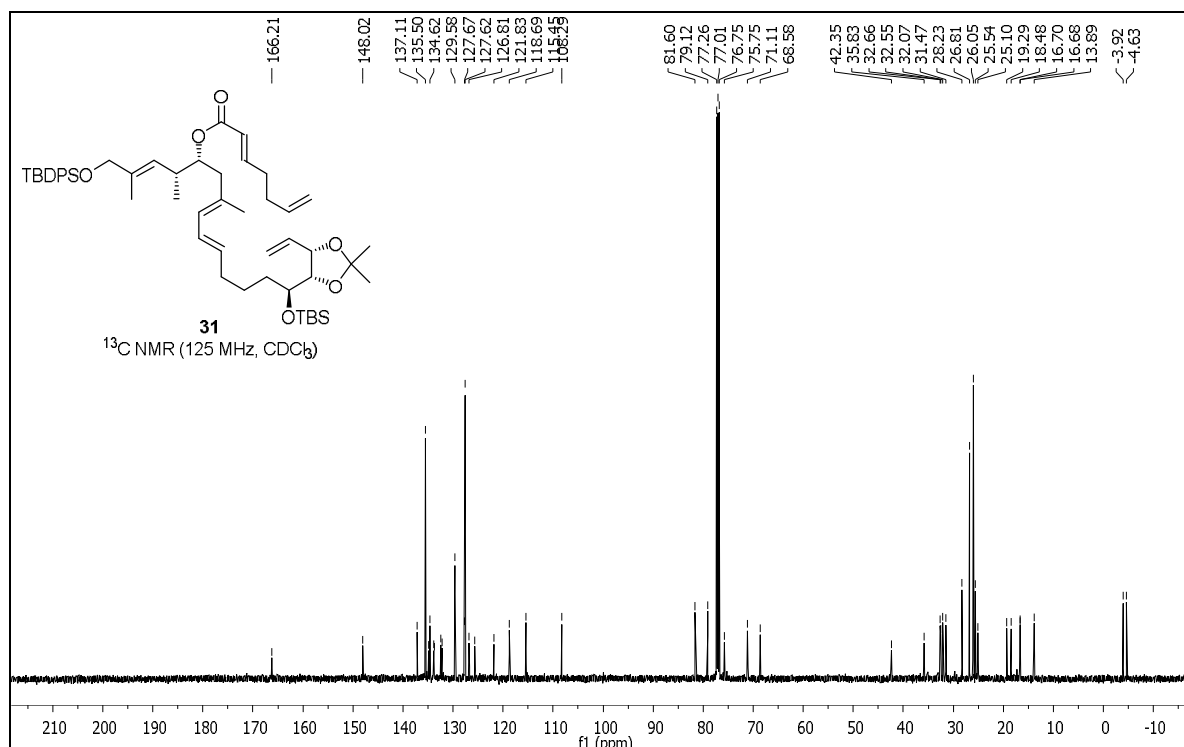
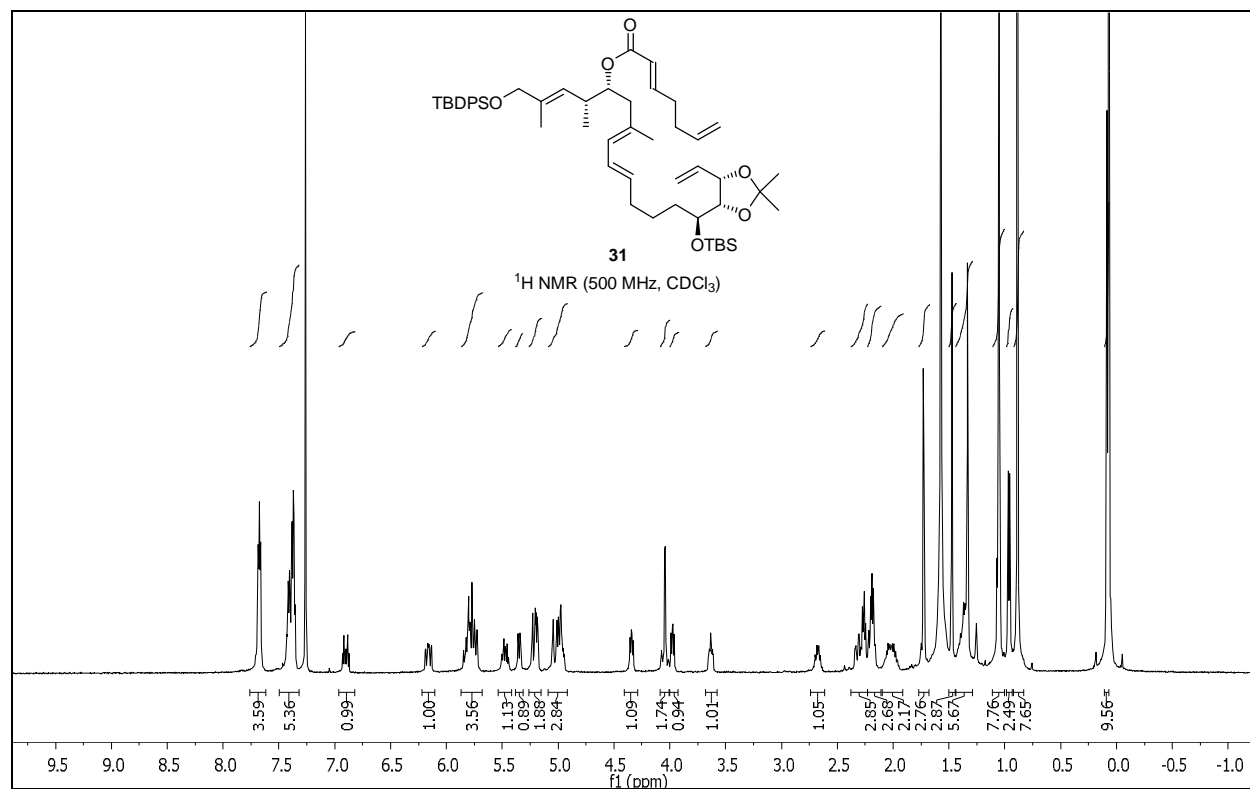
(1*E*,3*E*,5*R*,6*R*,8*E*,10*E*,15*S*)-15-(tert-butyl dimethylsilyloxy)-15-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)-1-iodo-3,5,8-trimethylpentadeca-1,3,8,10-tetraen-6-ol (**28**)



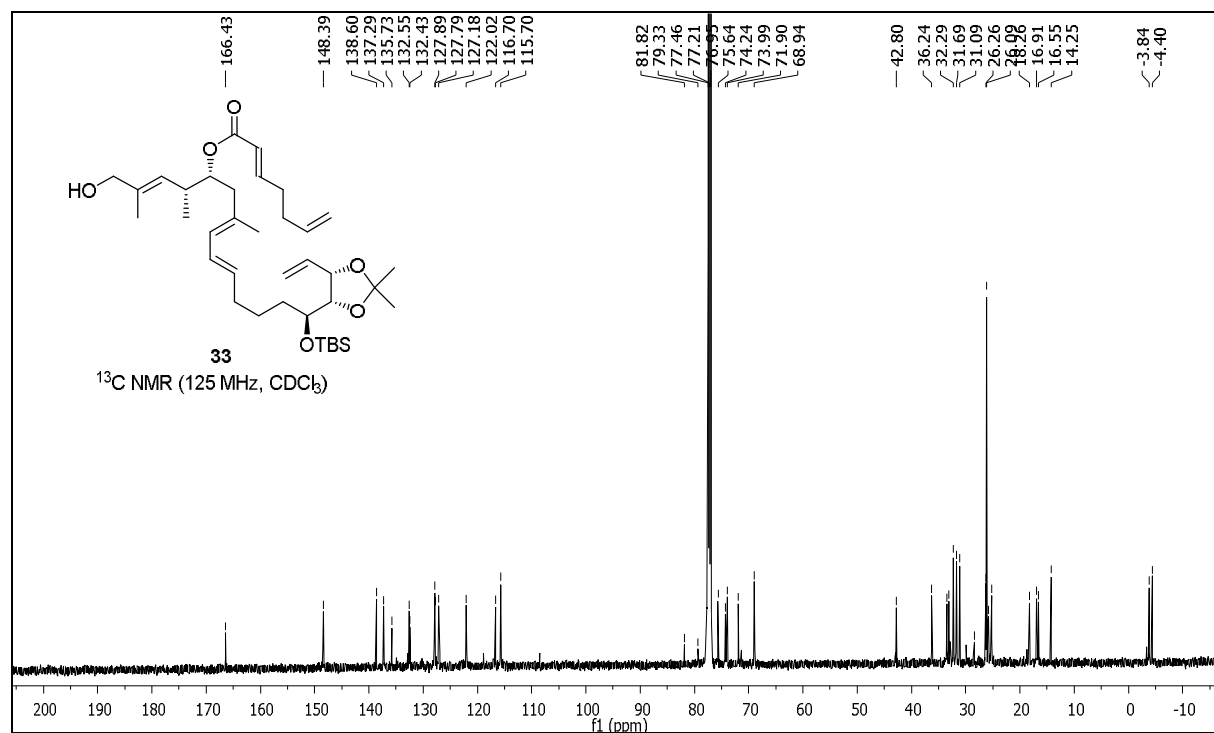
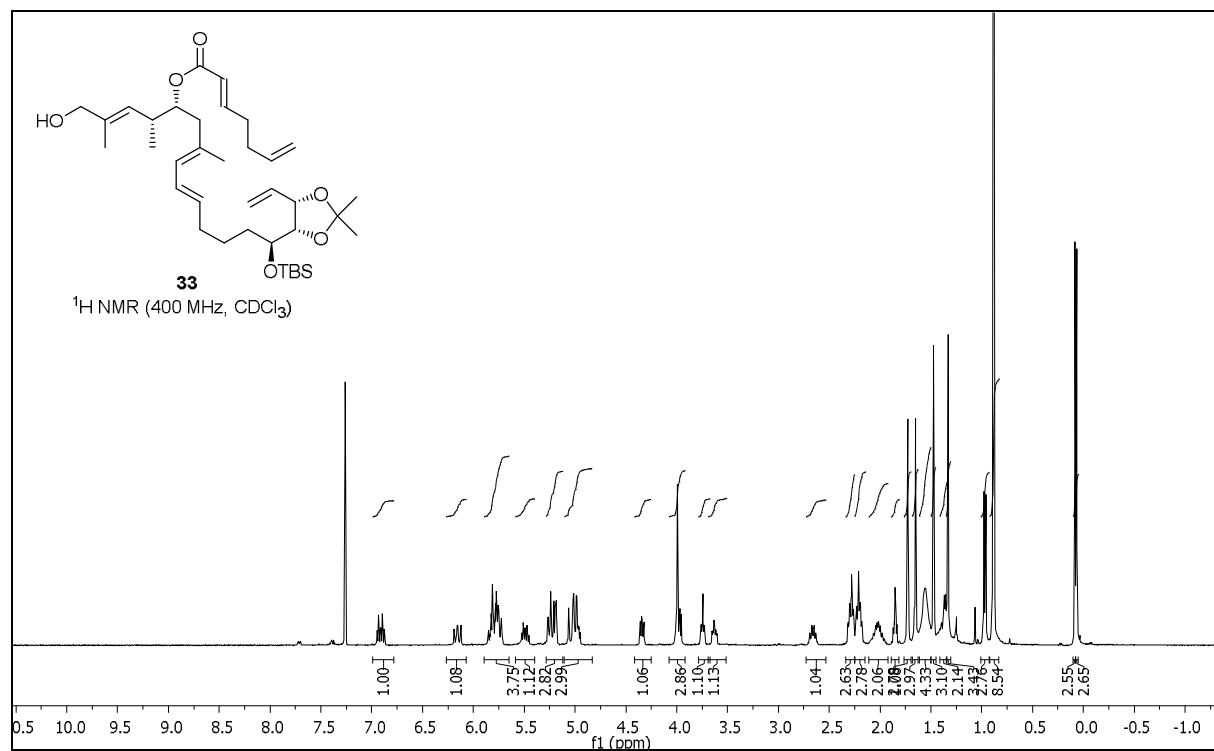
(6*E*,8*R*,9*R*,11*E*,13*E*,18*S*)-18-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)-2,2,6,8,11,20,20,21,21-nonamethyl-3,3-diphenyl-4,19-dioxo-3,20-disiladocosa-6,11,13-trien-9-ol (30)



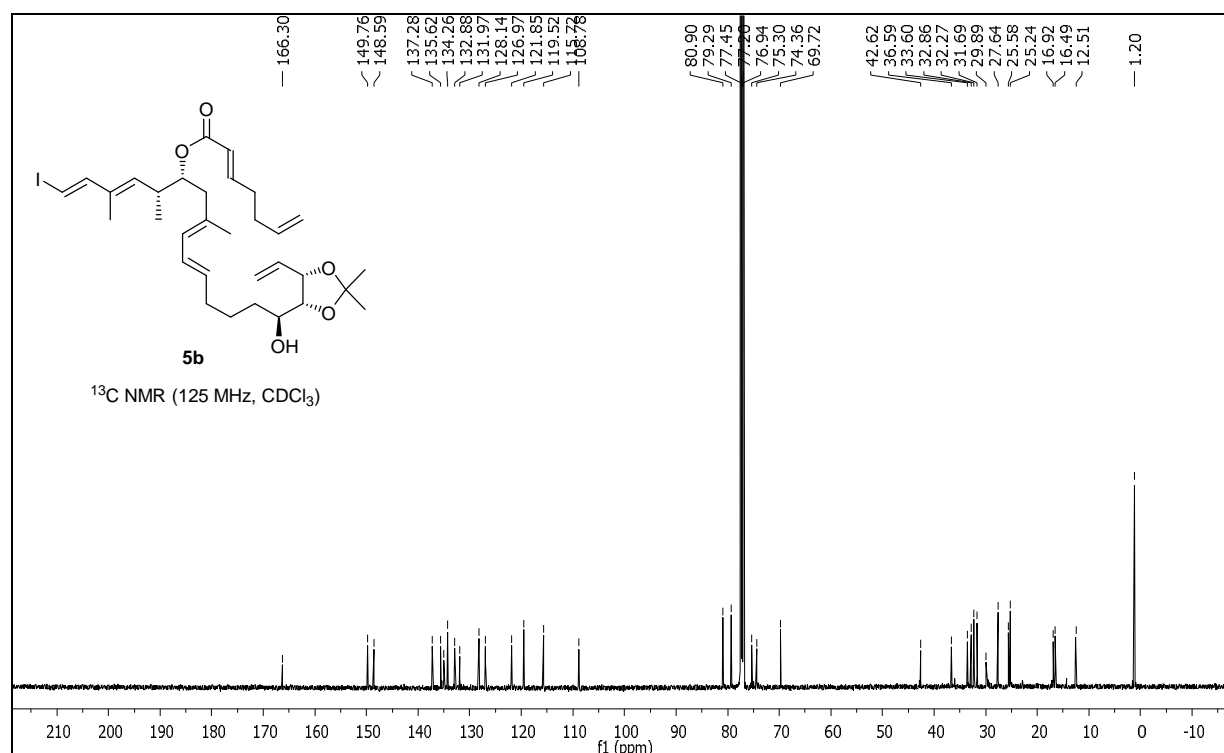
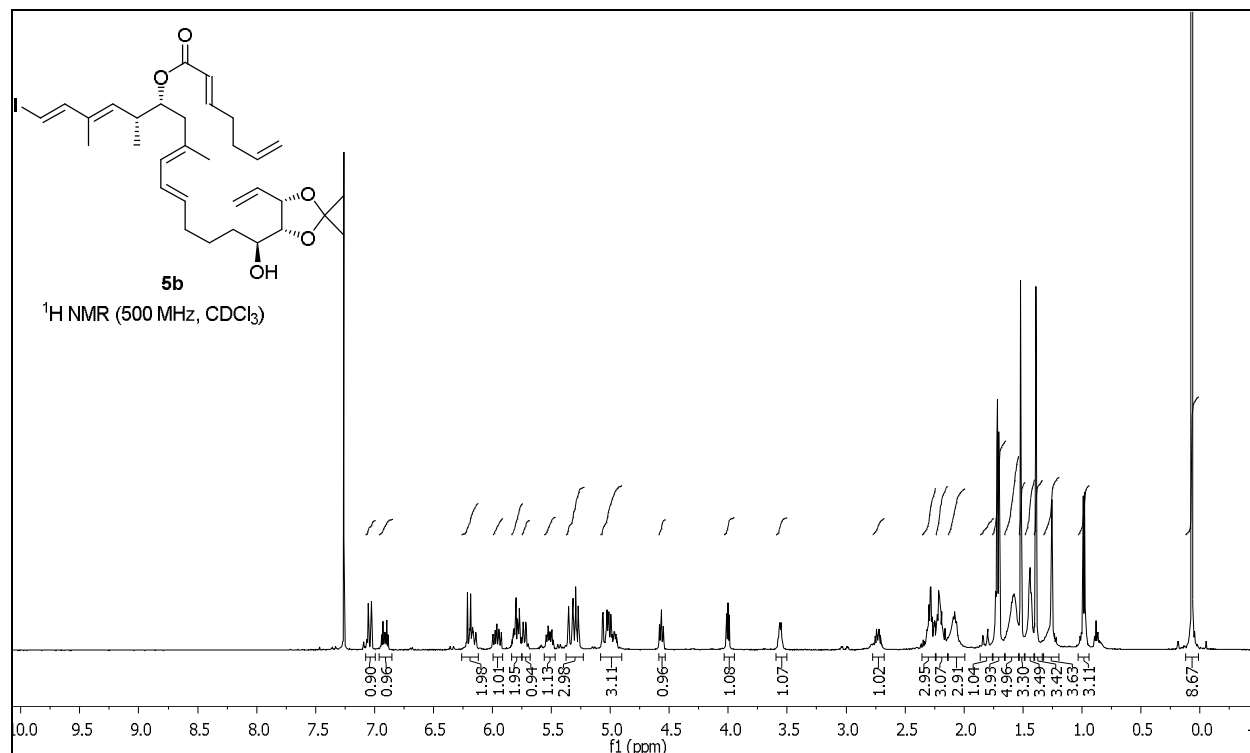
(*E*)-((6*E*,8*R*,9*R*,11*E*,13*E*,18*S*)-18-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)-2,2,6,8,11,20,20,21,21-nonamethyl-3,3-diphenyl-4,19-dioxo-3,20-disiladocosa-6,11,13-trien-9-yl)hepta-2,6-dienoate (**31**)



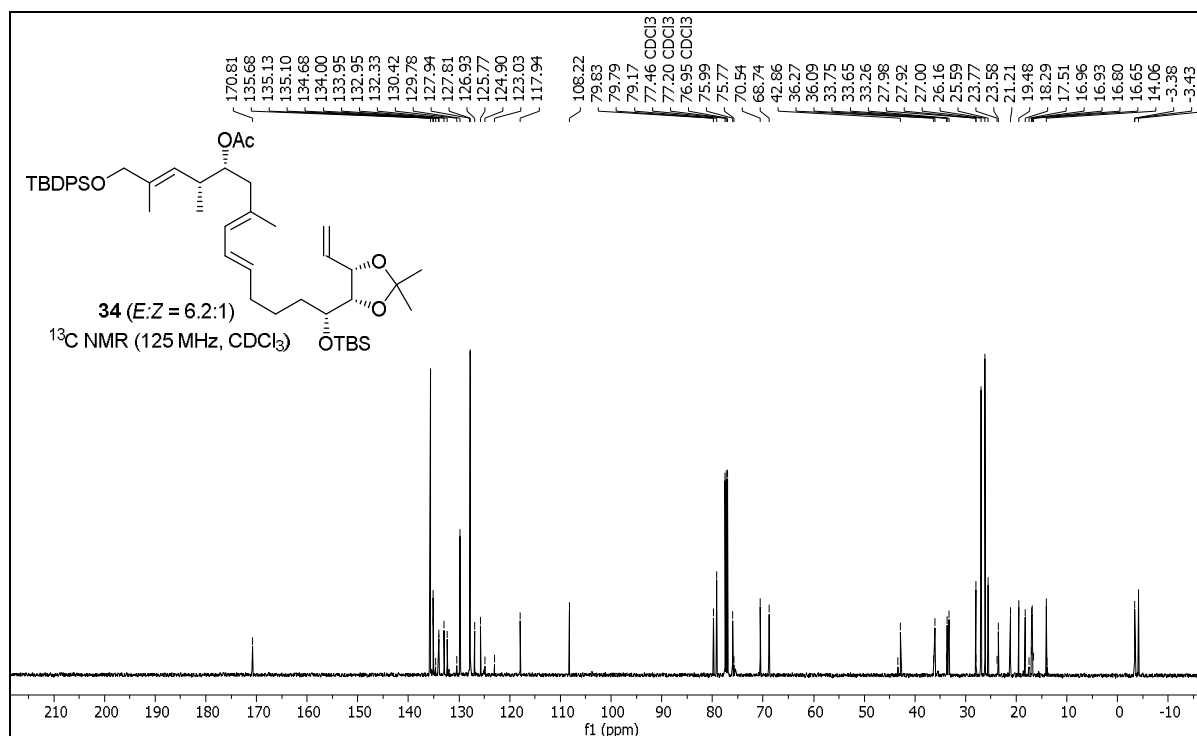
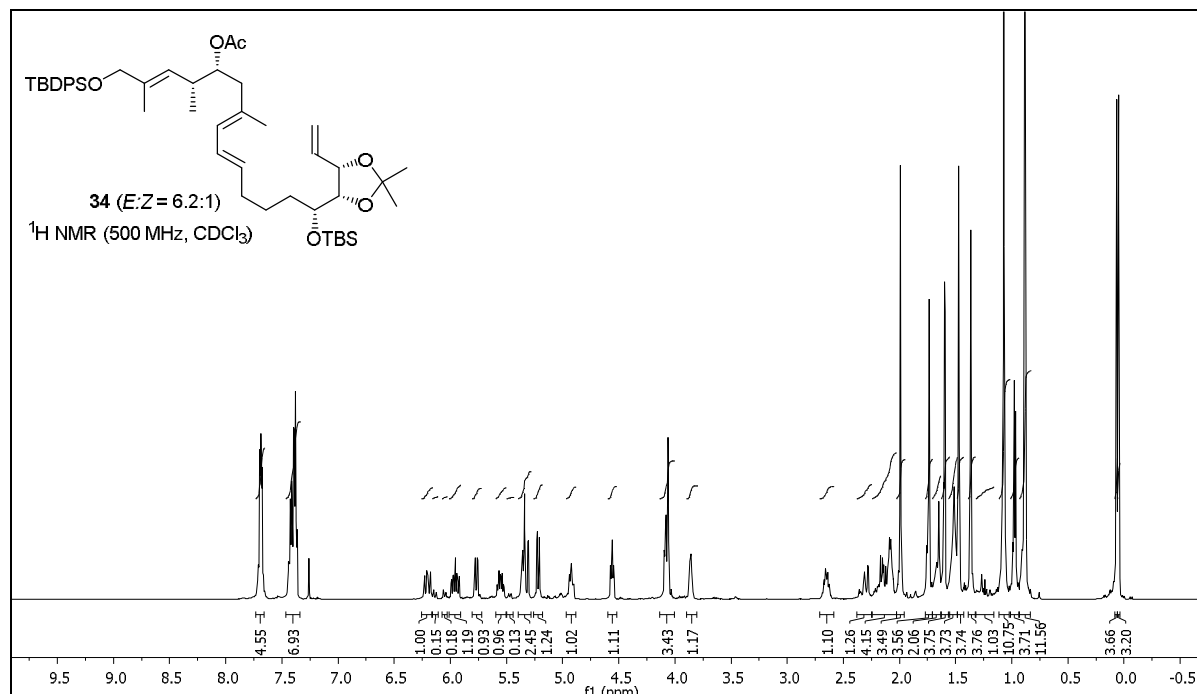
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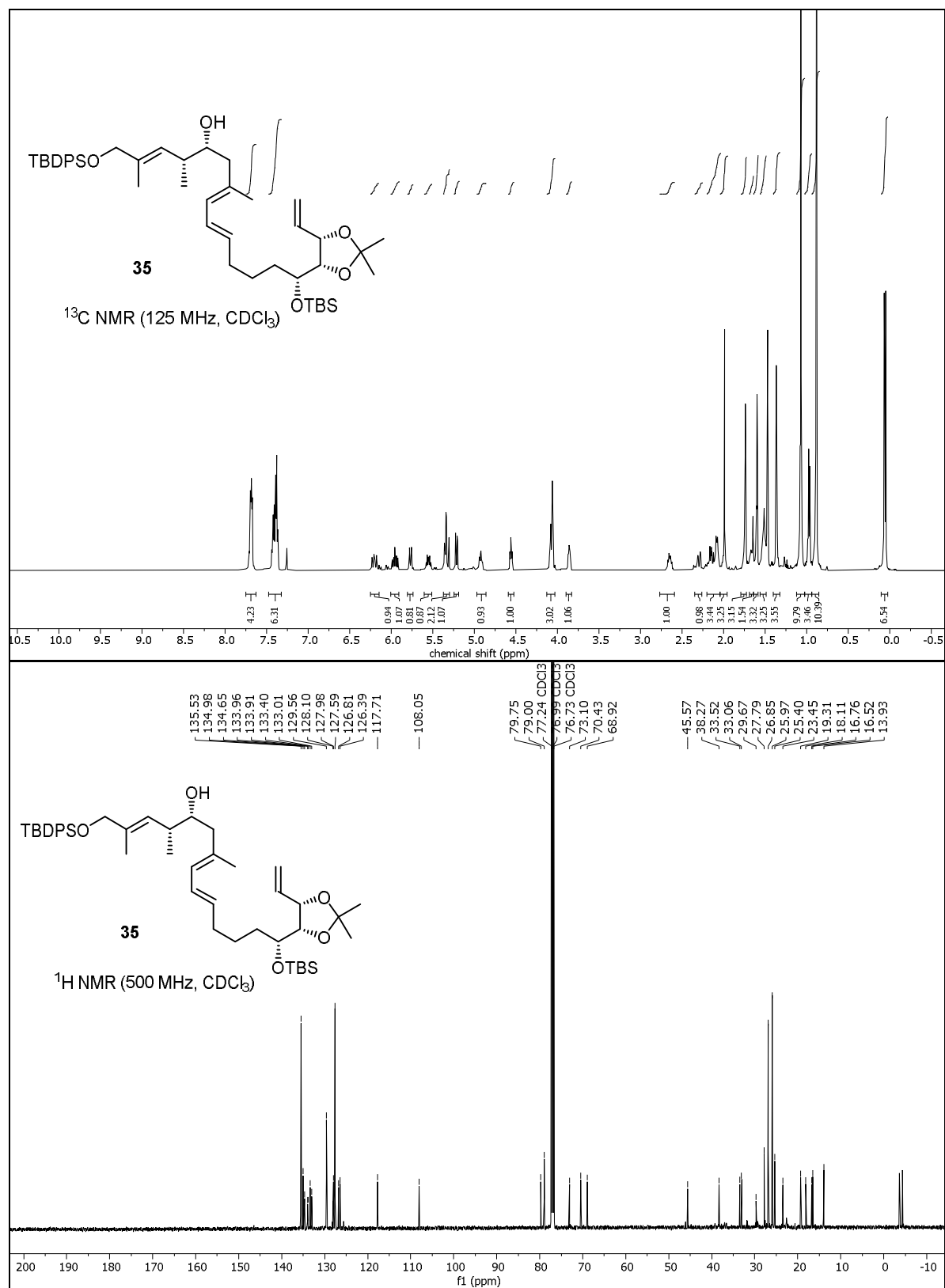
(*E*)-((1*E*,3*E*,5*R*,6*R*,8*E*,10*E*,15*S*)-15-((4*R*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)-15-hydroxy-1-iodo-3,5,8-trimethylpentadeca-1,3,8,10-tetraen-6-yl) hepta-2,6-dienoate (**5b**)



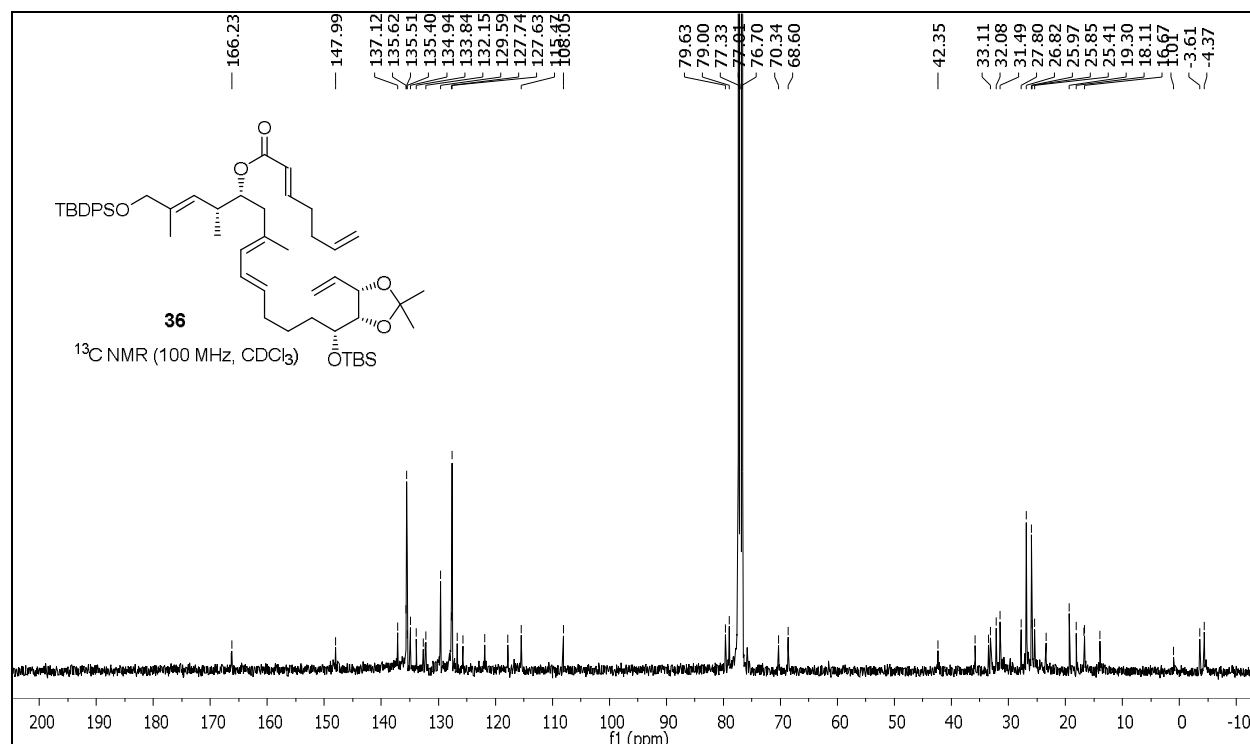
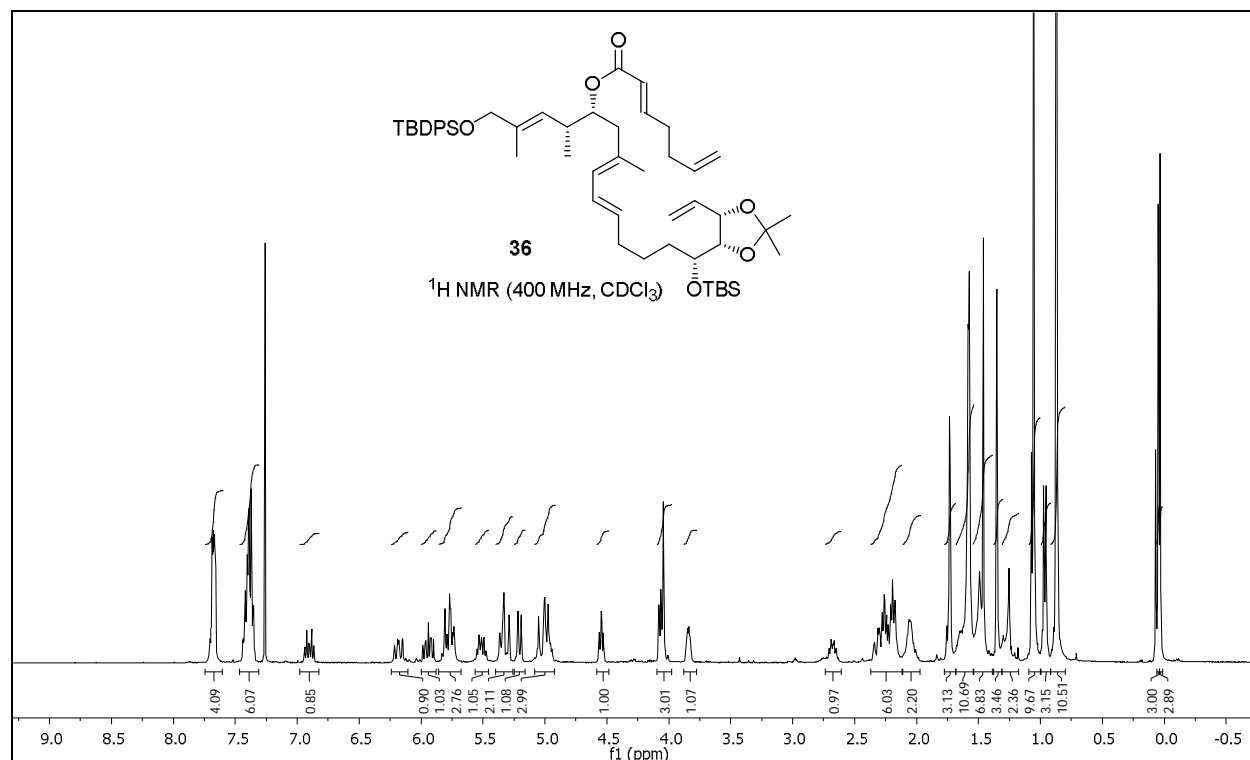
(6*E*,8*R*,9*R*,11*E*,13*E*,18*R*)-18-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)-2,2,6,8,11,20,20,21,21-nonamethyl-3,3-diphenyl-4,19-dioxo-3,20-disiladocosa-6,11,13-trien-9-yl acetate (**34**)



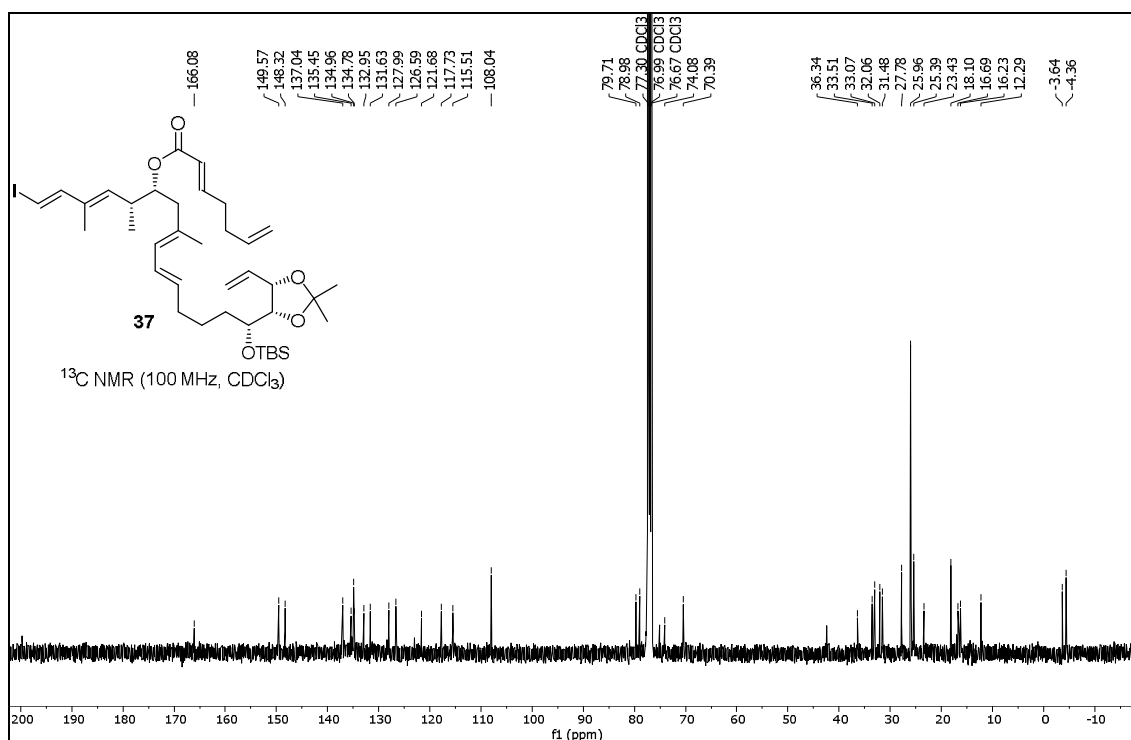
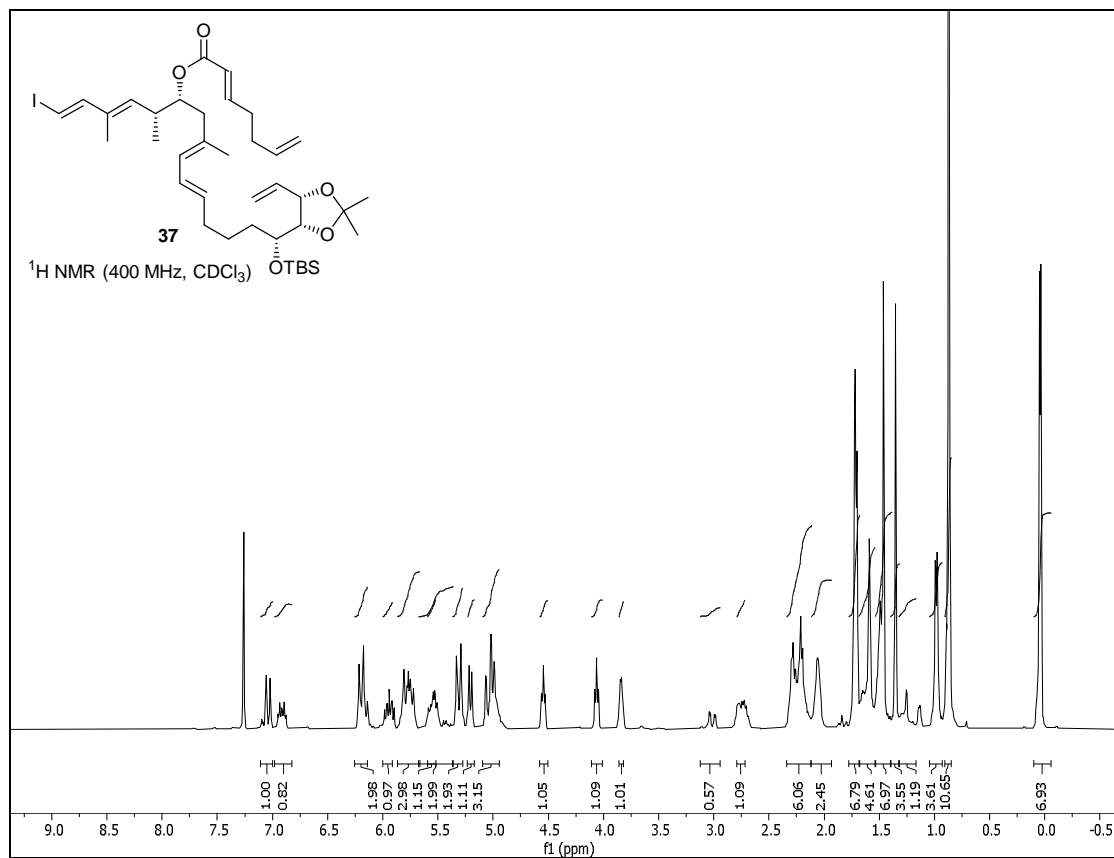
(6*E*,8*R*,9*R*,11*E*,13*E*,18*R*)-18-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)-2,2,6,8,11,20,20,21,21-nonamethyl-3,3-diphenyl-4,19-dioxo-3,20-disiladocosa-6,11,13-trien-9-ol (35)



(*E*)-((6*E*,8*R*,9*R*,11*E*,13*E*,18*R*)-18-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)-2,2,6,8,11,20,20,21,21-nonamethyl-3,3-diphenyl-4,19-dioxo-3,20-disiladocosa-6,11,13-trien-9-yl) hepta-2,6-dienoate (36)



(*E*)-((1*E*,3*E*,5*R*,6*R*,8*E*,10*E*,15*R*)-15-(tert-butylidimethylsilyloxy)-15-((4*S*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)-1-iodo-3,5,8-trimethylpentadeca-1,3,8,10-tetraen-6-yl) hepta-2,6-dienoate (**37**)



(*E*)-((1*E*,3*E*,5*R*,6*R*,8*E*,10*E*,15*R*)-15-((4*R*,5*S*)-2,2-dimethyl-5-vinyl-1,3-dioxolan-4-yl)-15-hydroxy-1-iodo-3,5,8-trimethylpentadeca-1,3,8,10-tetraen-6-yl) hepta-2,6-dienoate (**5a**)

