Synthesis and antiviral evaluation of (1,4-disubstituted-1,2,3-triazol)-*(E)*-2-methyl-but-2-enyl nucleosides phosphonate prodrugs

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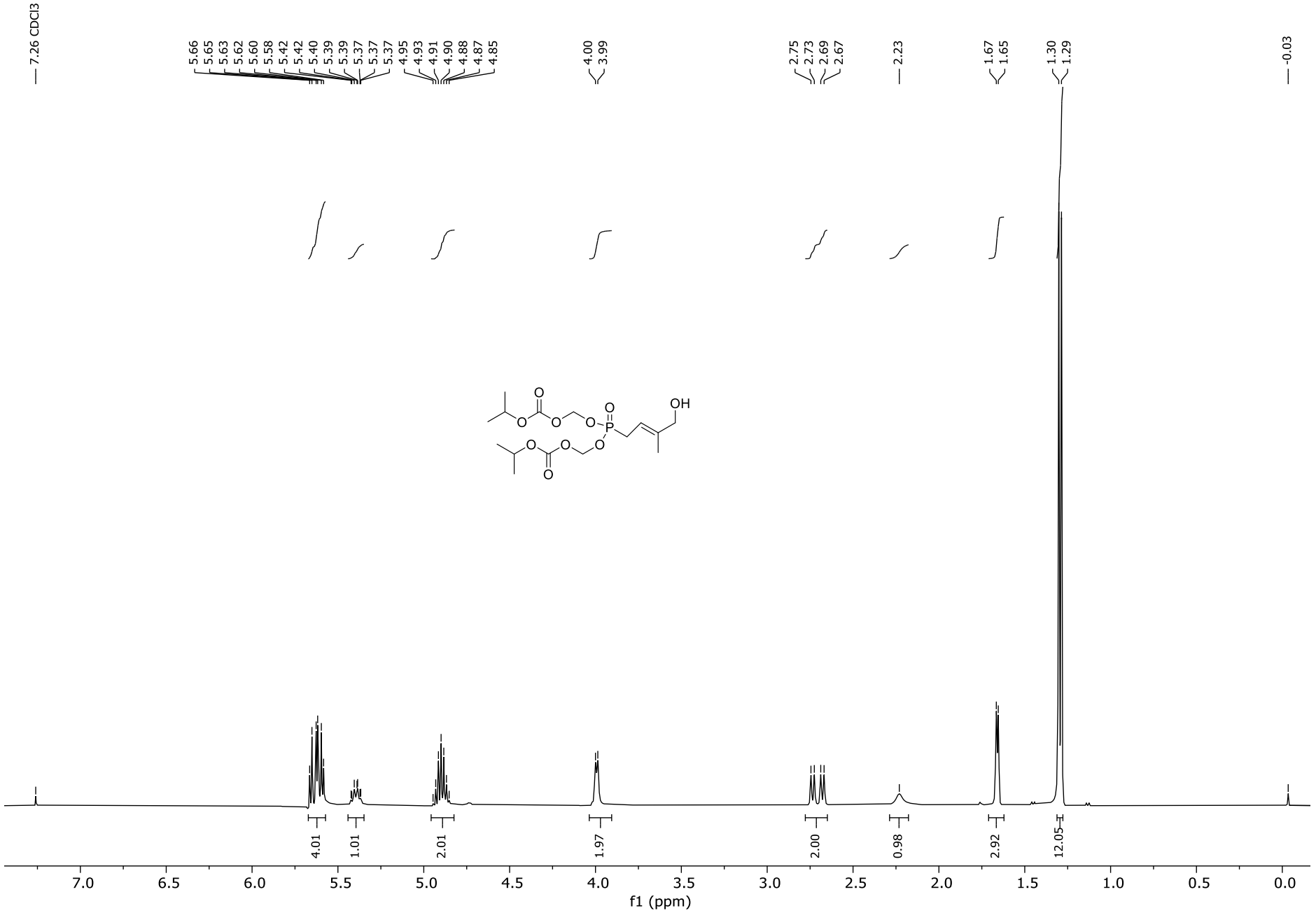
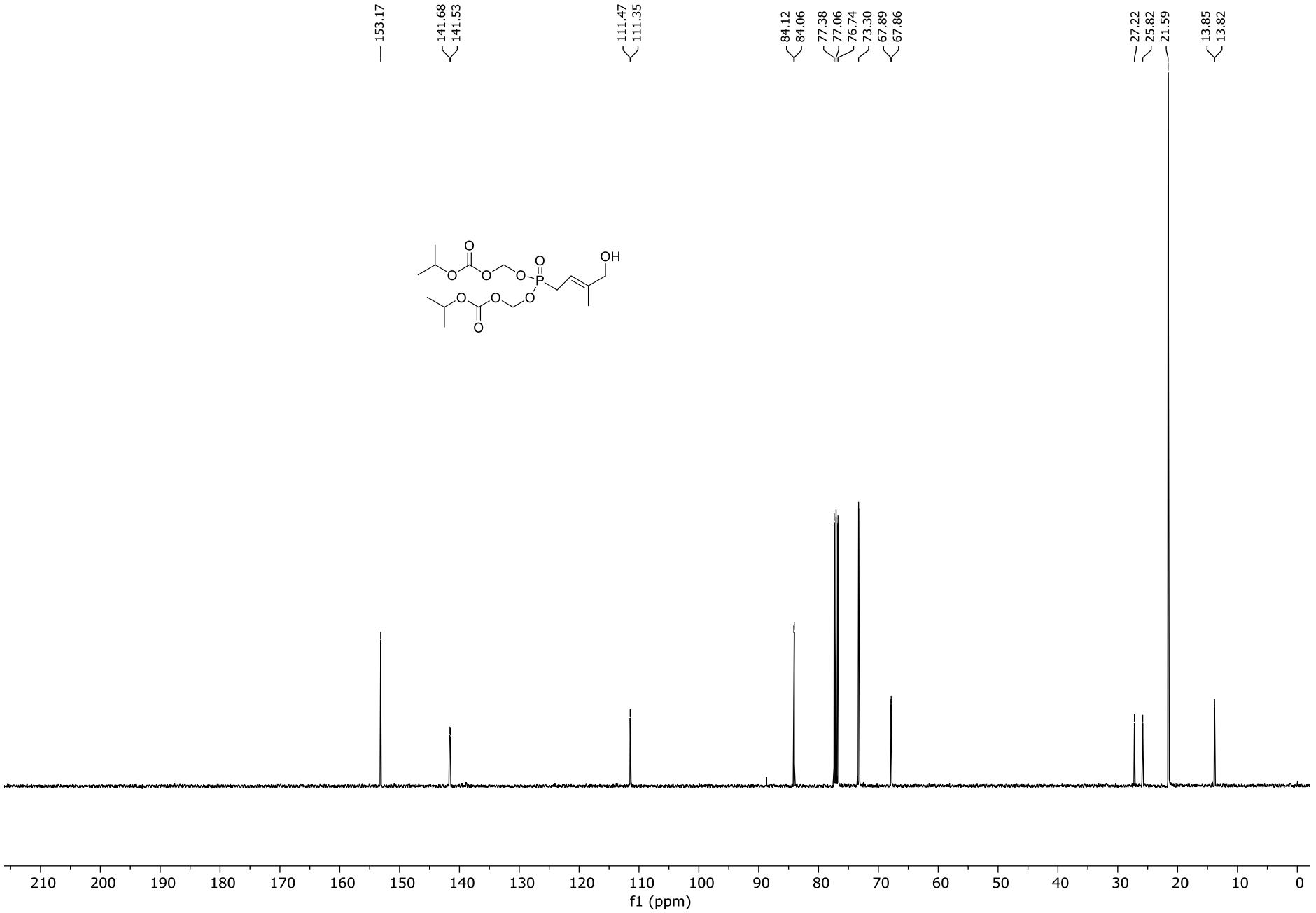
Supplementary Informations

Copies of ^{1}H-, ^{13}C- and ^{1}H-^{13}C HMBC NMR spectra of representative molecules

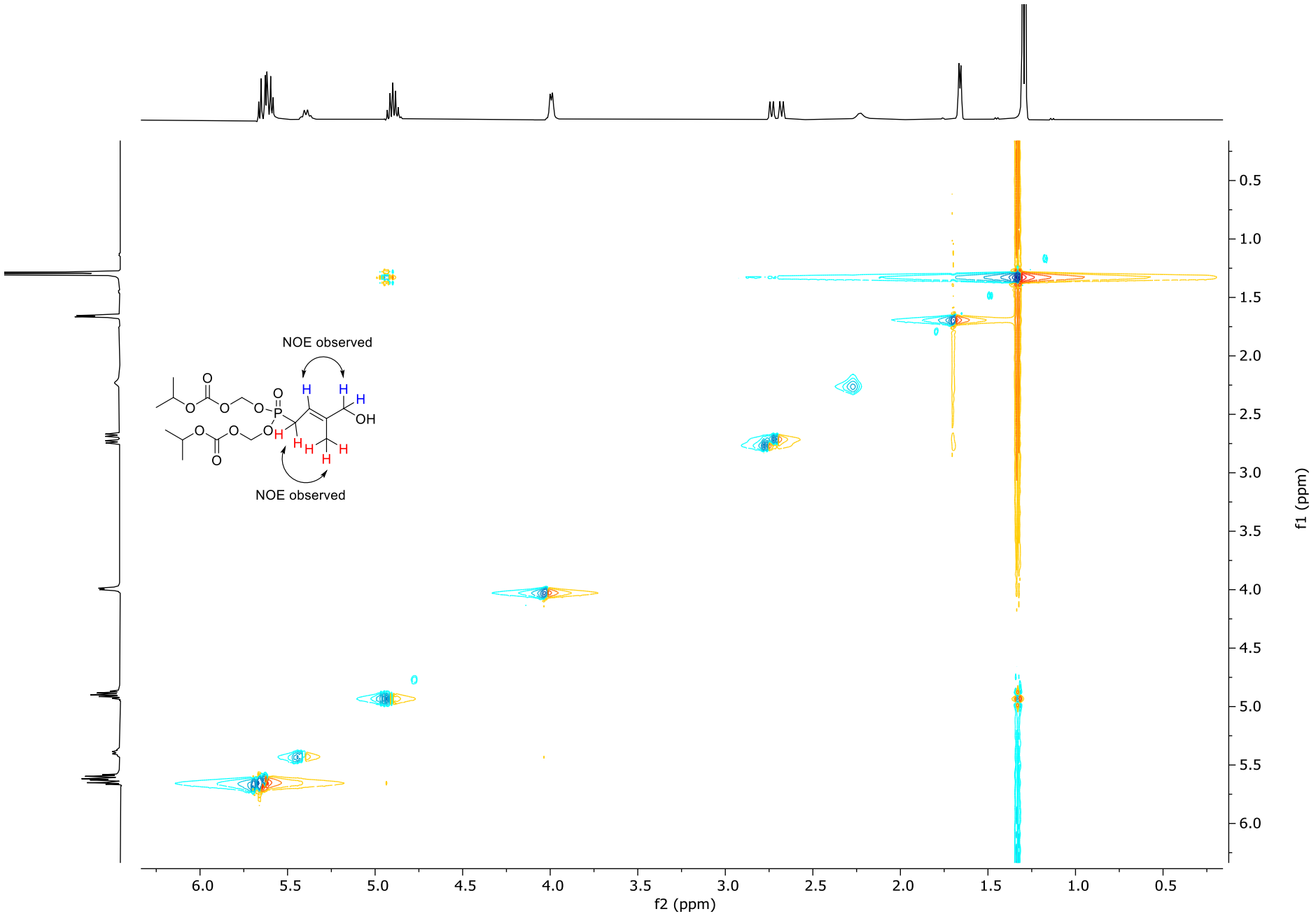
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 9



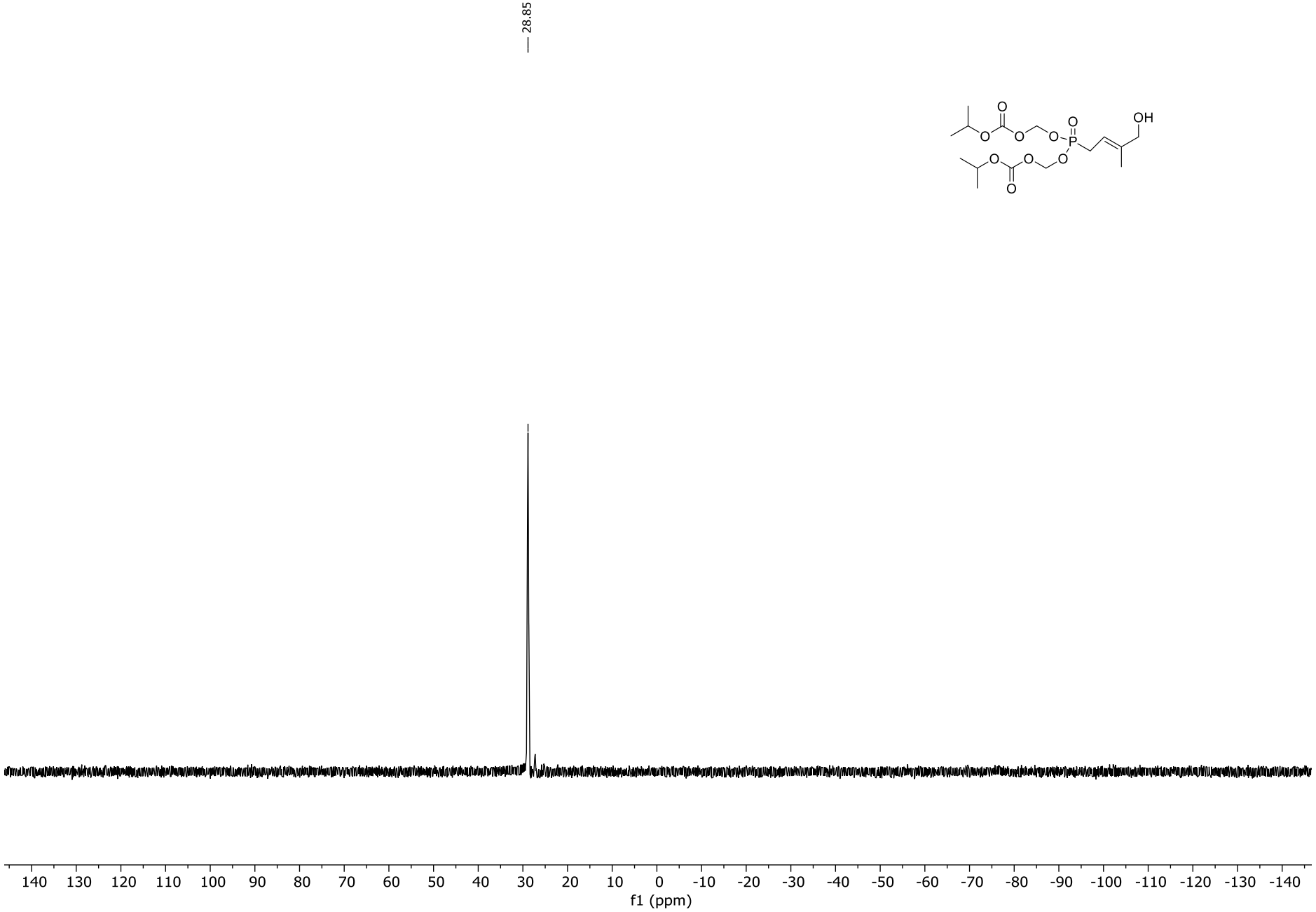
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 9



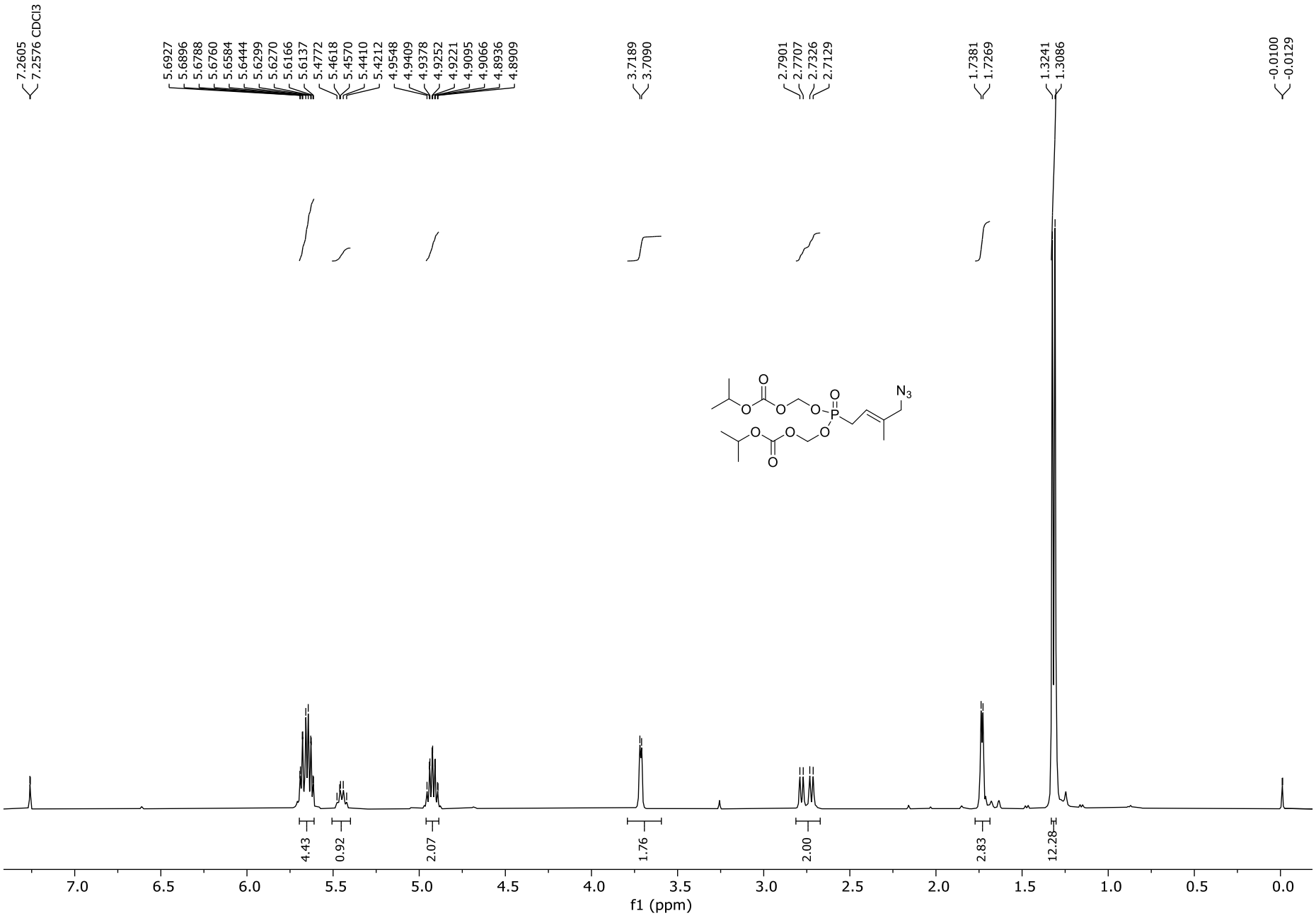
NOESY of Compound 9



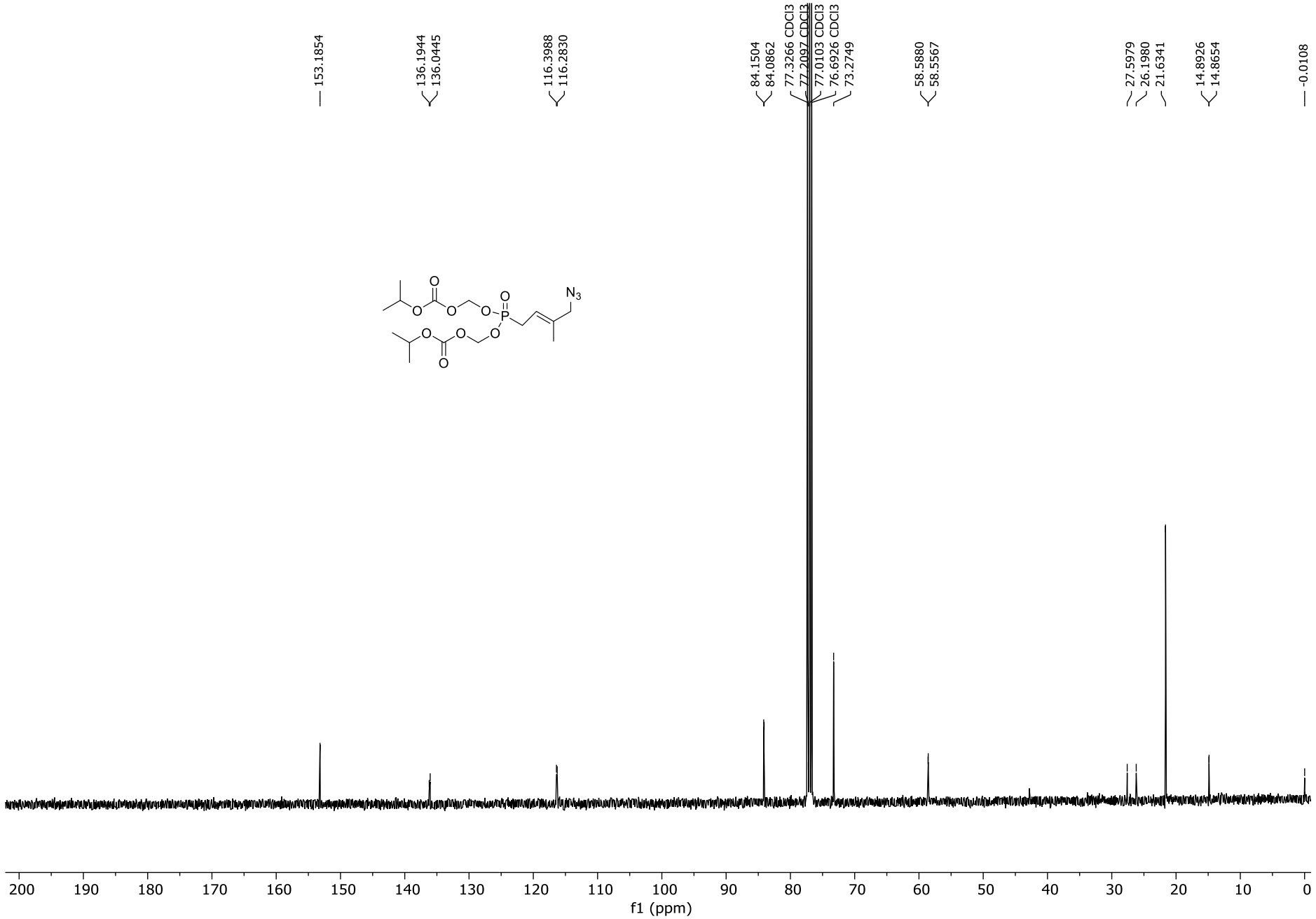
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 9



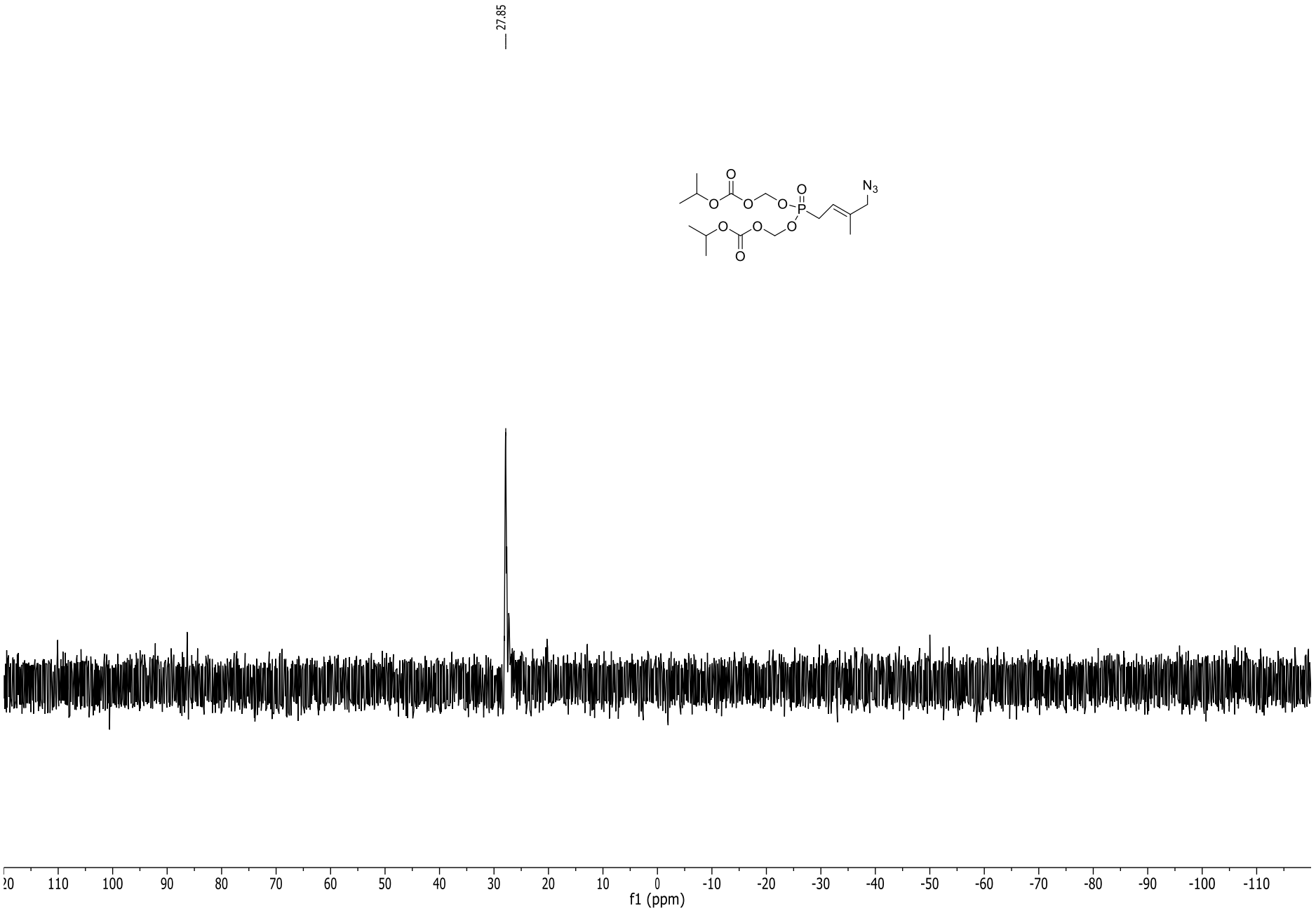
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 10



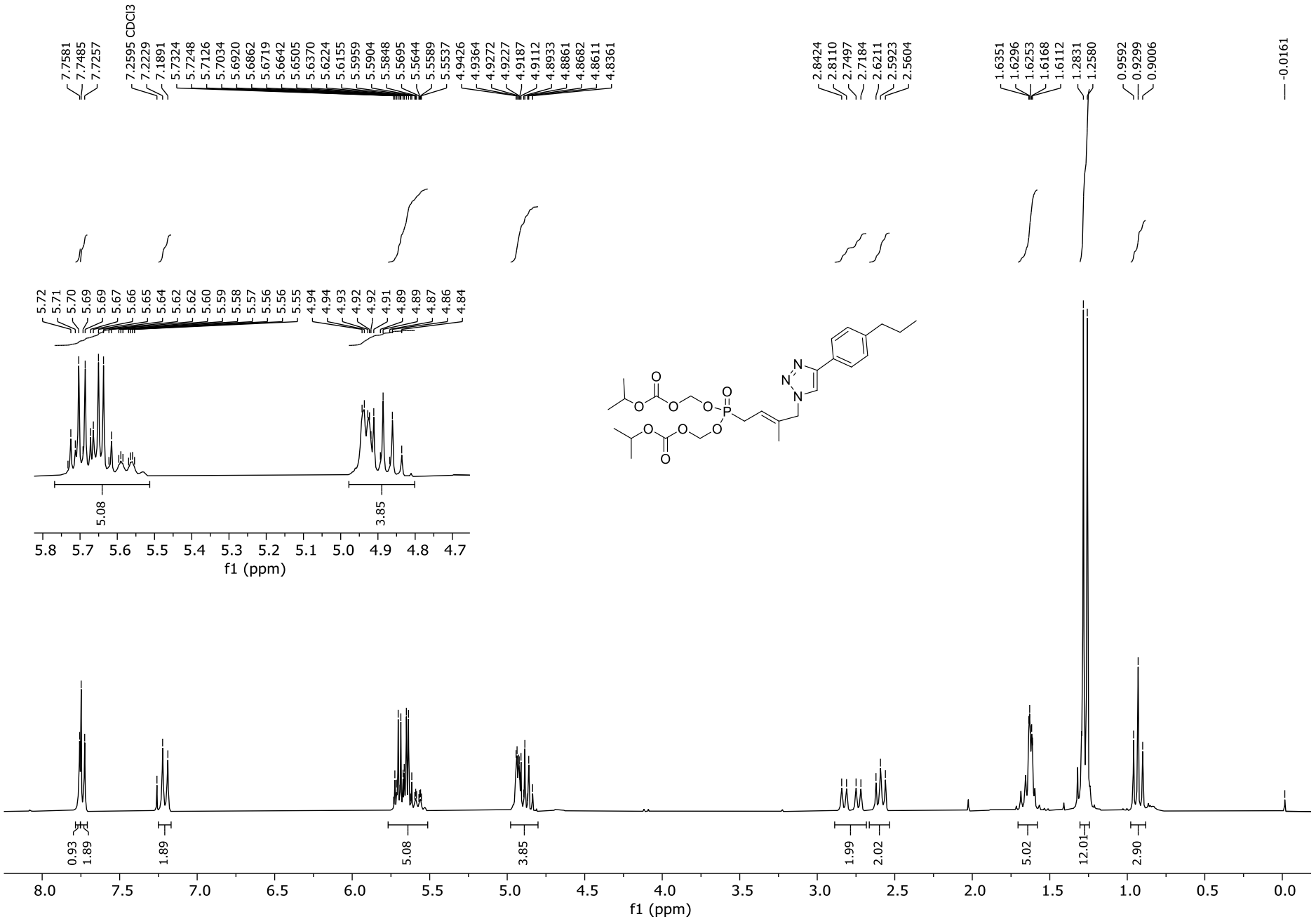
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 10



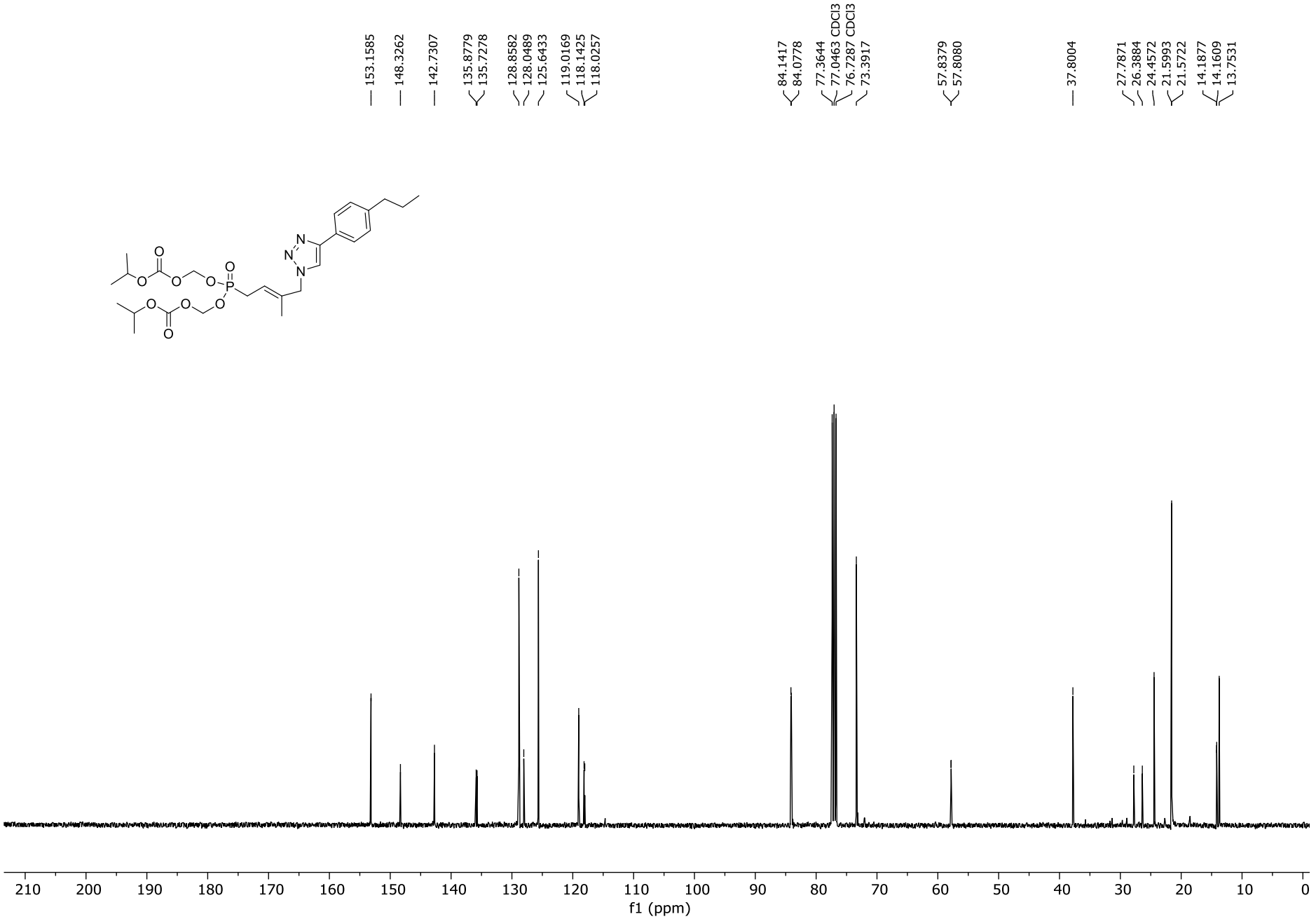
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 10



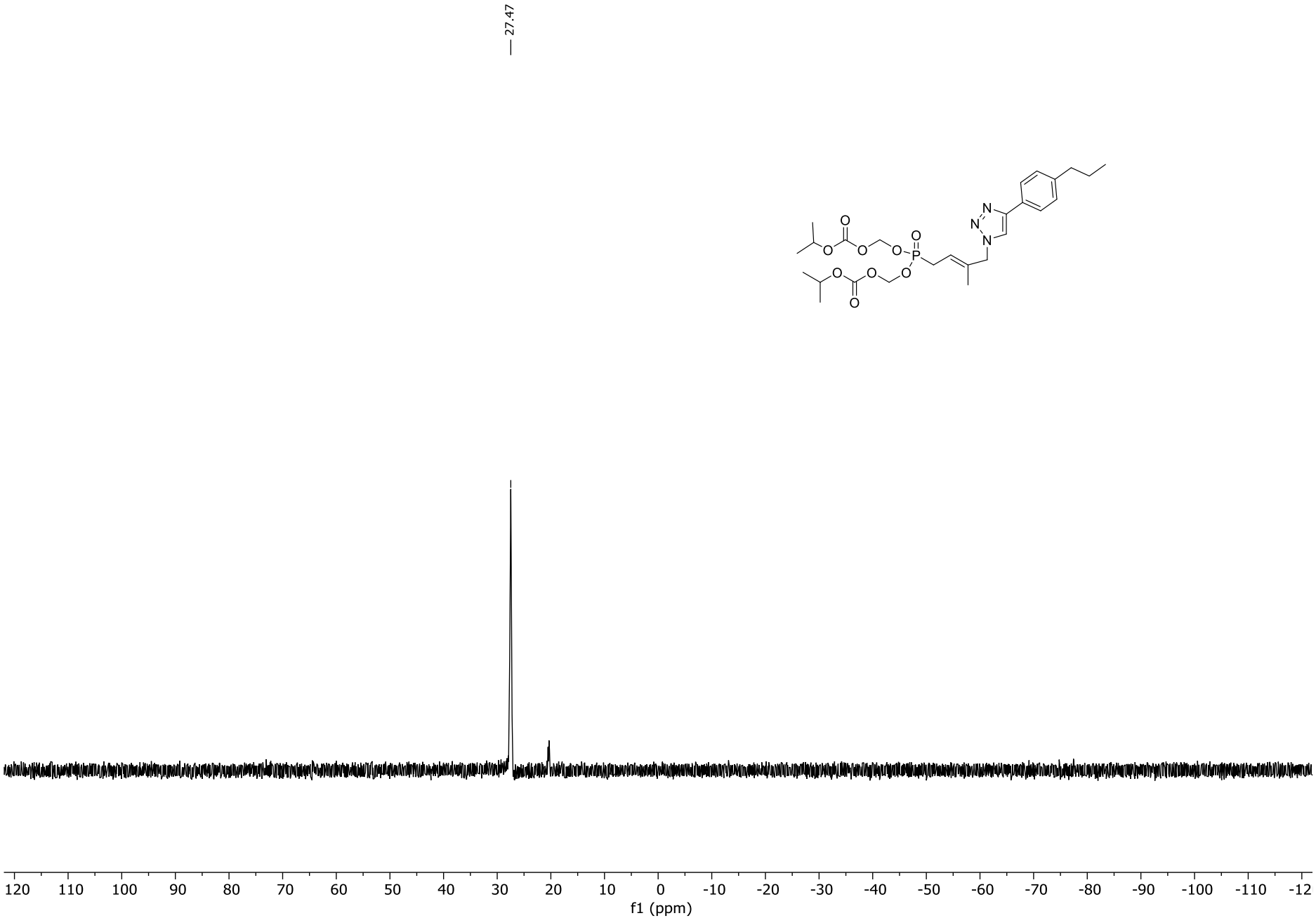
^{1}H NMR (250 MHz, $CDCl_3$) Analysis of Compound 11a



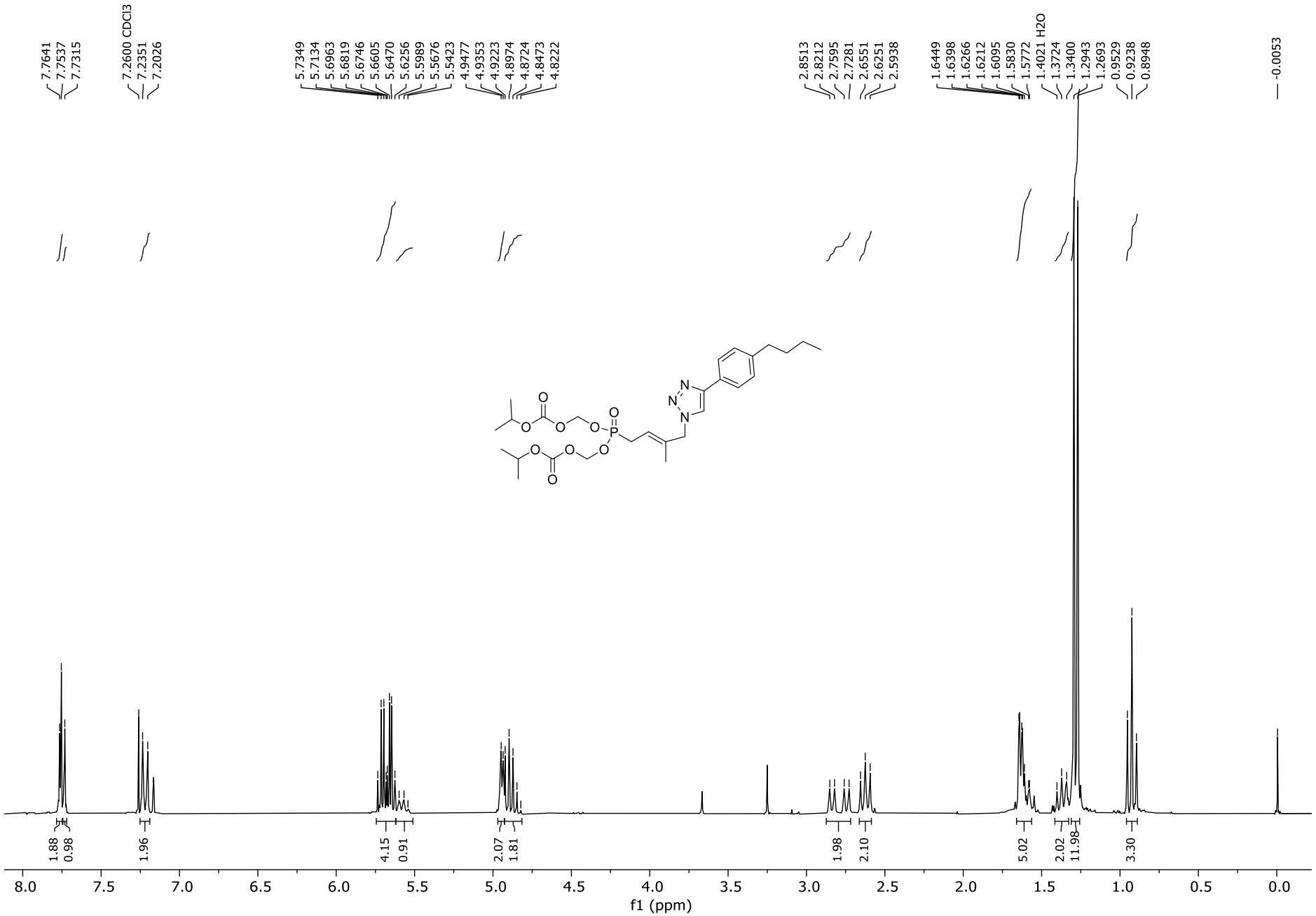
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 11a



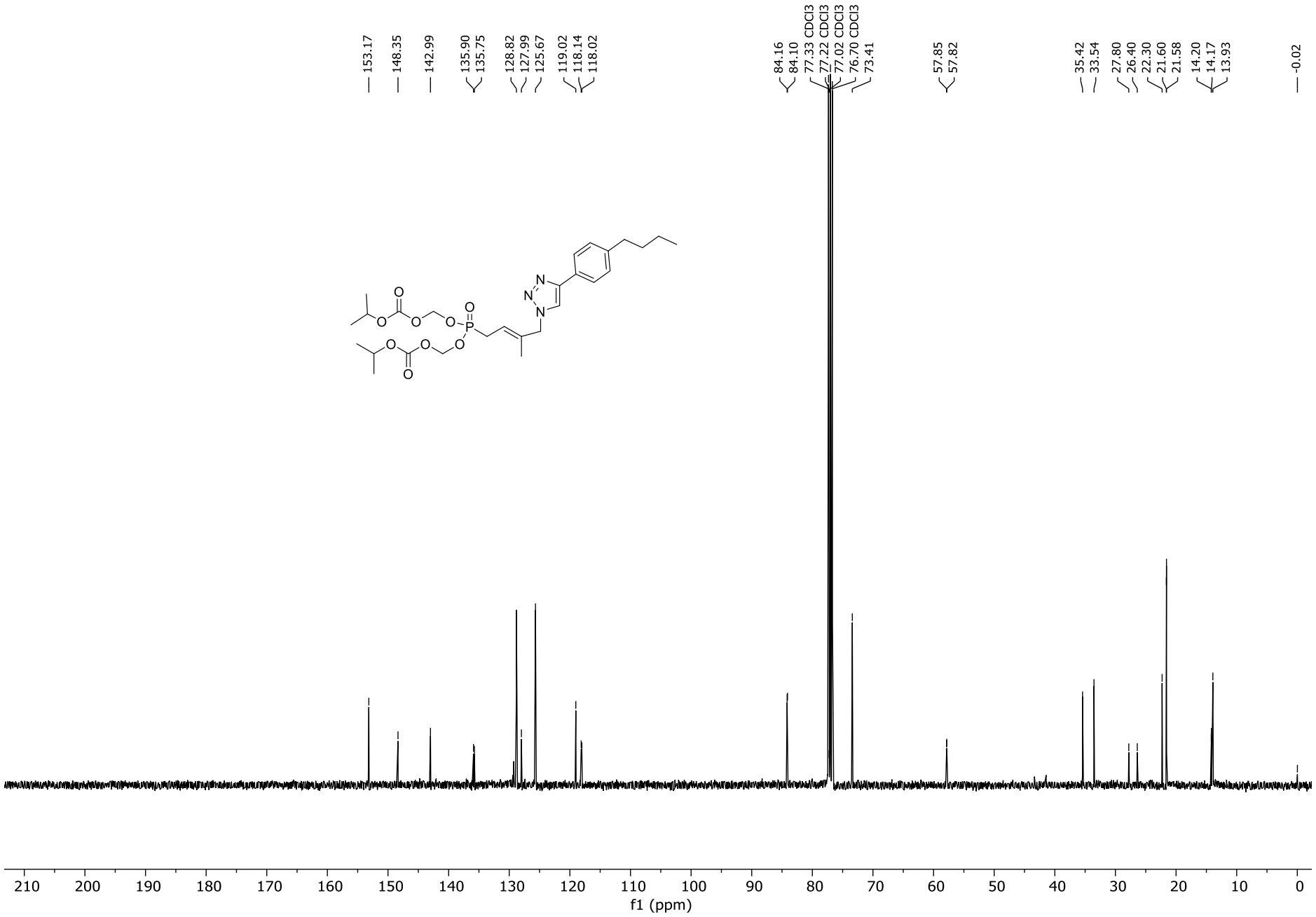
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 11a



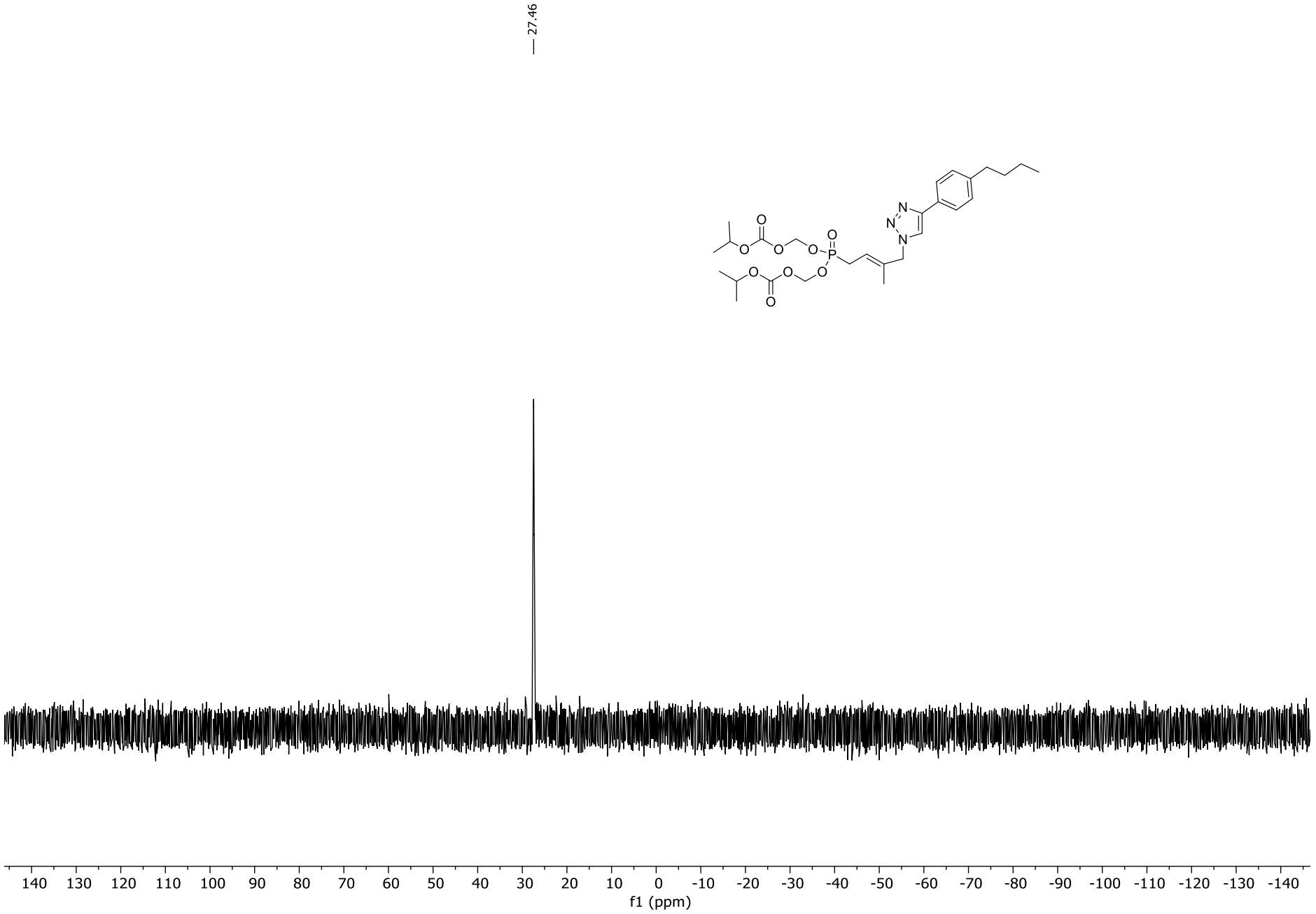
^{1}H NMR (250 MHz, $CDCl_3$) Analysis of Compound 11b



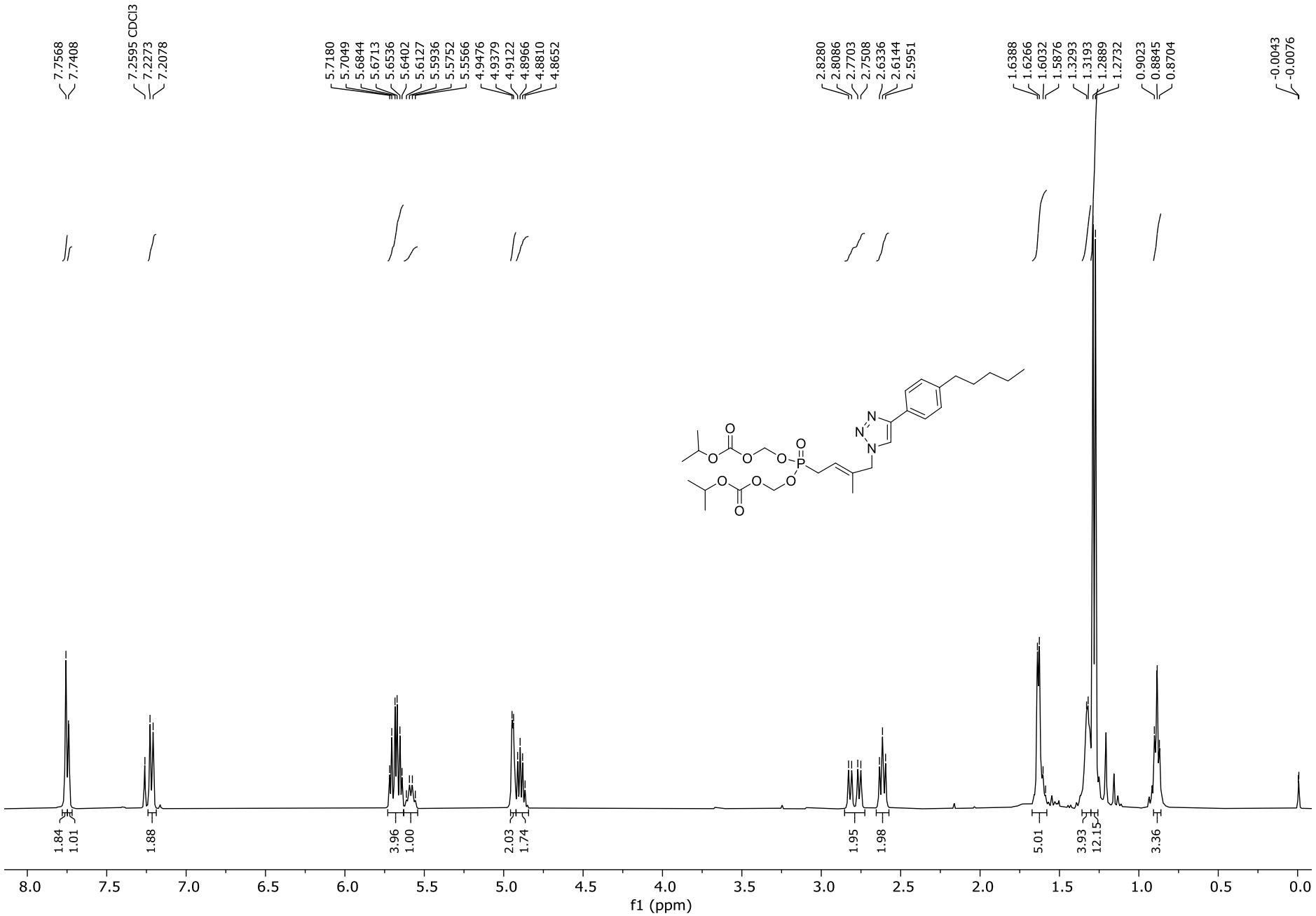
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 11b



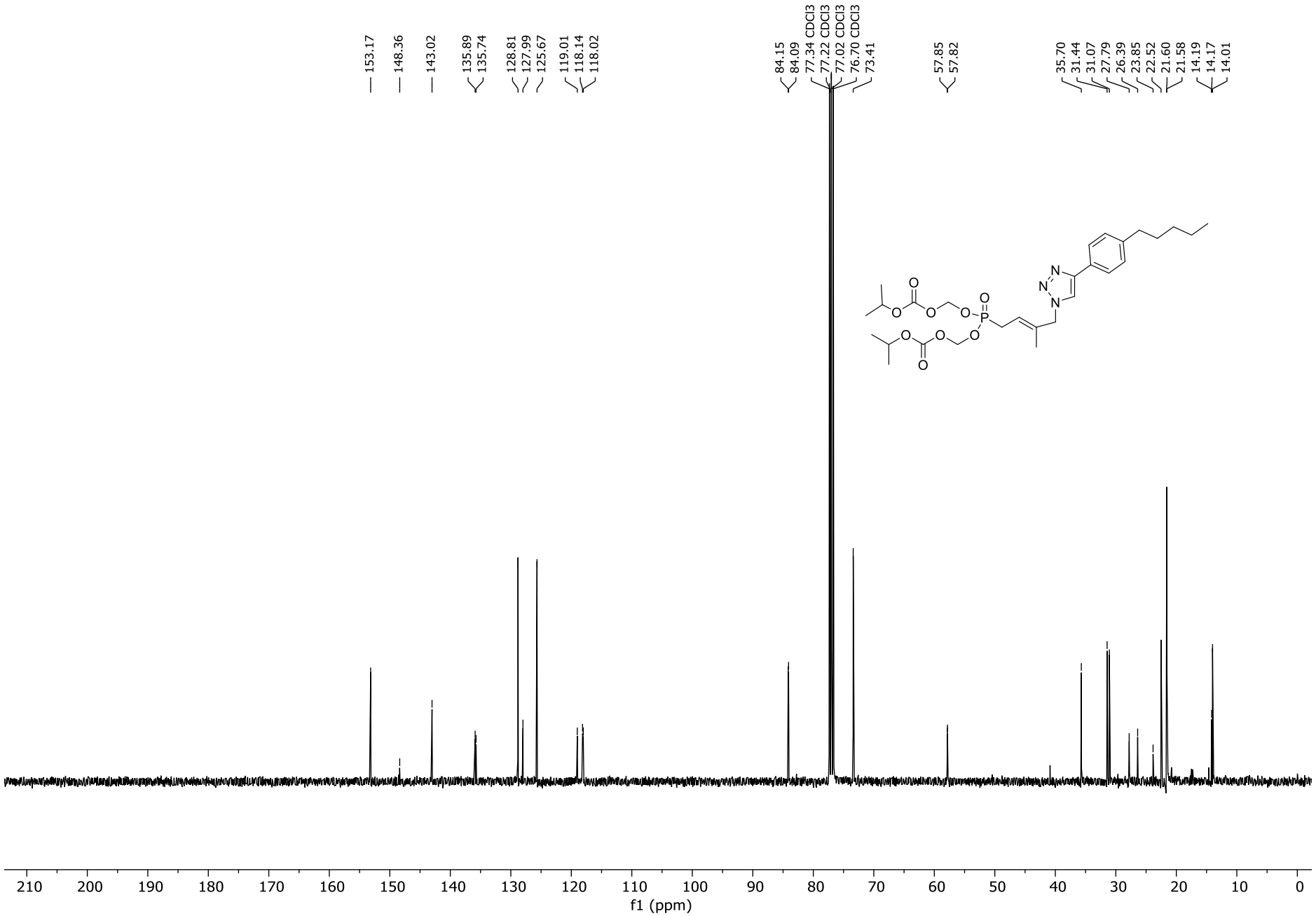
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 11b



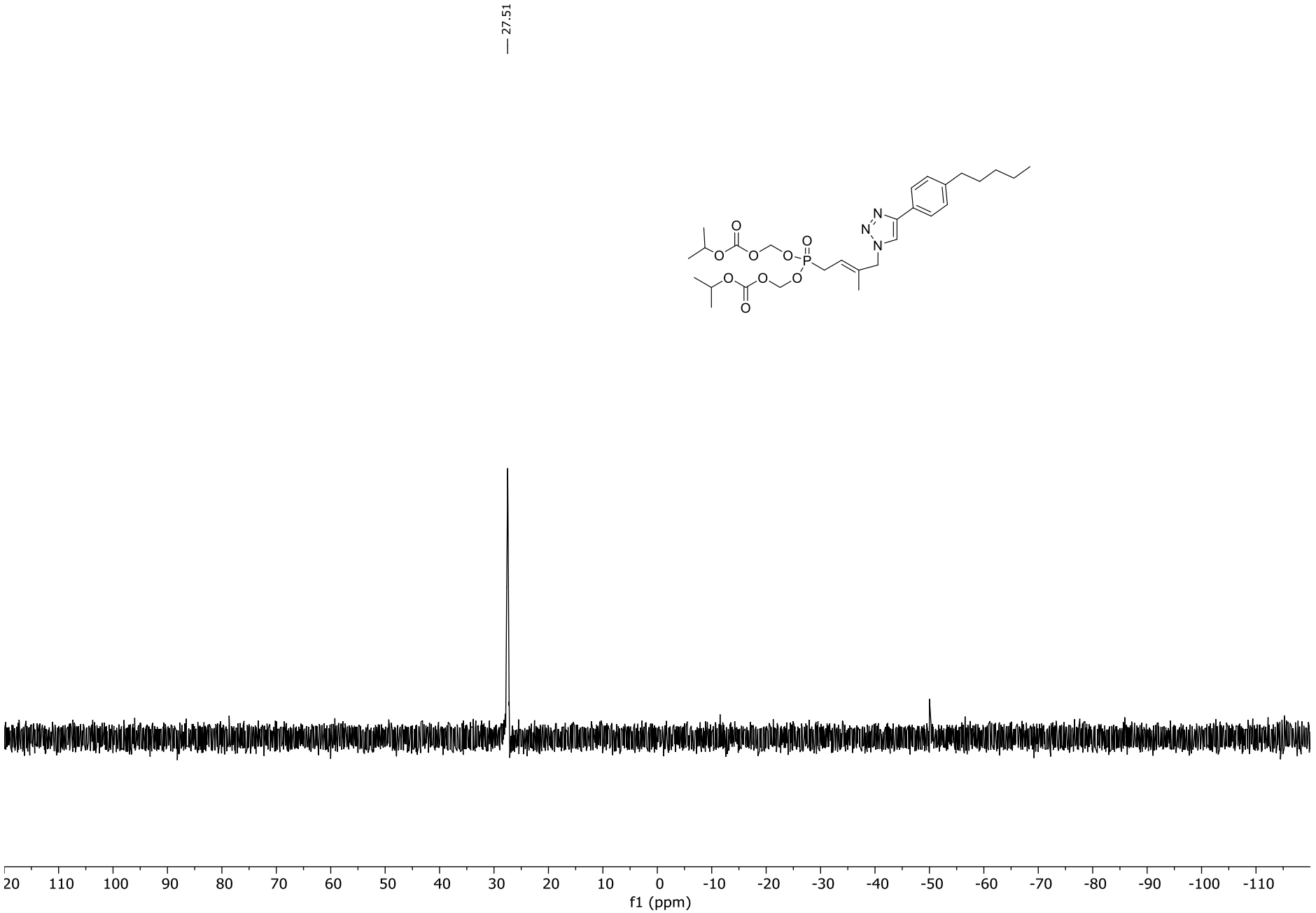
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 11c



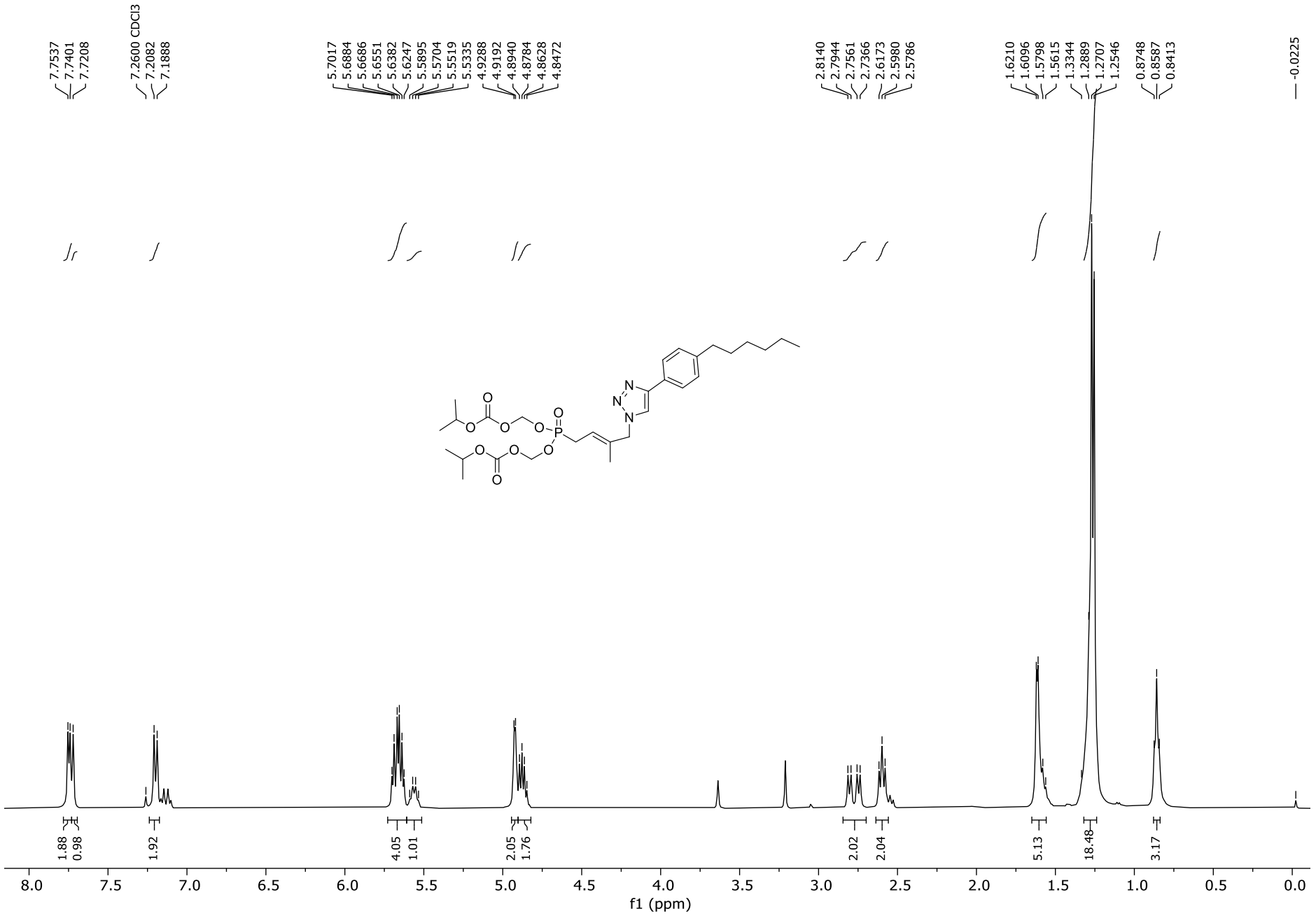
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 11c



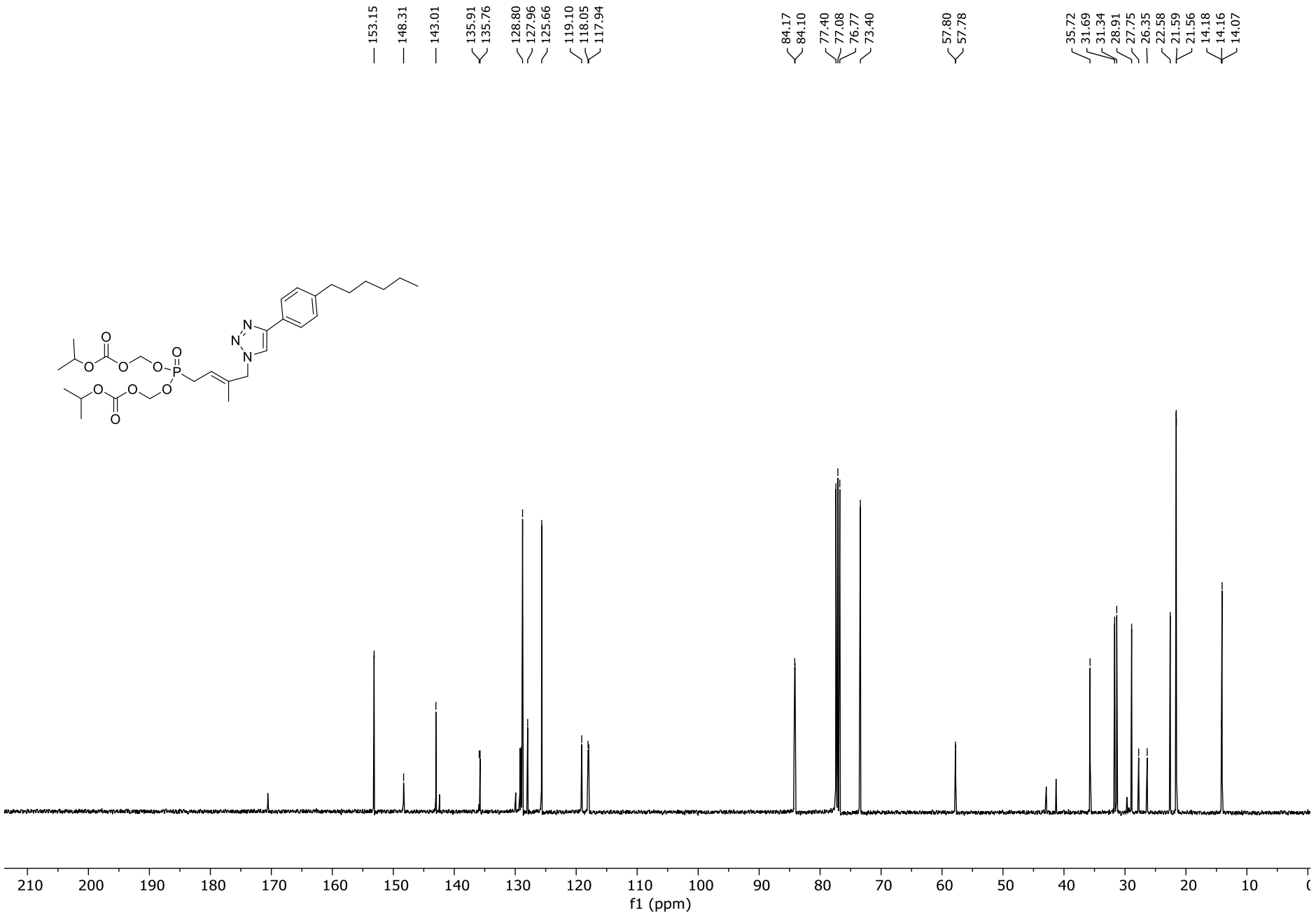
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 11c



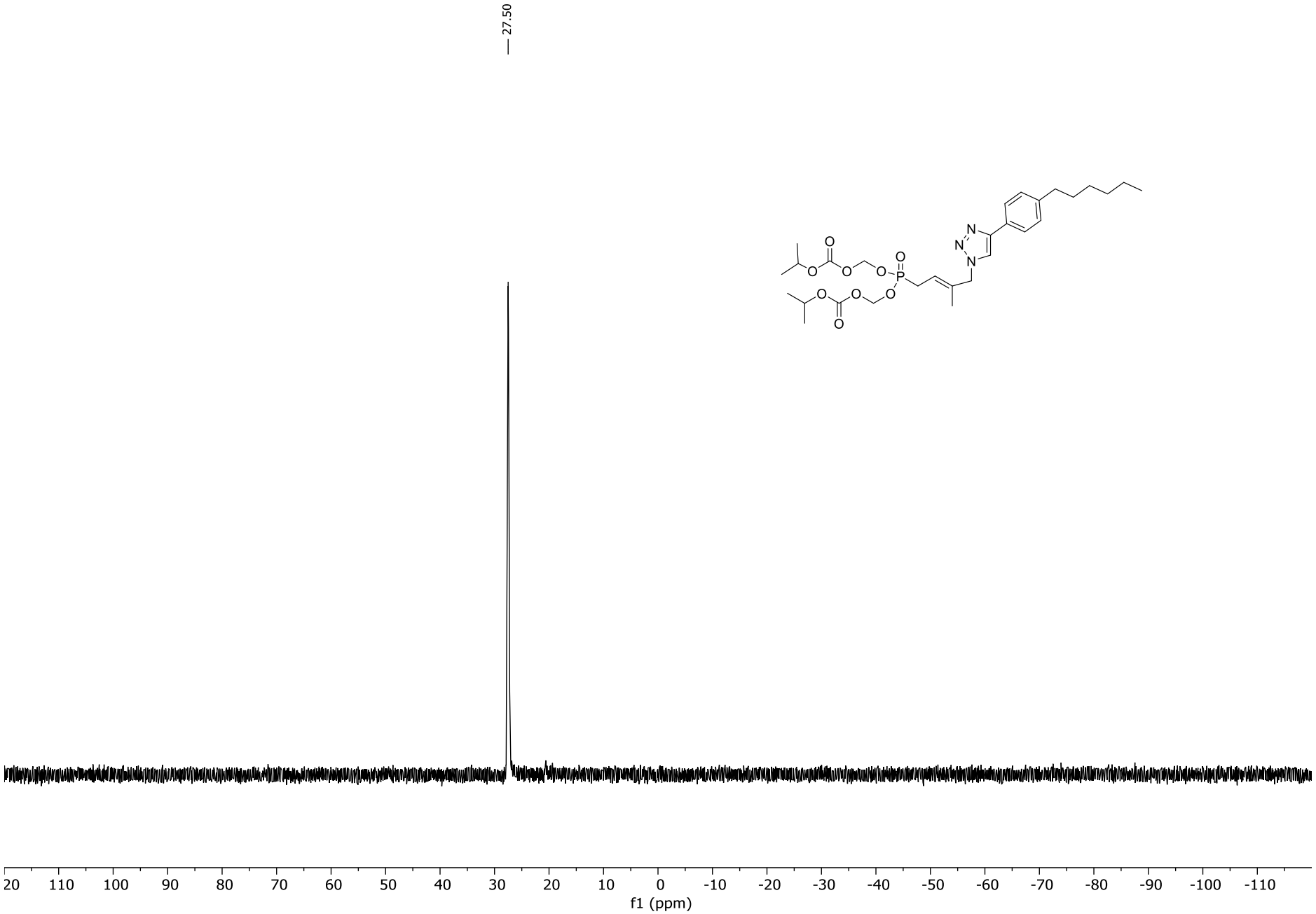
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 11d



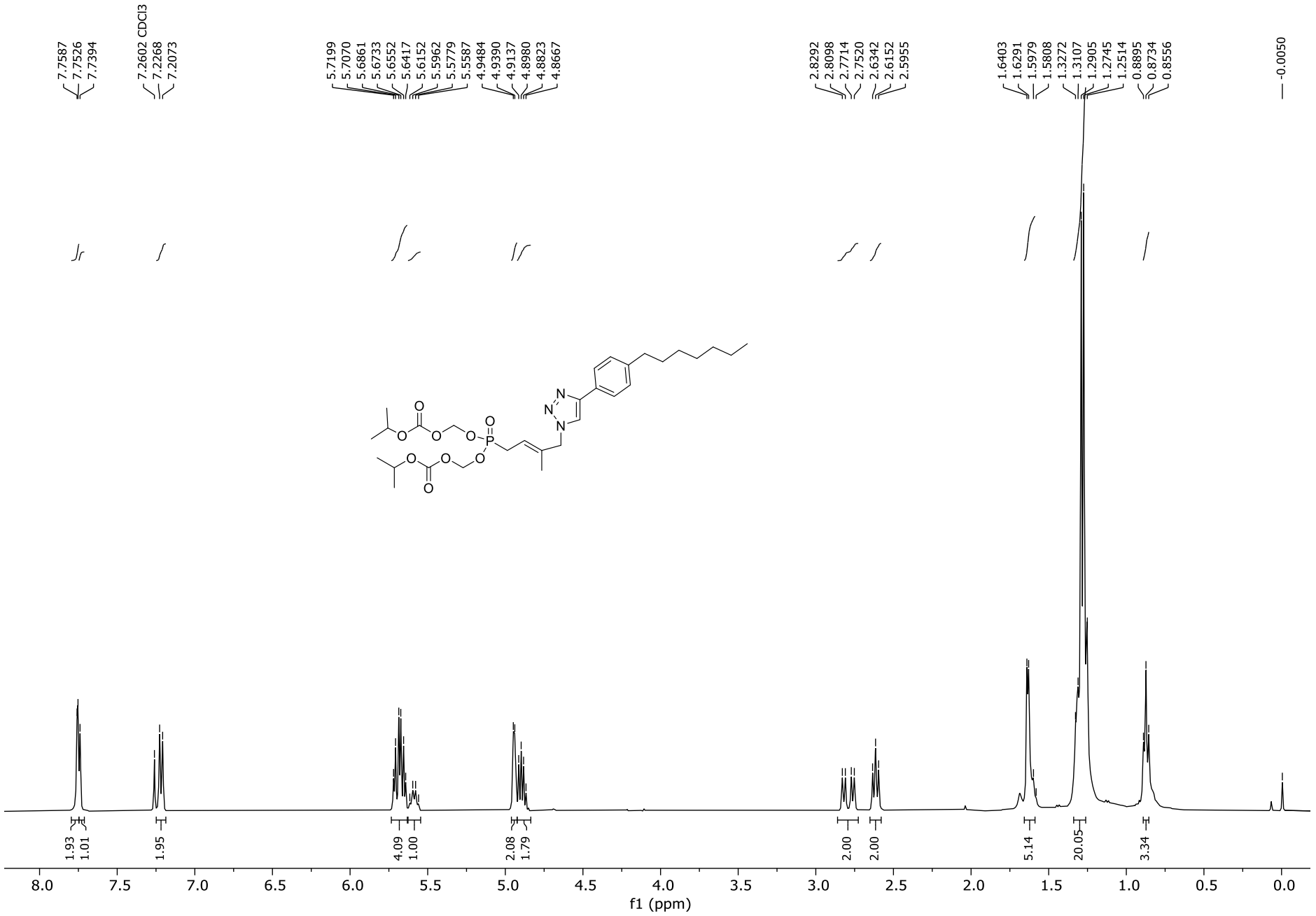
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 11d



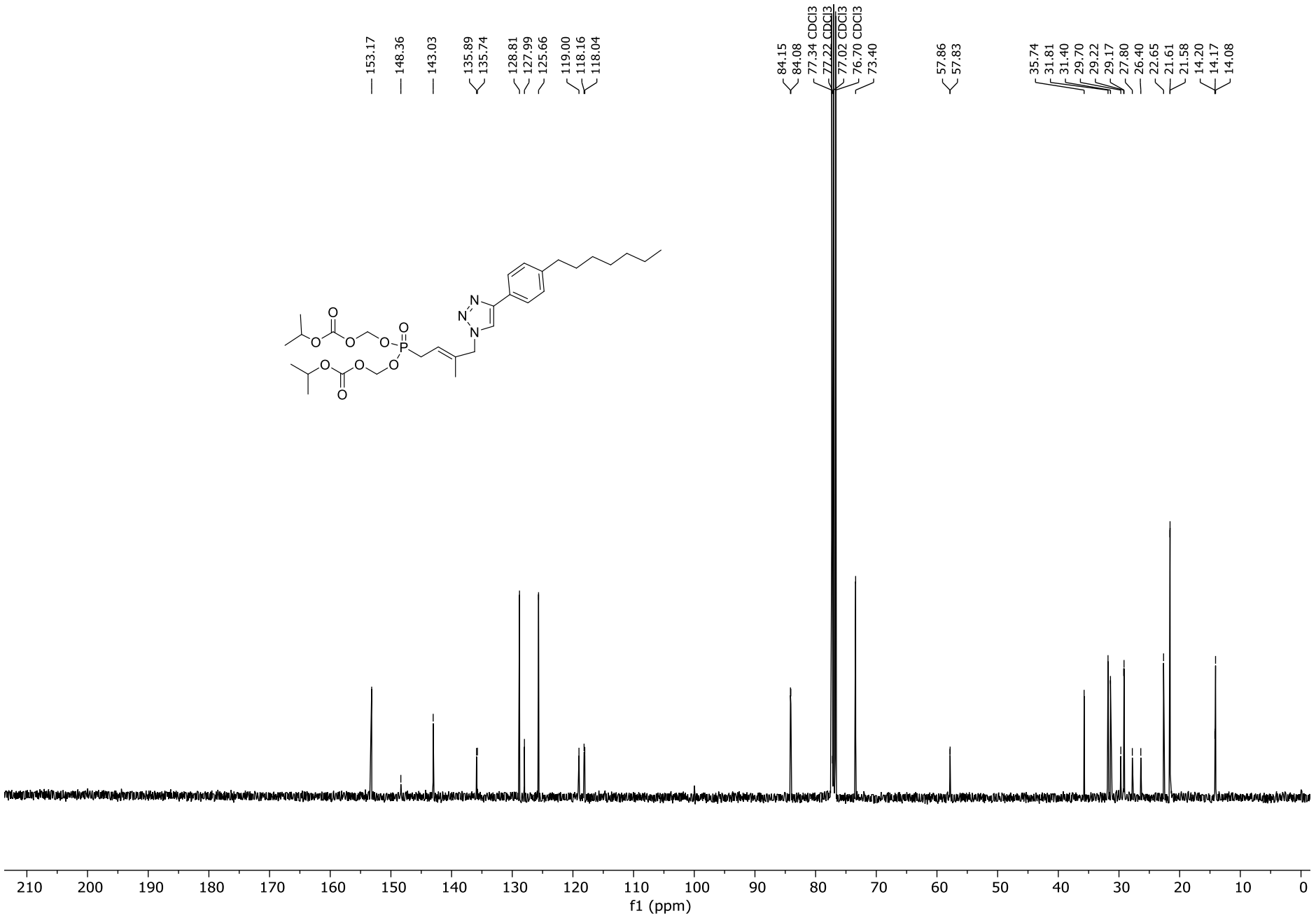
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 11d



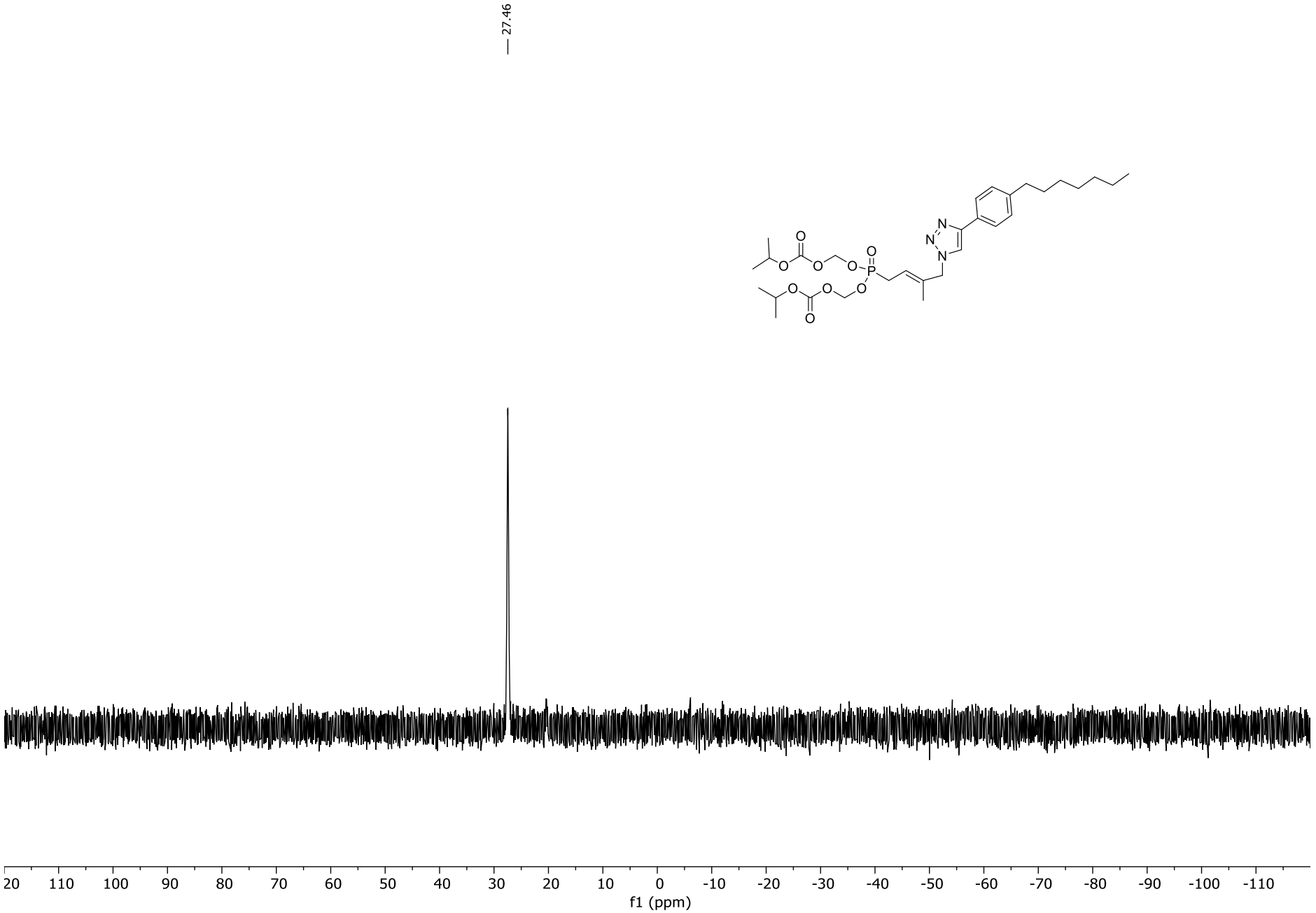
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 11e



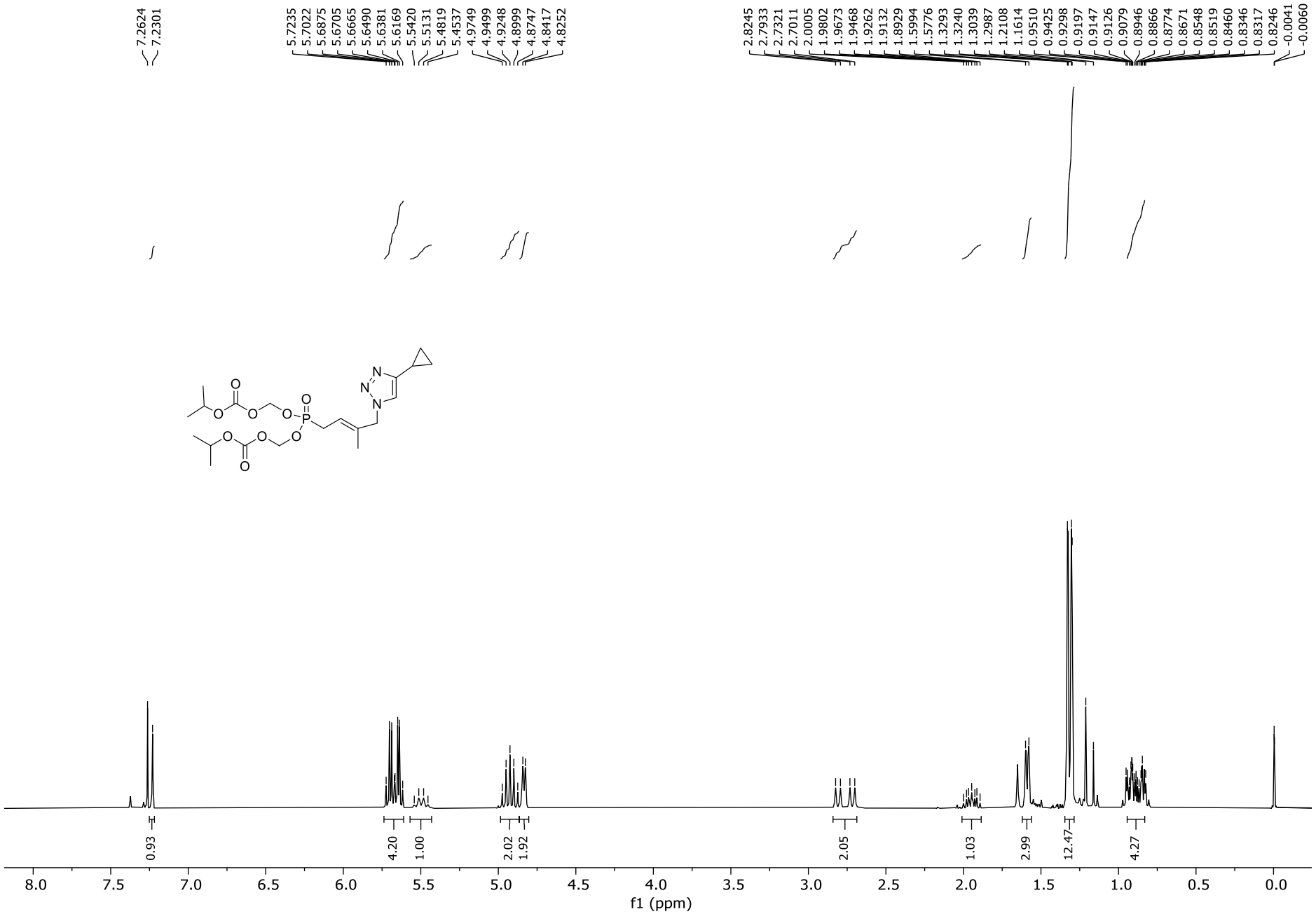
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 11e



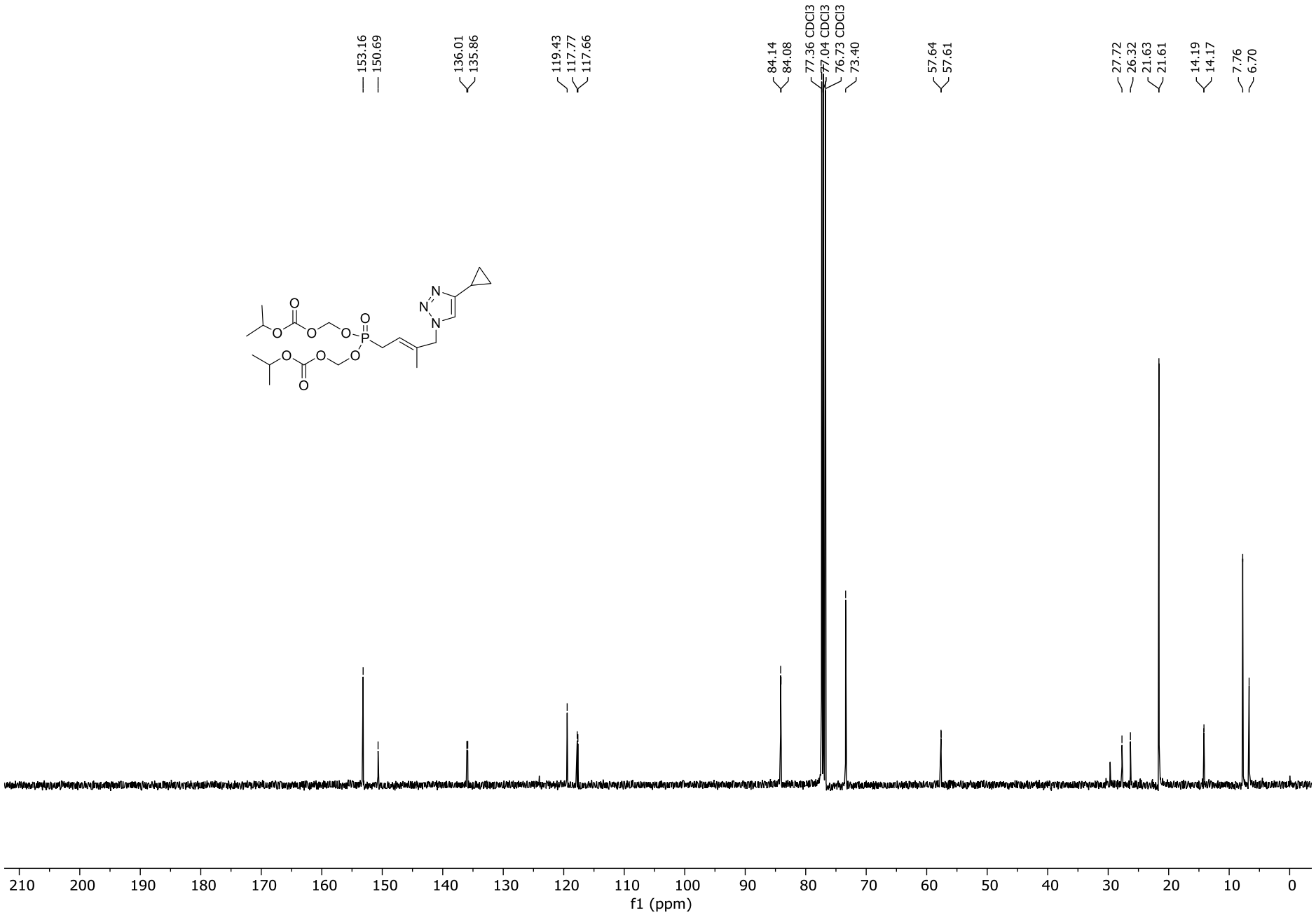
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 11e



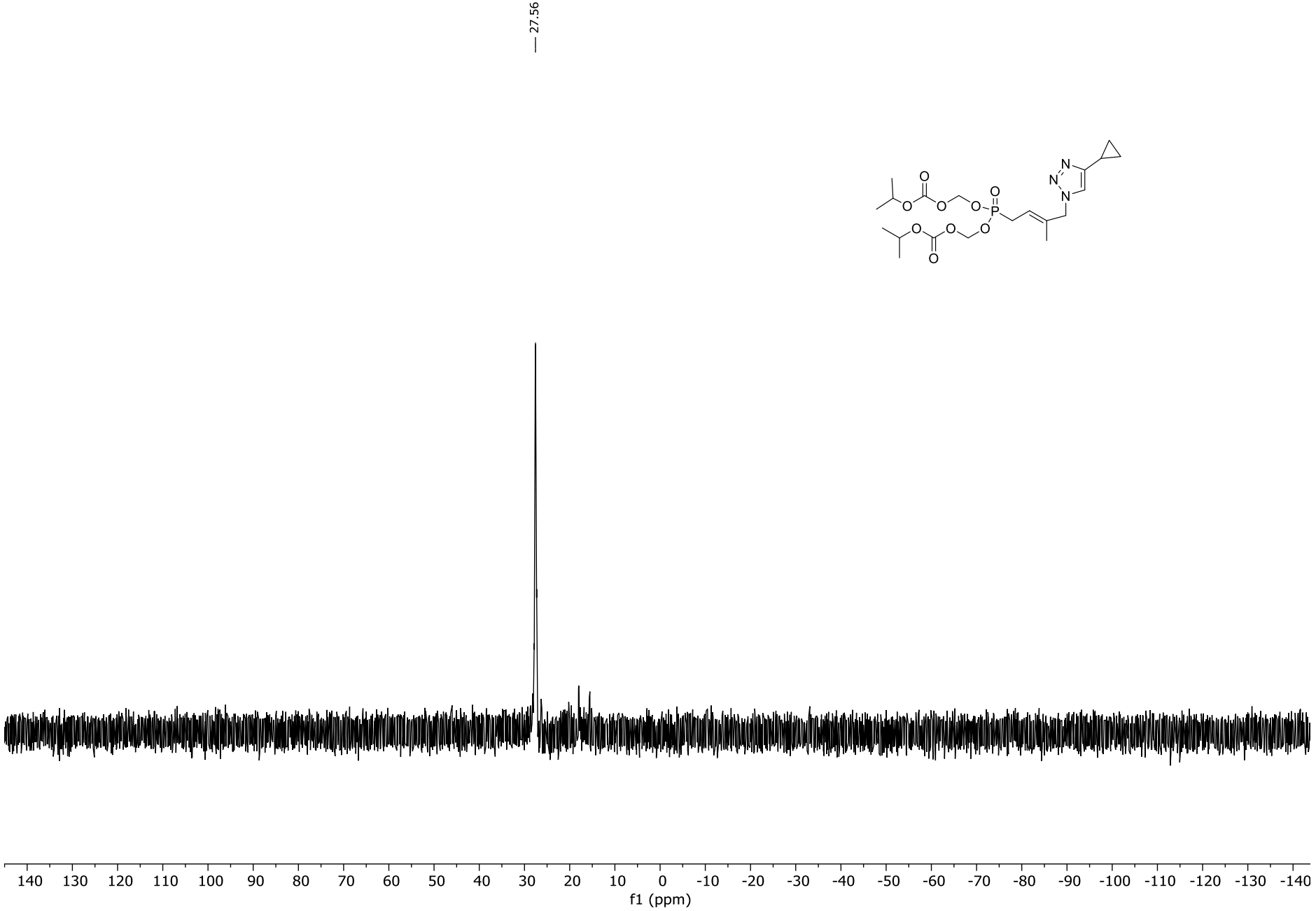
^{1}H NMR (250 MHz, $CDCl_3$) Analysis of Compound 11f



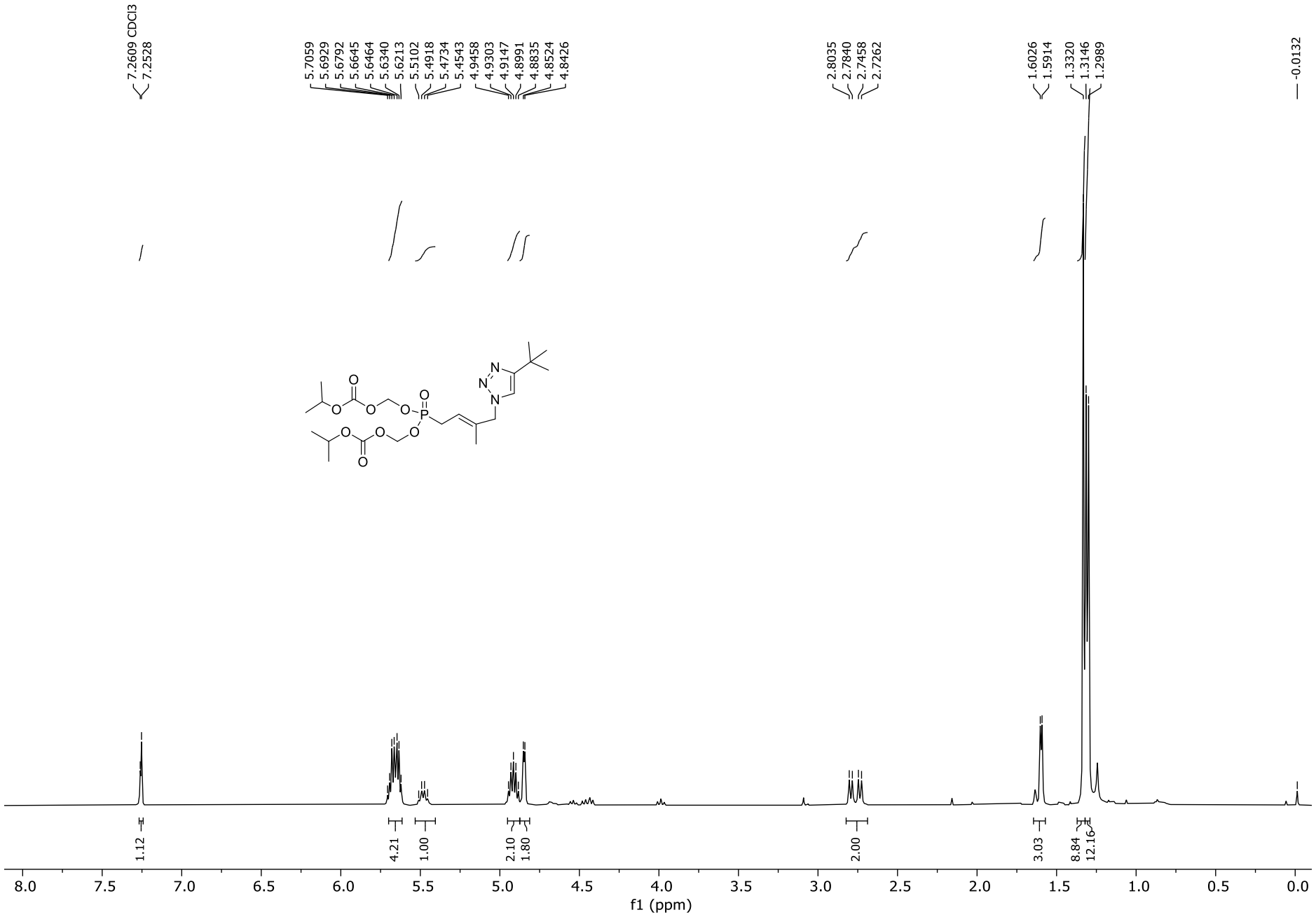
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 11f



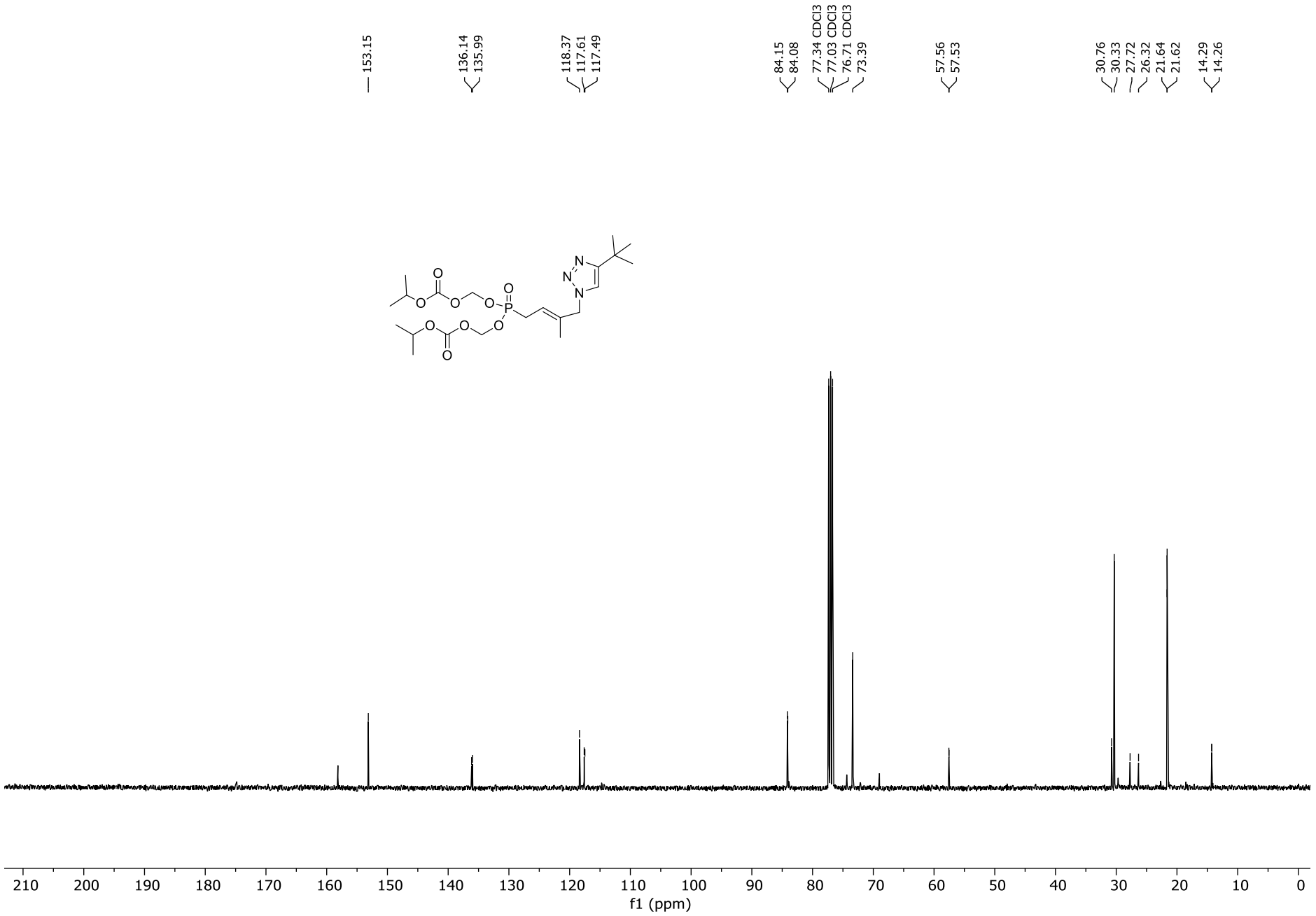
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 11f



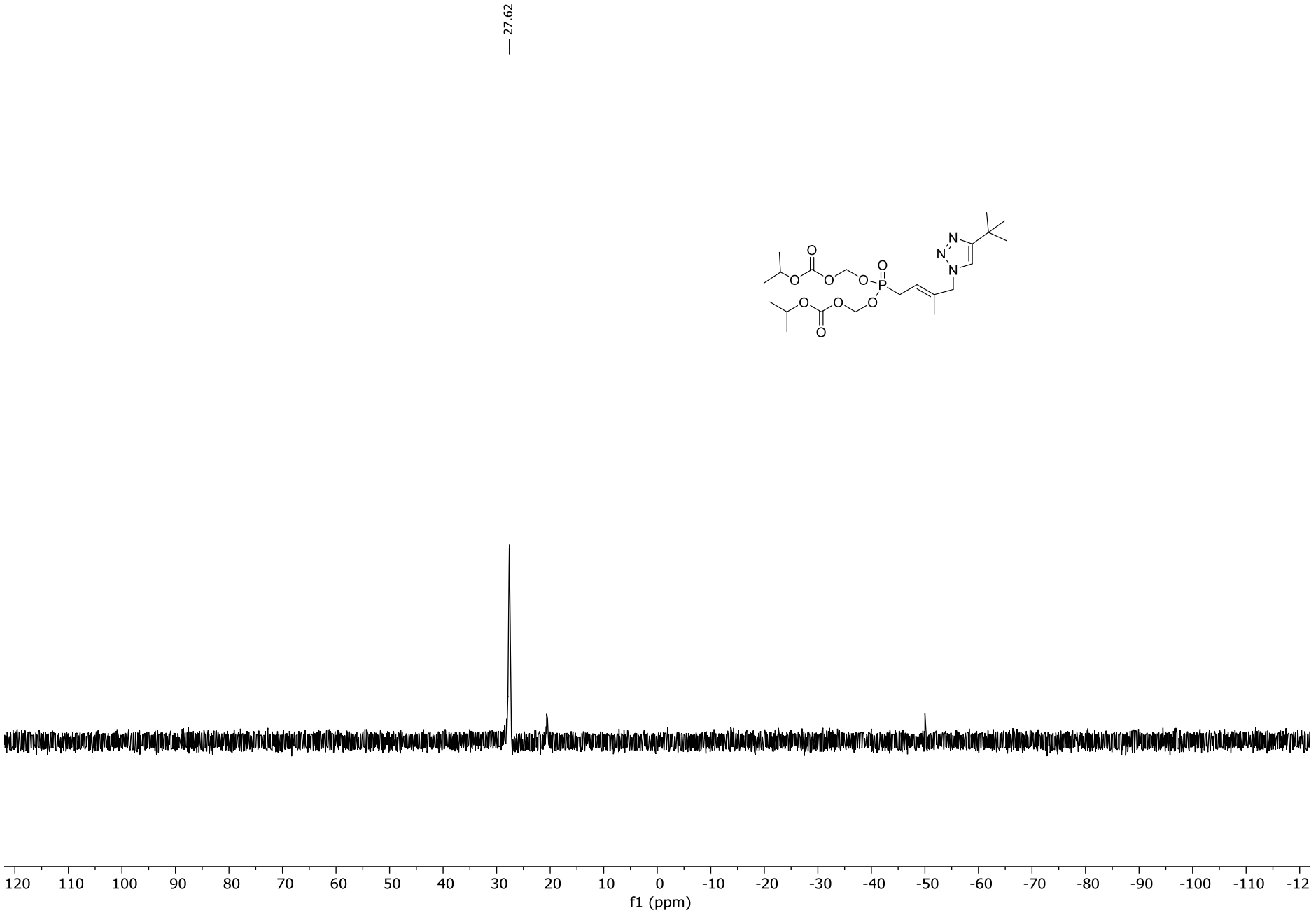
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 11g



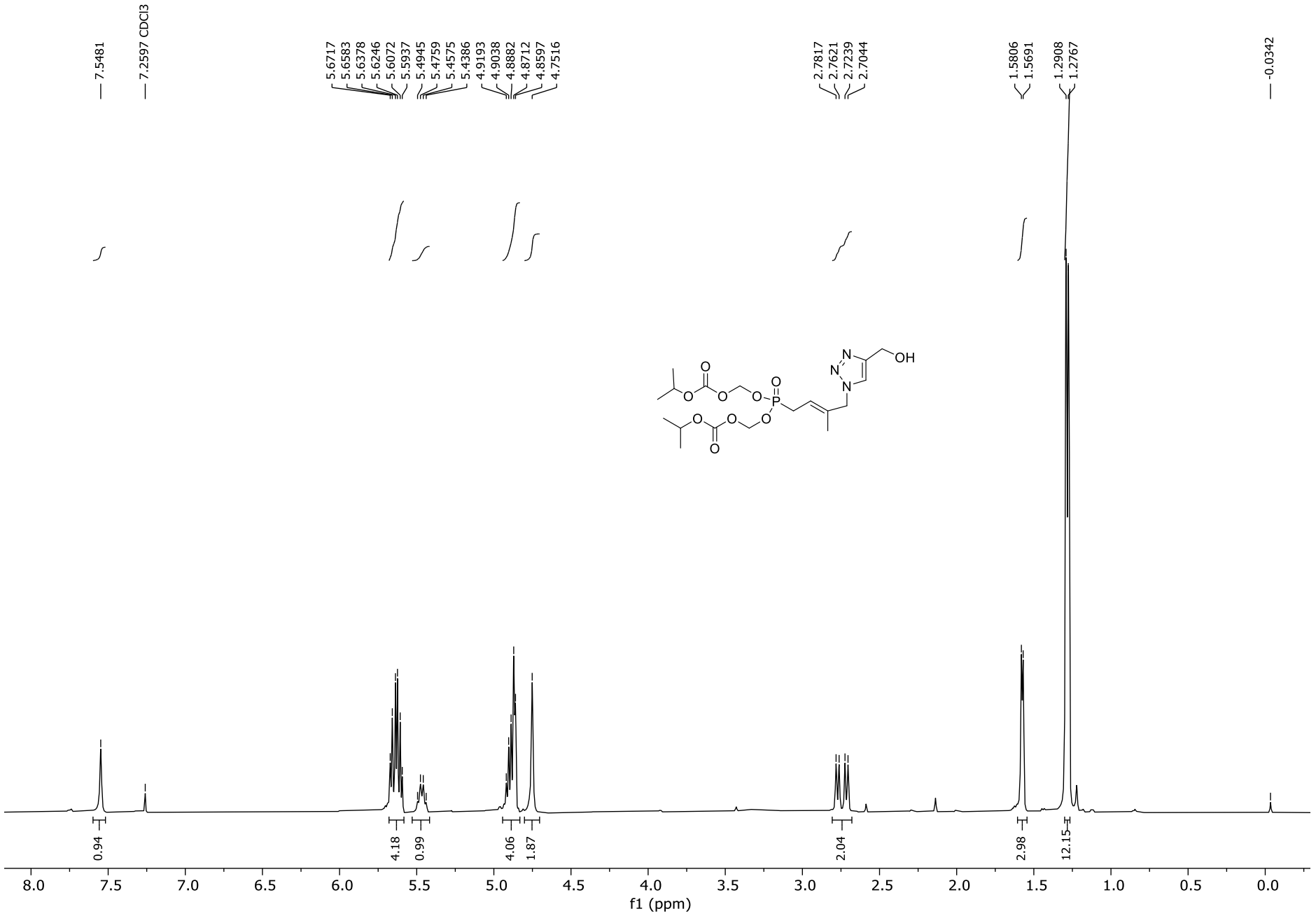
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 11g



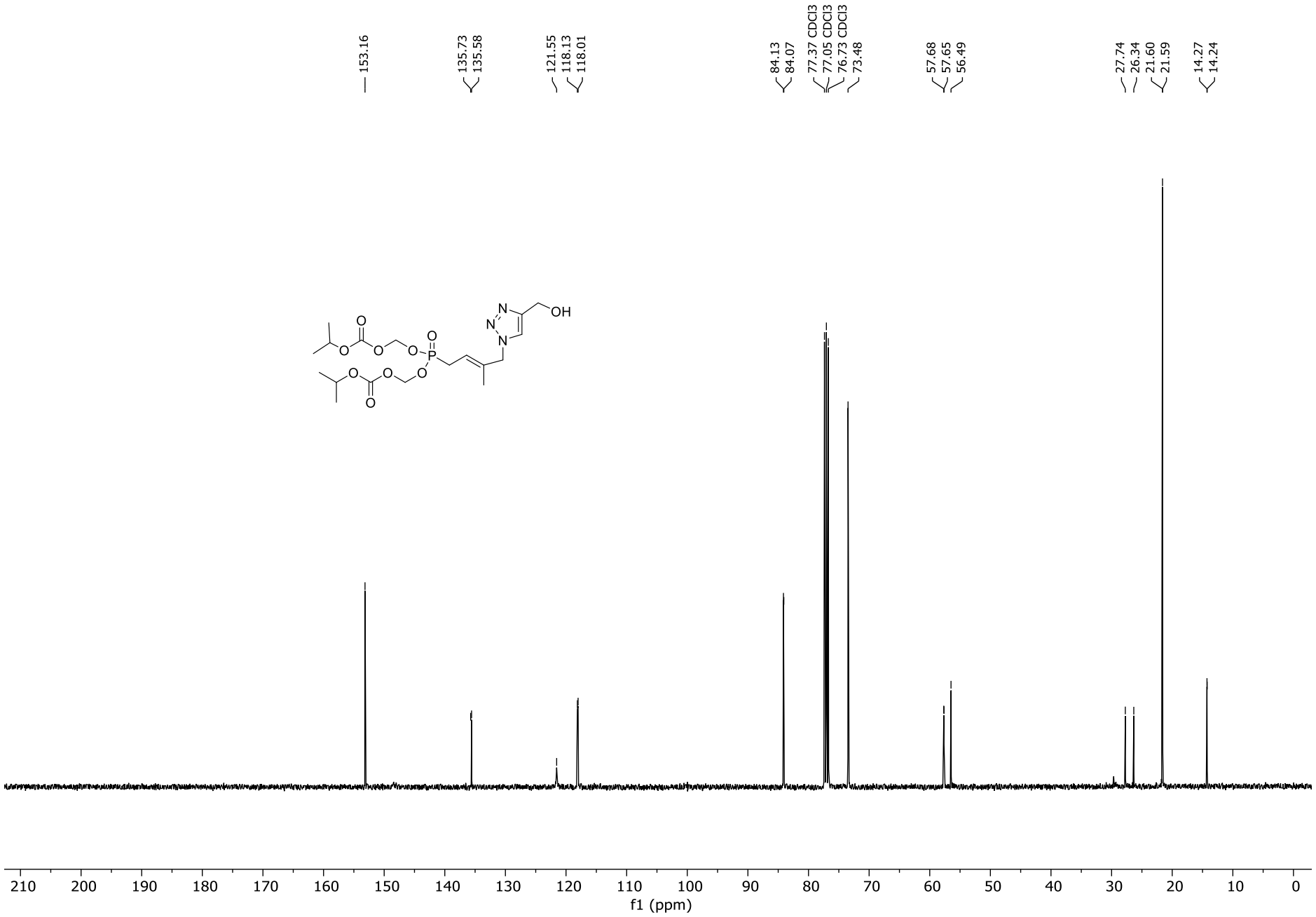
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 11g



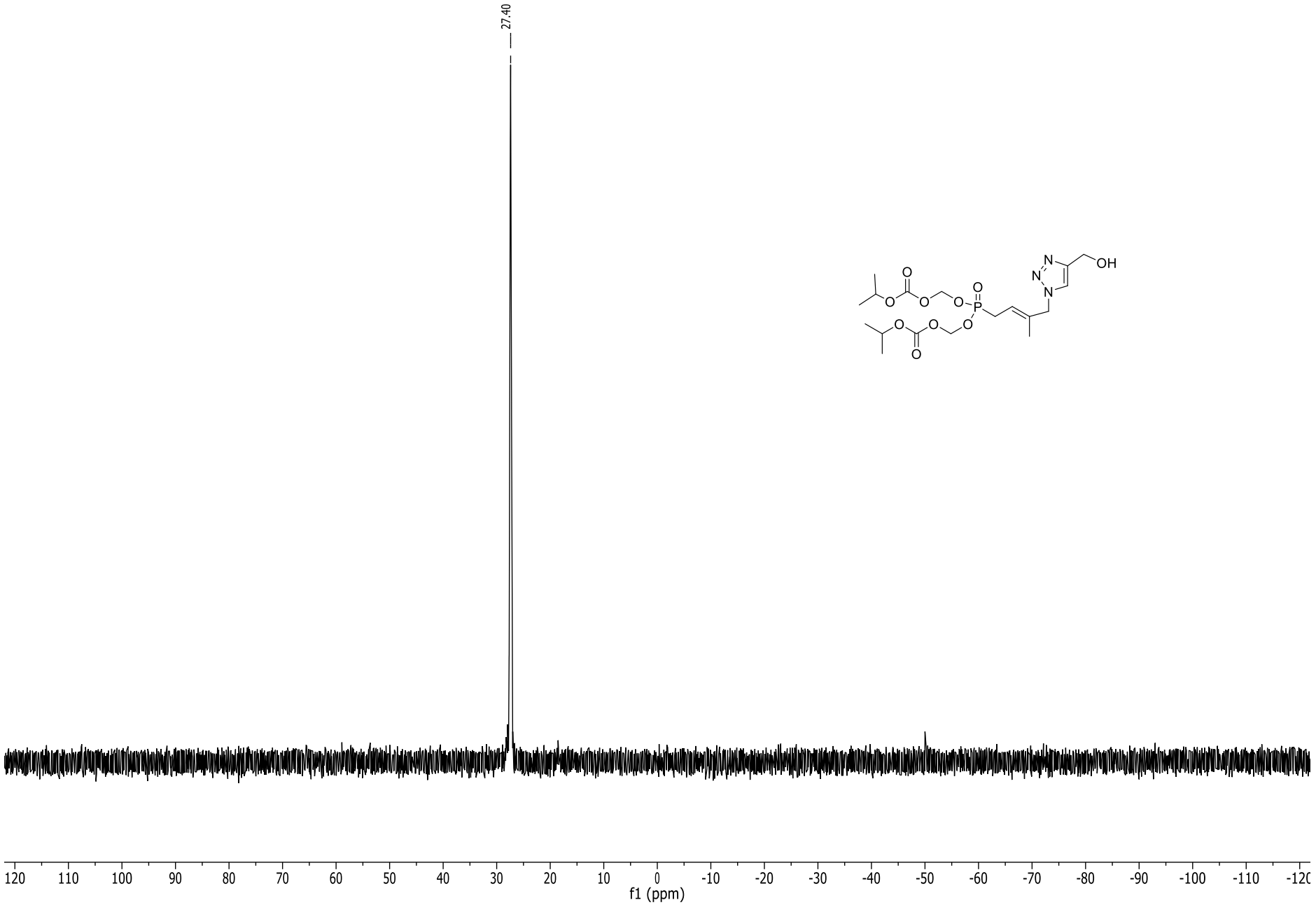
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 11h



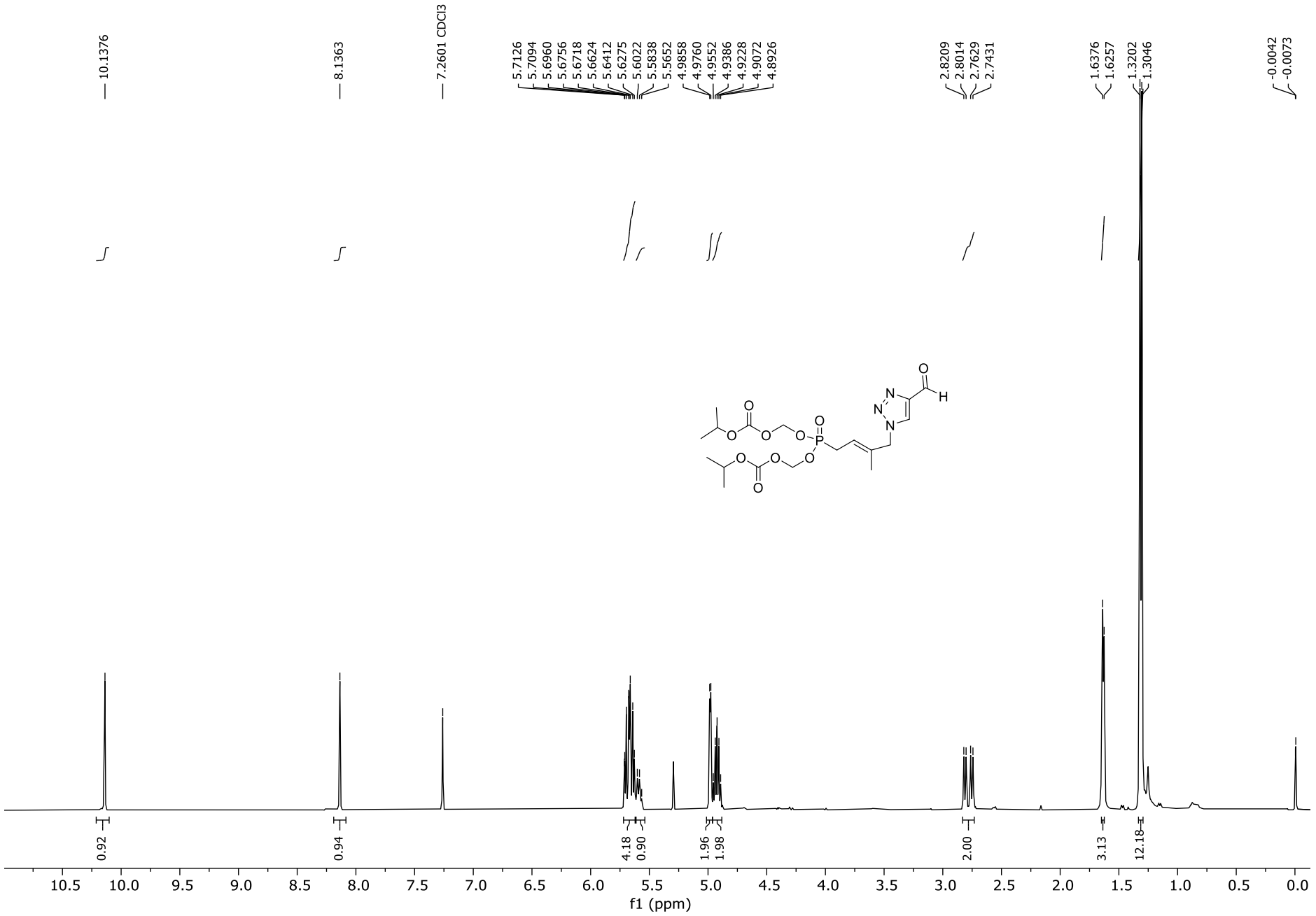
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 11h



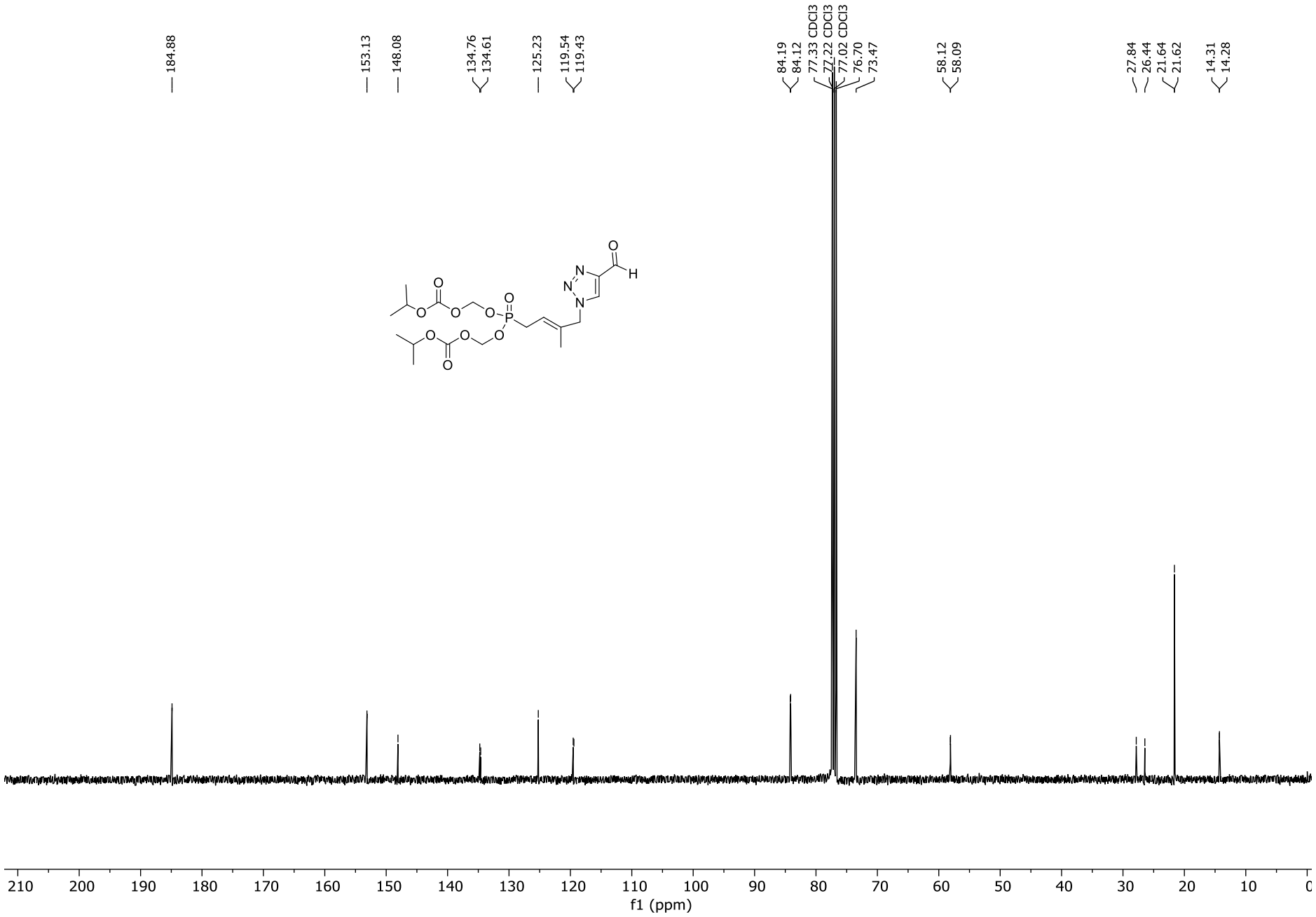
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 11h



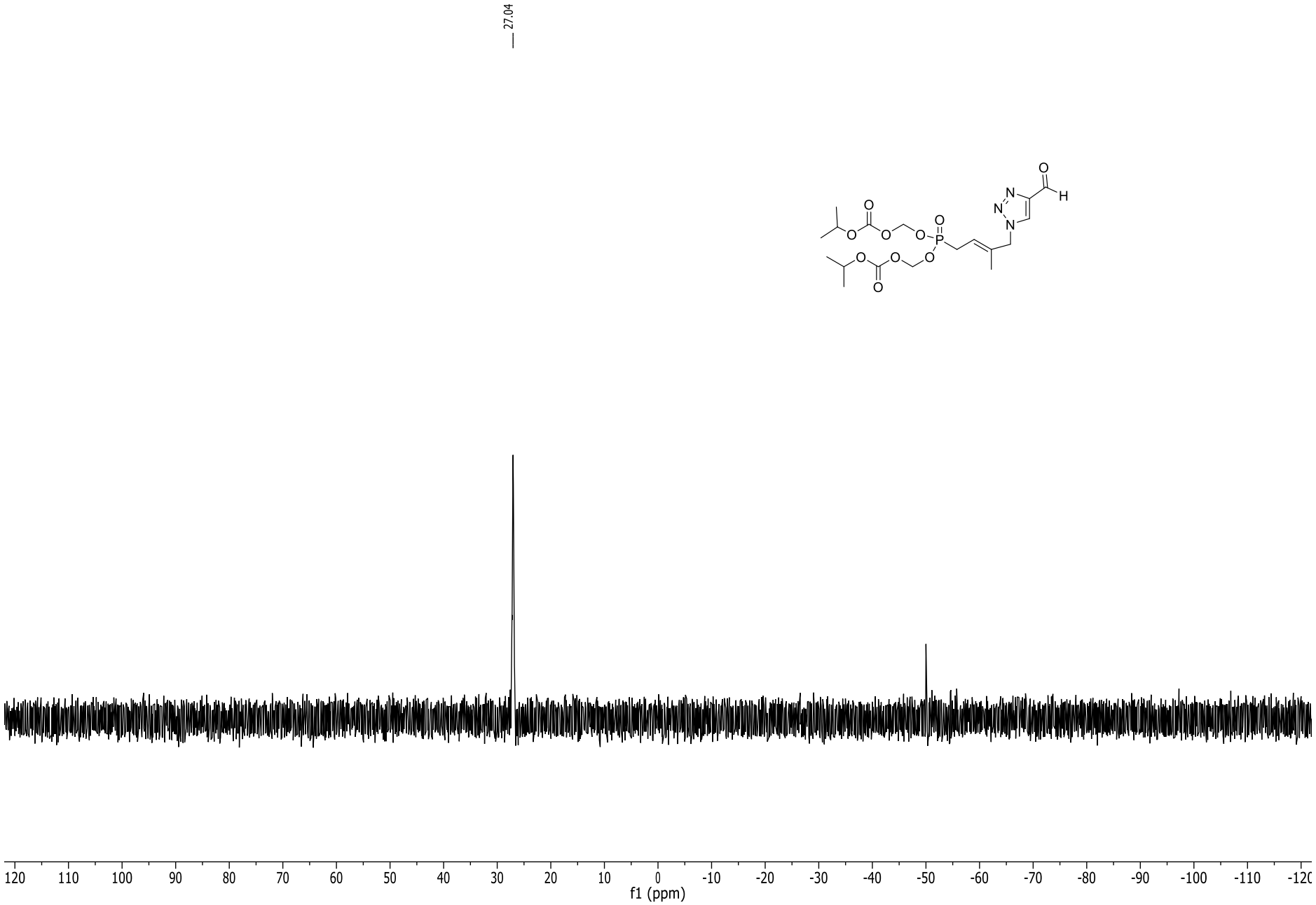
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 11i



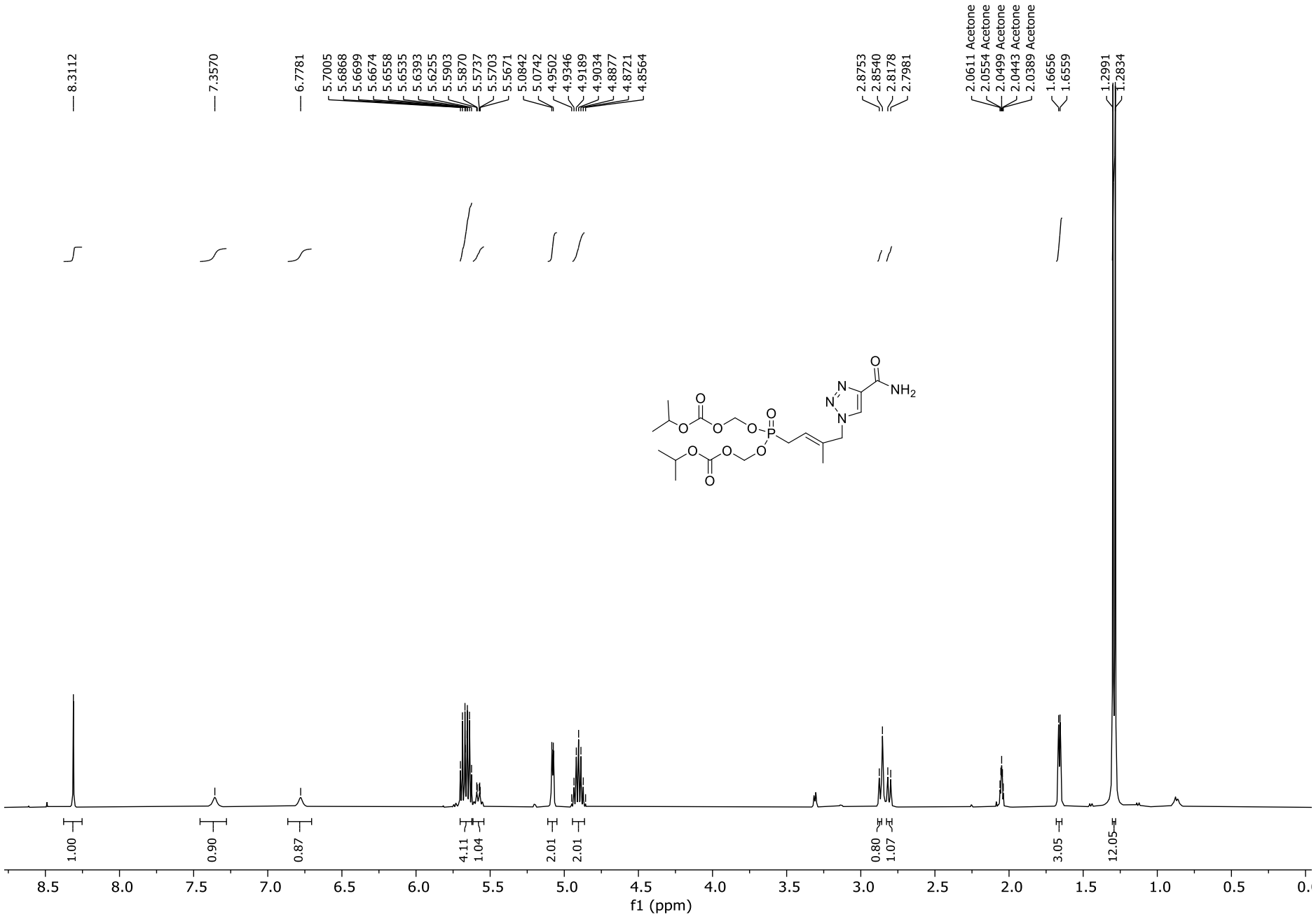
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 11i



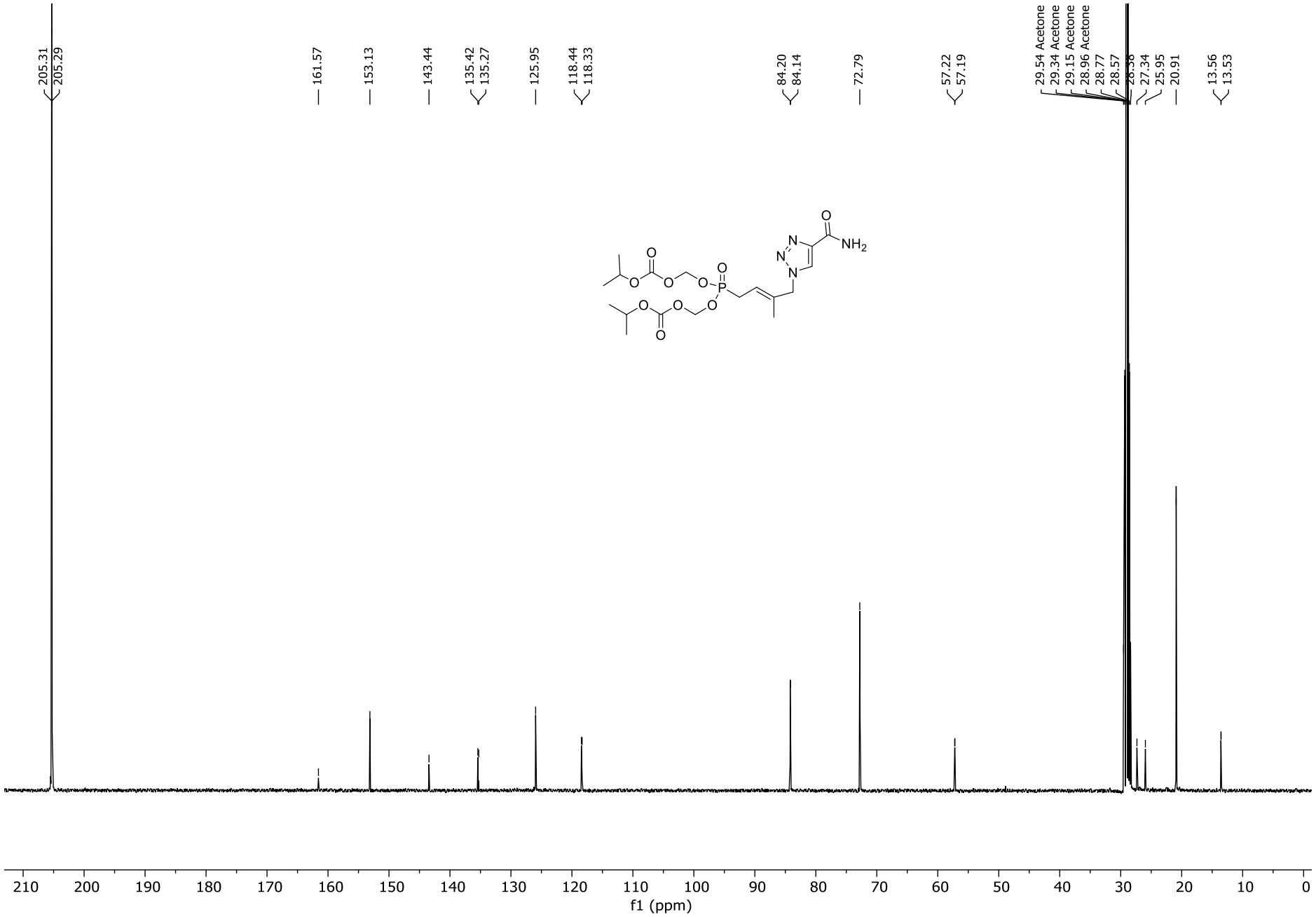
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 11i



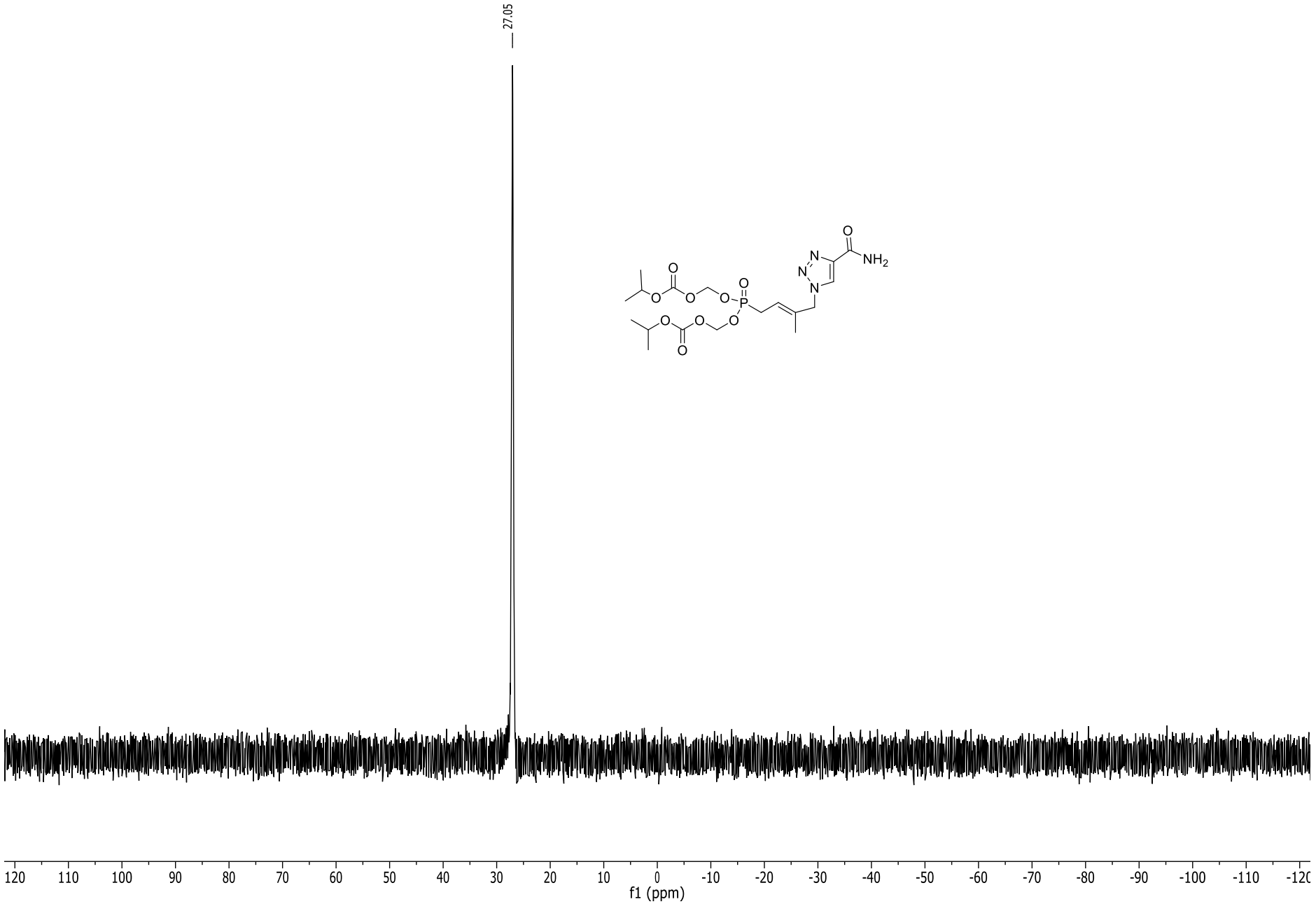
^{1}H NMR (400 MHz, Acetone-d_6) Analysis of Compound 11j



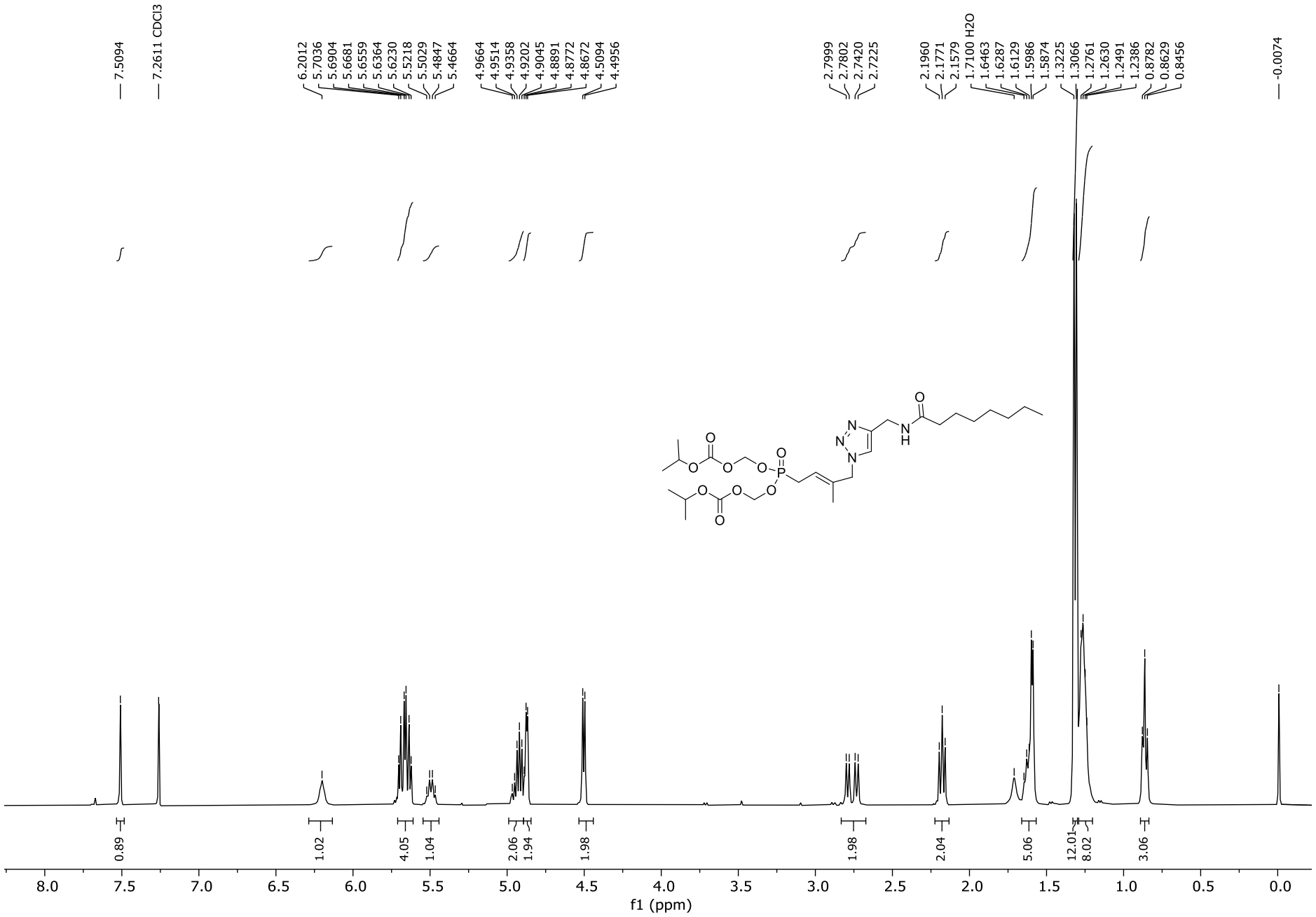
^{13}C NMR (101 MHz, Acetone-d_6) Analysis of Compound 11j



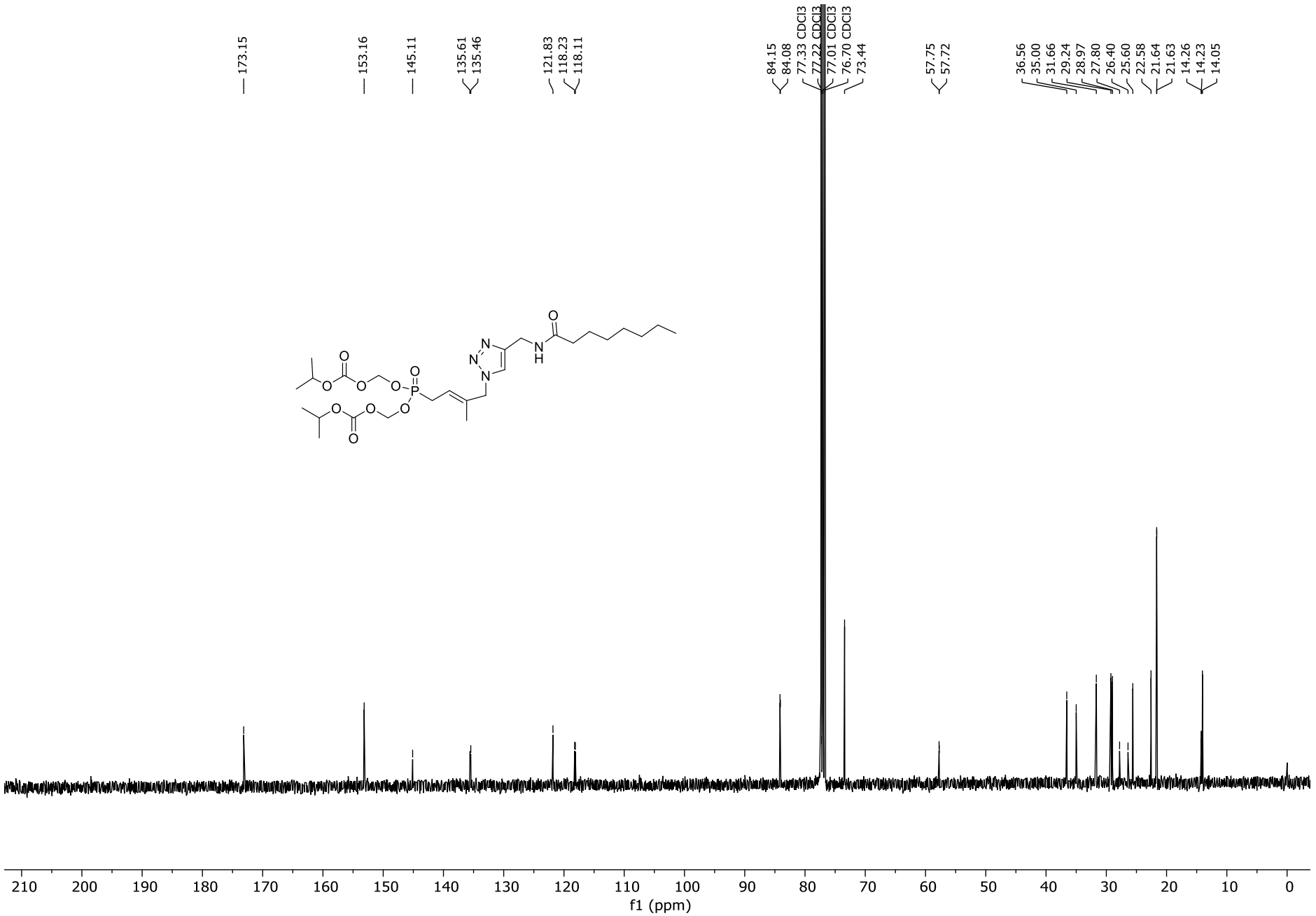
^{31}P NMR (161 MHz, Acetone-d_6) Analysis of Compound 11j



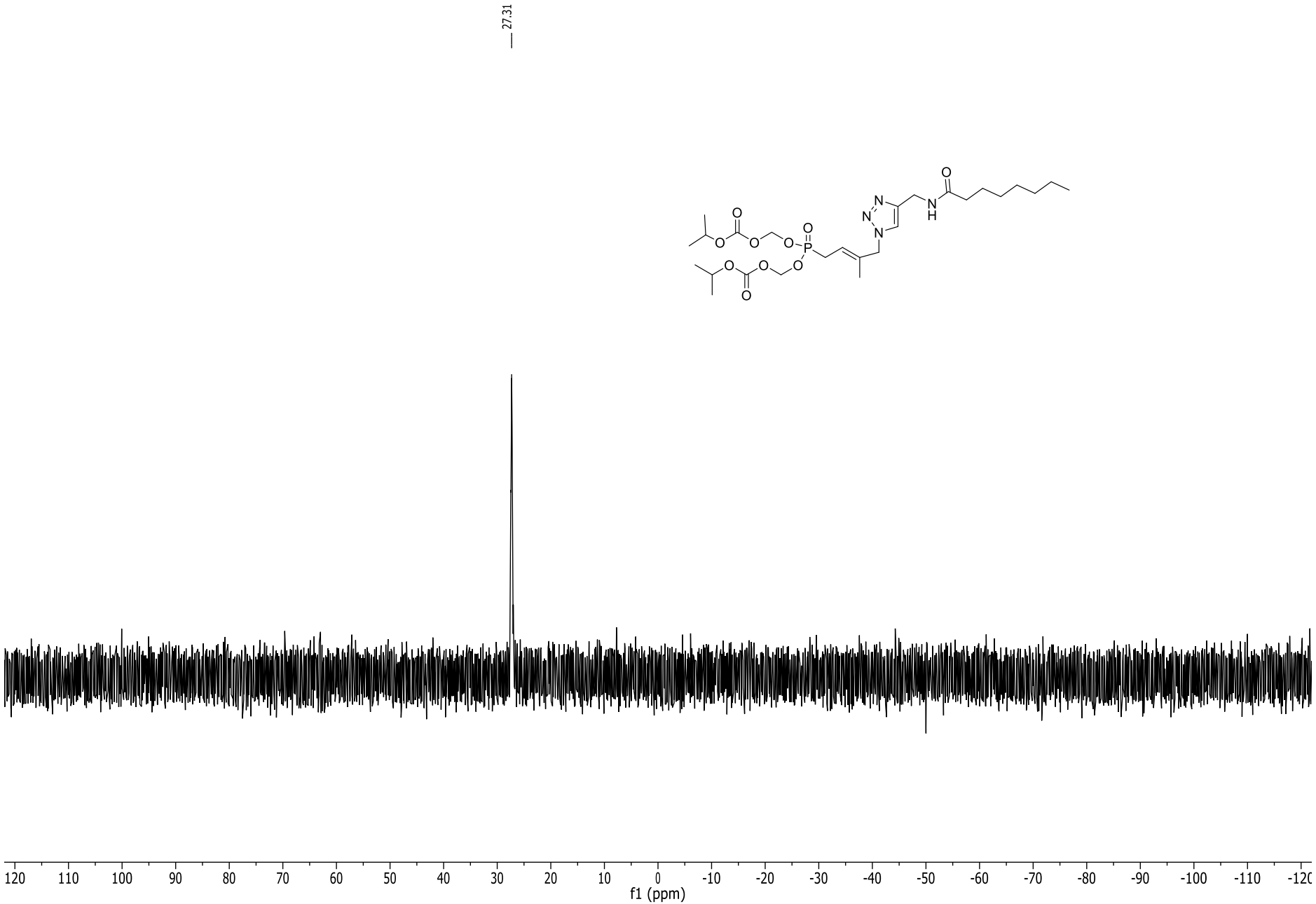
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 11k



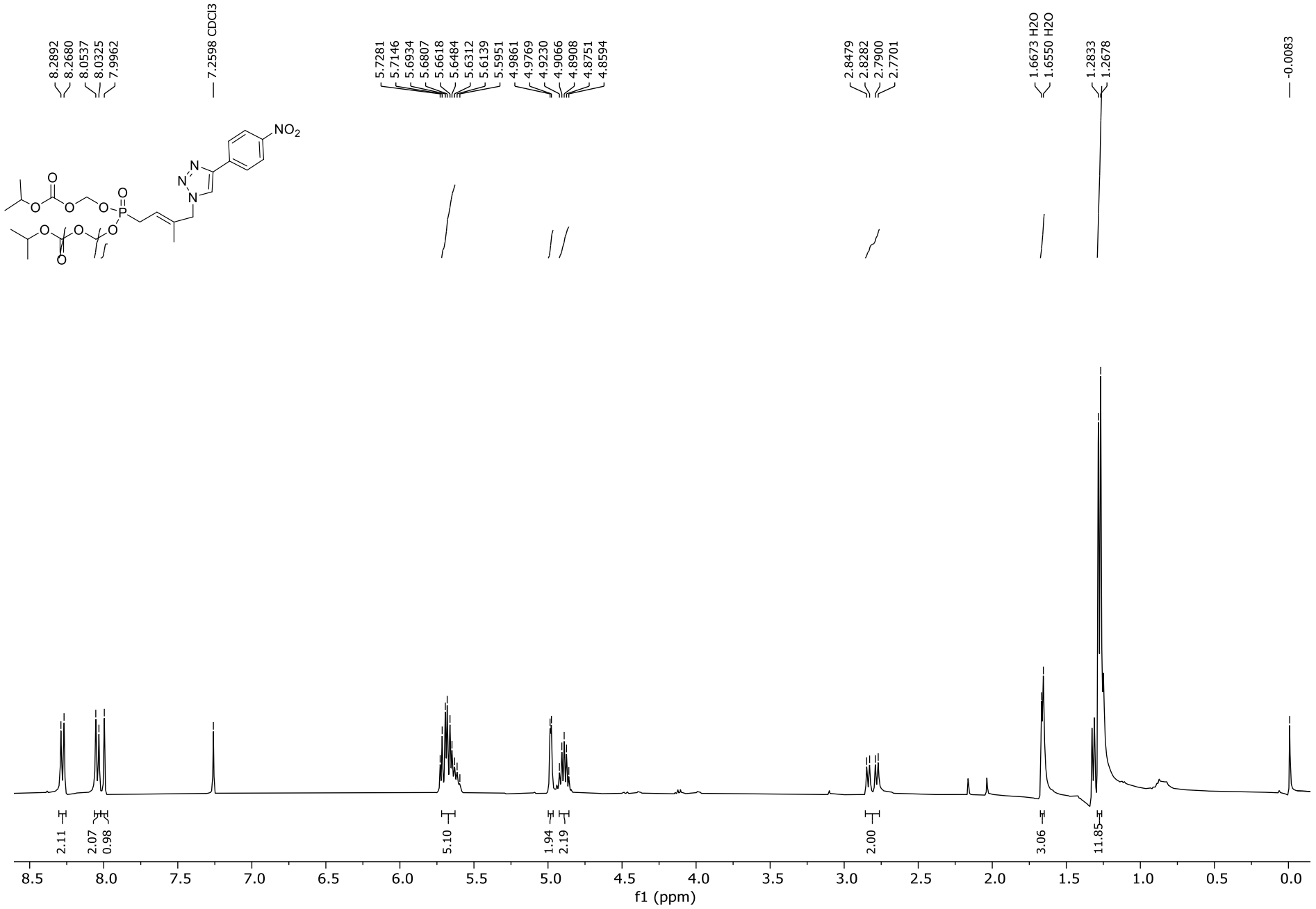
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 11k



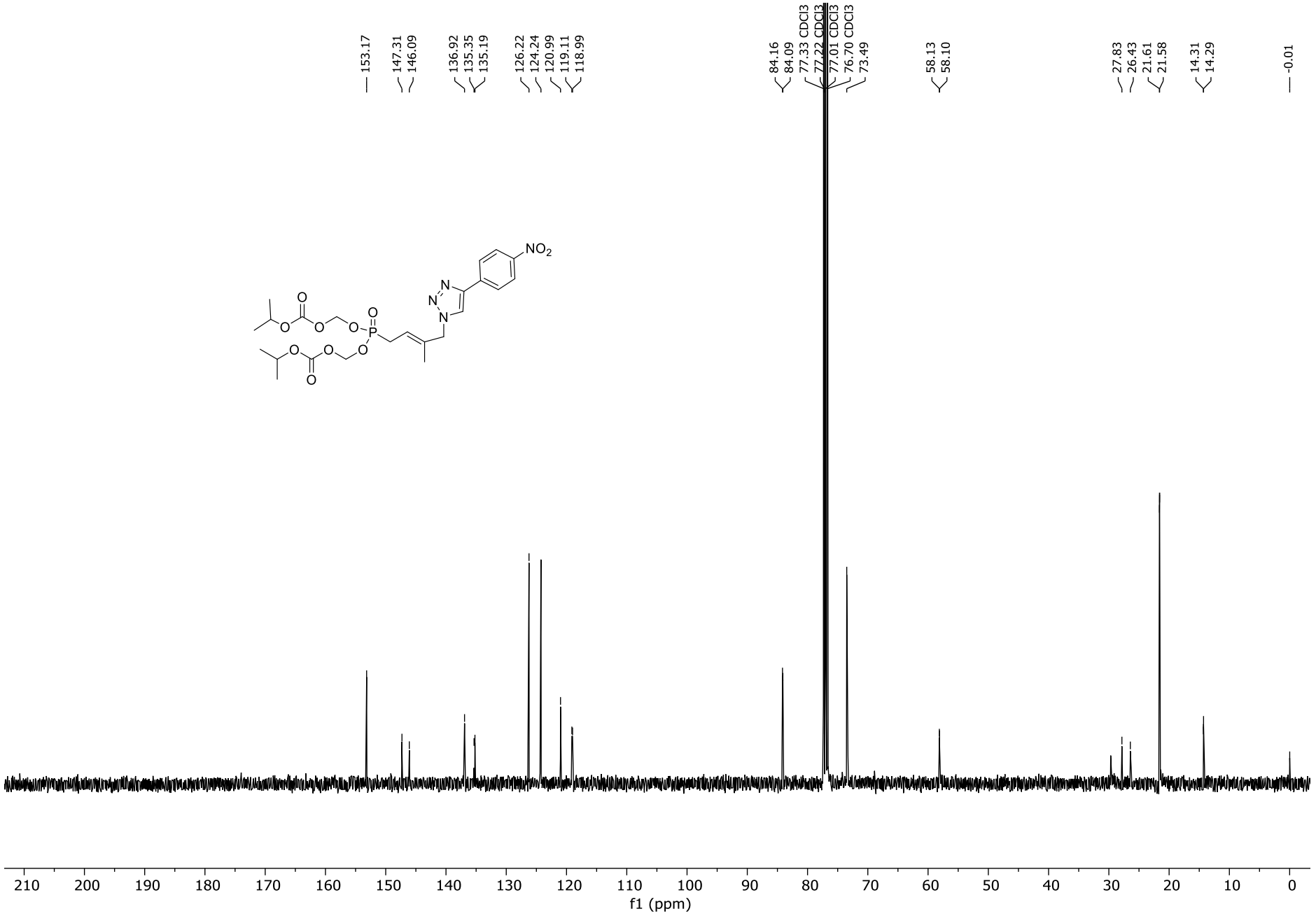
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 11k



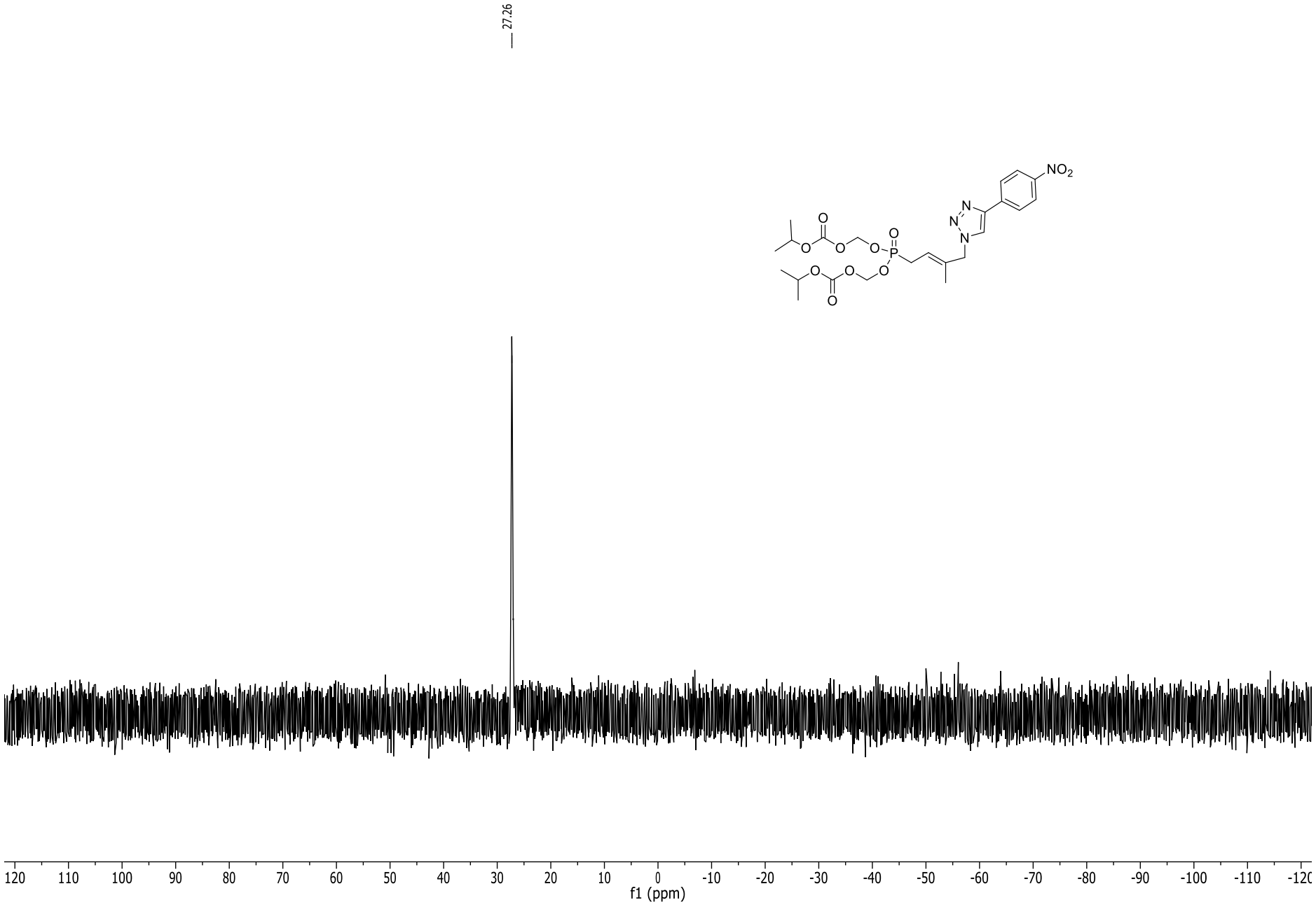
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 11l



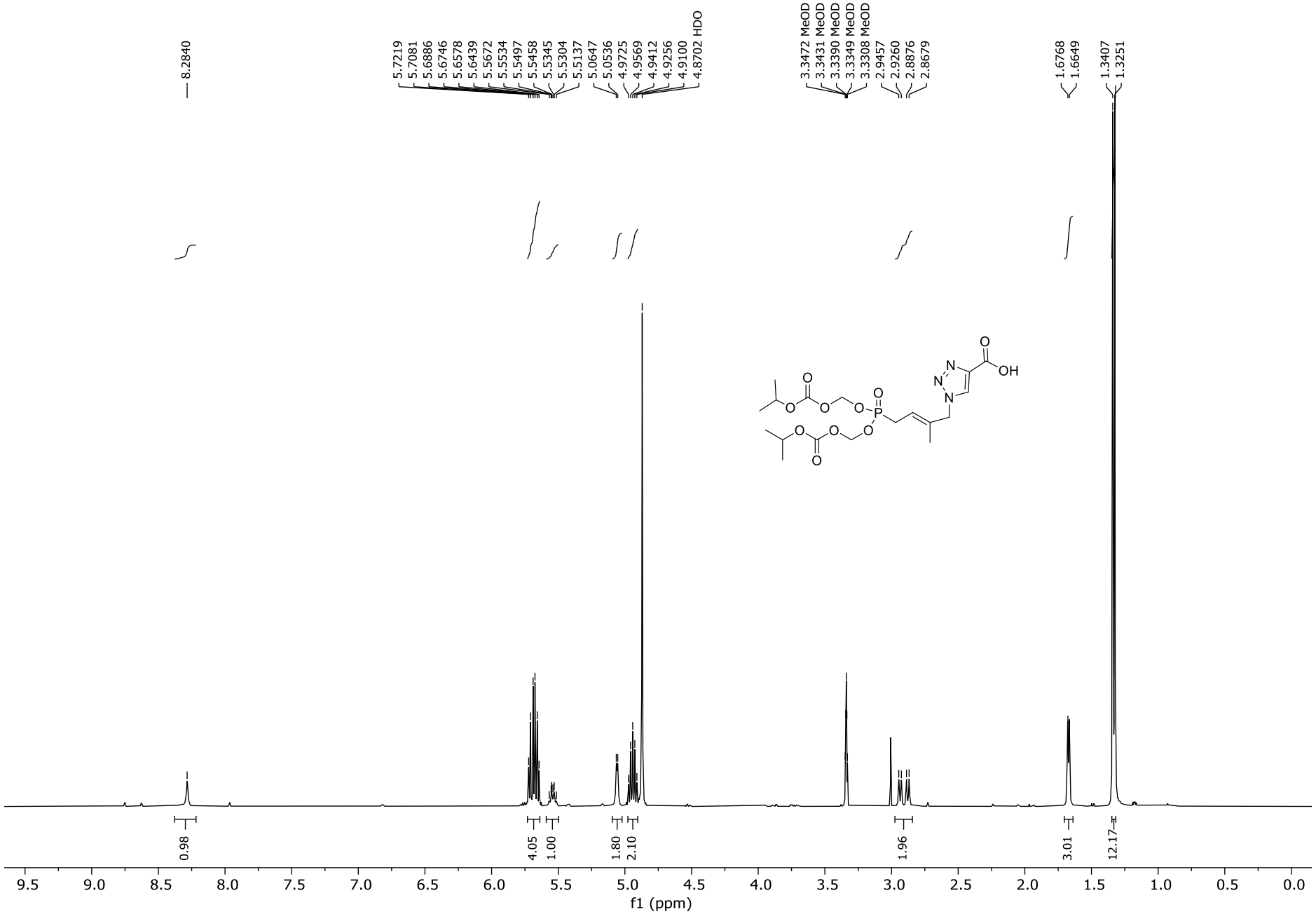
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 11l



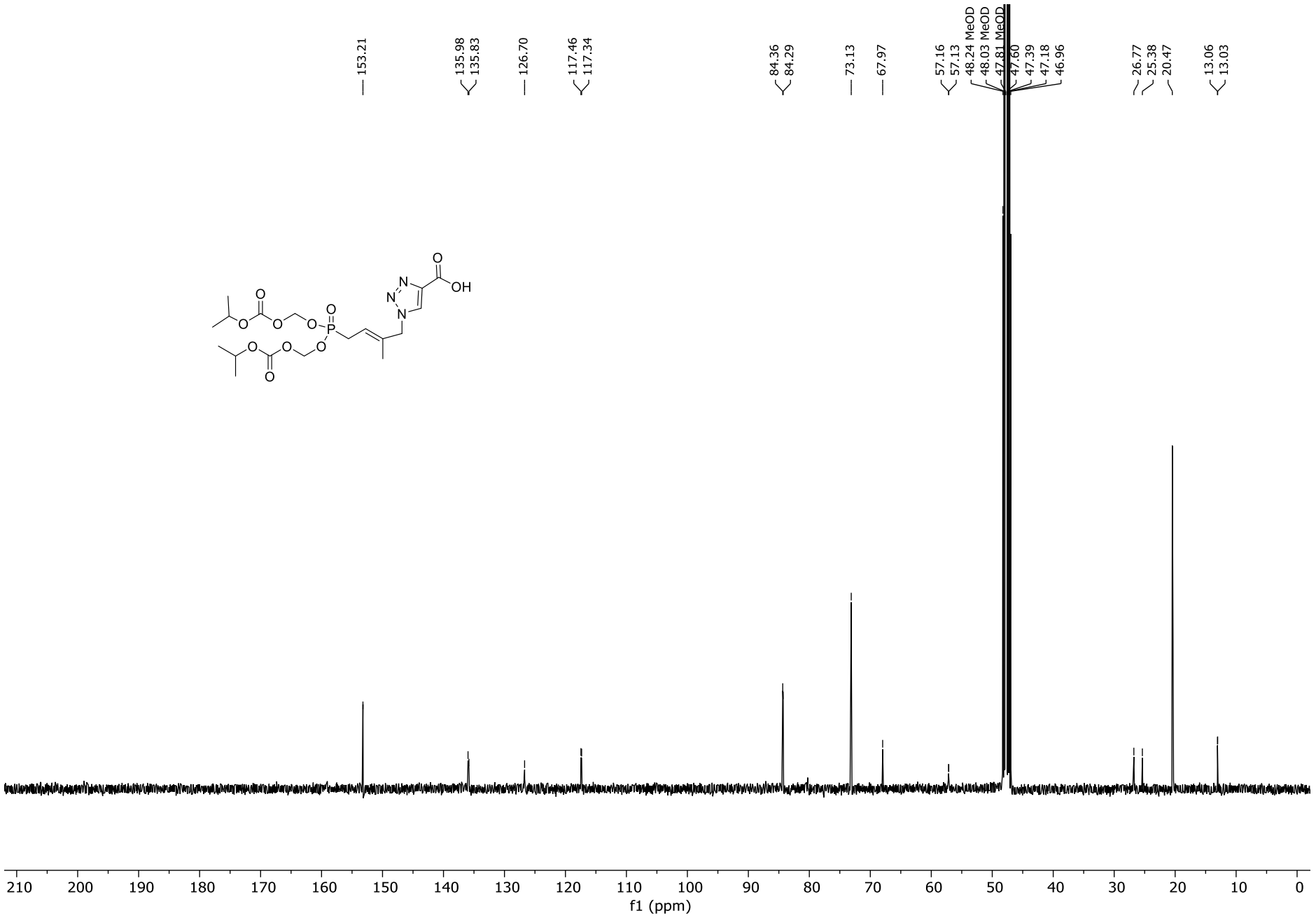
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 11l



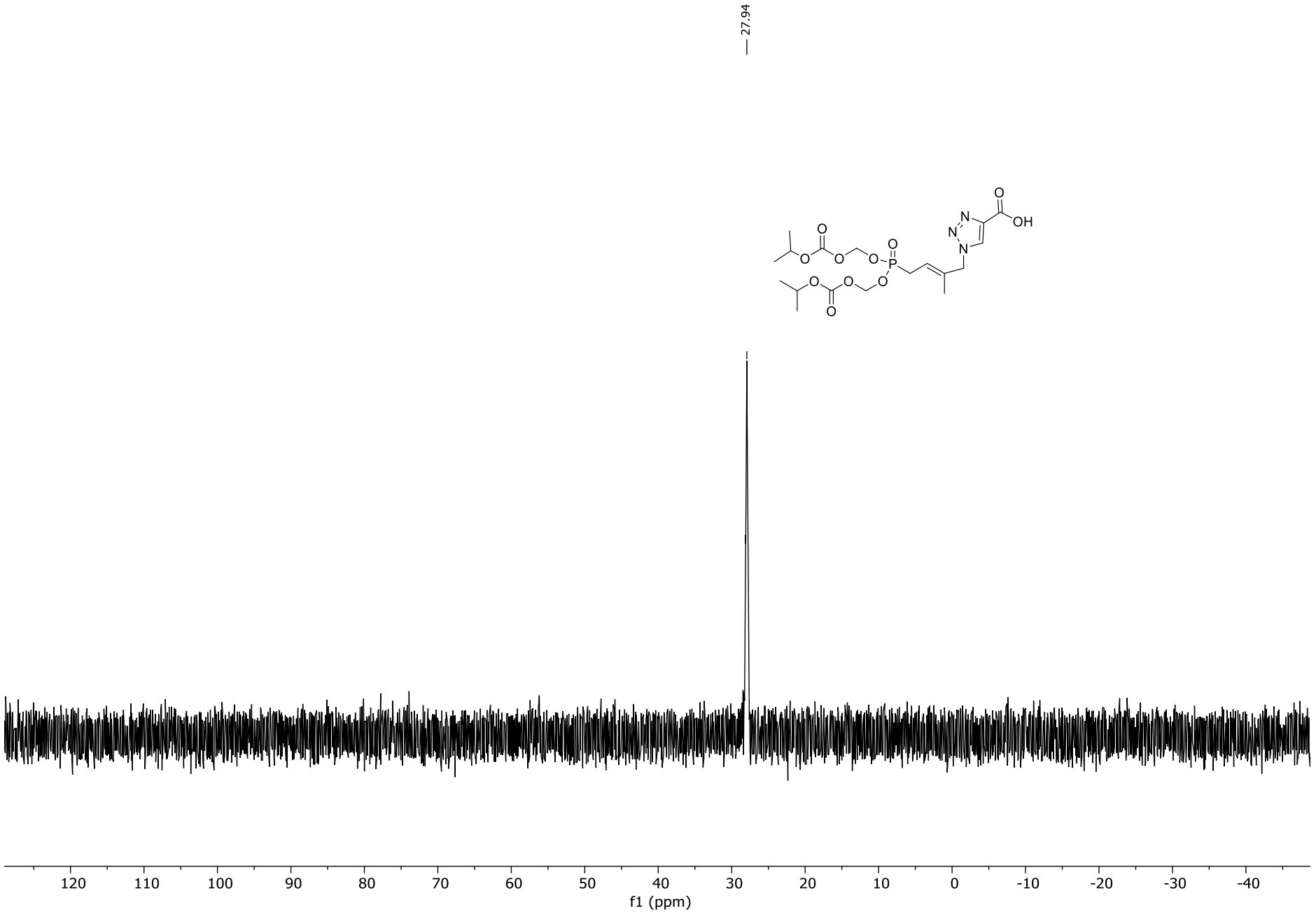
^{1}H NMR (400 MHz, MeOD) Analysis of Compound 11m



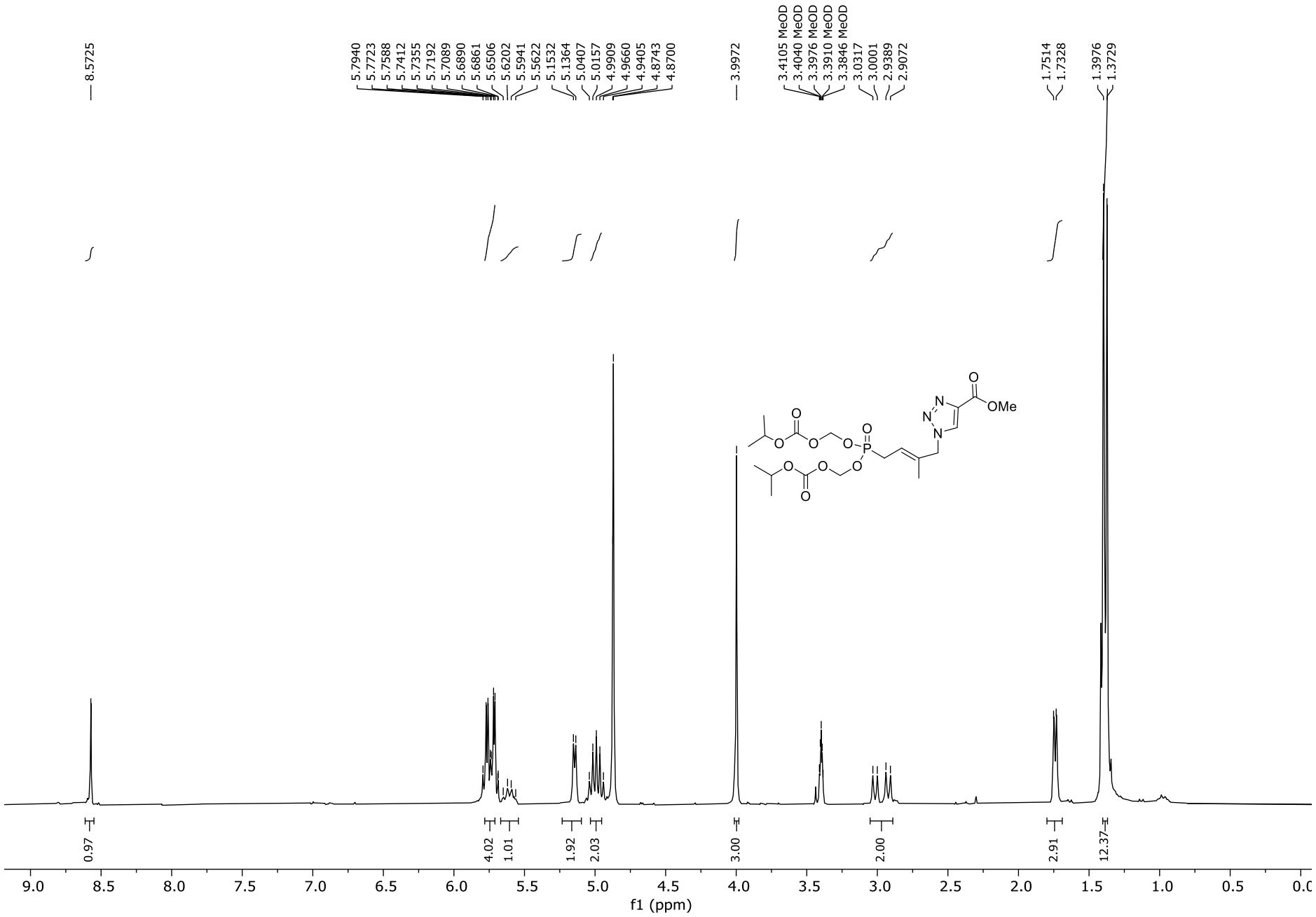
^{13}C NMR (101 MHz, MeOD) Analysis of Compound 11m



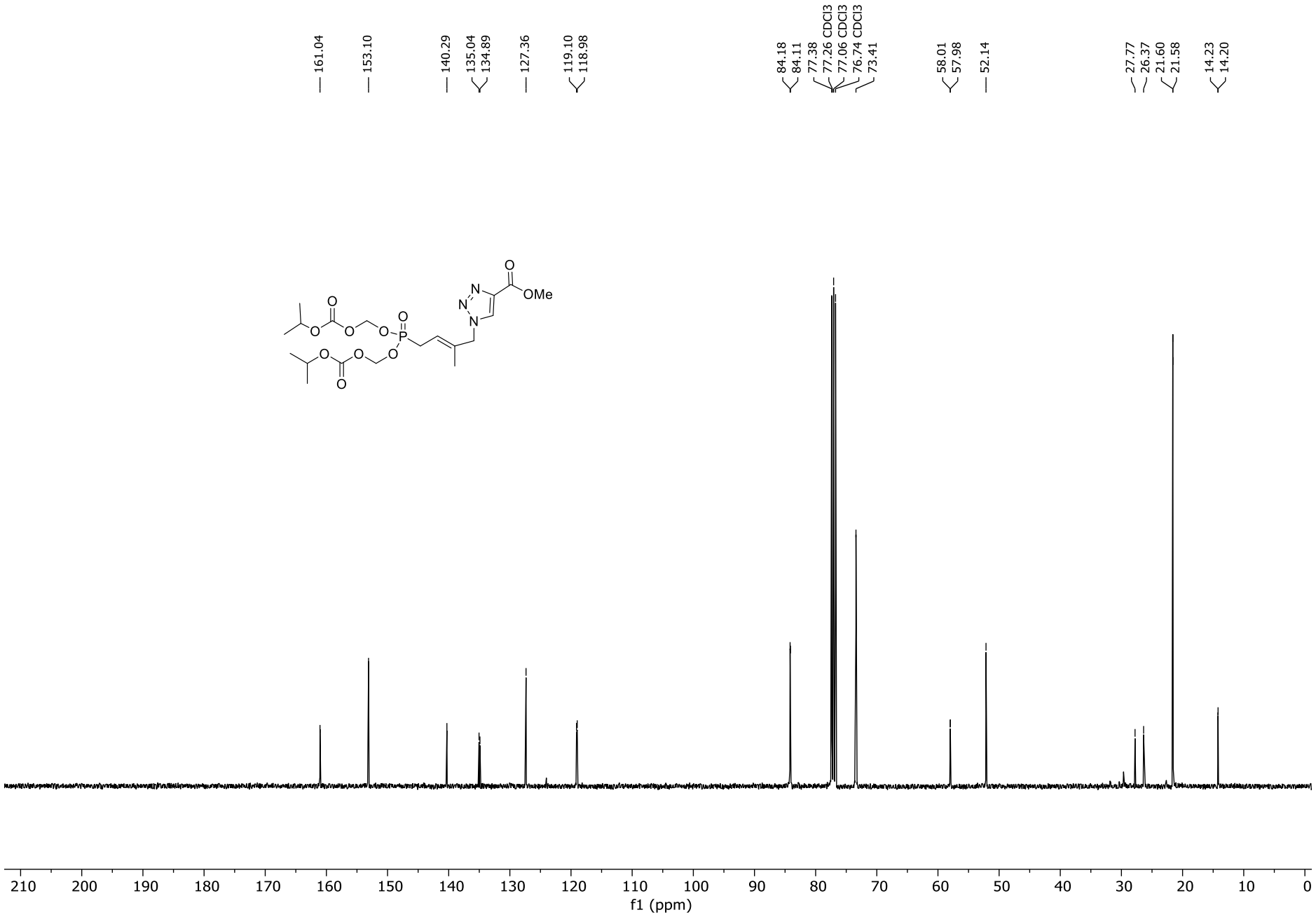
^{31}P NMR (161 MHz, MeOD) Analysis of Compound 11m



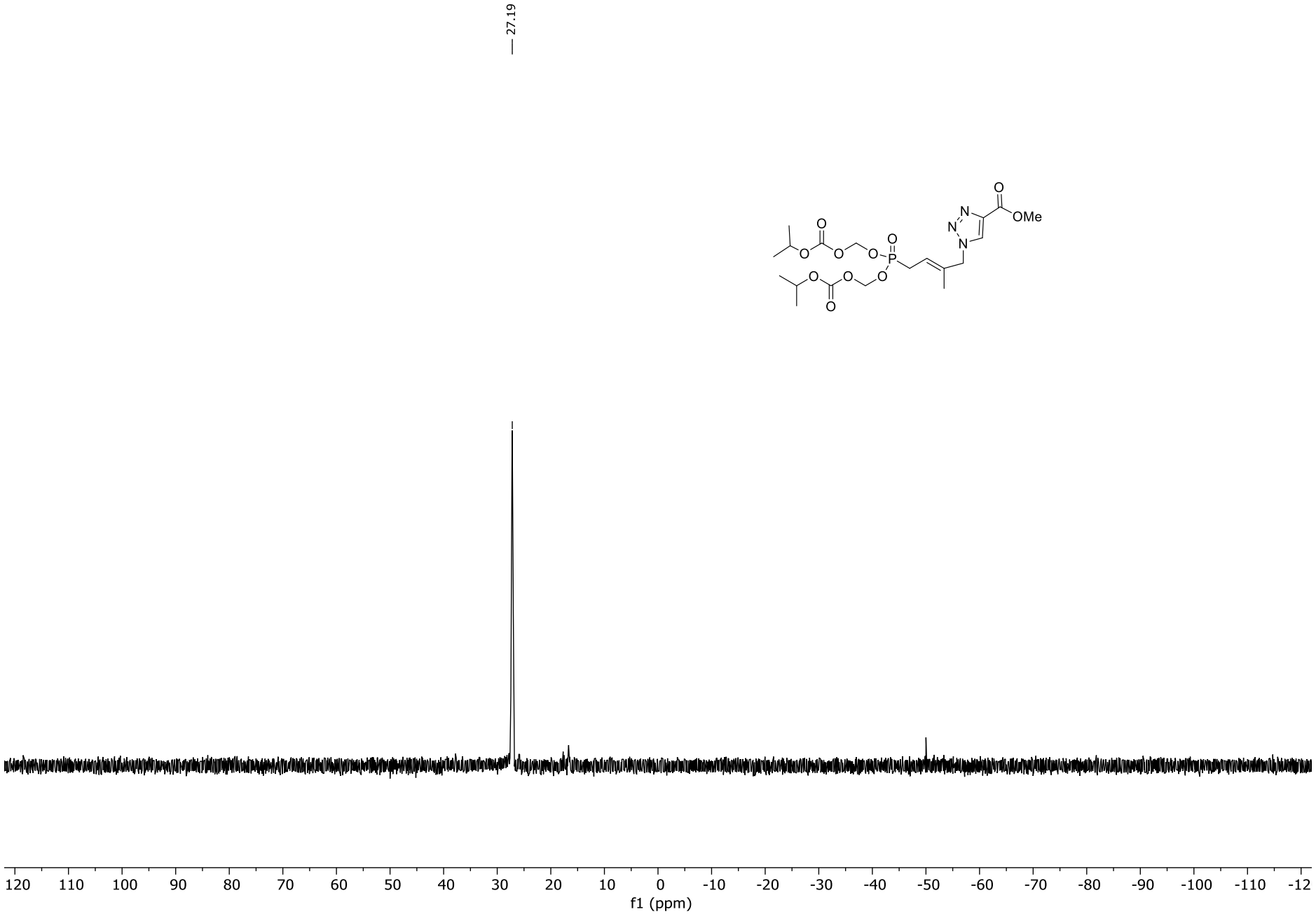
^{1}H NMR (250 MHz, MeOD) Analysis of Compound 11n



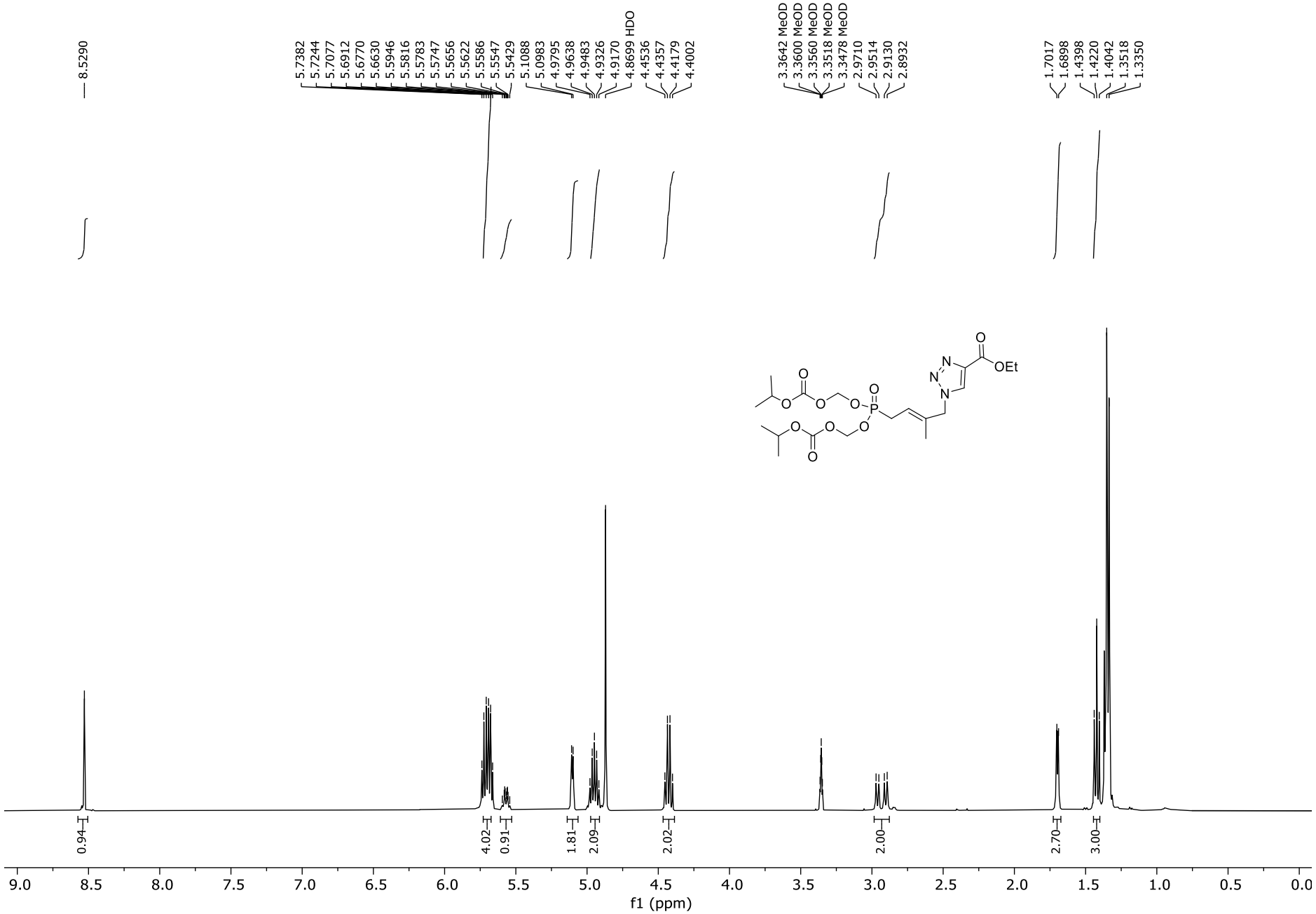
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 11n



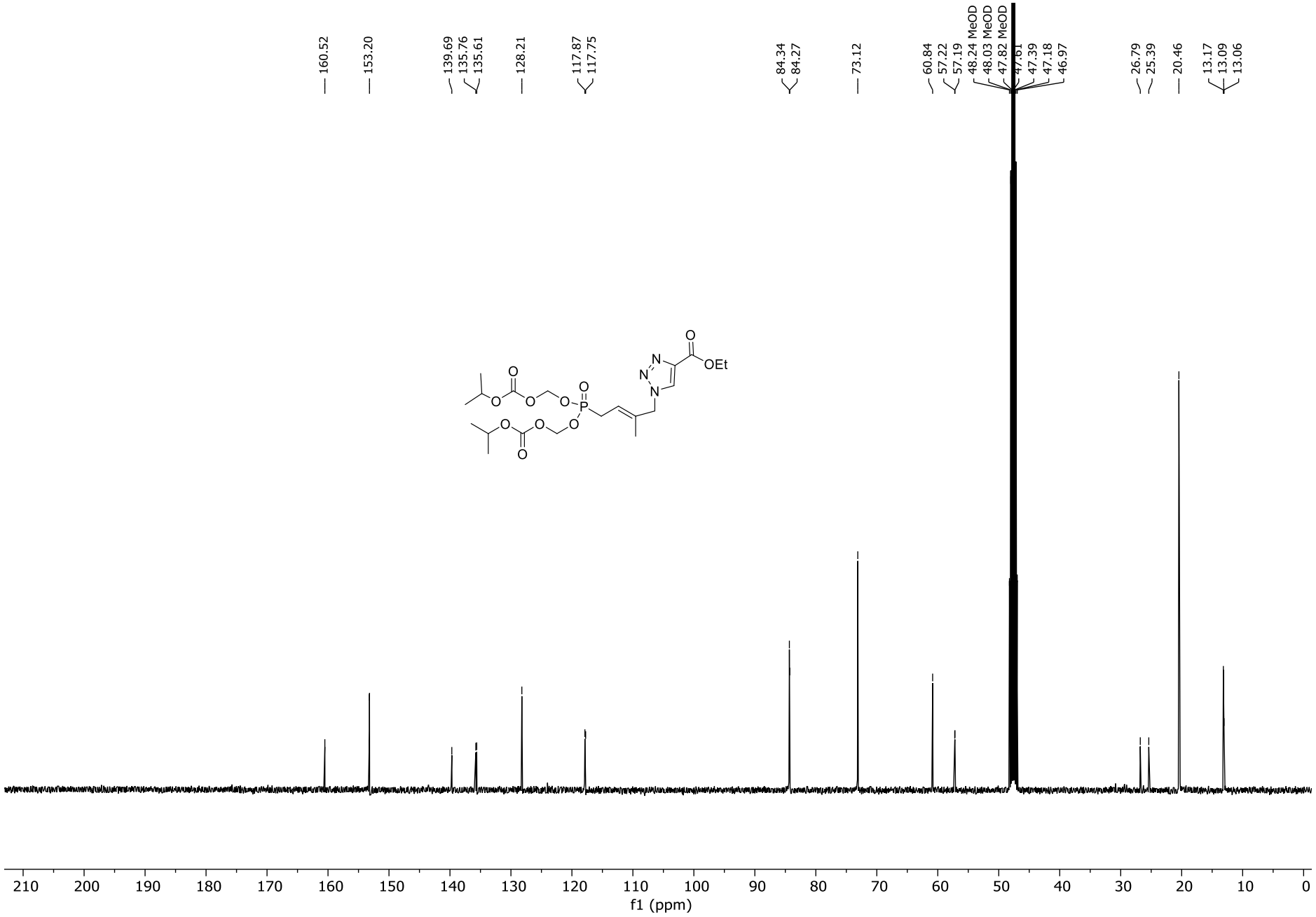
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 11n



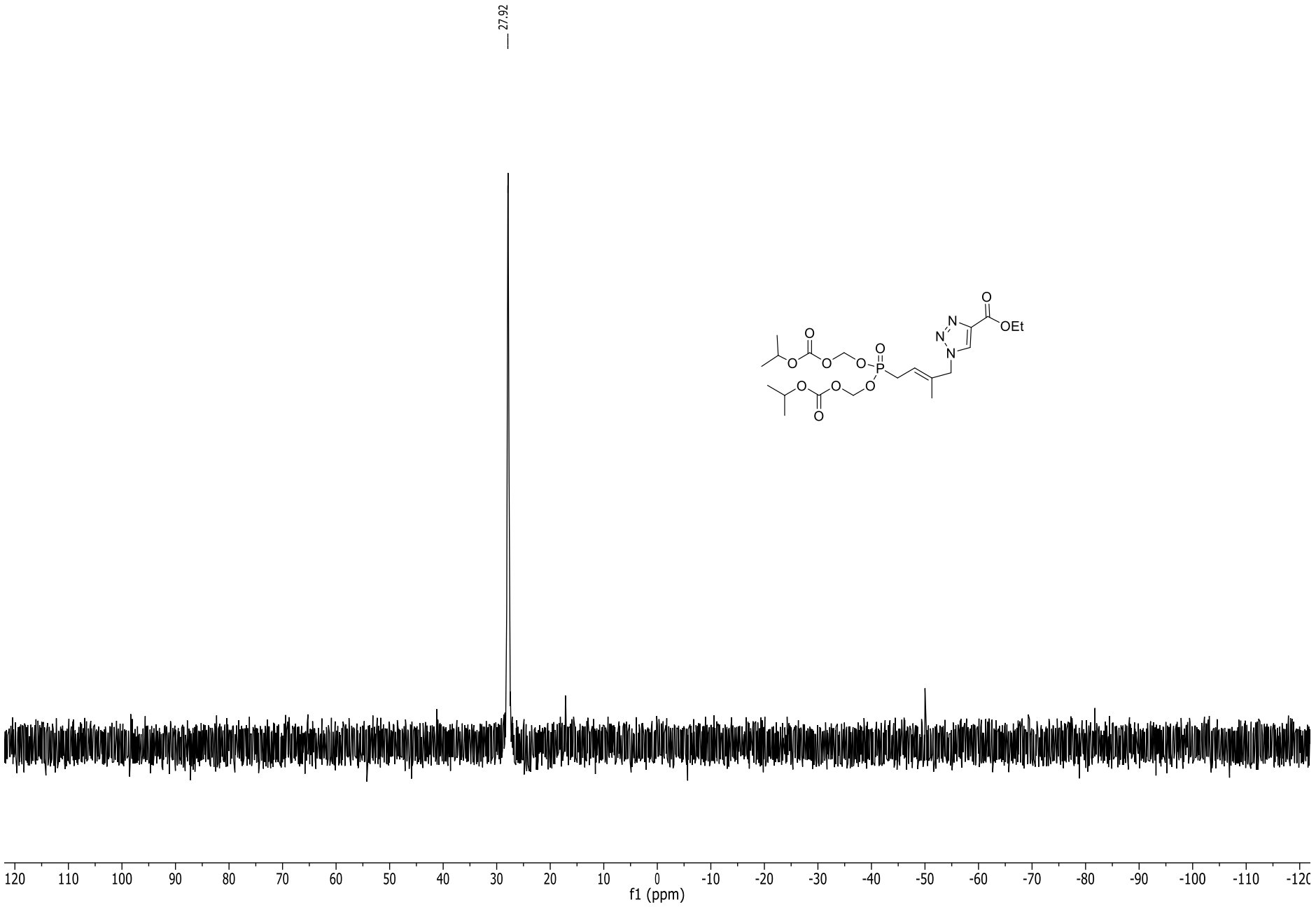
^{1}H NMR (400 MHz, MeOD) Analysis of Compound 11o



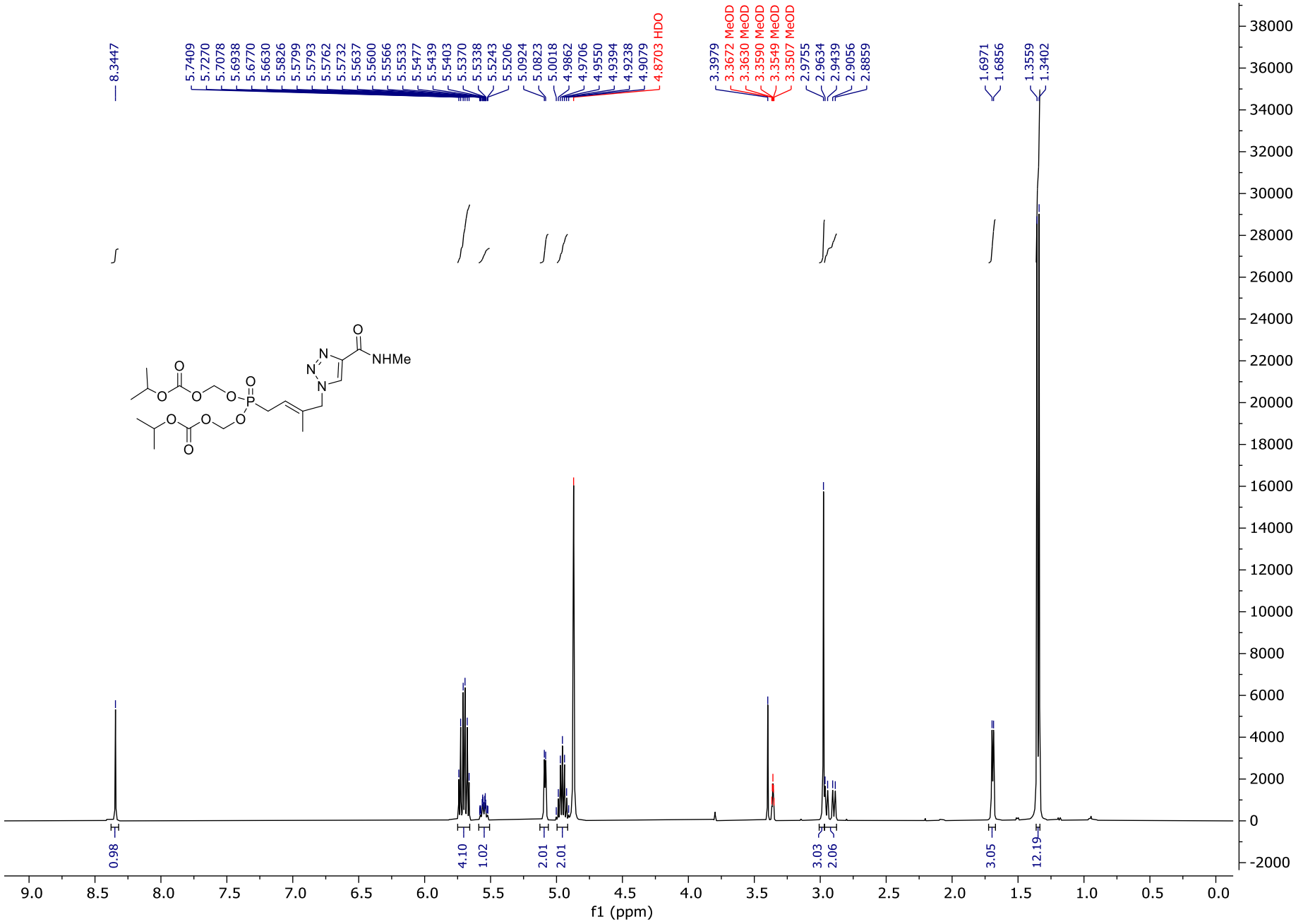
^{13}C NMR (101 MHz, MeOD) Analysis of Compound 11o



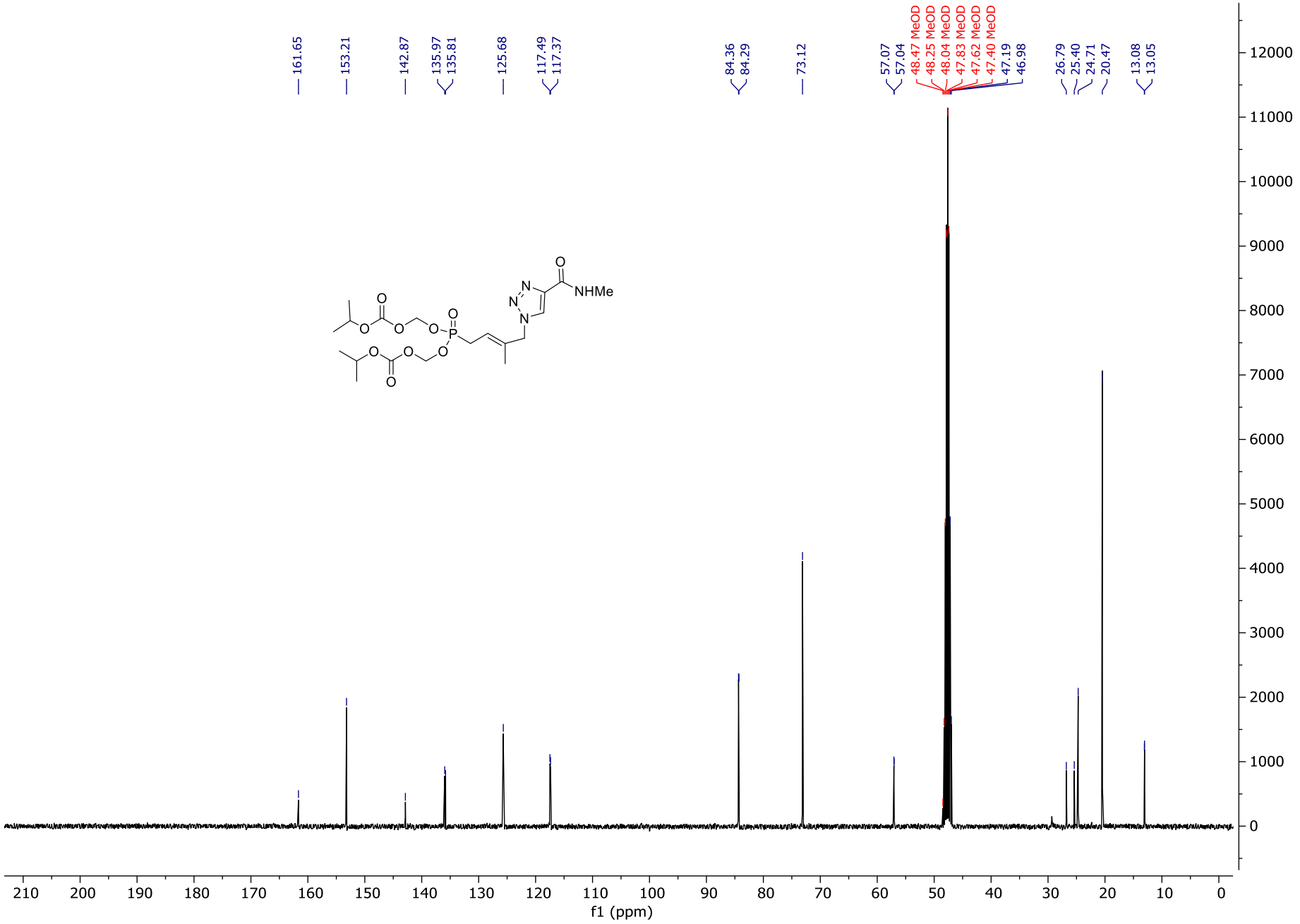
^{31}P NMR (161 MHz, MeOD) Analysis of Compound 11o



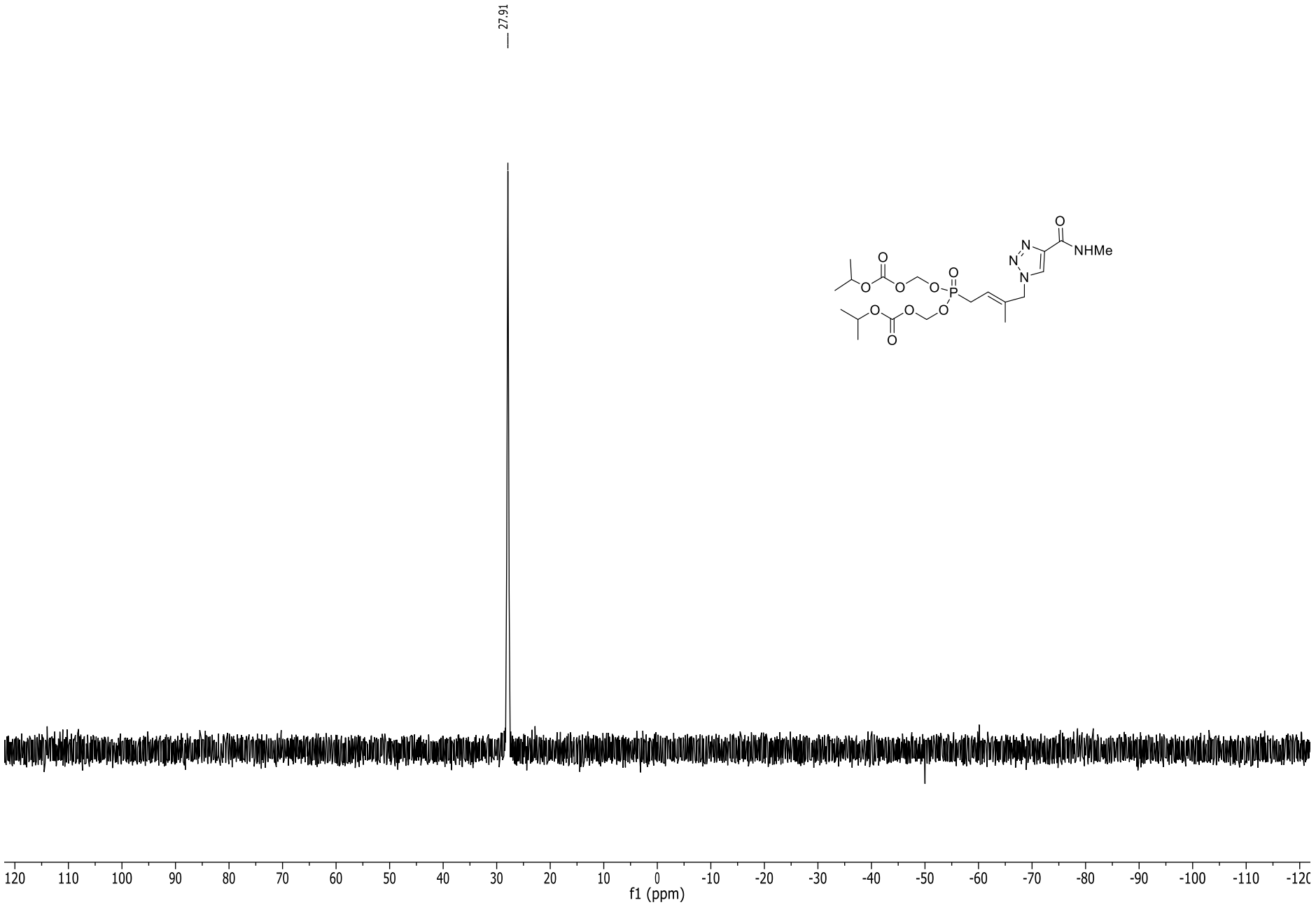
^{1}H NMR (400 MHz, MeOD) Analysis of Compound 11p



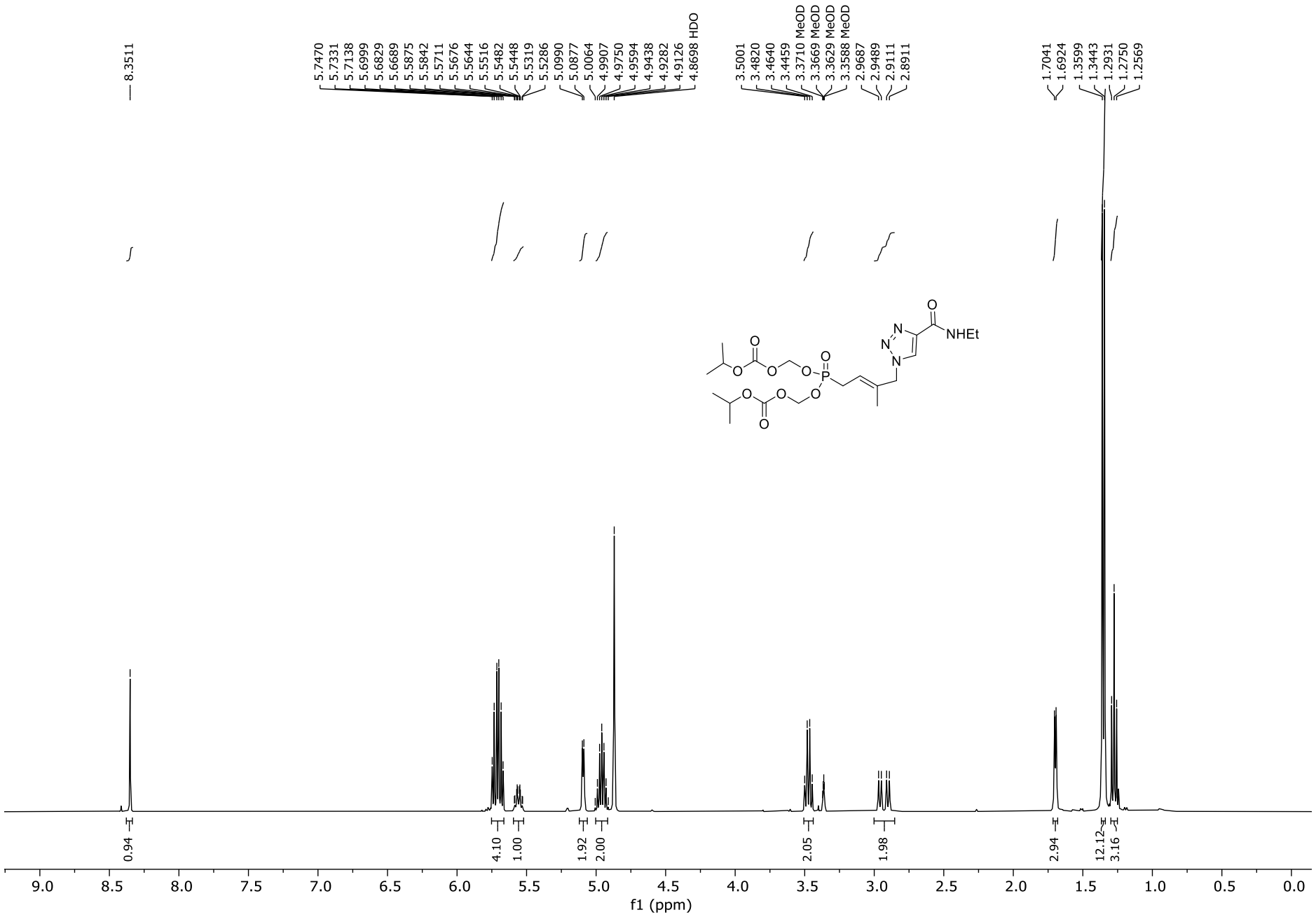
^{13}C NMR (101 MHz, MeOD) Analysis of Compound 11p



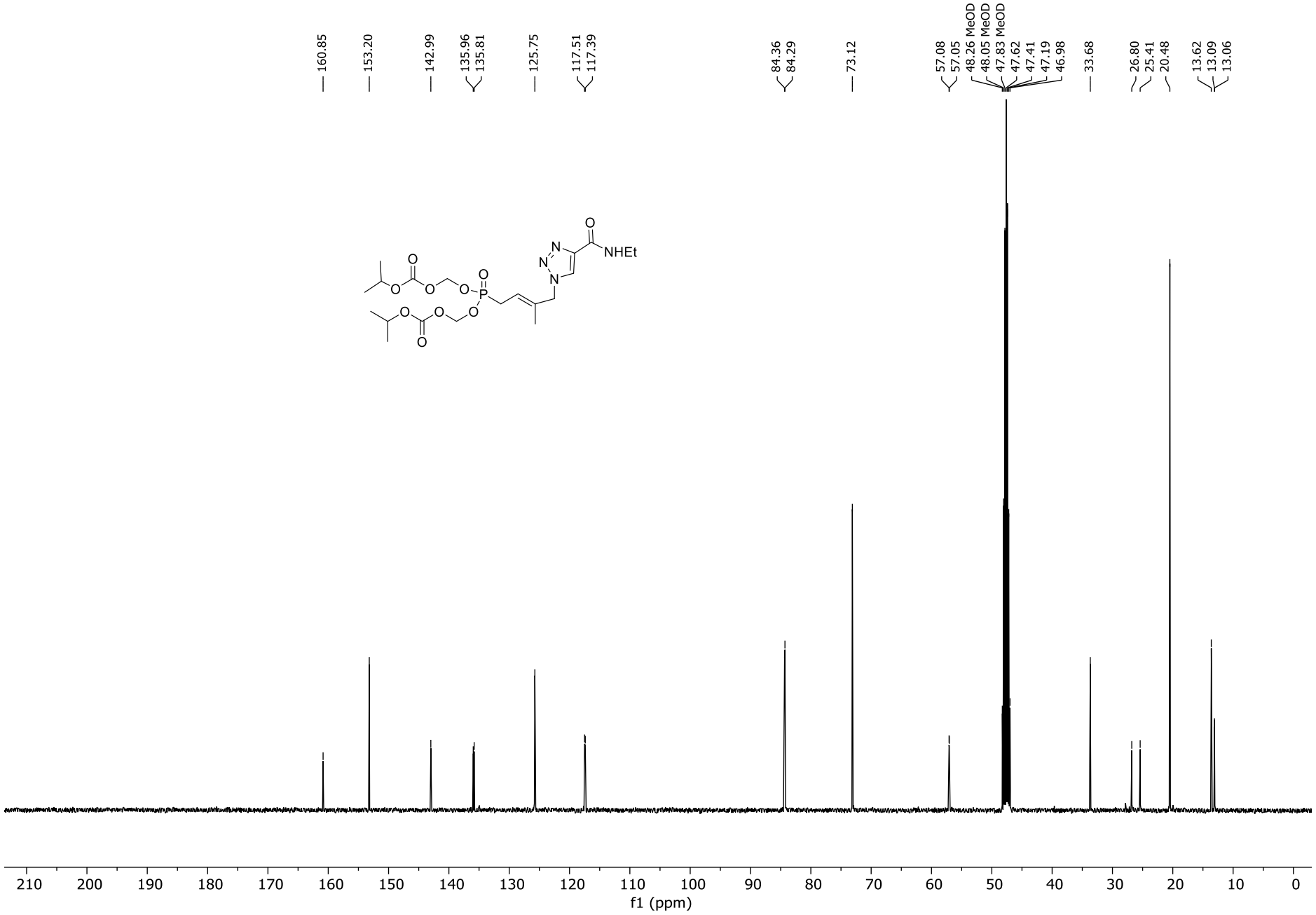
^{31}P NMR (161 MHz, MeOD) Analysis of Compound 11p



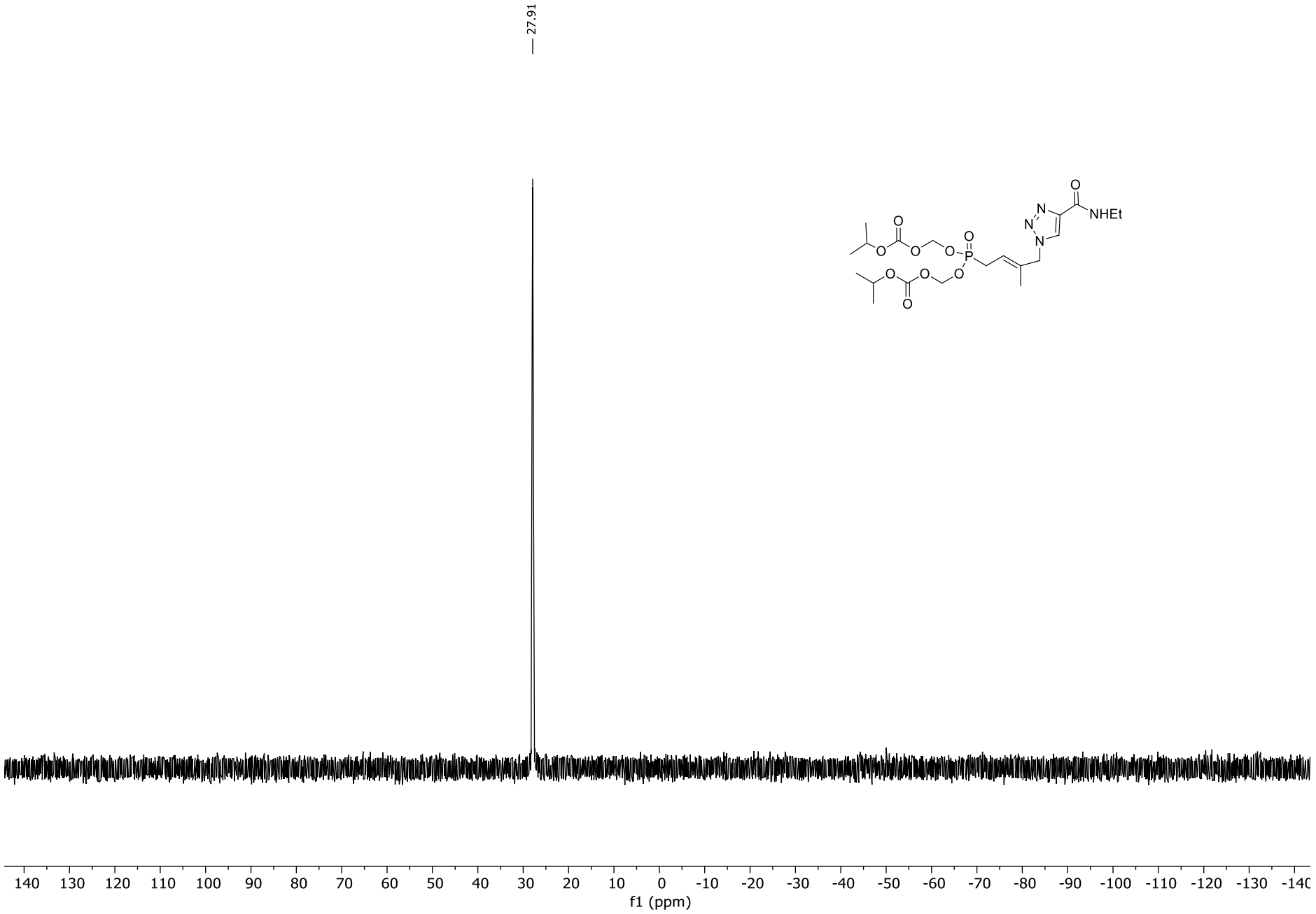
^{1}H NMR (400 MHz, MeOD) Analysis of Compound 11q



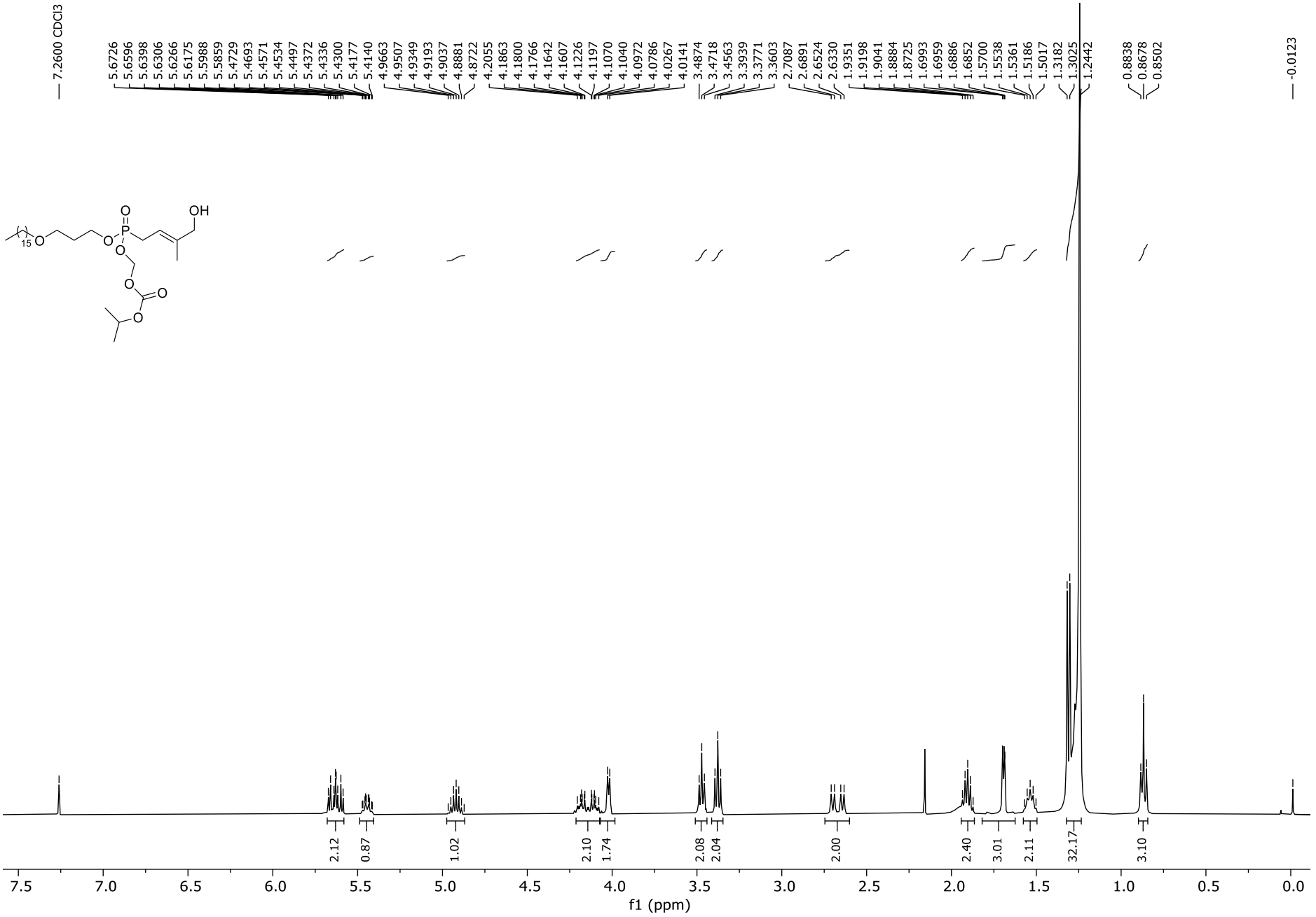
^{13}C NMR (101 MHz, MeOD) Analysis of Compound 11q



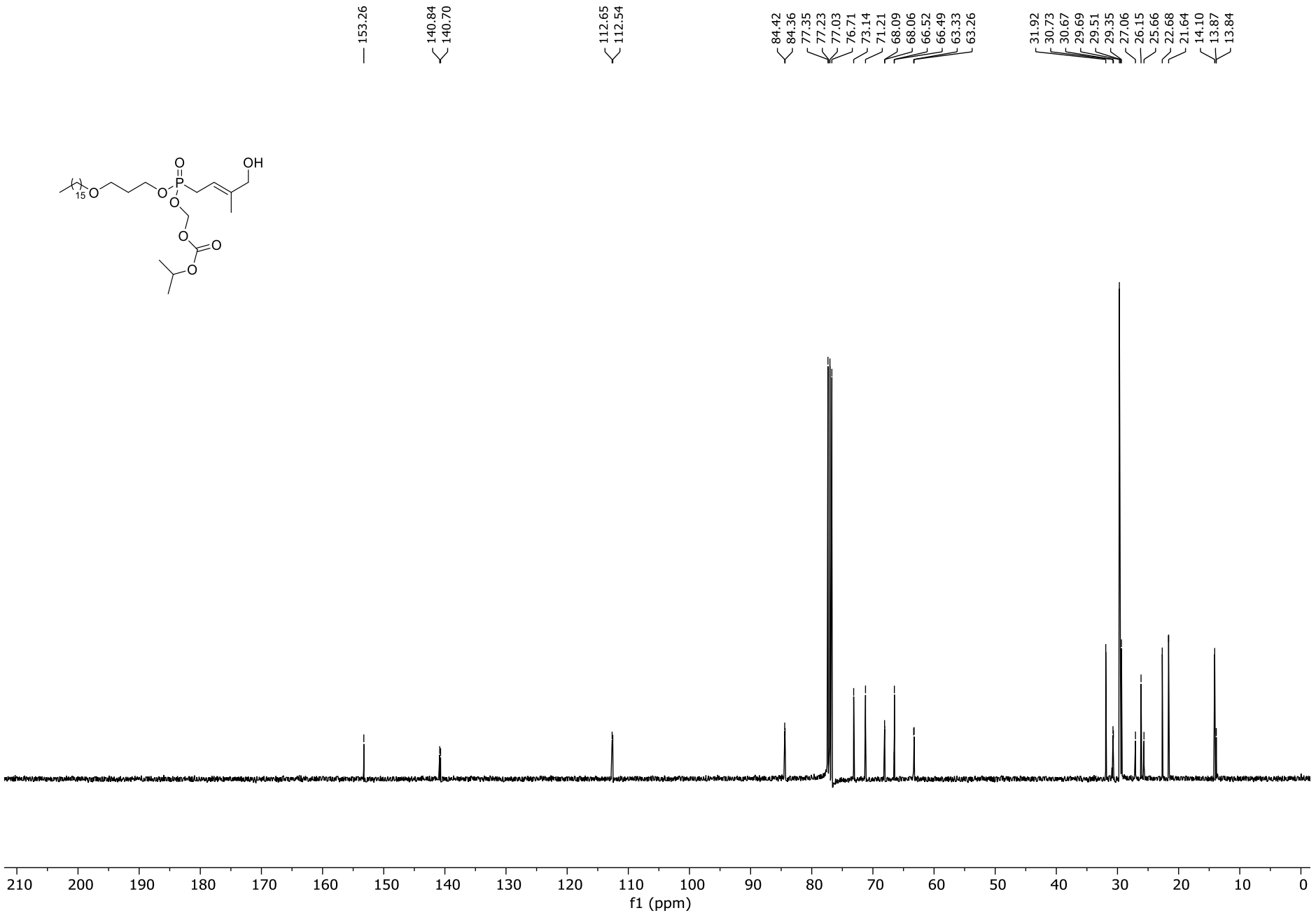
^{31}P NMR (161 MHz, MeOD) Analysis of Compound 11q



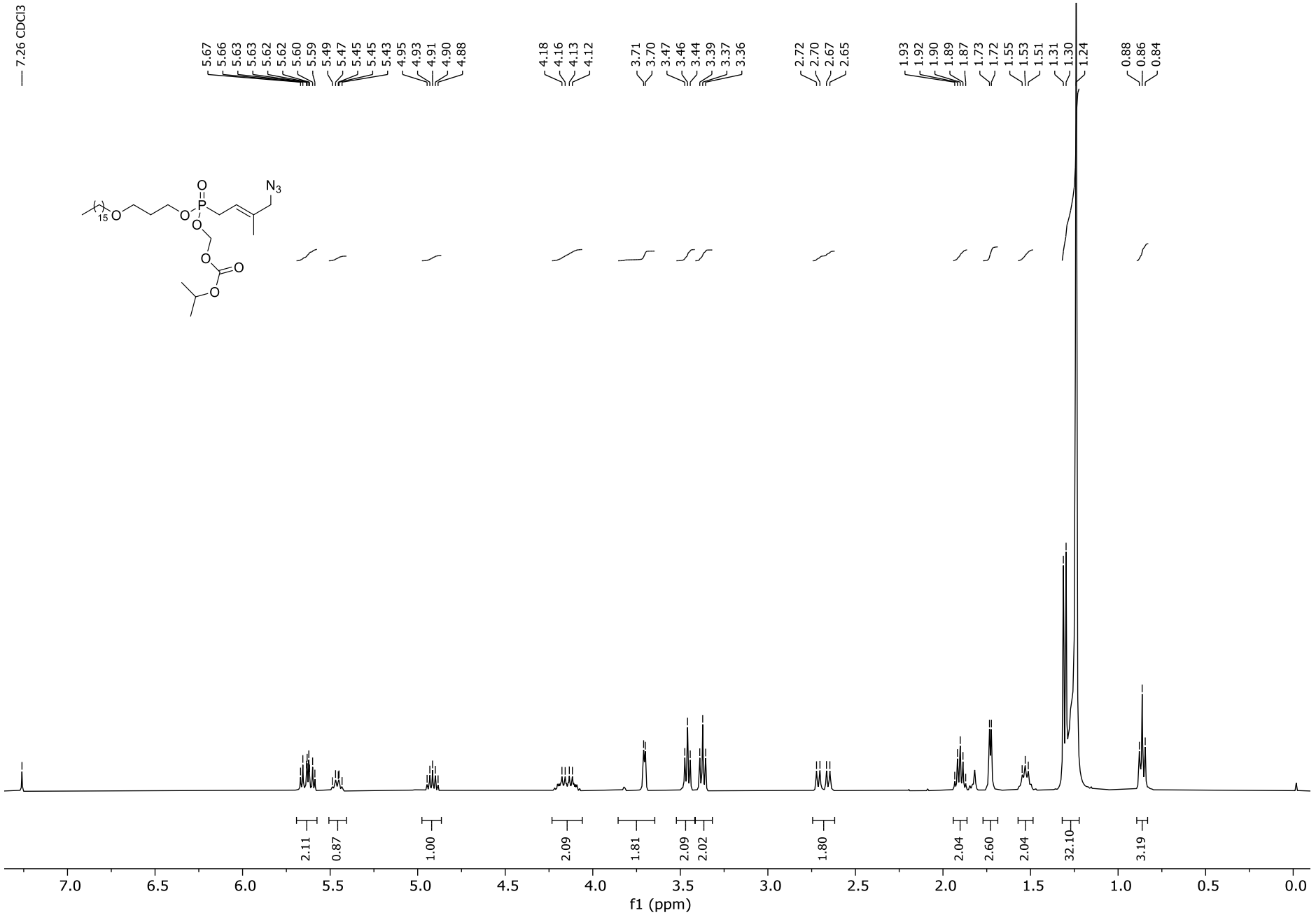
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 13



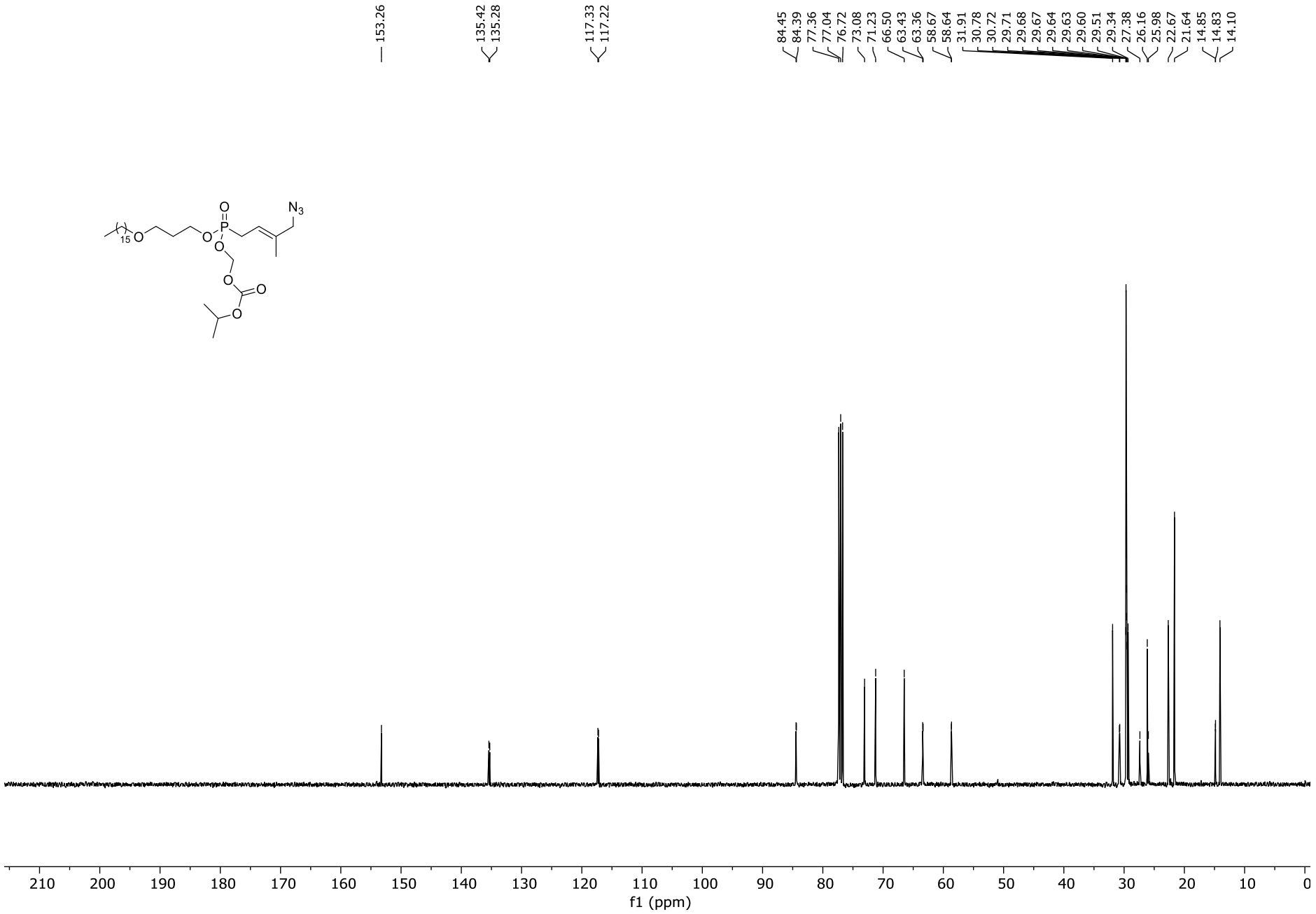
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 13



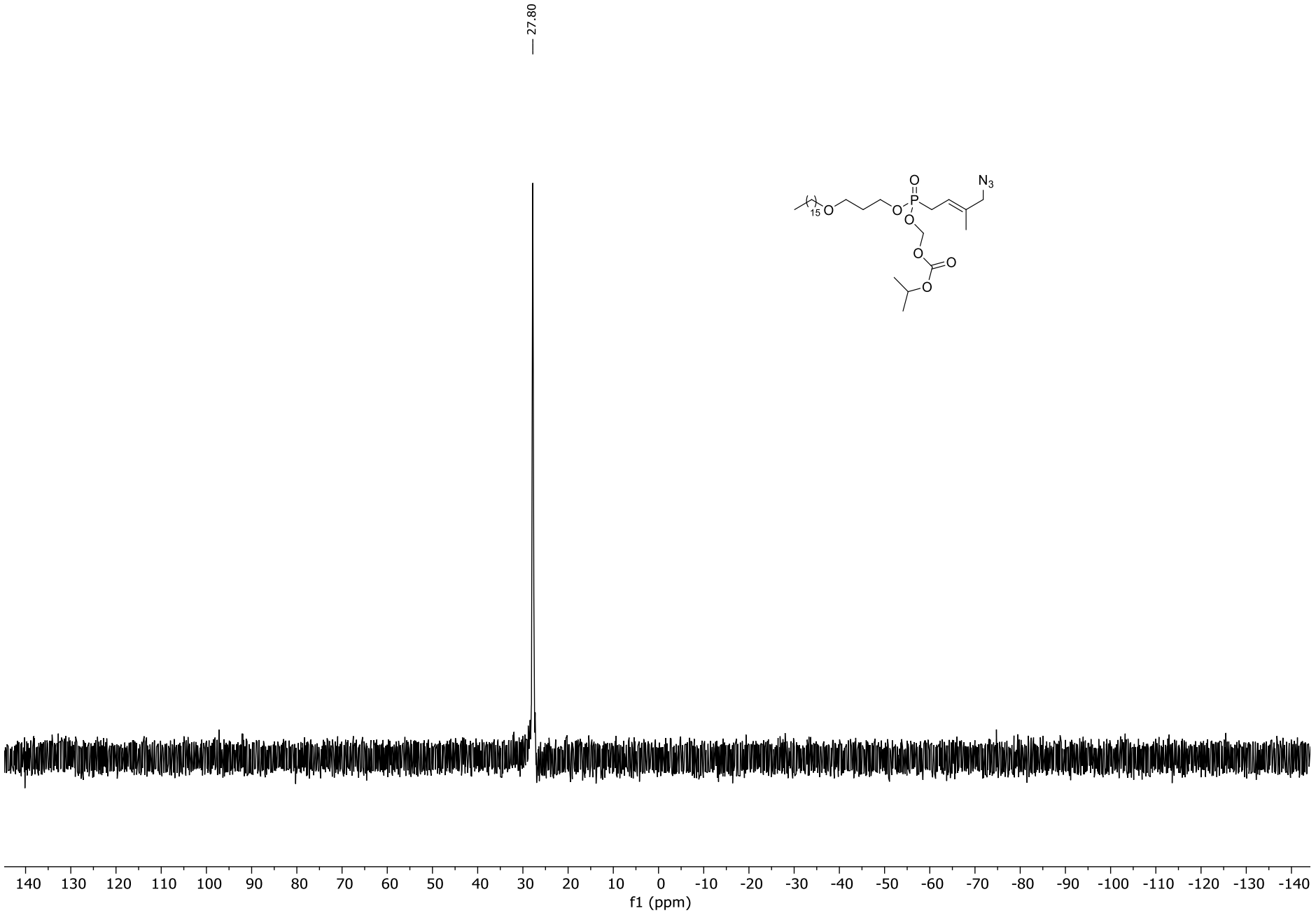
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 14



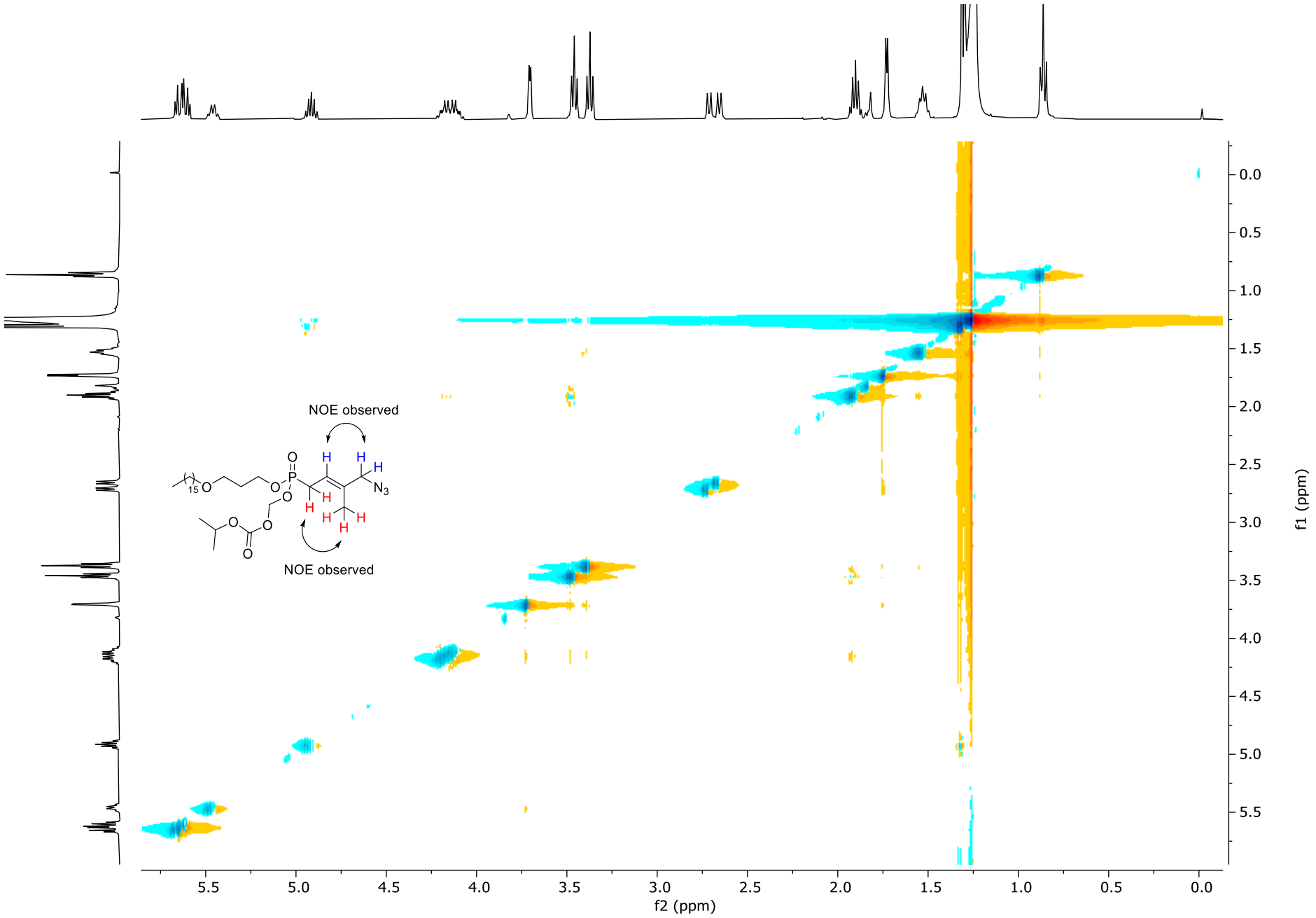
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 14



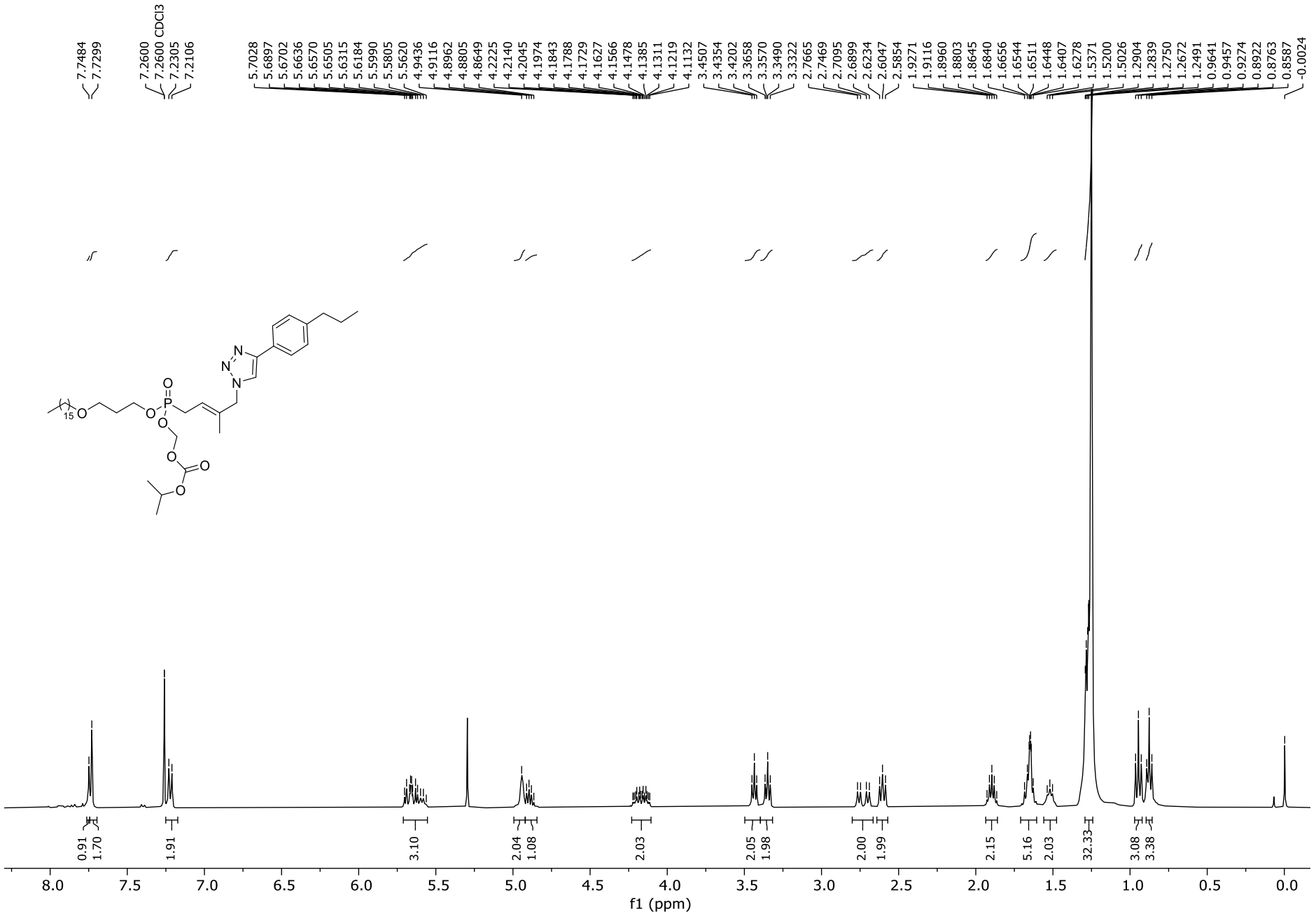
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 14



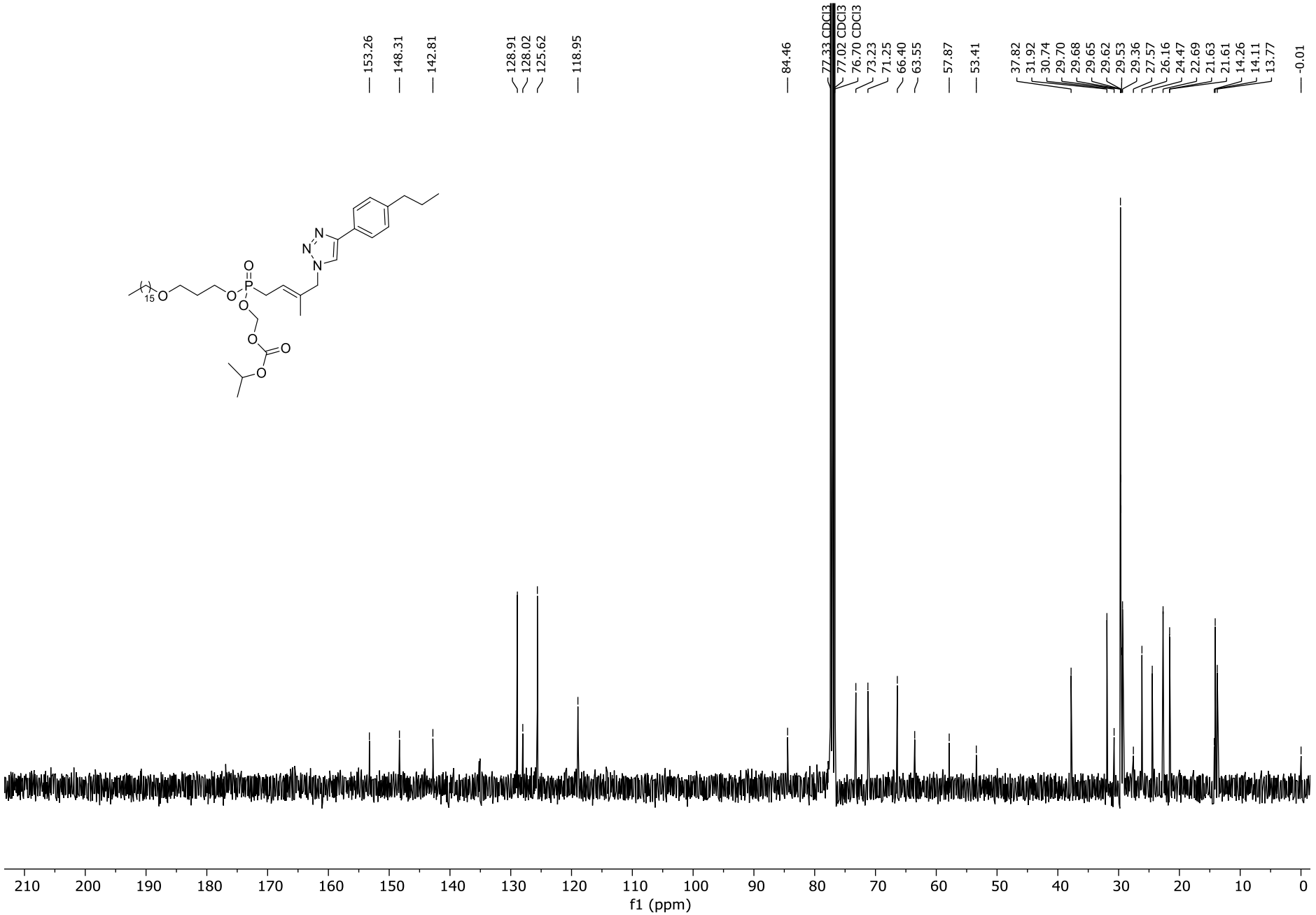
NOESY of Compound 14



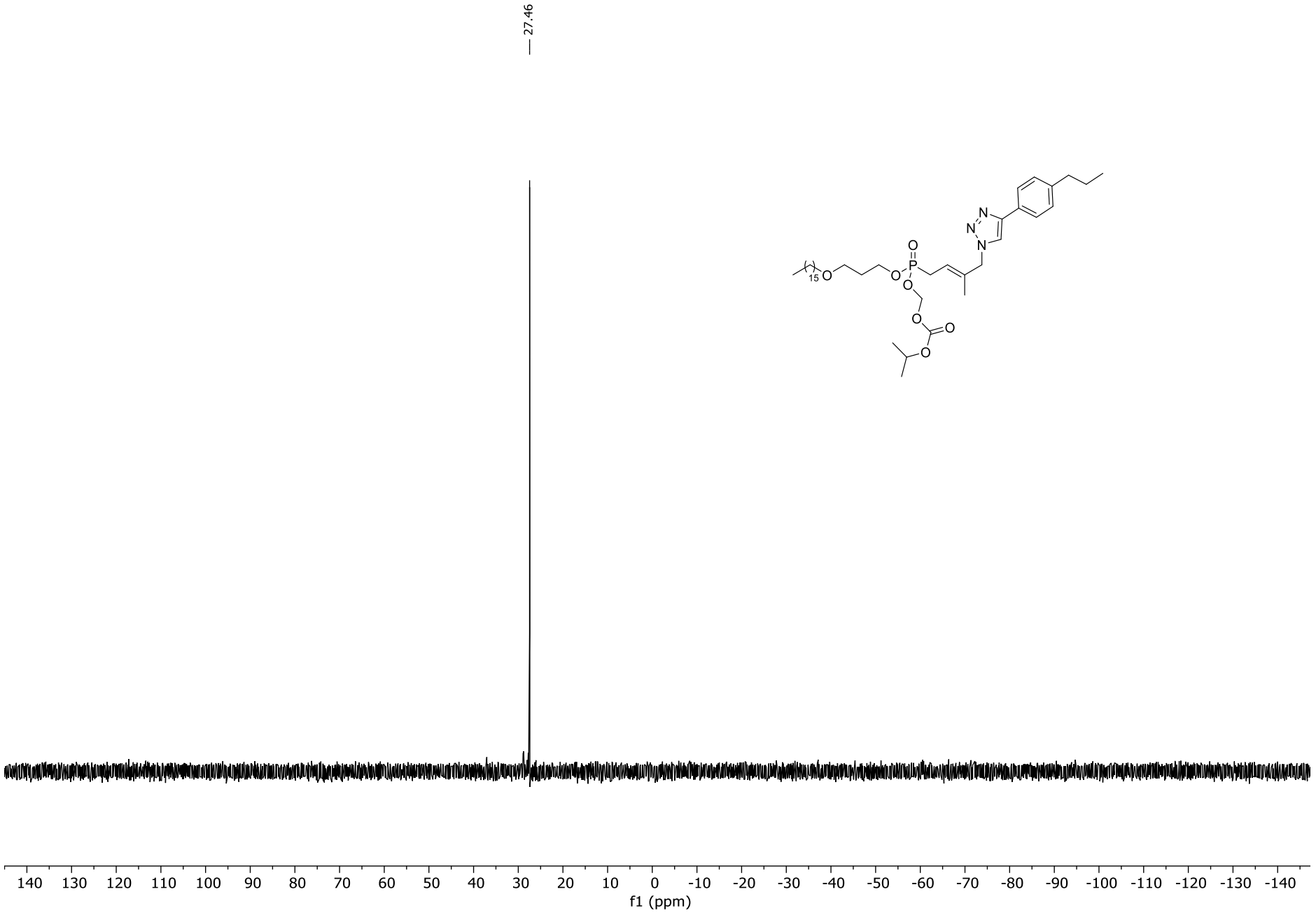
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 15a



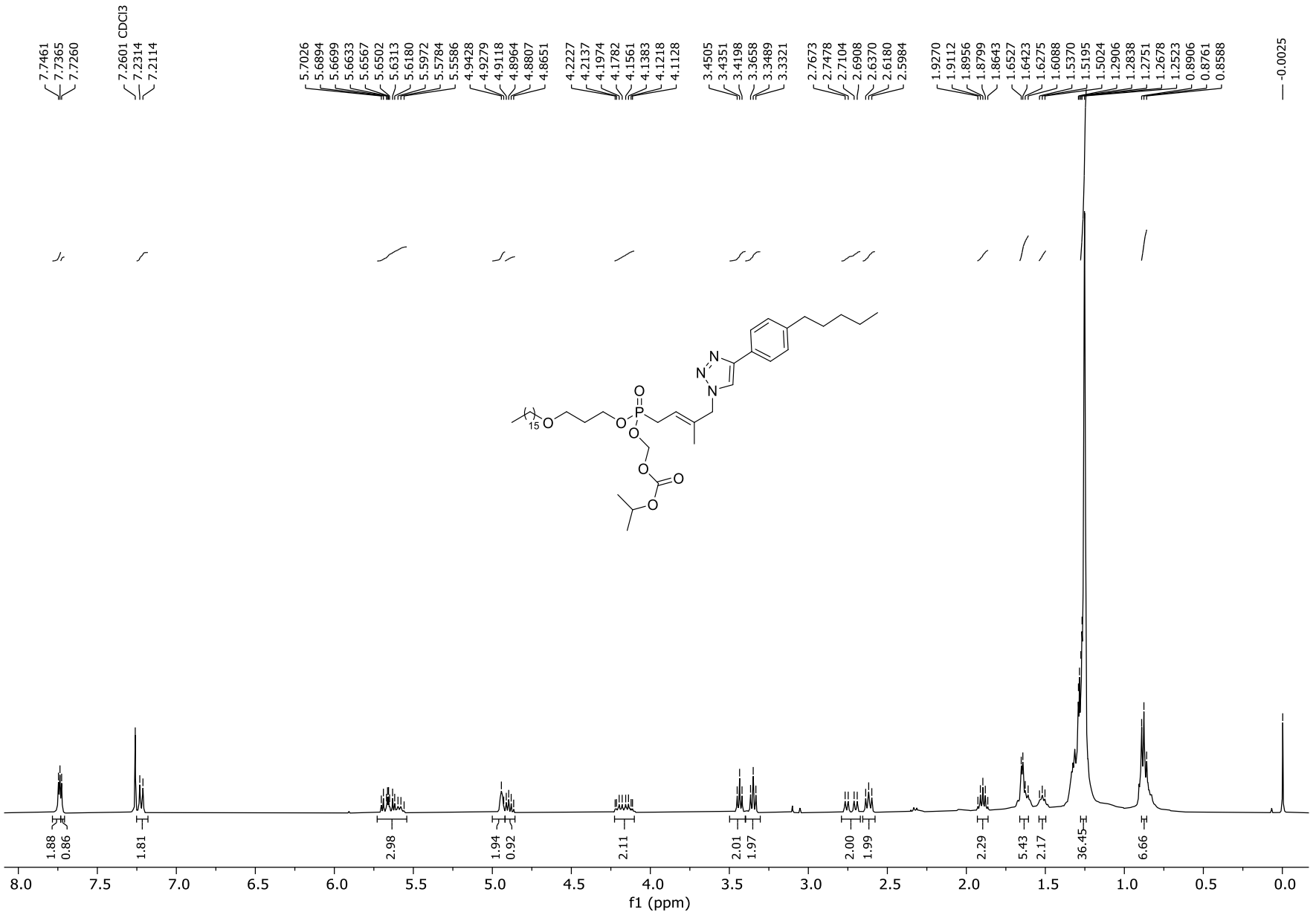
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 15a



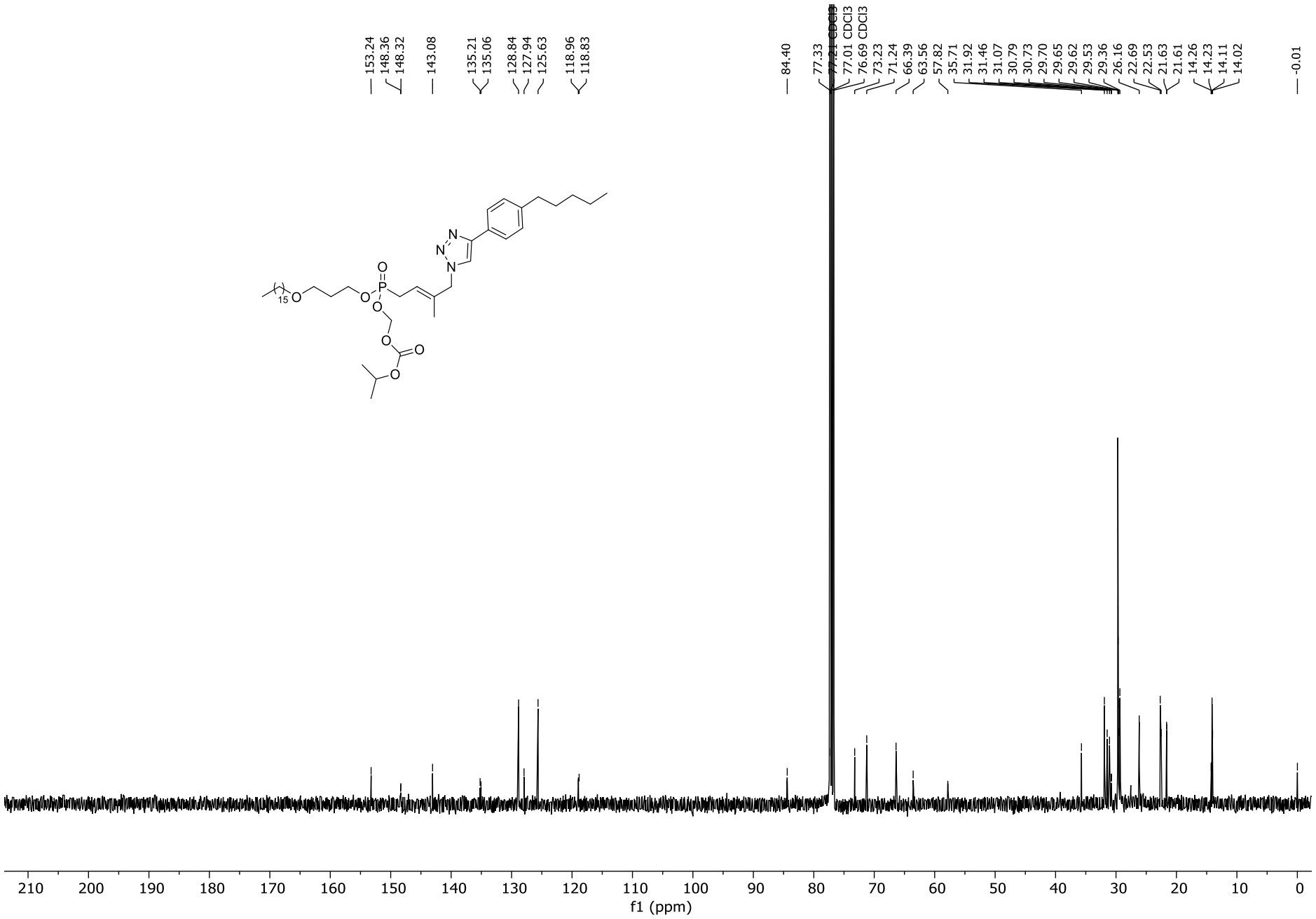
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 15a



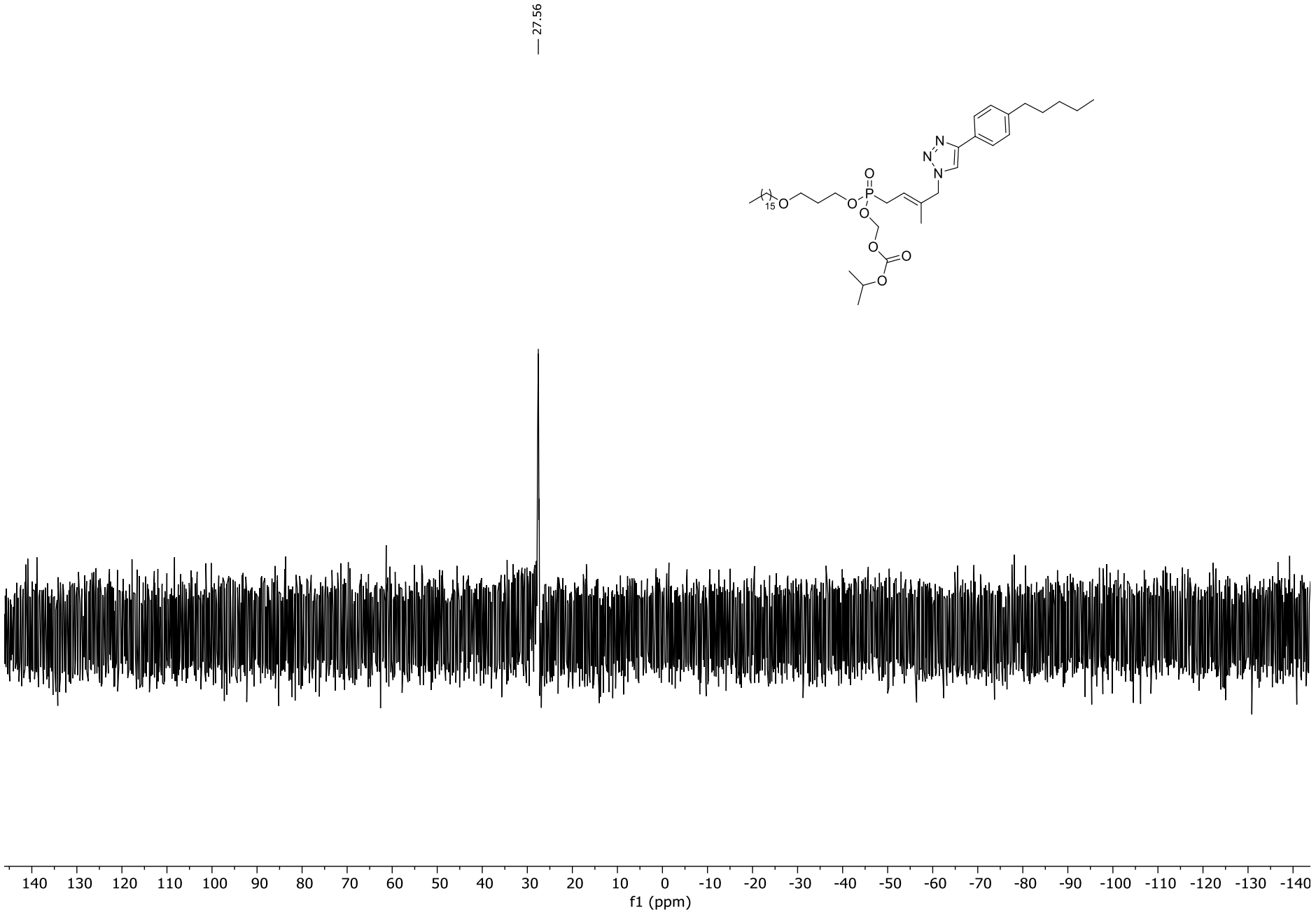
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 15c



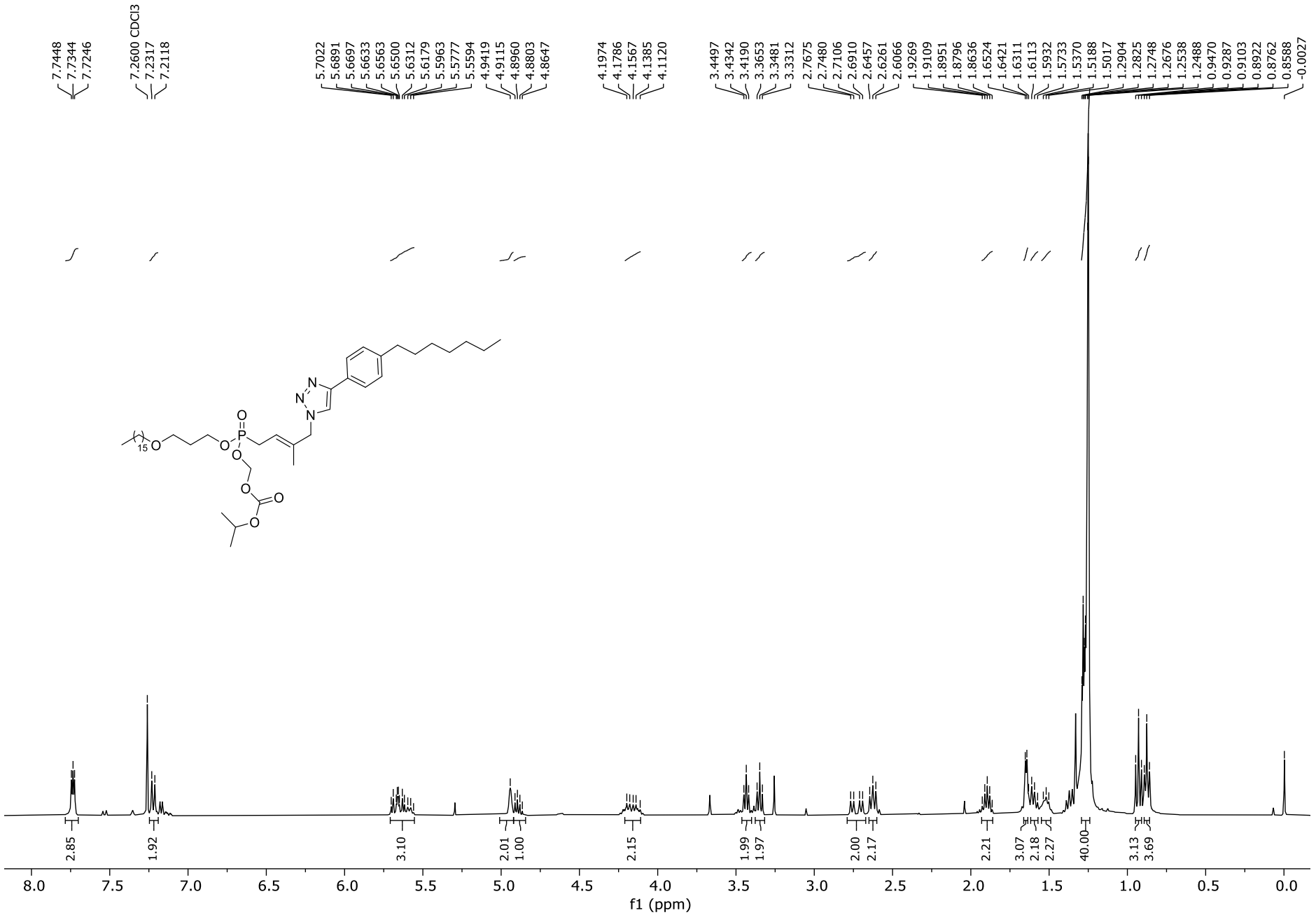
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 15c



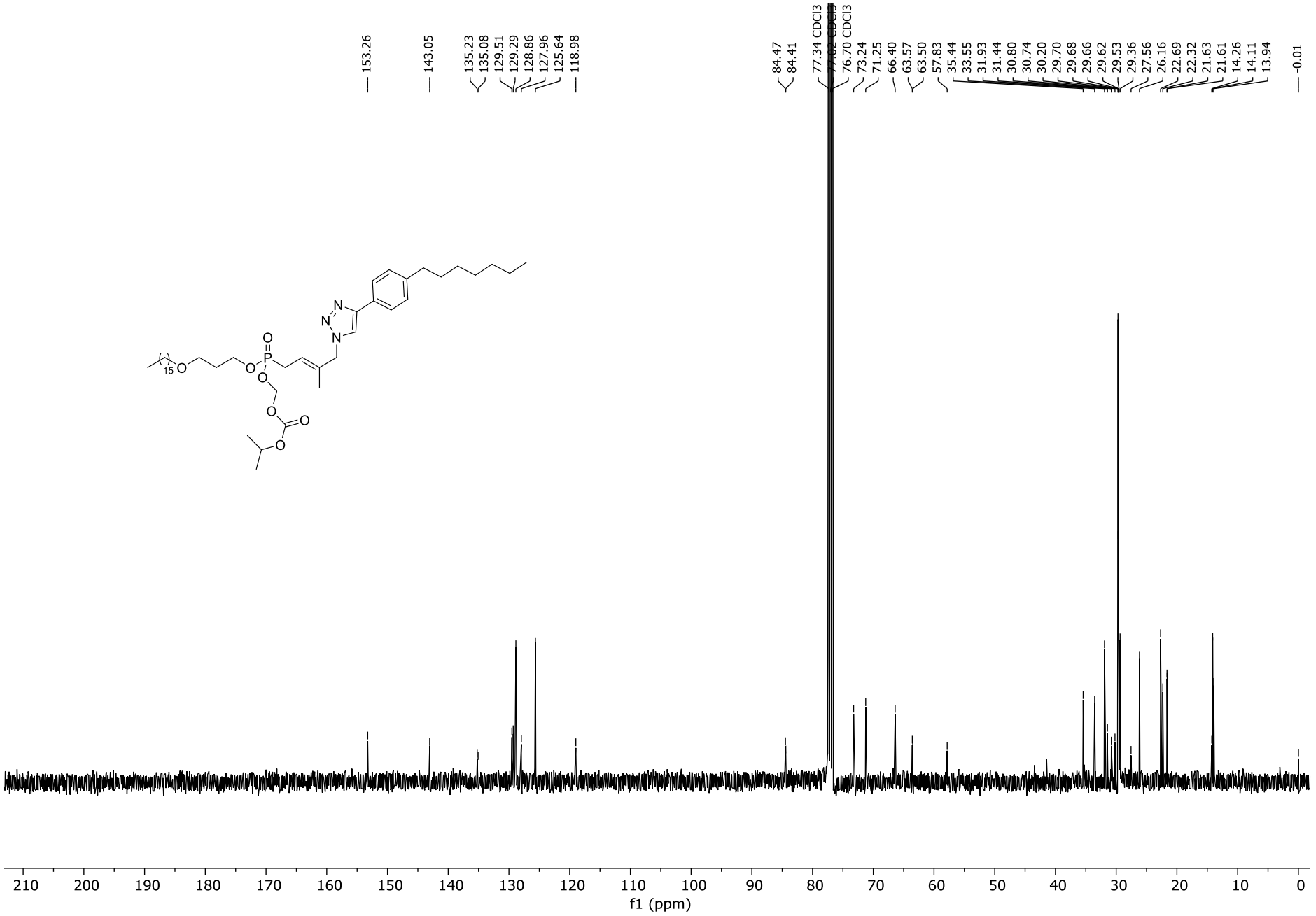
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 15c



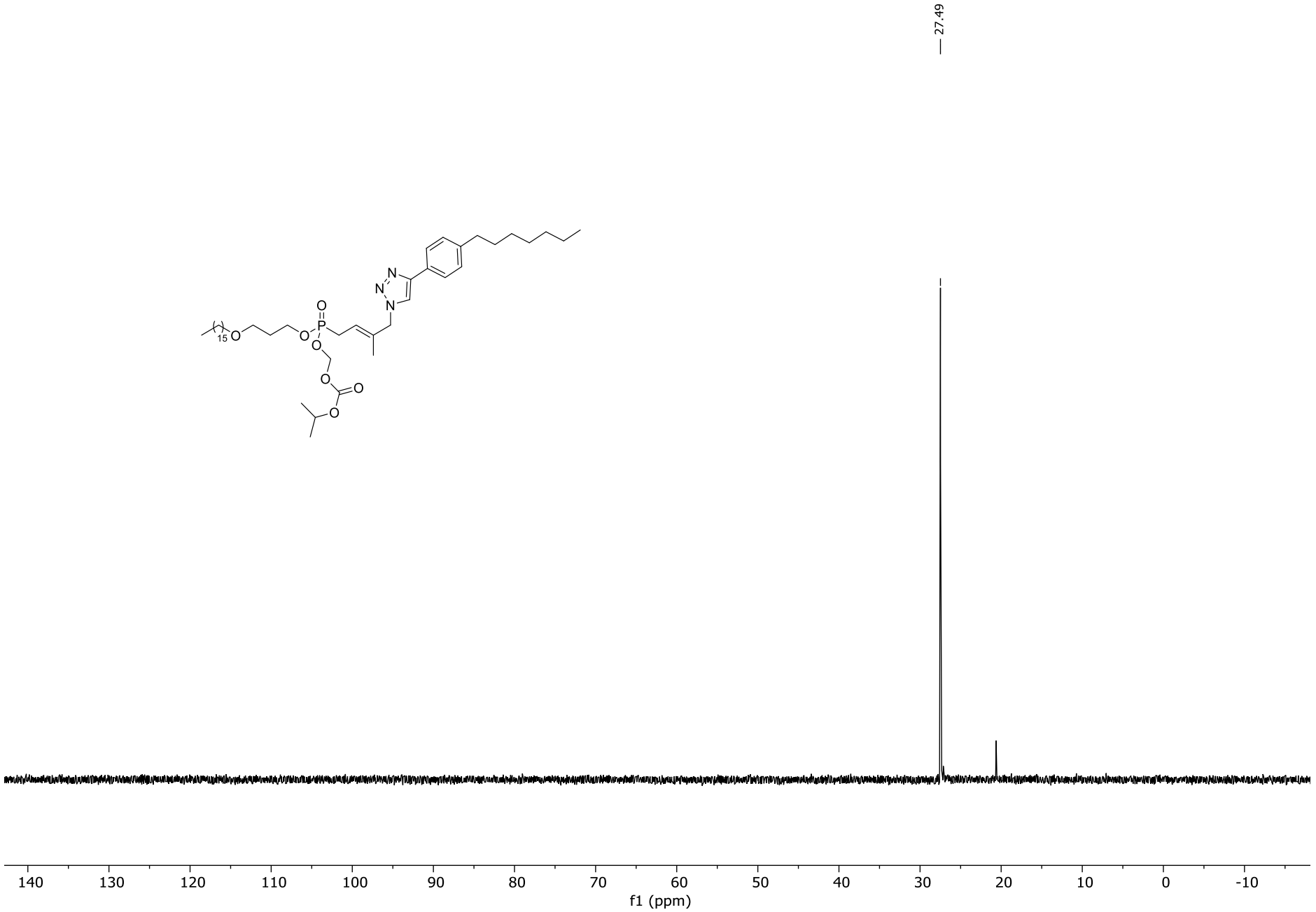
^{1}H NMR (400 MHz, MeOD) Analysis of Compound 15e



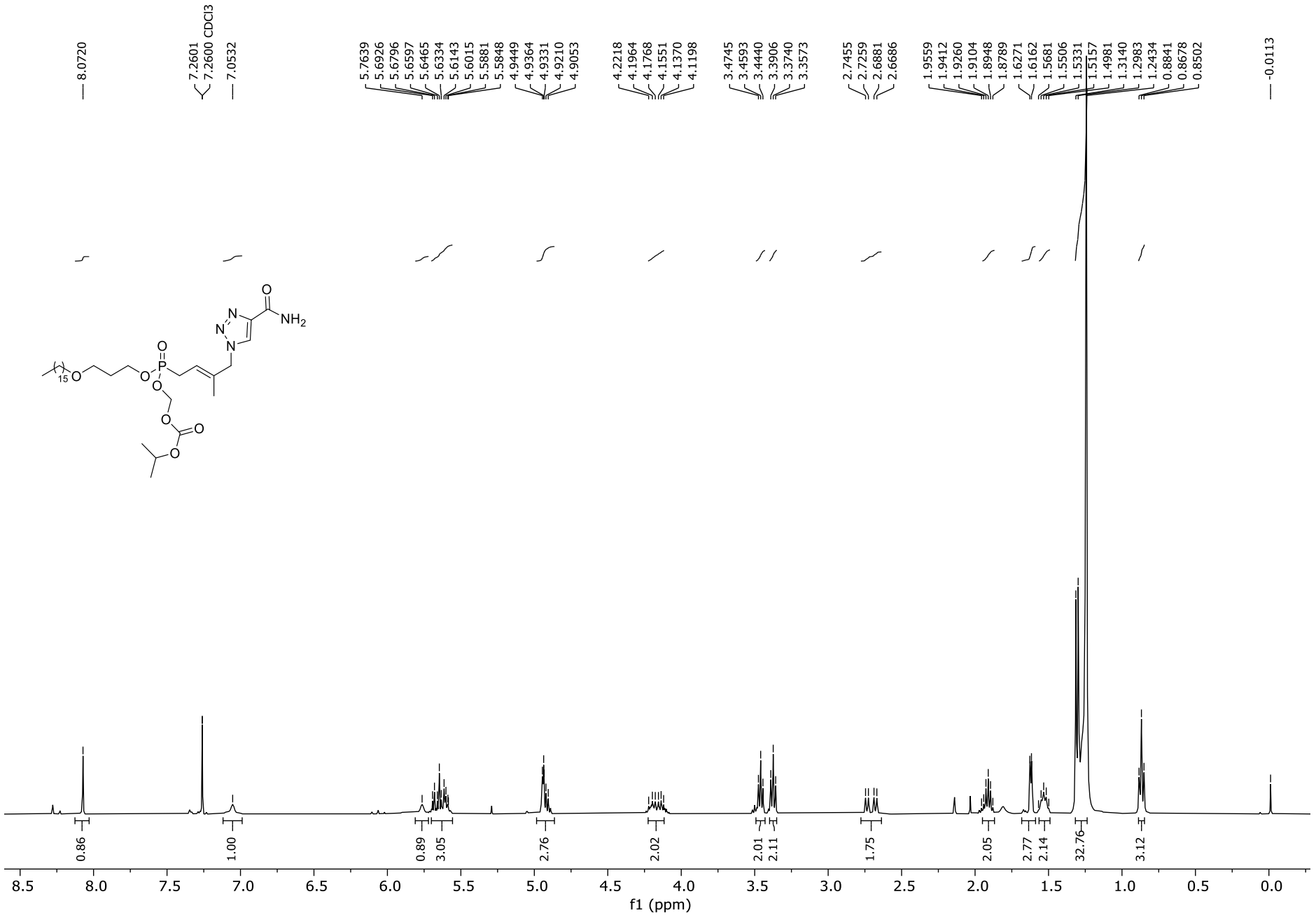
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 15e



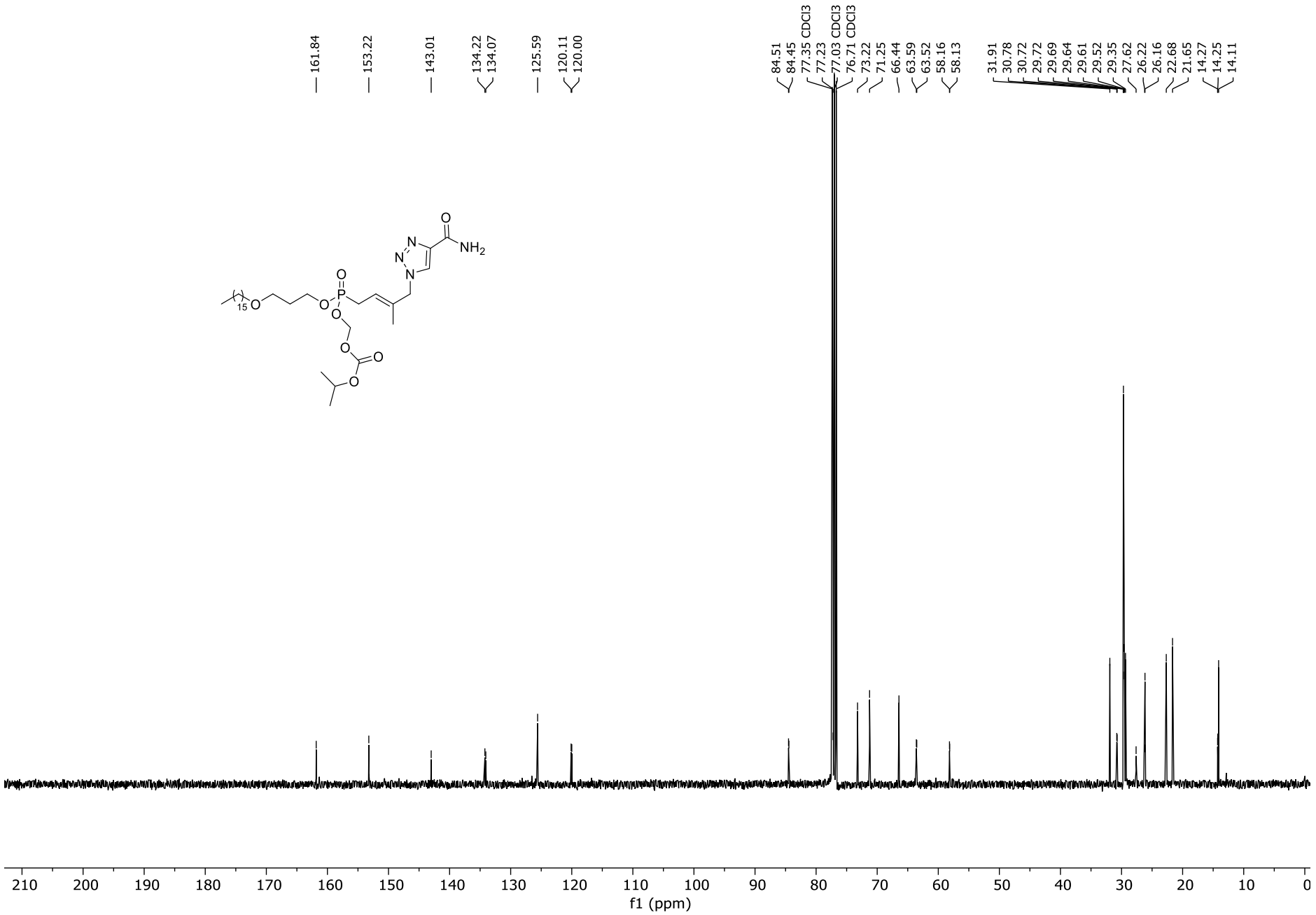
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 15e



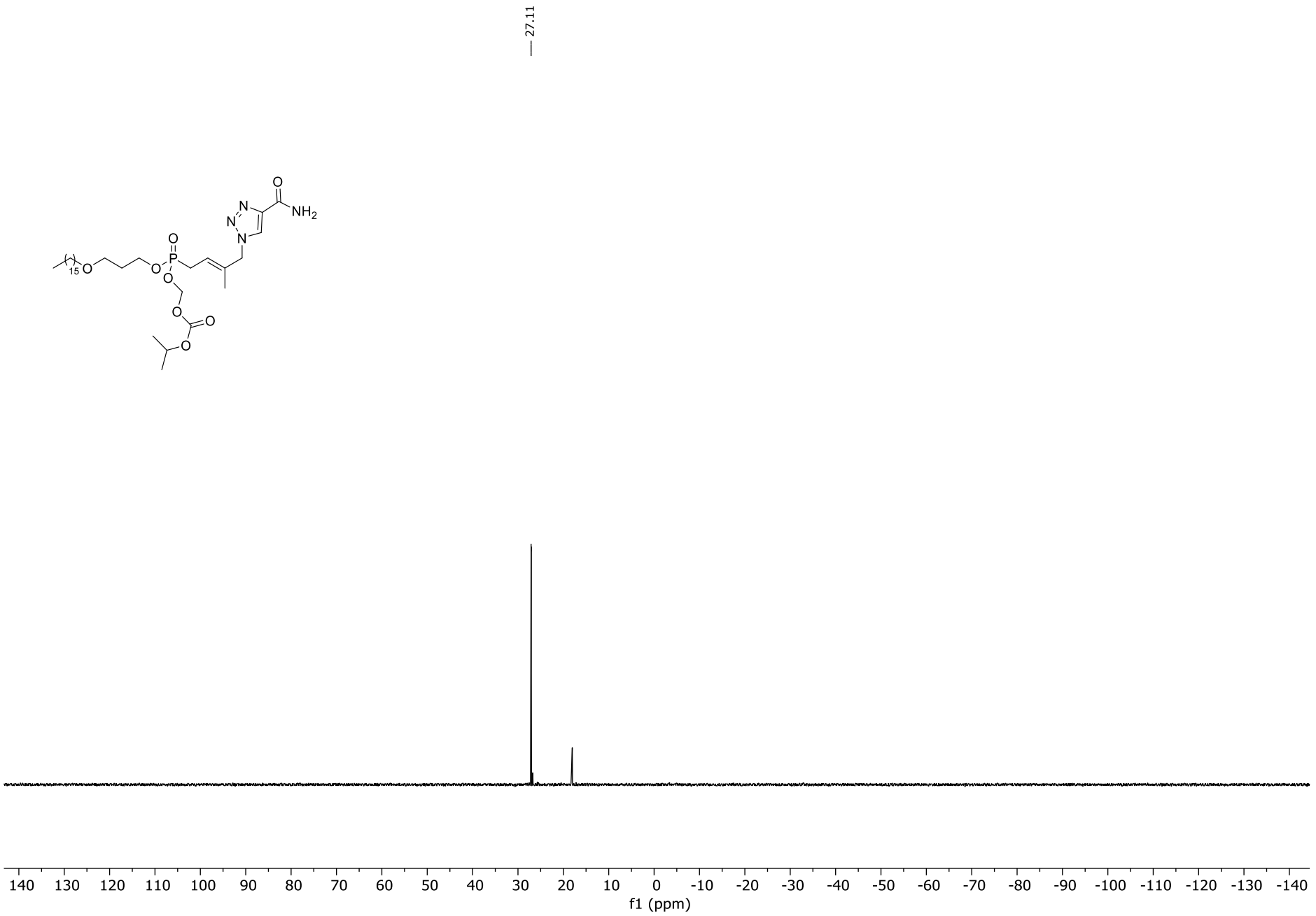
^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 15j



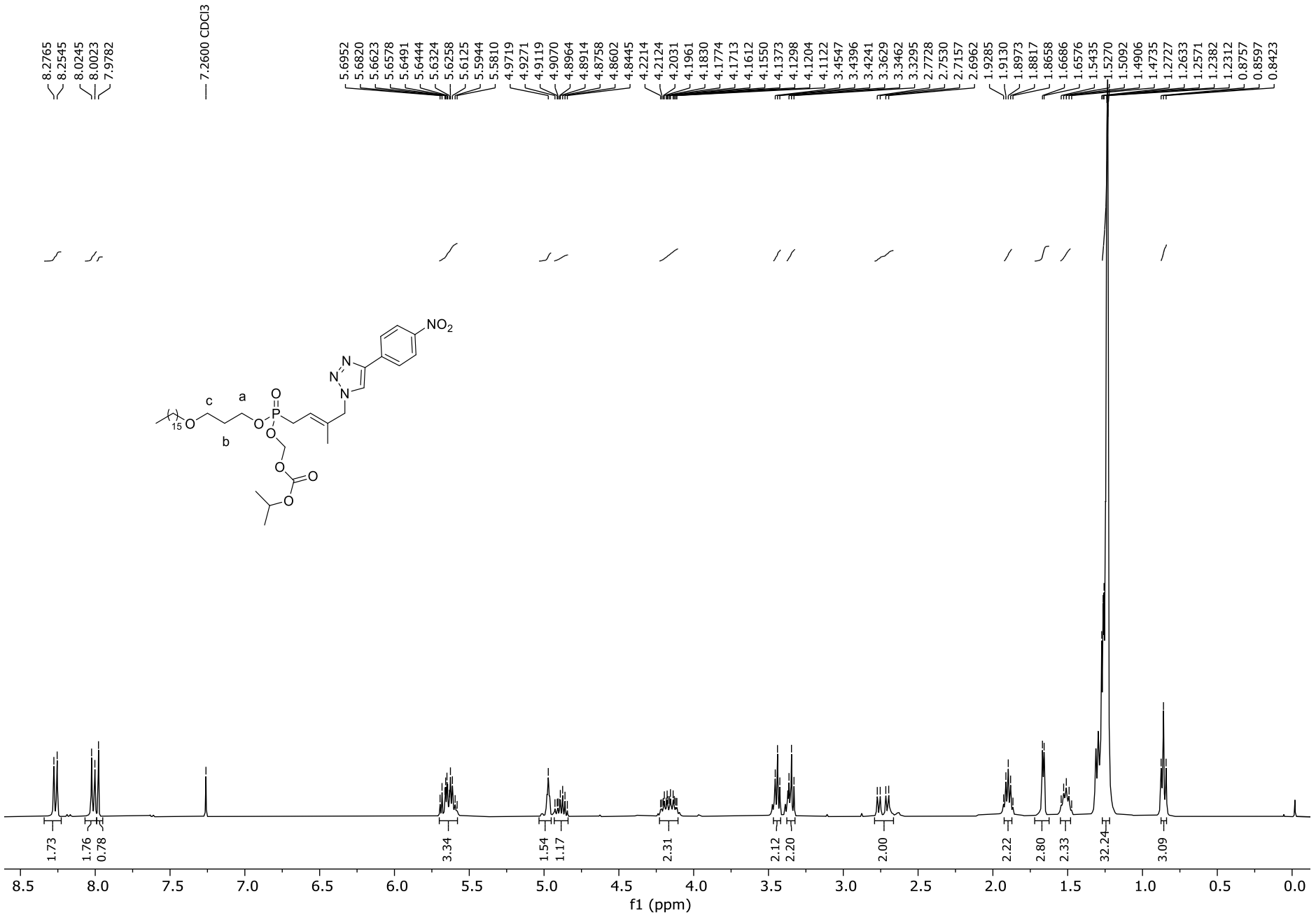
^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 15j



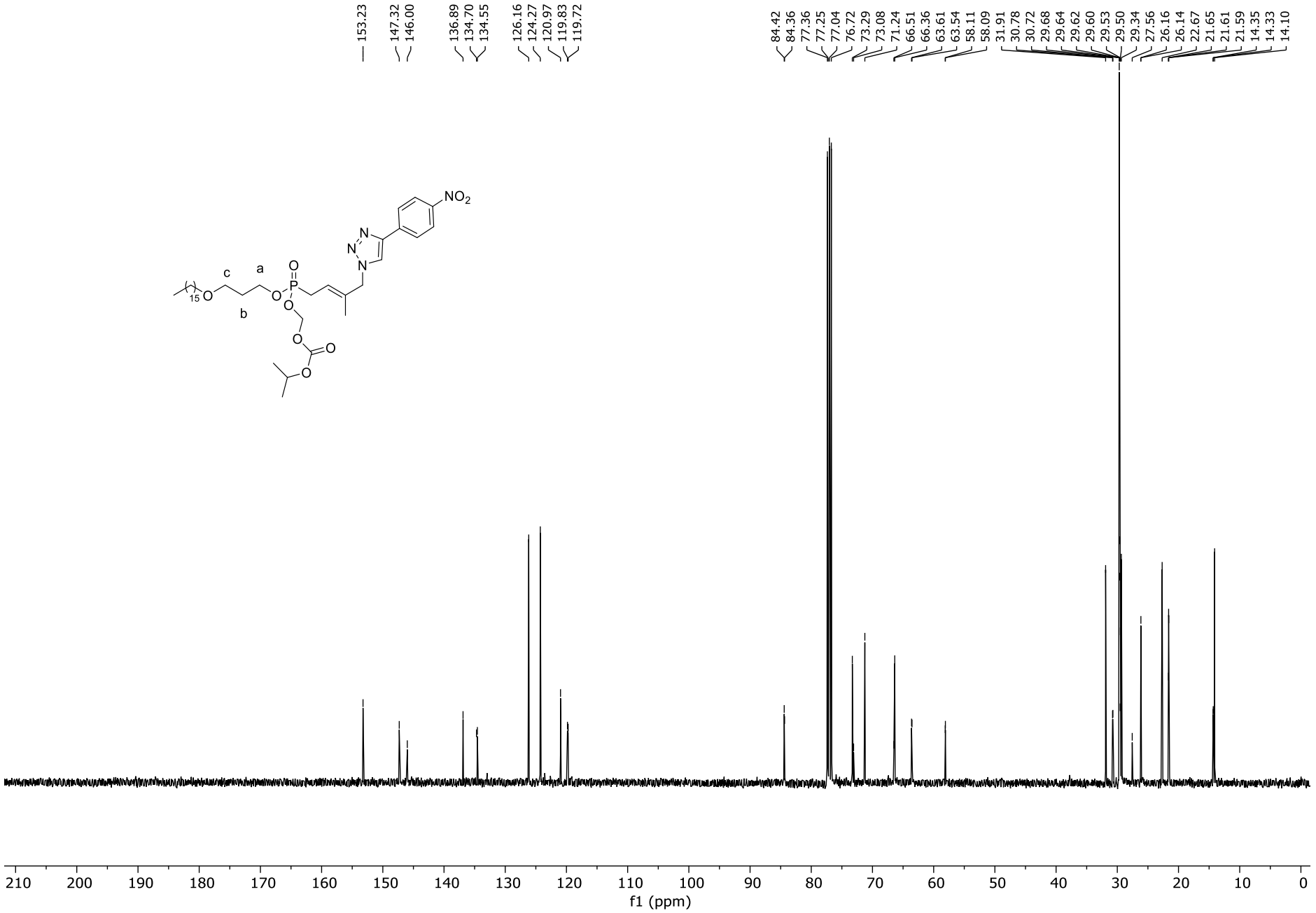
^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 15j



^{1}H NMR (400 MHz, $CDCl_3$) Analysis of Compound 15l



^{13}C NMR (101 MHz, $CDCl_3$) Analysis of Compound 15l



^{31}P NMR (161 MHz, $CDCl_3$) Analysis of Compound 15l