

SUPPLEMENTARY INFORMATION

Novel Derivatives of UDP-Glucose: Concise Synthesis and Fluorescent Properties

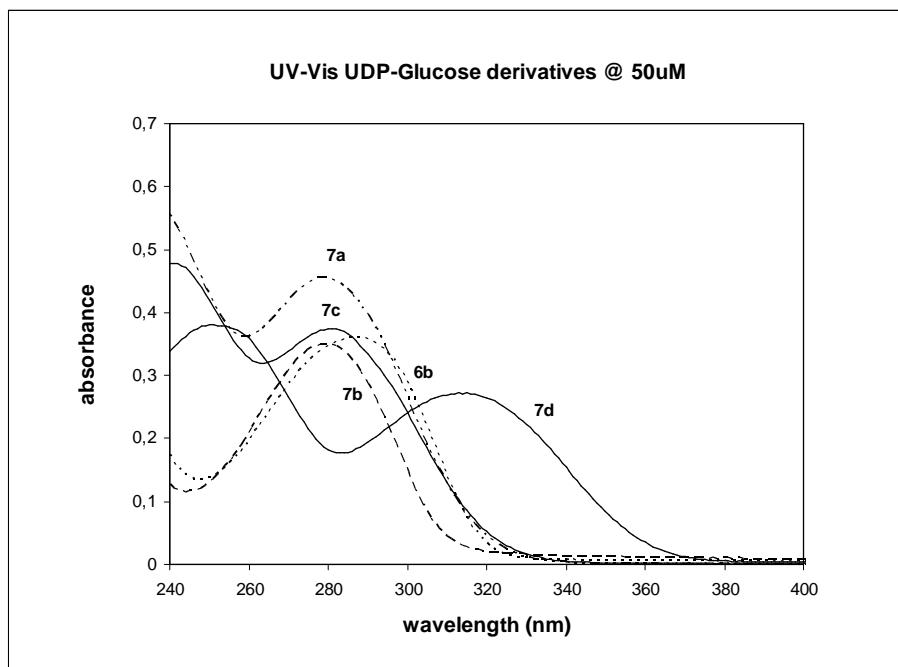
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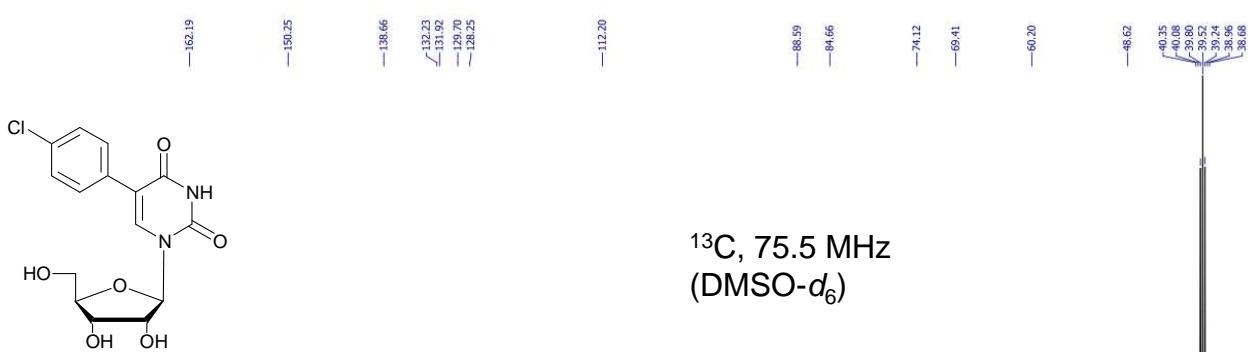
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- S7 5-(4-Methylphenyl)uridine-5'-monophosphate **5b**: ^1H , ^{13}C and ^{31}P NMR spectra
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- S13 5-(2-Furyl)uridine-5'-diphosphate- α -D-glucose **7d**: ^1H , ^{13}C and ^{31}P NMR spectra

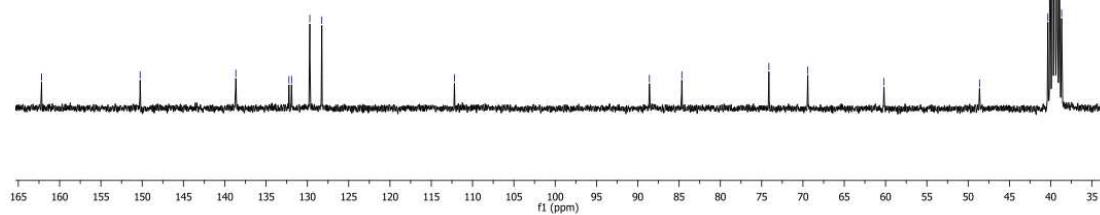
UV absorbance spectra of 5-substituted UDP-glucose derivatives **6b** and **7a-d**



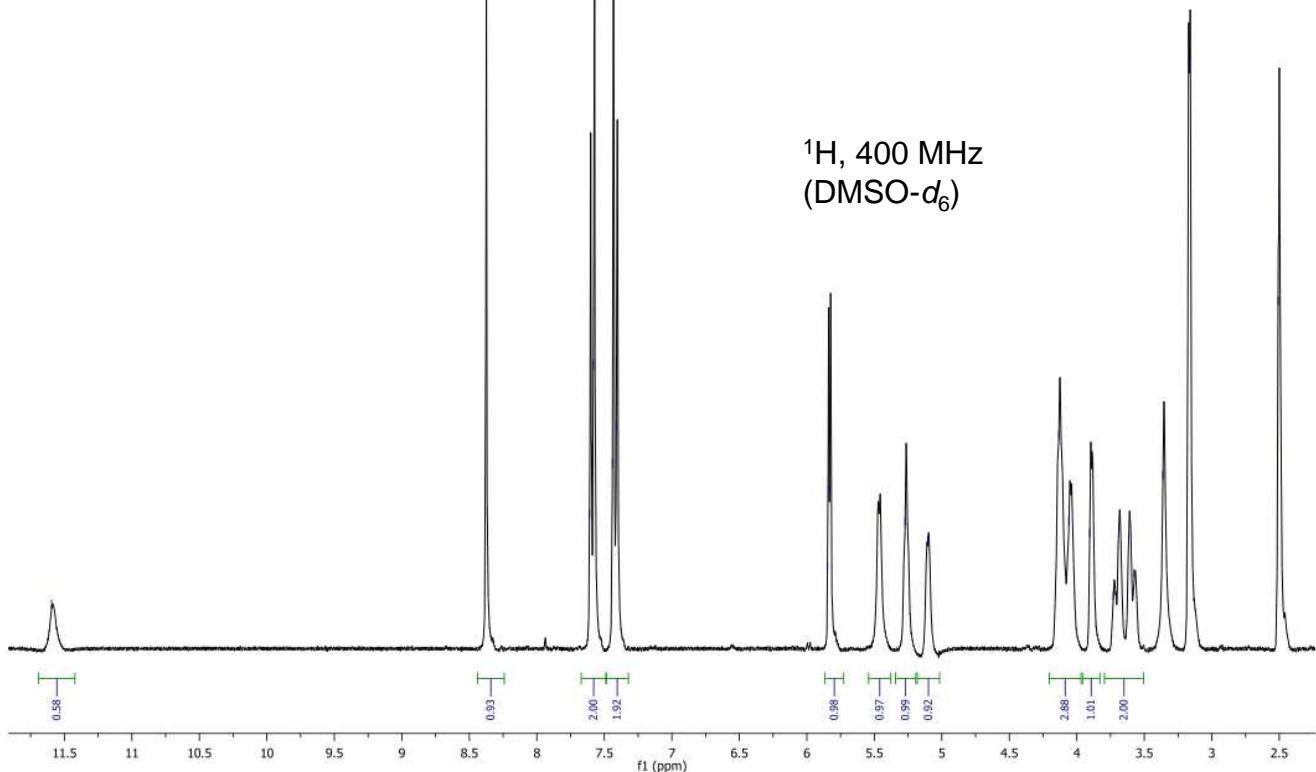
- 6b** 5-Iodouridine-5'-diphosphate- α -D-glucose
7a 5-Phenyluridine-5'-diphosphate- α -D-glucose
7b 5-(4-Methoxyphenyl)uridine-5'-diphosphate- α -D-glucose
7c 5-(4-Chlorophenyl)uridine-5'-diphosphate- α -D-glucose
7d 5-(2-Furyl)uridine-5'-diphosphate- α -D-glucose

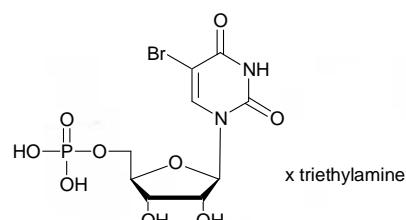


3c



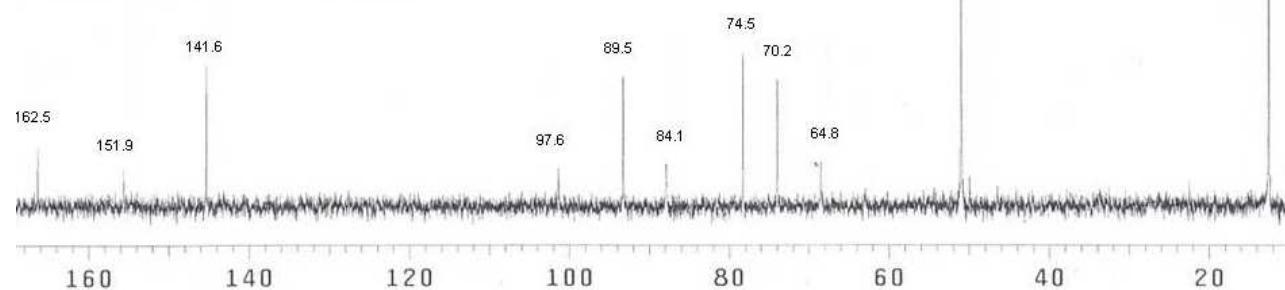
^1H , 400 MHz
(DMSO- d_6)





4a

^{13}C , 75.5 MHz
(D₂O)



—8.27

—5.94

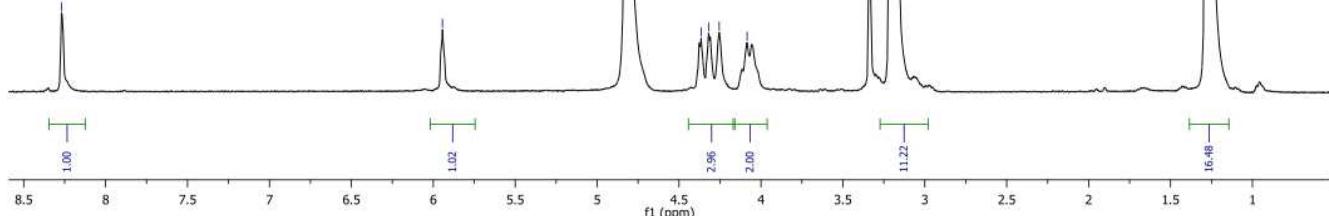
—4.37
—4.32
—4.25
—4.08

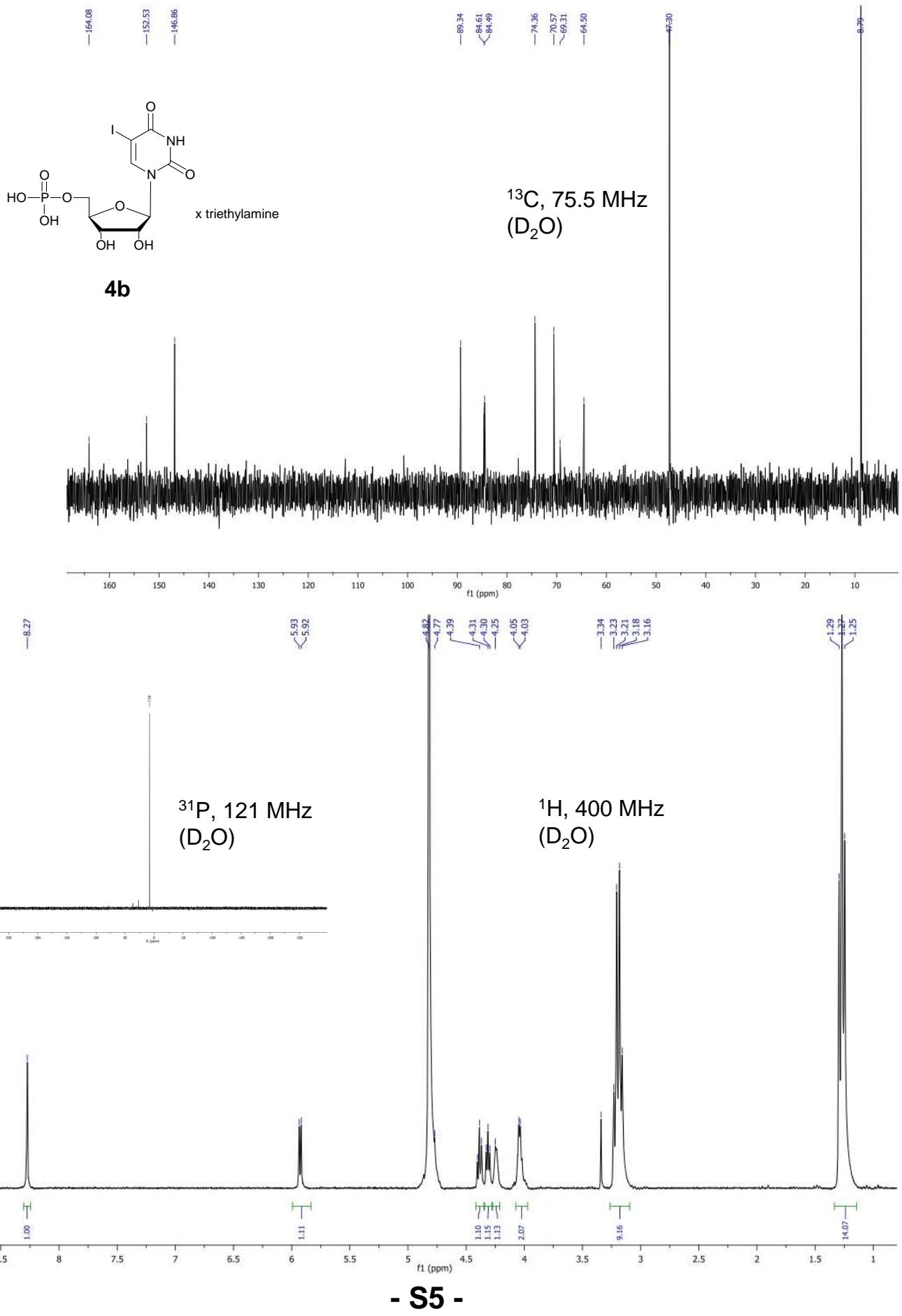
—3.34
—3.20
—3.19

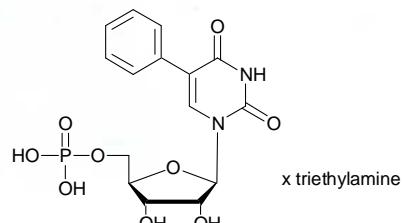
—1.27
—1.25

^{31}P , 121 MHz
(D₂O)

^1H , 400 MHz
(D₂O)

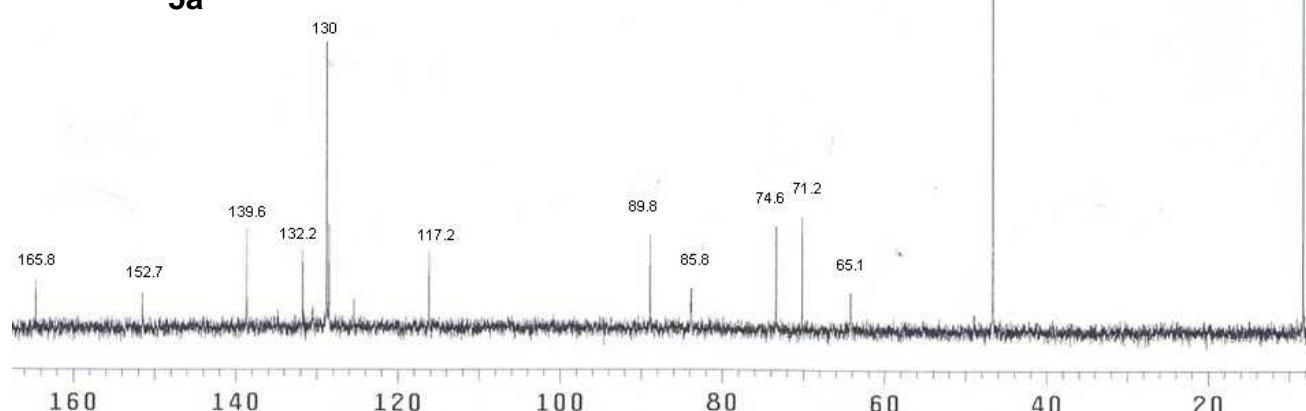






x triethylamine

^{13}C , 75.5 MHz
(D₂O)



— 7.79
— 7.44
— 7.42
— 7.40
— 7.38
— 7.36
— 7.35
— 7.33

— 5.95
— 5.93

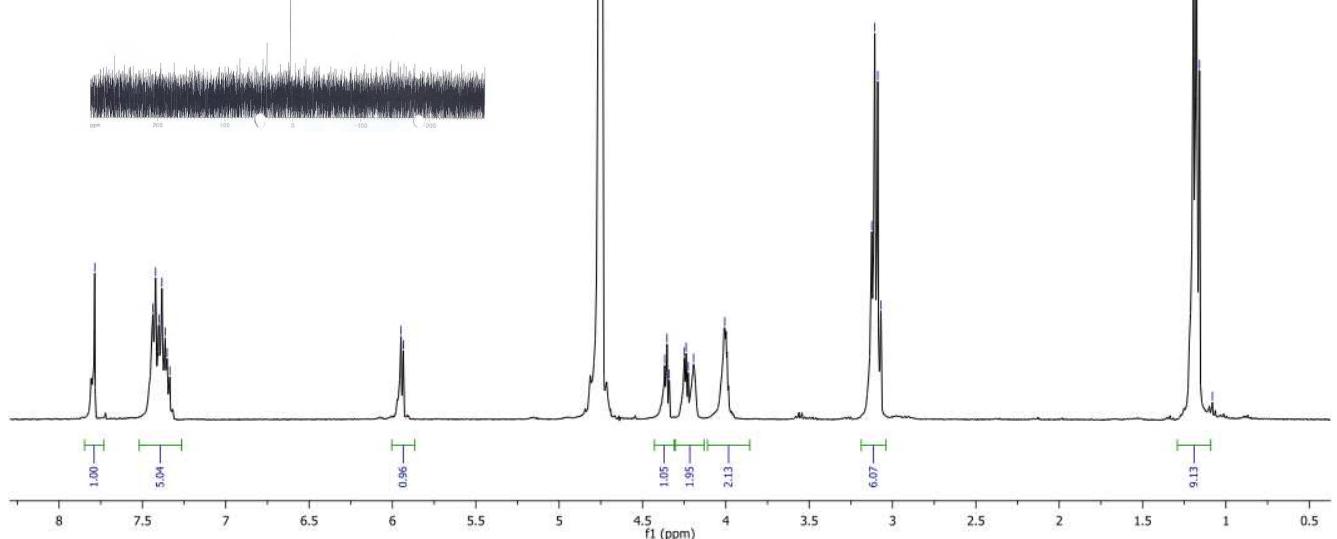
— 4.76
— 4.74
— 4.35
— 4.24
— 4.23
— 4.19
— 4.01

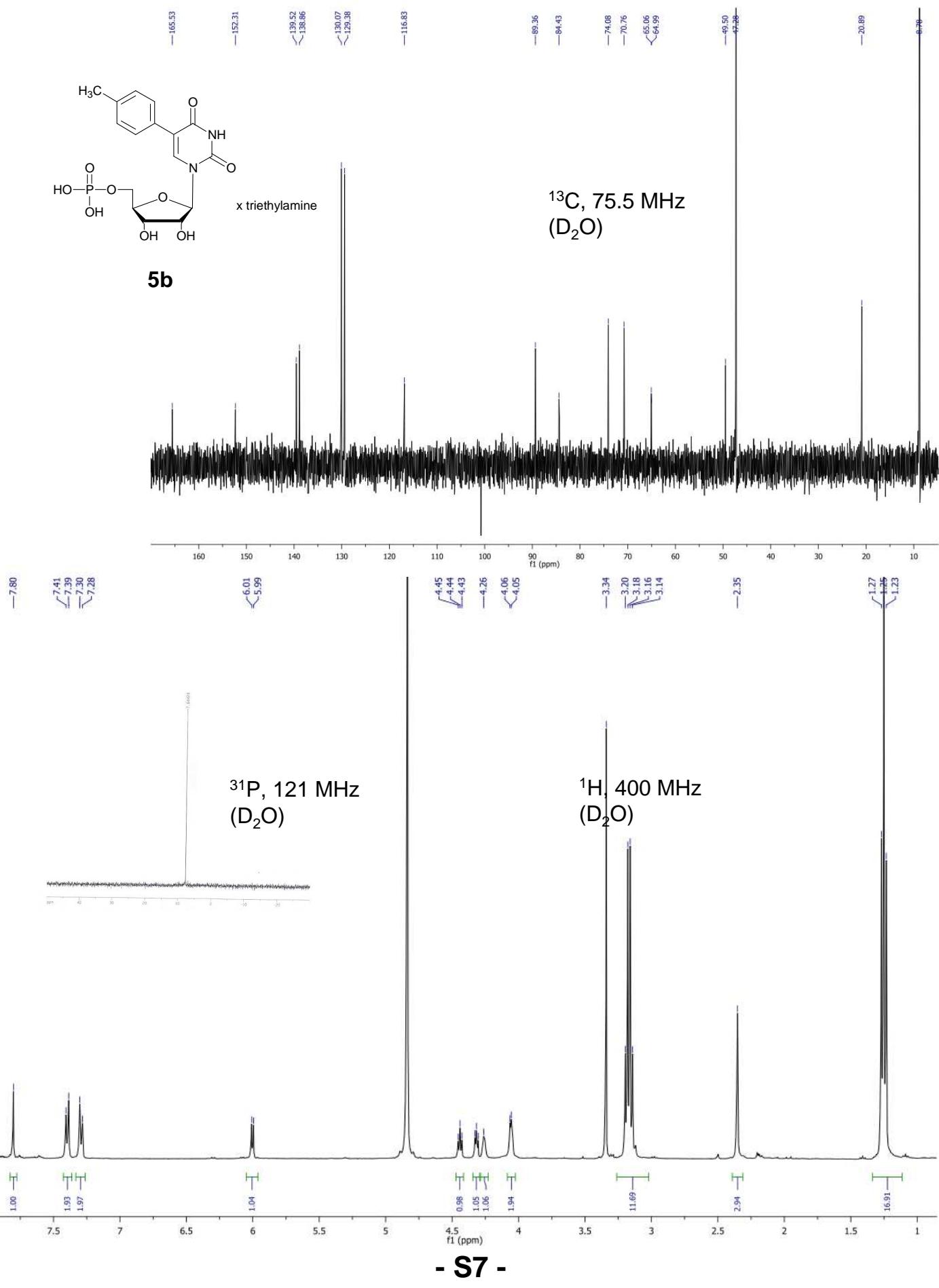
— 3.12
— 3.11
— 3.09
— 3.07

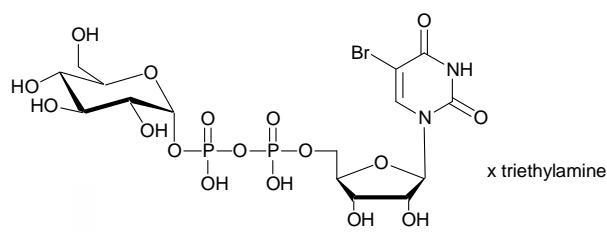
— 1.19
— 1.18
— 1.16
— 1.08

^{31}P , 121 MHz
(D₂O)

^1H , 400 MHz
(D₂O)





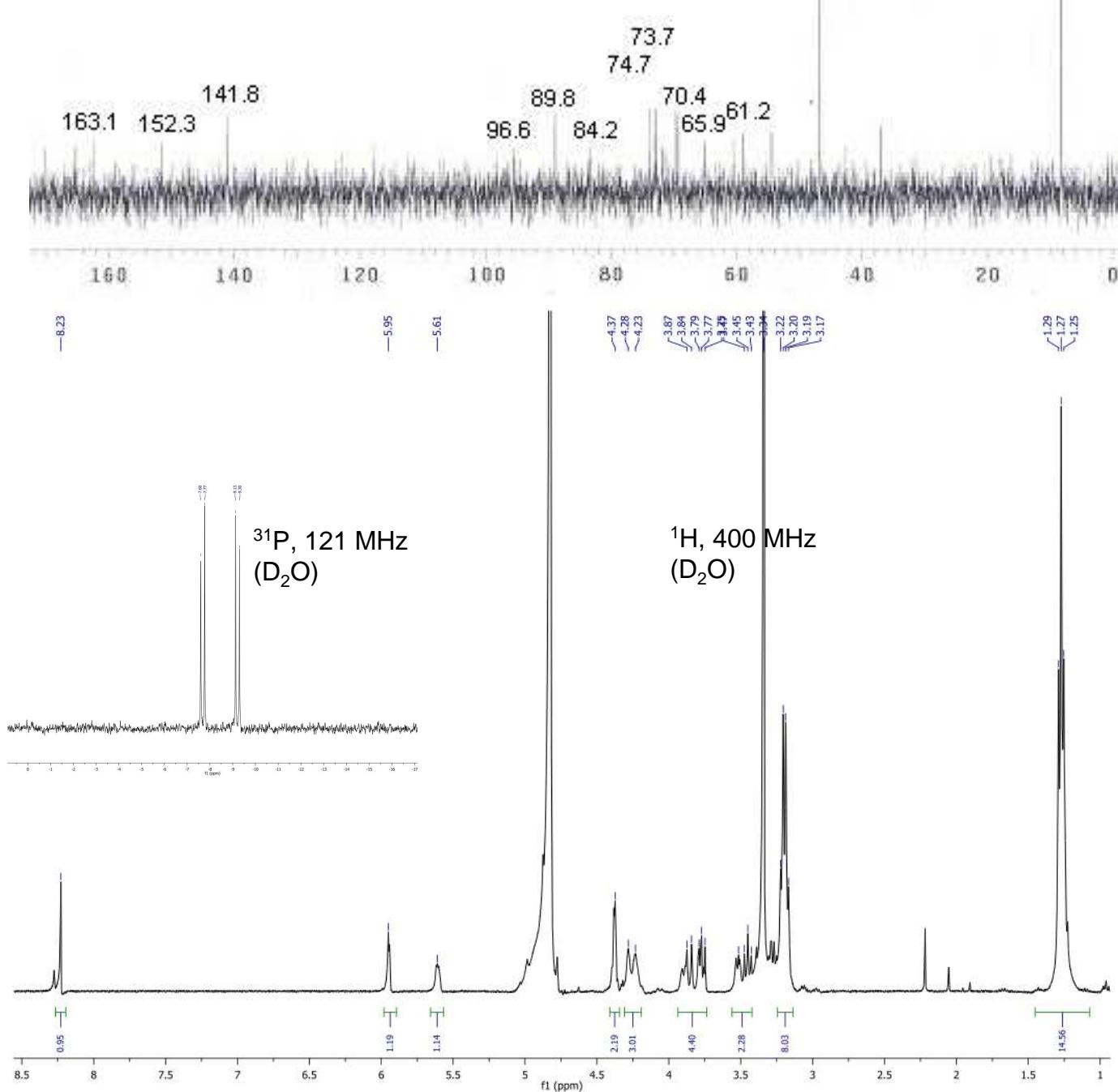


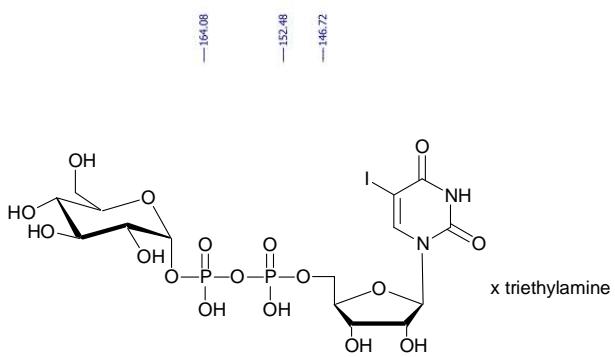
¹³C, 75.5 MHz
(D₂O)

9.0

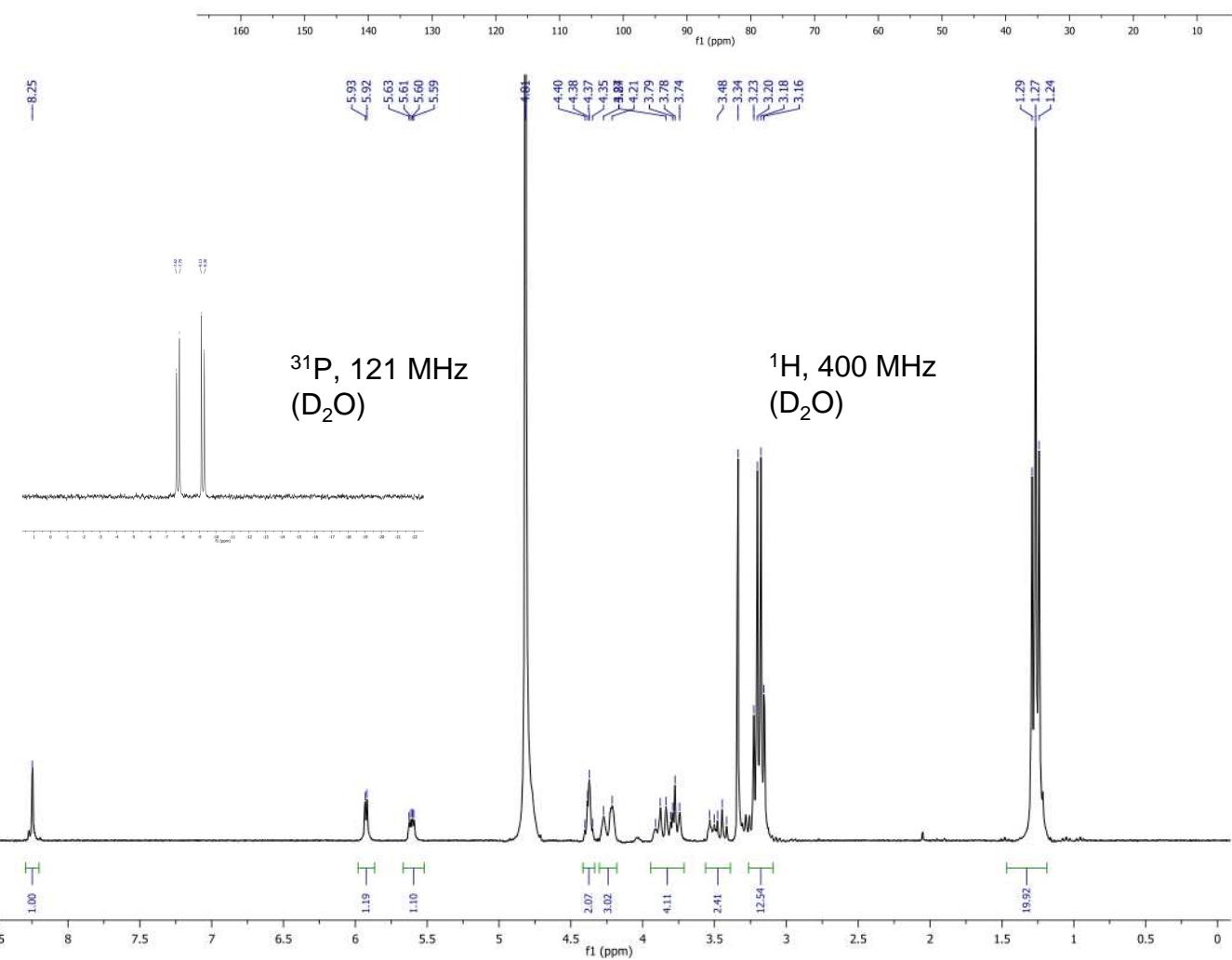
47.5

6a

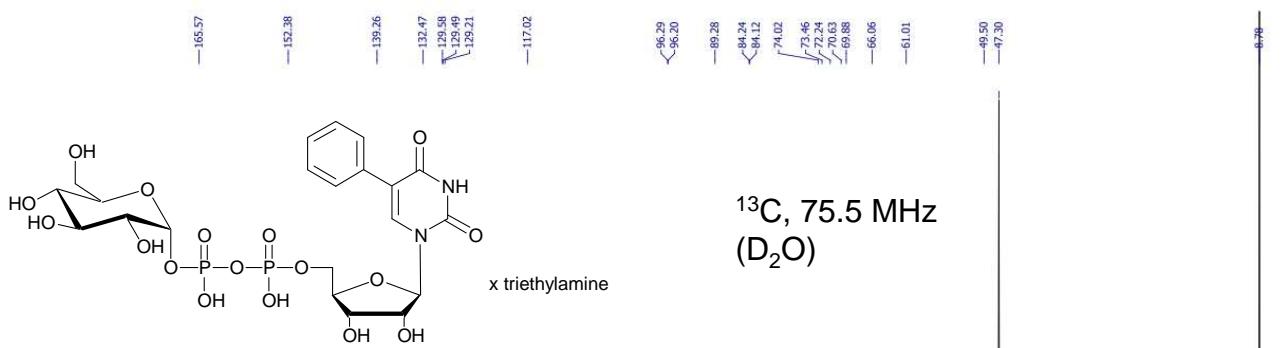




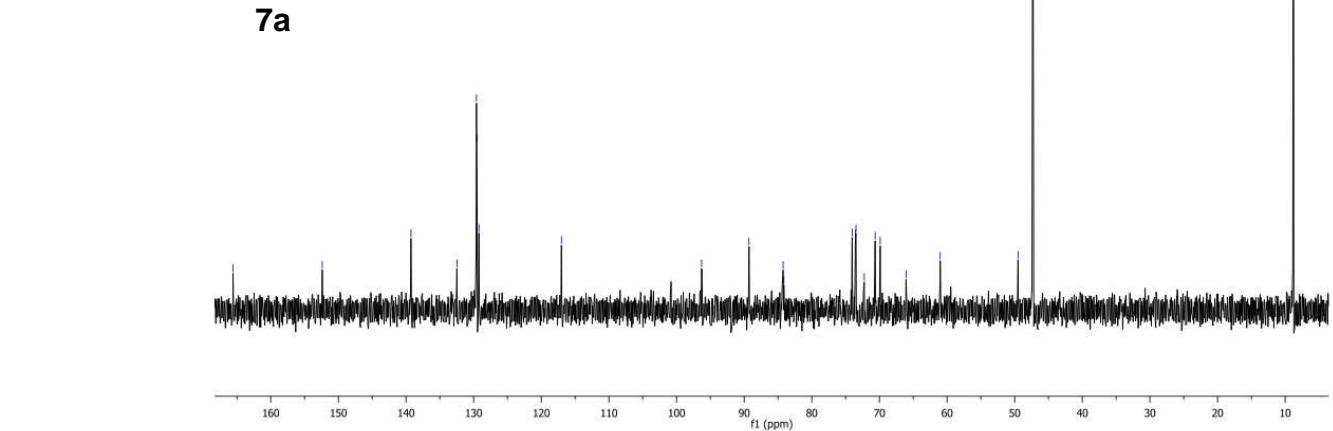
6b



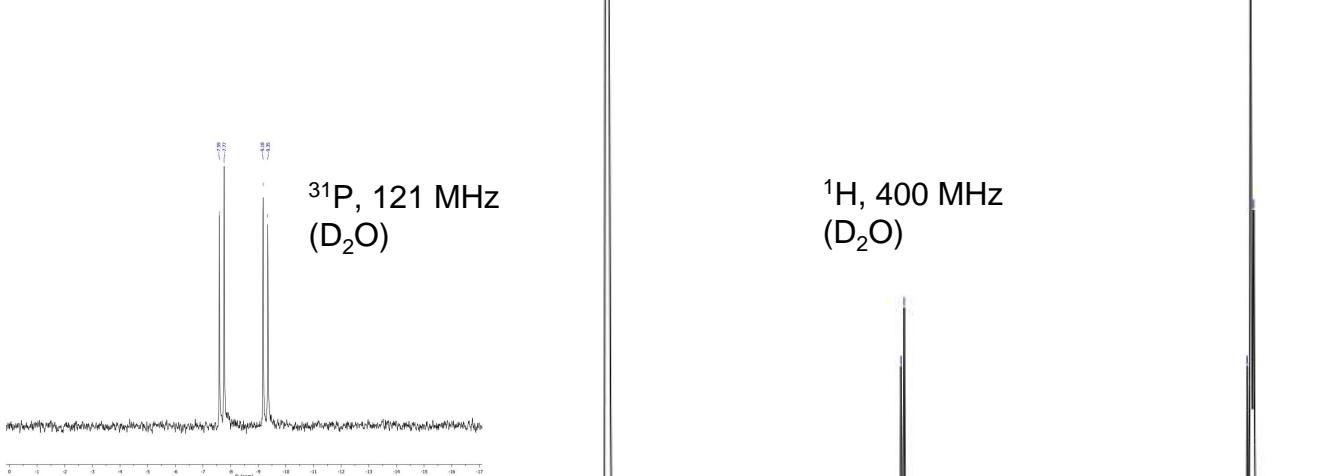
- S9 -



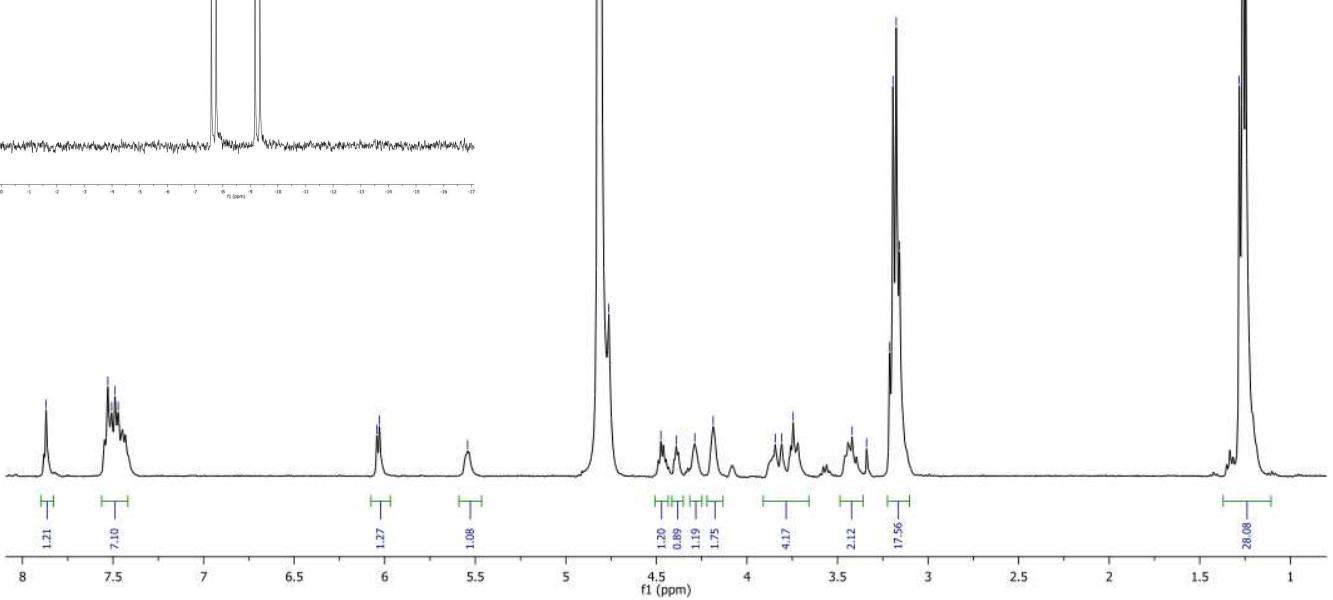
^{13}C , 75.5 MHz
(D_2O)

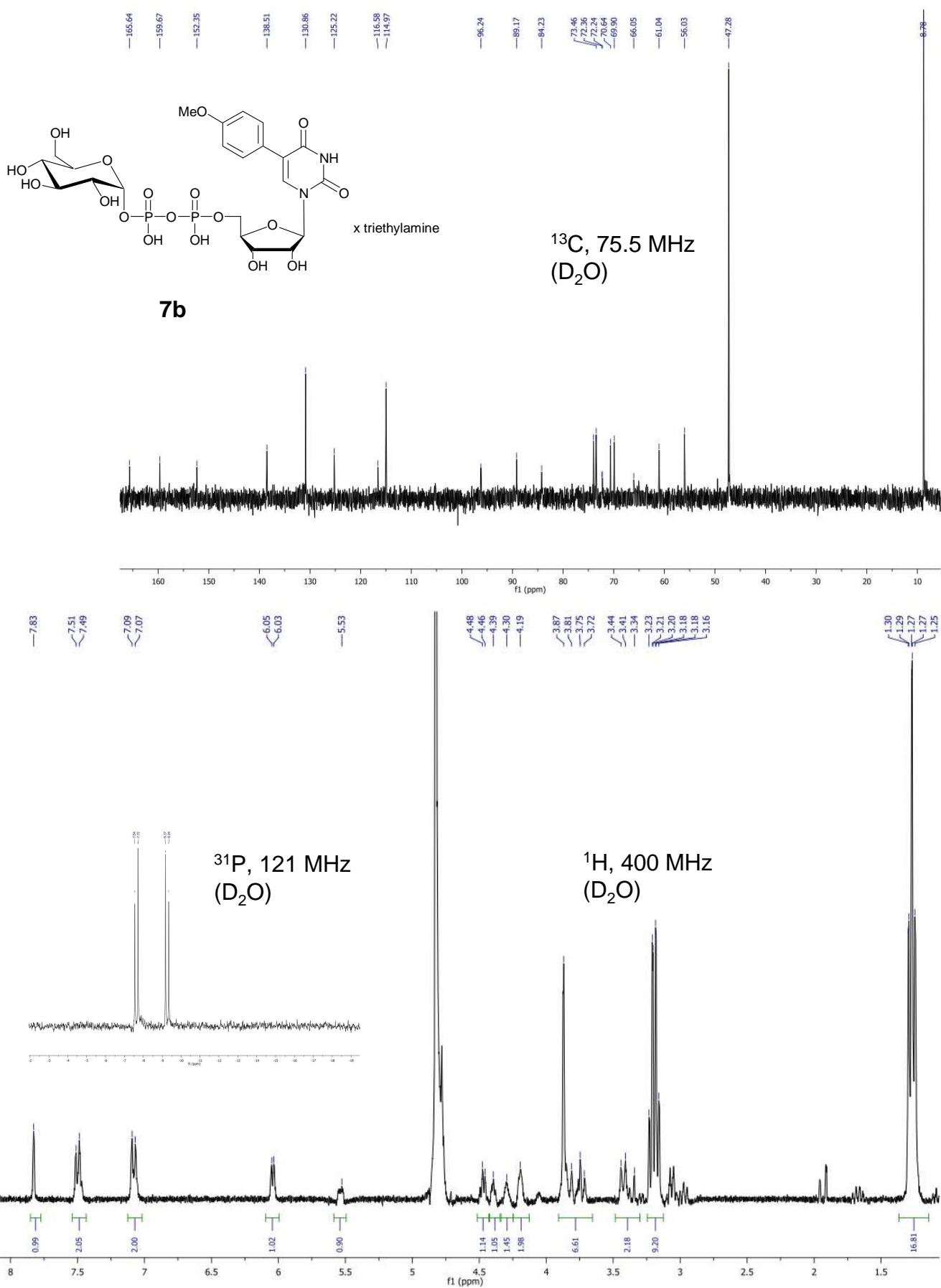


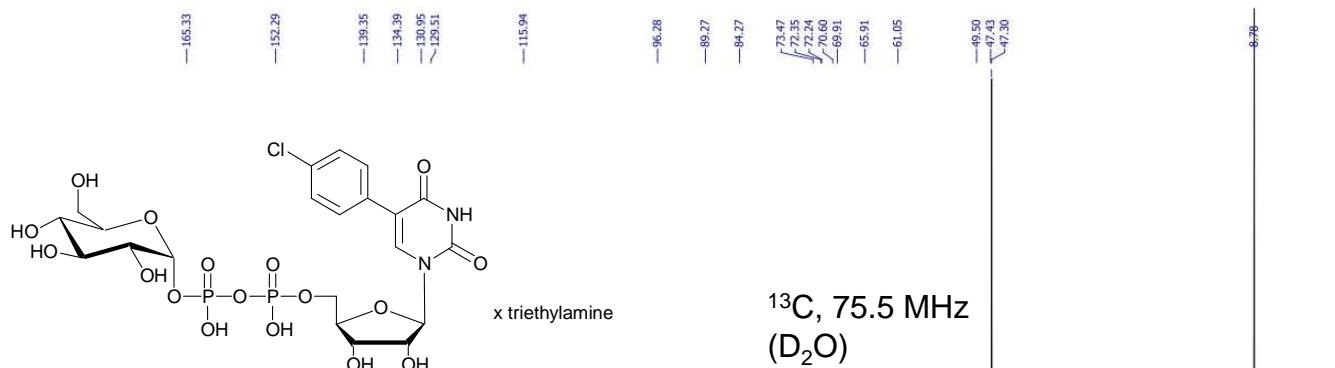
^{31}P , 121 MHz
(D_2O)



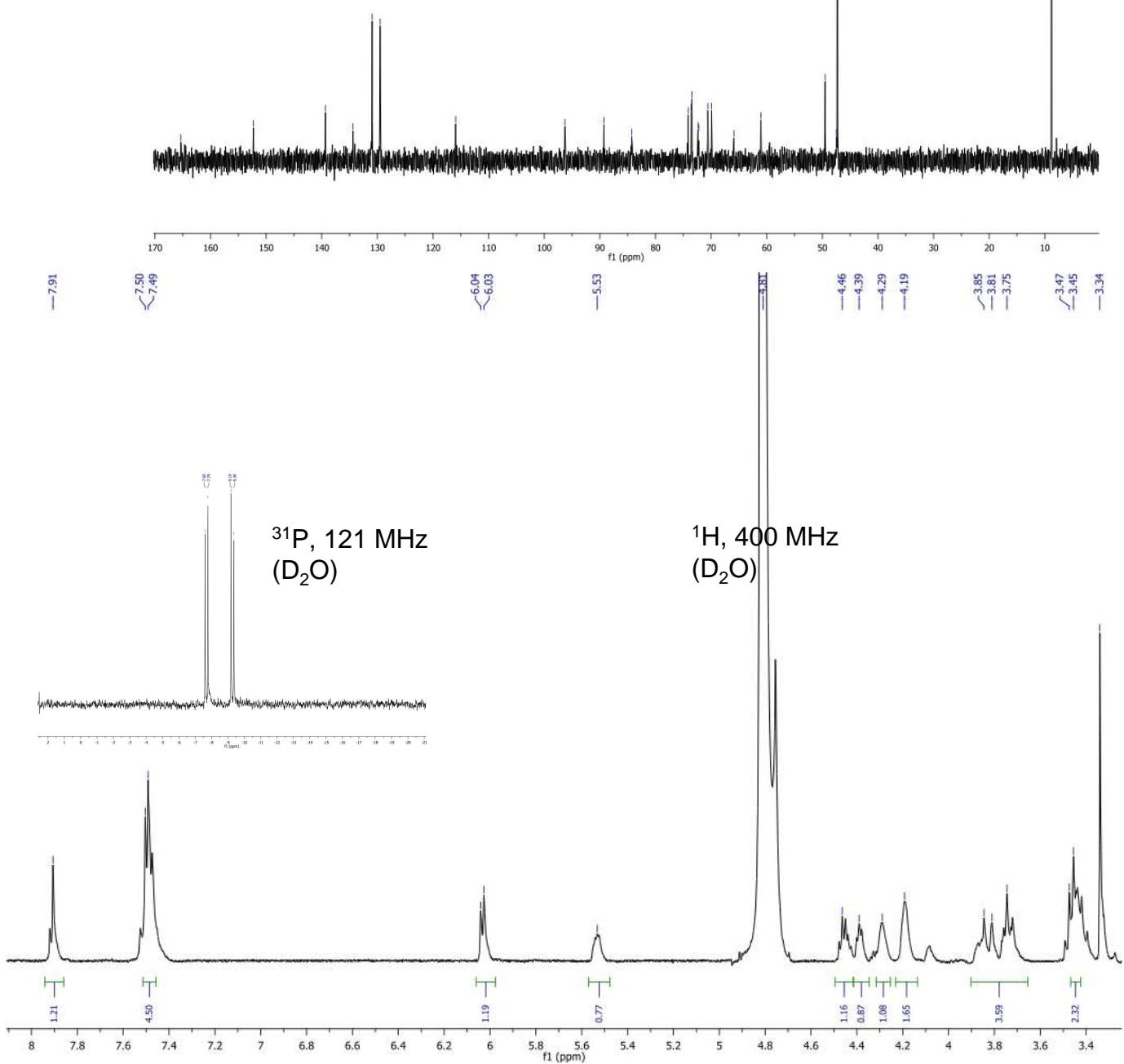
^1H , 400 MHz
(D_2O)

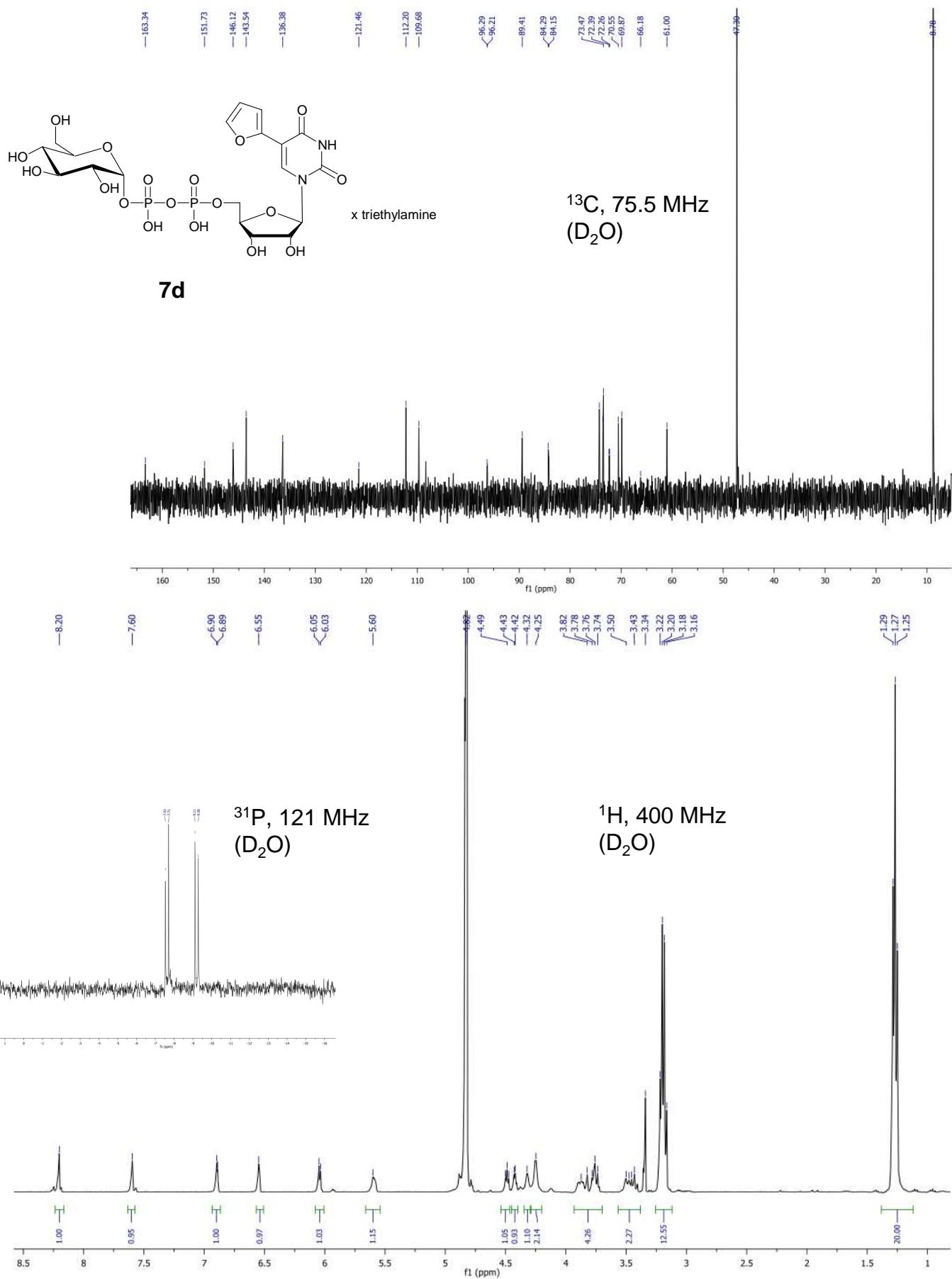






7c





- S13 -