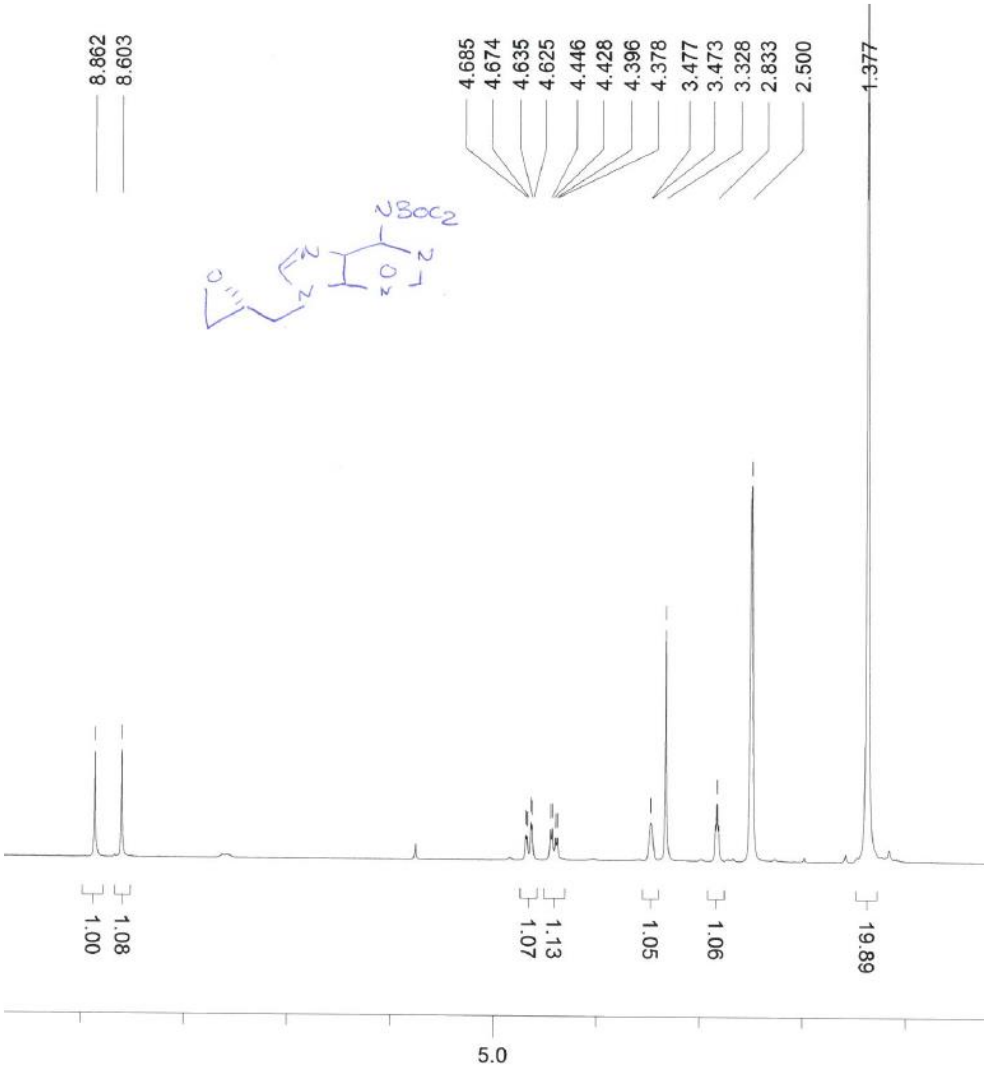
Supporting Information

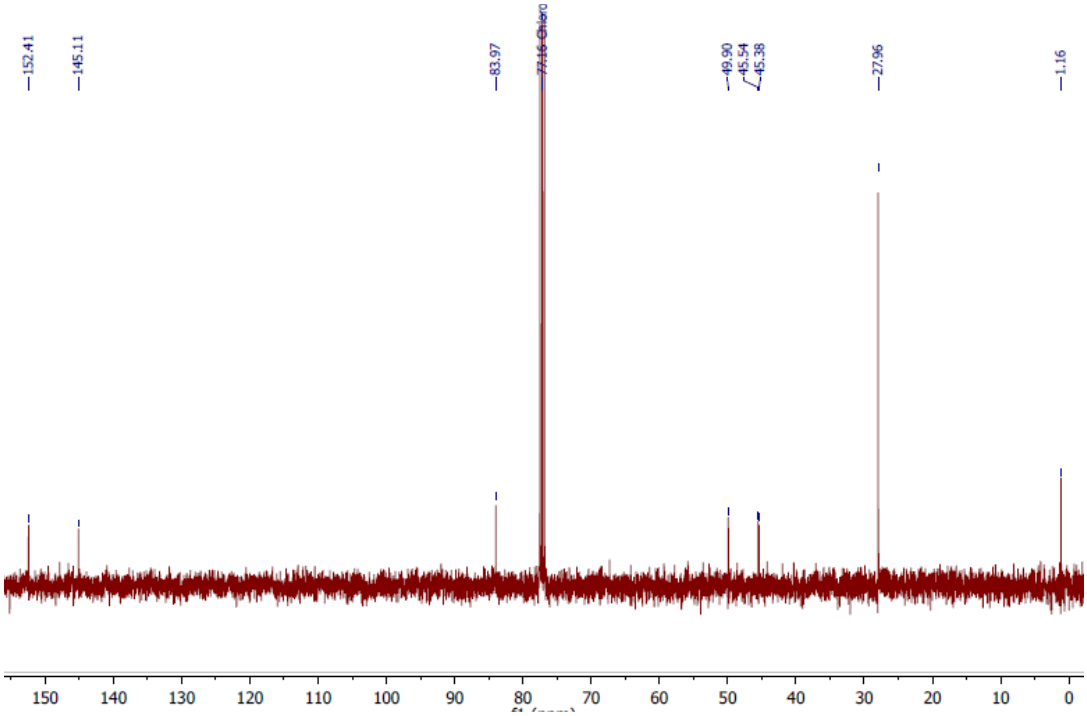
Beta-Hydroxy- and beta-aminophosphonate acyclonucleosides as potent inhibitors of *Plasmodium falciparum* growth

Thomas Cheviet, Sharon Wein, Gabriel Bourchenin, Manon Lagacherie, Christian Périgaud, Rachel Cerdan* and Suzanne Peyrottes*

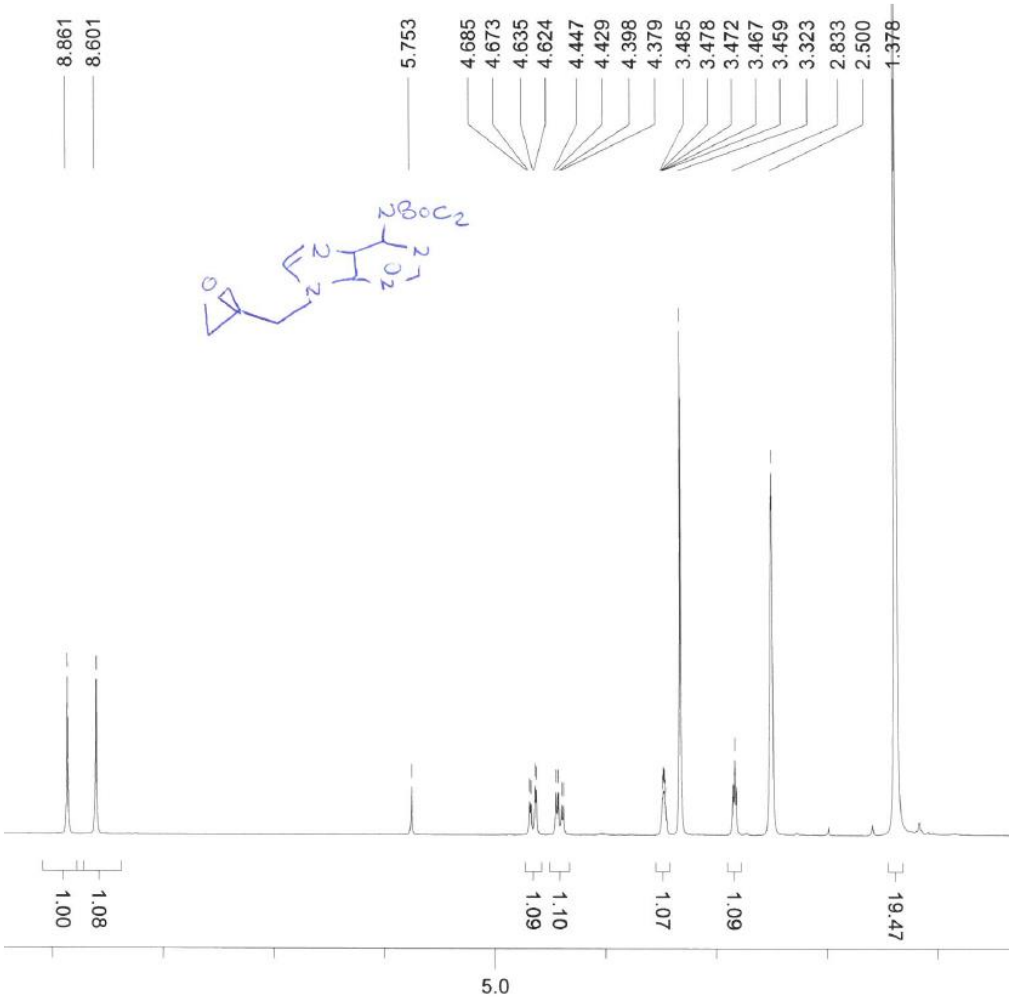
Copies of ^{1}H NMR and ^{13}C NMR for intermediates **14** to **19** and **21** to **41**

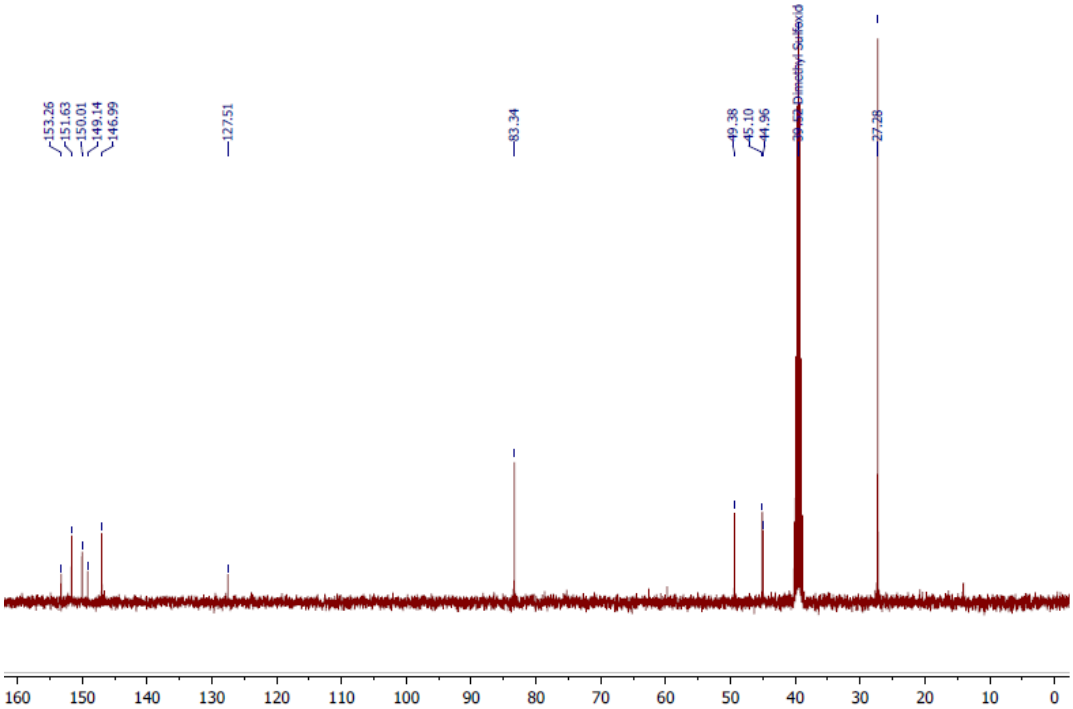
N,N-6-Bis(*tert*-butoxycarbonyl)-*N*-9-(2*R*-(oxiran-2-yl)methyl)-adenine, (*R*)-14





N,N-6-Bis(*tert*-butoxycarbonyl)-*N*-9-(2*S*-(oxiran-2-yl)methyl)-adenine, (*S*)-14





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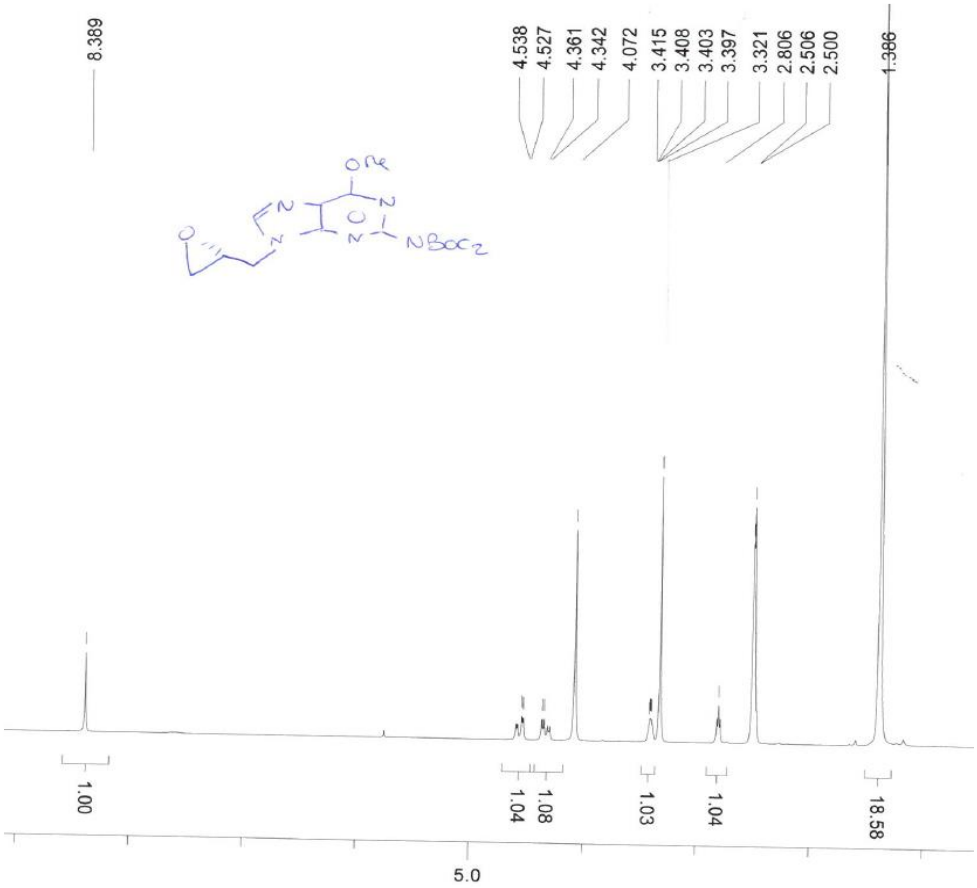

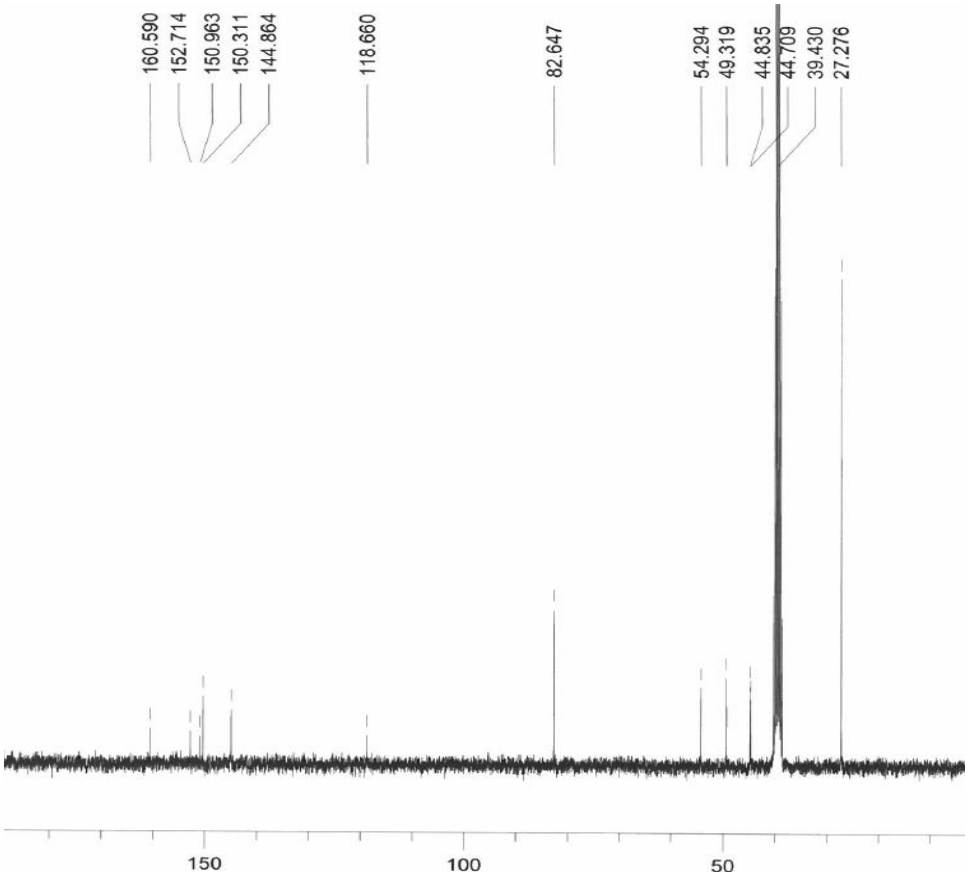

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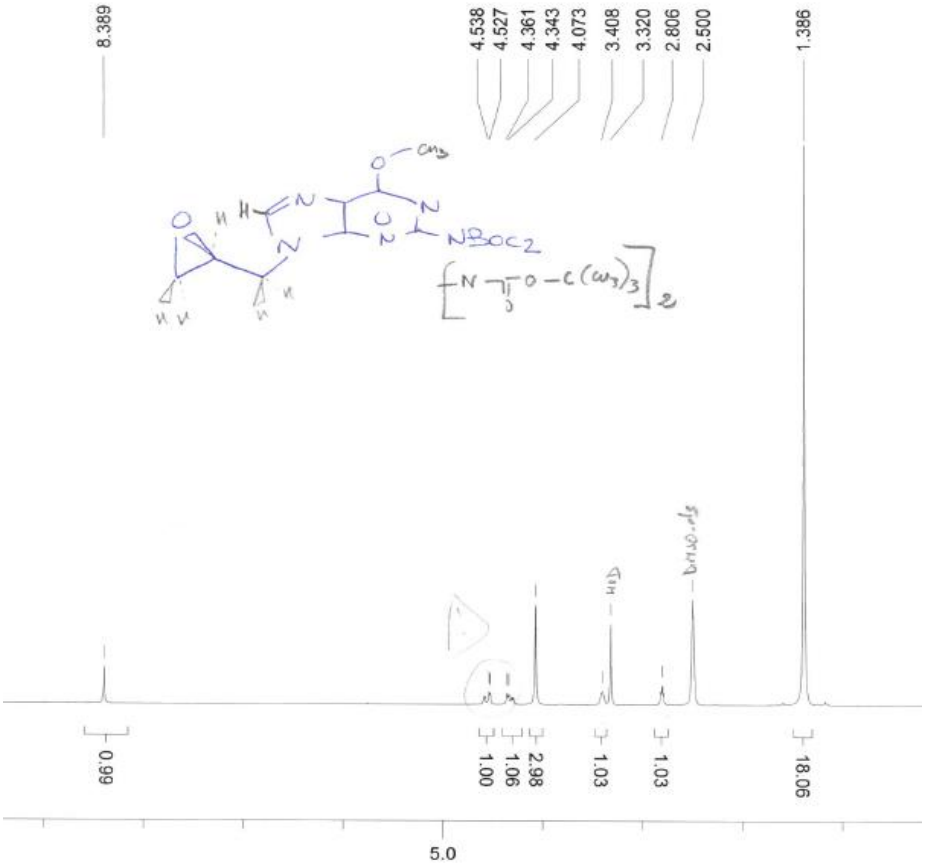
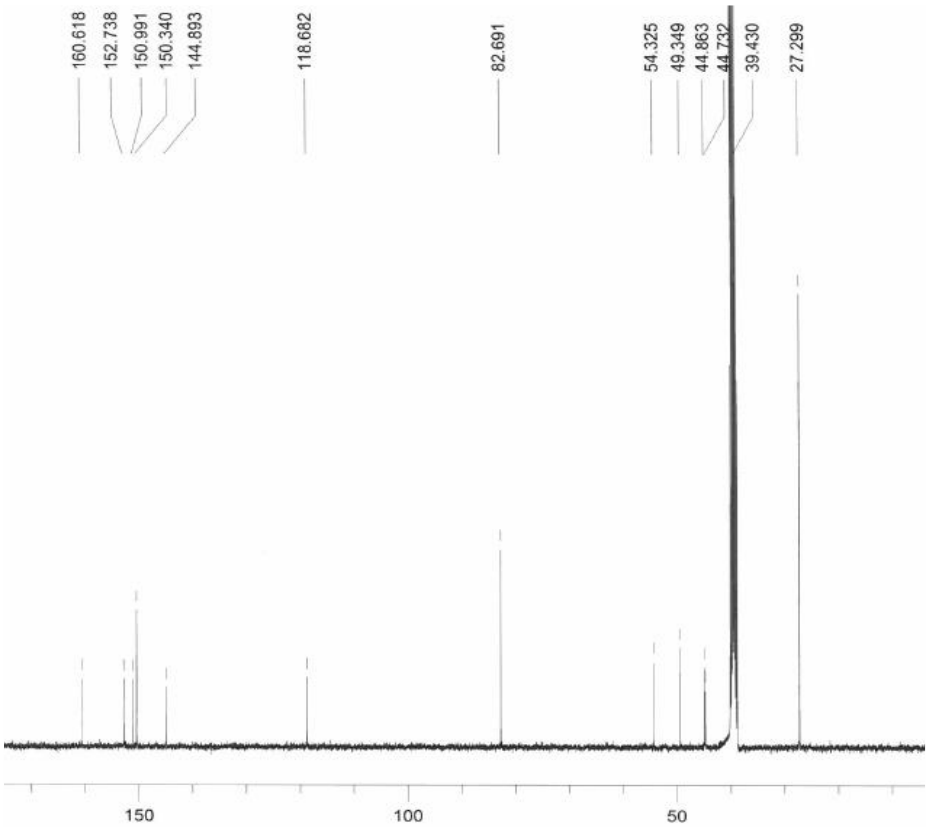
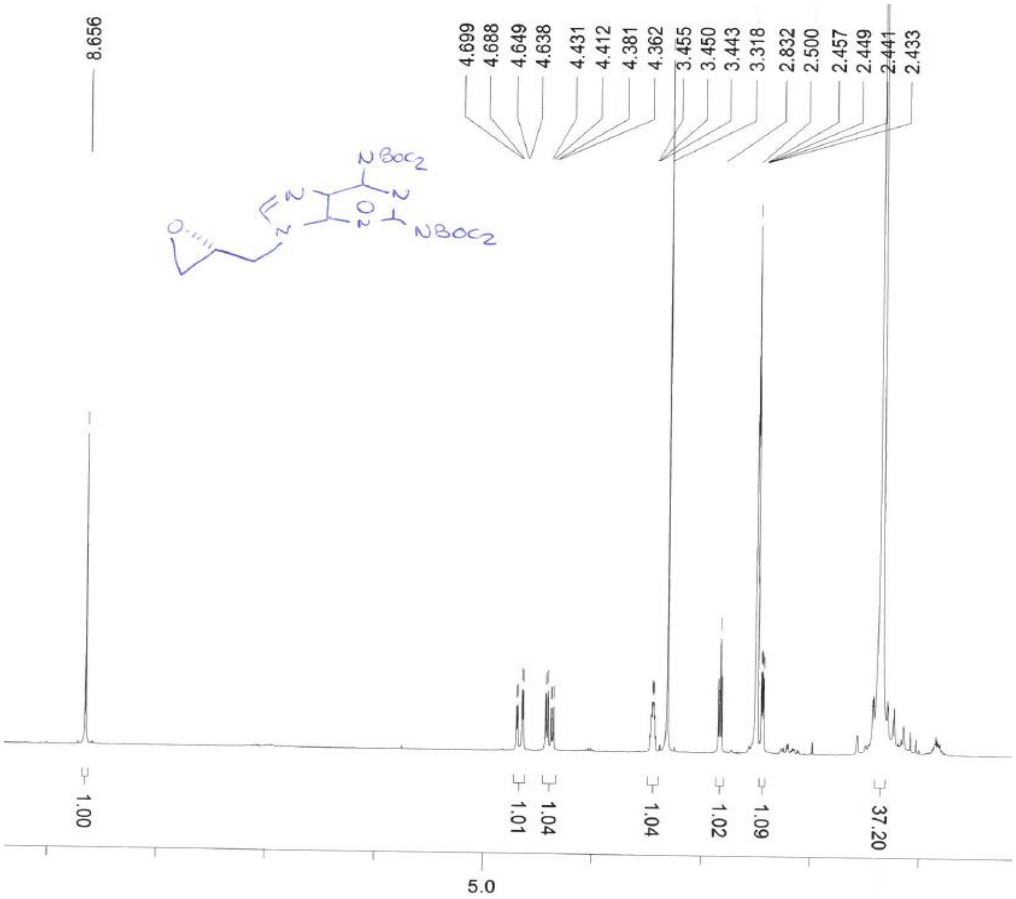
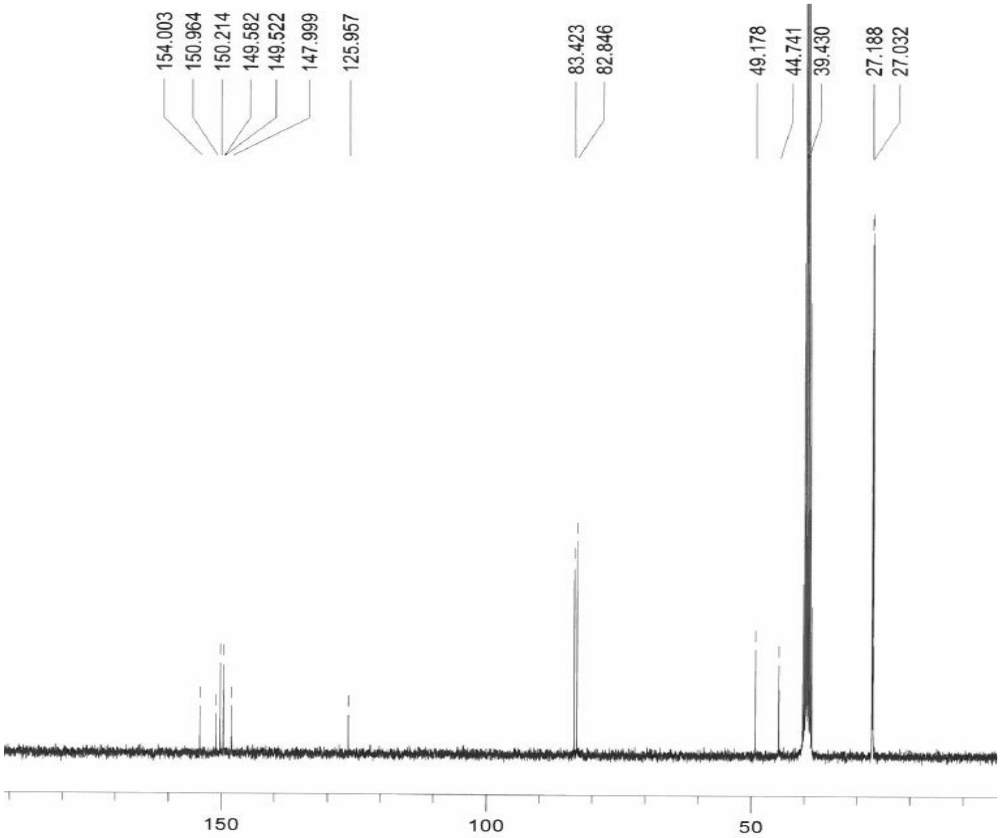




N,N-2,6-Tetra(*tert*-butoxycarbonyl)-*N*-9-(2*R*-(oxiran-2-yl)methyl)-2,6-diaminopurine, (*R*)-16





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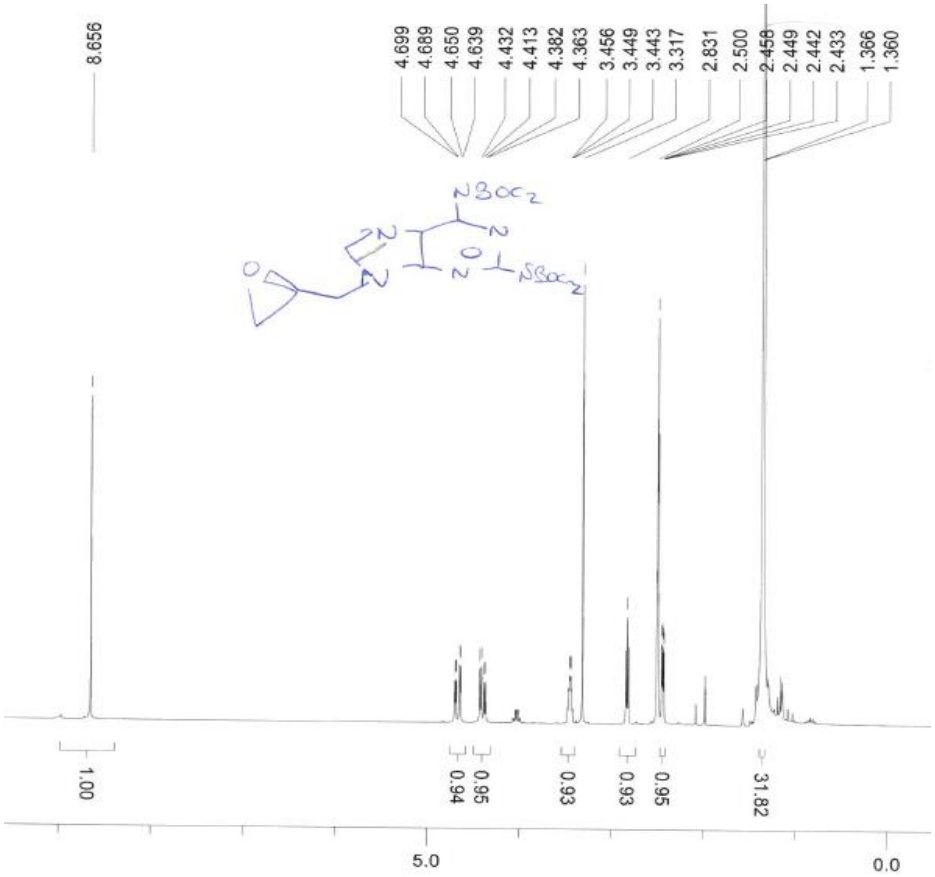

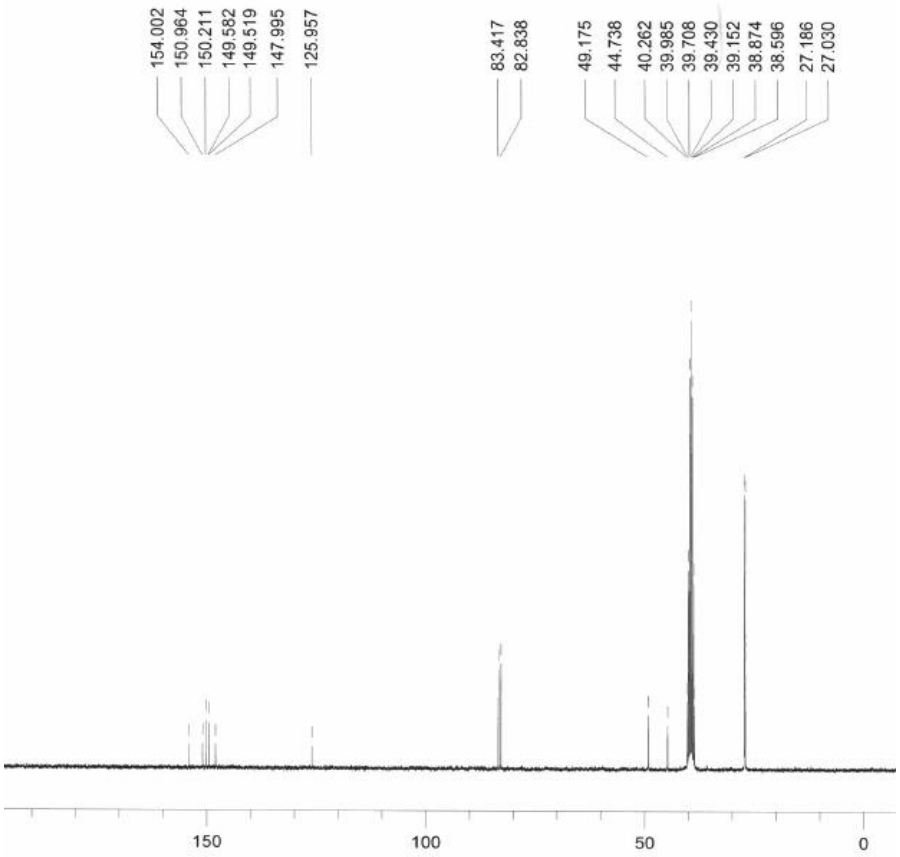

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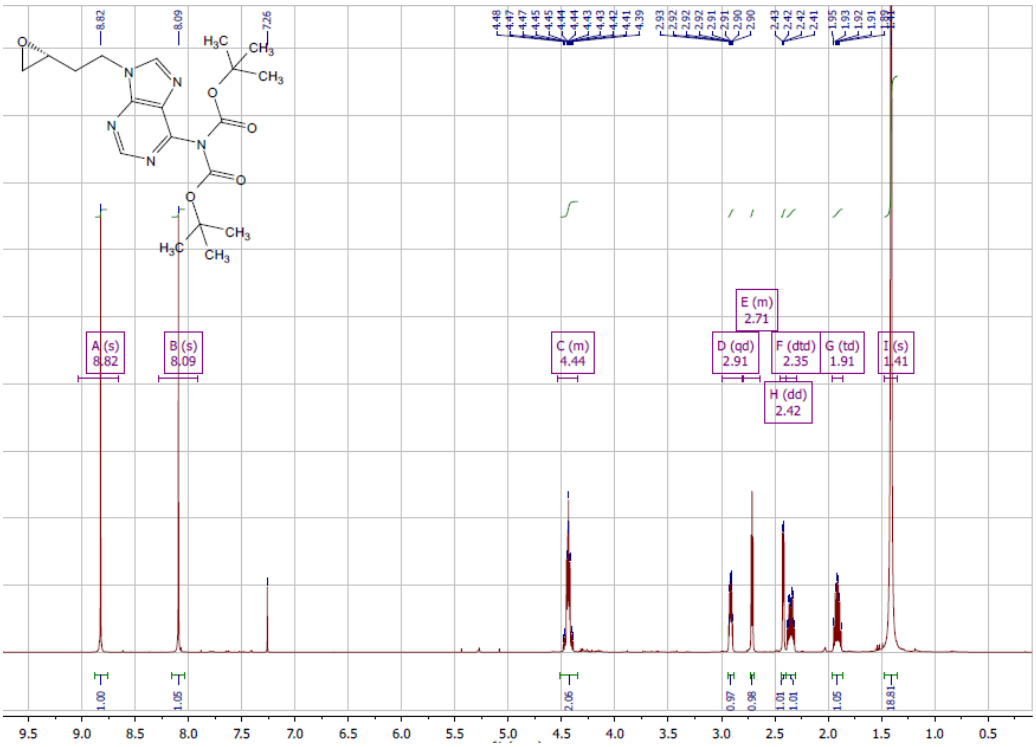

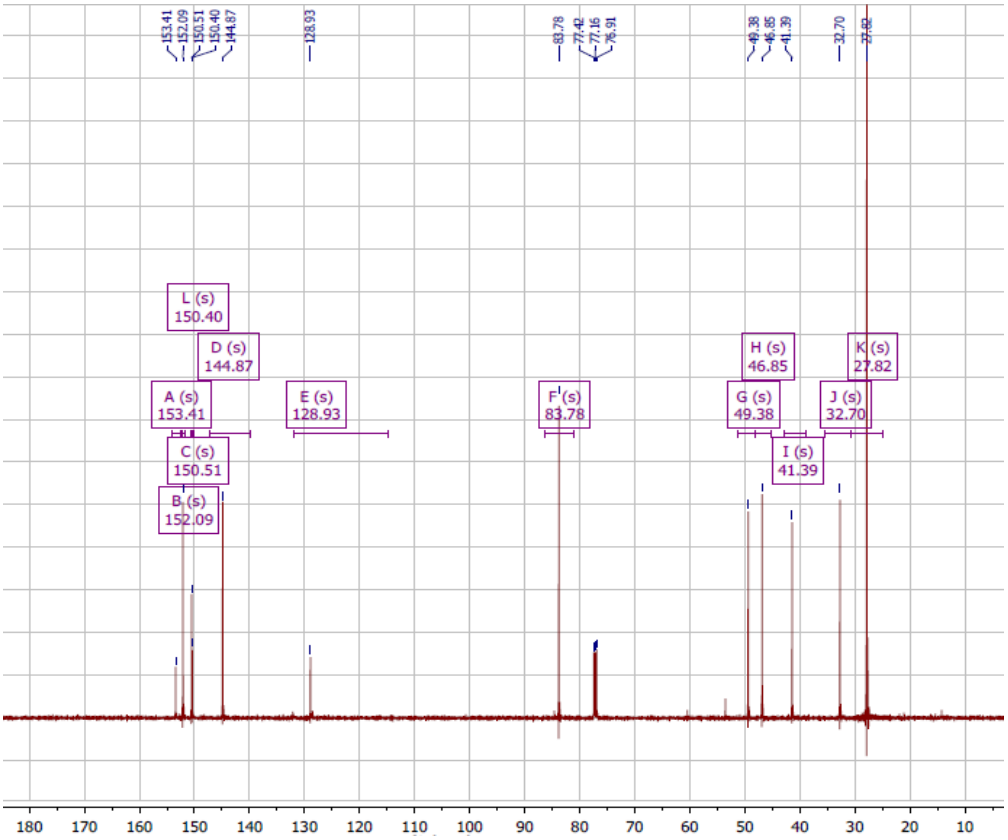

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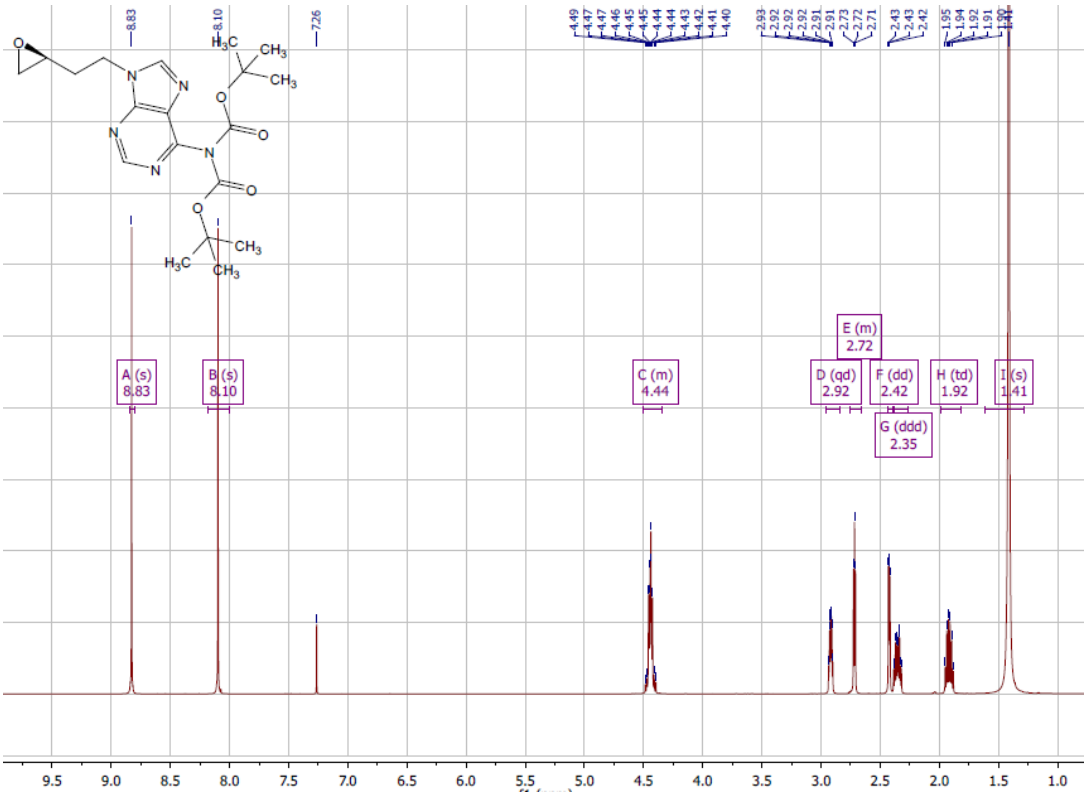
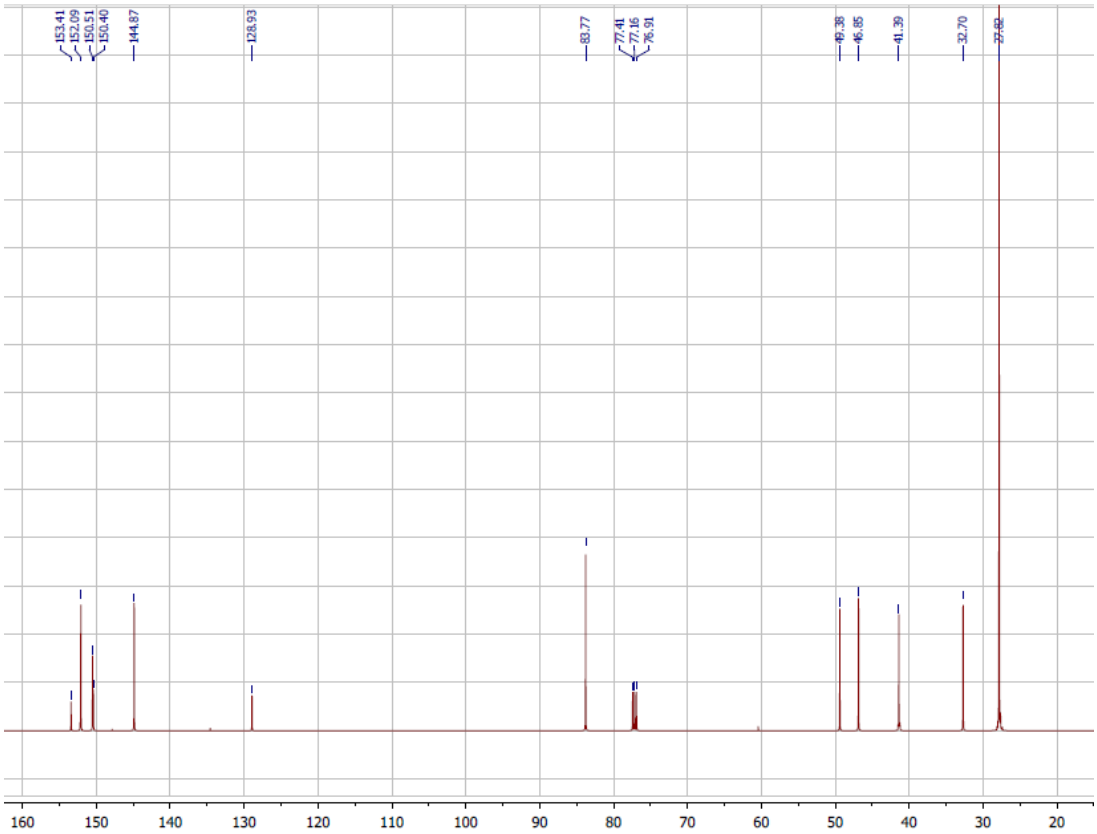
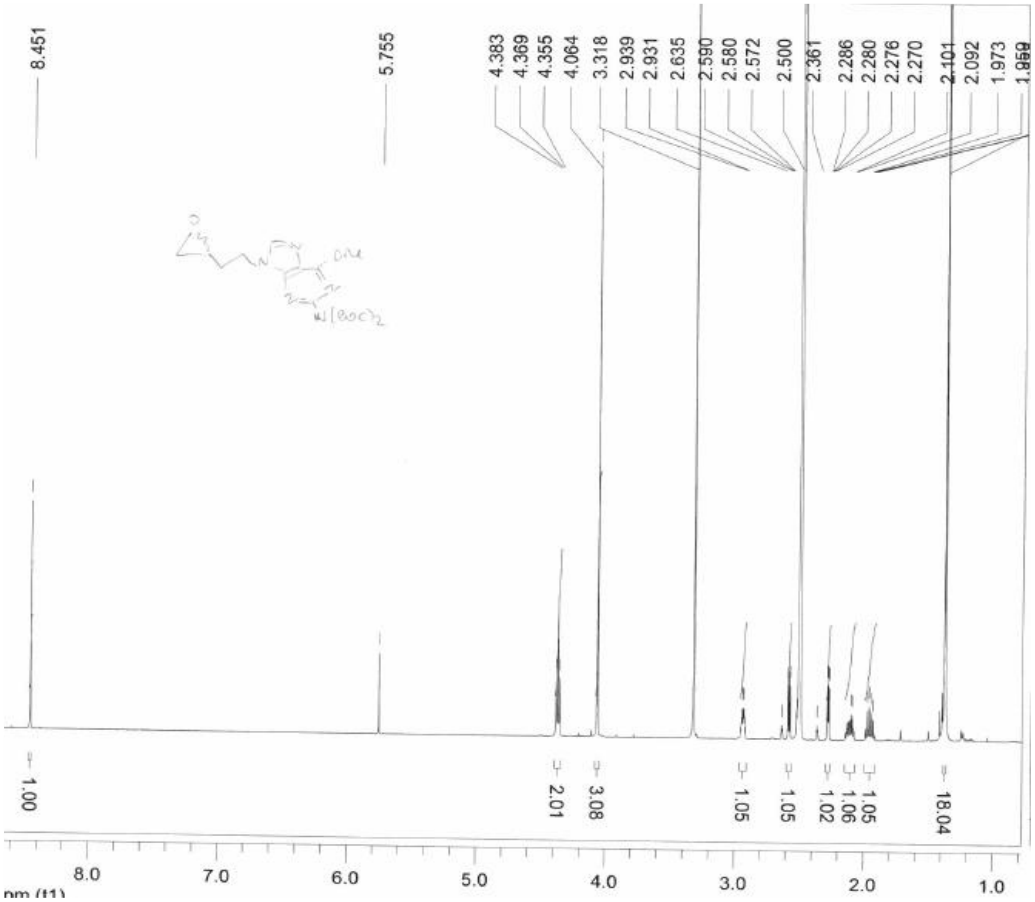
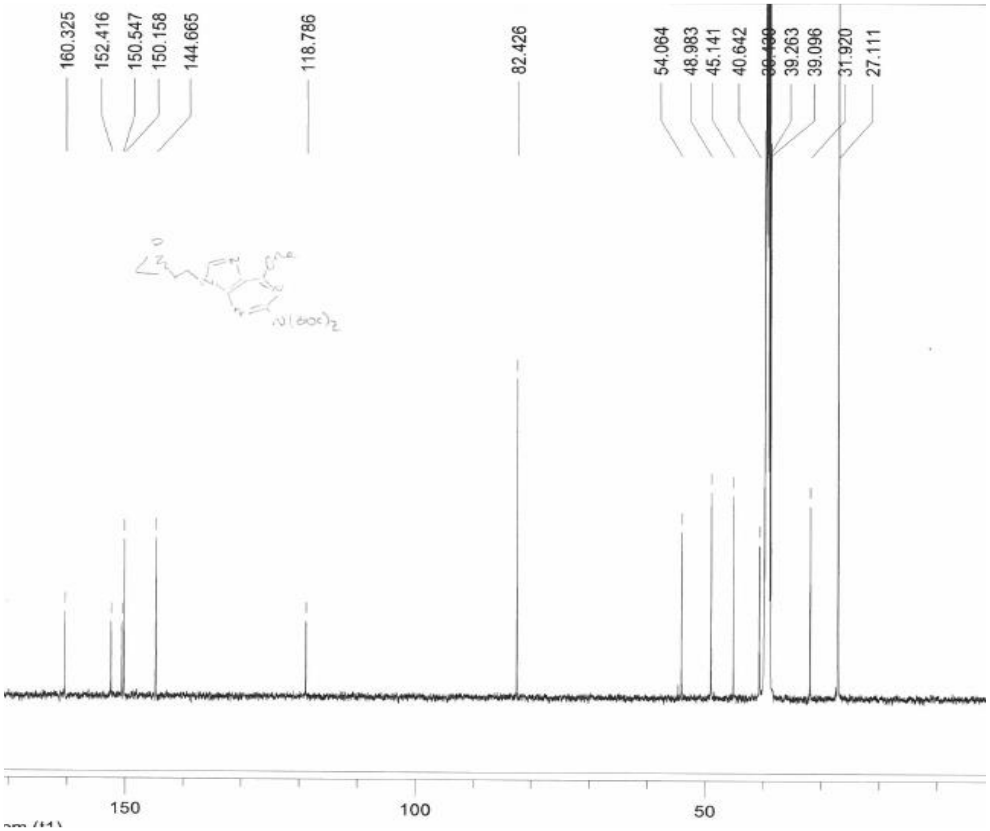




N,N-2-Bis(*tert*-butoxycarbonyl)-6-methoxy-*N*-9-(2*R*-(oxiran-2-yl)ethyl)-2-aminopurine, (*R*)-22





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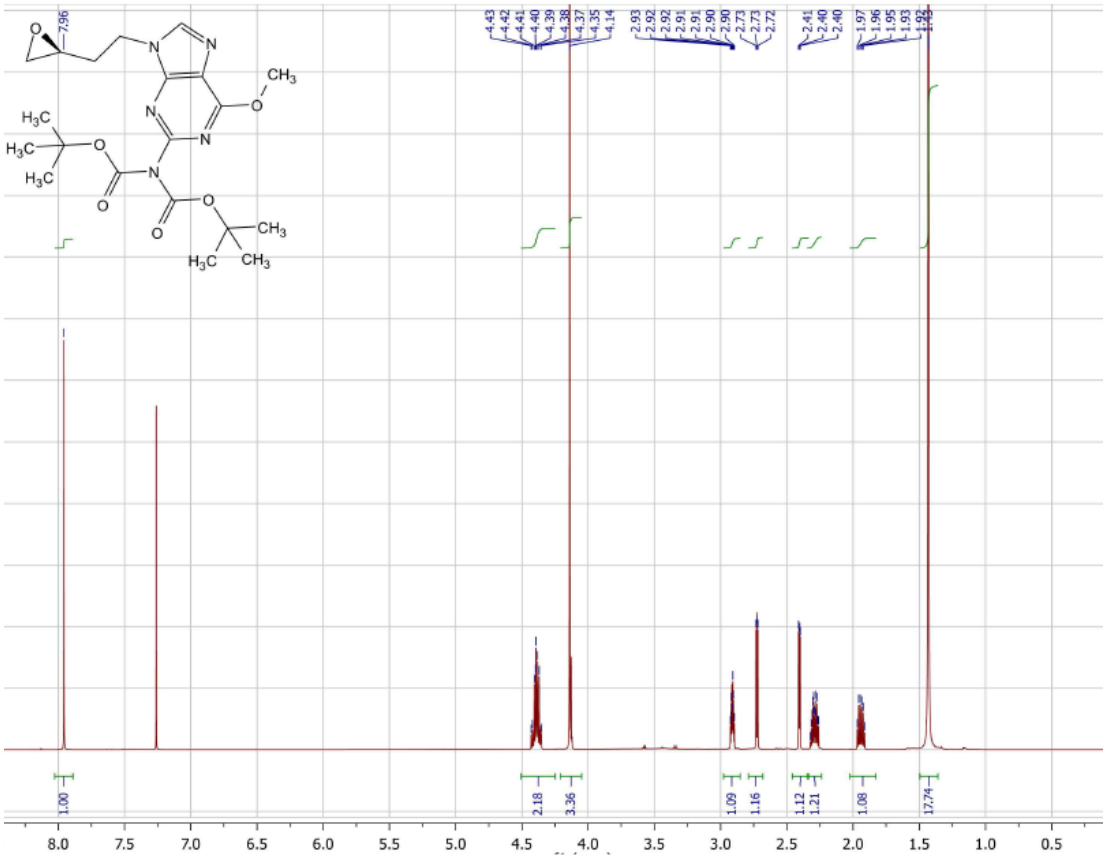

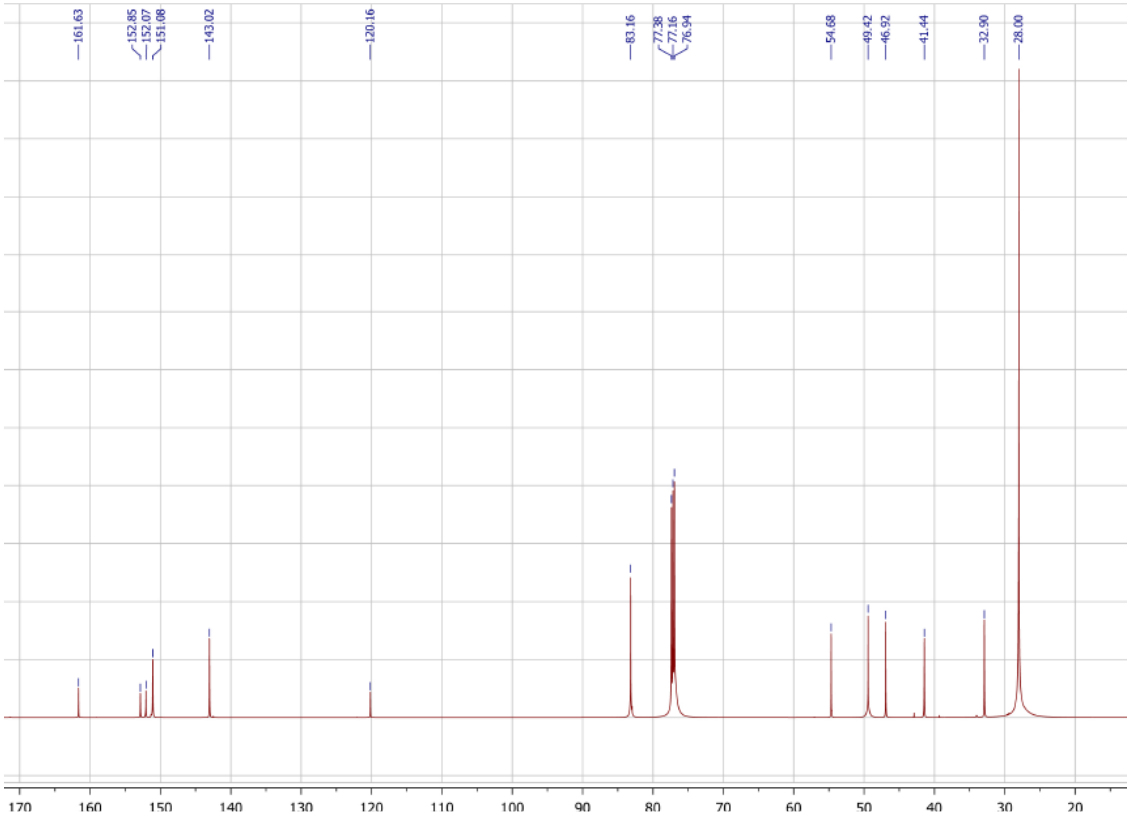

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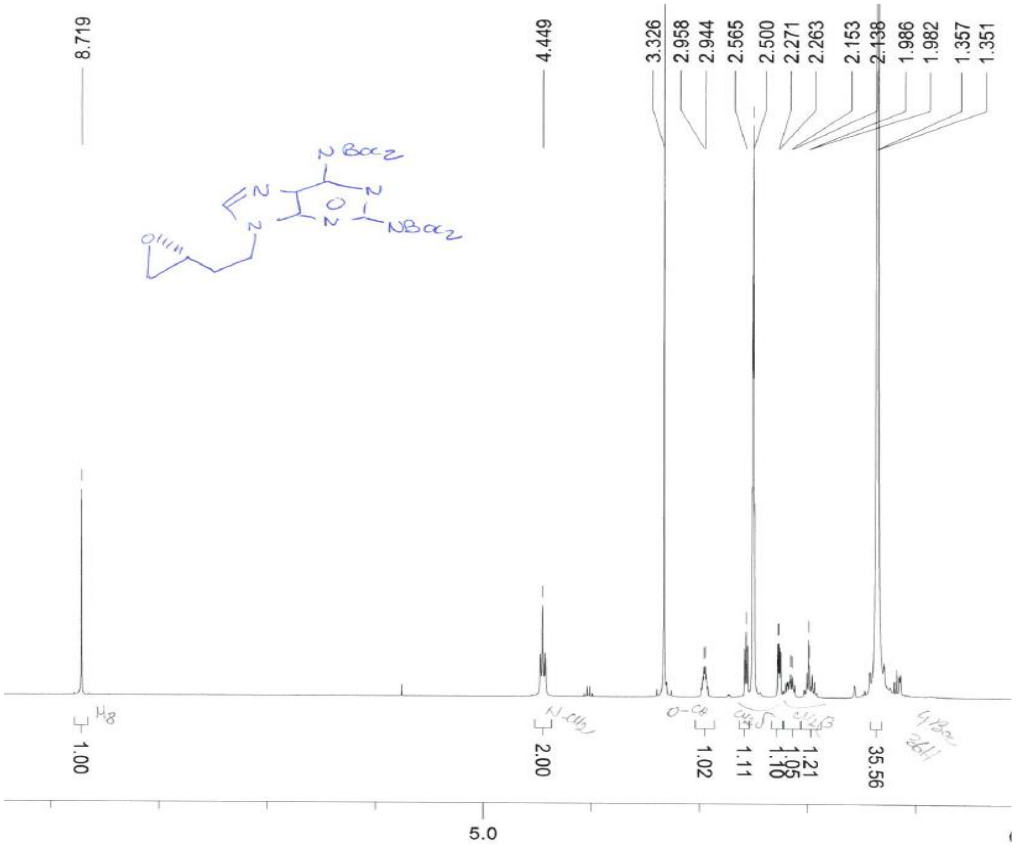

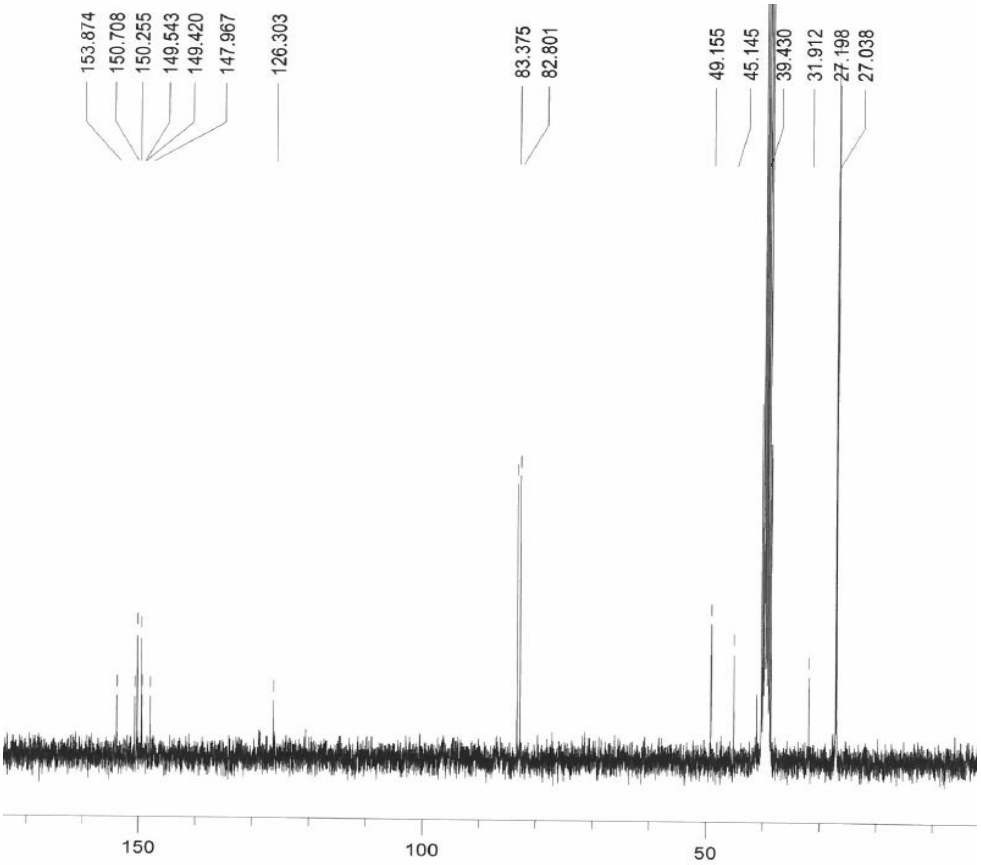

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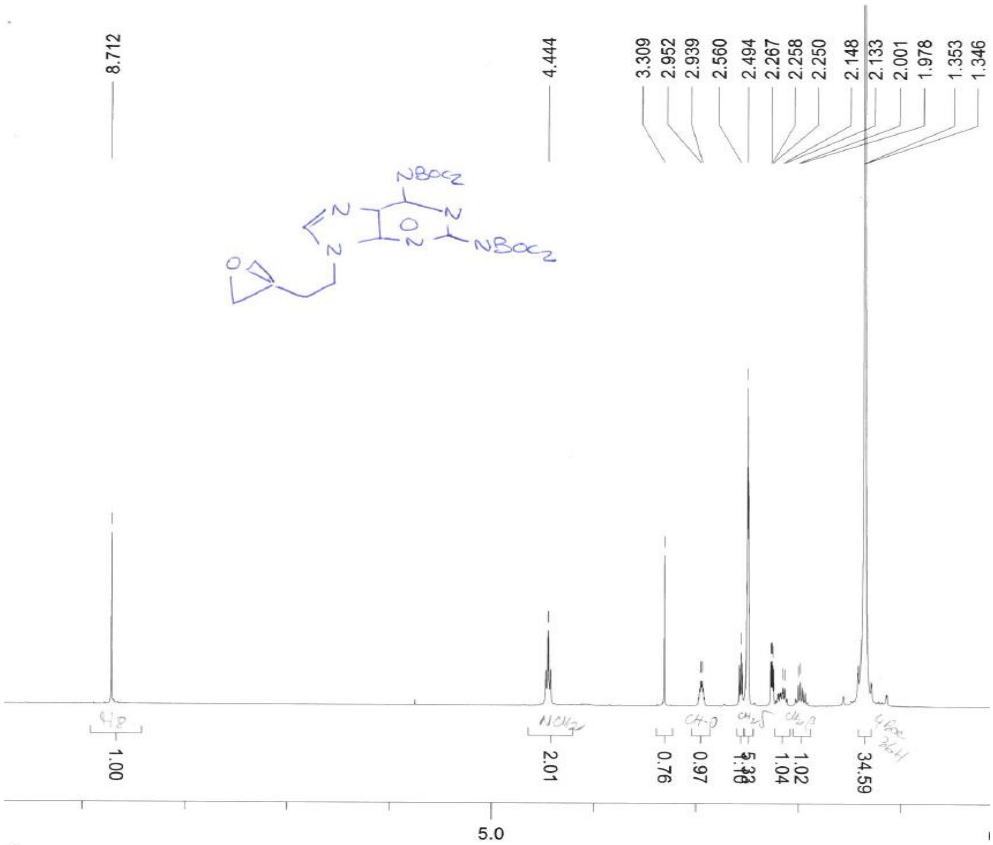
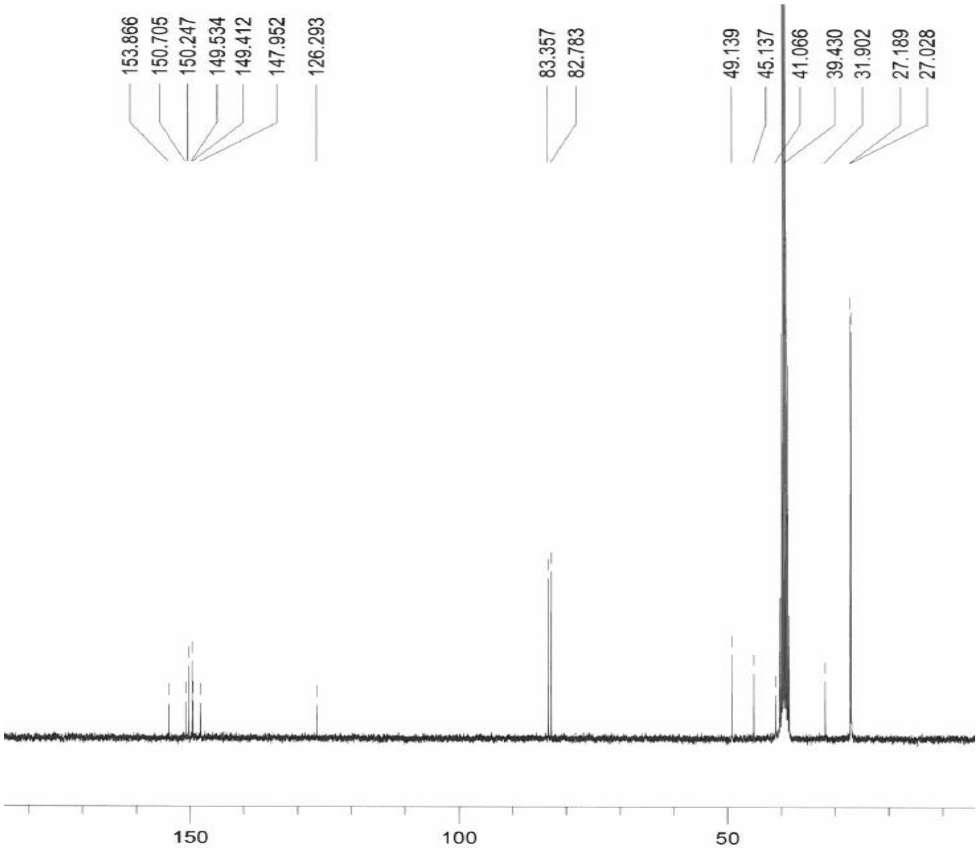
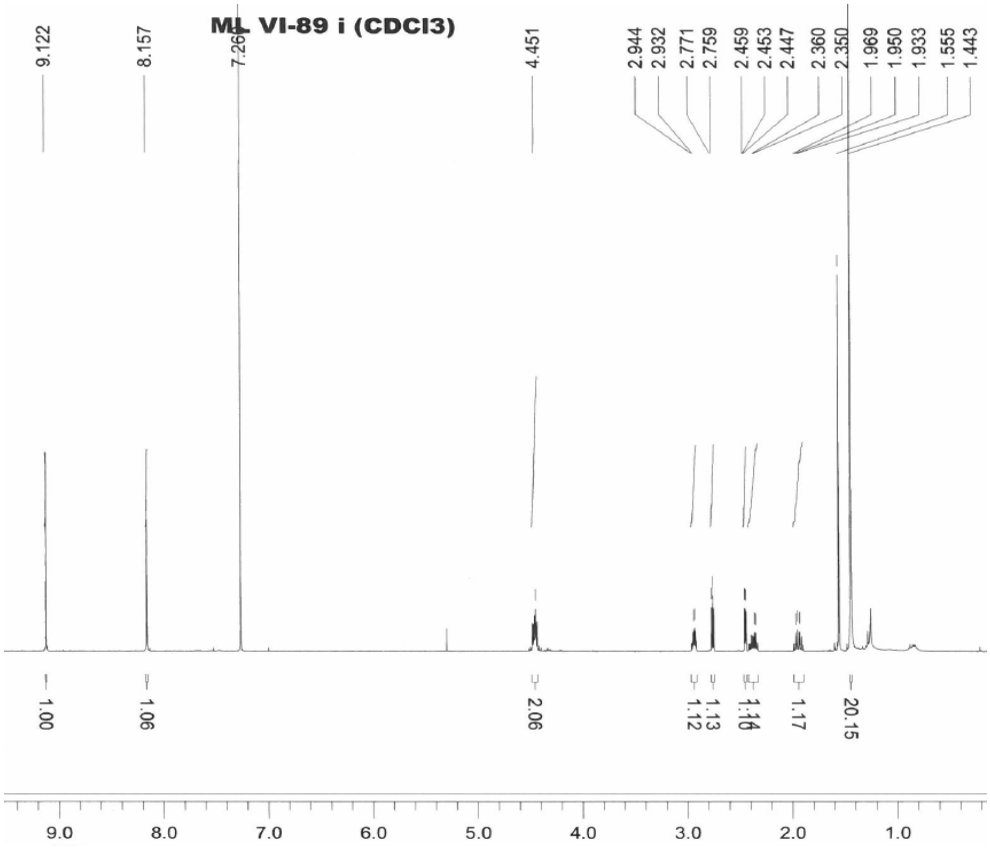
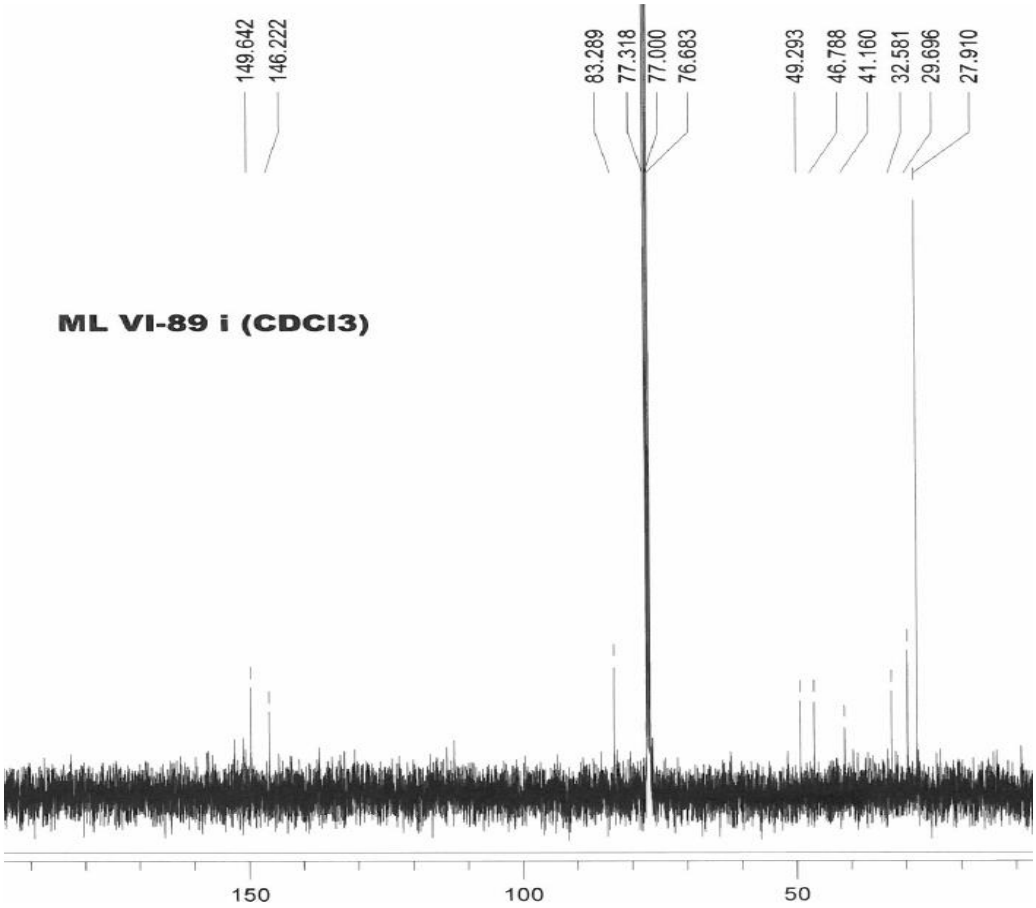




N,N-2-Bis(*tert*-butoxycarbonyl)-*N*-9-(2*R*-(oxiran-2-yl)ethyl)-2-aminopurine, (*R*)-31





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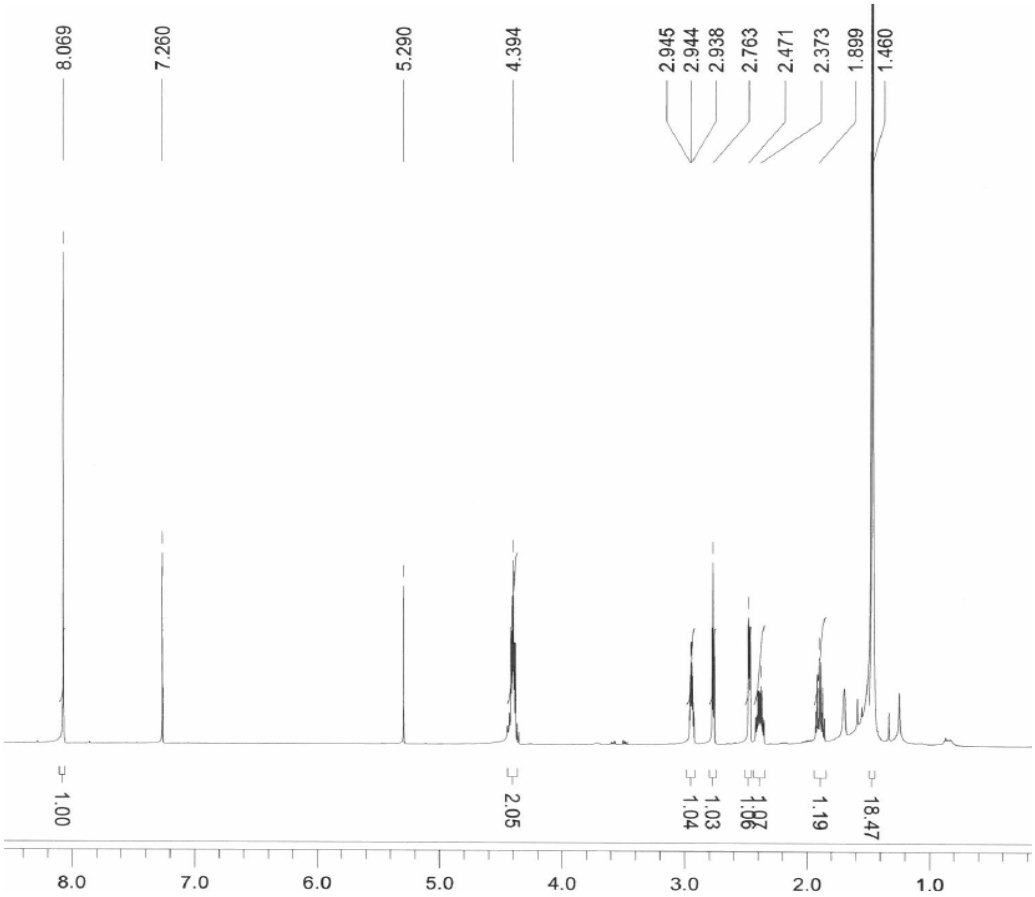
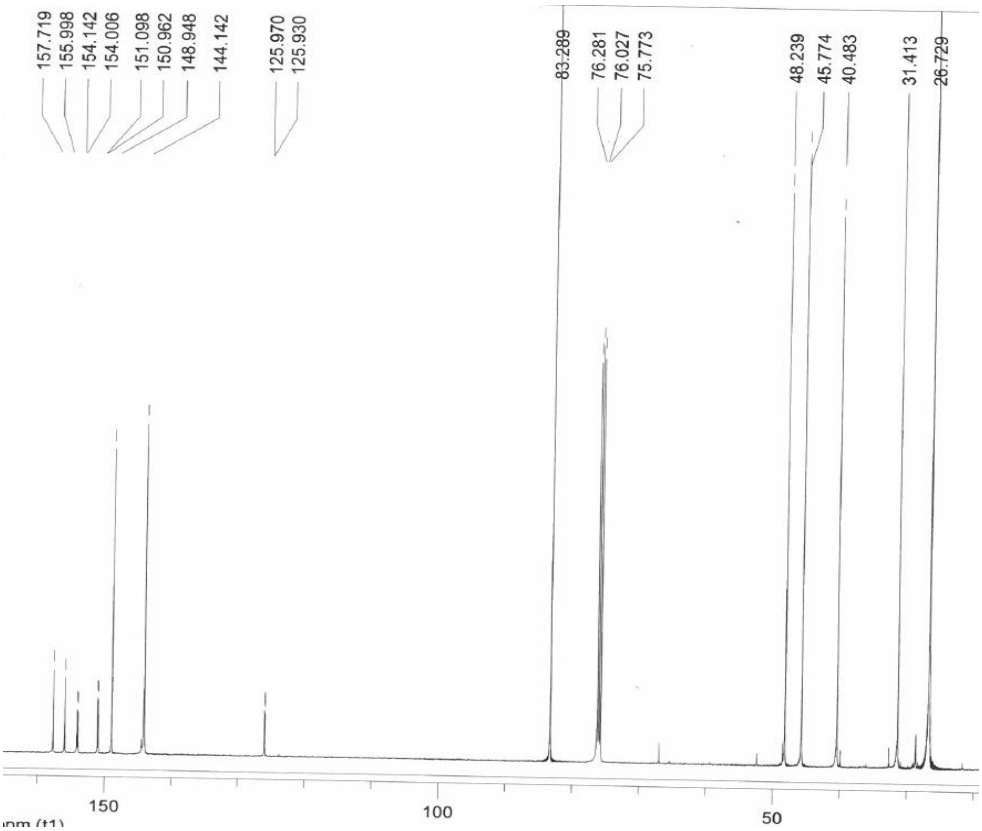
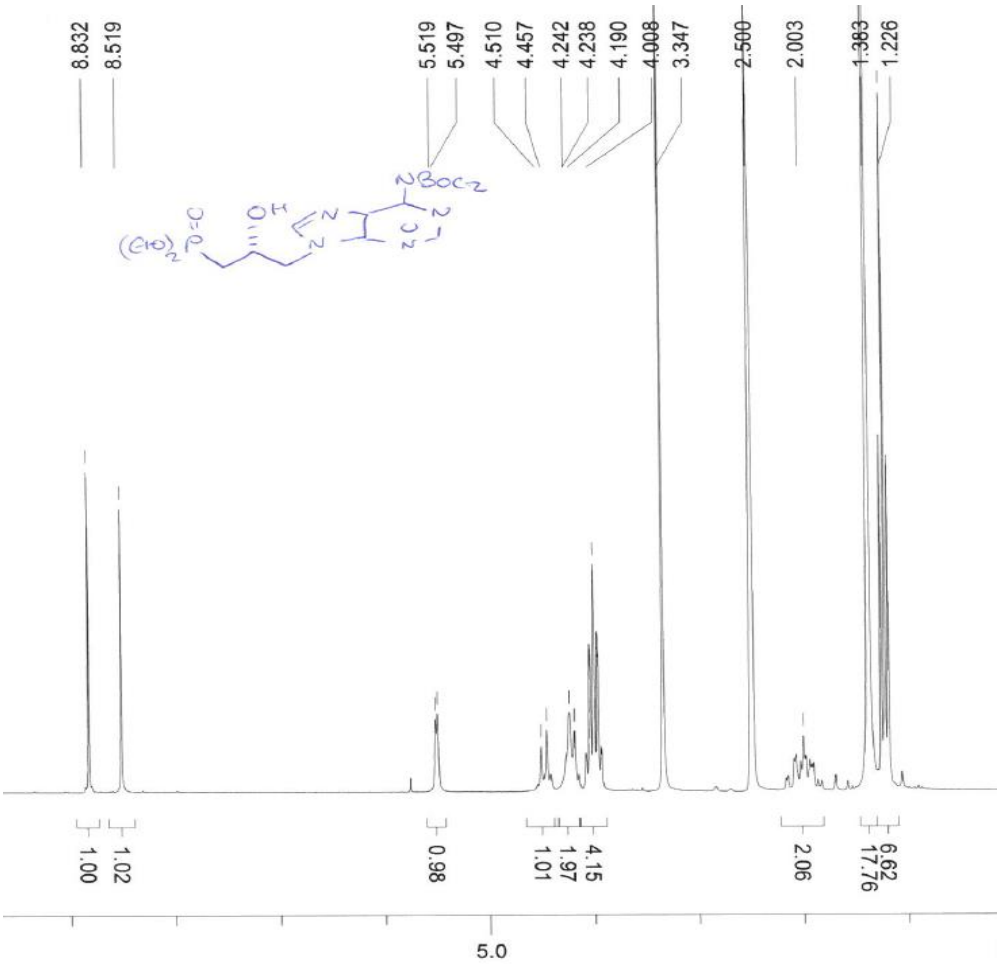
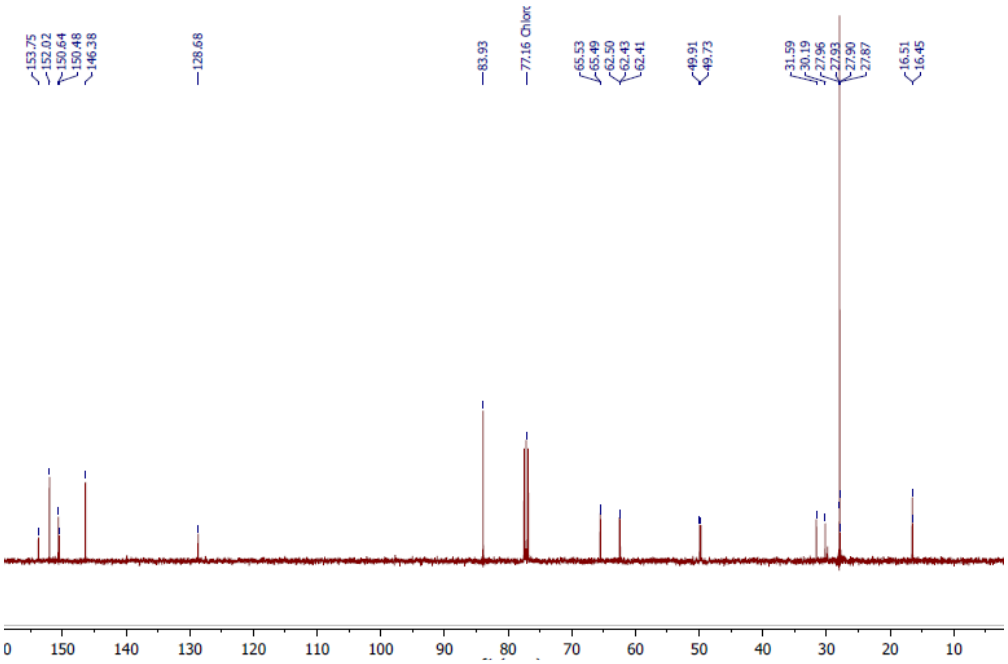




Diethyl (*R*)-(3-(6-(Bis(*tert*-butoxycarbonyl)amino)-9*H*-purin-9-yl)-2-hydroxypropyl)phosphonate, (*R*)-17





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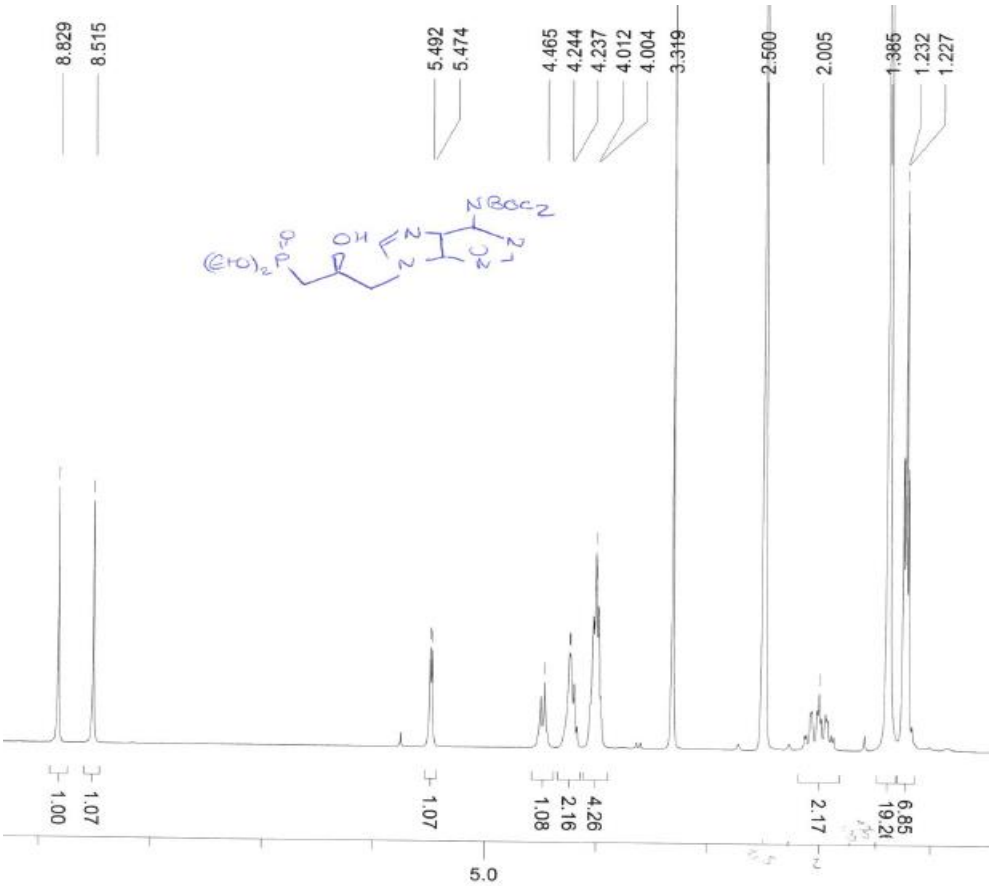

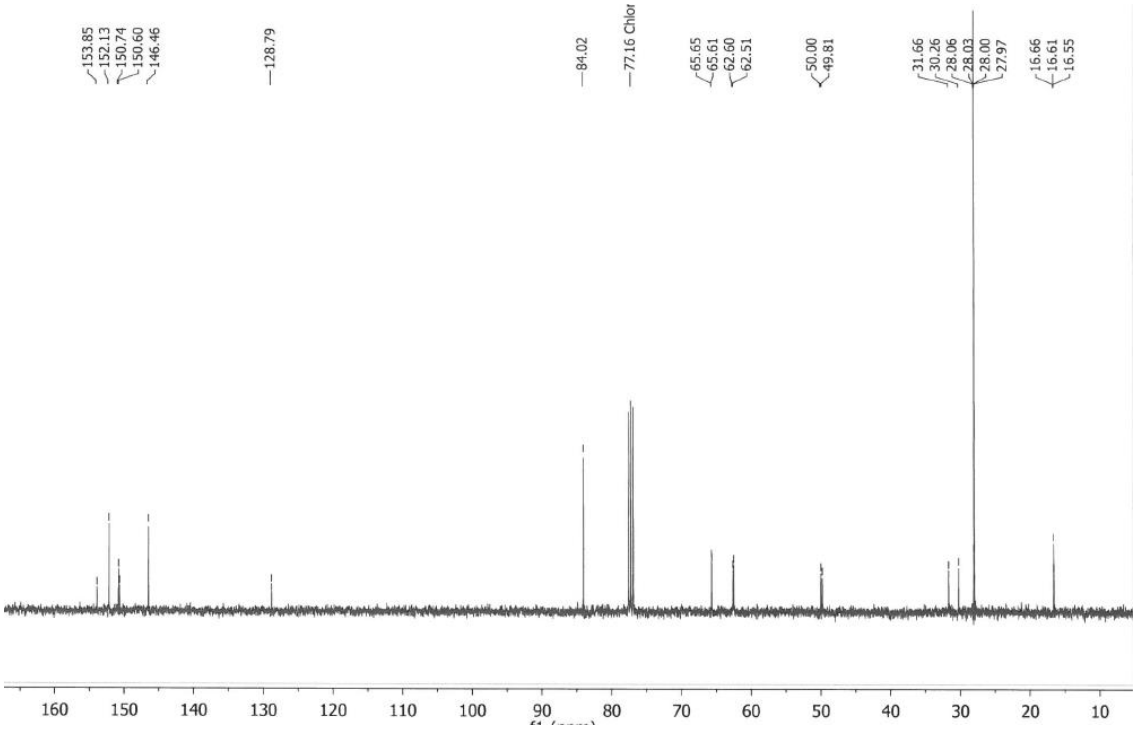

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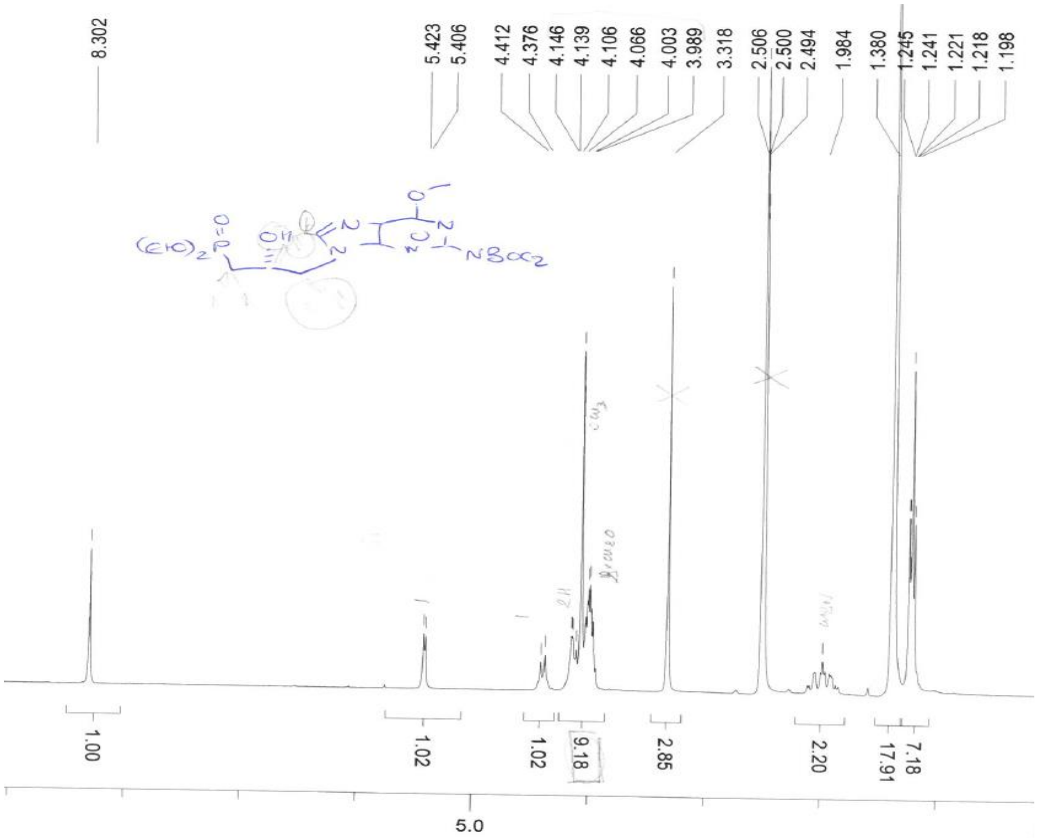

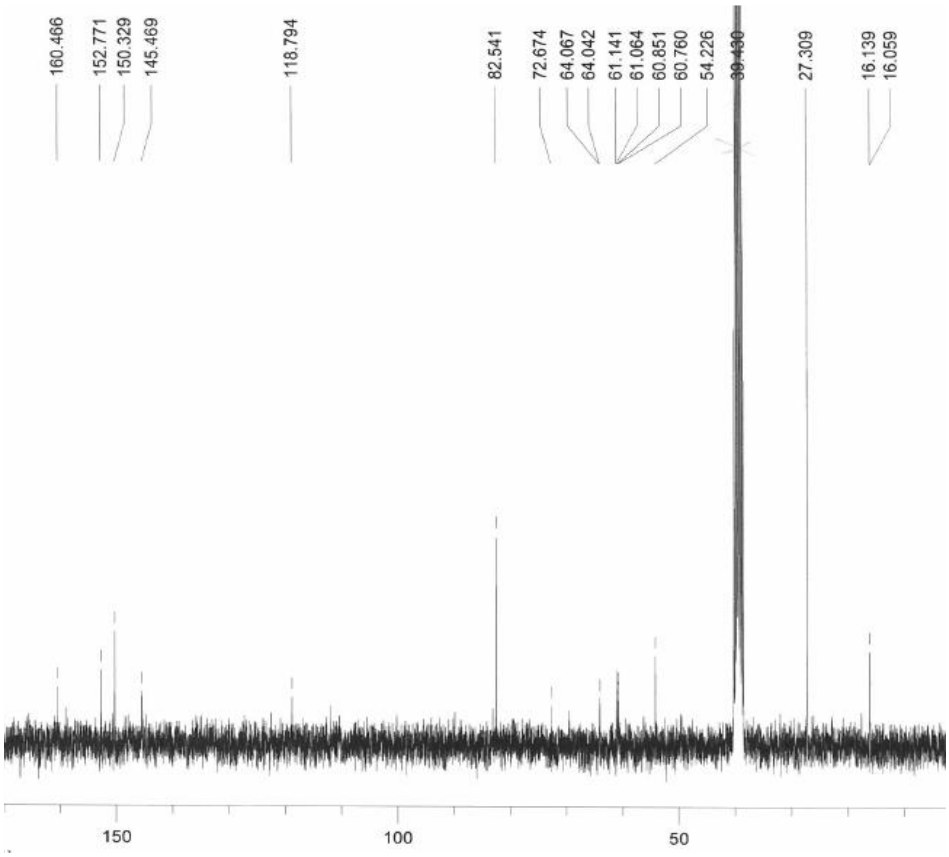

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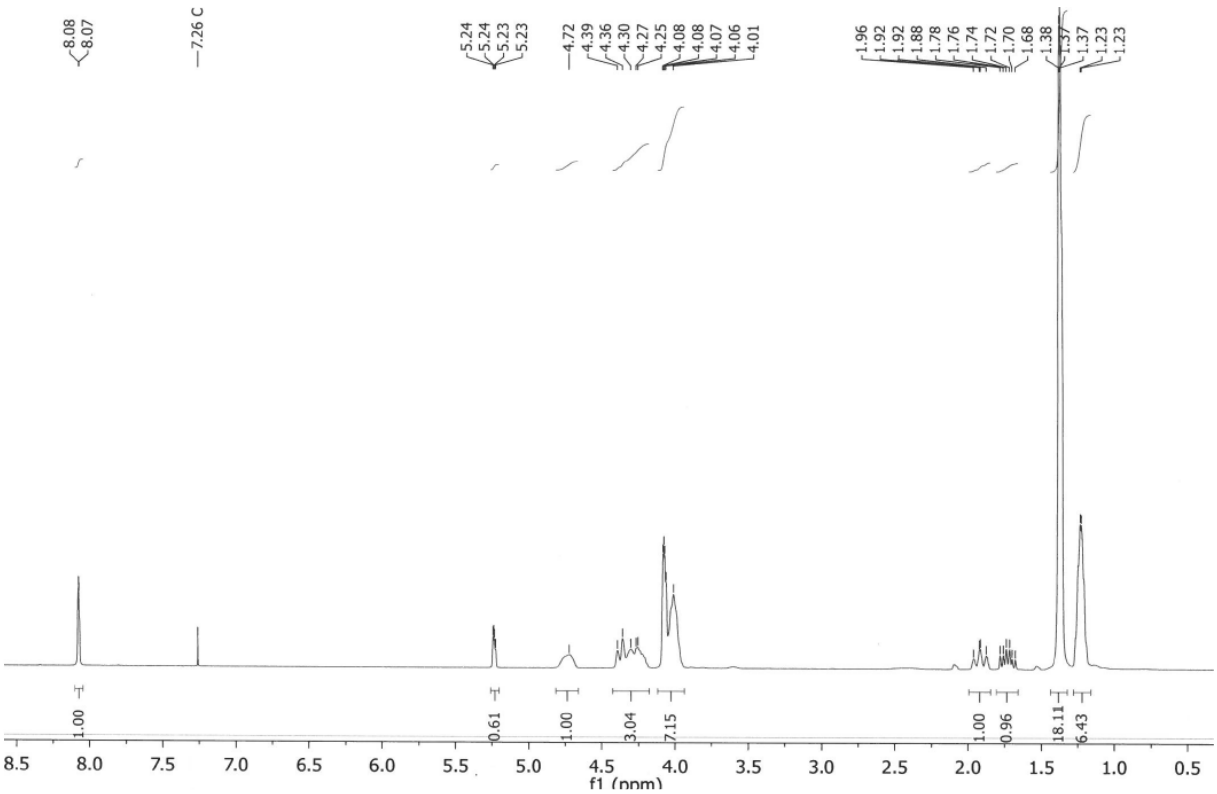
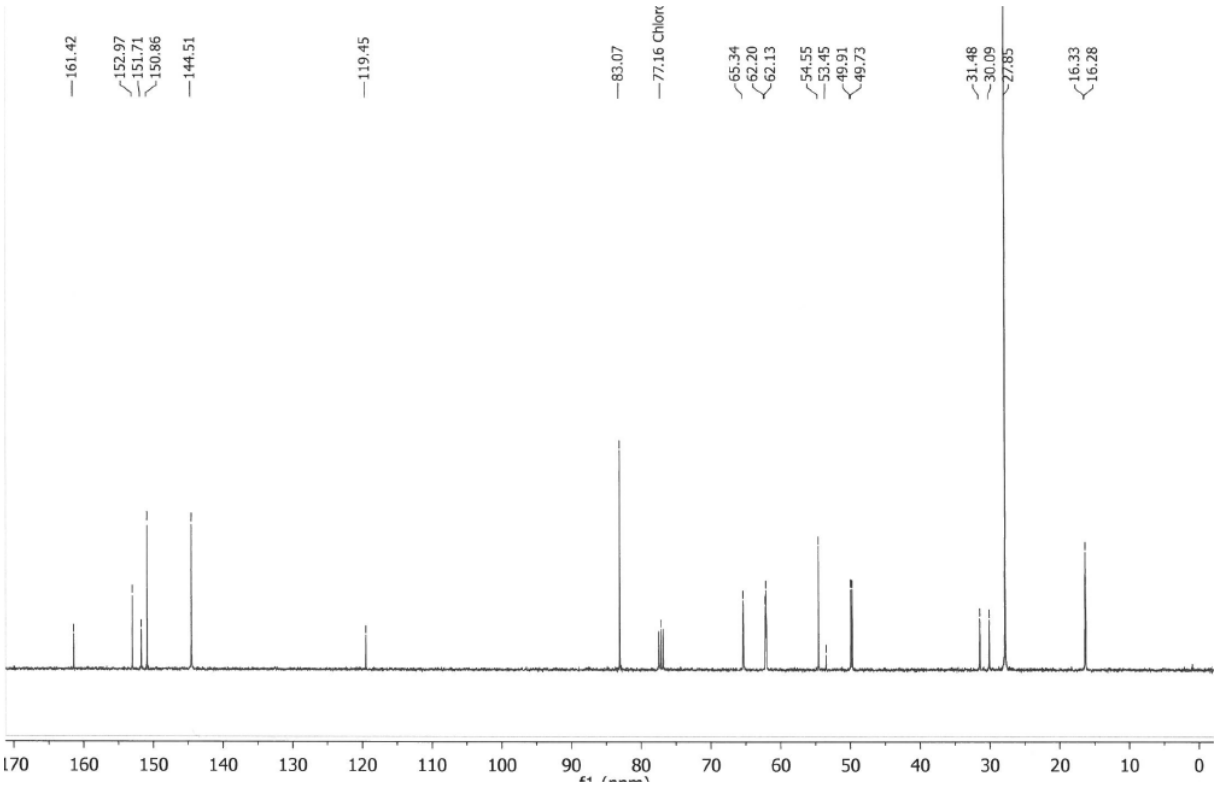
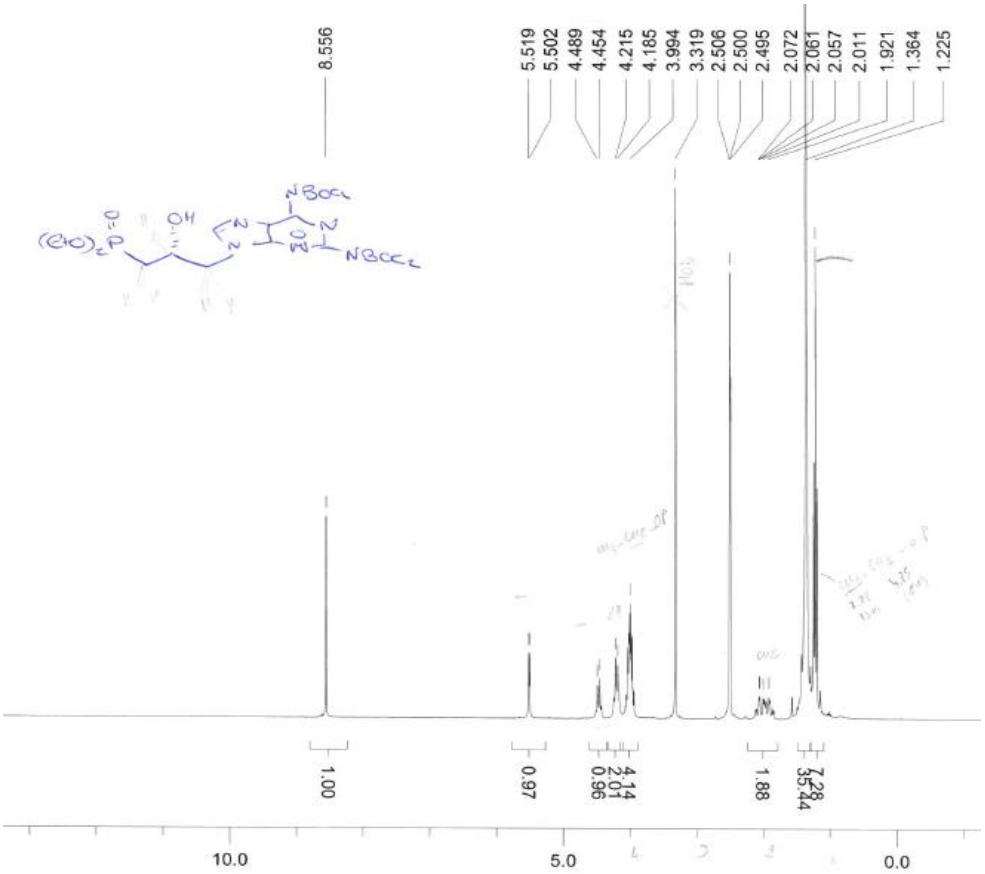
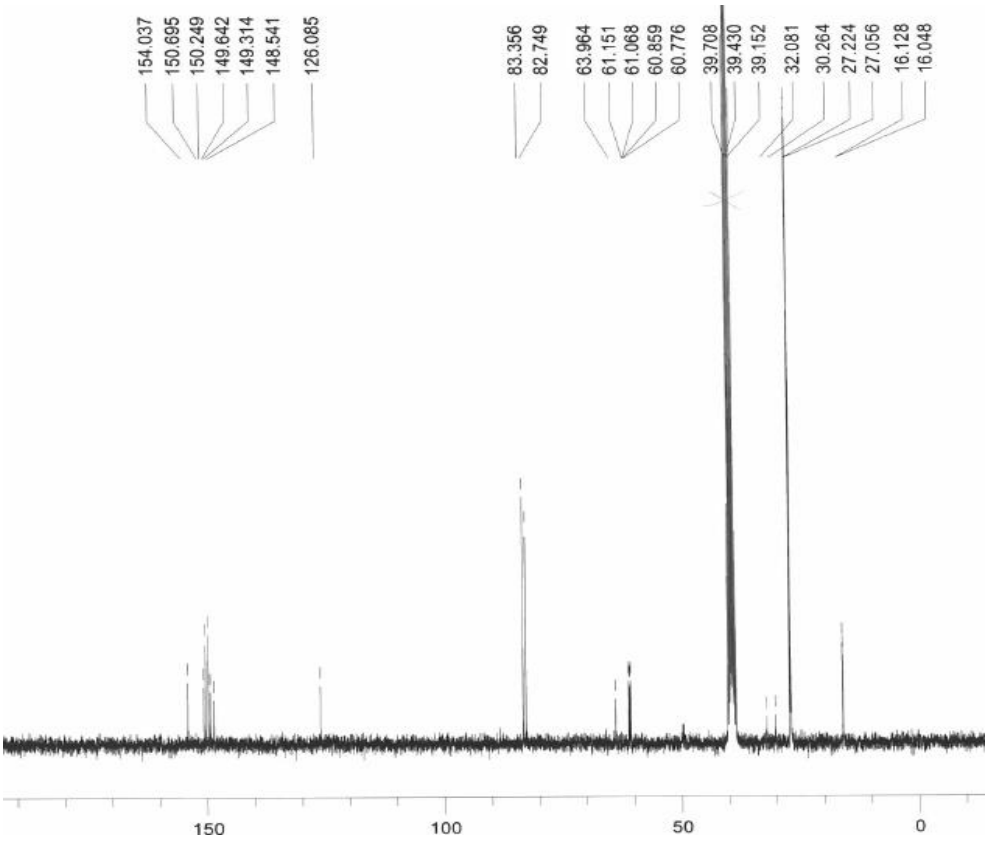


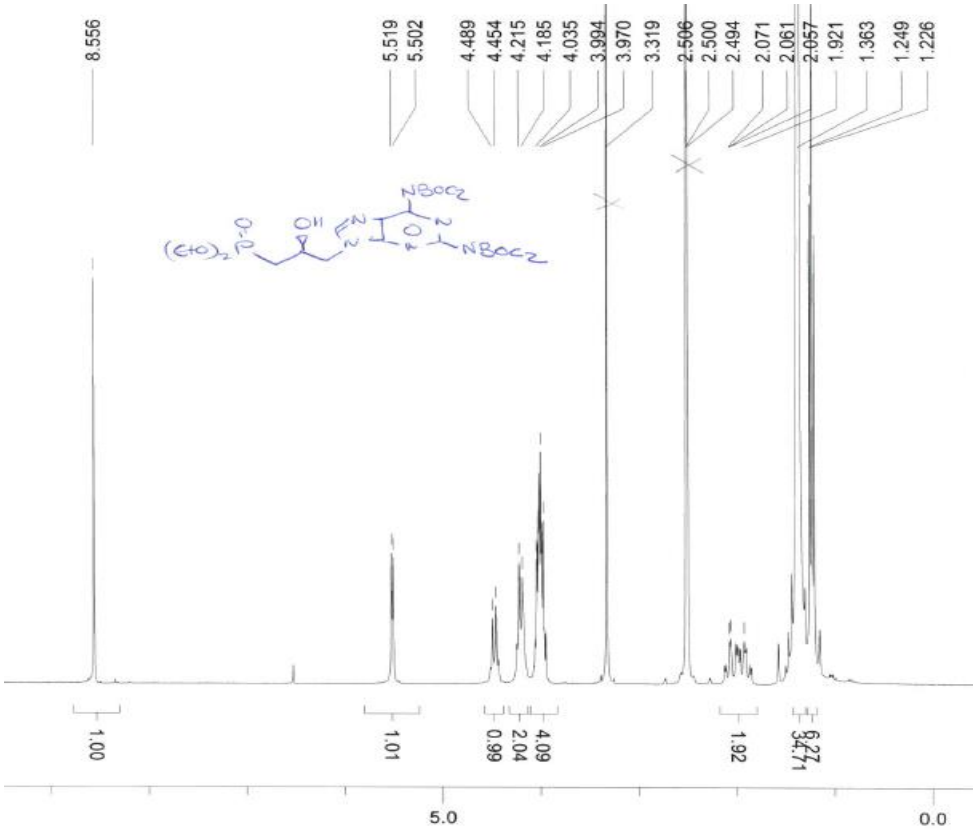


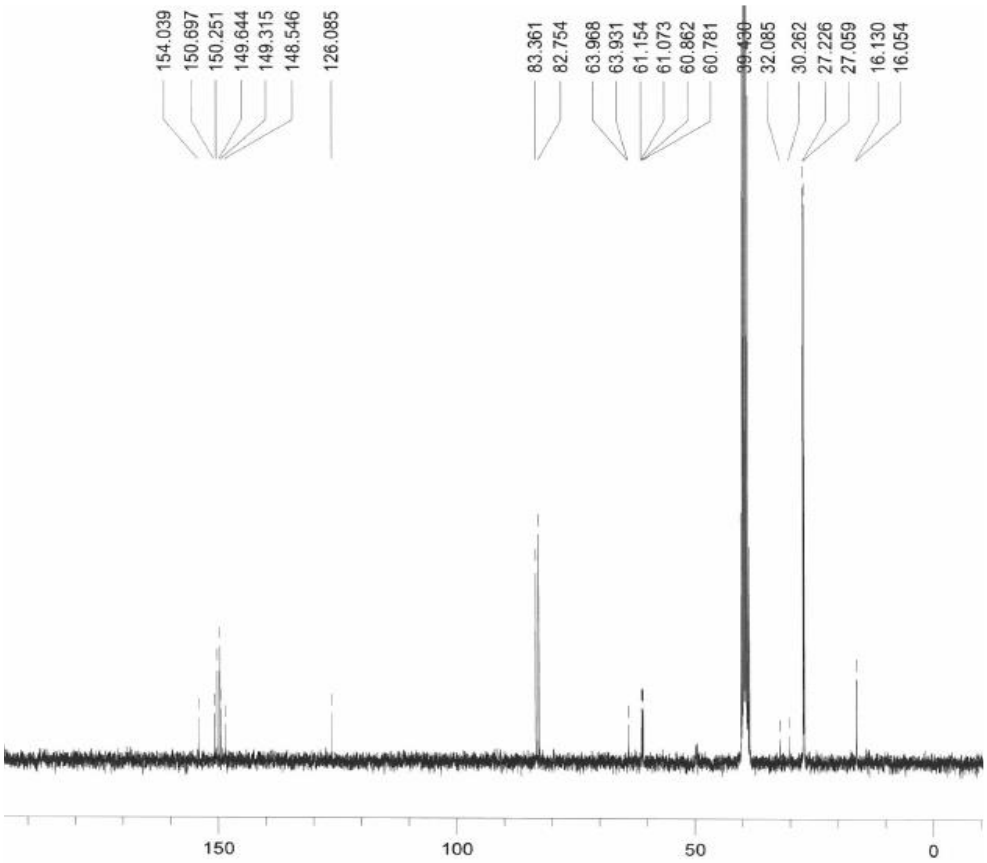
Diethyl (*R)*-(3-(2,6-(Tetra(*tert*-butoxycarbonyl)diamino)-9H-purin-9-yl)-2-hydroxypropyl)phosphonate (*R*)-19



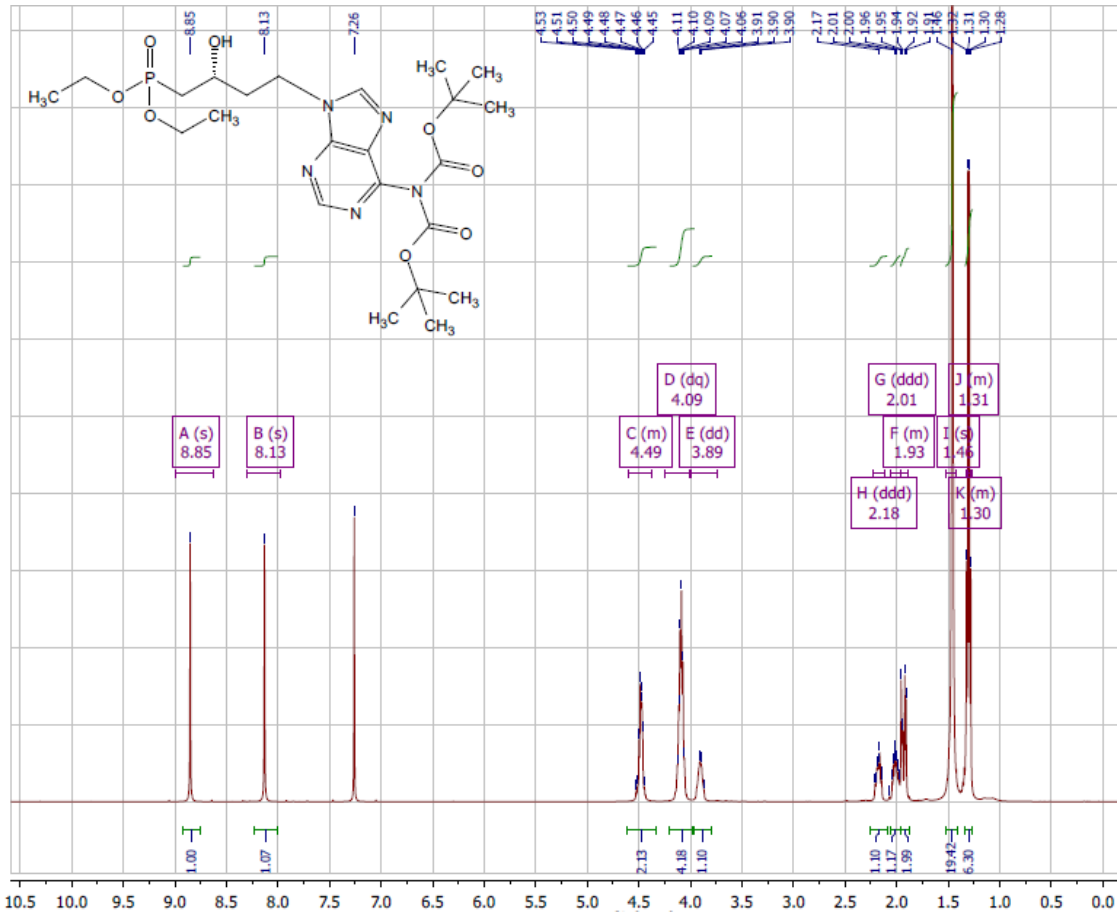


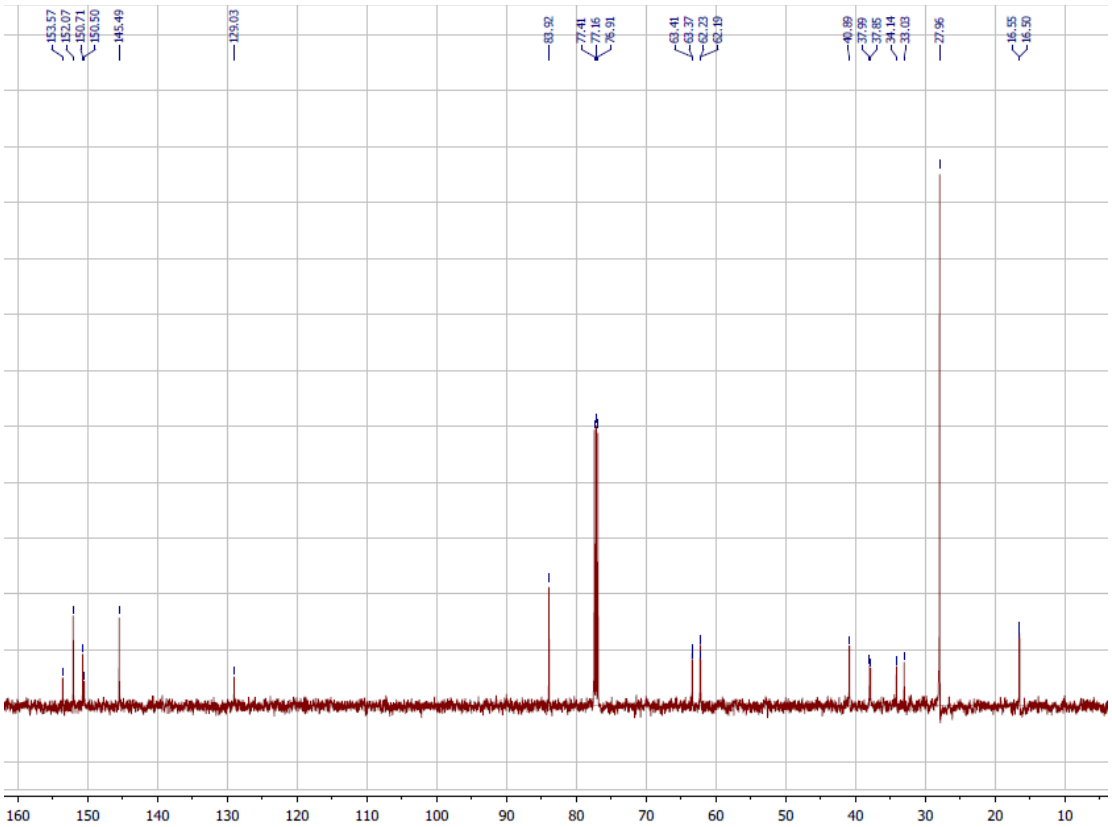
Diethyl (*S)*-(3-(2,6-(Tetra(*tert*-butoxycarbonyl)diamino)-9H-purin-9-yl)-2-hydroxypropyl)phosphonate (*S*)-19



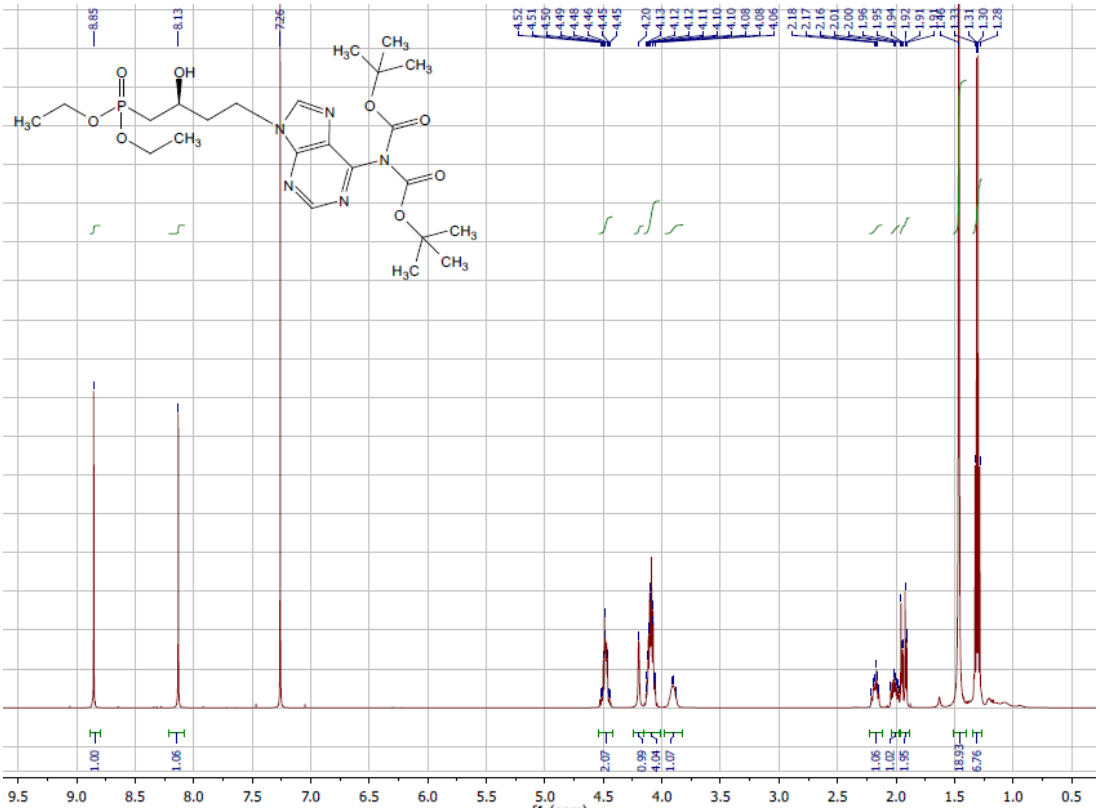


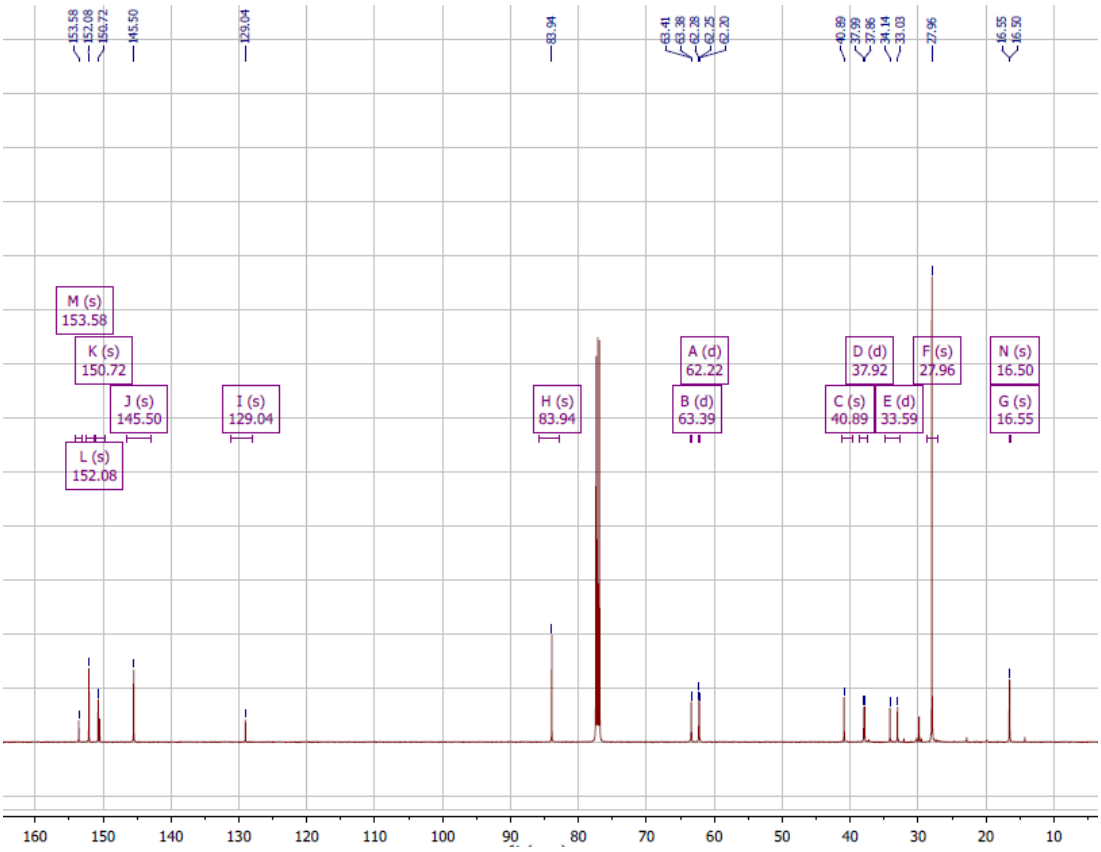
Diethyl (*R*)-(4-(6-(Bis(*tert*-butoxycarbonyl)amino)-9*H*-purin-9-yl)-2-hydroxybutyl)phosphonate (*R*)- 24



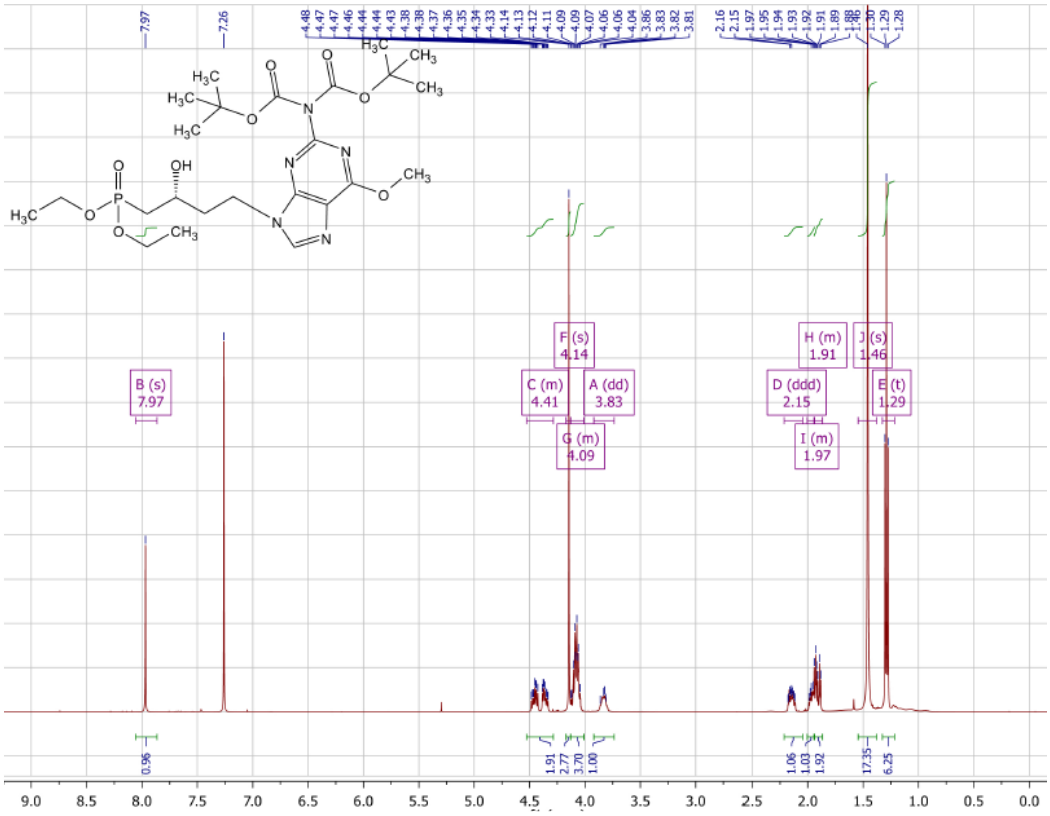


Diethyl (*S*)-(4-(6-(Bis(*tert*-butoxycarbonyl)amino)-9*H*-purin-9-yl)-2-hydroxybutyl)phosphonate (*S*)- 24

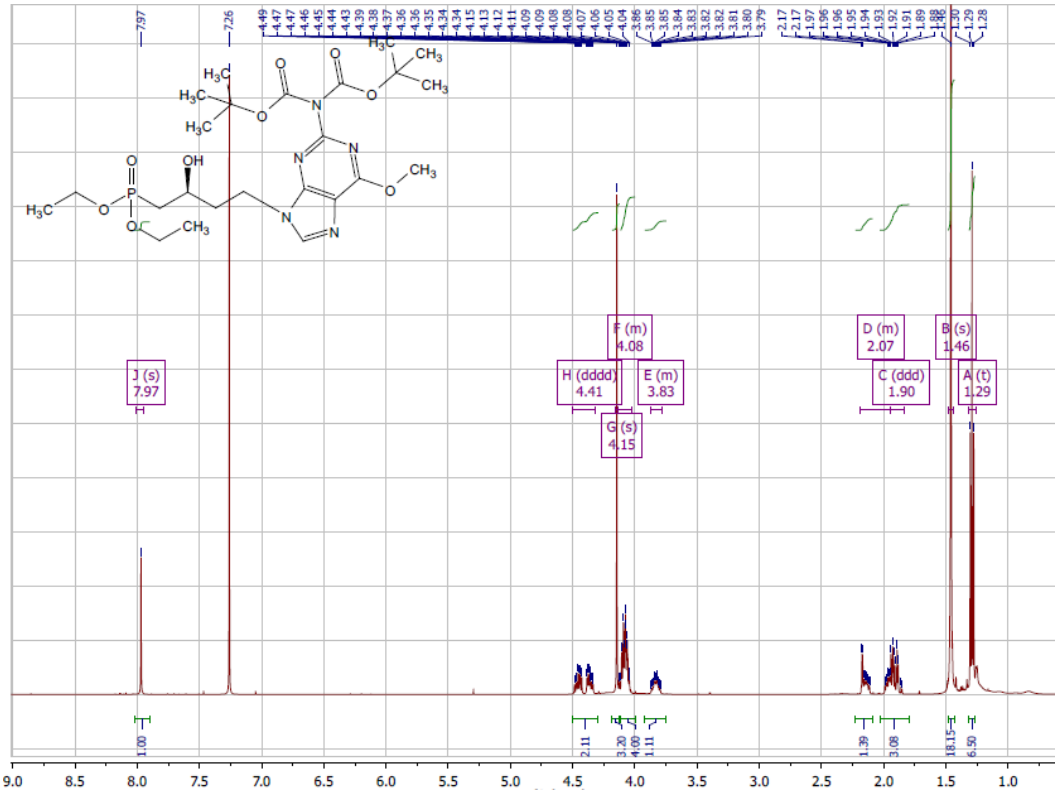


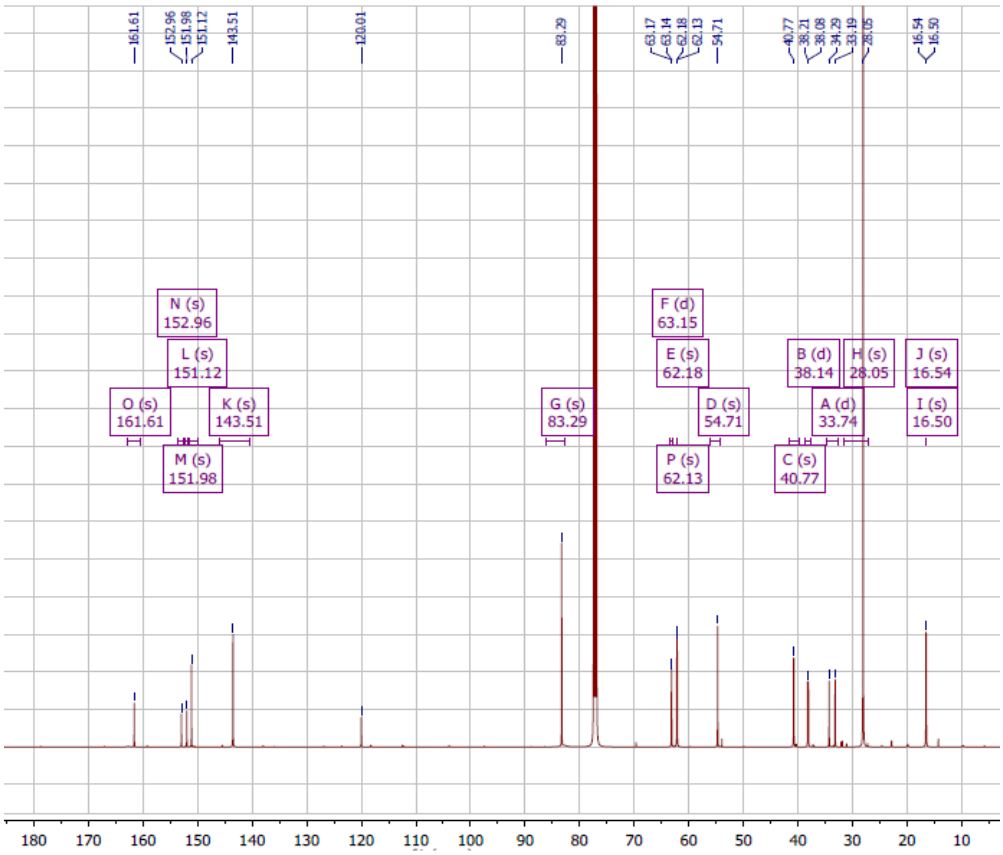


Diethyl (*R*)-(4-(2-(Bis(*tert*-butoxycarbonyl)amino)-6-methoxy-9H-purin-9-yl)-2-hydroxybutyl) phosphonate (*R*)-25

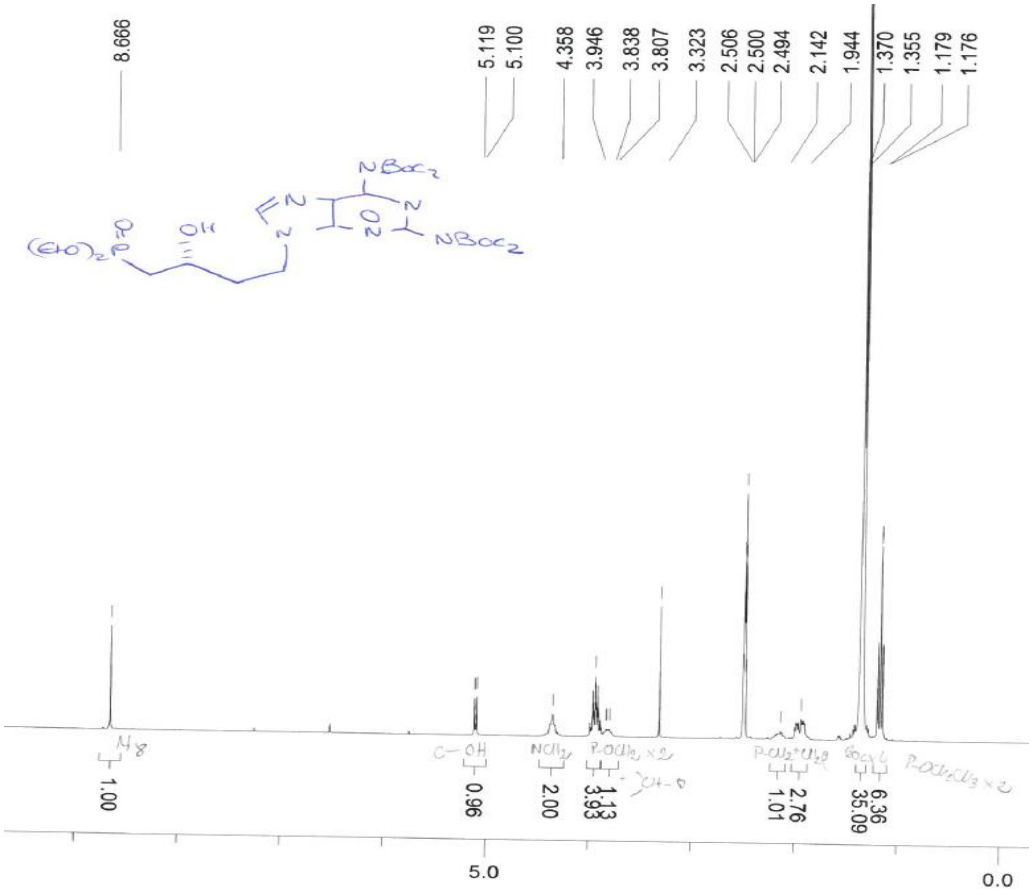


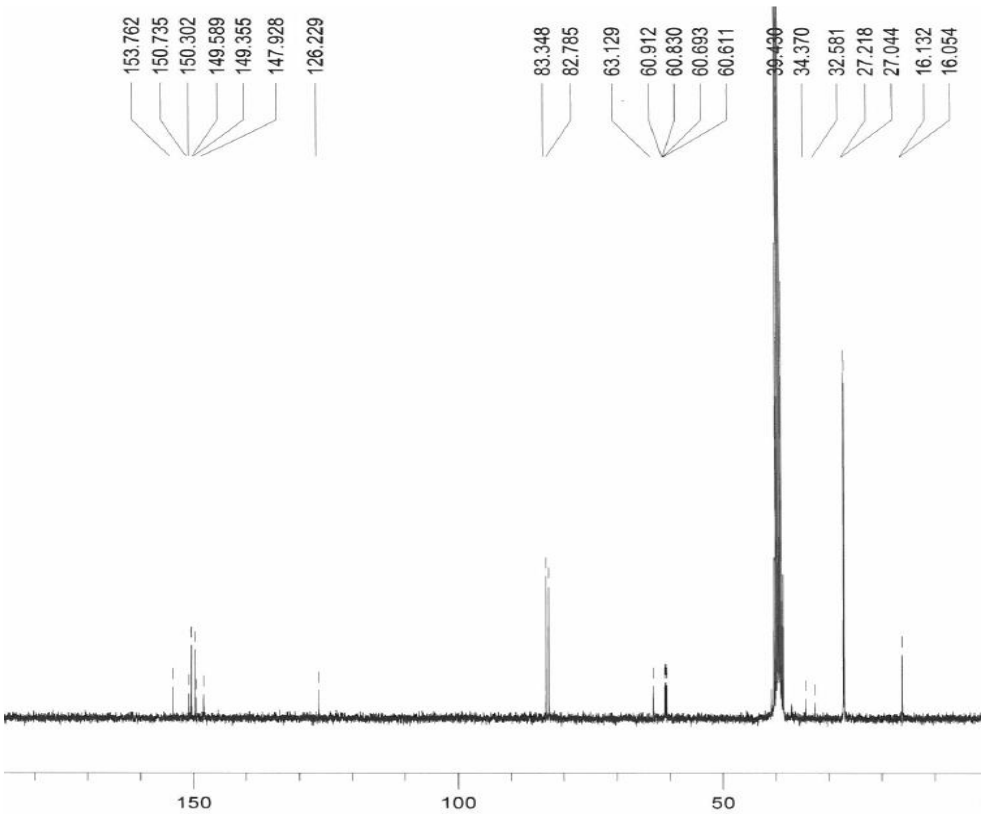
Diethyl (*S*)-(4-(2-(Bis(*tert*-butoxycarbonyl)amino)-6-methoxy-9H-purin-9-yl)-2-hydroxybutyl) phosphonate (*S*)-25



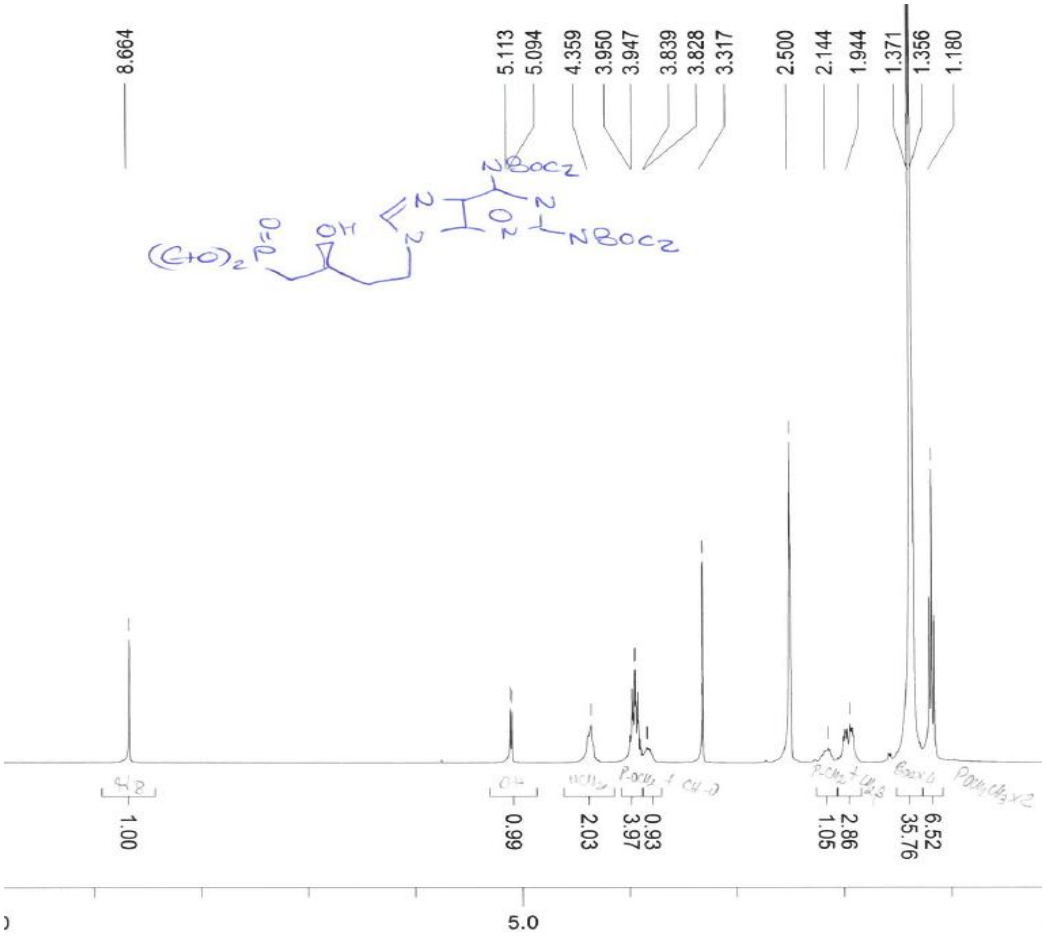


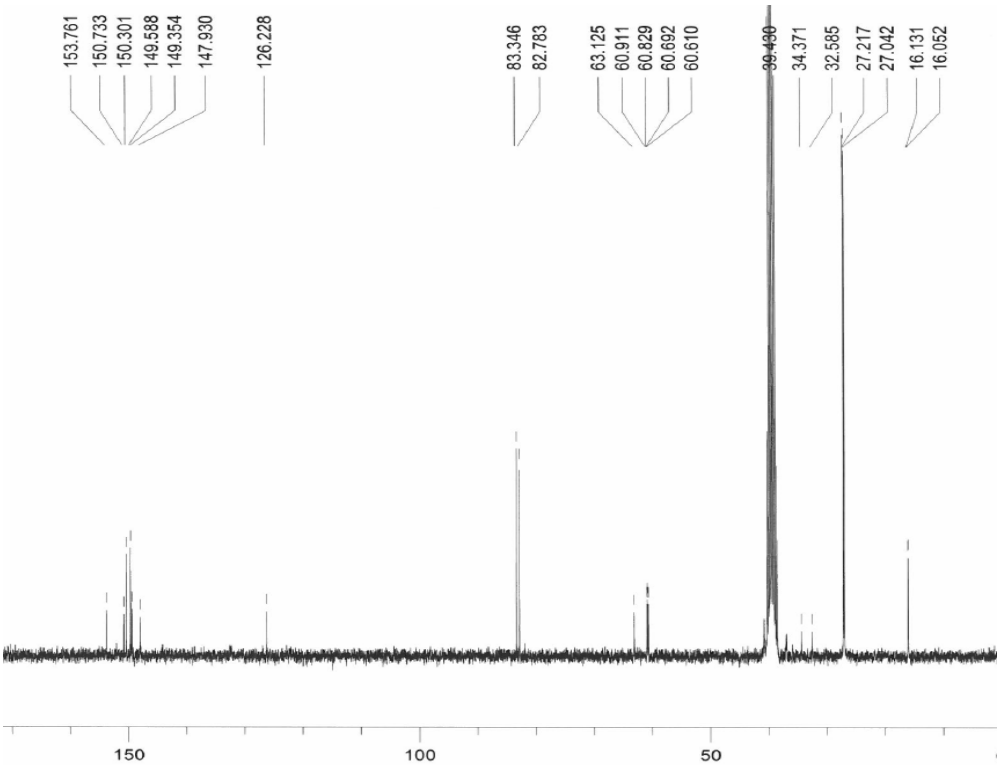
Diethyl (*R*)-(4-(2,6-(Tetra(*tert*-butoxycarbonyl)diamino)-9H-purin-9-yl)-2-hydroxybutyl)phosphonate (*R*)-26



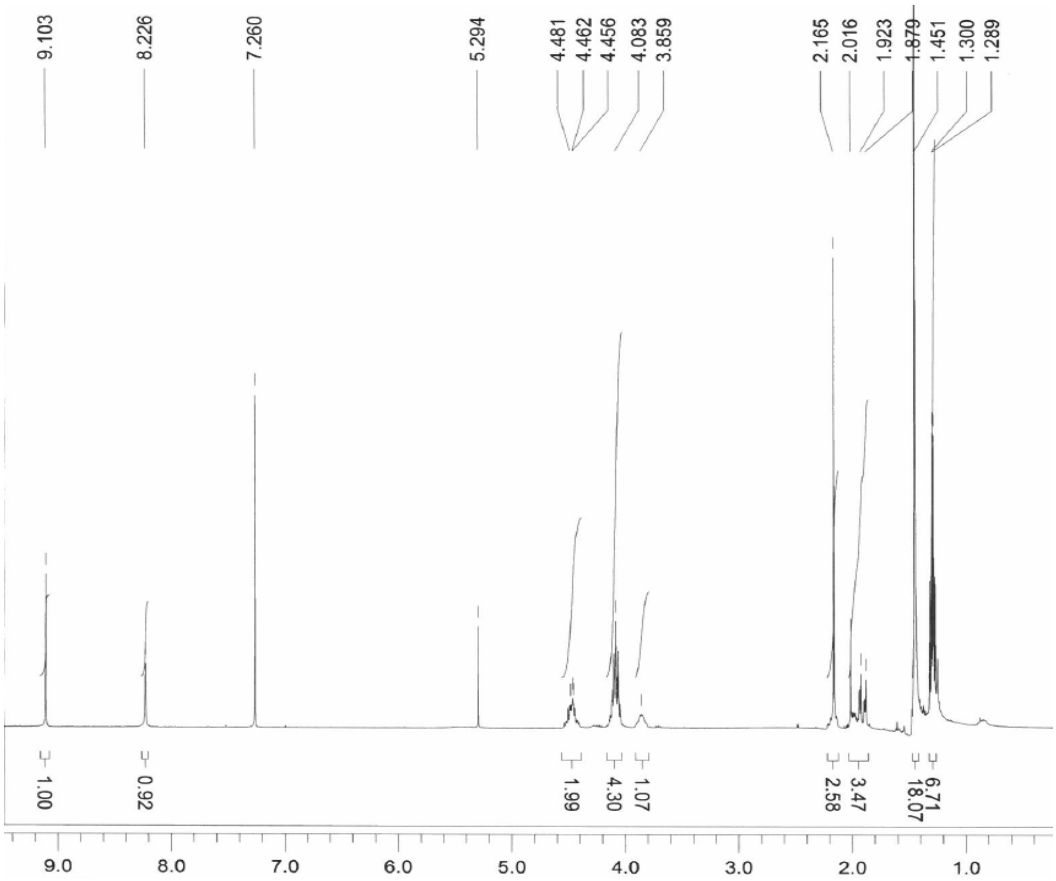


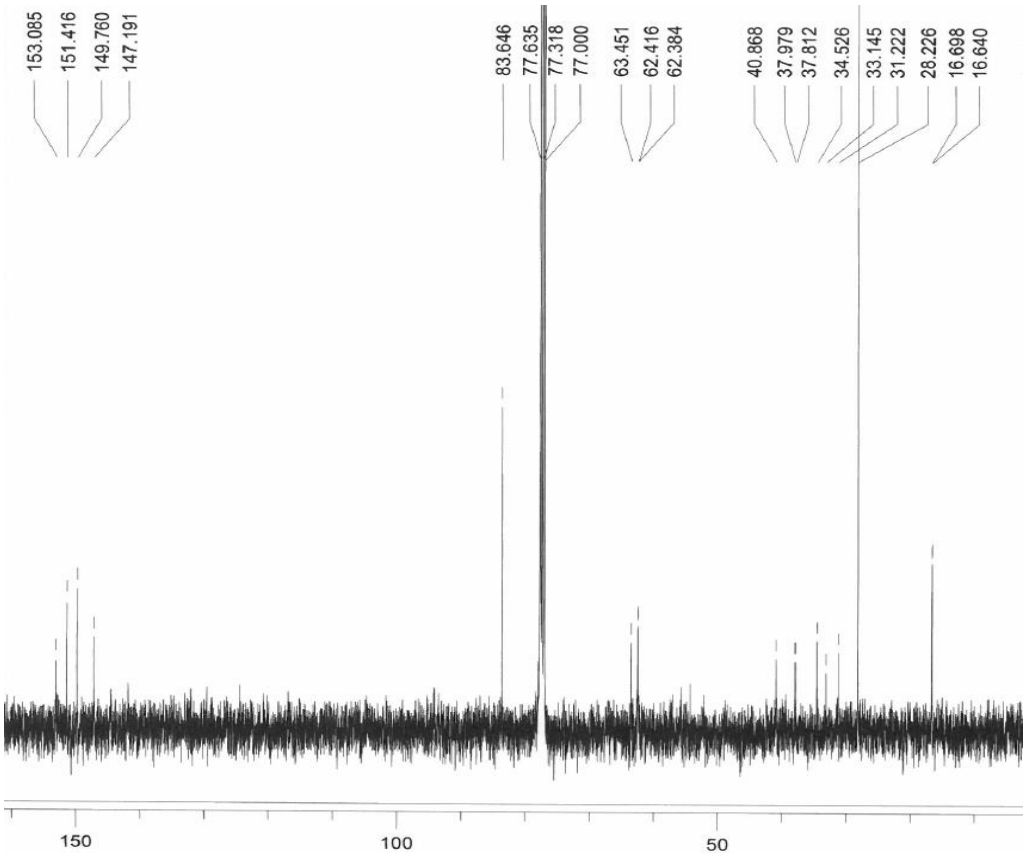
Diethyl (*S*)-(4-(2,6-(Tetra(*tert*-butoxycarbonyl)diamino)-9H-purin-9-yl)-2-hydroxybutyl)phosphonate (*S*)-26



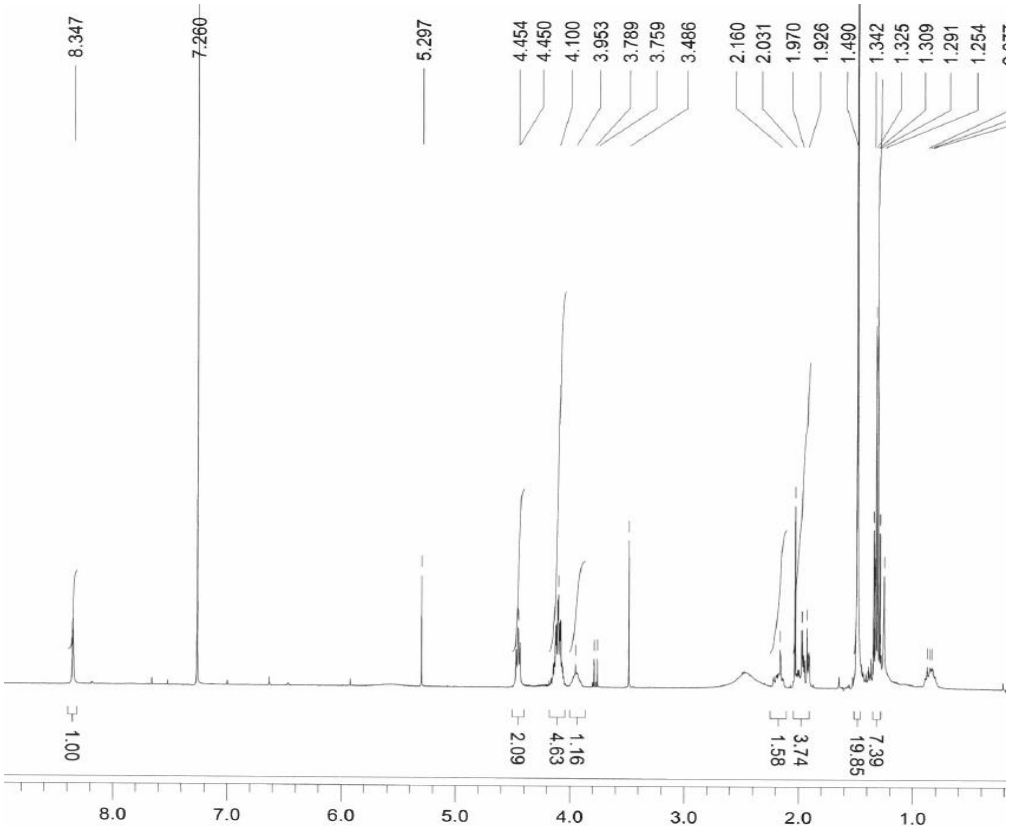


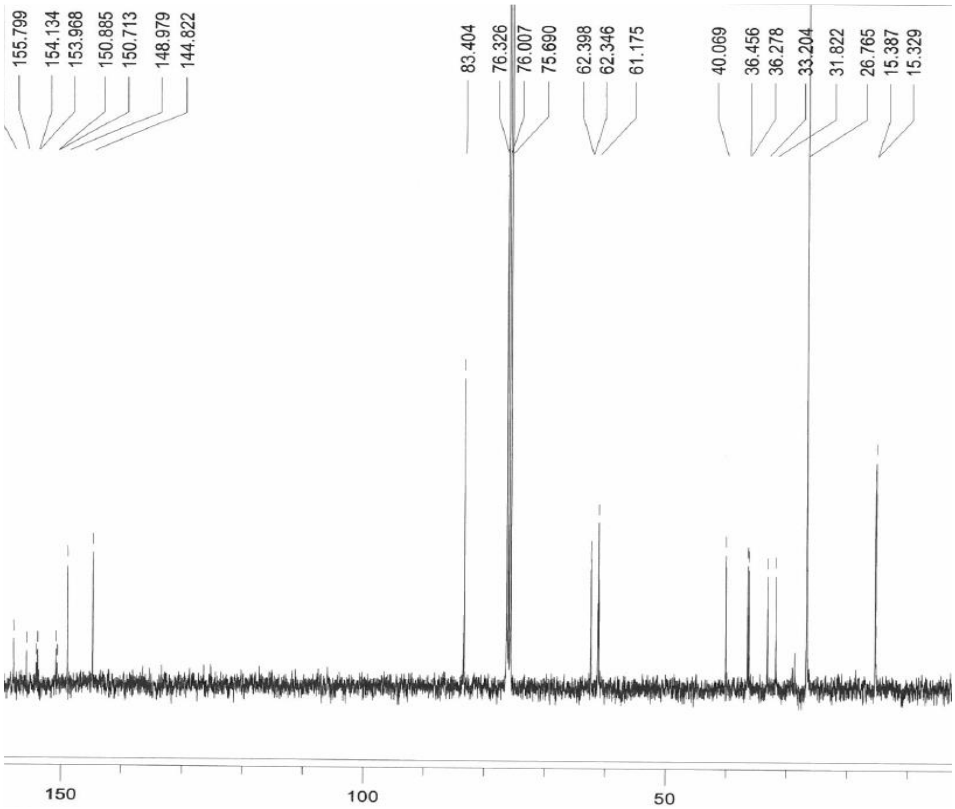
Diethyl (*R*)-(4-(2-(Bis(*tert*-butoxycarbonyl)amino)-9*H*-purin-9-yl)-2-hydroxybutyl)phosphonate (*R*)- 33



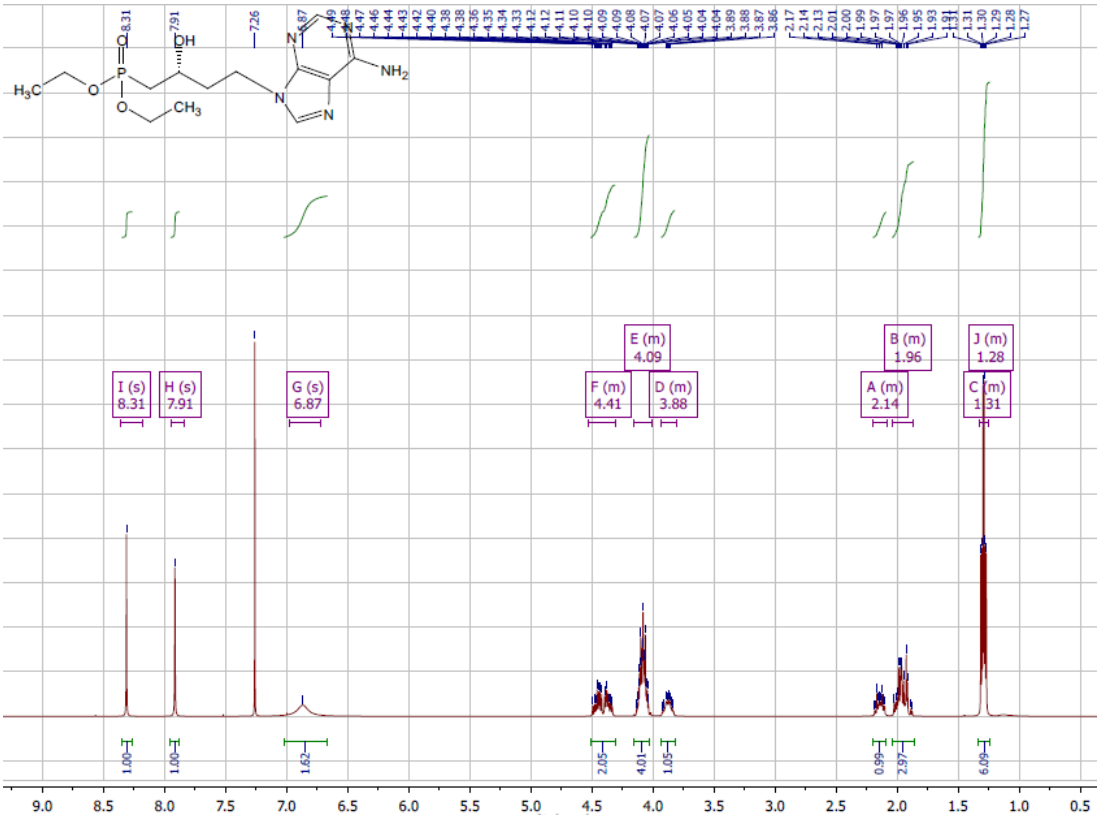


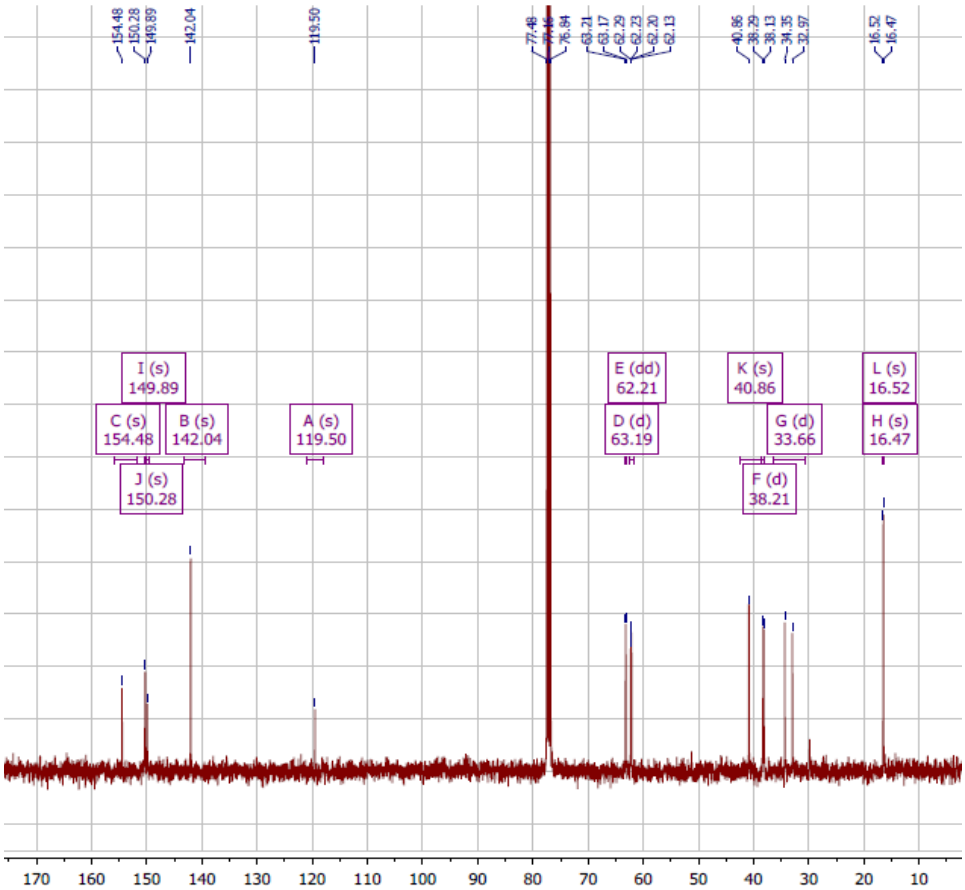
Diethyl (*R*)-(4-(6-(Bis(*tert*-butoxycarbonyl)amino)-9*H*-2-fluoropurin-9-yl)-2-hydroxybutyl)phosphonate (*R*)- 34



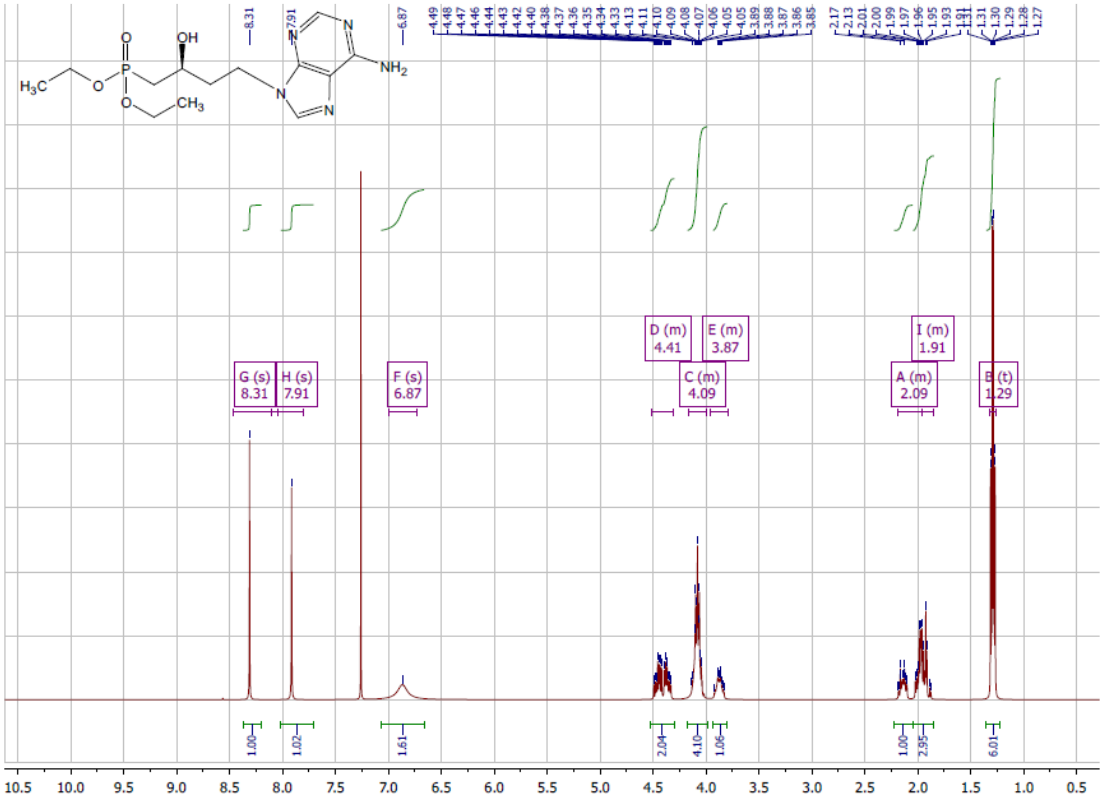


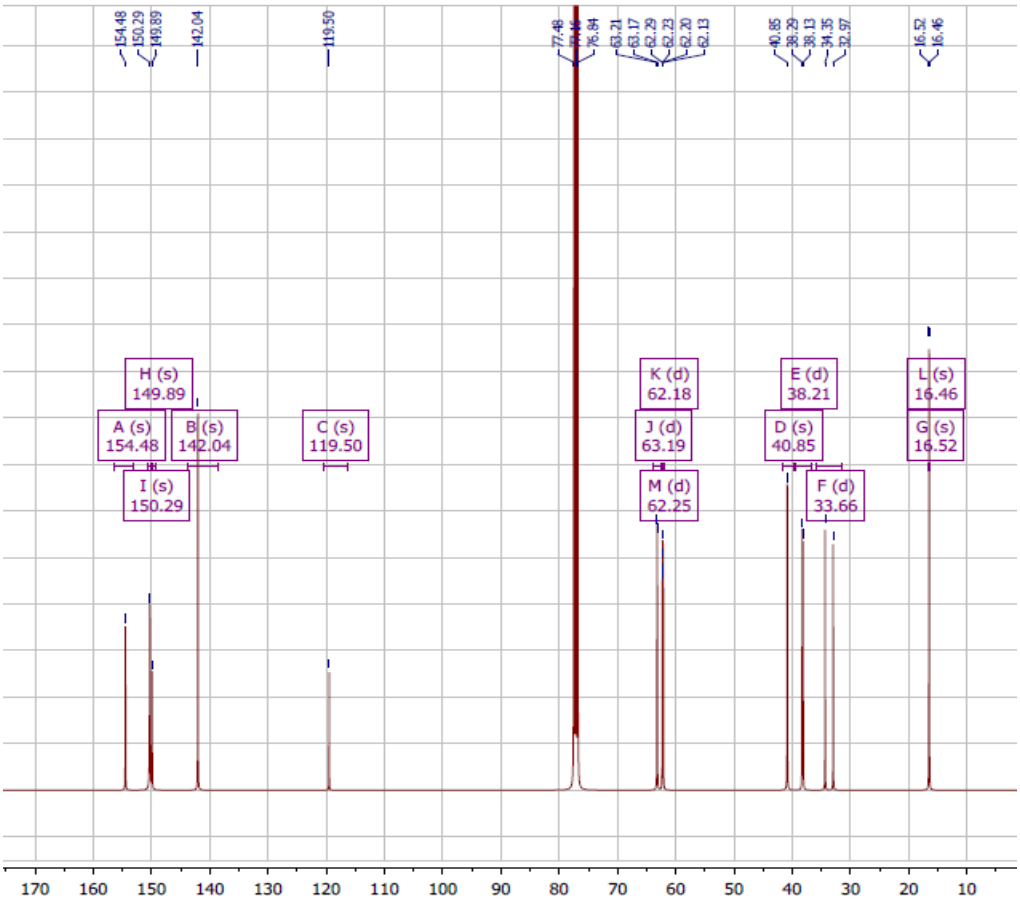
Diethyl (*R*)-(4-(6-amino-9*H*-purin-9-yl)-2-hydroxybutyl) phosphonate (*R*)-27



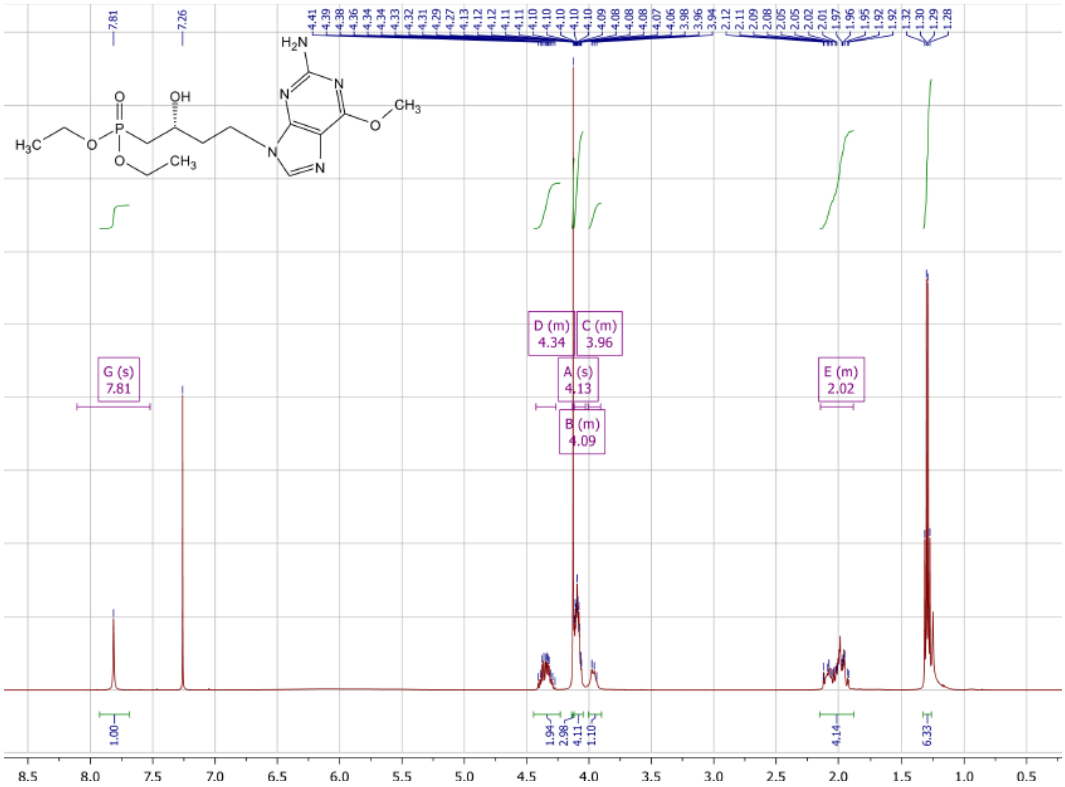


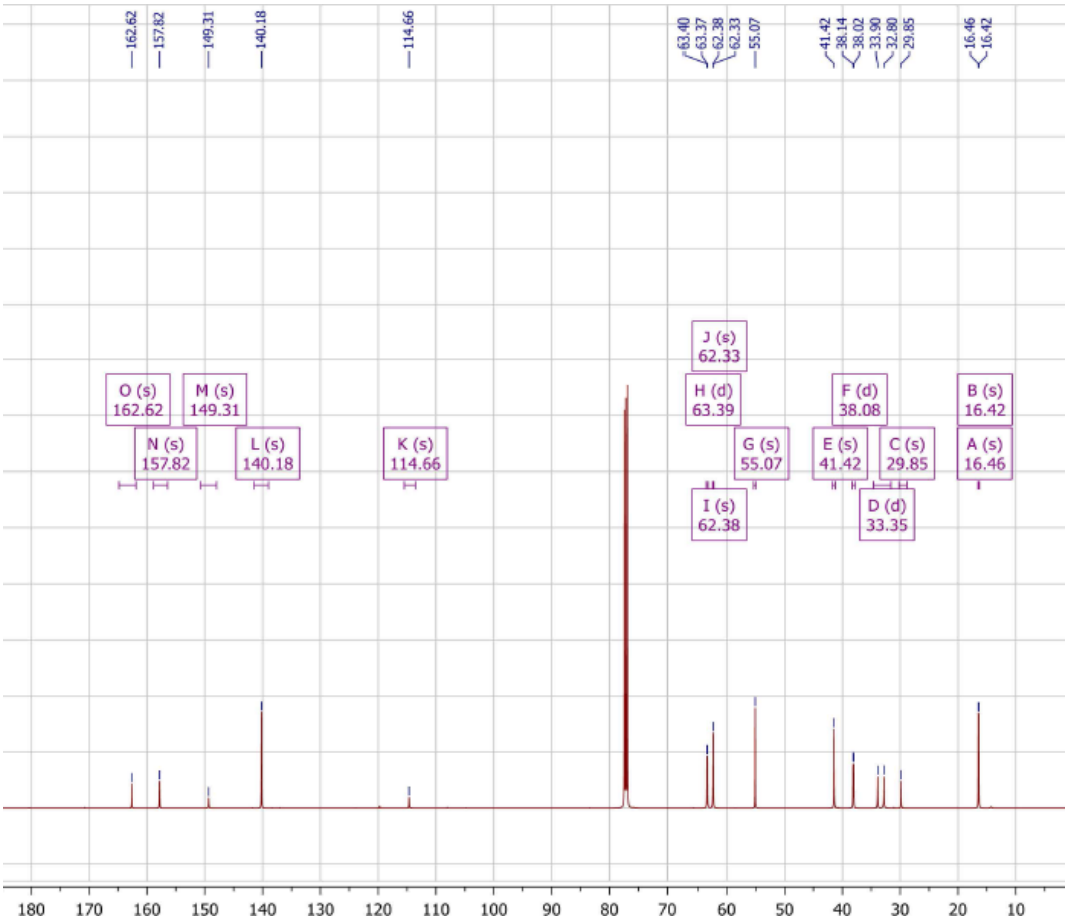
Diethyl (*S*)-(4-(6-amino-9*H*-purin-9-yl)-2-hydroxybutyl) phosphonate (*S*)-27



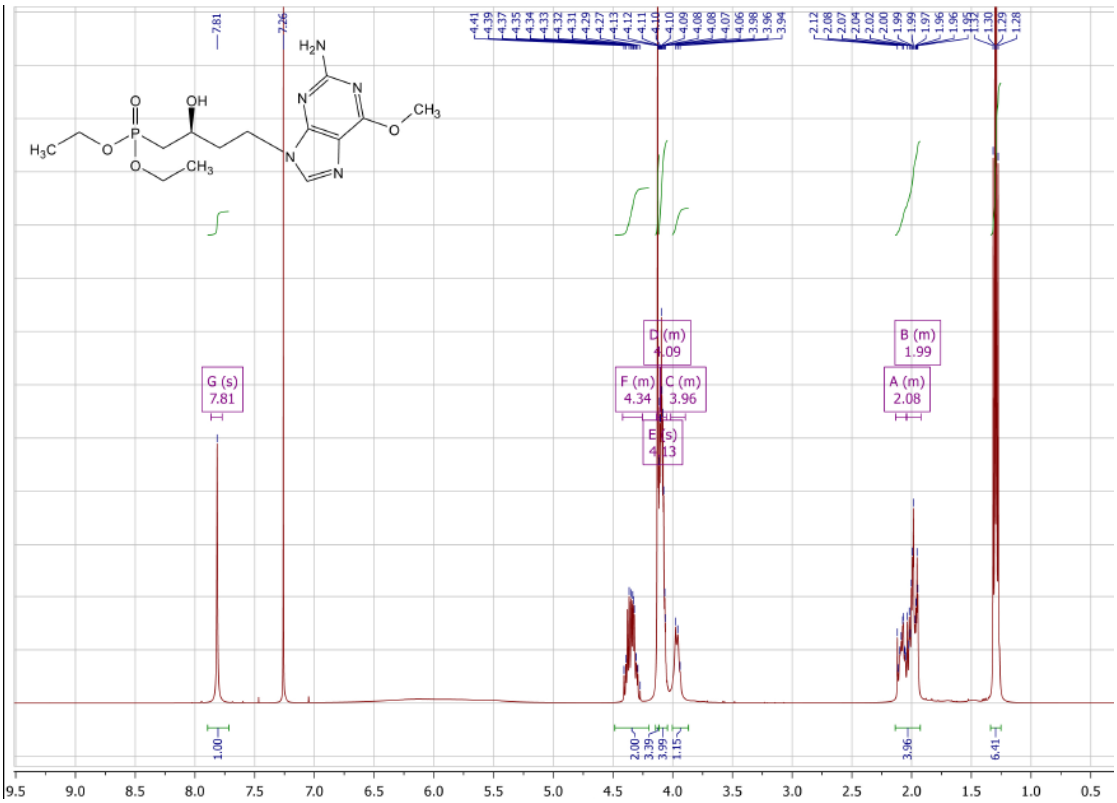


Diethyl (*R*)-(4-(2-amino-6-methoxy-9*H*-purin-9-yl)-2-hydroxybutyl)phosphonate (*R*)-28

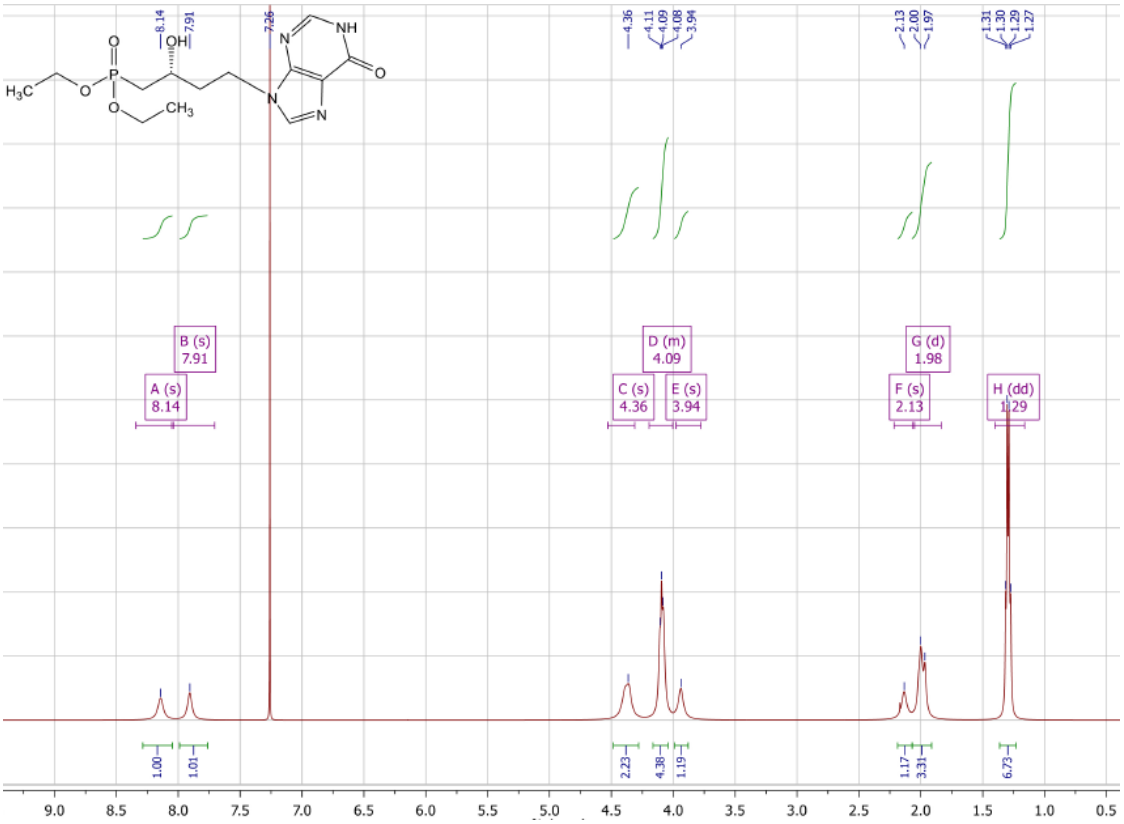




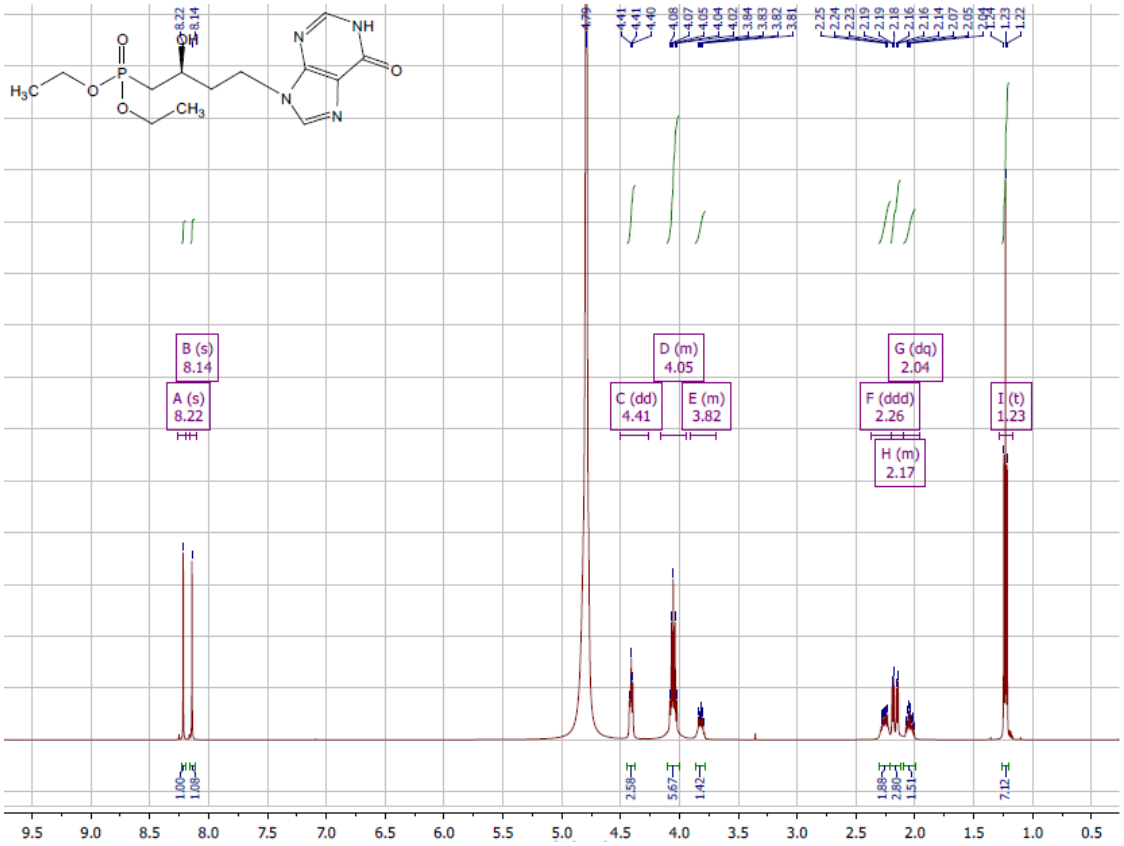
Diethyl (*S*)-(4-(2-amino-6-methoxy-9*H*-purin-9-yl)-2-hydroxybutyl)phosphonate (*S*)-28



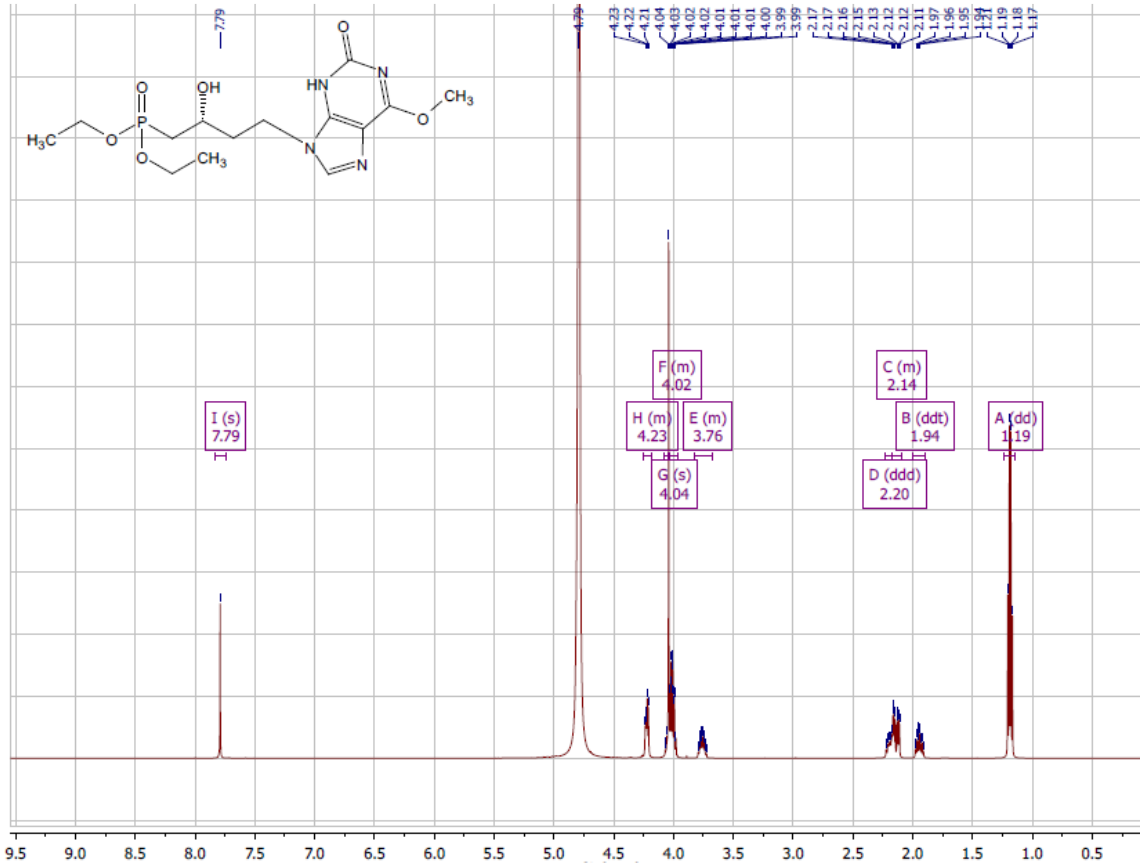
Diethyl (*R*)-(2-hydroxy-4-(6-oxo-1,6-dihydro-9*H*-purin-9-yl) butyl)phosphonate (*R*)-29

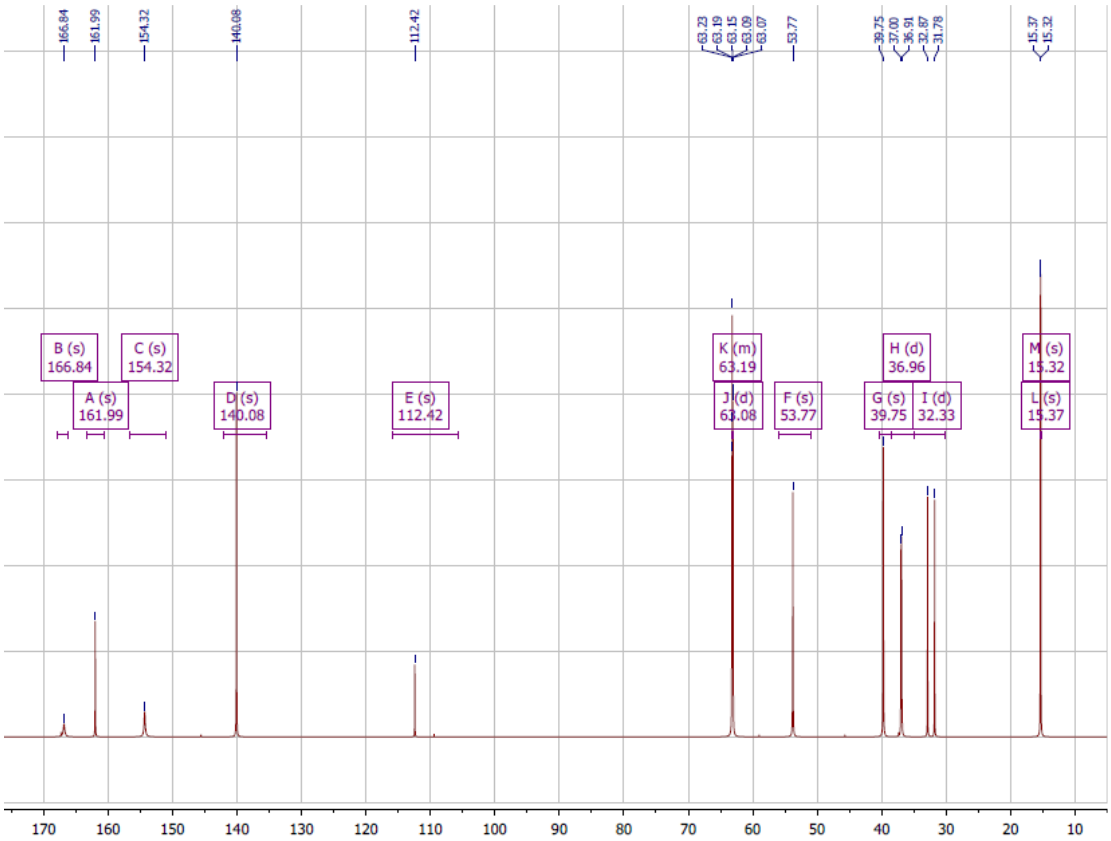


Diethyl (*S*)-(2-hydroxy-4-(6-oxo-1,6-dihydro-9*H*-purin-9-yl)butyl)phosphonate (*S*)-29

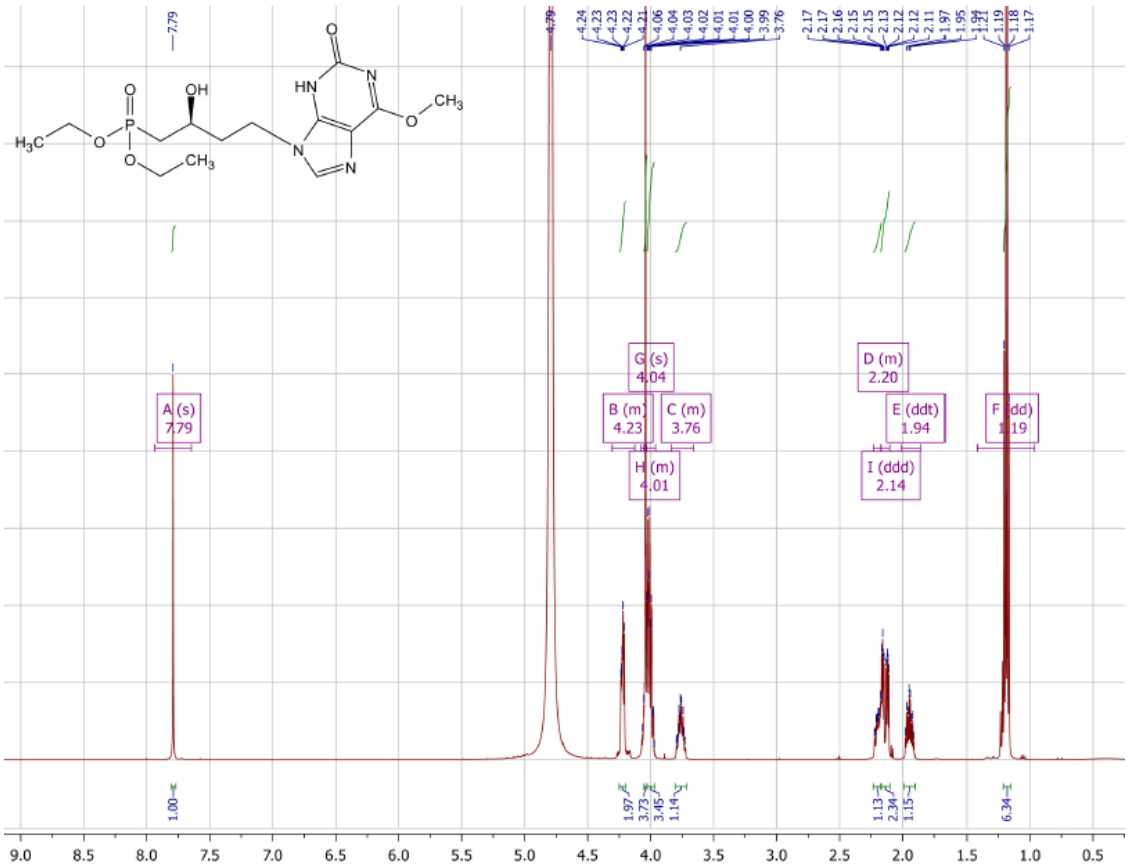


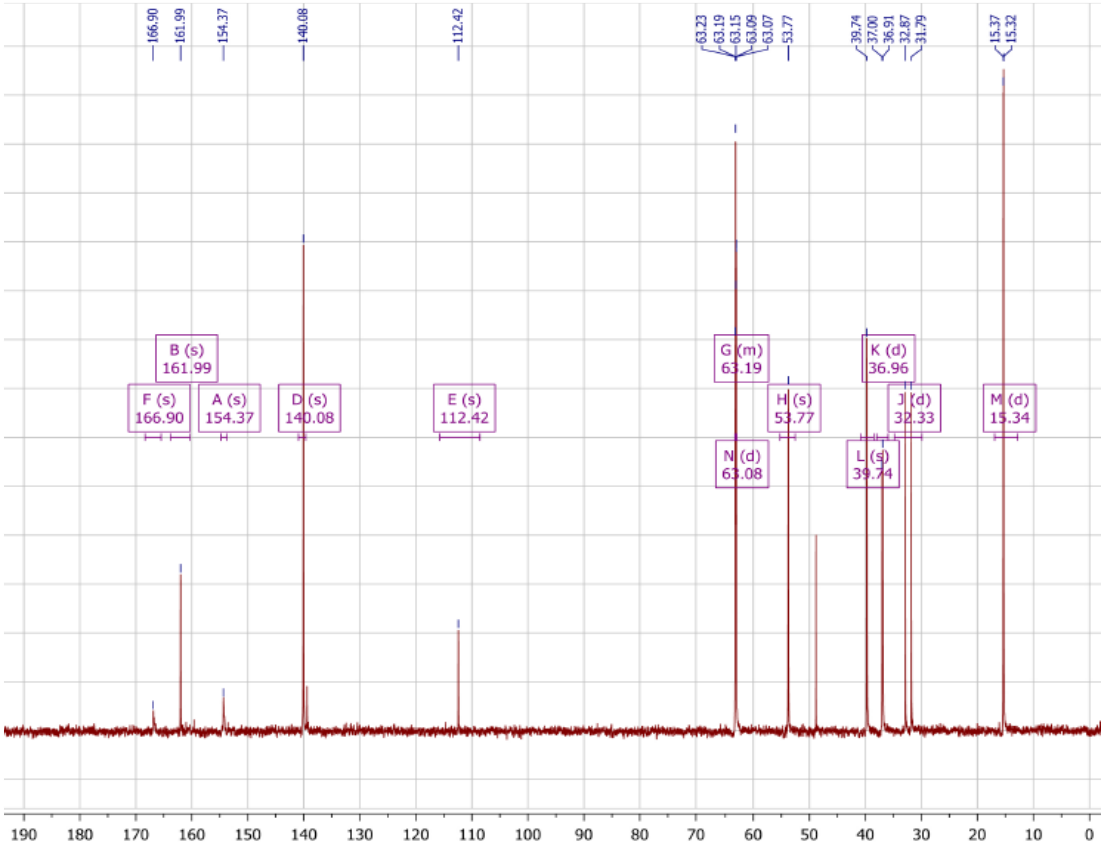
Diethyl (*R*)-(2-hydroxy-4-(6-methoxy-2-oxo-2,3-dihydro-9H-purin-9-yl)butyl)phosphonate (*R*)-30



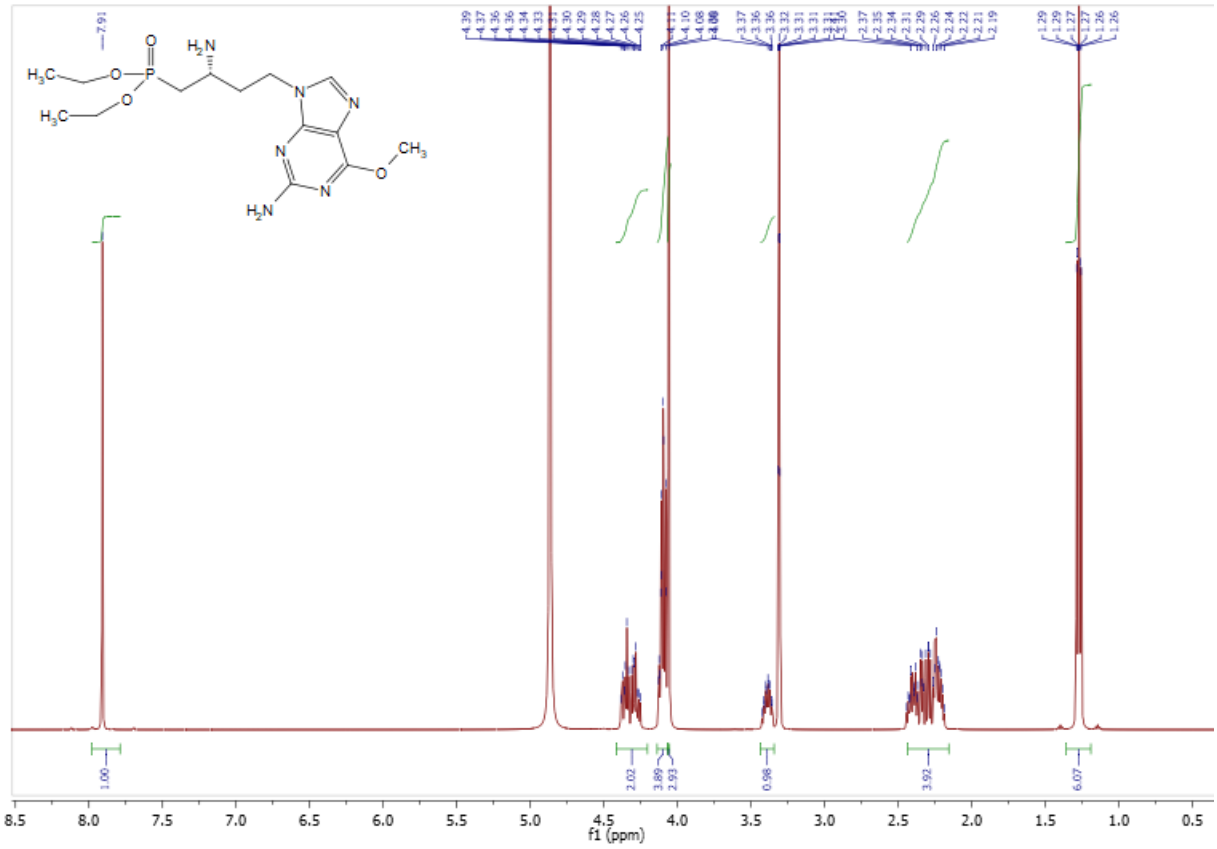


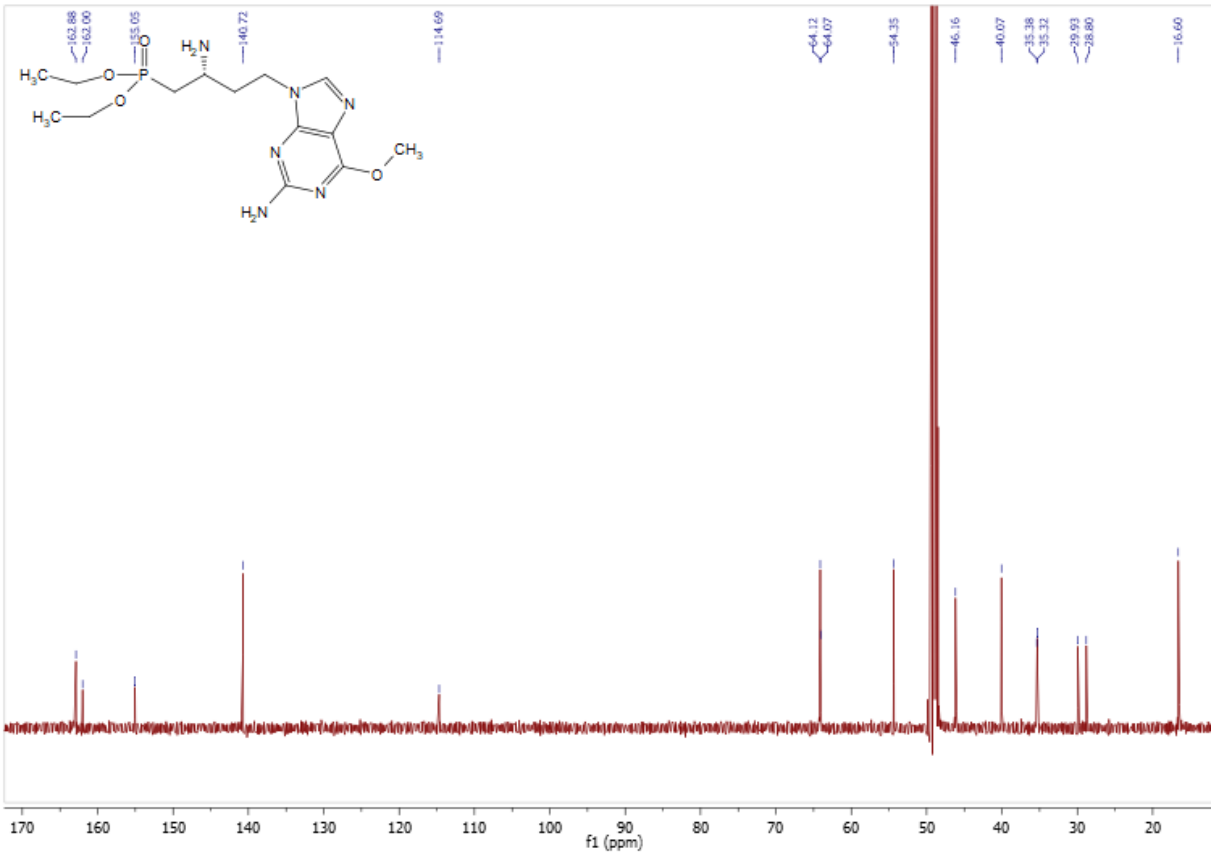
Diethyl (*S*)-(2-hydroxy-4-(6-methoxy-2-oxo-2,3-dihydro-9H-purin-9-yl)butyl)phosphonate (*S*)-30



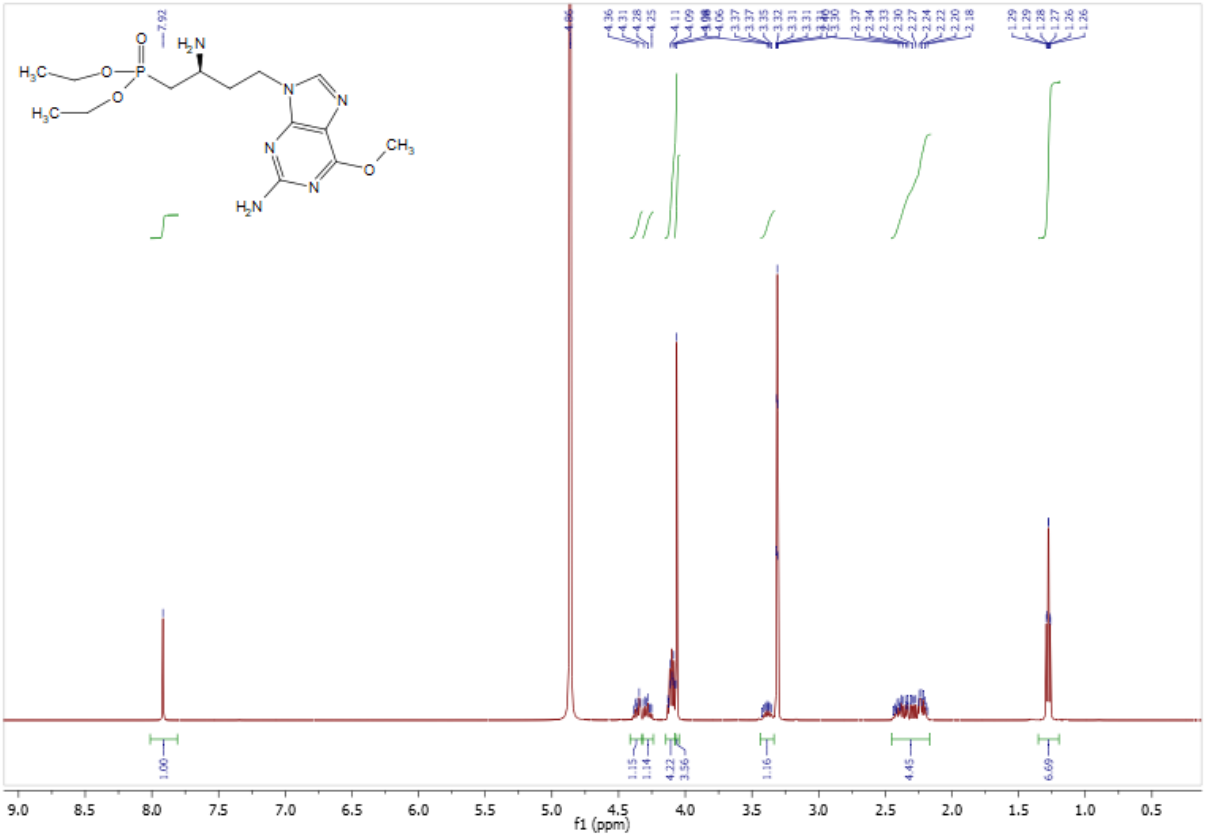


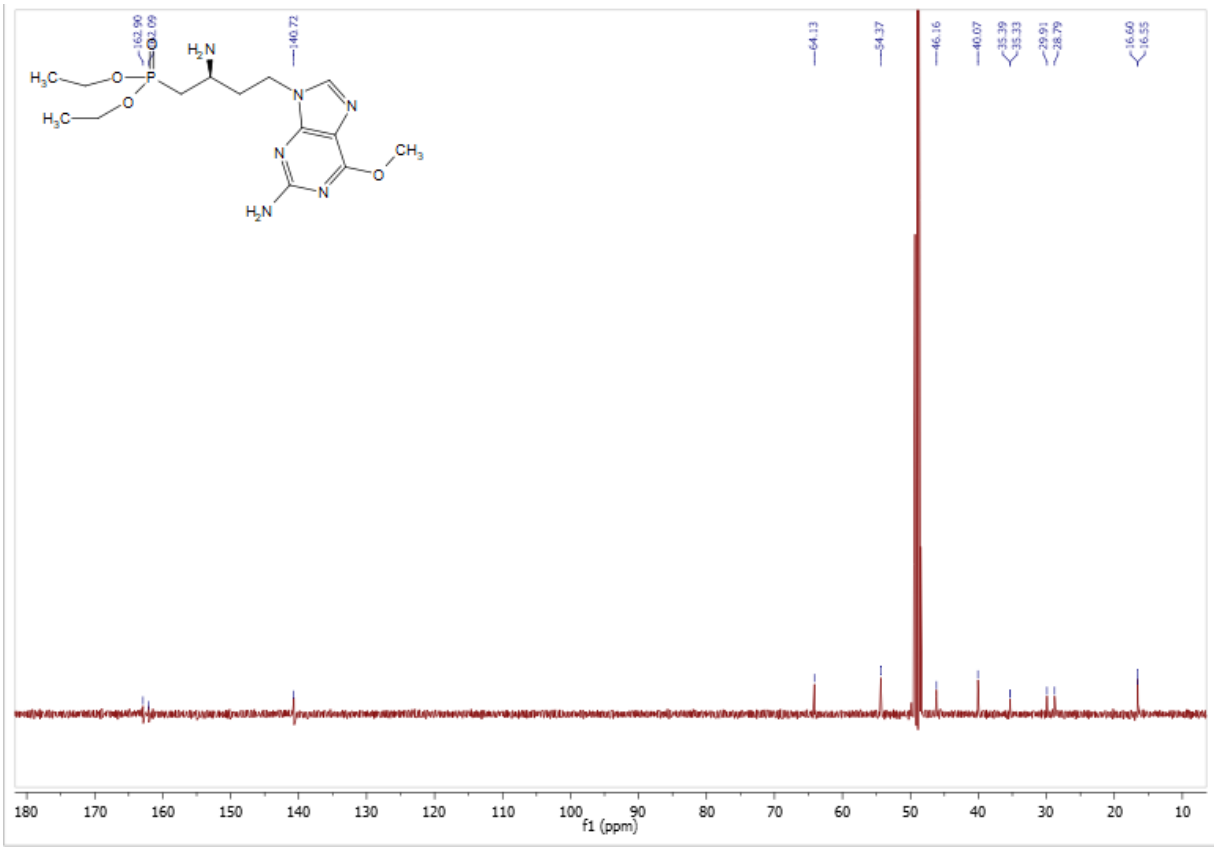
Diethyl (*R*)-(4-(2-amino-6-methoxy-9*H*-purin-9-yl)-2-aminobutyl)phosphonate (*R*)-40



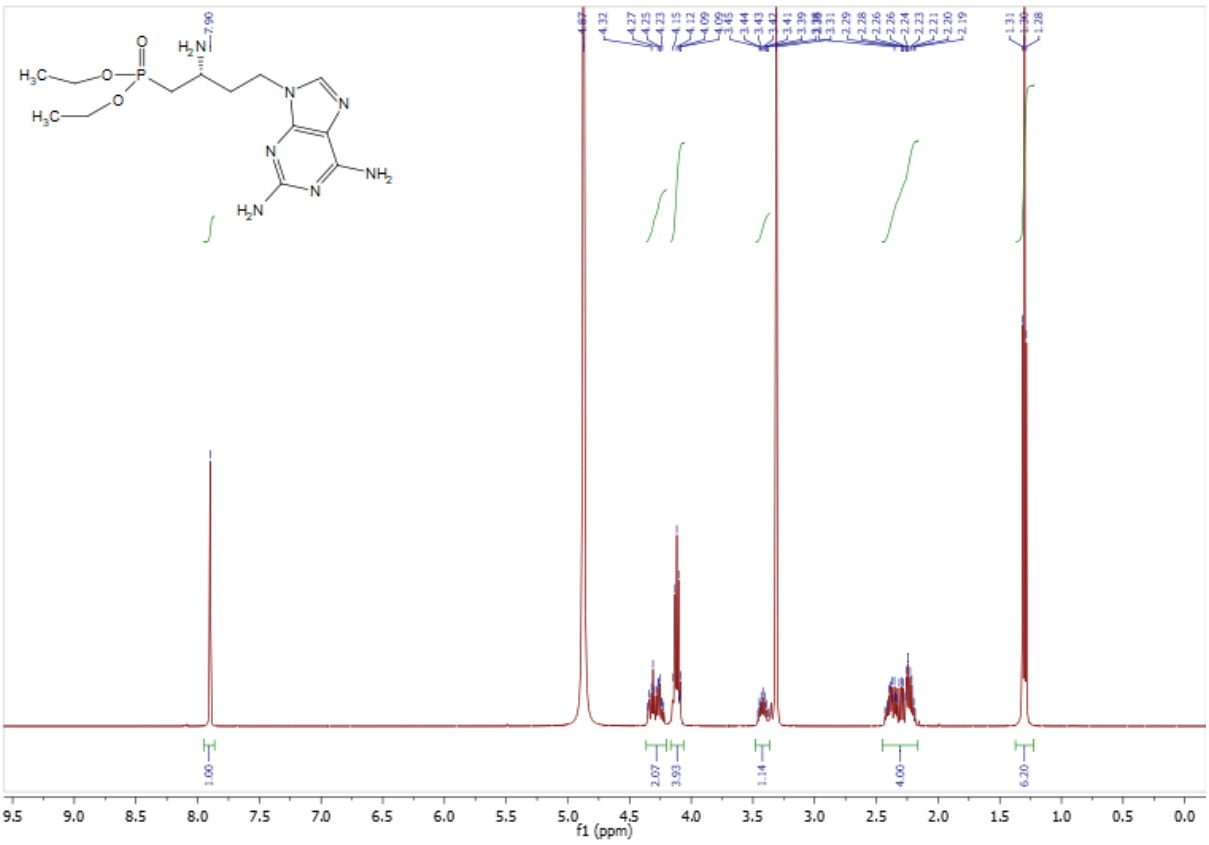


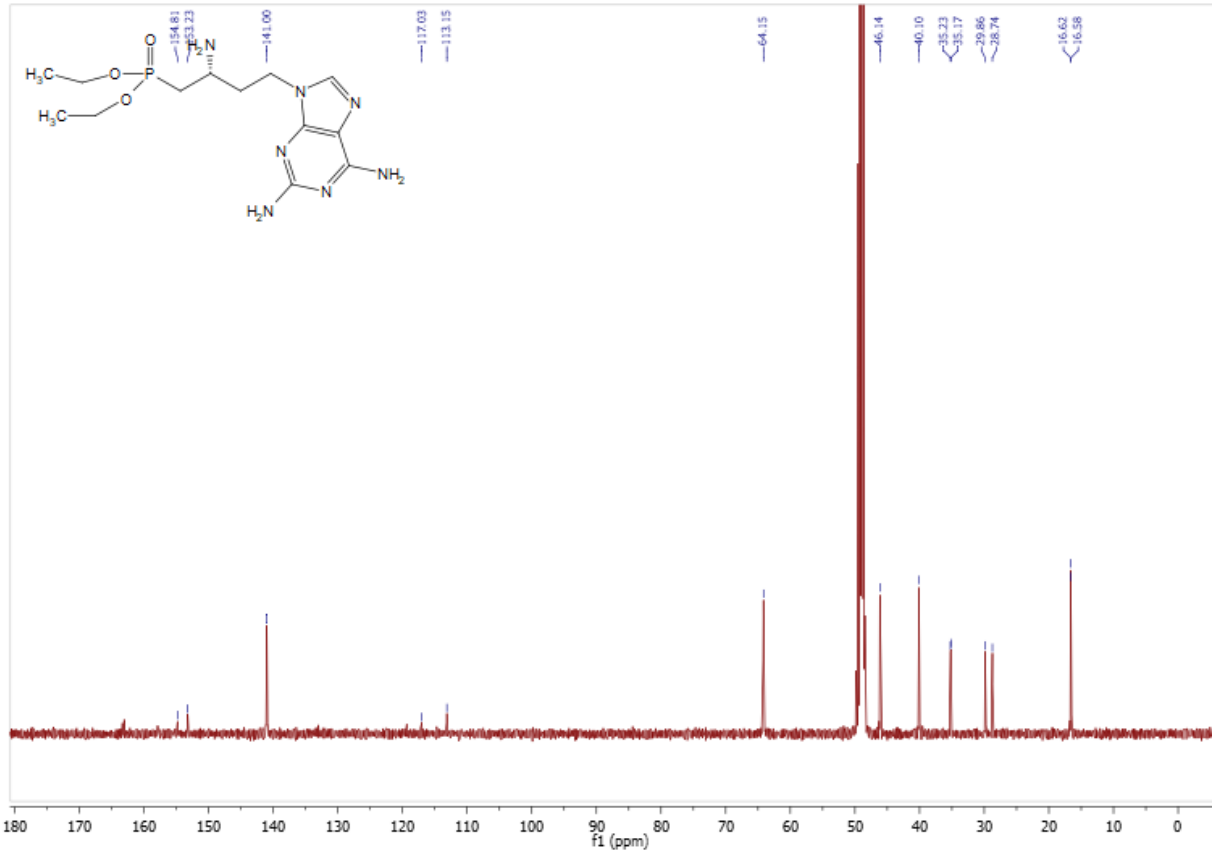
Diethyl (*S*)-(4-(2-amino-6-methoxy-9*H*-purin-9-yl)-2-aminobutyl)phosphonate (*S*)-40



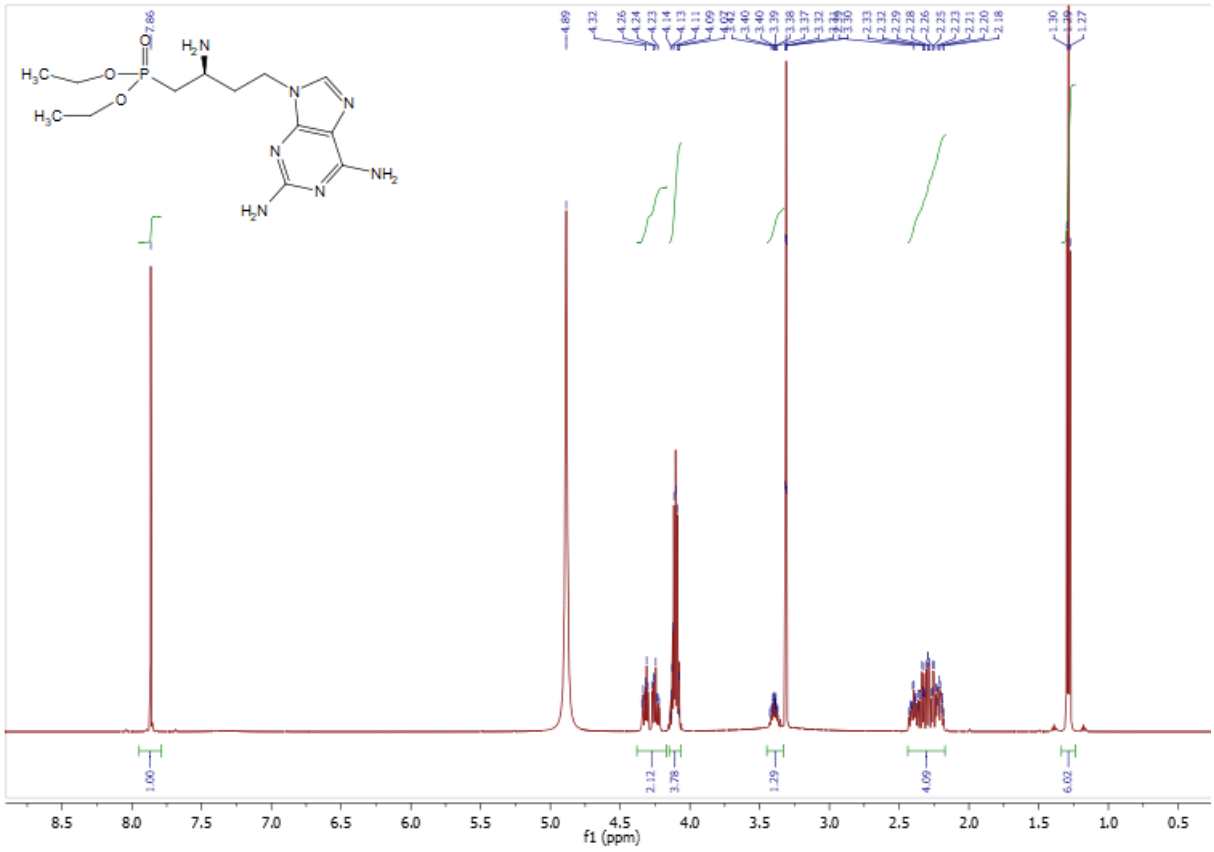


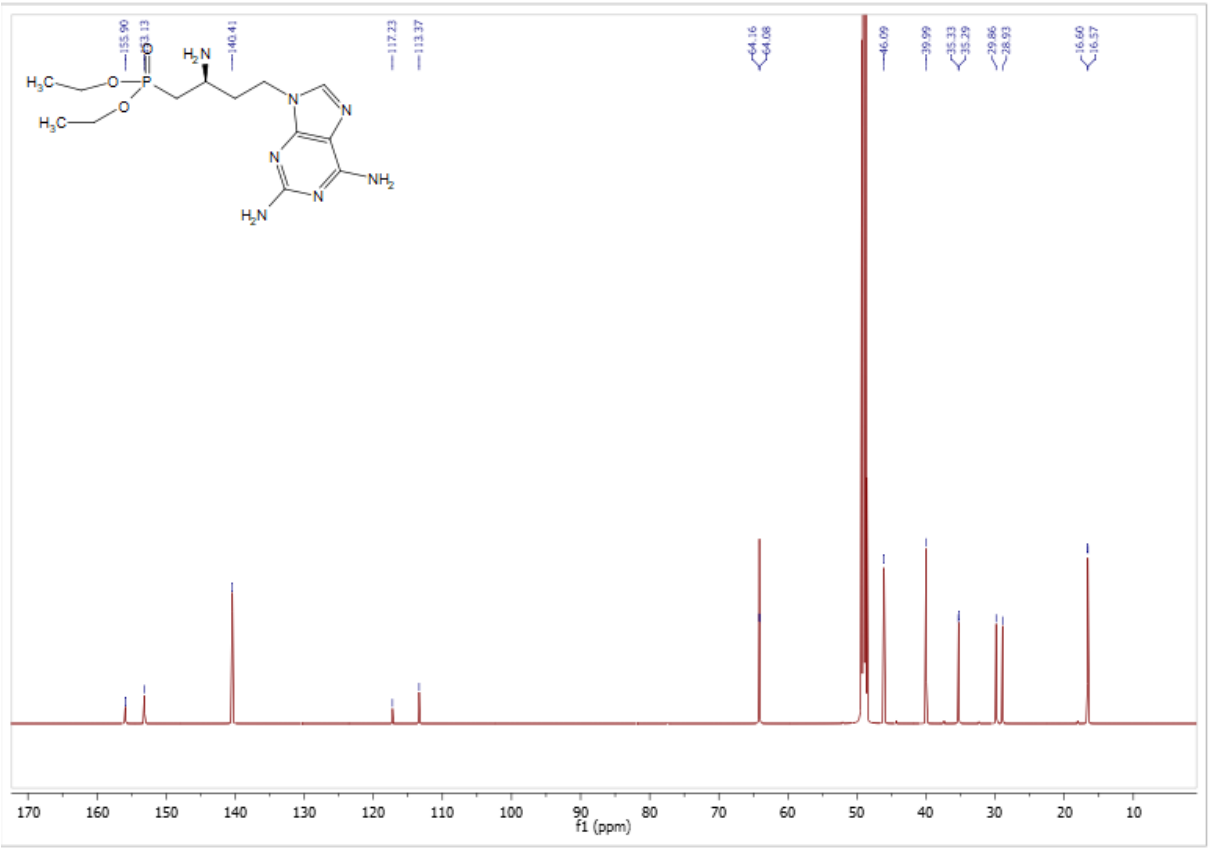
Diethyl (*R*)-(4-(2,6-diamino-9*H*-purin-9-yl)-2-aminobutyl) phosphonate (*R*)-41



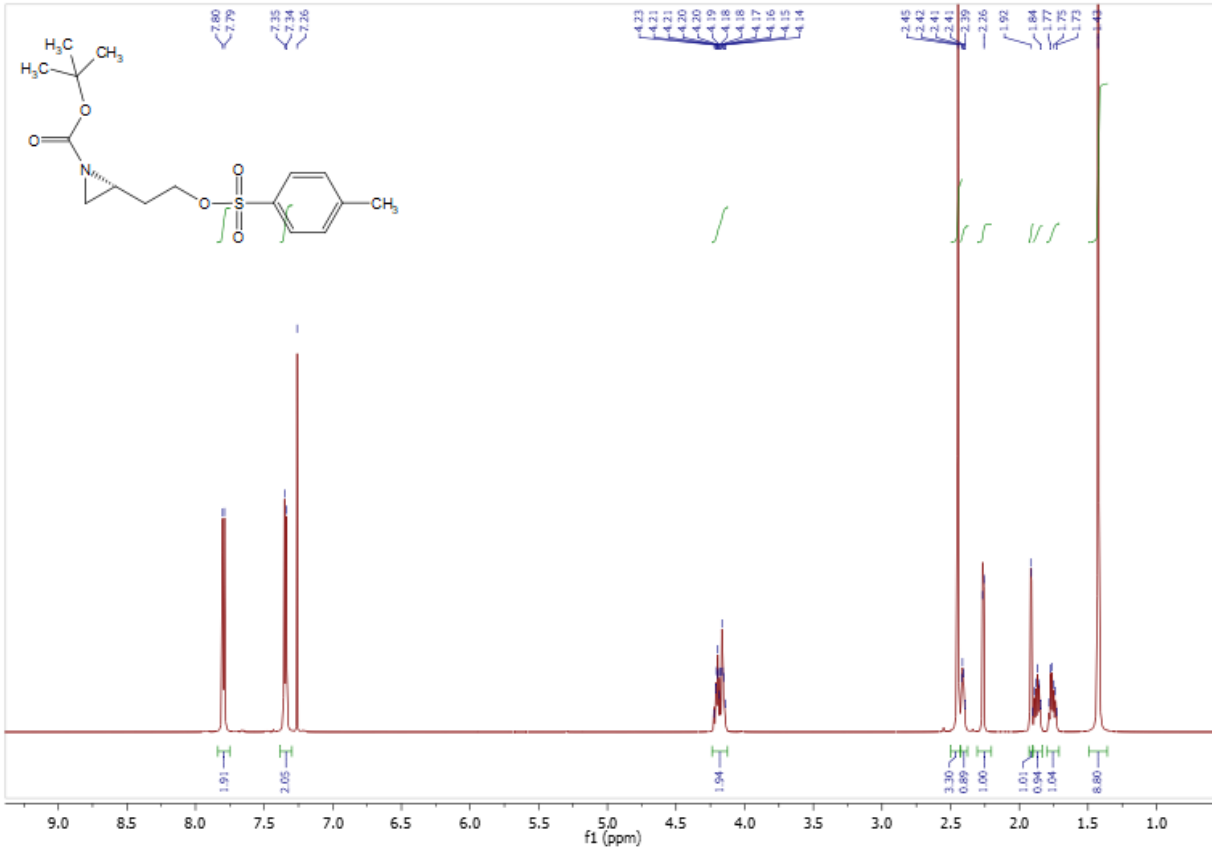


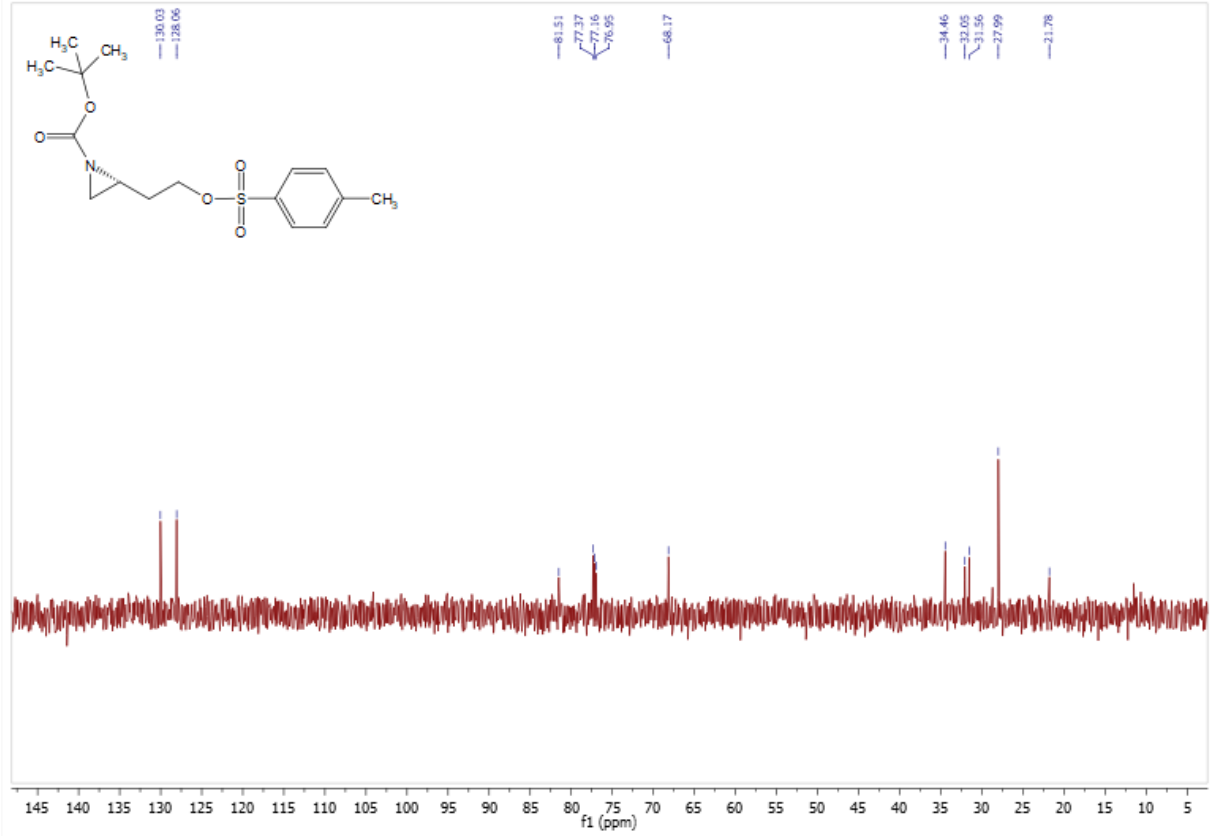
Diethyl (*S*)-(4-(2,6-diamino-9*H*-purin-9-yl)-2-aminobutyl) phosphonate (*S*)-41



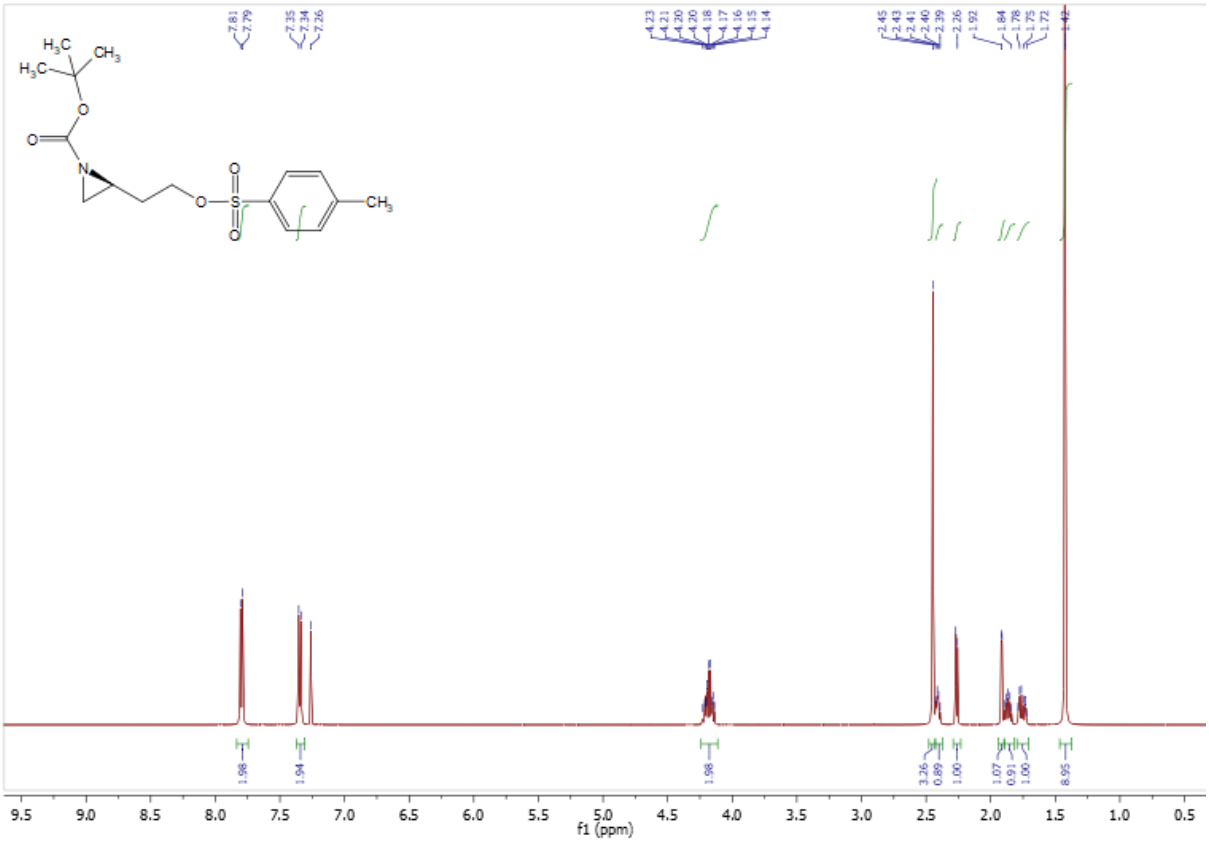


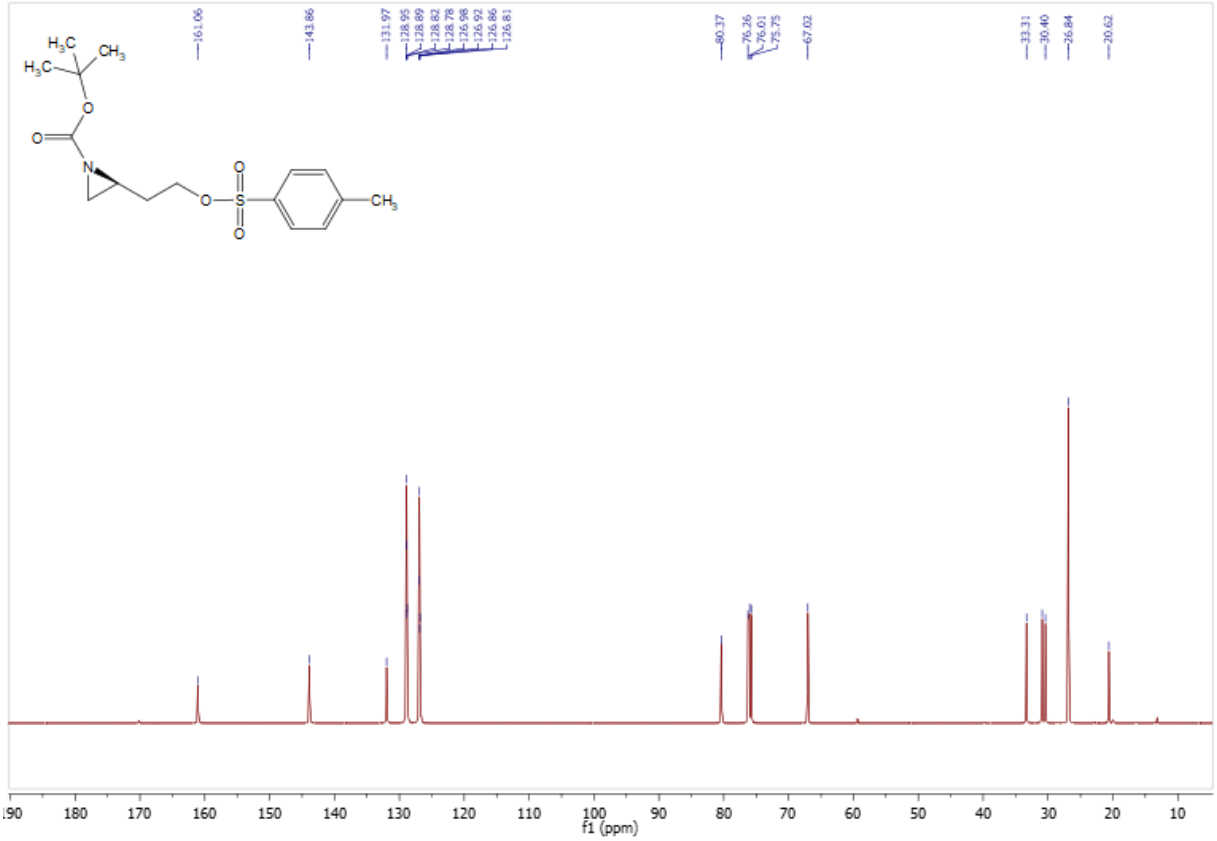
(*R*)-*tert*-butyl-(2-(2-tosyloxy)ethyl)aziridine-*N*-carboxylate, 35



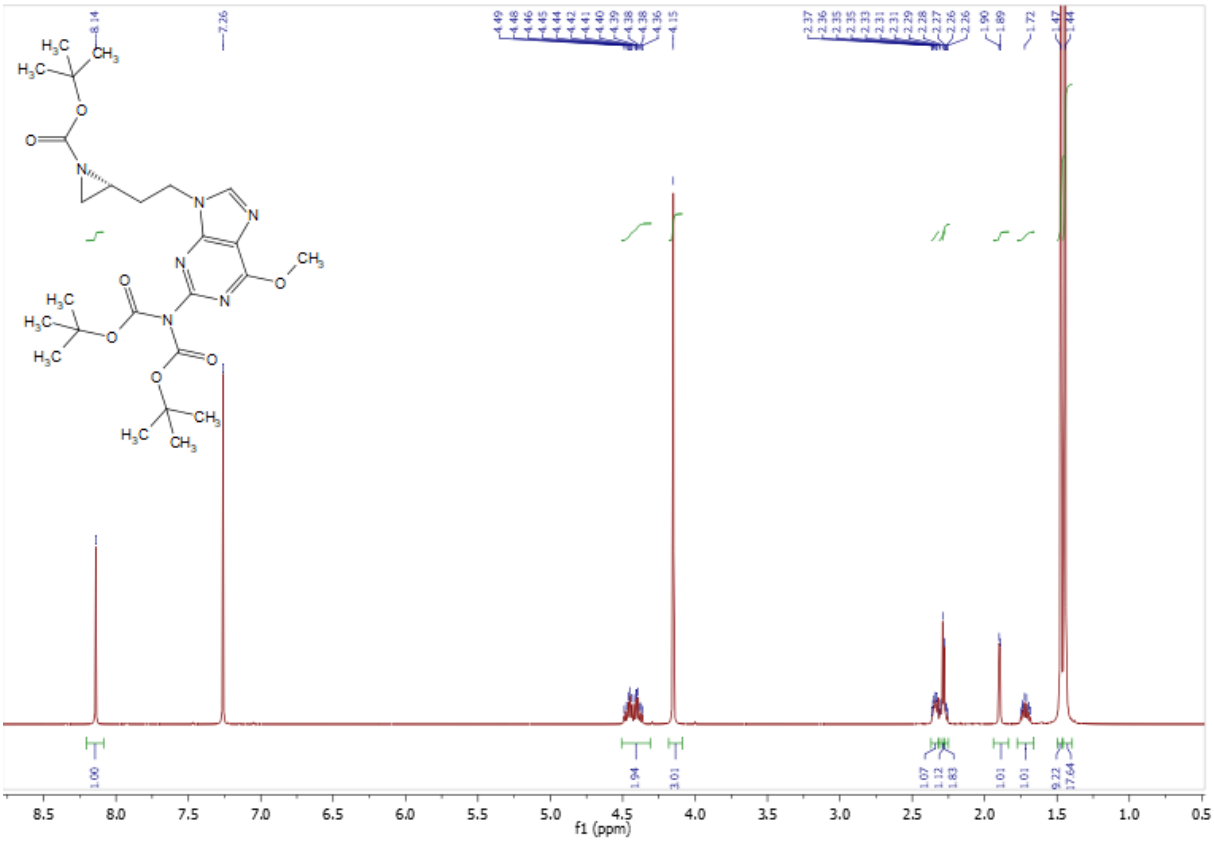


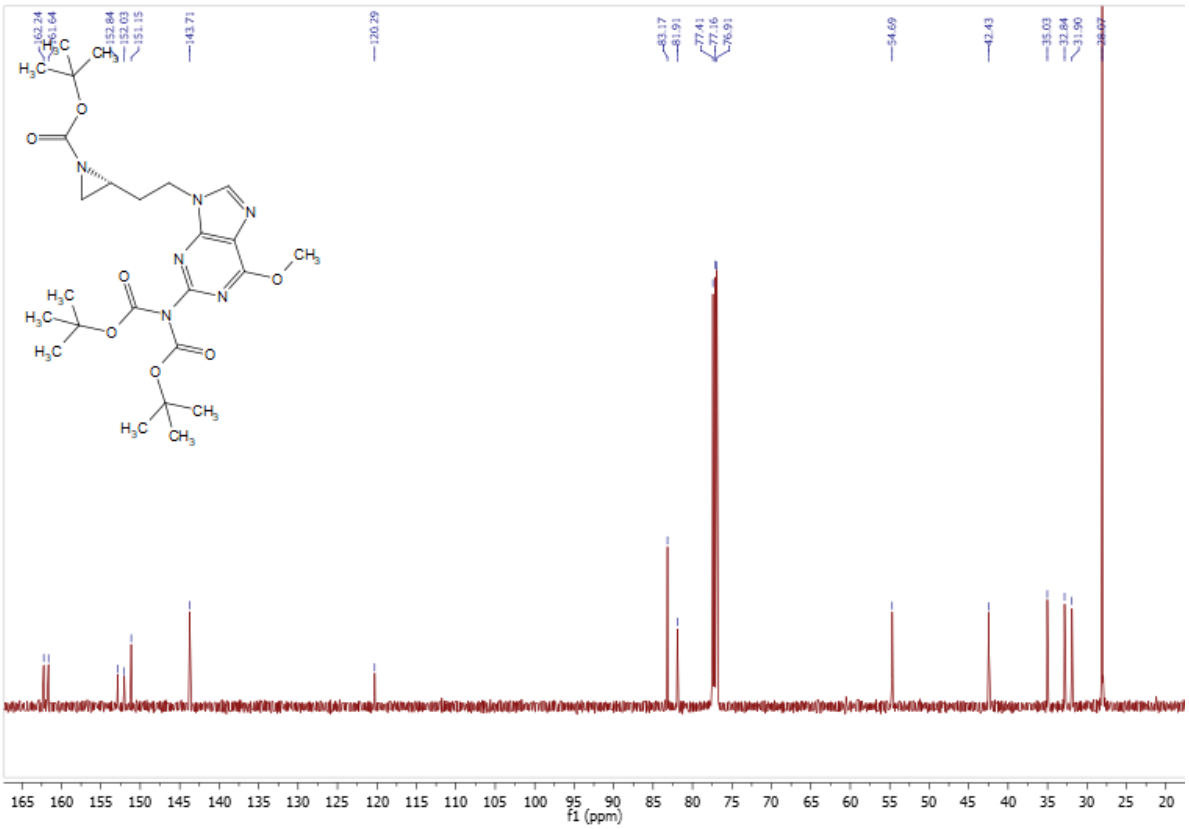
(*S*)-*tert*-butyl-(2-(2-tosyloxy)ethyl)aziridine-*N*-carboxylate 35



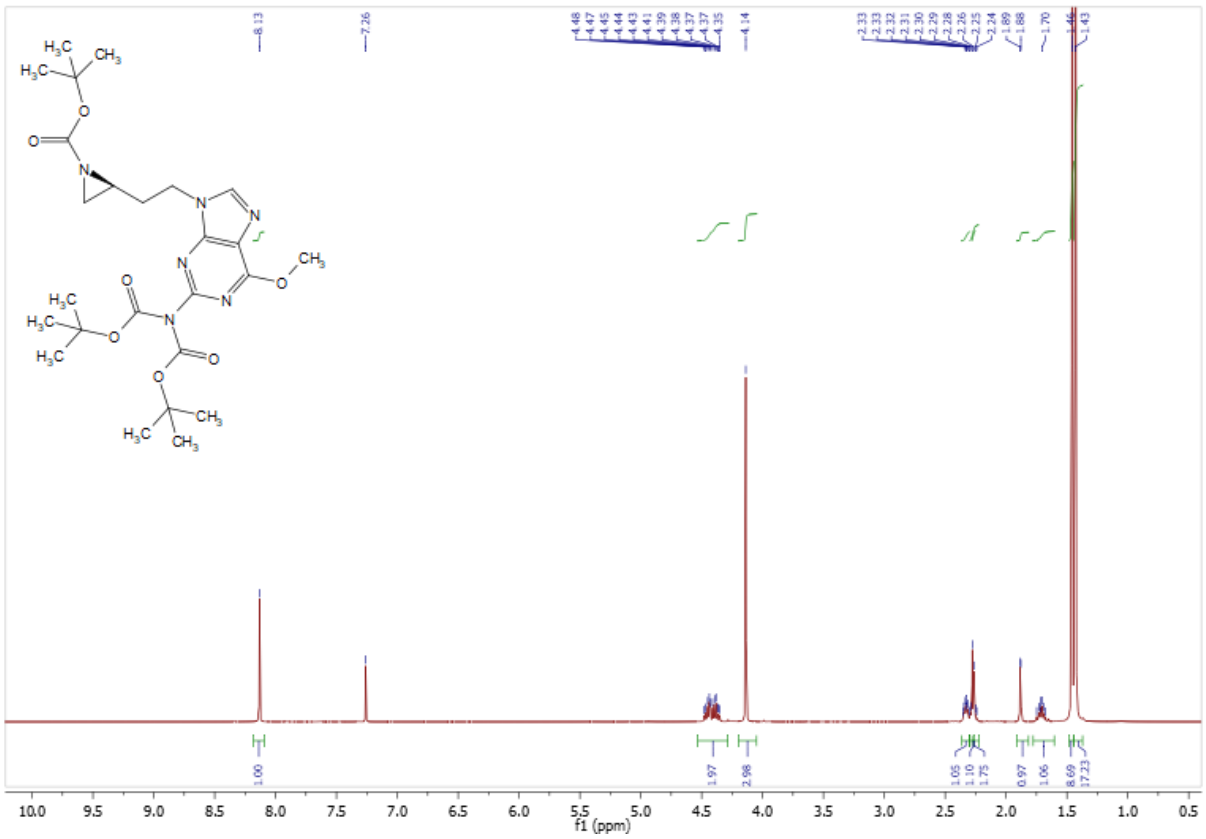


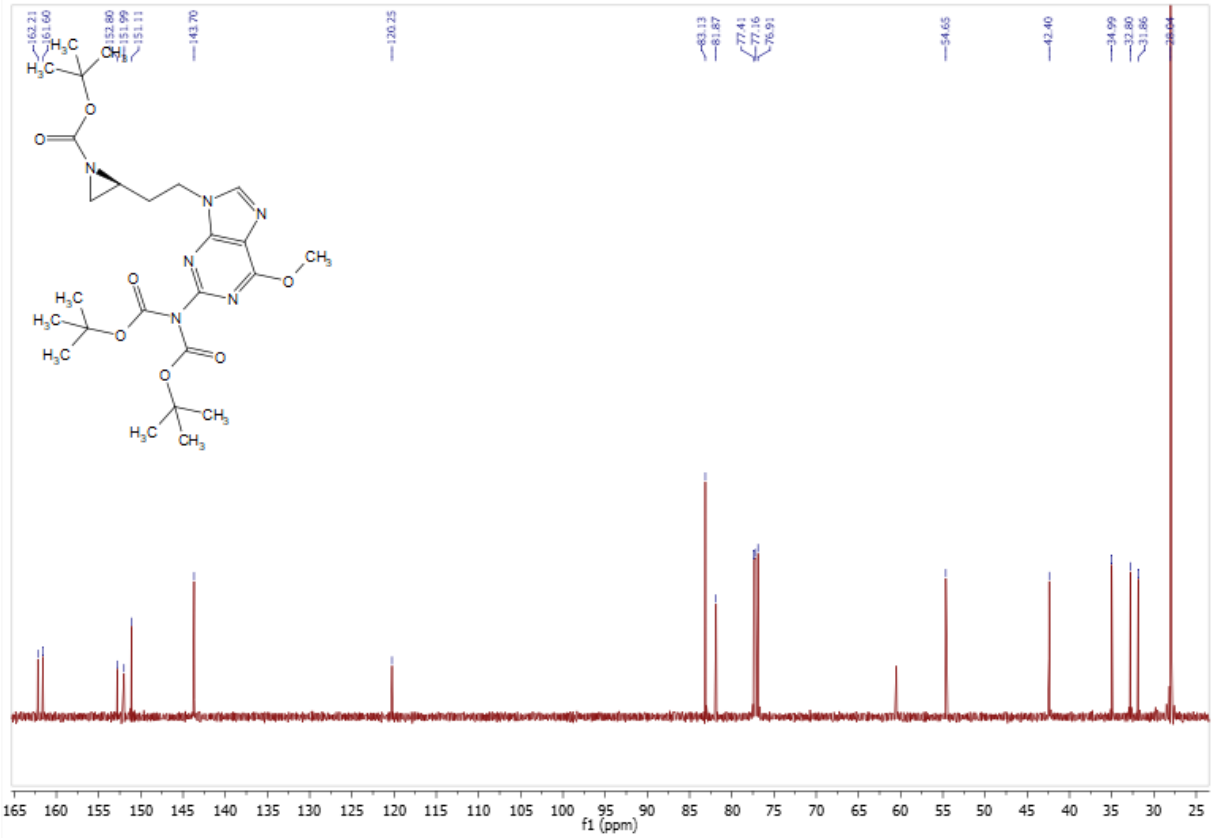
(*R*)-*tert*-butyl-(2-(2-amino-di(*N*-*tert*-butyloxycarbonyl)-6-methoxy-*N*-9-purine)ethyl)aziridine-*N*-carboxylate (*R*)-36



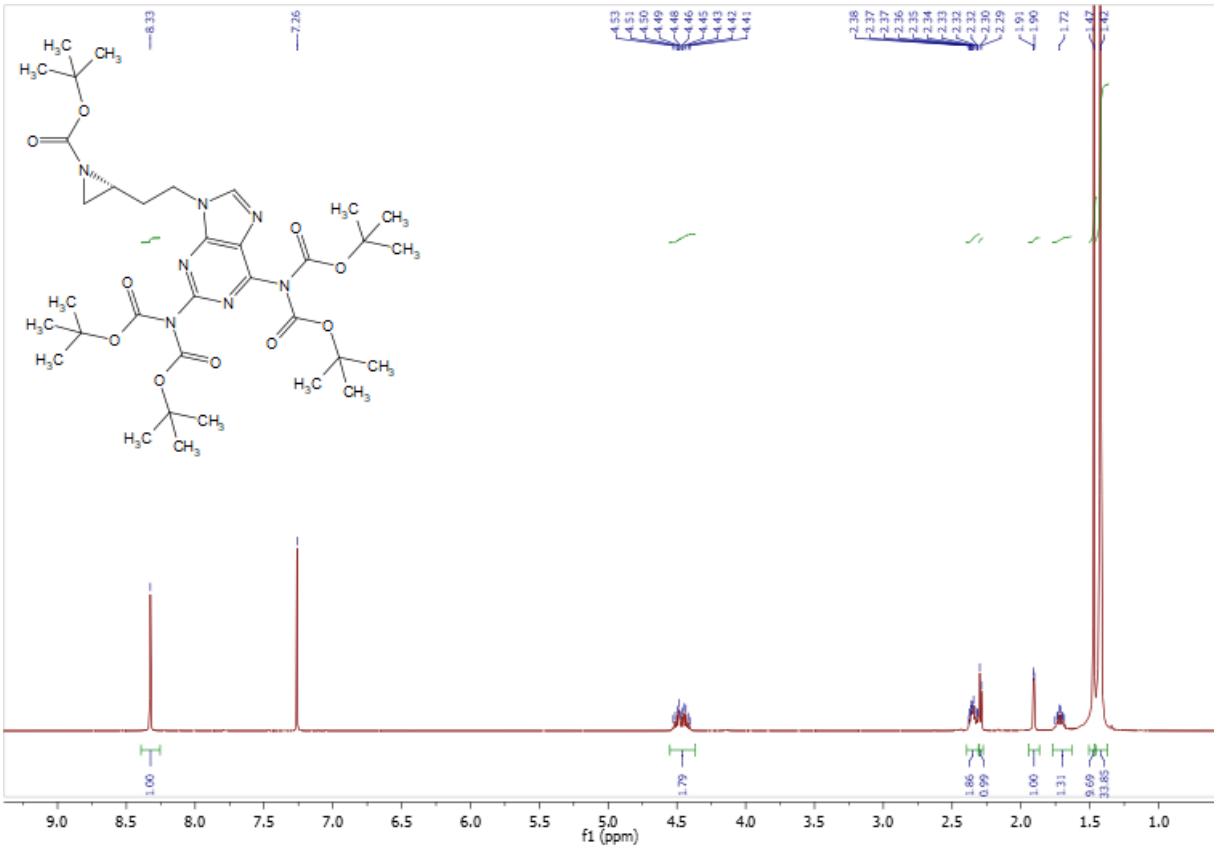


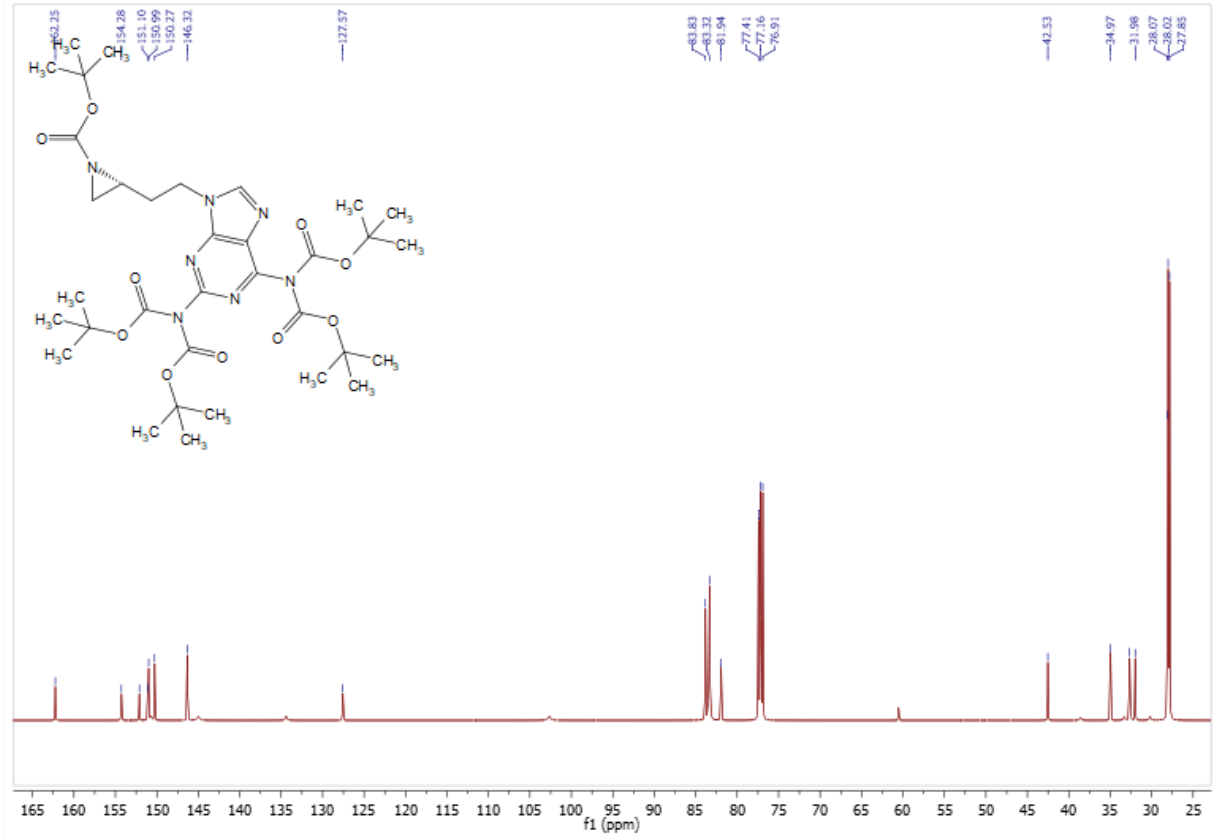
(*S*)-*tert*-butyl-(2-(2-amino-di(*N*-*tert*-butyloxycarbonyl)-6-methoxy-*N*-*9*-purine)ethyl)aziridine-*N*-carboxylate (*S*)-36



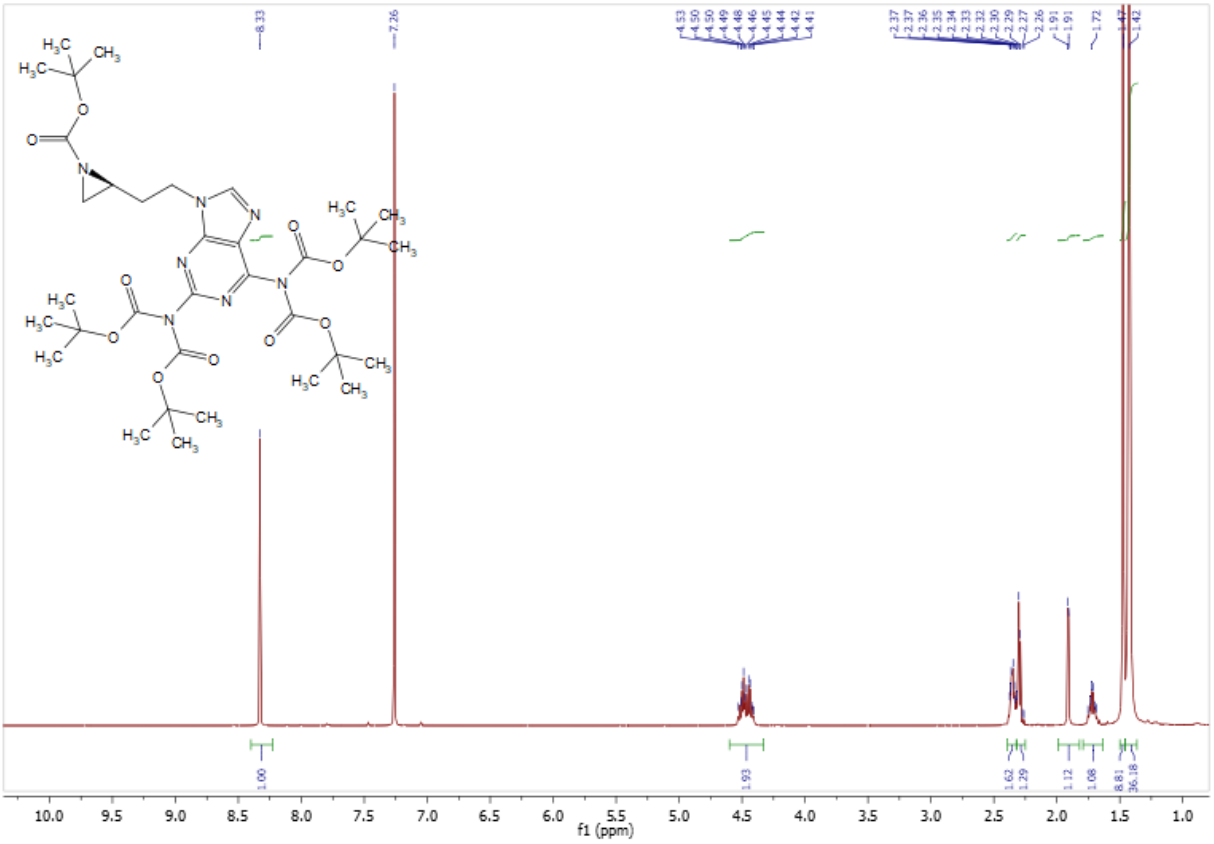


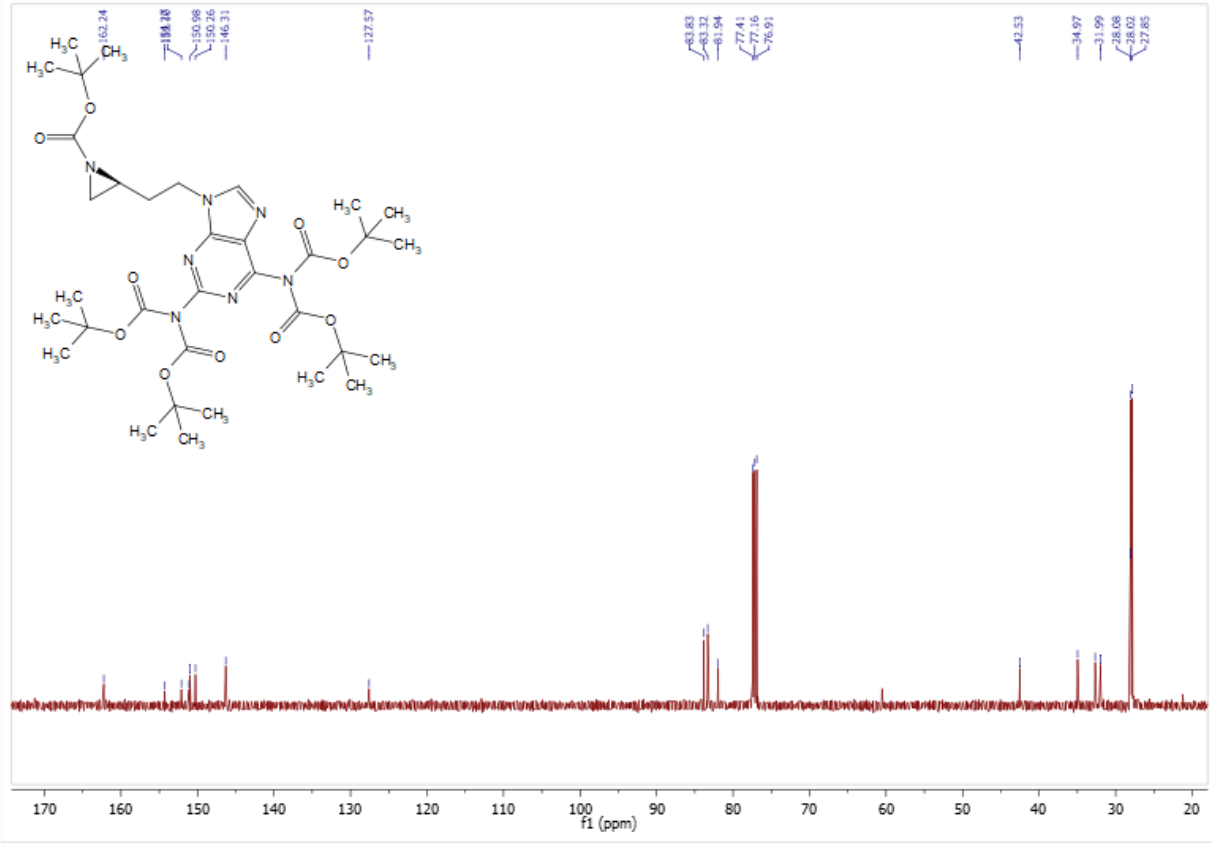
(*R*)-*tert*-butyl-(2-(2,6-diamino-di(*N*-*tert*-butyloxycarbonyl)-*N*-*9*-purine)ethyl)aziridine-*N*-carboxylate (*R*)-37



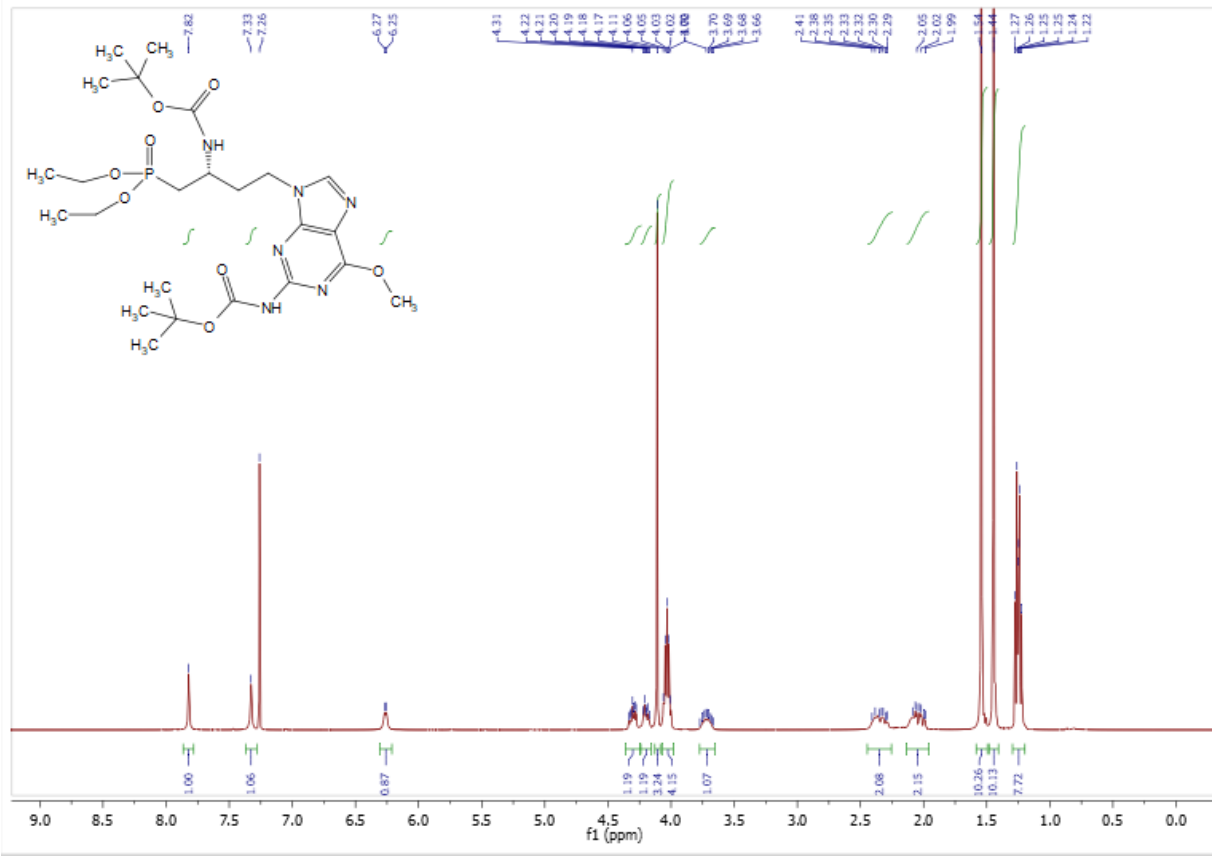


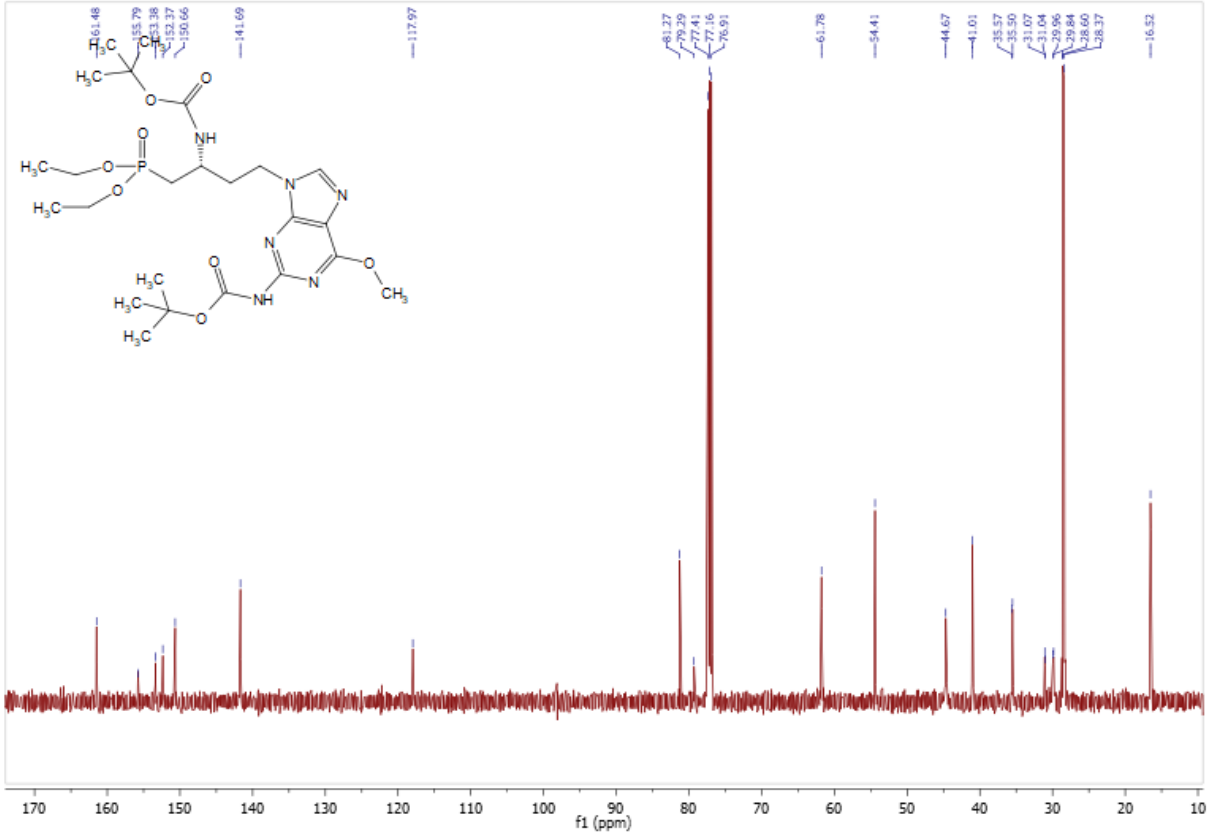
(*S*)-*tert*-Butyl-(2-(2,6-diamino-di(*N*-*tert*-butyloxycarbonyl)-*N*-*9*-purine)ethyl)aziridine-1-carboxylate (*S*)-37



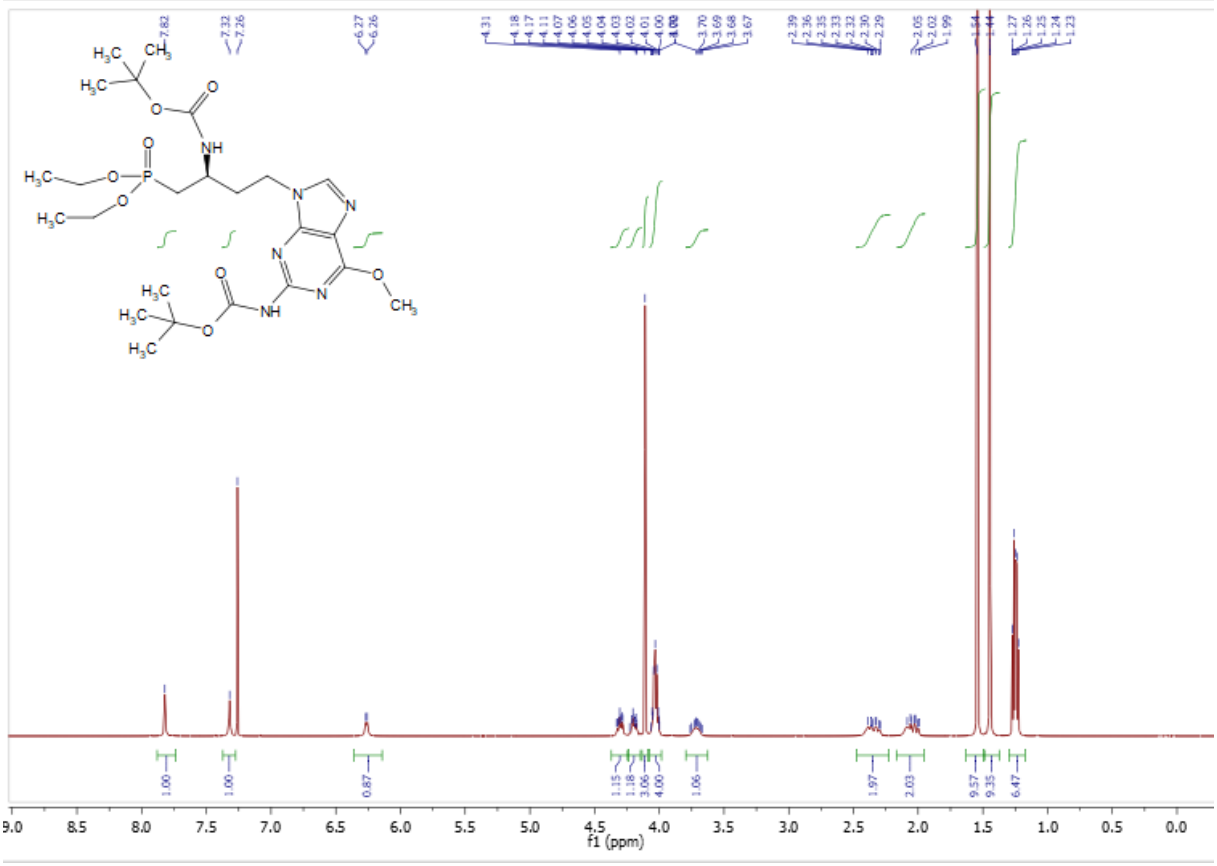


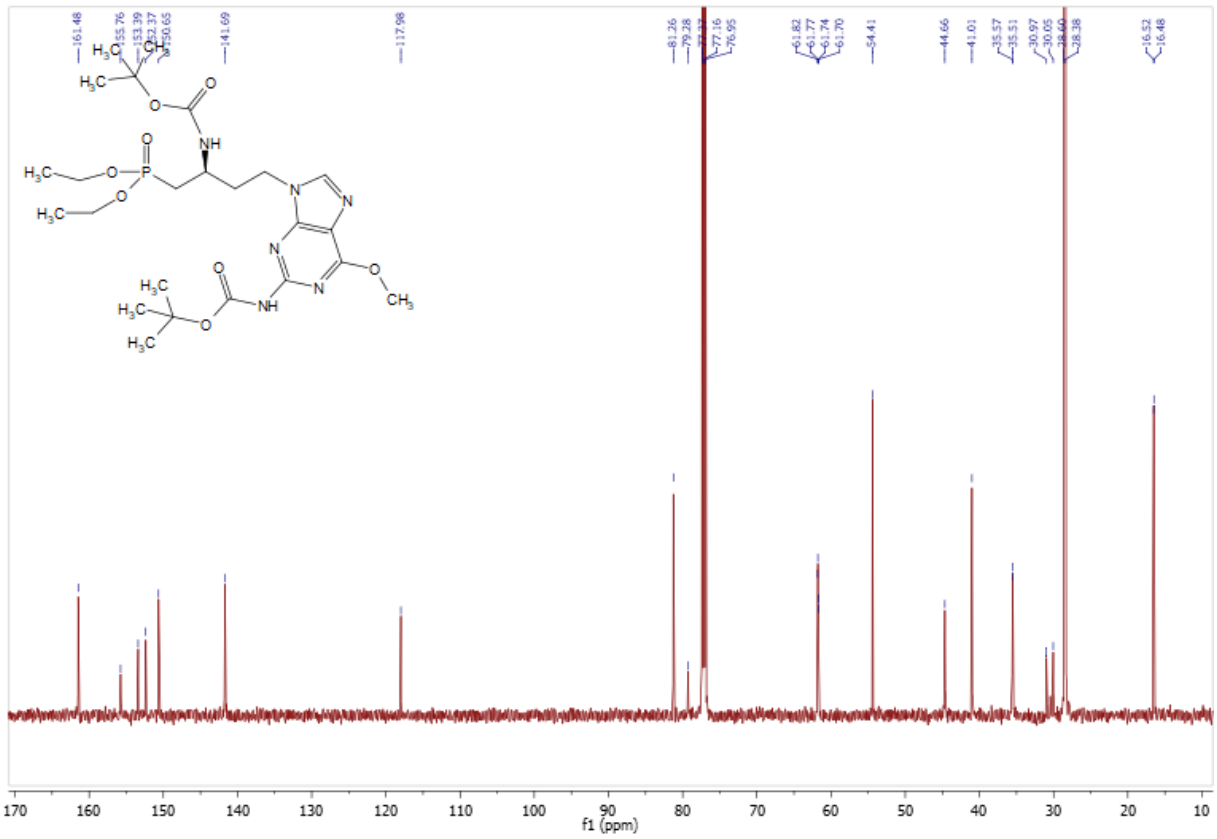
(R)-2-amino-(*N*-*tert*-butoxycarbonyl)-6-methoxy-*N*-9-(3-amino-4-diethylphosphonobutyl)purine, (R)-38



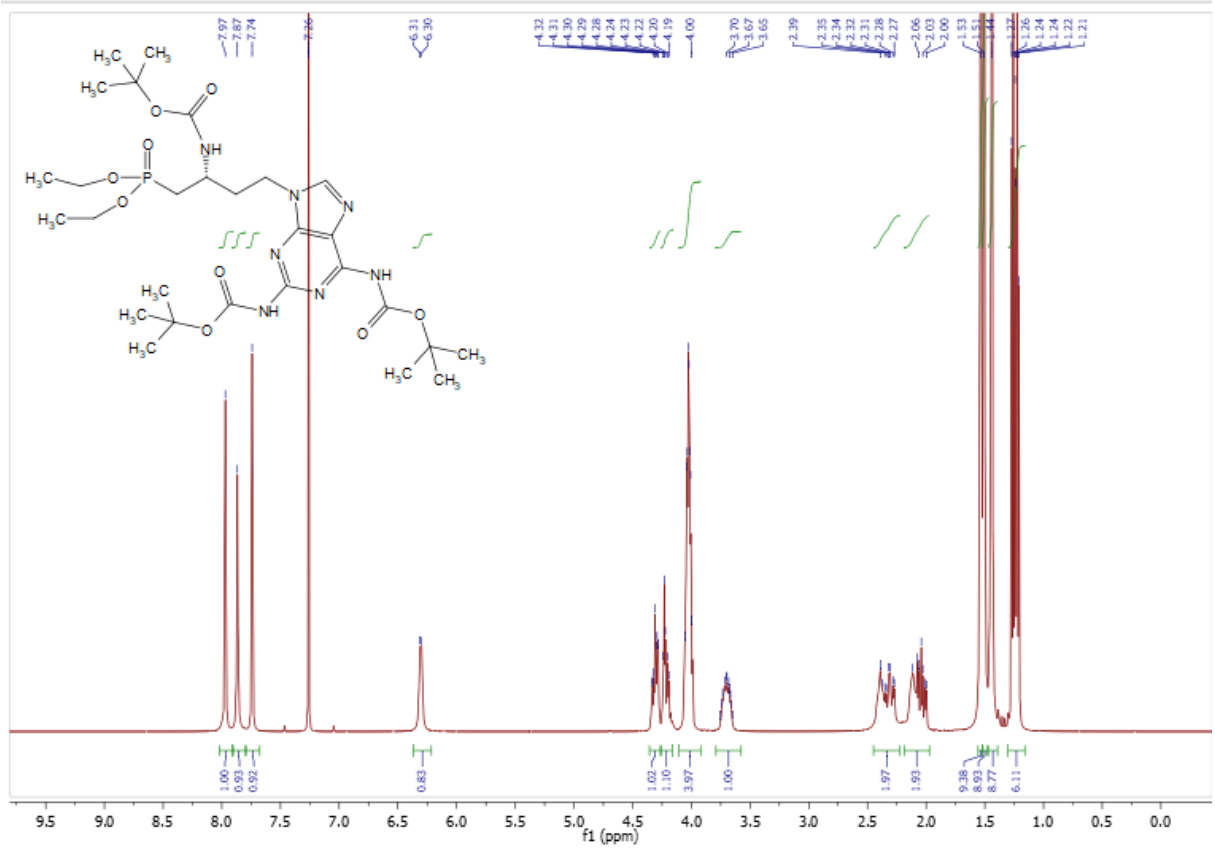


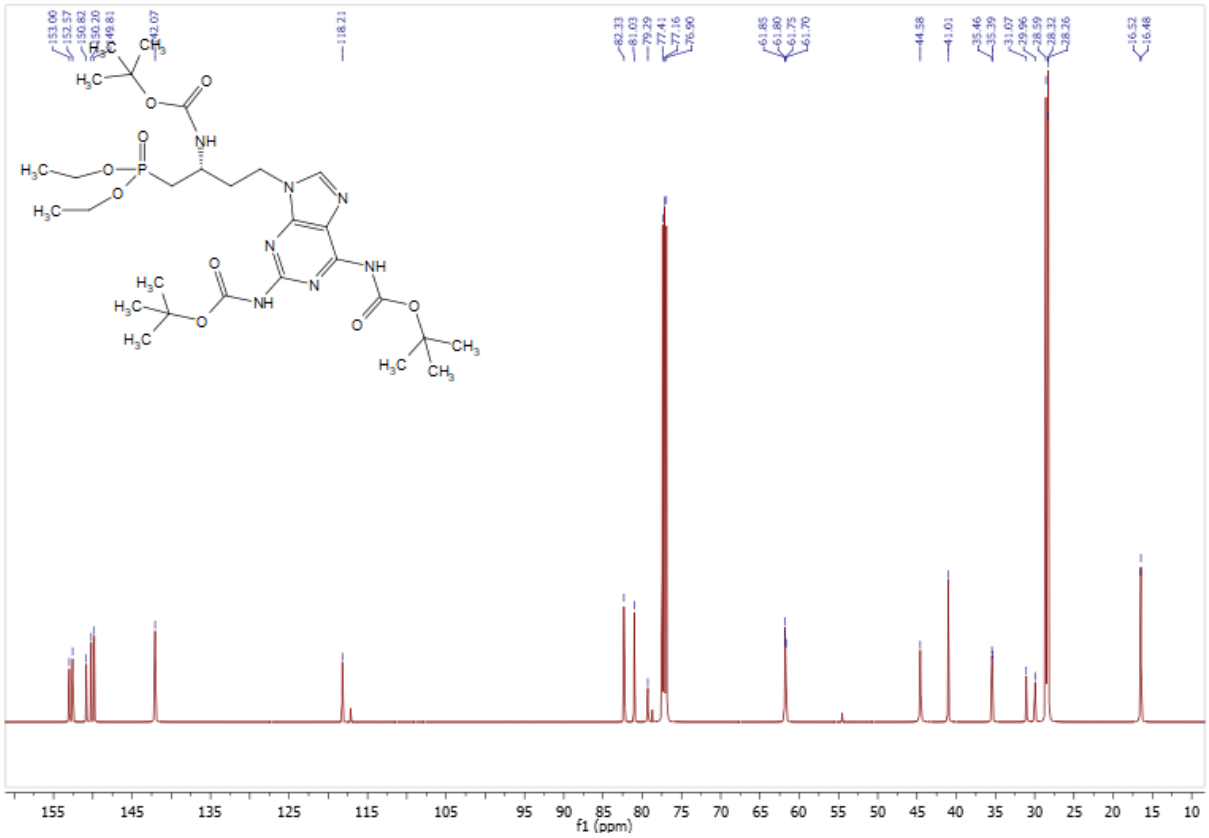
(S)-2-amino-(*N*-*tert*-butoxycarbonyl)-6-methoxy-*N*-9-(3-amino-4-diethylphosphonobutyl)purine, (S)-38



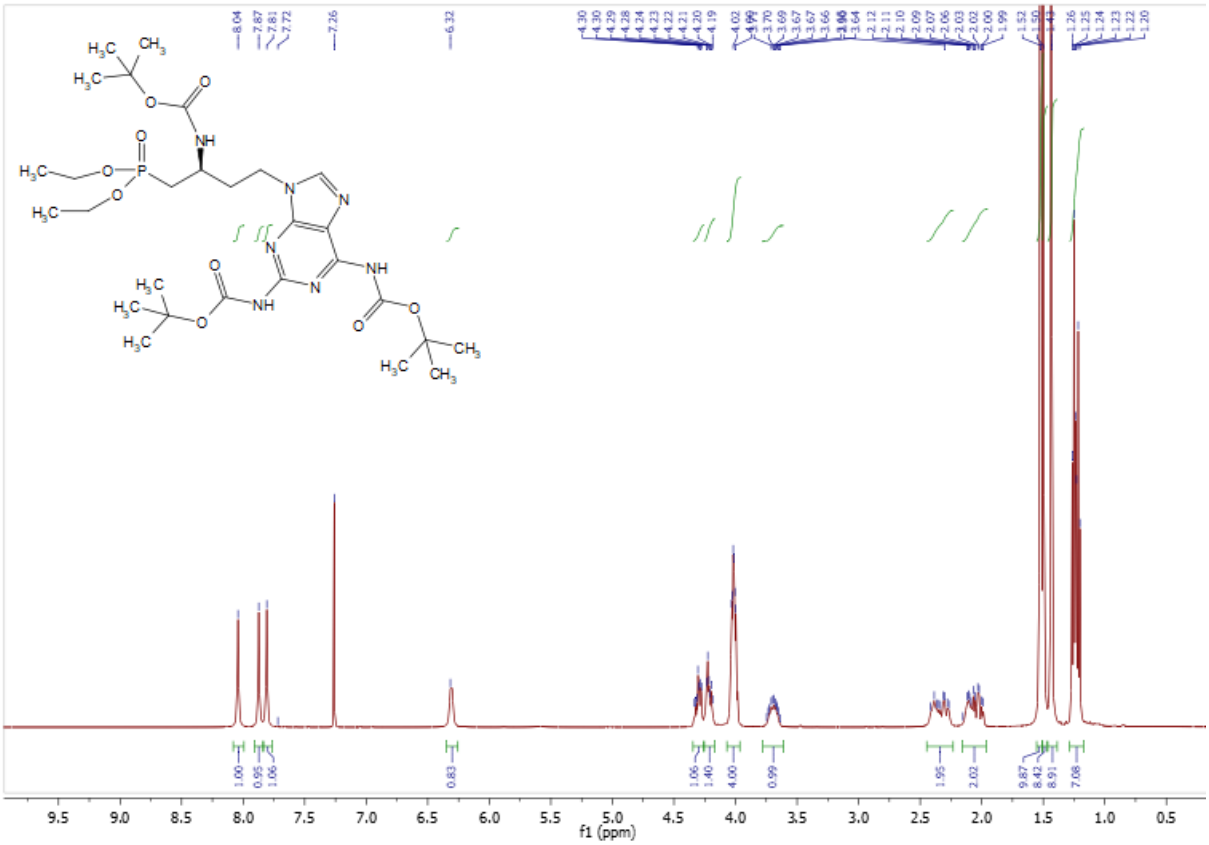


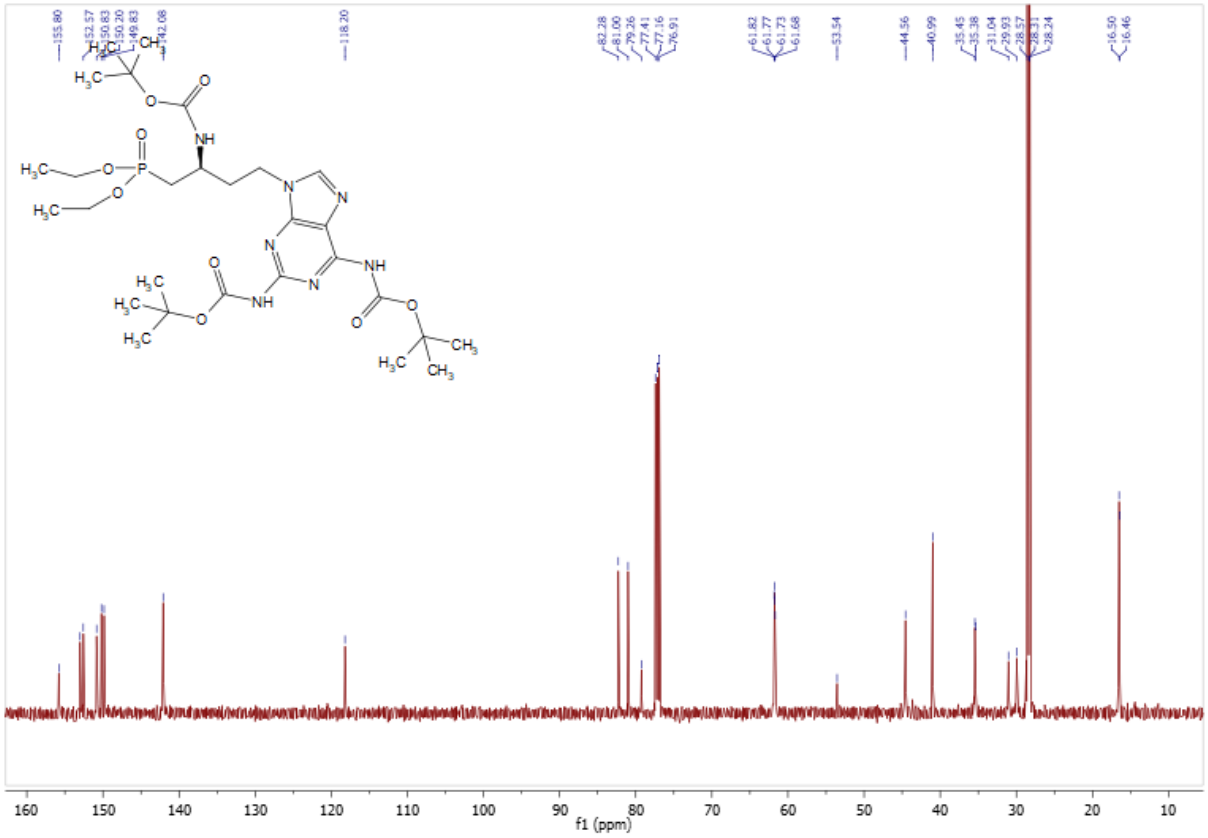
(R)-2,6-diamino-(*N-tert*-butoxycarbonyl)-*N*-9-(3-amino-4-diethylphosphonobutyl)purine, (R)-39





(S)-2,6-diamino-(*N-tert*-butoxycarbonyl)-*N*-9-(3-amino-4-diethylphosphonobutyl)purine, (S)-39


f1 (ppm)


f1 (ppm)