

The impact of extended nucleobase-ribose linkers in the biophysical and biological properties of oligonucleotides

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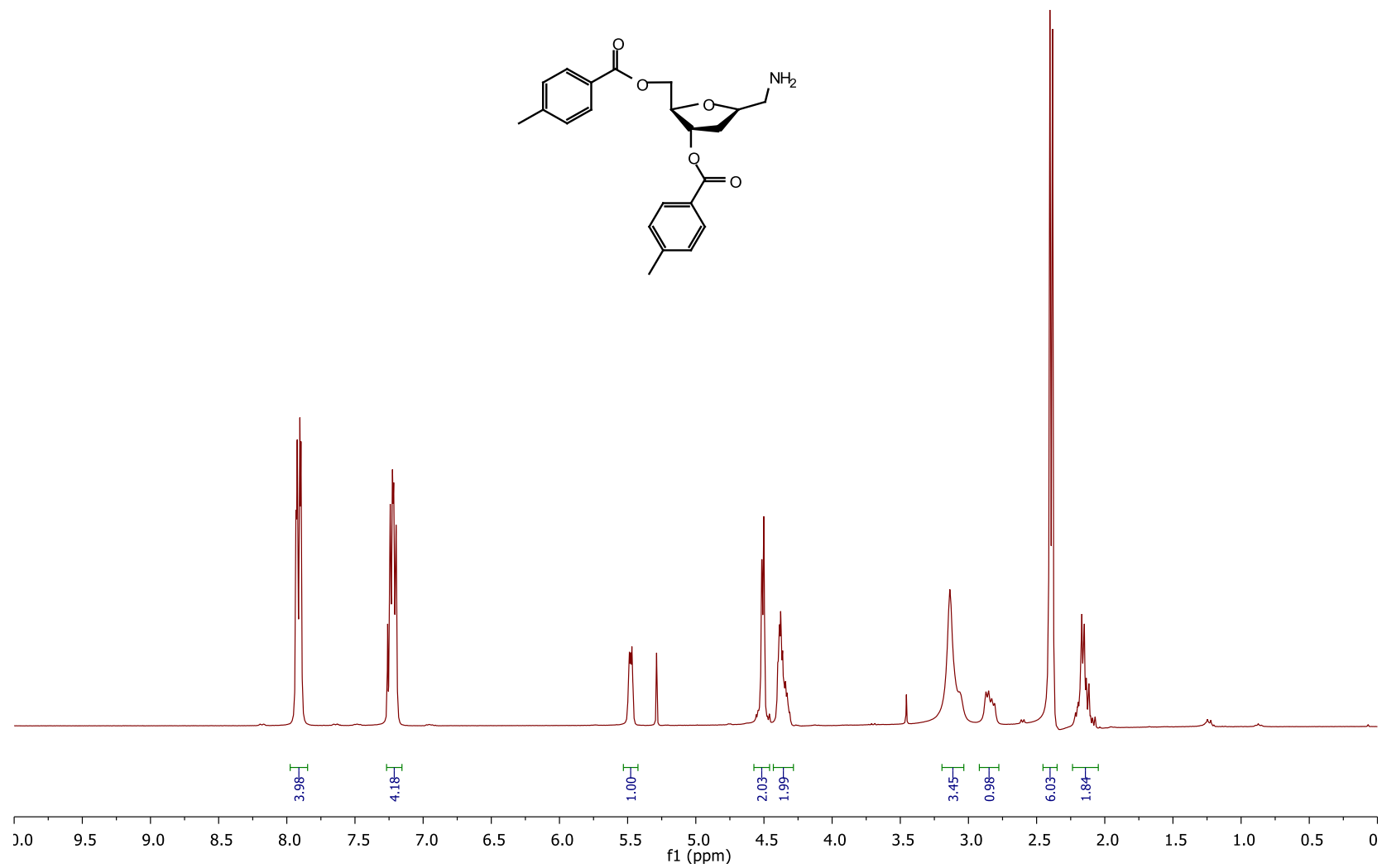
¹ H NMR of 2	S2	¹³ C NMR of 4	S15
¹³ C NMR of 2	S3	DEPT NMR of 4	S16
DEPT NMR of 2	S4	COSY NMR of 4	S17
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HSQC NMR of 2	S6	HMBC NMR of 4	S19
HMBC NMR of 2	S7	¹ H NMR of 5	S20
¹ H NMR of 3	S8	¹³ C NMR of 5	S21
¹³ C NMR of 3	S9	DEPT NMR of 5	S22
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MALDI-TOF of 15Mer_T*(03).....	S29
MALDI-TOF of ASmd.....	S30
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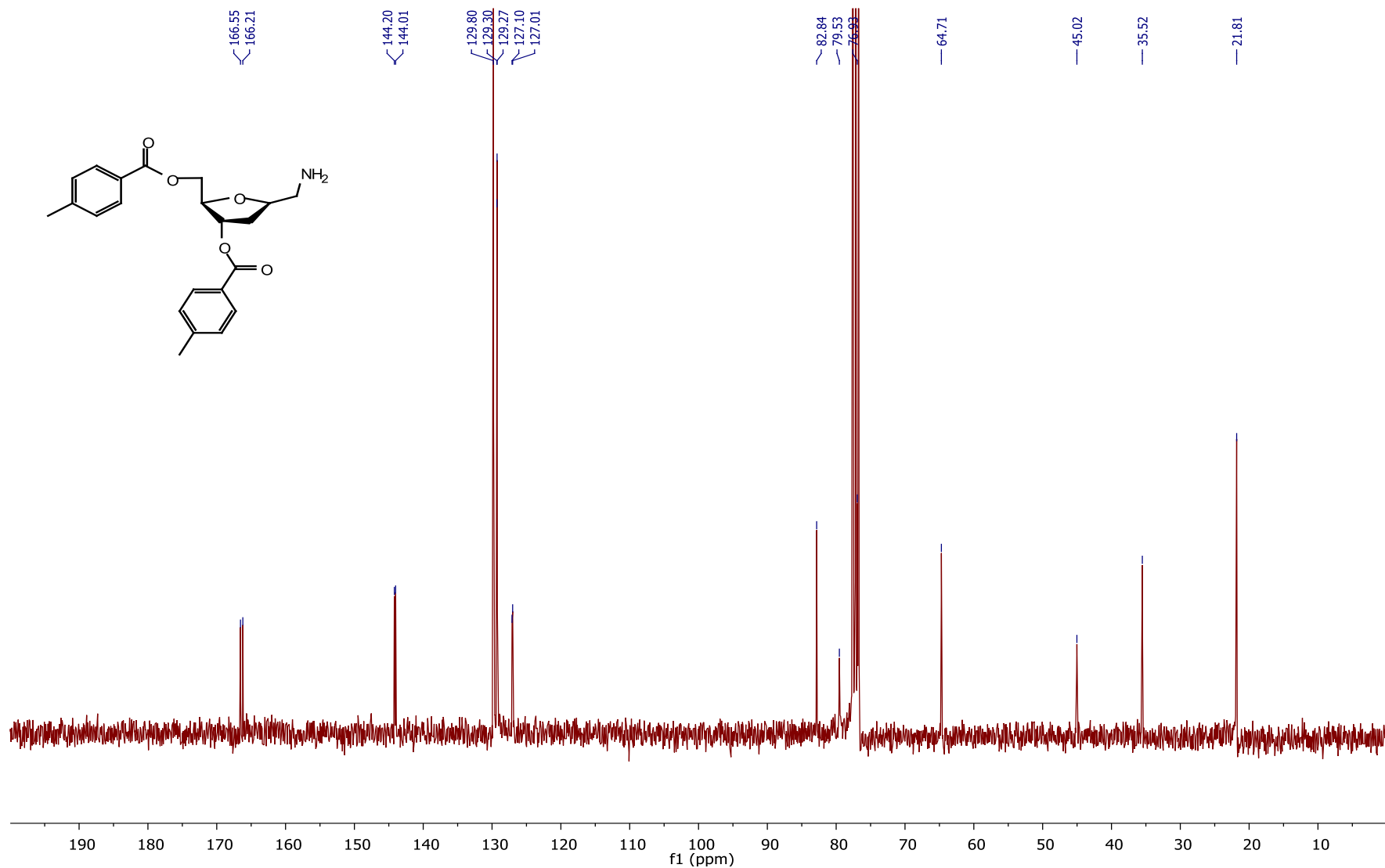
1 β -Aminomethyl-1,2-dideoxy-3,5-di-*O*-toluoyl-D-ribose (2)

^1H NMR (300.13 MHz, CDCl_3)



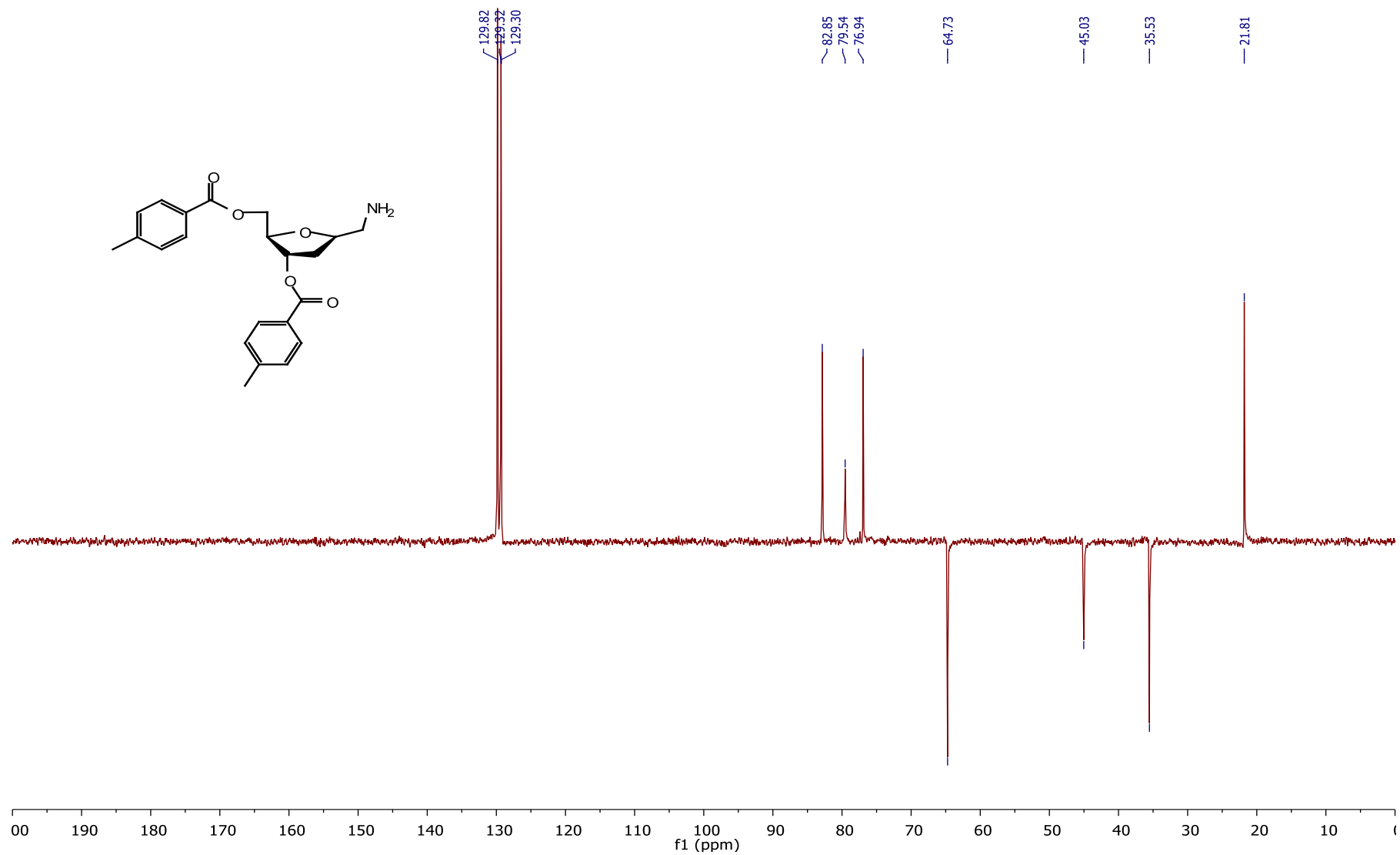
1 β -Aminomethyl-1,2-dideoxy-3,5-di-*O*-toluoyl-D-ribose (2)

¹³C NMR (75.5 MHz, CDCl₃)



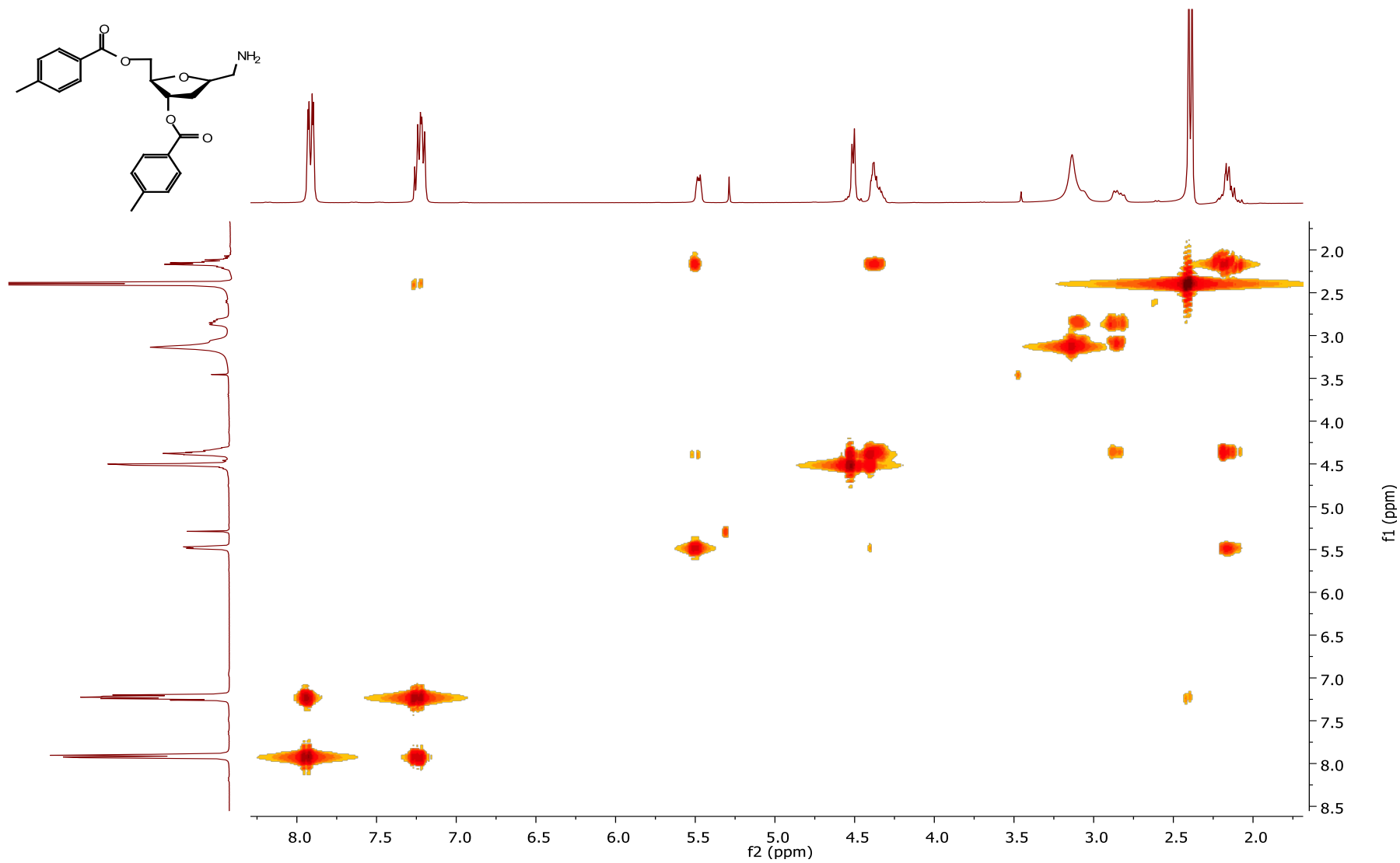
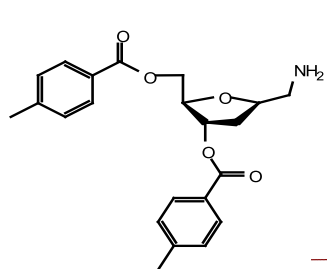
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DEPT NMR (75.5 MHz, CDCl₃)



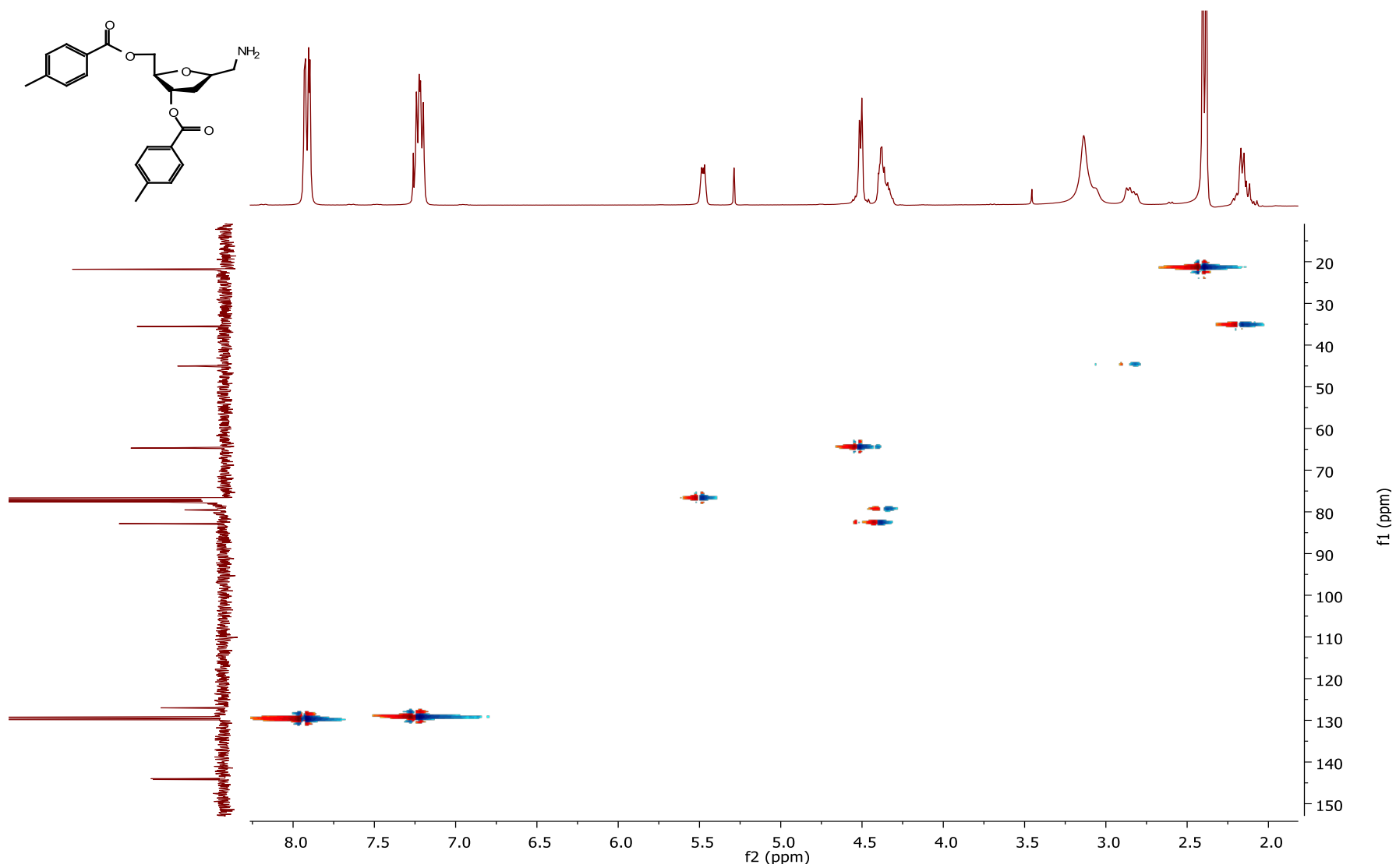
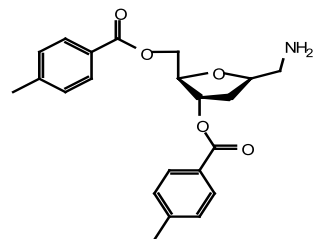
1 β -Aminomethyl-1,2-dideoxy-3,5-di-*O*-toluoyl-D-ribose (2)

COSY NMR (CDCl₃)



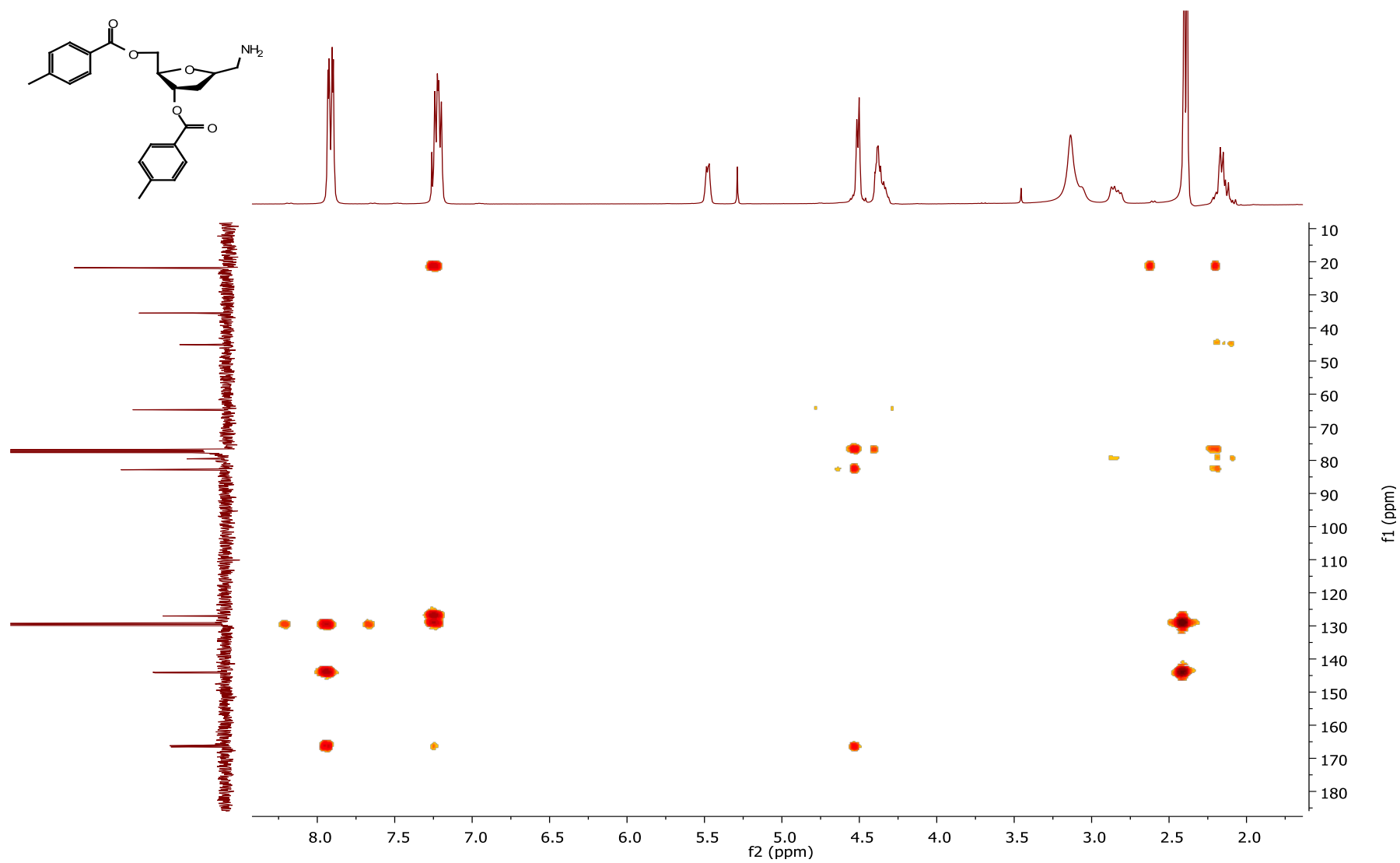
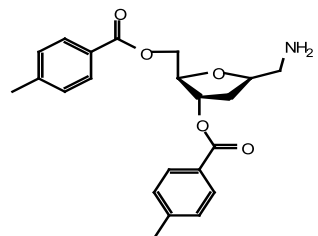
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HSQC NMR (CDCl₃)



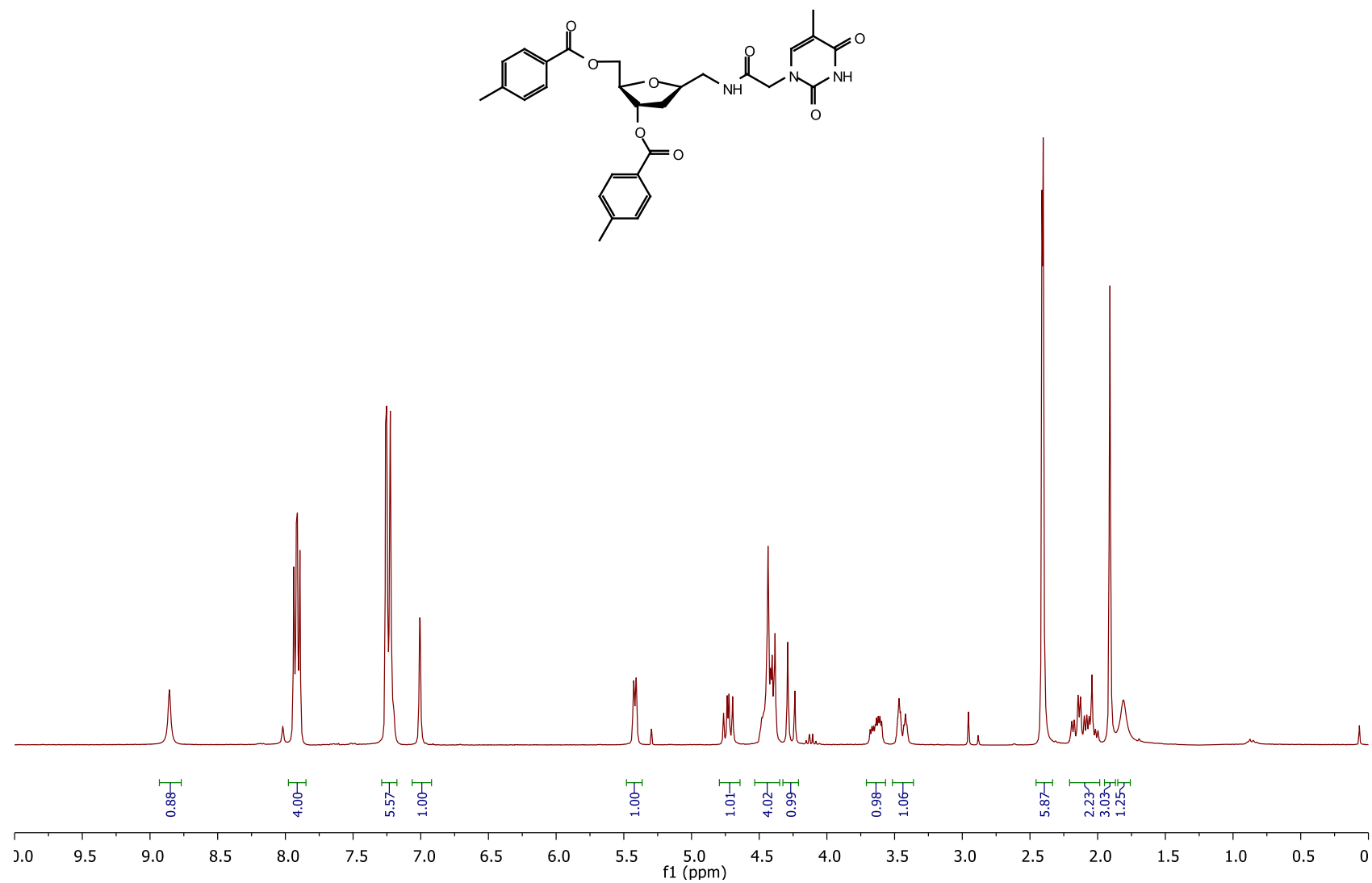
1 β -Aminomethyl-1,2-dideoxy-3,5-di-*O*-toluoyl-D-ribose (2)

HMBC NMR (CDCl₃)



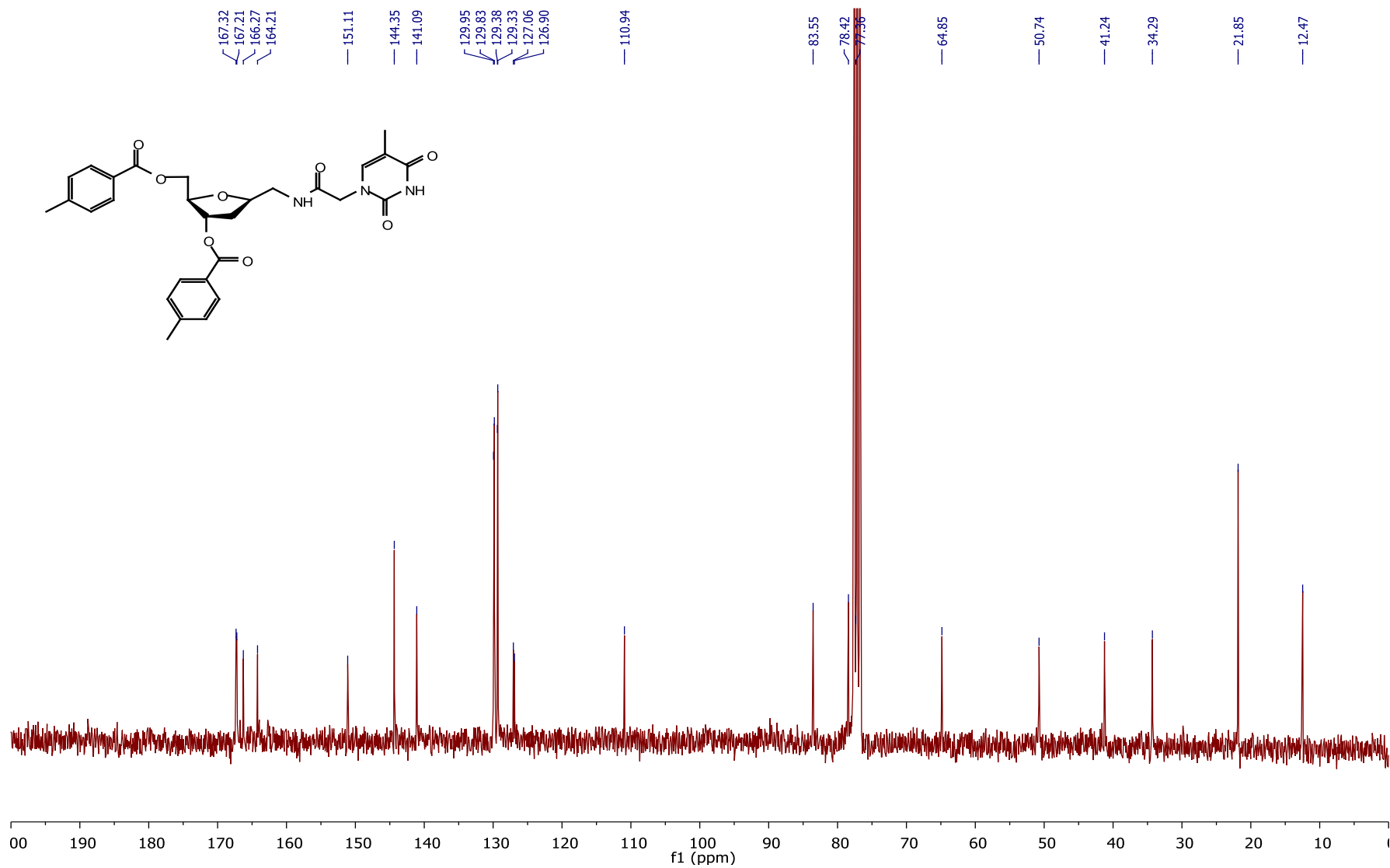
1,2-Dideoxy-1 β -[*N*-(1-thyminylacetyl)aminomethyl]-3,5-di-*O*-toluoyl-D-ribose (3)

^1H NMR (300.13 MHz, CDCl_3)



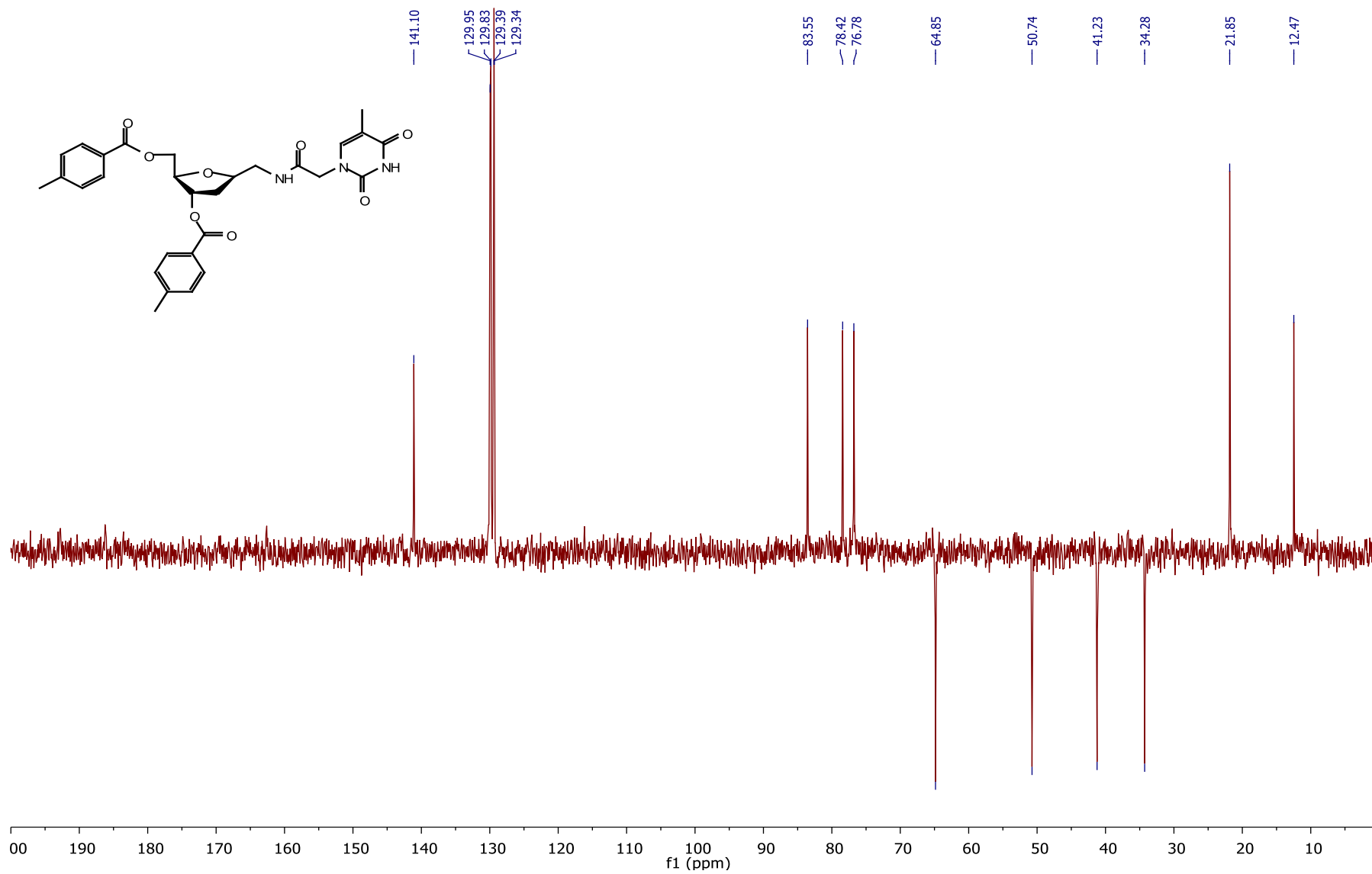
1,2-Dideoxy-1 β -[N-(1-thyminylacetyl)aminomethyl]-3,5-di-O-toluoyl-D-ribose (3)

^{13}C NMR (75.5 MHz, CDCl_3)



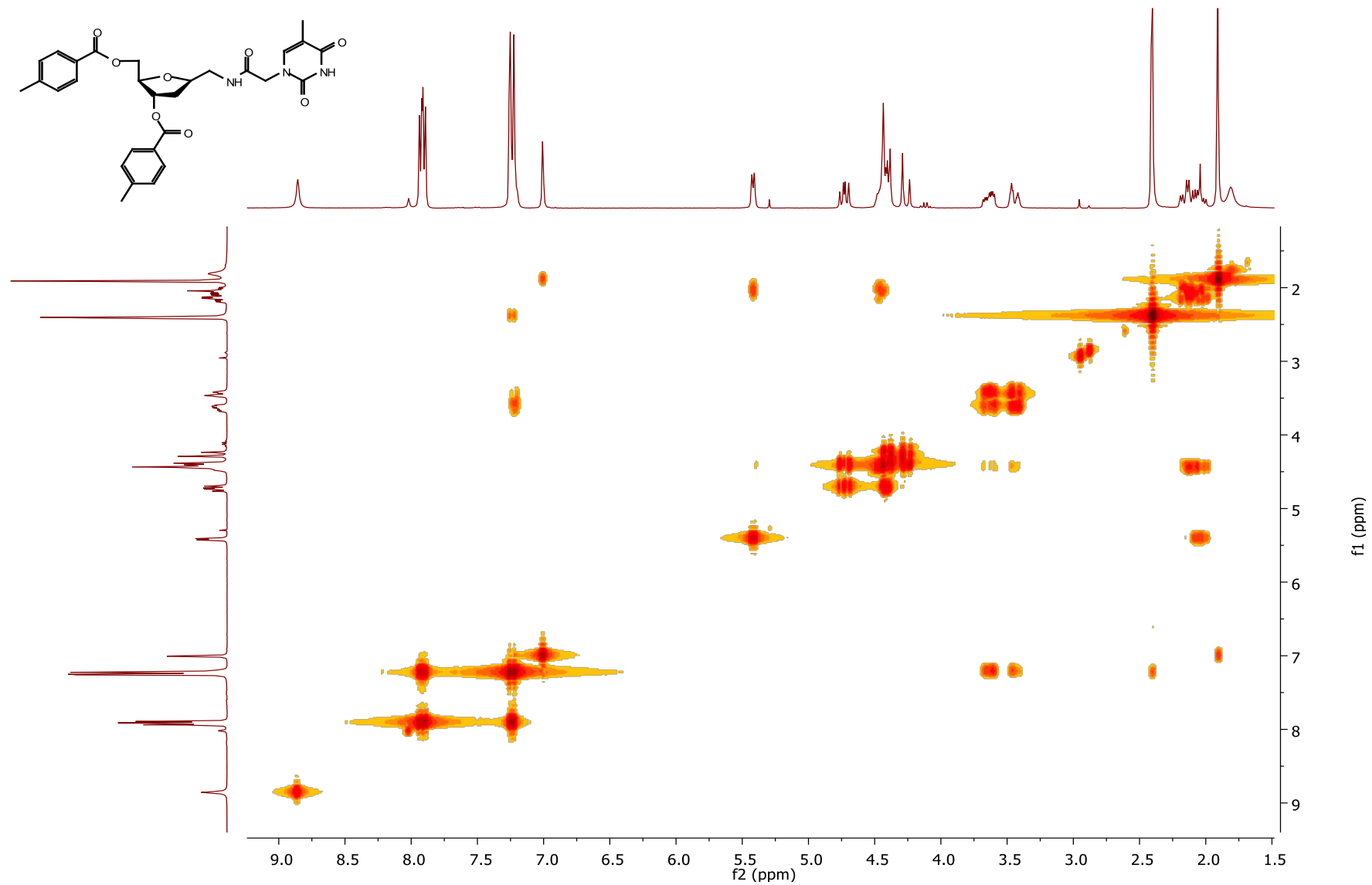
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DEPT NMR (75.5 MHz, CDCl₃)



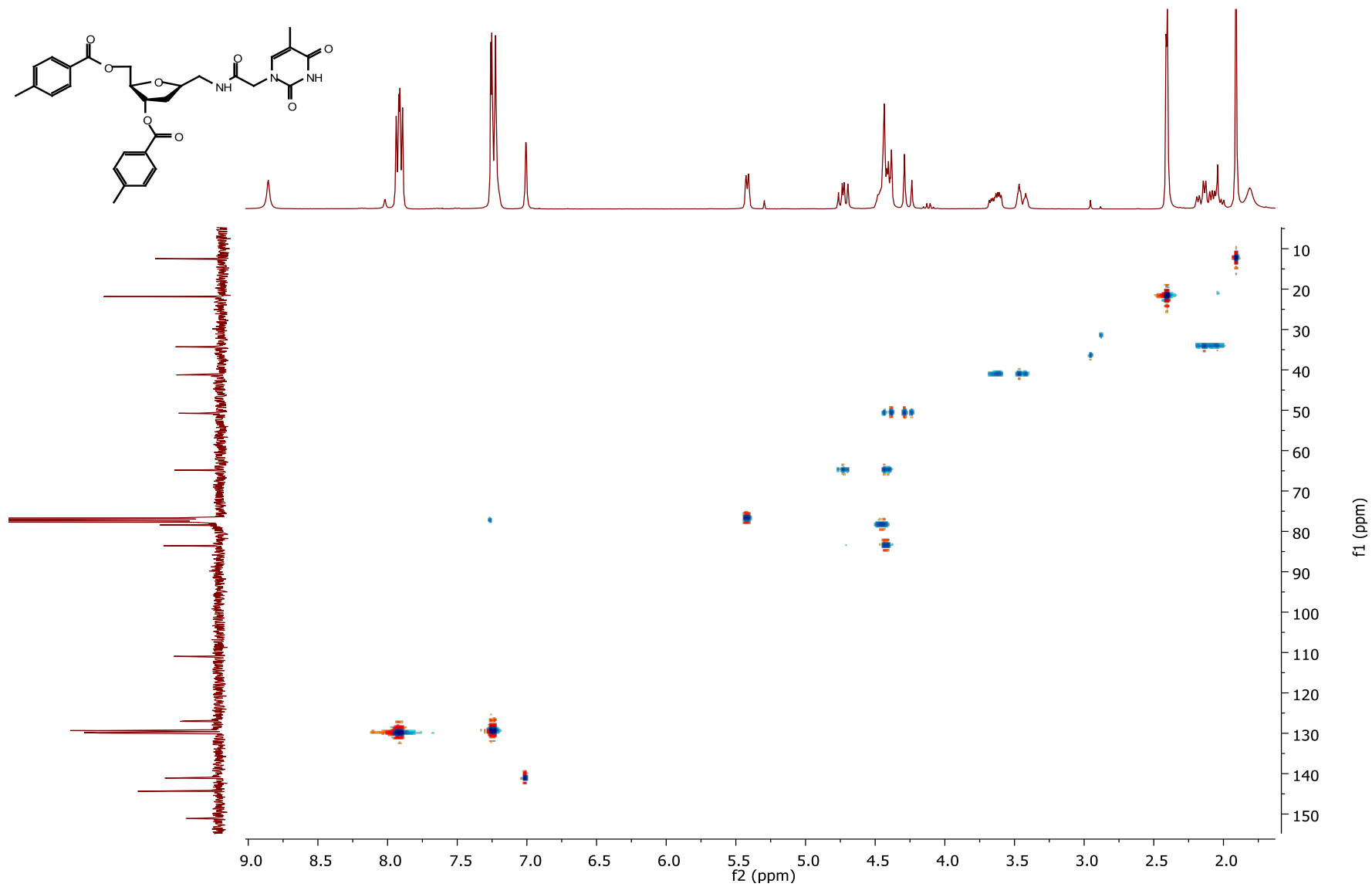
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COSY NMR (CDCl₃)



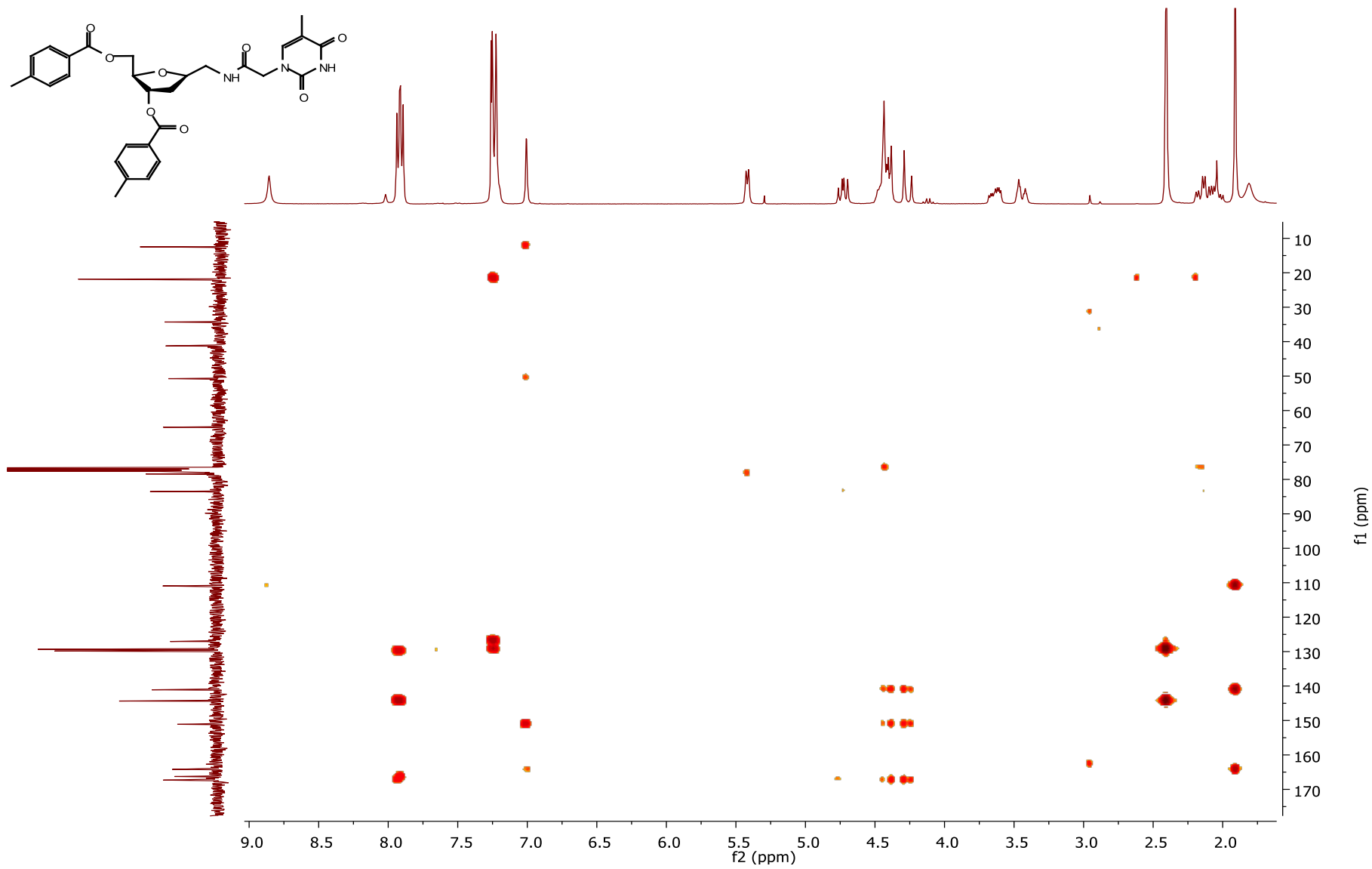
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HSQC NMR (CDCl₃)



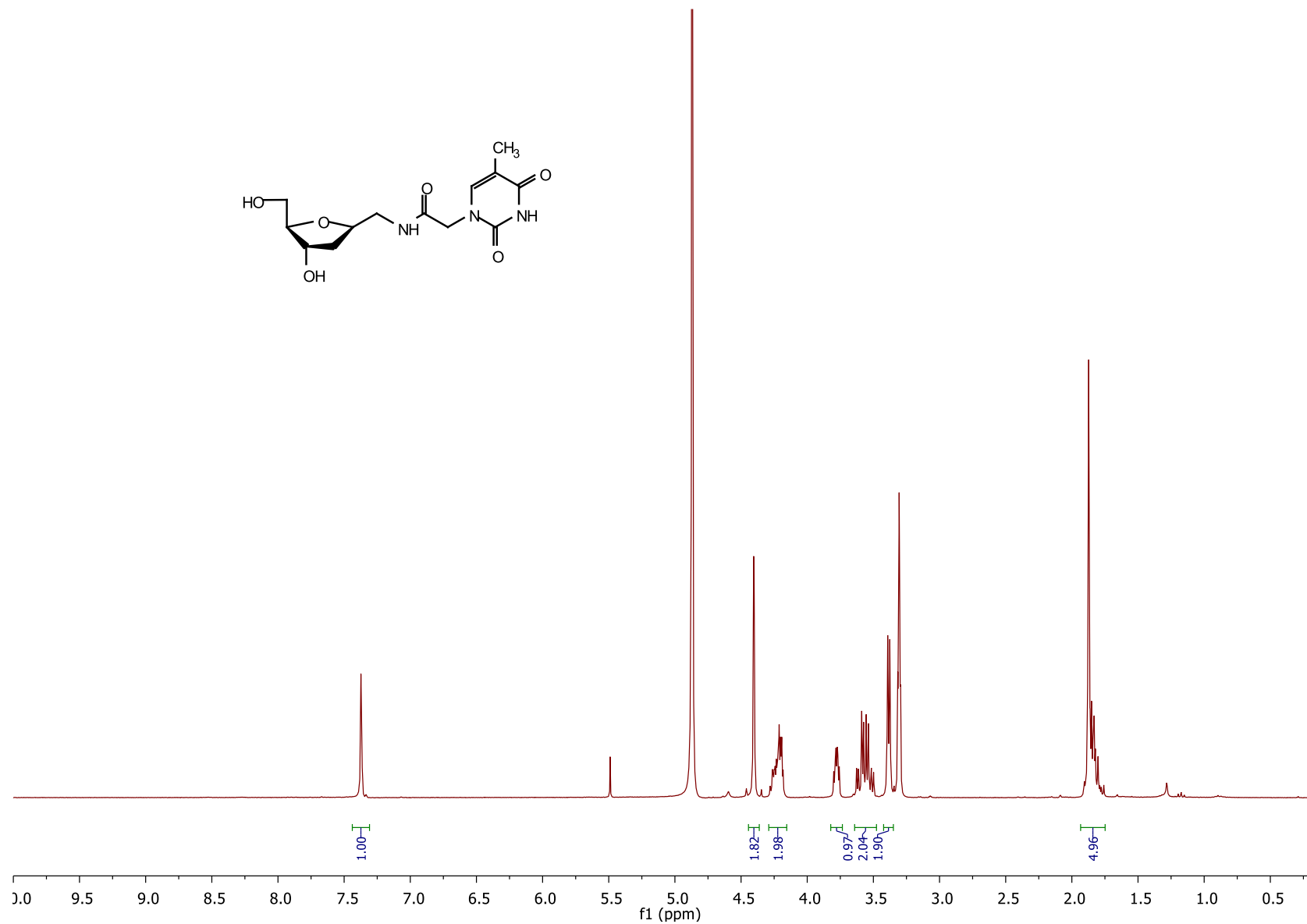
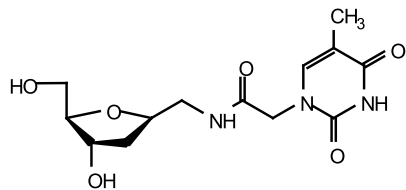
1,2-Dideoxy-1 β -[*N*-(1-thyminylacetyl)aminomethyl]-3,5-di-*O*-toluoyl-D-ribose (3)

HMBC NMR (CDCl₃)



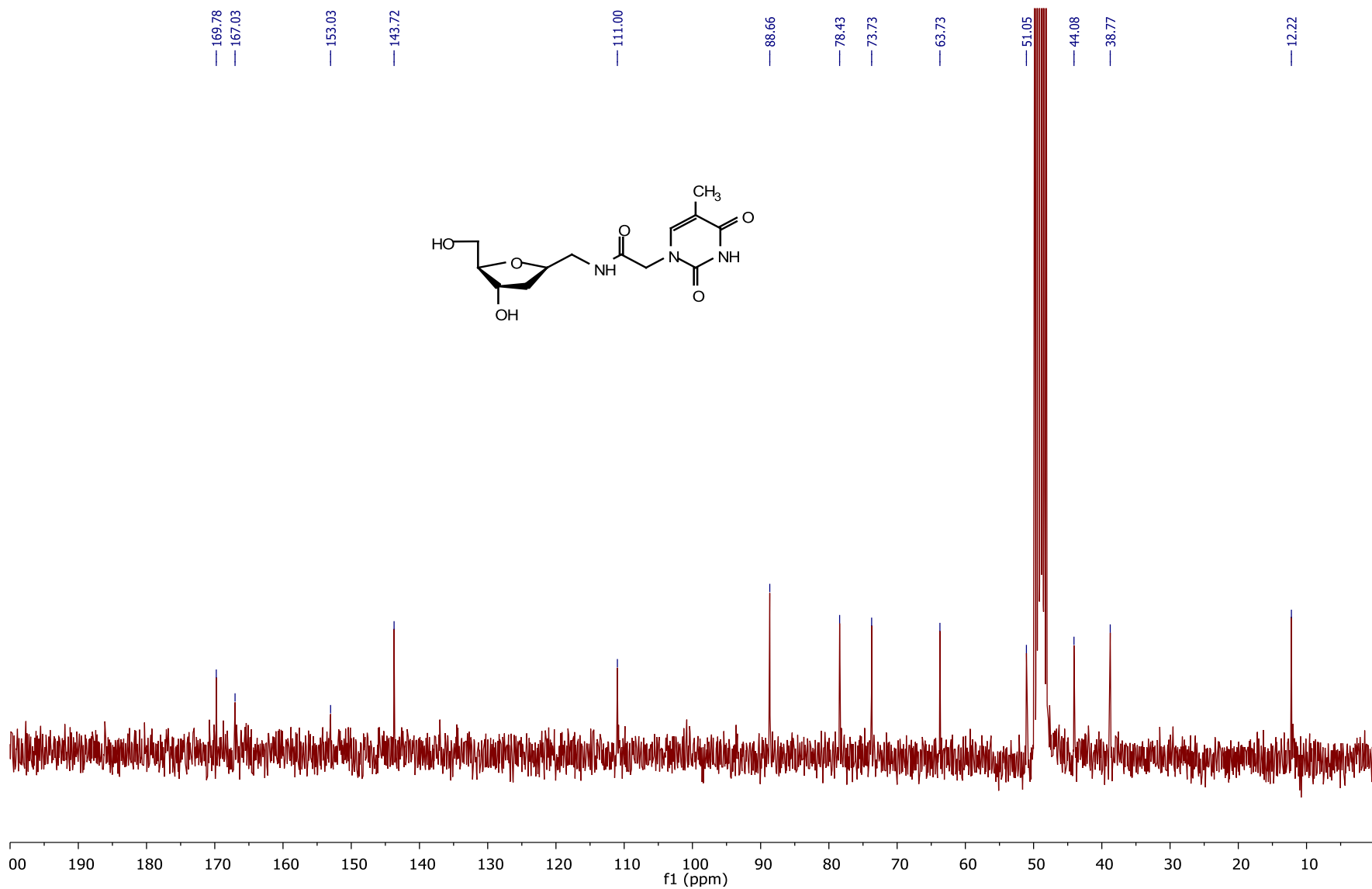
1,2-Dideoxy-1 β -[N-(1-thyminylacetyl)aminomethyl]-D-ribose (4)

^1H NMR (300.13 MHz, MeOH- d_4)



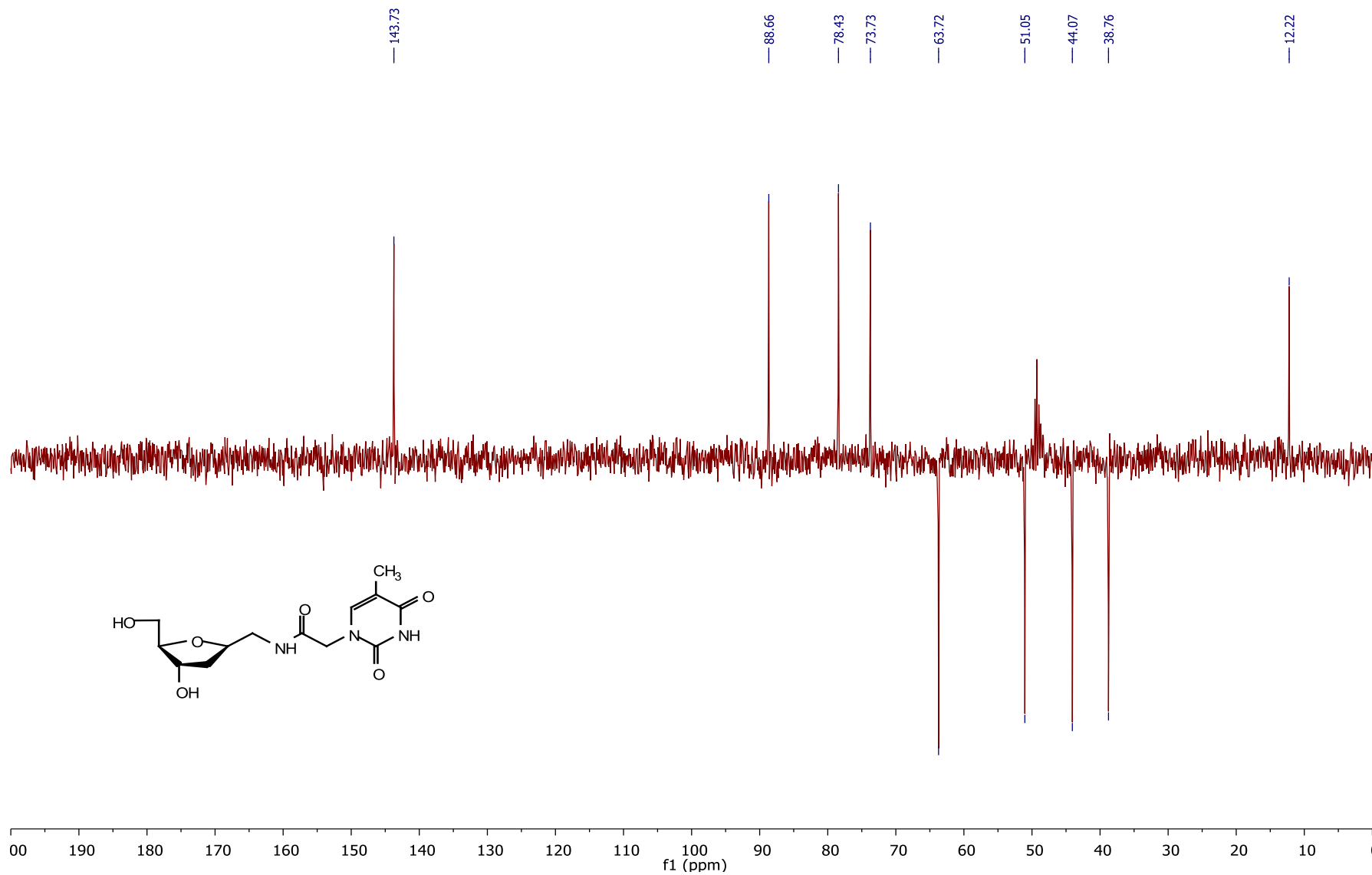
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^{13}C NMR (75.5 MHz, MeOH- d_4)



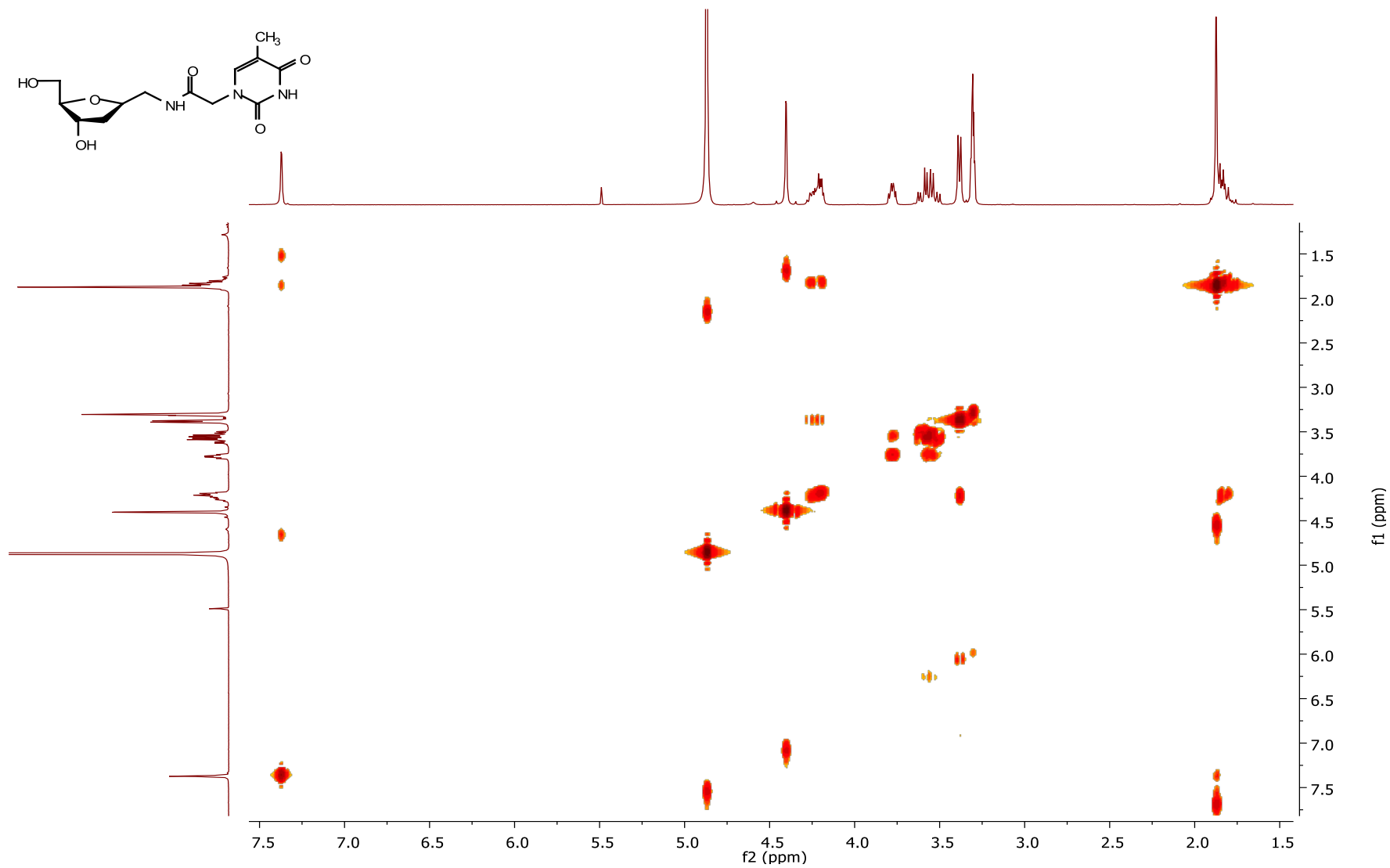
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DEPT NMR (75.5 MHz, MeOH- d_4)



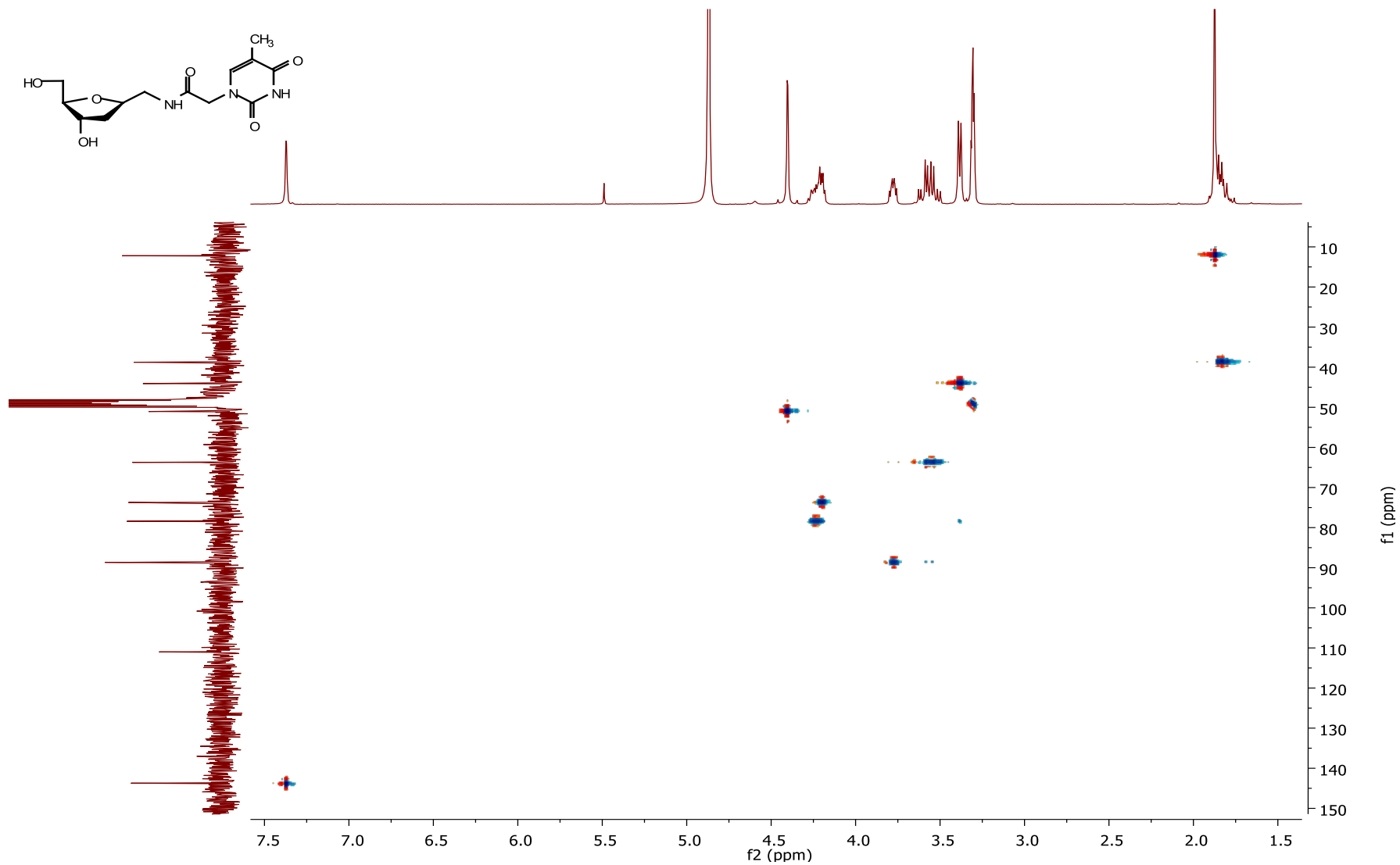
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COSY NMR (MeOH- d_4)



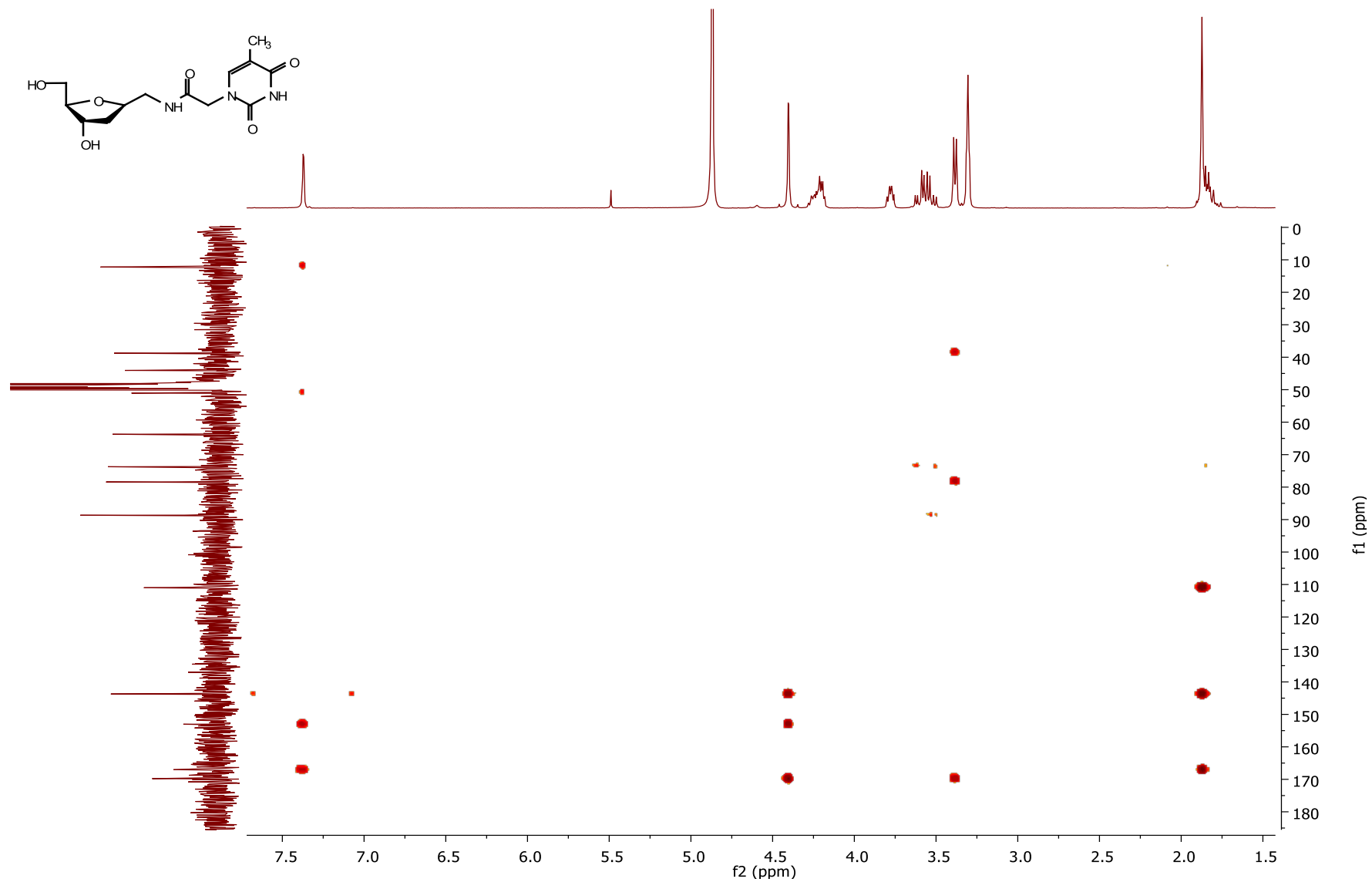
1,2-Dideoxy-1 β -[N-(1-thyminylacetyl)aminomethyl]-D-ribose (4)

HSQC NMR (MeOH- d_4)



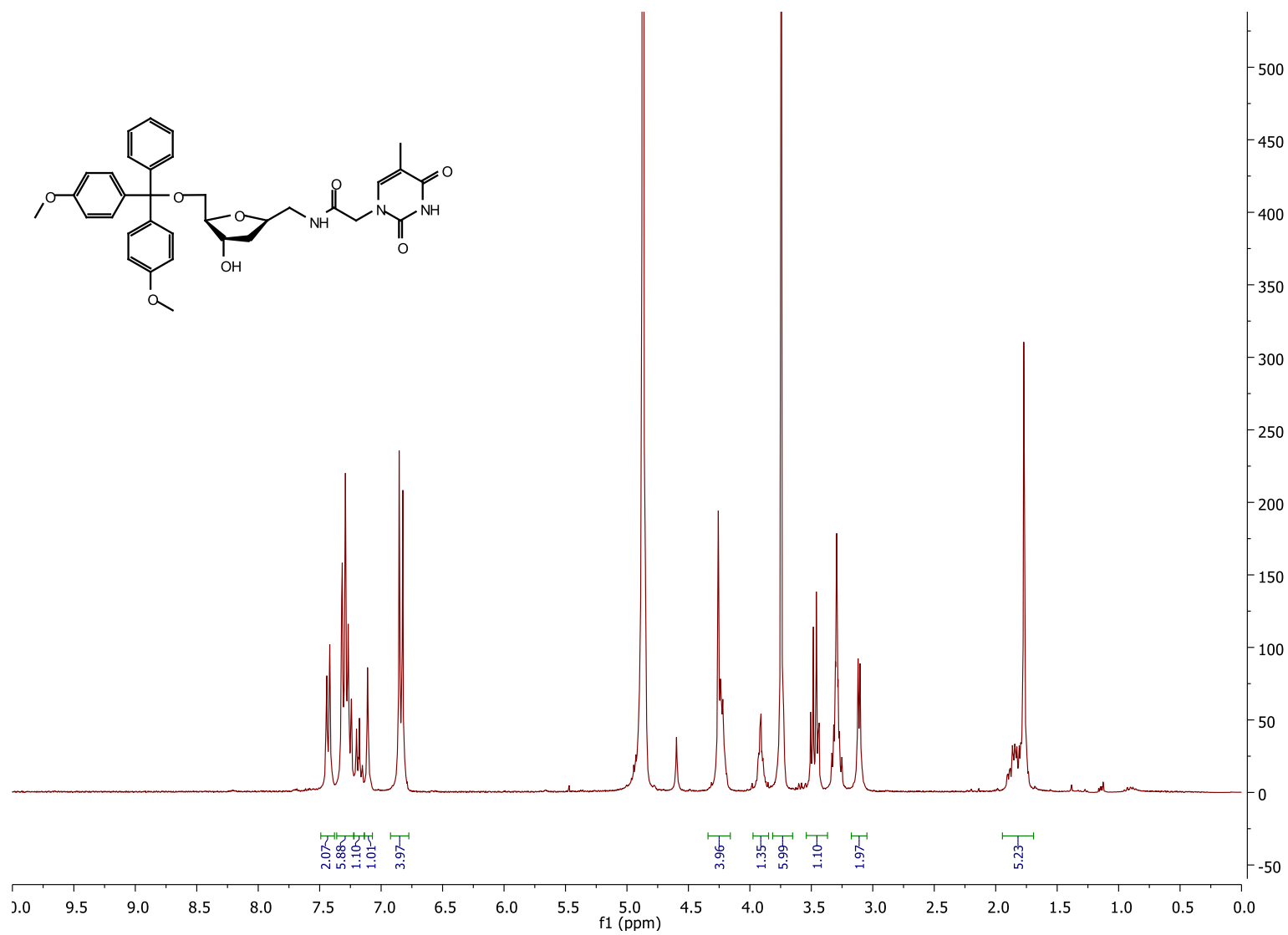
1,2-Dideoxy-1 β -[N-(1-thyminylacetyl)aminomethyl]-D-ribose (4)

HMBC NMR (MeOH- d_4)



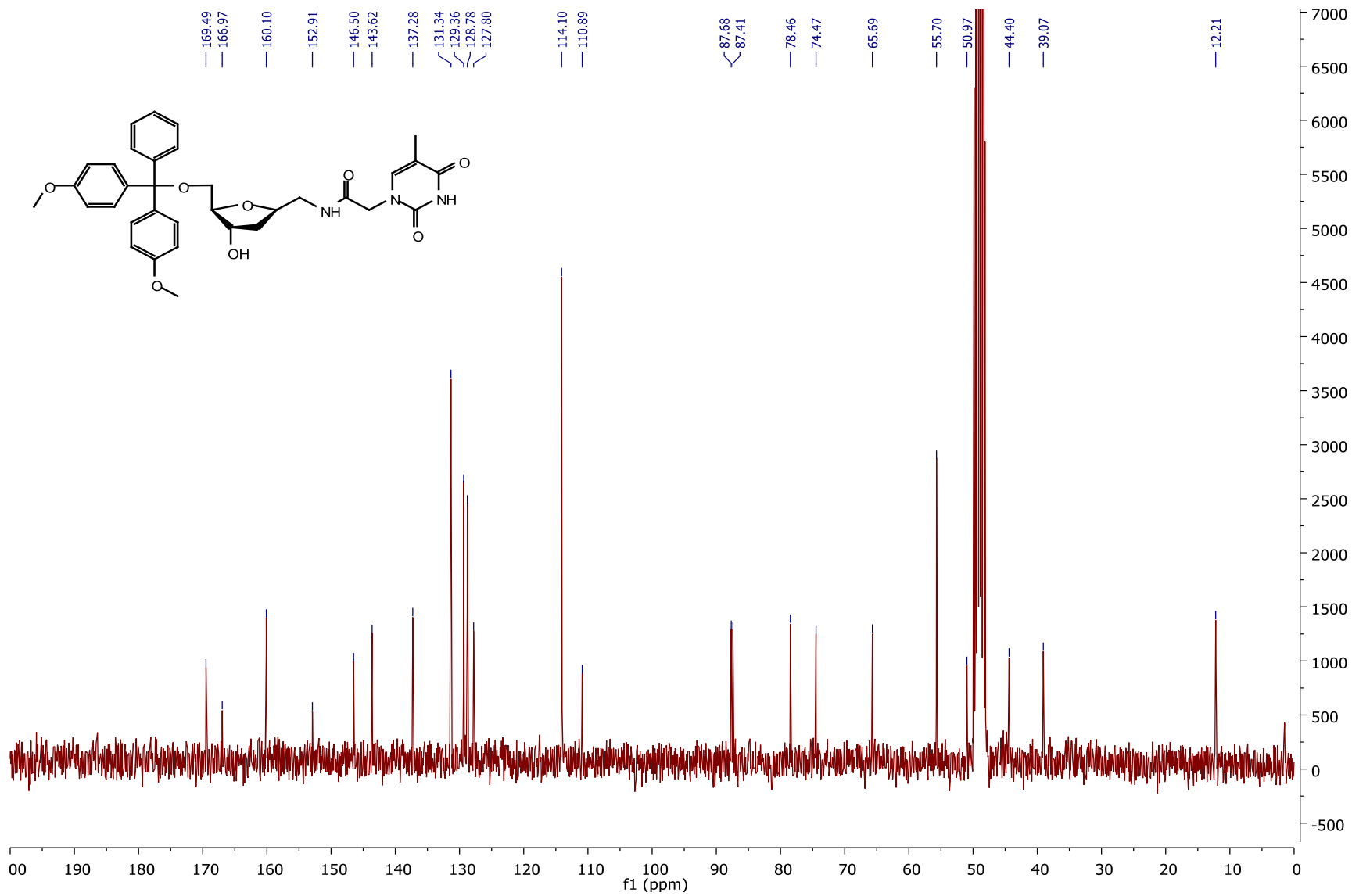
1,2-Dideoxy-5-O-(4,4'-dimethoxytrityl)-1-[N-(1-thyminylacetyl)aminomethyl]-D-ribose (5, DMT-T*)

¹H NMR (300.13 MHz, MeOH-d₄)



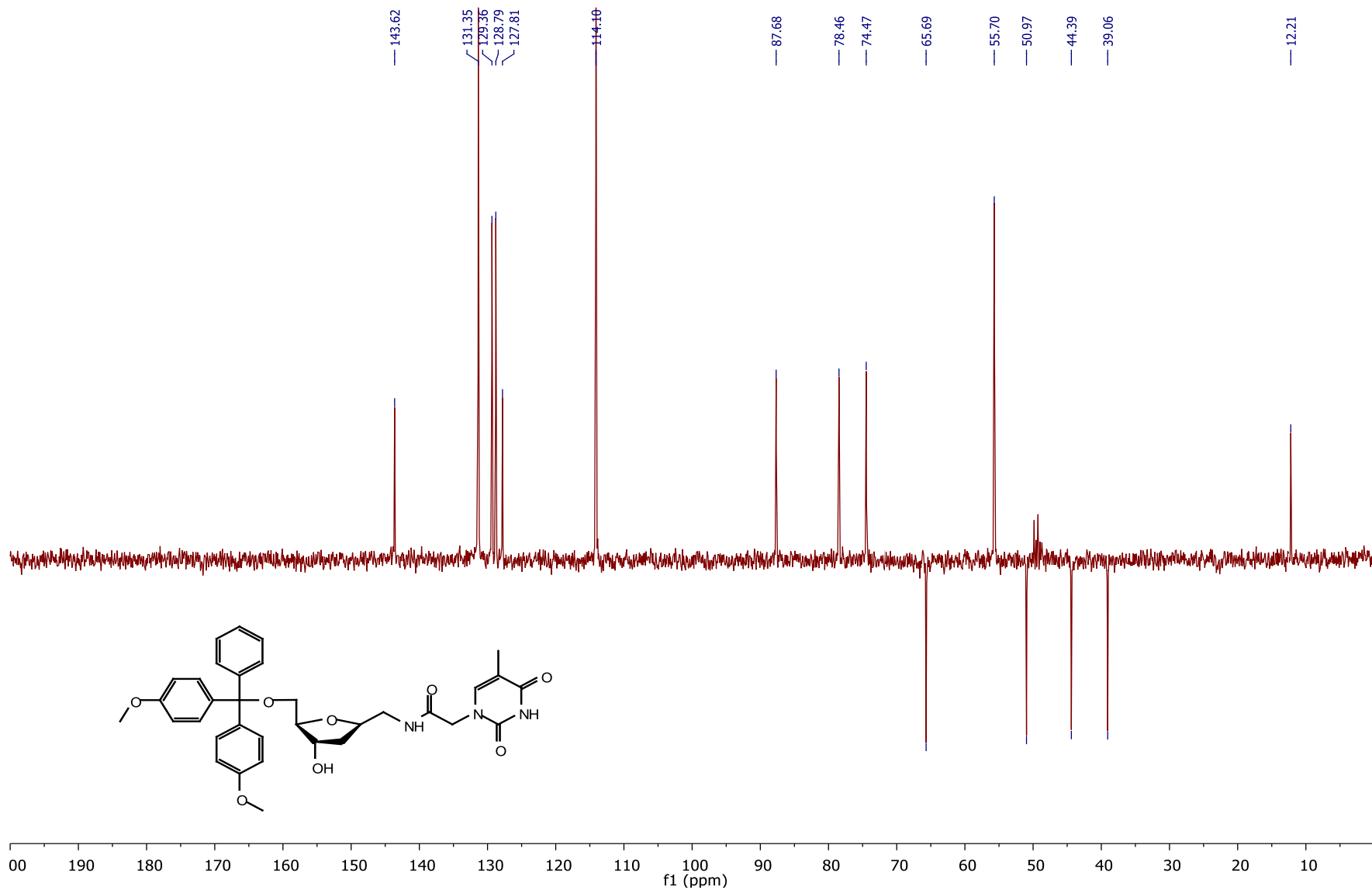
1,2-Dideoxy-5-O-(4,4'-dimethoxytrityl)-1-[N-(1-thyminylacetyl)aminomethyl]-D-ribose (5, DMT-T*)

¹³C NMR (75.5 MHz, MeOH-d₄)



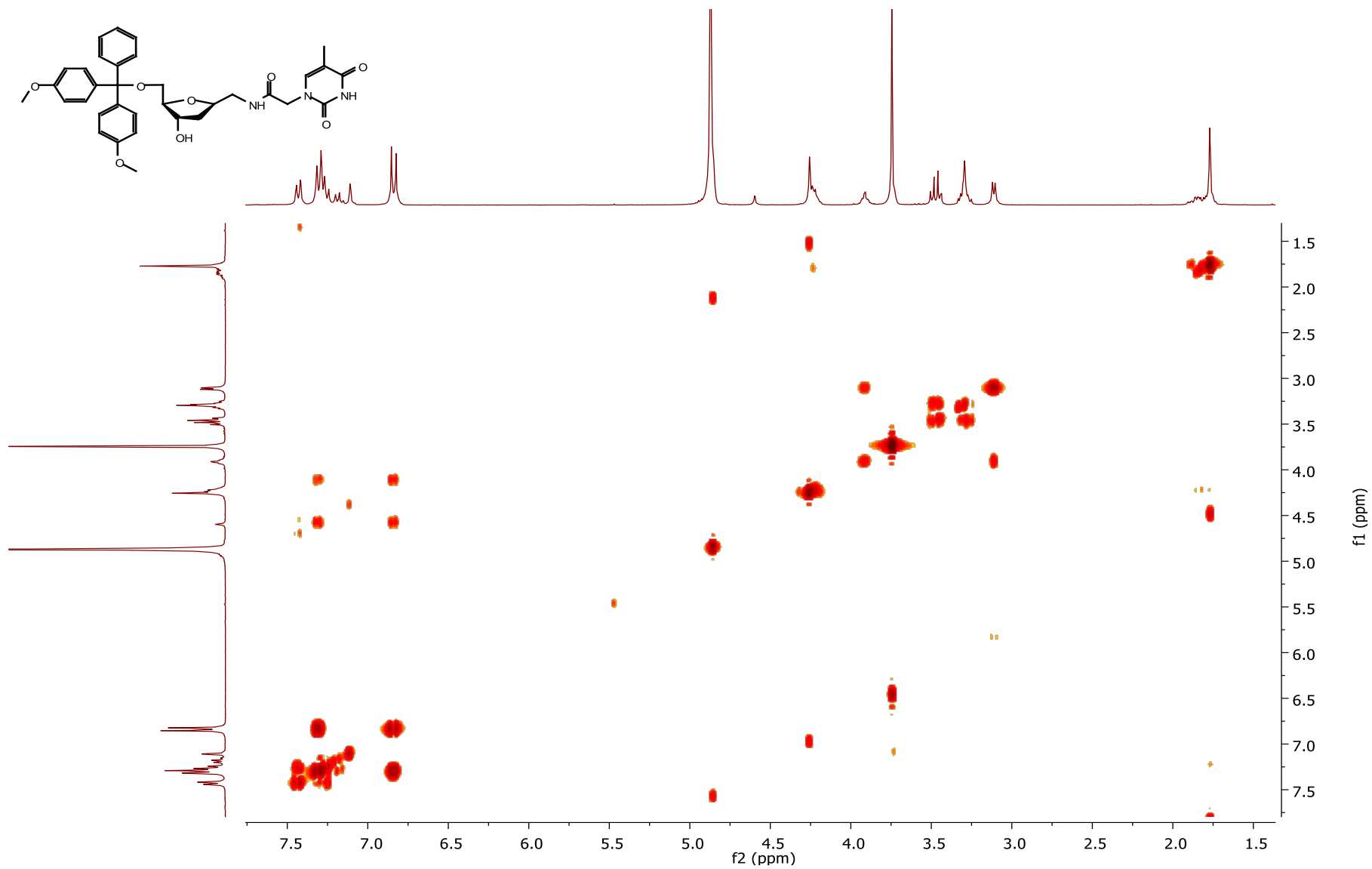
1,2-Dideoxy-5-O-(4,4'-dimethoxytrityl)-1-[N-(1-thyminylacetyl)aminomethyl]-D-ribose (5, DMT-T*)

DEPT NMR (75.5 MHz, MeOH-*d*₄)



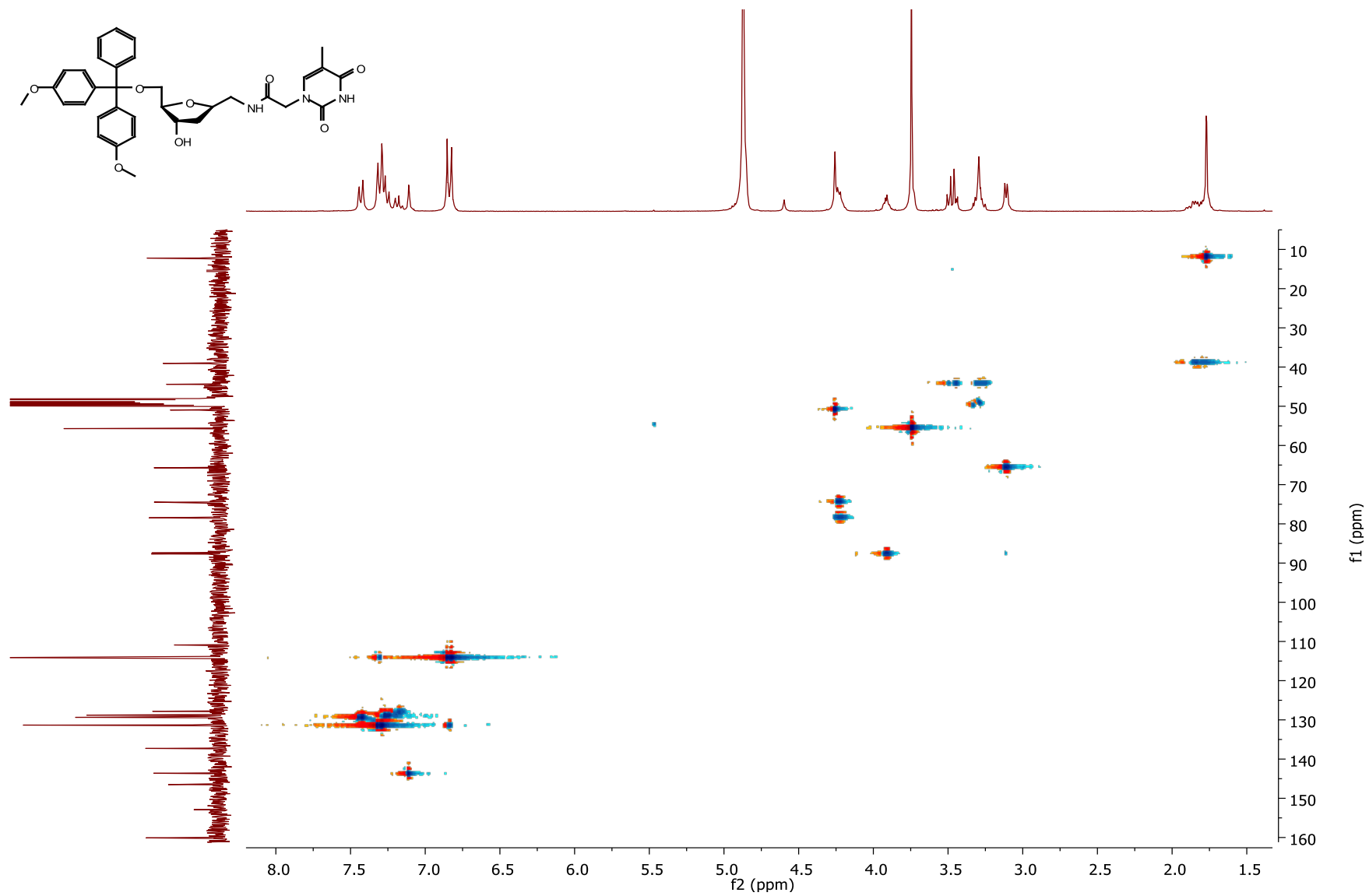
1,2-Dideoxy-5-*O*-(4,4'-dimethoxytrityl)-1-[*N*-(1-thyminylacetyl)aminomethyl]-D-ribose (5, DMT-T*)

COSY NMR (MeOH-*d*₄)



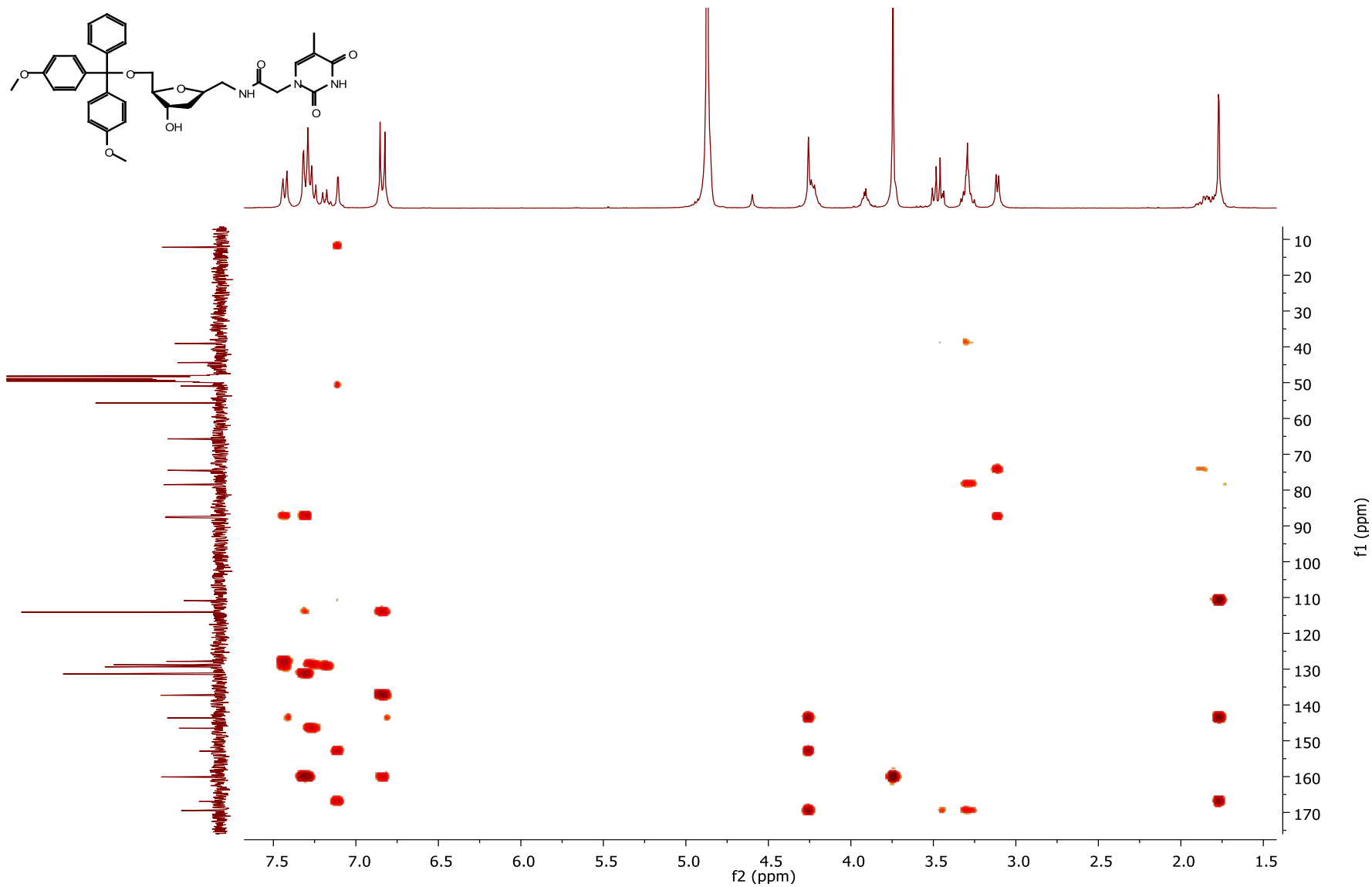
1,2-Dideoxy-5-*O*-(4,4'-dimethoxytrityl)-1-[*N*-(1-thyminylacetyl)aminomethyl]-D-ribose (5, DMT-T*)

HSQC NMR (MeOH-*d*₄)



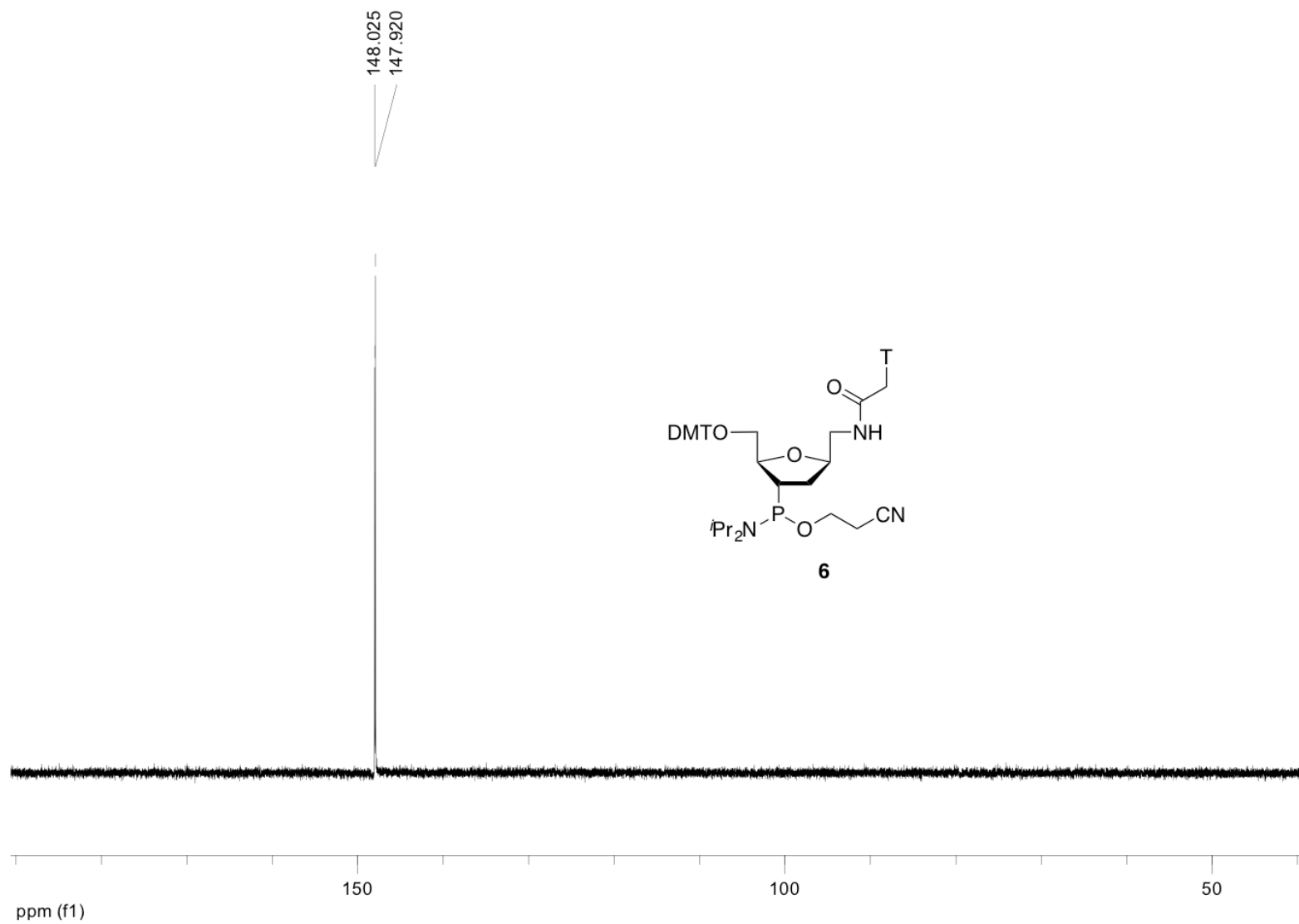
1,2-Dideoxy-5-*O*-(4,4'-dimethoxytrityl)-1-[*N*-(1-thyminylacetyl)aminomethyl]-D-ribose (5, DMT-T*)

HMBC NMR (MeOH-*d*₄)



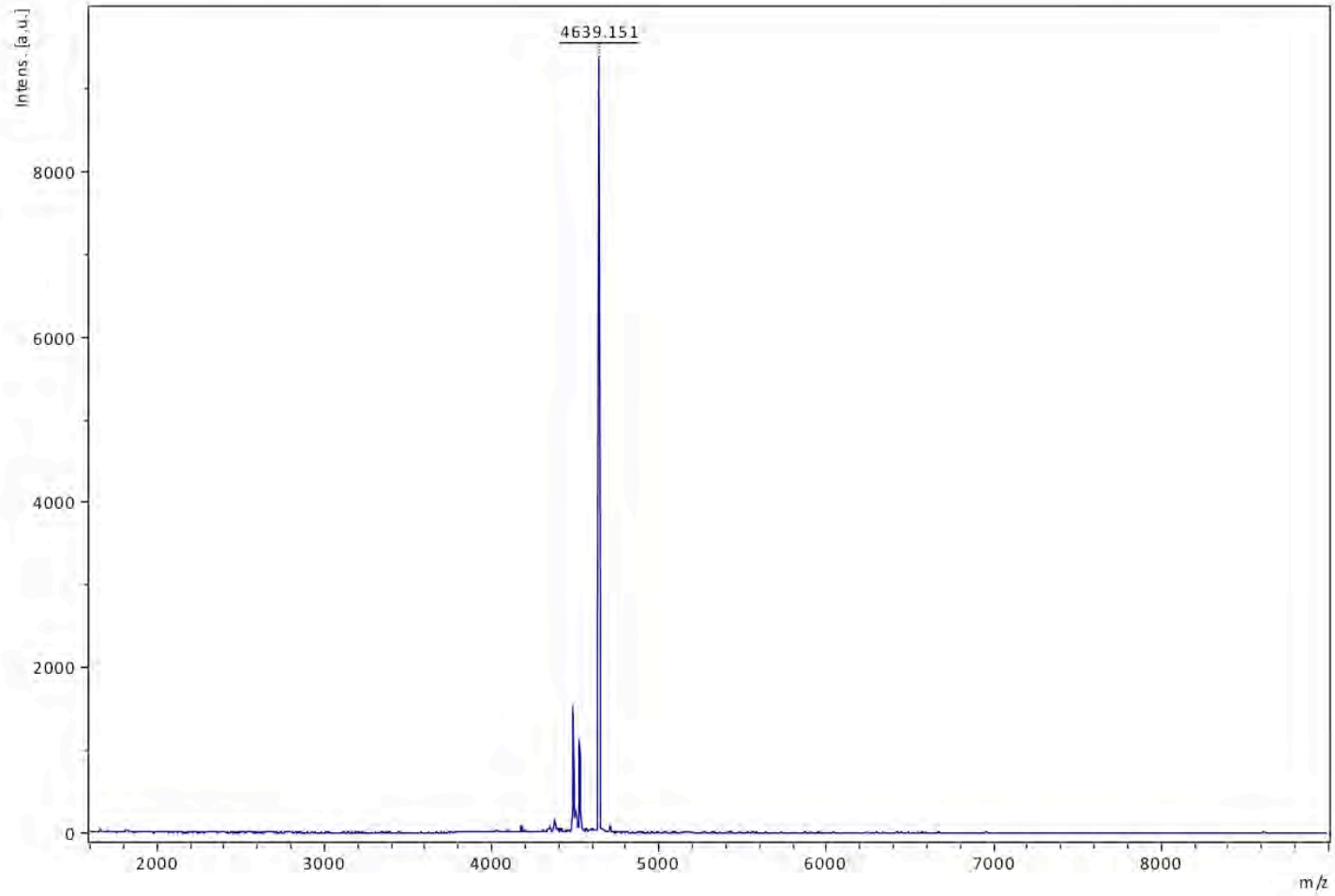
DMT-T* phosphoramidite derivative (6)

^{31}P NMR (CDCl_3)



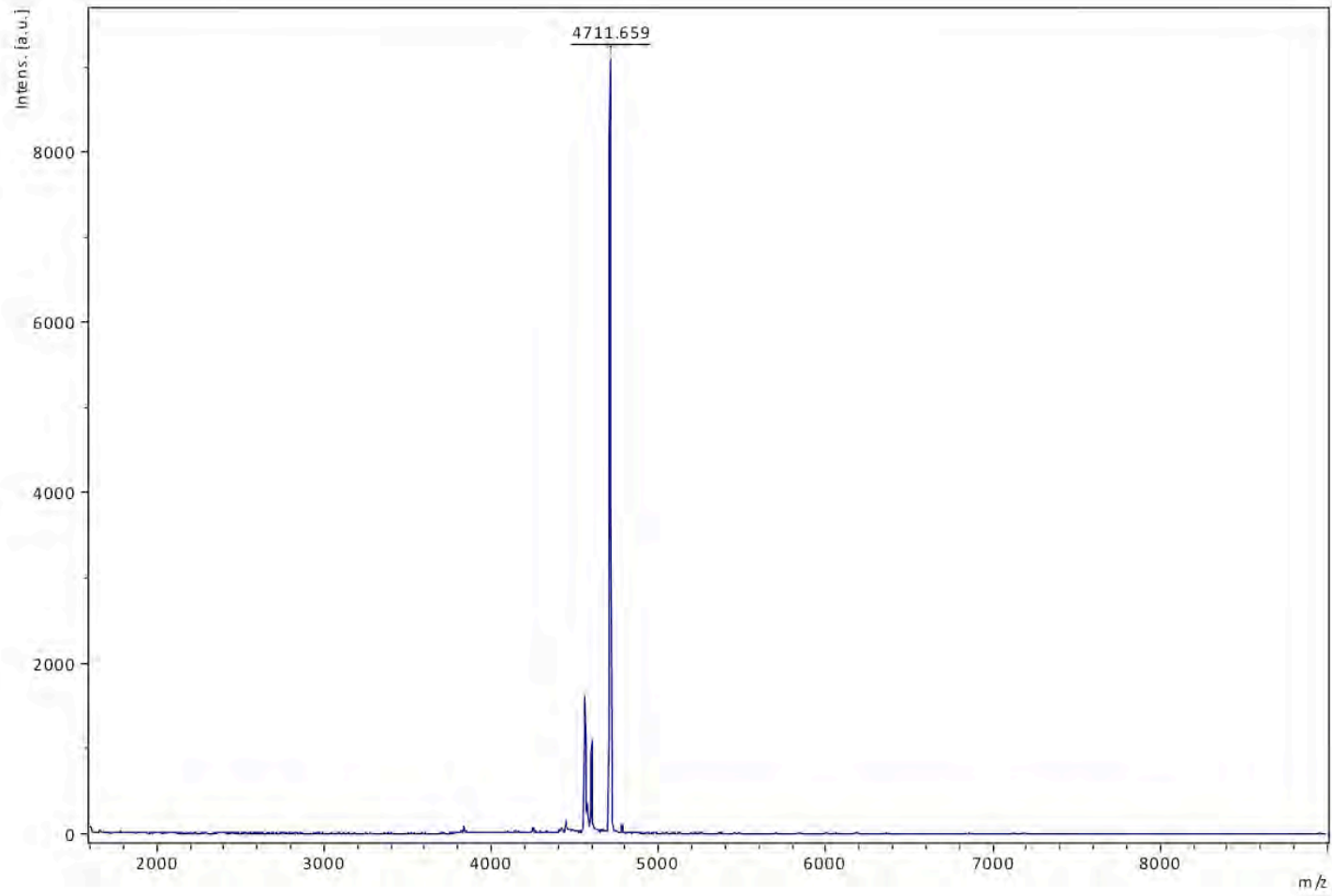
15Mer_T*(01)

MALDI-TOF



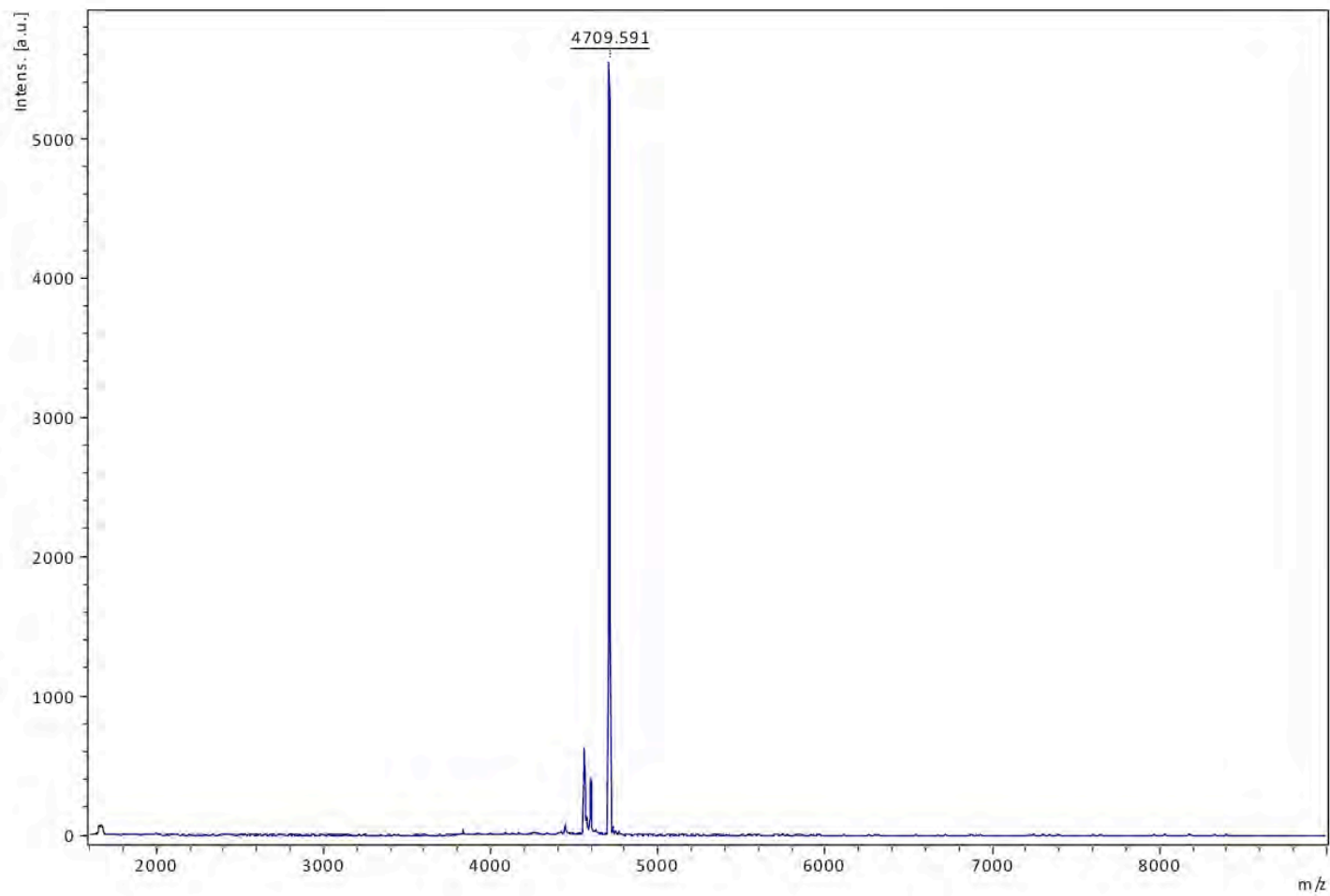
15Mer_T*(02)

MALDI-TOF



15Mer_T*(03)

MALDI-TOF

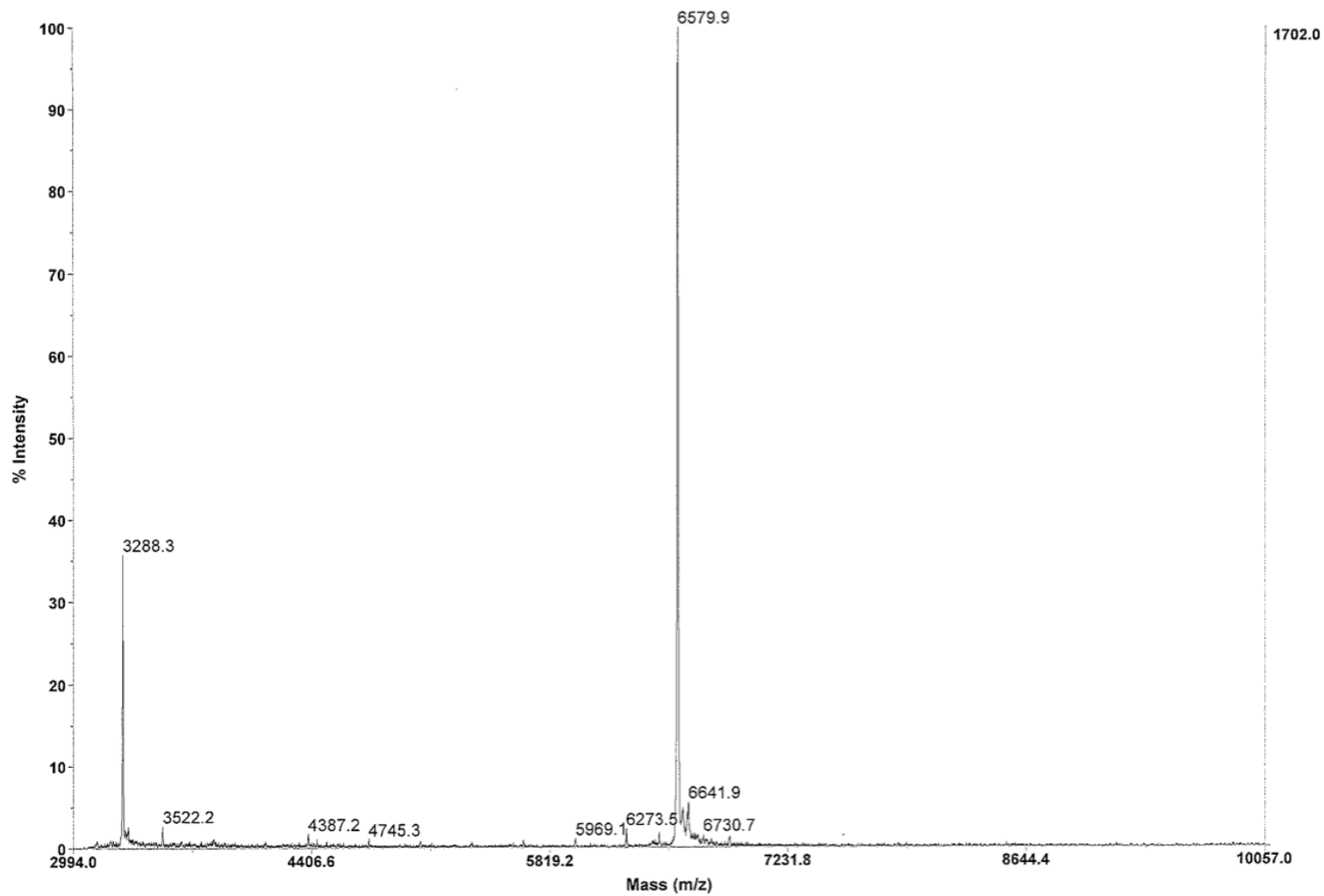


ASmd

MALDI-TOF

Applied Biosystems 4700 Proteomics Analyzer 2011

4700 Linear Spec #1[BP = 6580.4, 1702]



SSmd

MALDI-TOF

Applied Biosystems 4700 Proteomics Analyzer 2011

4700 Linear Spec #1[BP = 6946.9, 340]

