



Supporting Information

for

Tuning the stability of alkoxyisopropyl protection groups

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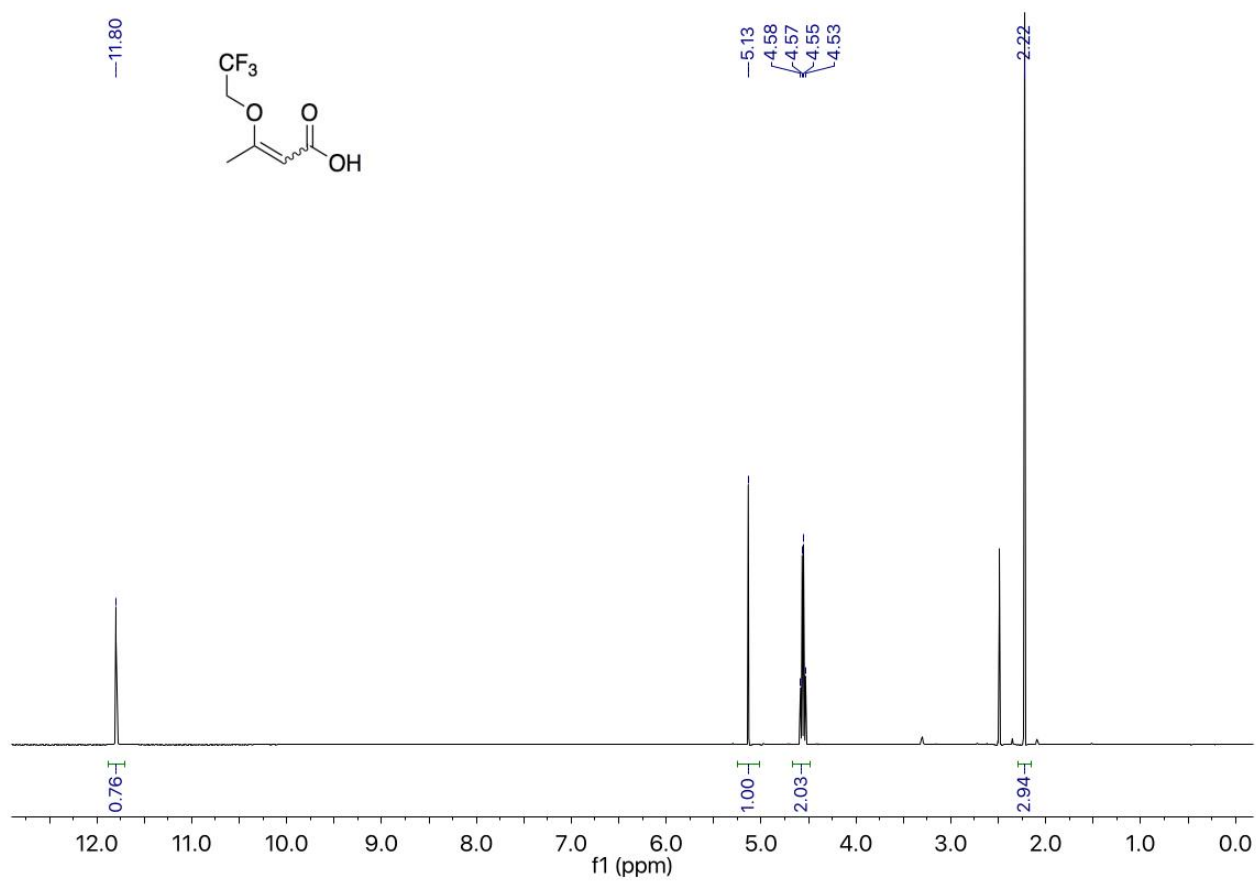
Beilstein J. Org. Chem. **2019**, *15*, 746–751. doi:10.3762/bjoc.15.70

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

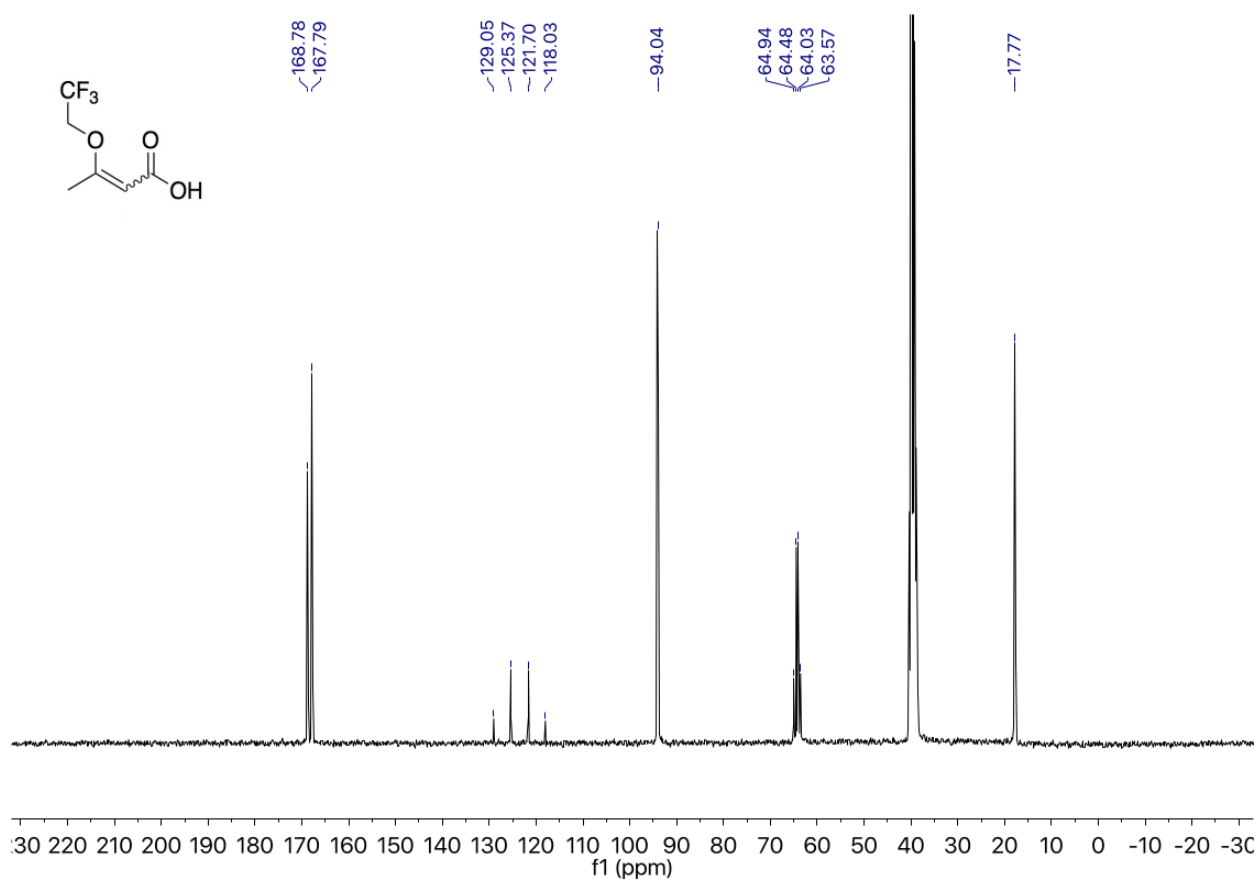
^1H and ^{13}C NMR spectra

3-(2,2,2-Trifluoroethoxy)but-2-enoic acid (**9**).

^1H -NMR (500 MHz, $\text{DMSO}-d_6$)

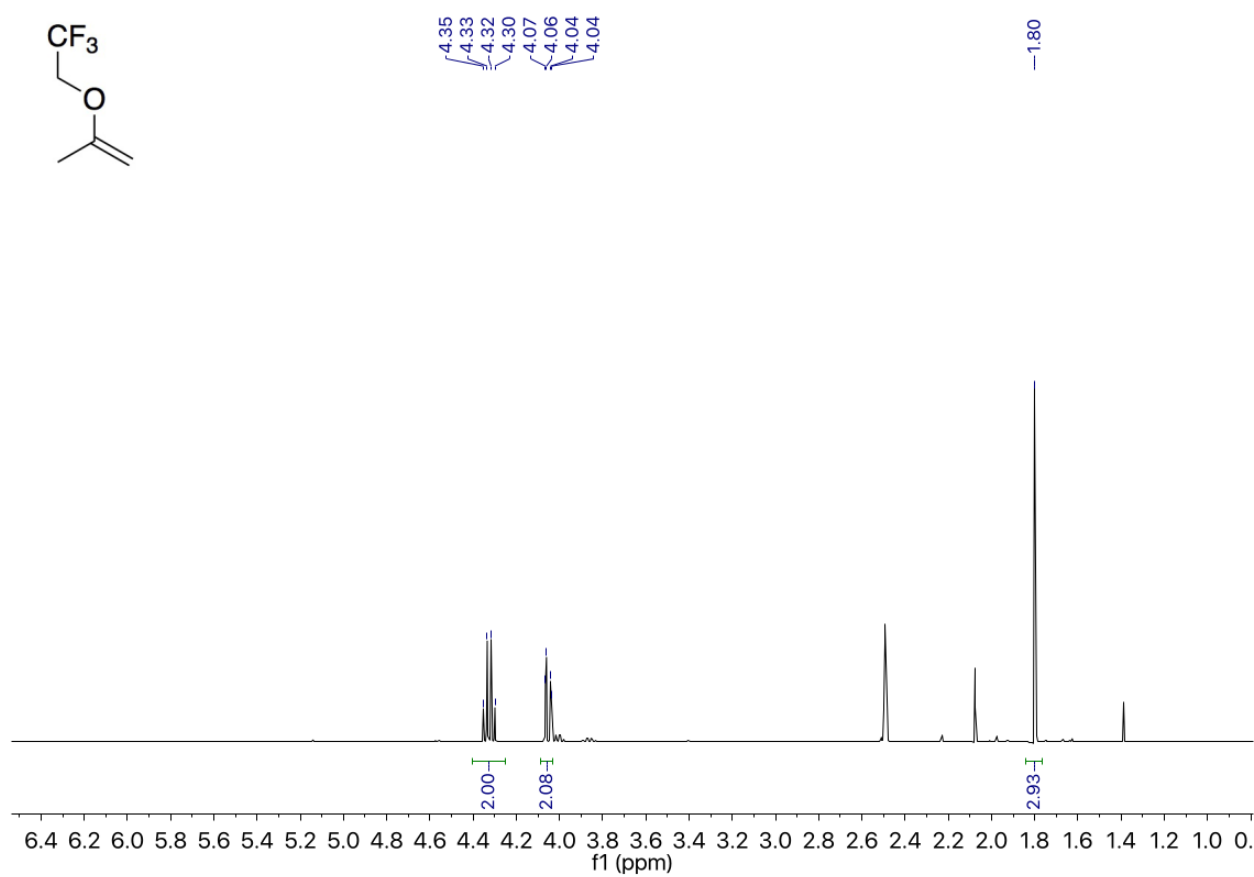


^{13}C NMR (75 MHz, $\text{DMSO}-d_6$)

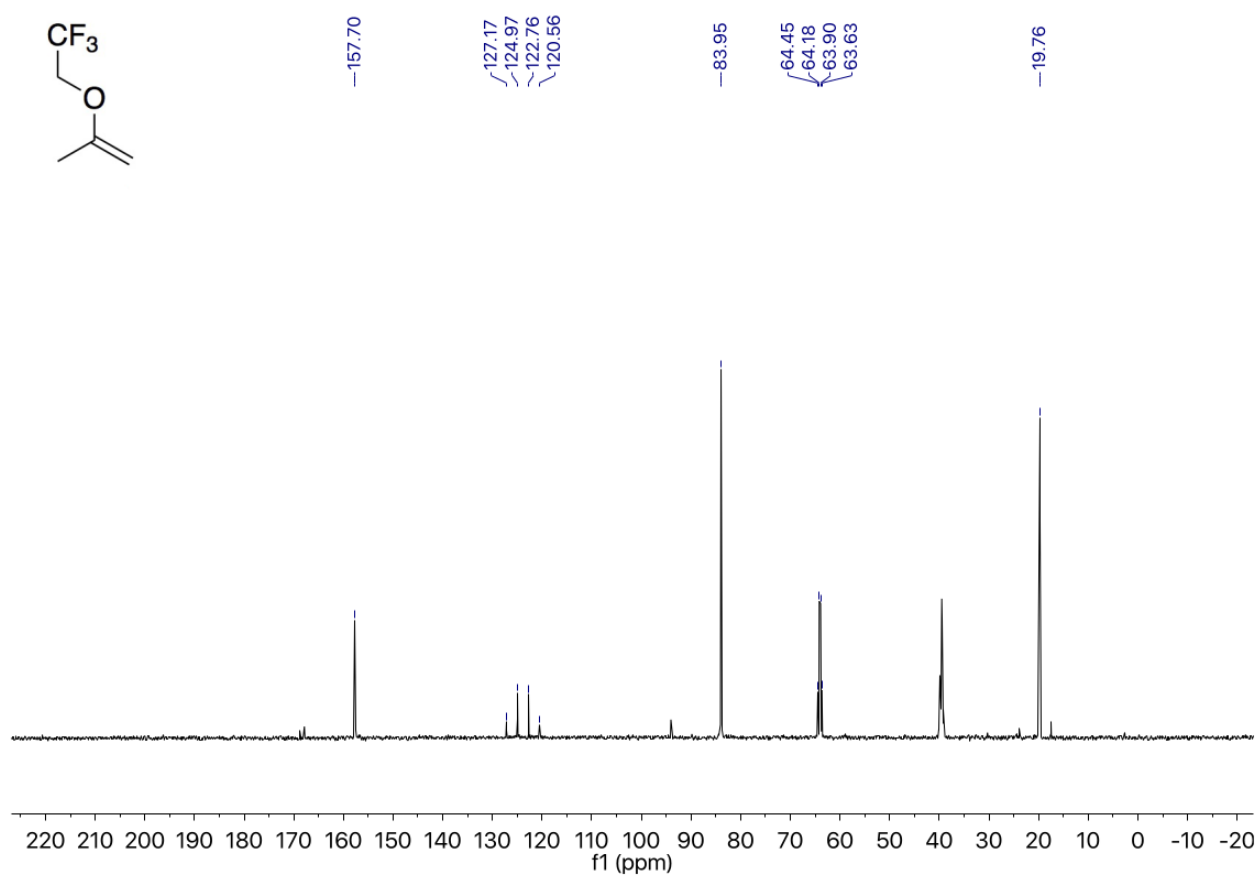


2-(2,2,2-Trifluoroethoxy)prop-1-ene (**1e**).

^1H -NMR (500 MHz, $\text{DMSO-}d_6$)

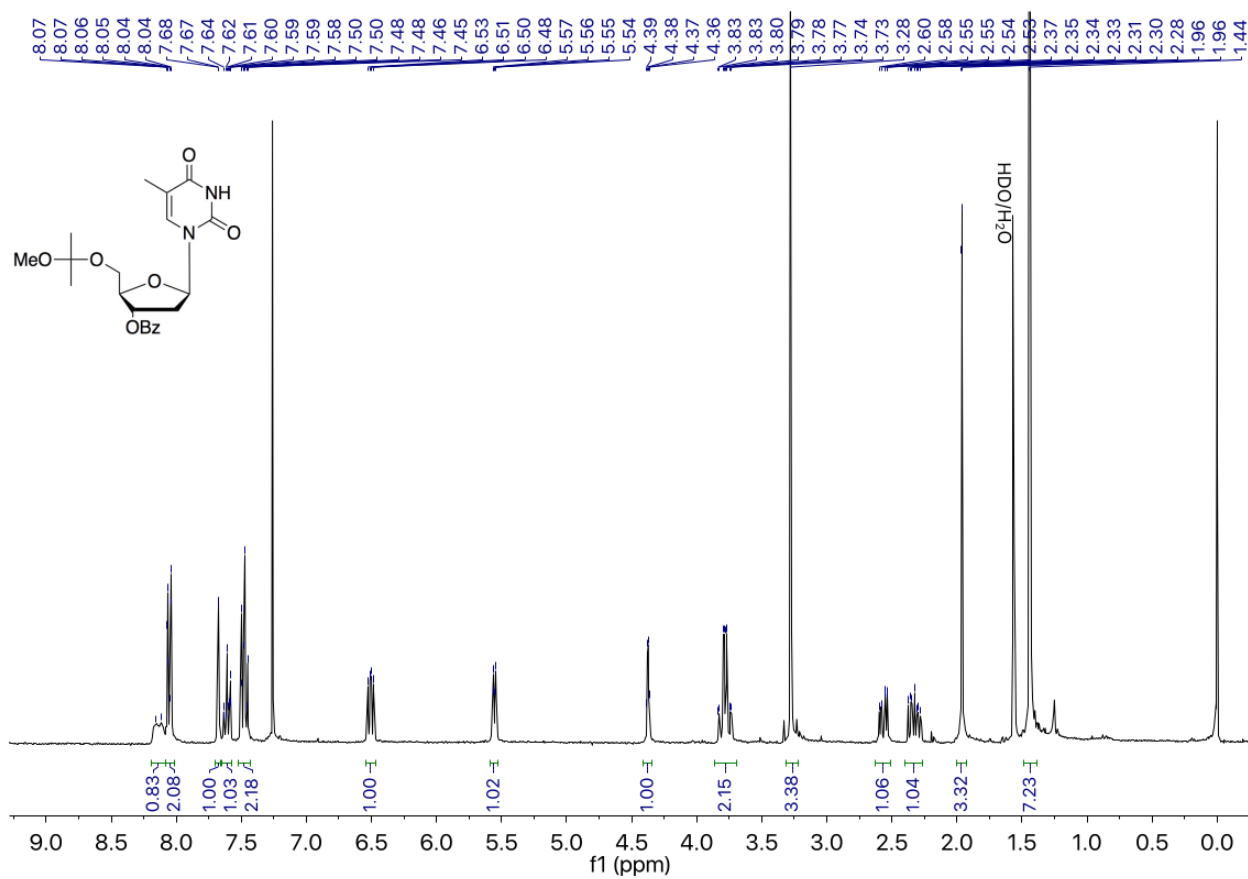


^{13}C -NMR (125 MHz, $\text{DMSO-}d_6$)

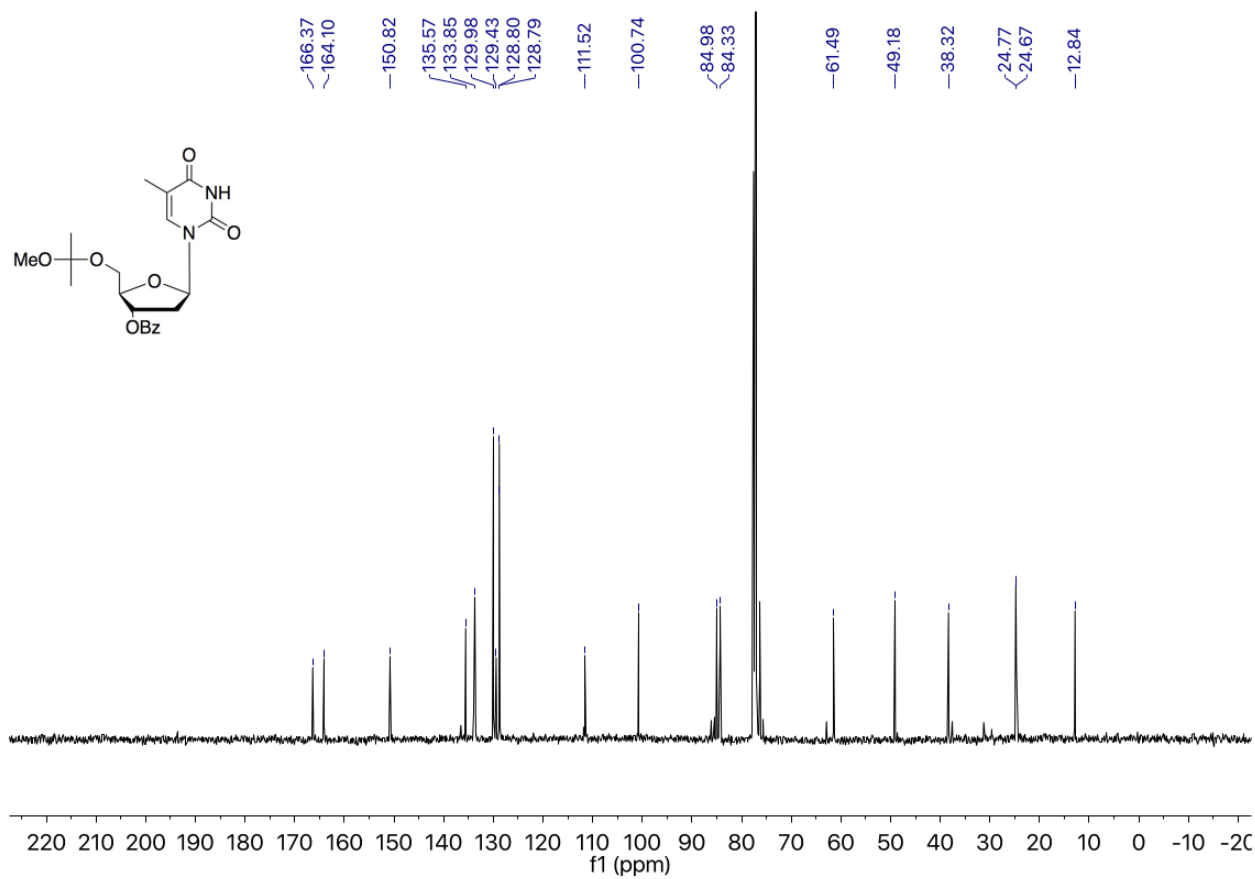


3'-O-Benzoyl-5'-O-methoxypropan-2-yl-2'-deoxythymidine (3a).

¹H-NMR (300 MHz, CDCl₃):

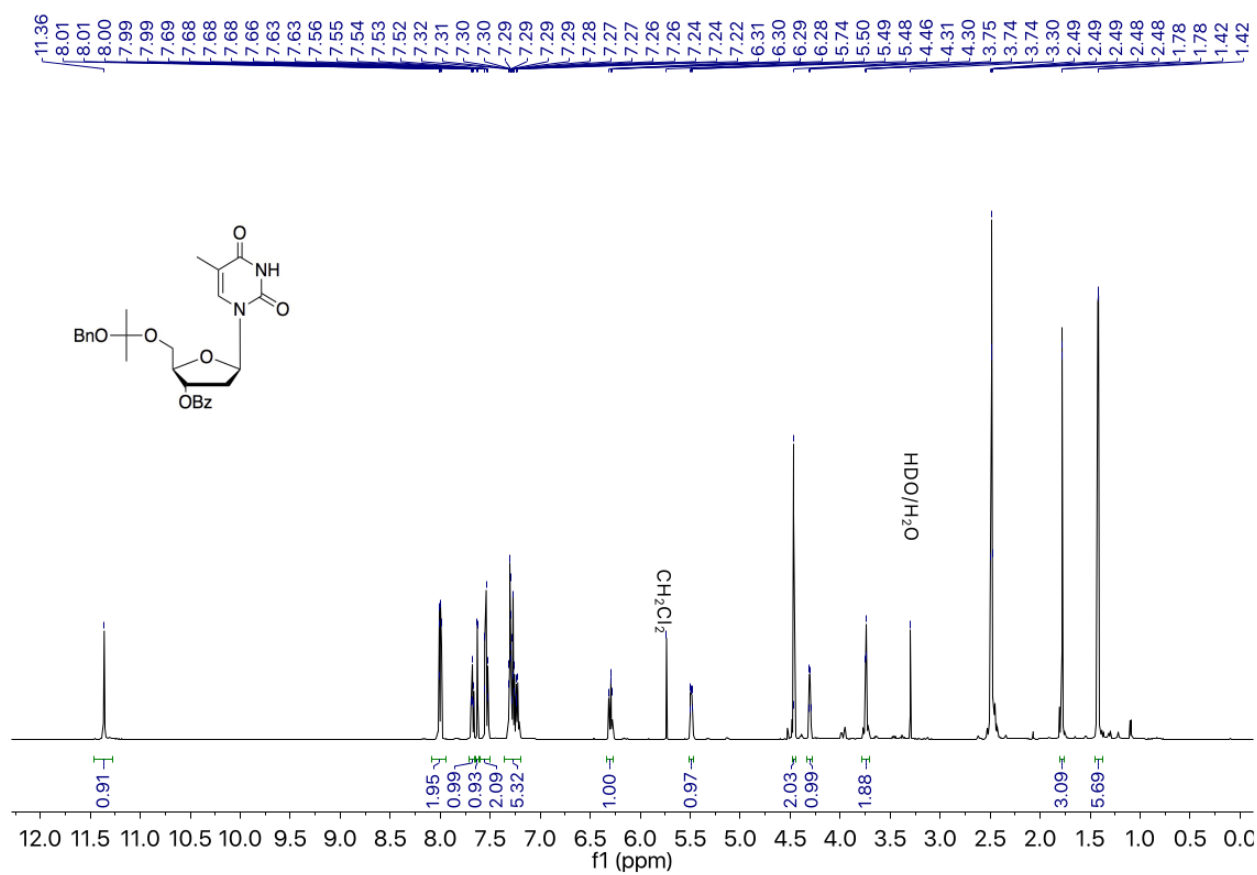


^{13}C -NMR (125 MHz, CDCl_3)

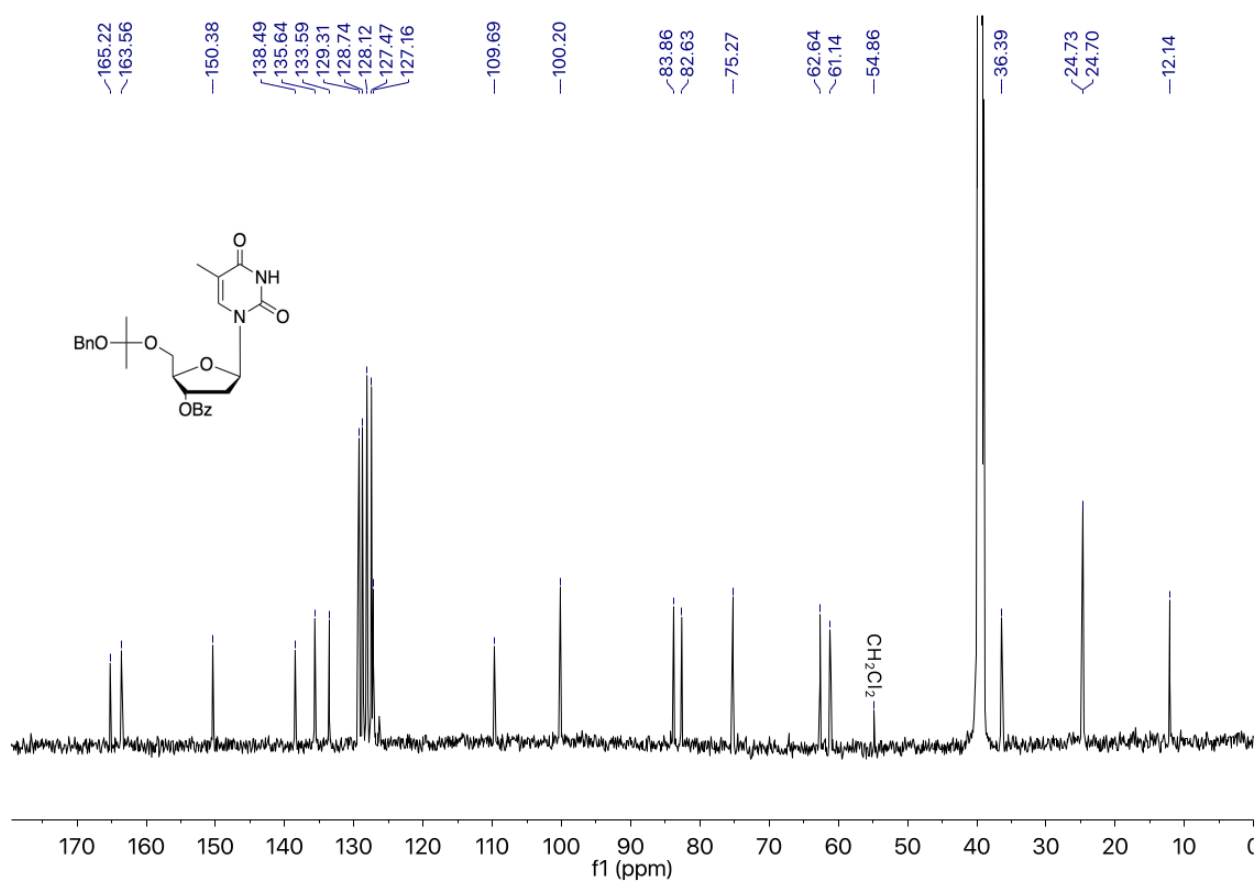


3'-O-Benzoyl-5'-O-benzyloxypropan-2'-deoxythymidine (**3b**).

$^1\text{H-NMR}$ (500 MHz, $\text{DMSO-}d_6$):

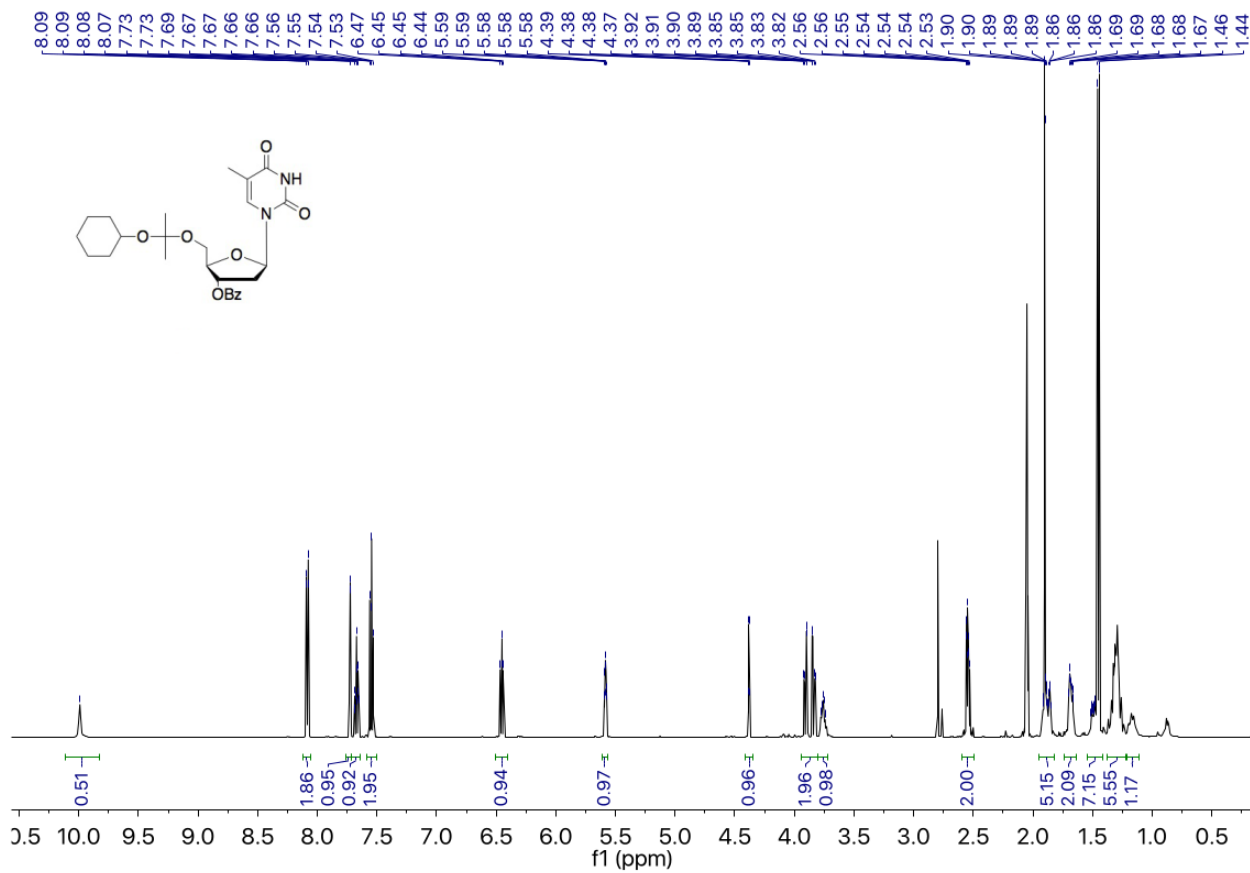


^{13}C -NMR (125 MHz, DMSO- d_6)

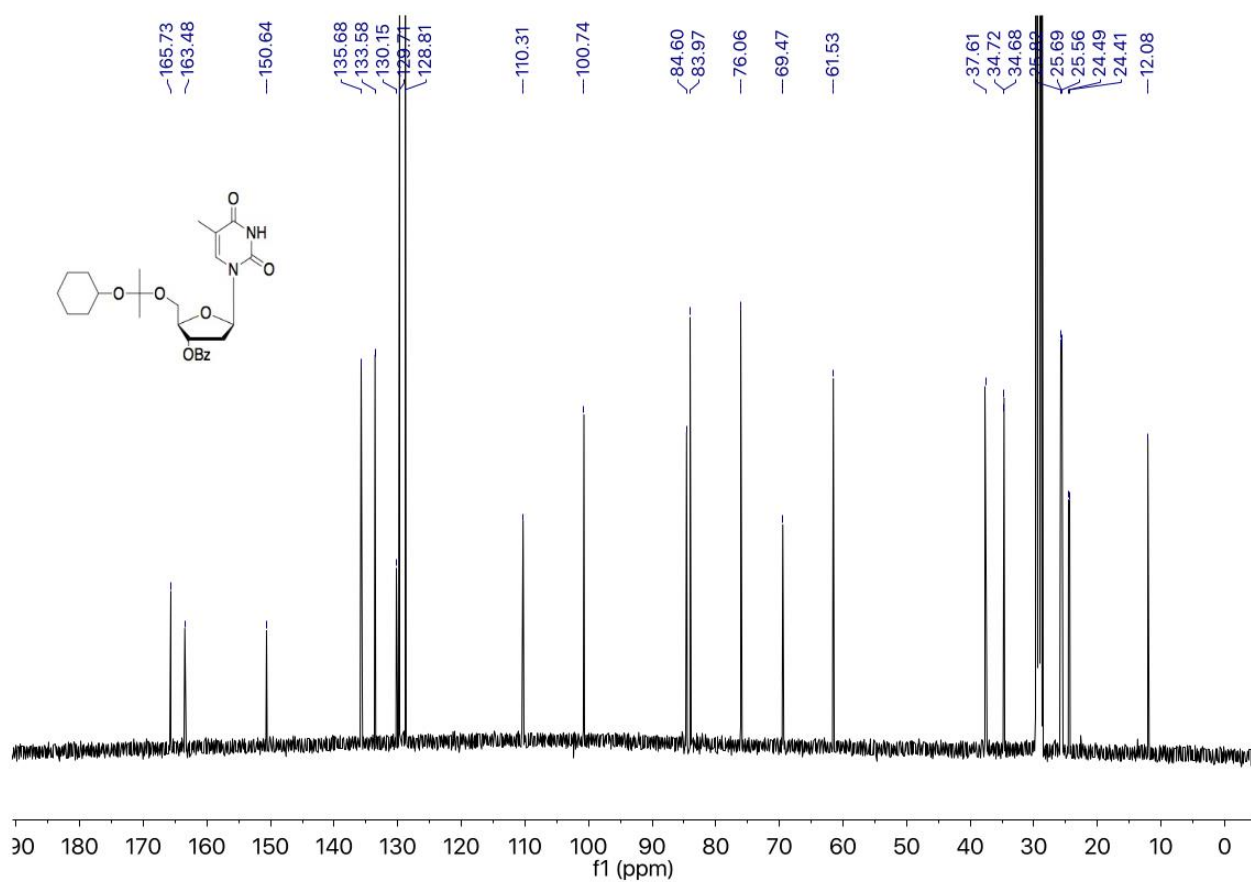


3'-O-Benzoyl-5'-O-cyclohexyloxypropan-2-yl-2'-deoxythymidine (3c).

¹H-NMR (500 MHz, Acetone-*d*₆)

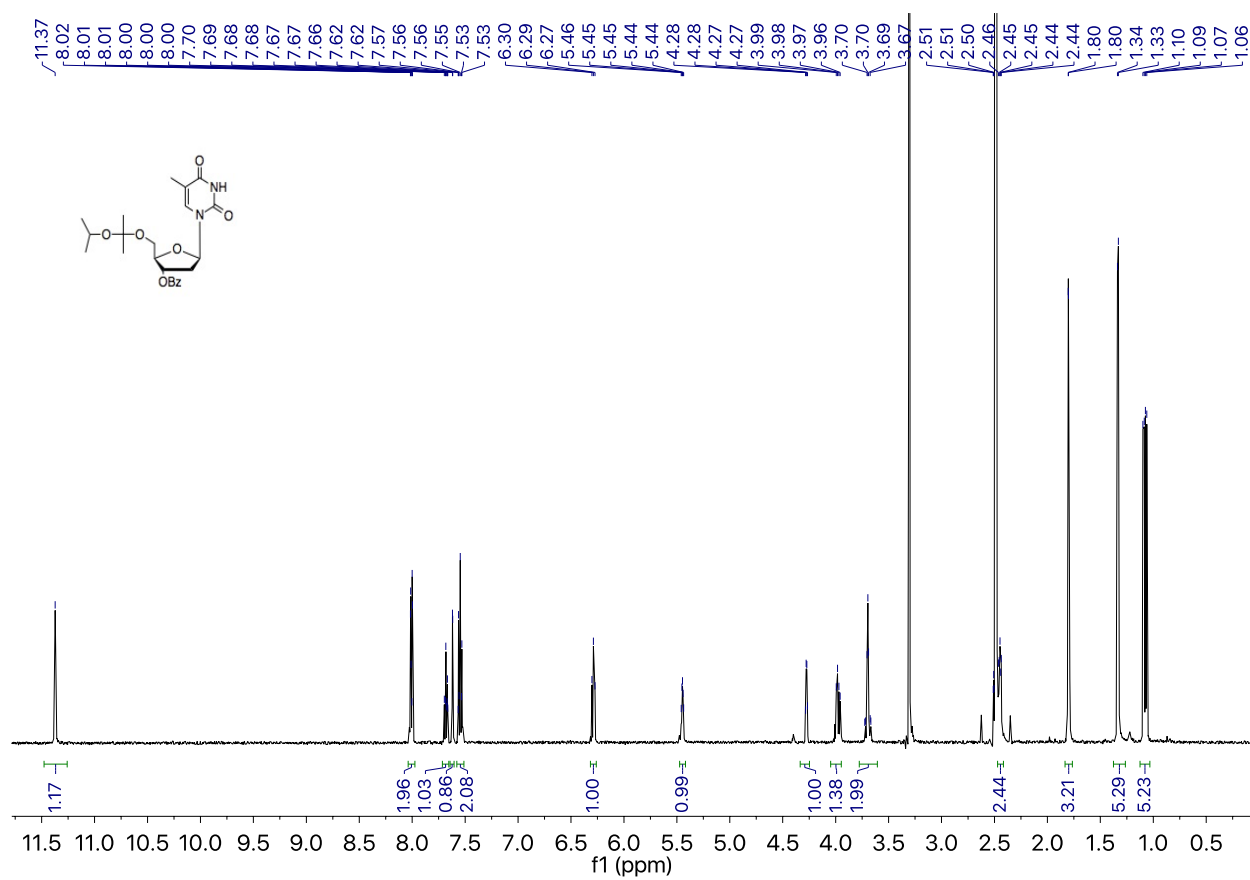


^{13}C -NMR (125 MHz, Acetone- d_6)

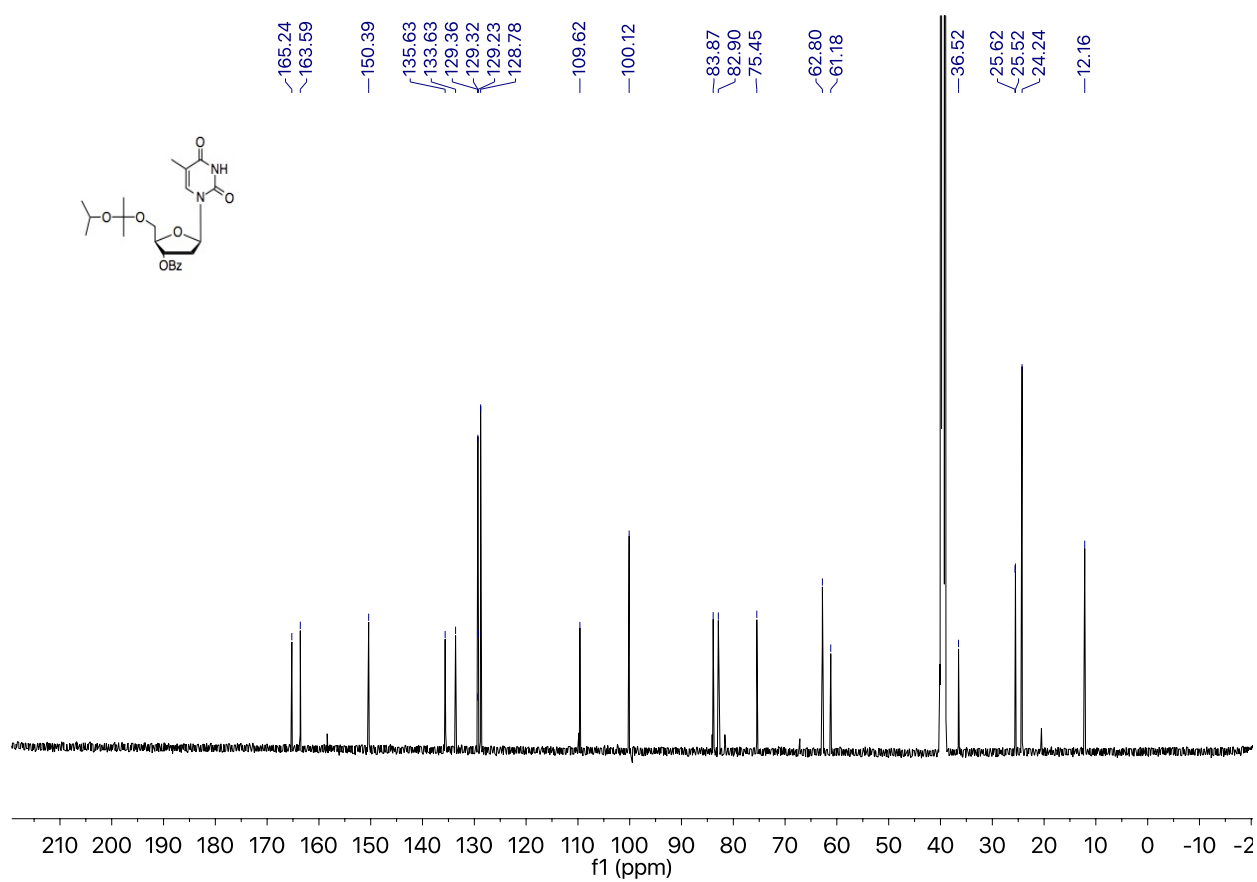


3'-O-Benzoyl-5'-O-isopropoxypropan-2-yl-2'-deoxythymidine (3d).

¹H-NMR (500 MHz, DMSO-*d*₆)

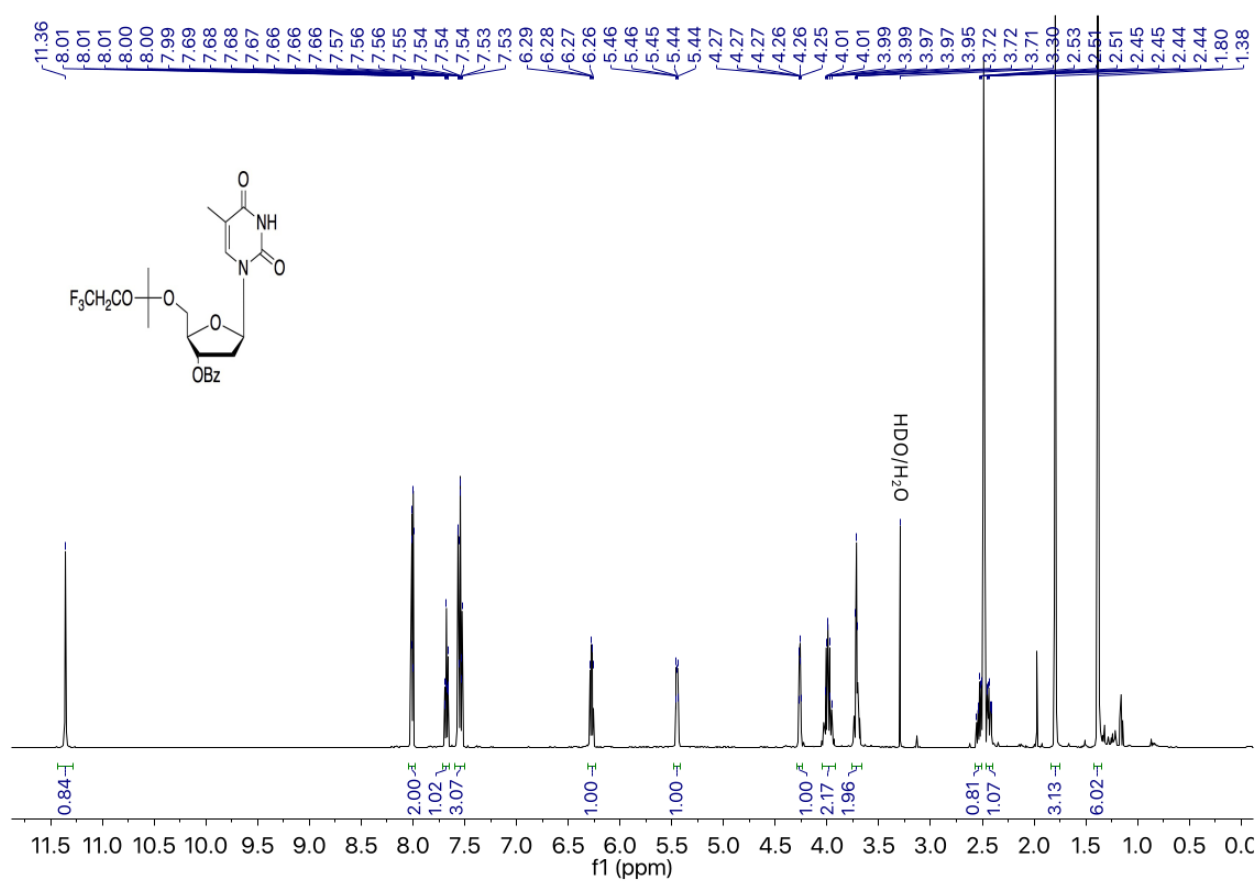


^{13}C -NMR (125 MHz, DMSO-d_6)

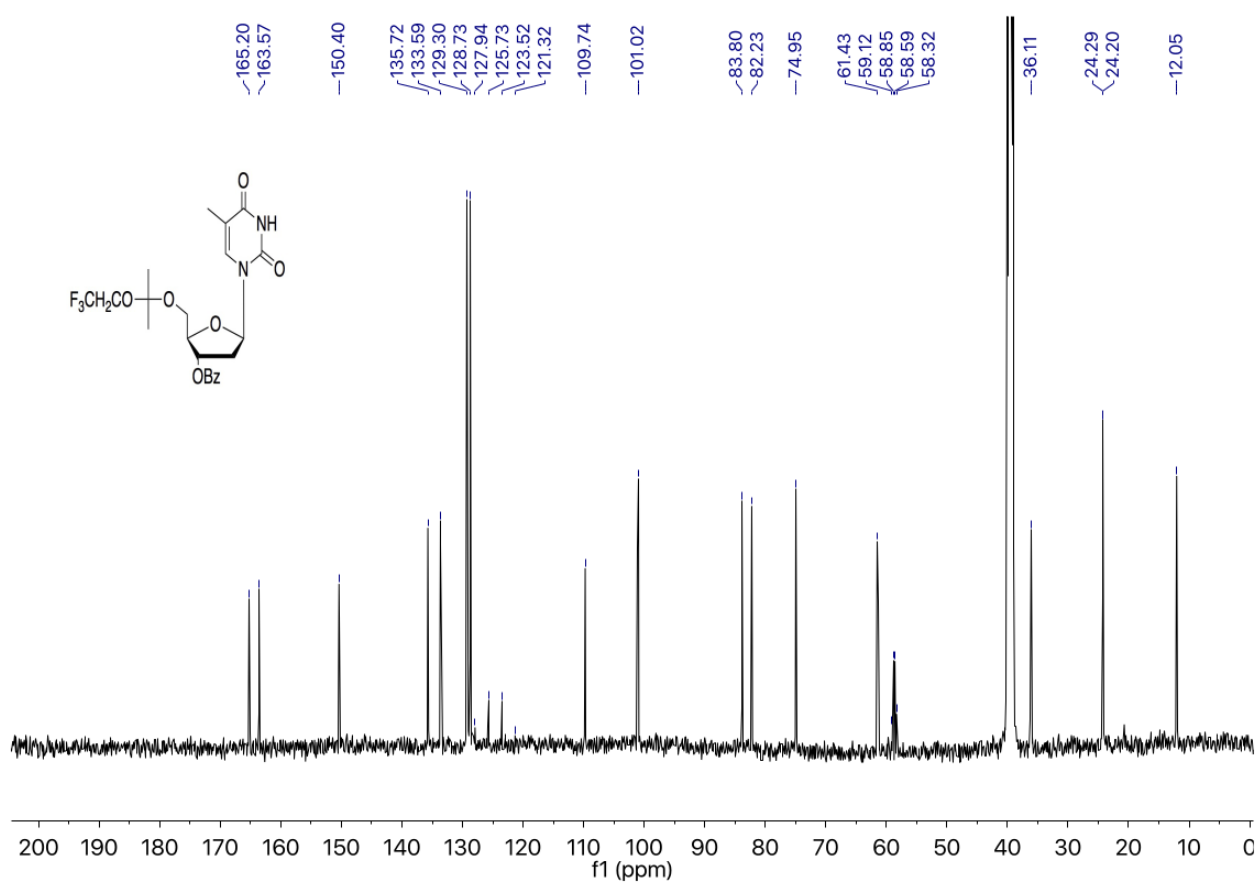


3'-O-Benzoyl-5'-O-(2,2,2-trifluoroethoxy)propan-2-yl-2'-deoxythymidine (**3e**).

$^1\text{H-NMR}$ (500 MHz, $\text{DMSO-}d_6$)

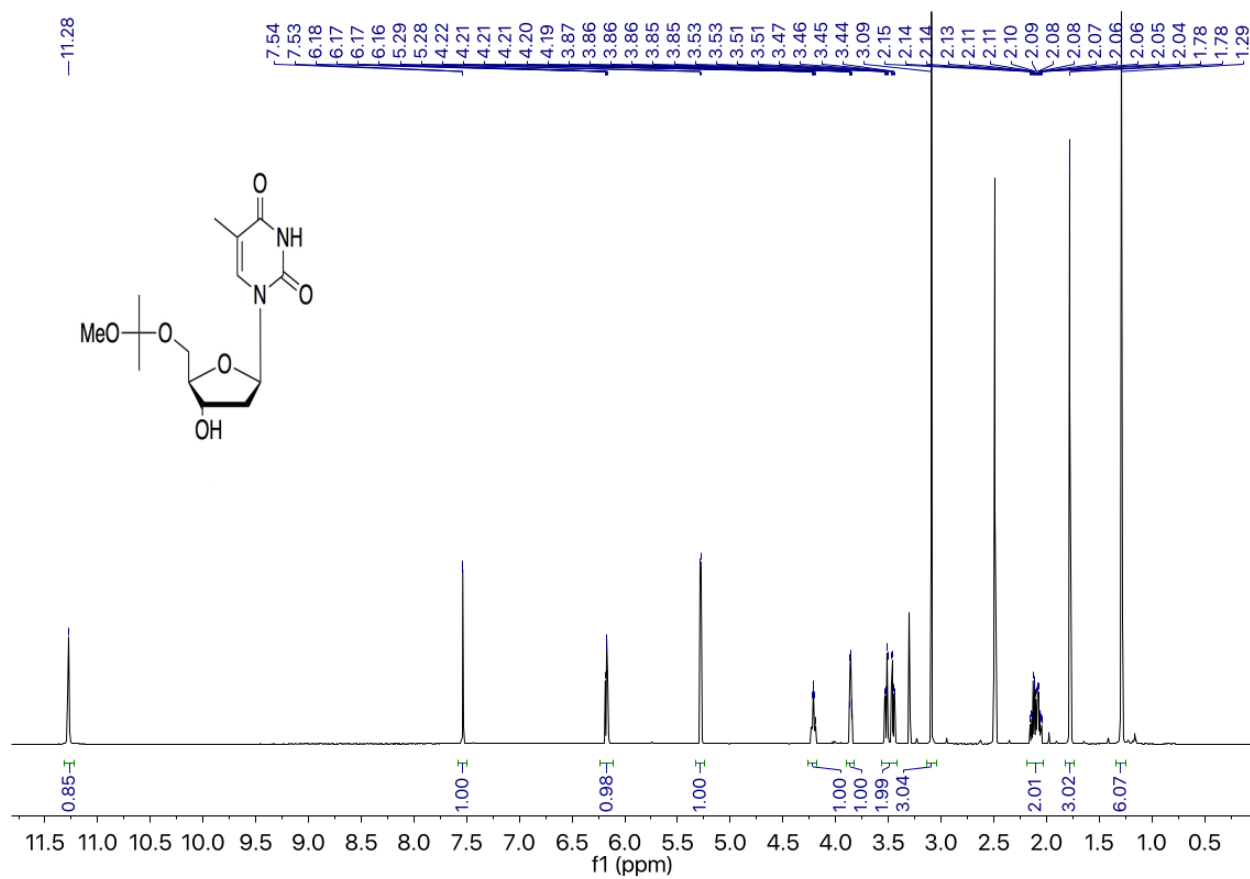


^{13}C -NMR (125 MHz, DMSO- d_6)

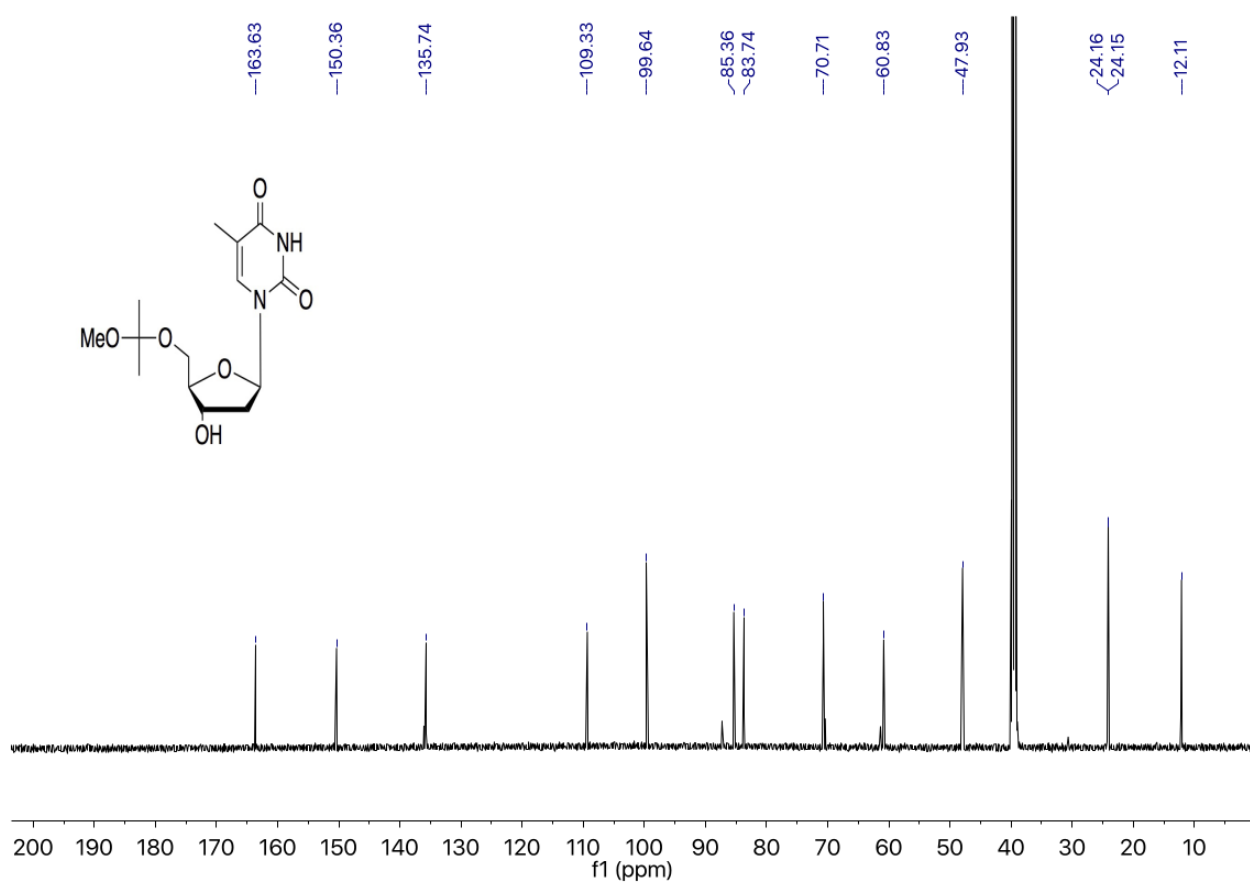


5'-*O*-Methoxypropan-2-yl-2'-deoxythymidine (**4a**).

¹H-NMR (500 MHz, DMSO-*d*₆)

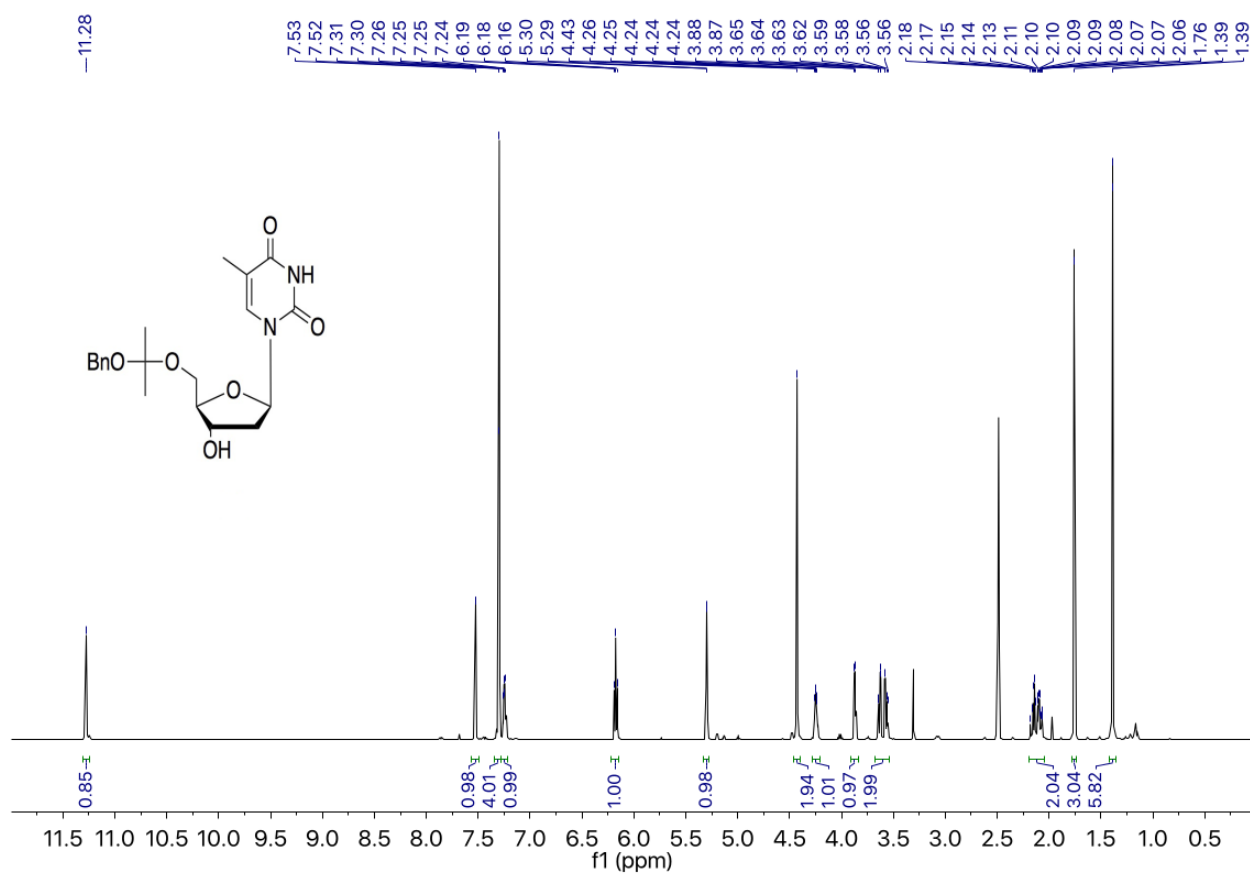


^{13}C -NMR (125 MHz, DMSO-d_6)

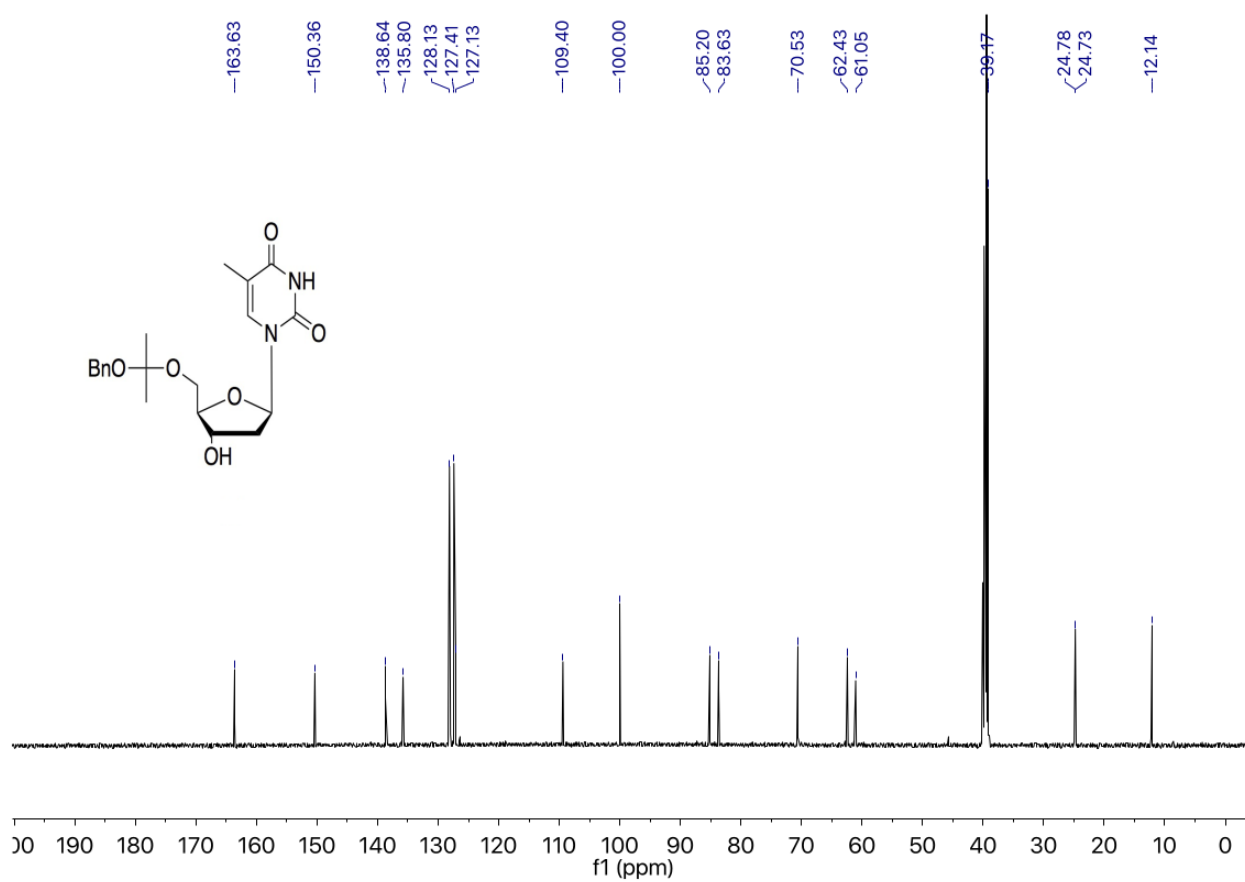


5'-*O*-Benzyloxypropan-2-yl-2'-deoxythymidine (**4b**).

¹H-NMR (500 MHz, DMSO-d₆)

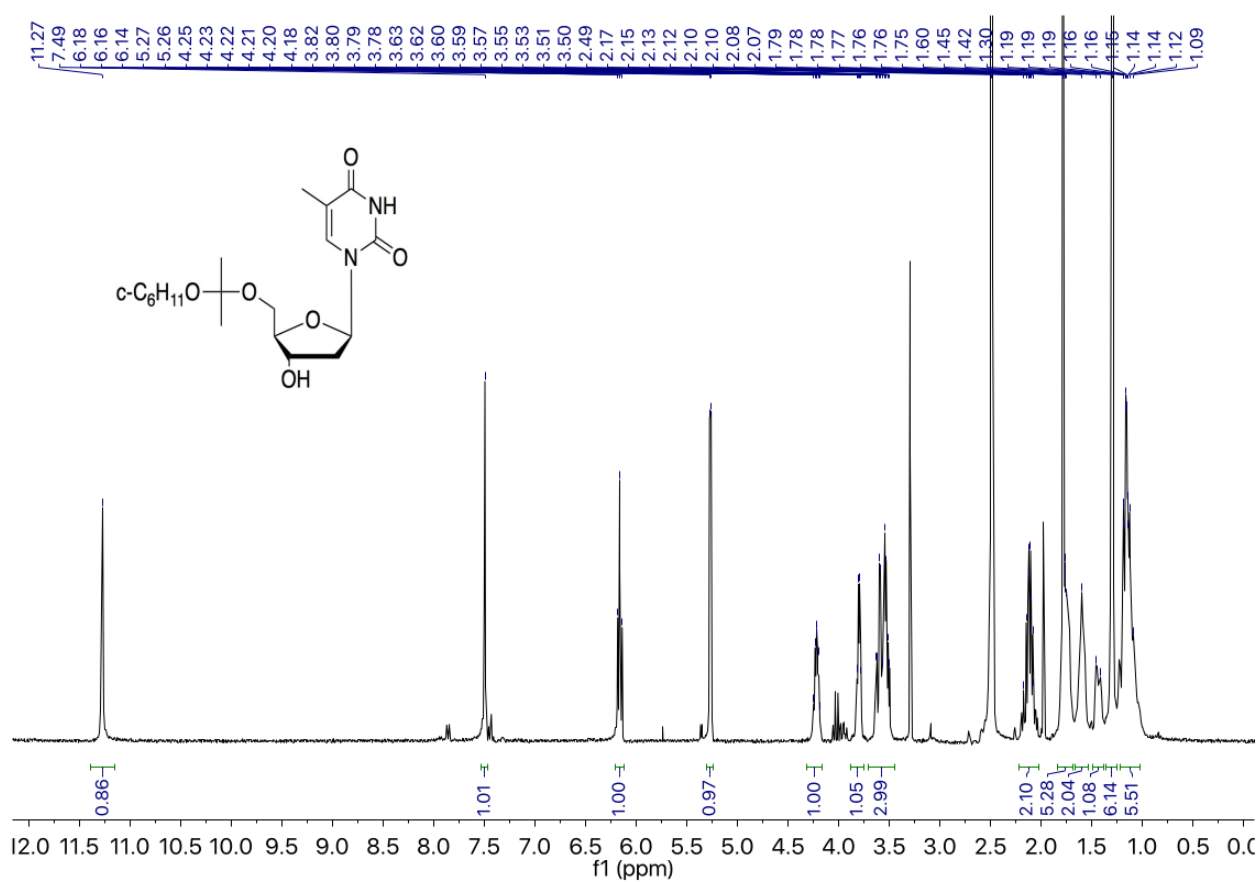


^{13}C -NMR (125 MHz, DMSO- d_6)

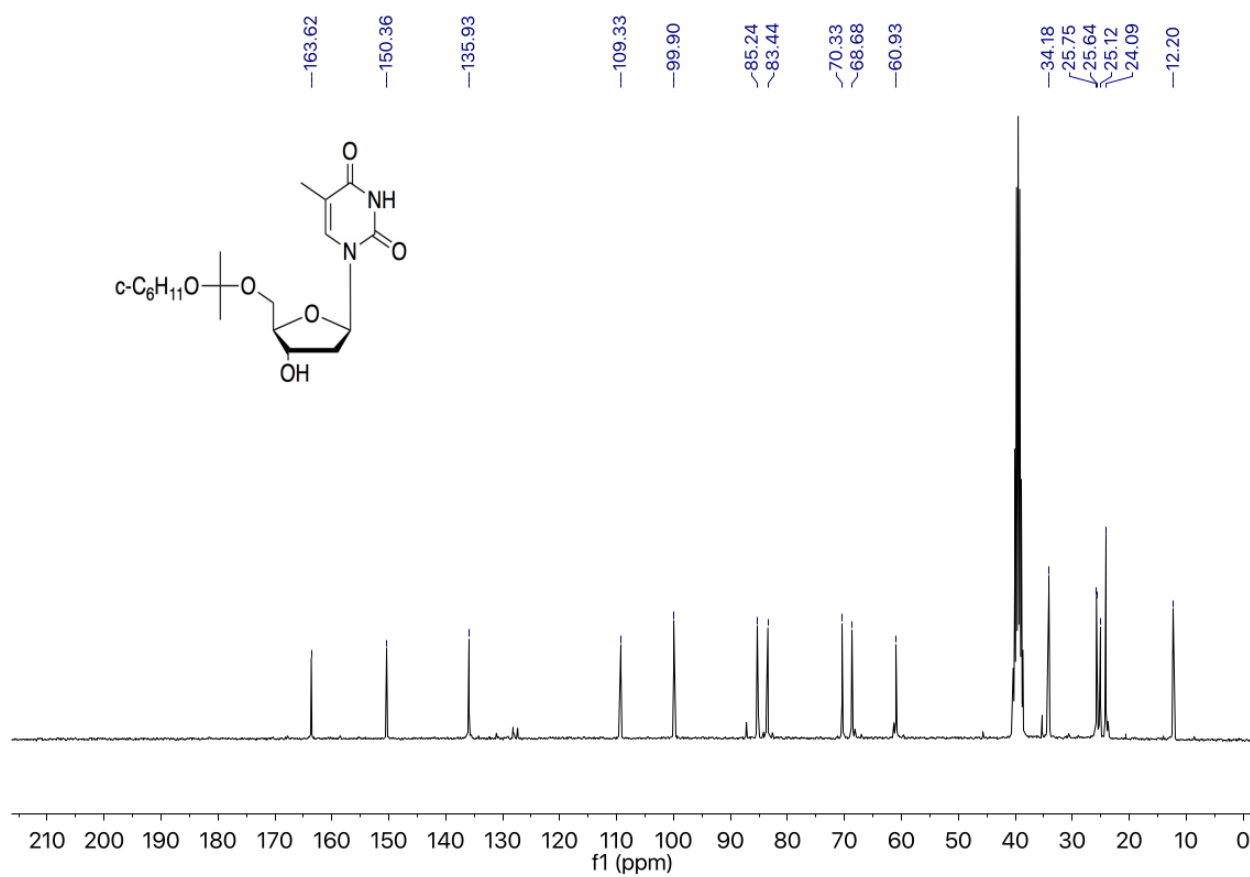


5'-*O*-Cyclohexyloxypropan-2-yl-2'-deoxythymidine (**4c**).

¹H-NMR (500 MHz, DMSO-d₆)

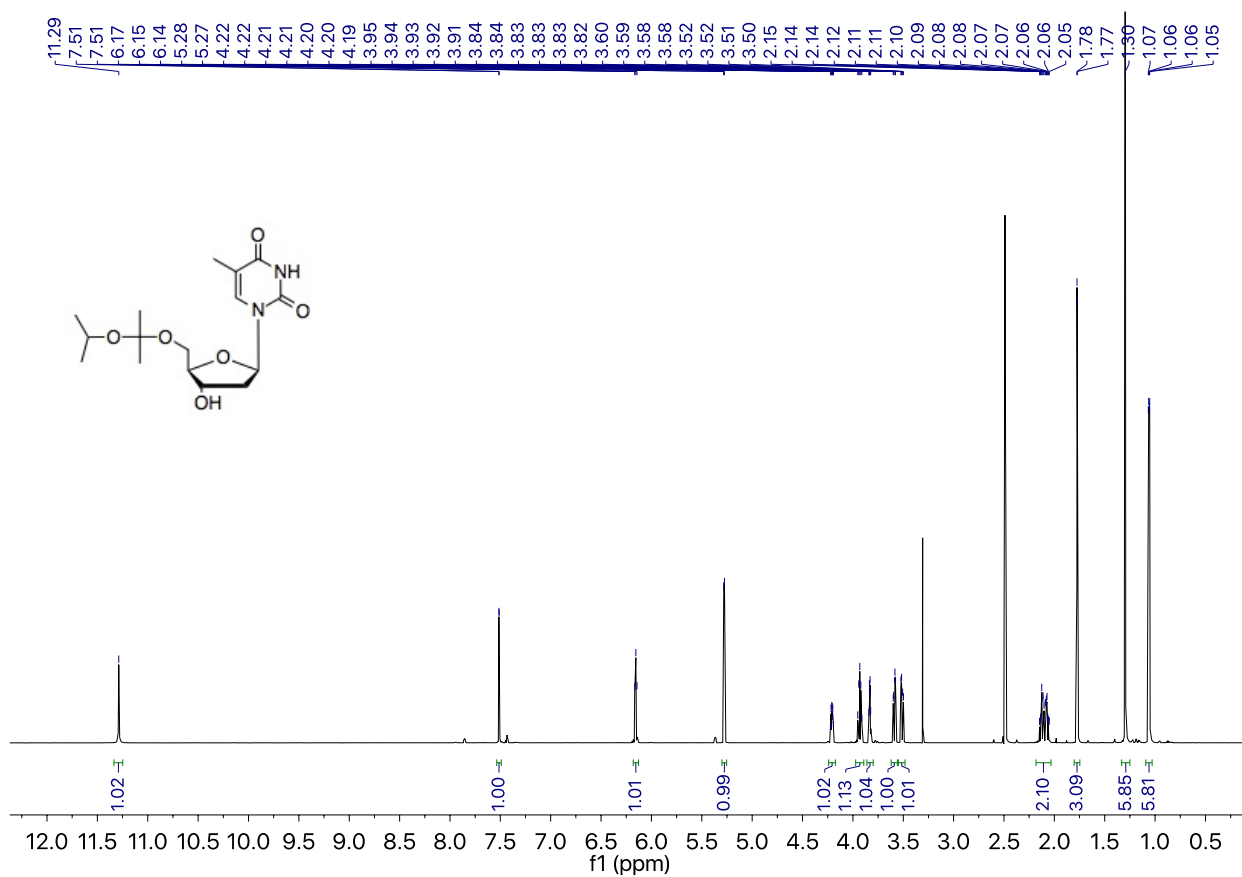


^{13}C -NMR (75 MHz, DMSO- d_6)

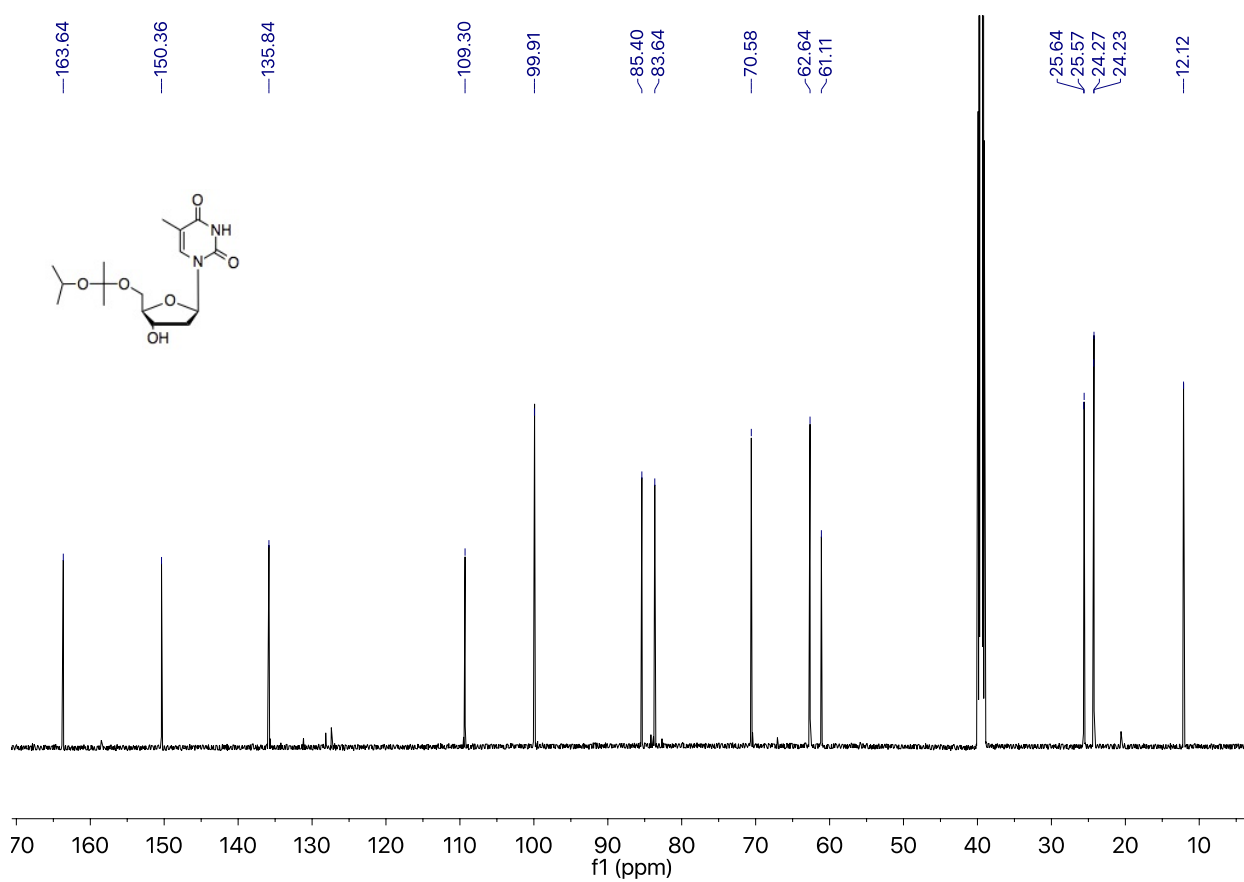


5'-*O*-Isopropoxypropan-2-yl-2'-deoxythymidine (**4d**).

^1H -NMR (600 MHz, DMSO- d_6)

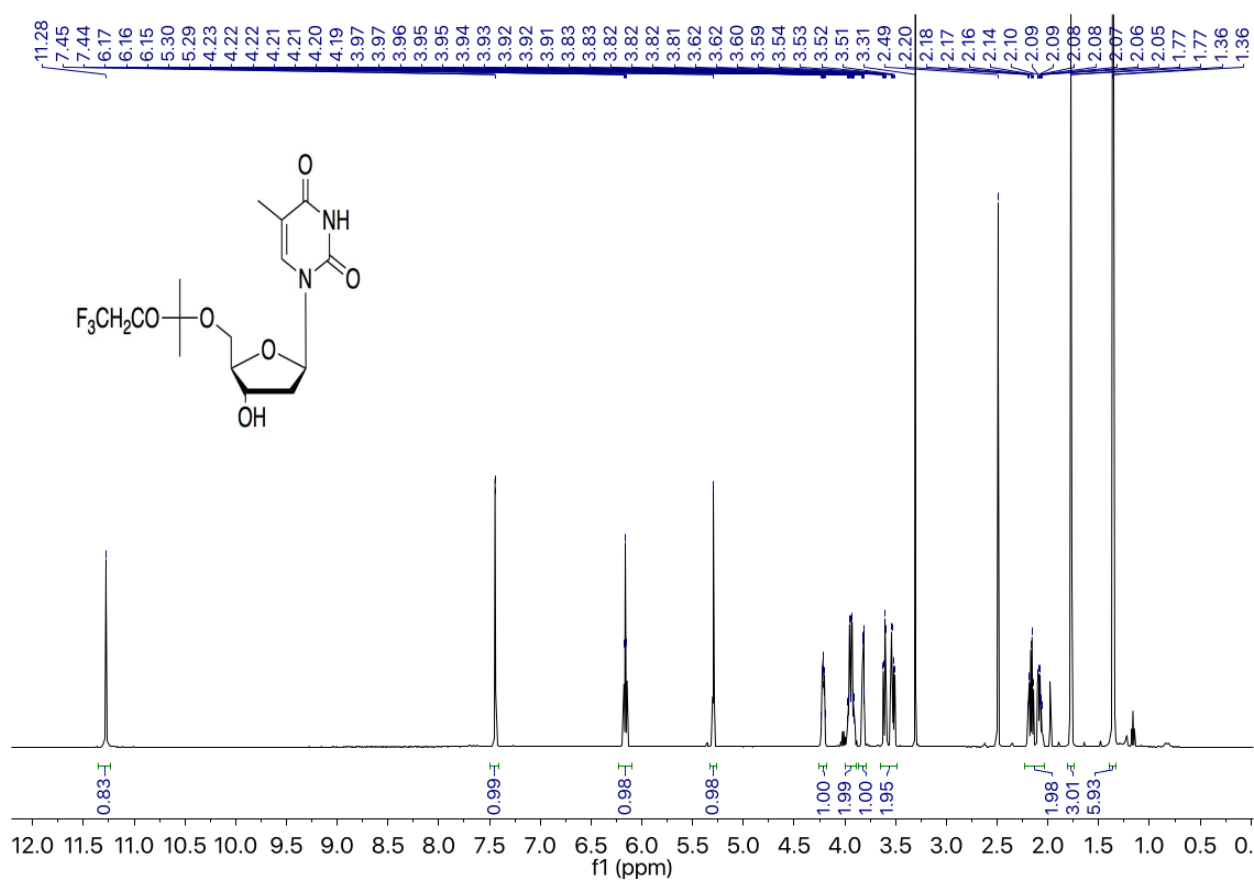


^{13}C -NMR (150 MHz, DMSO- d_6)



5'-O-(2,2,2-Trifluoroethoxy)propan-2-yl-2'-deoxythymidine (**4e**).

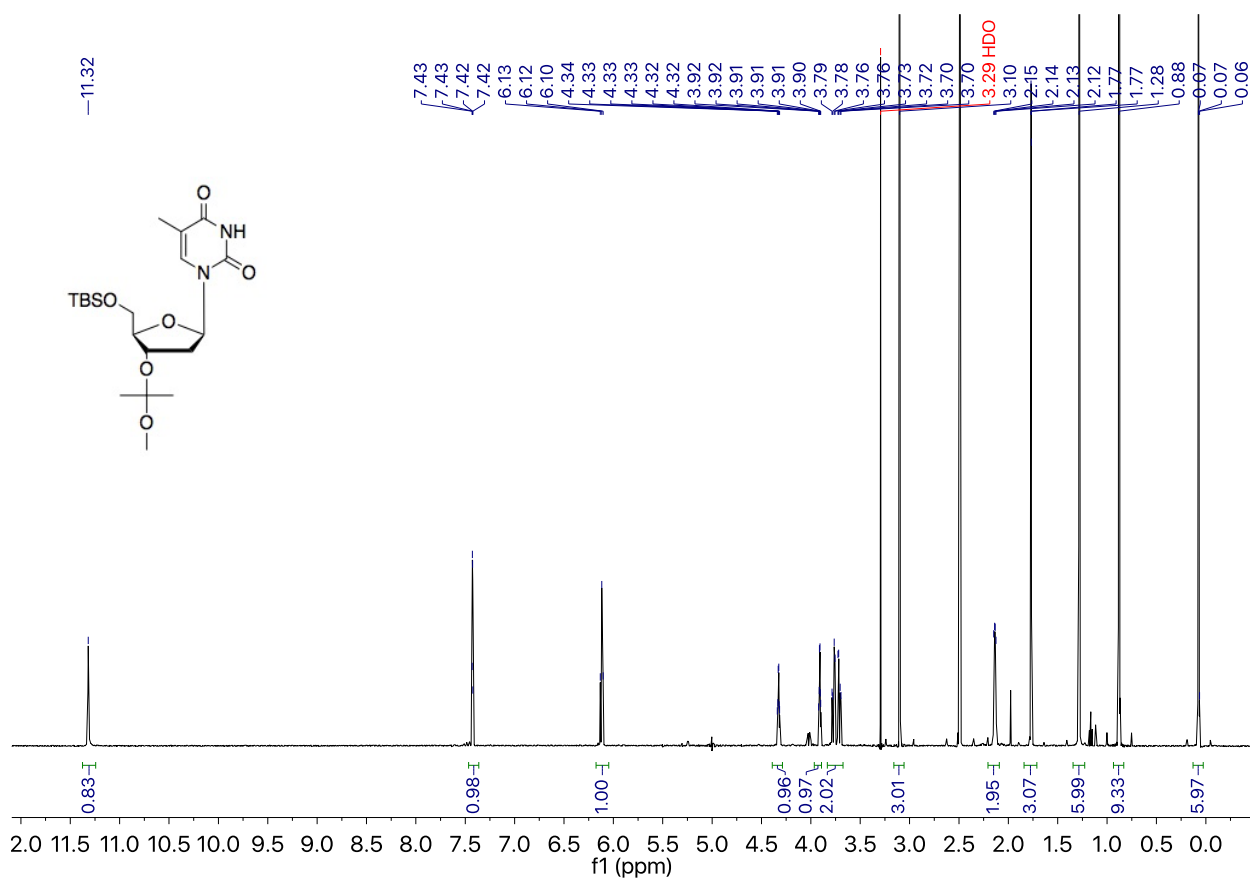
¹H-NMR (500 MHz, DMSO-d₆)



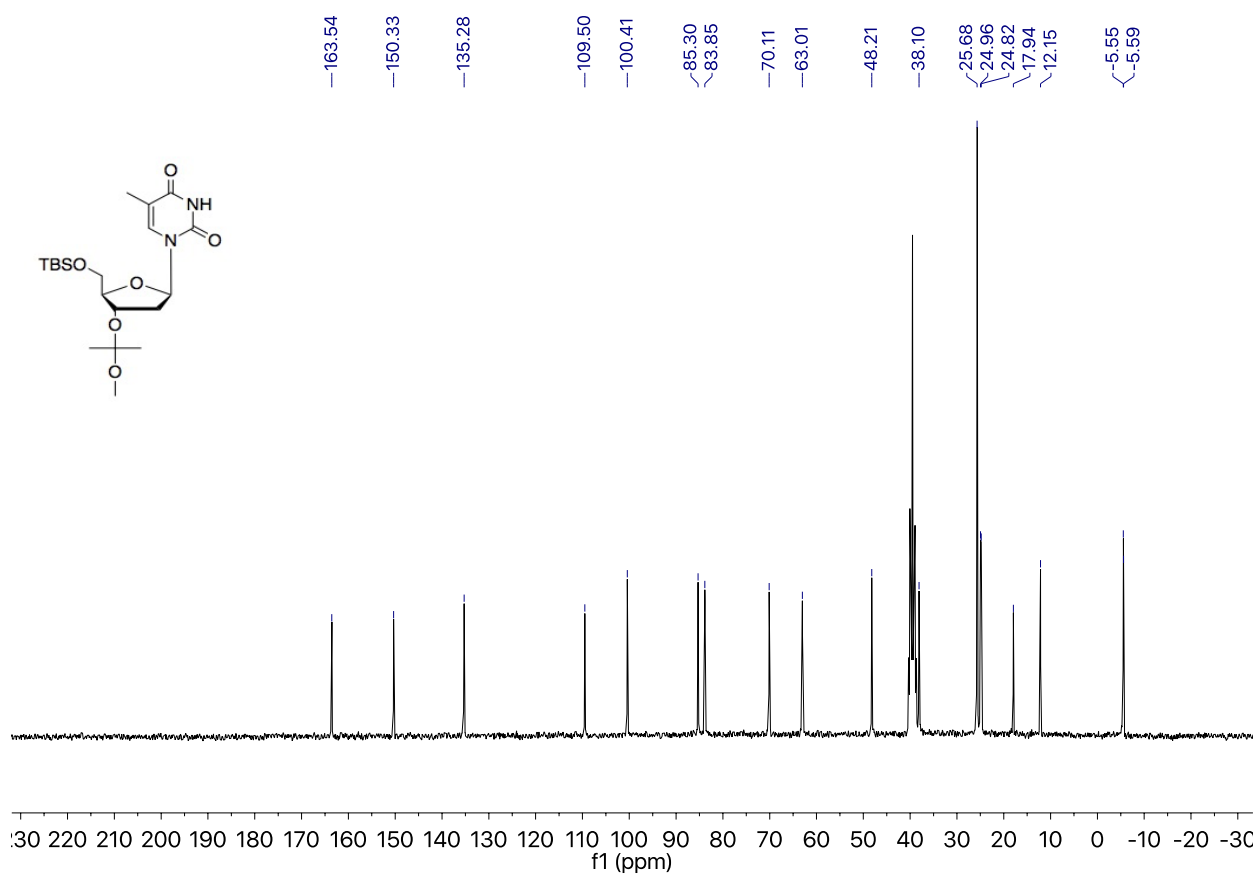
[illegible]

3'-*O*-Methoxypropan-2-yl-5'-*O*-*tert*-butyldimethylsilyl-2'-deoxythymidine (**6a**).

¹H-NMR (500 MHz, DMSO-d₆)

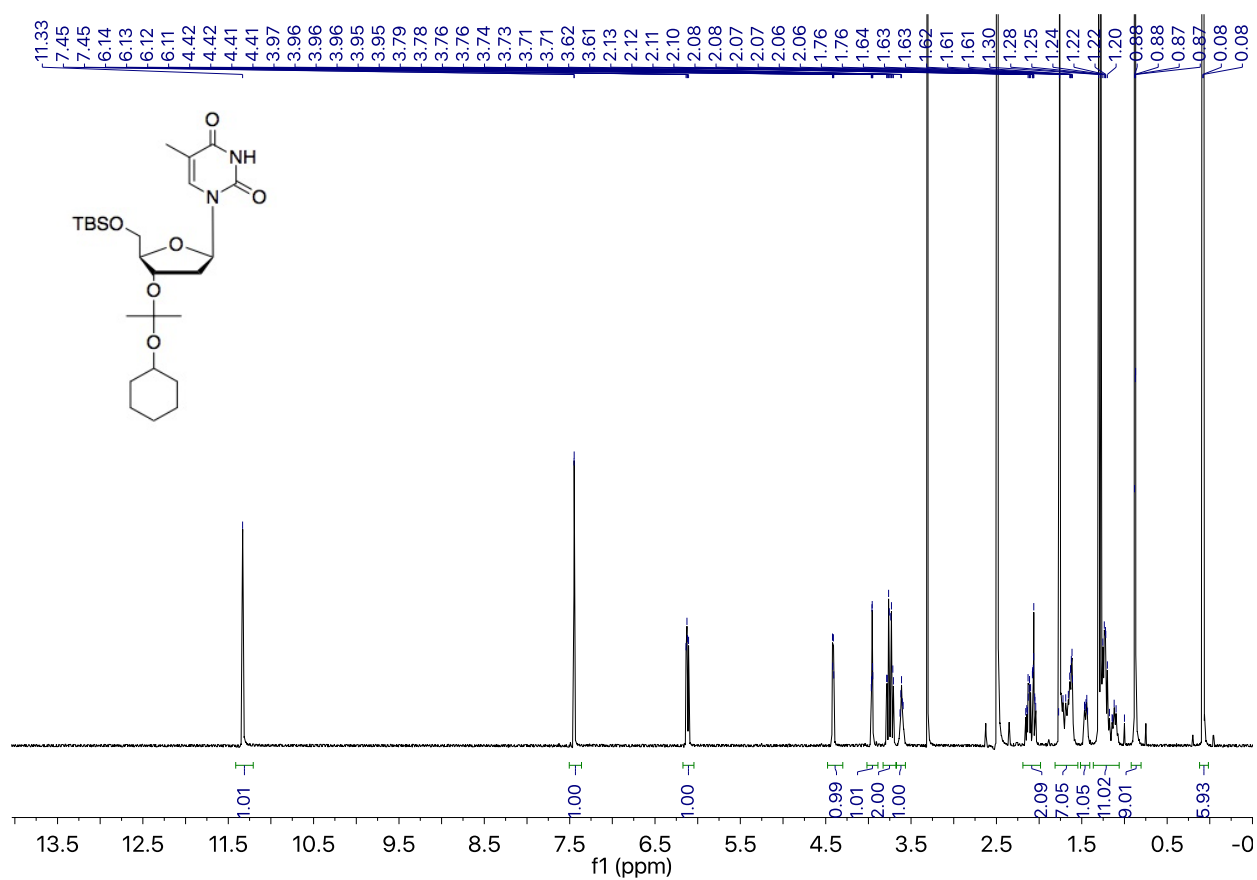


^{13}C -NMR (125 MHz, DMSO- d_6)

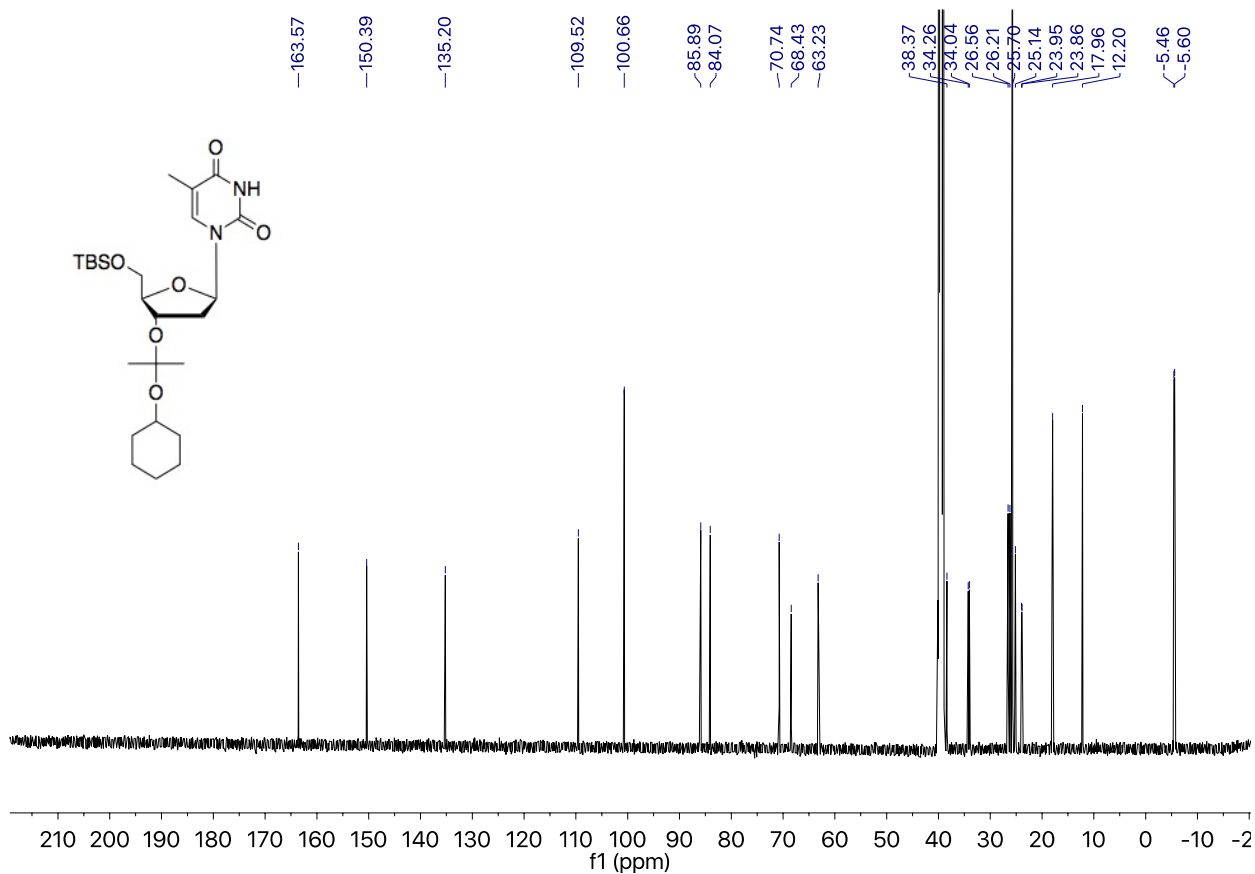


3'-O-Cyclohexyloxypropan-2-yl-5'-O-tert-butyltrimethylsilyl-2'-deoxythymidine (6c).

¹H-NMR (500 MHz, DMSO-d₆)

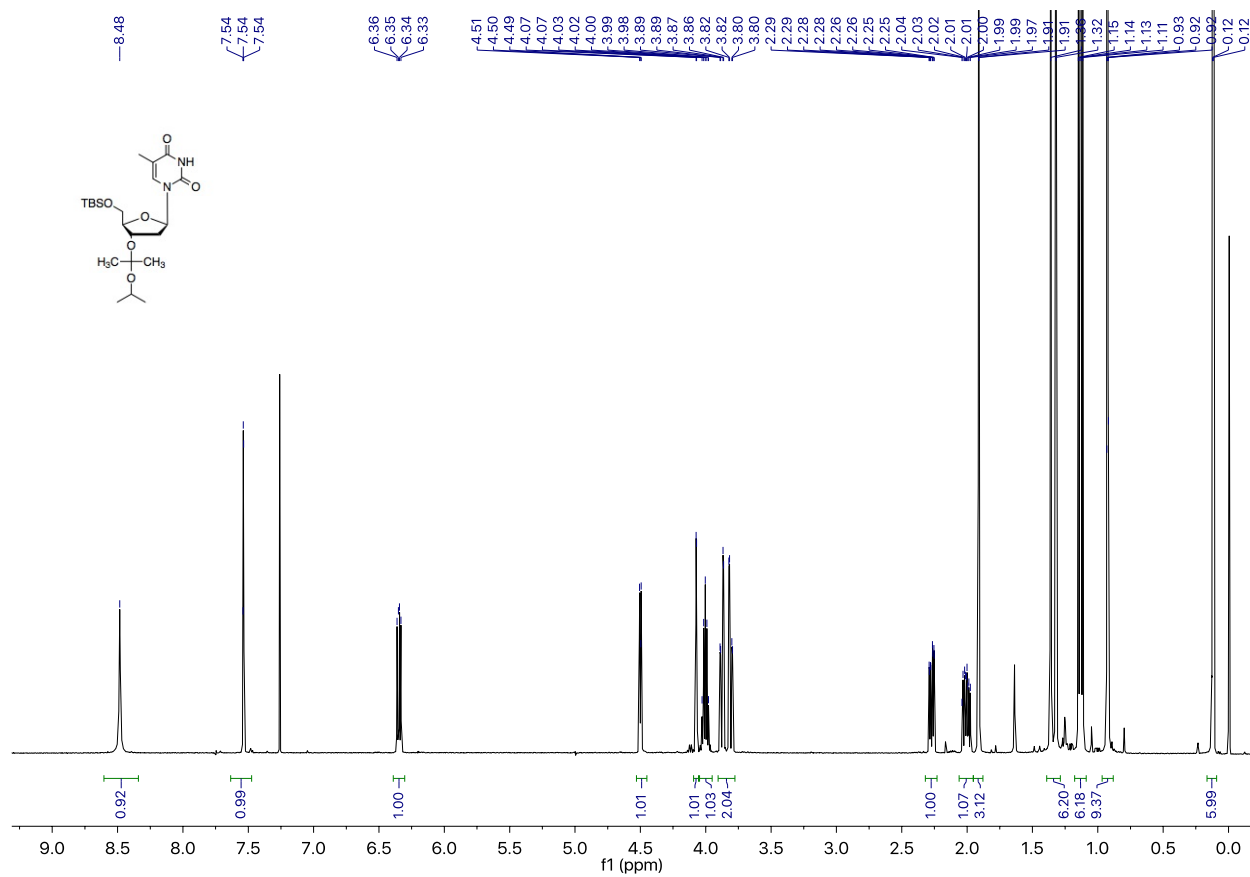


^{13}C -NMR (125 MHz, DMSO-d_6)

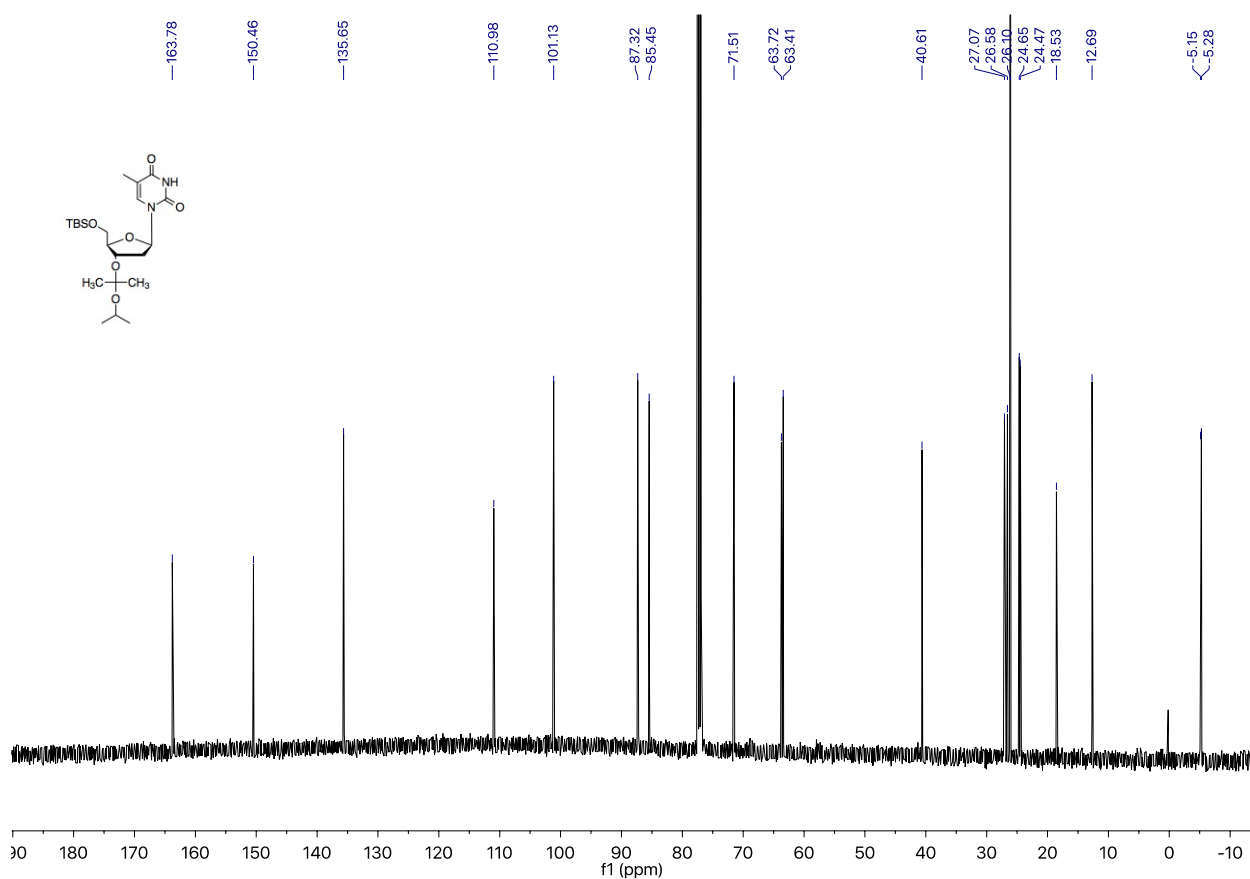


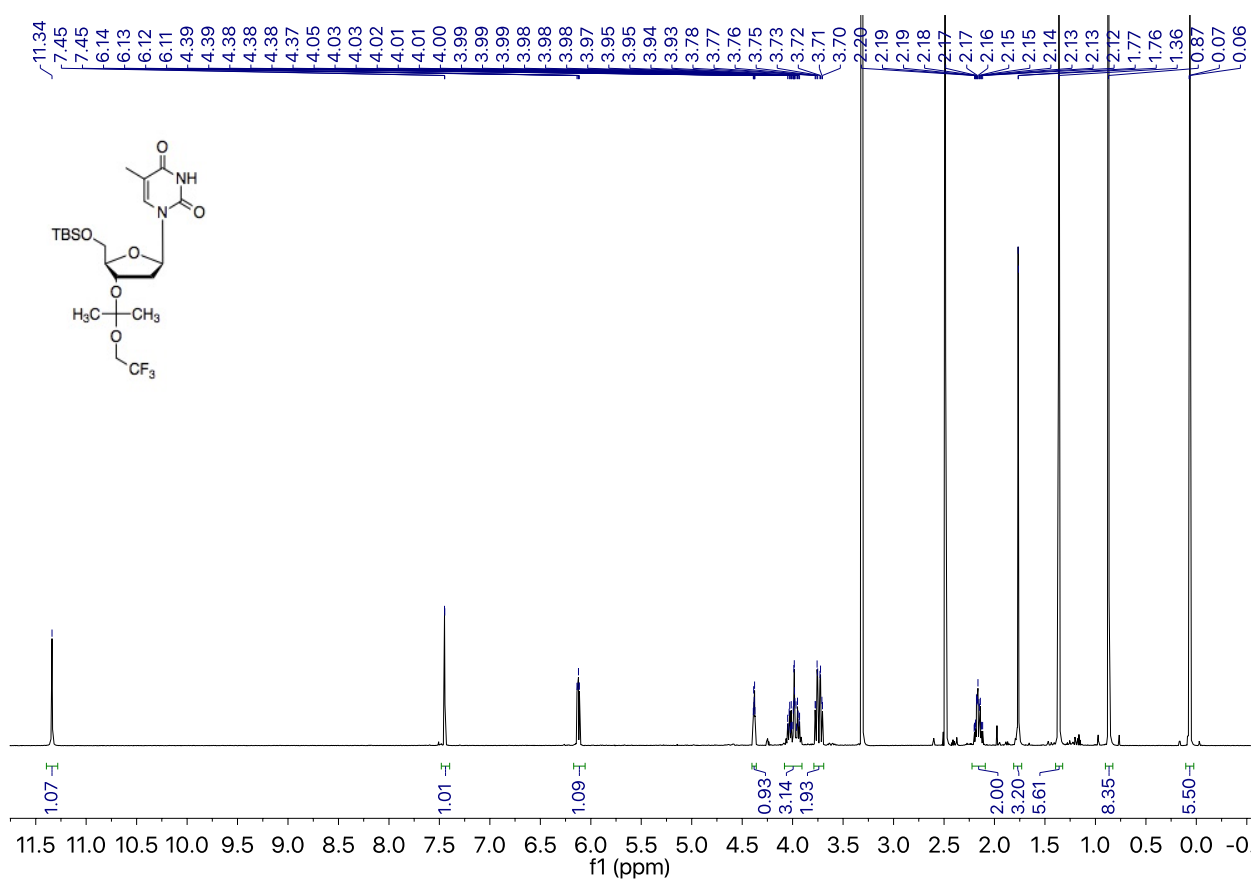
3'-*O*-Isopropoxypropan-2-yl-5'-*O*-*tert*-butyldimethylsilyl-2'-deoxythymidine (**6d**).

^1H -NMR (500 MHz, CDCl_3):



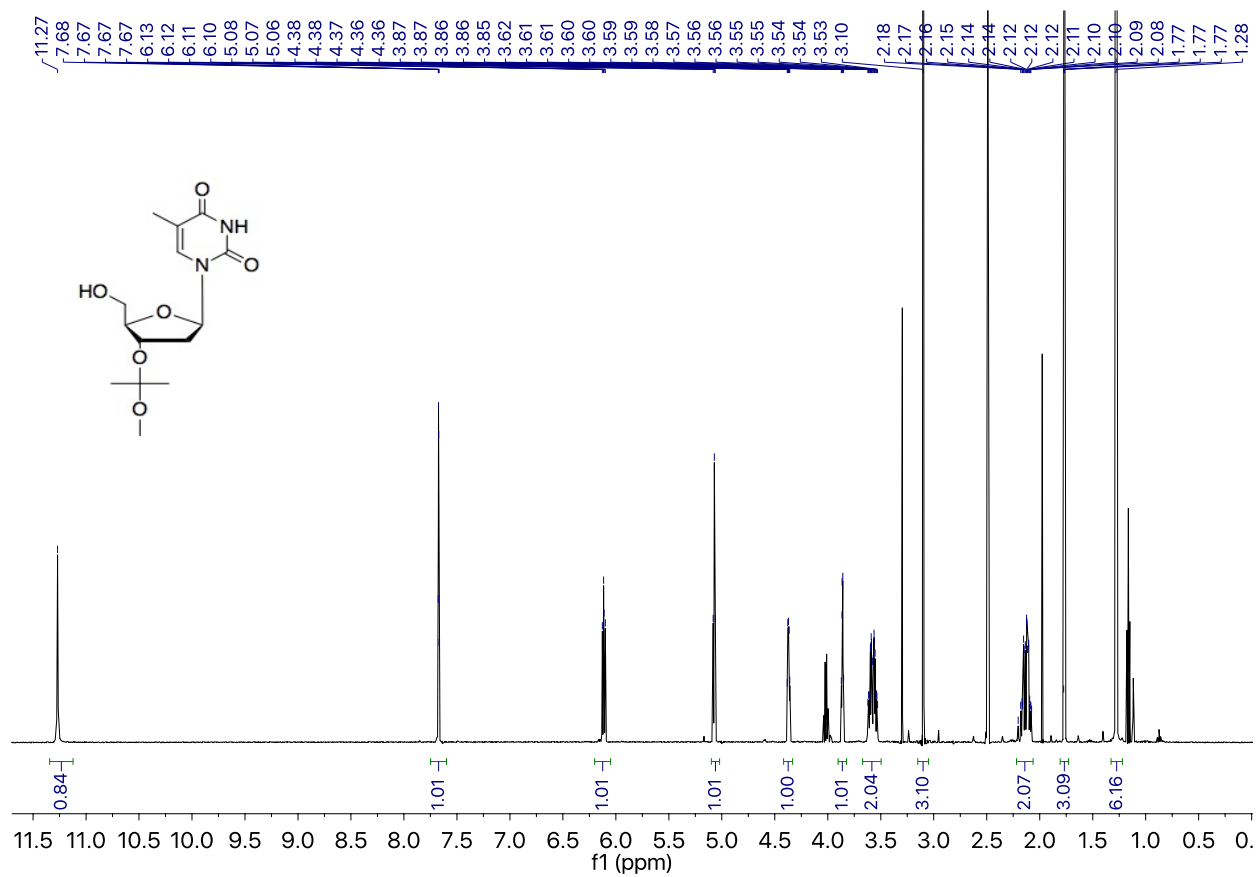
^{13}C -NMR (125 MHz, CDCl_3):



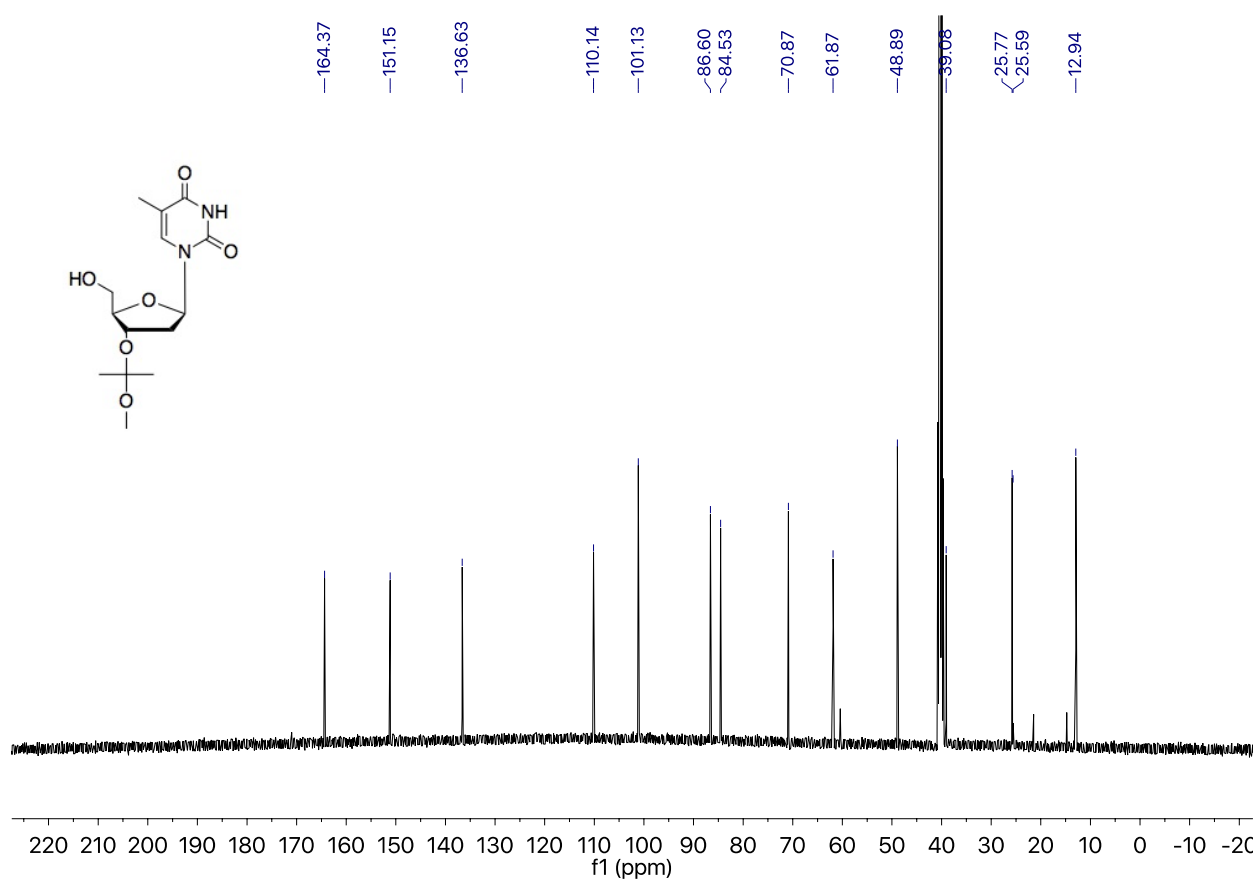
¹H-NMR (600 MHz, DMSO-d₆):

3'-O-Methoxypropan-2-yl-2'-deoxythymidine (7a).

¹H-NMR (500 MHz, DMSO-d₆)

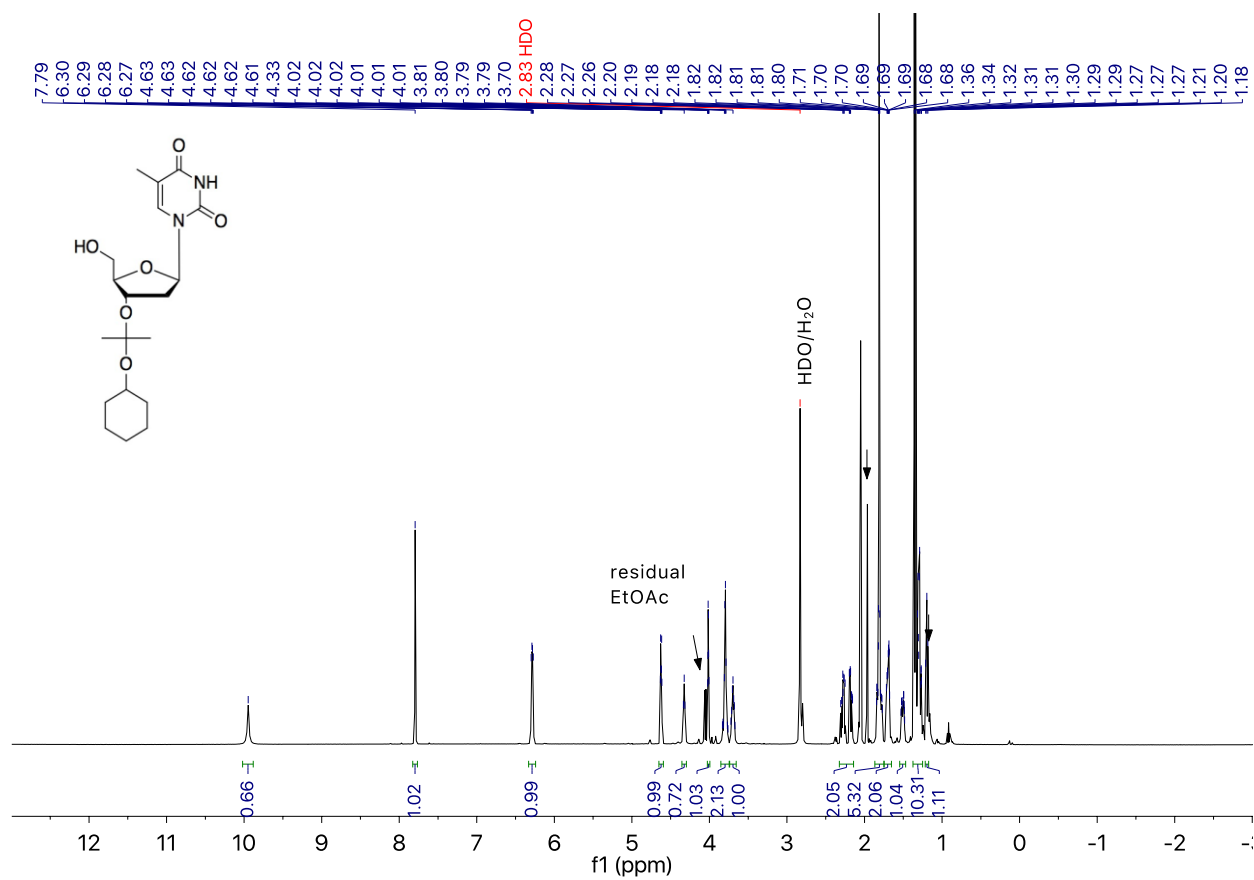


^{13}C -NMR (125 MHz, DMSO- d_6)

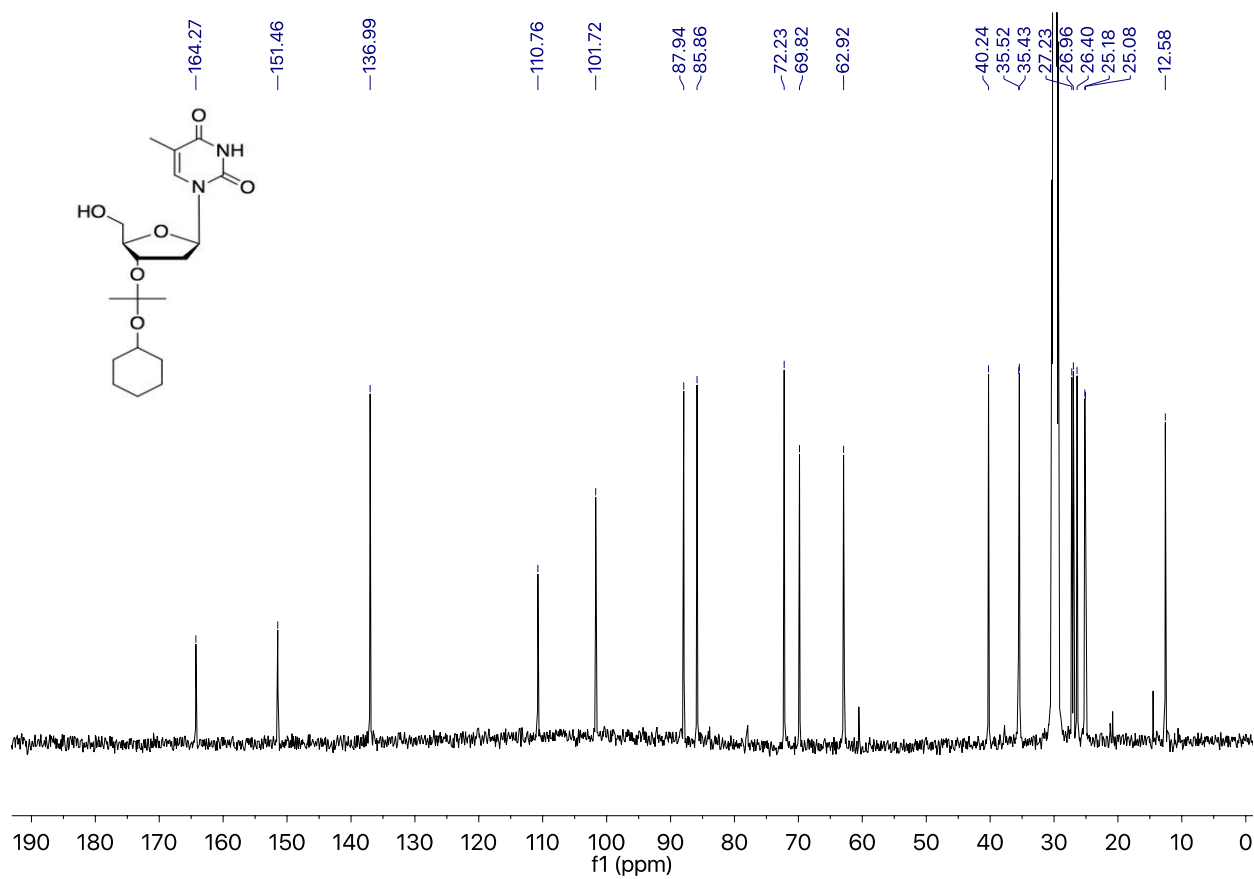


3'-O-Cyclohexyloxypropan-2-yl-2'-deoxythymidine (**7c**).

¹H-NMR (500 MHz, Acetone-d₆)

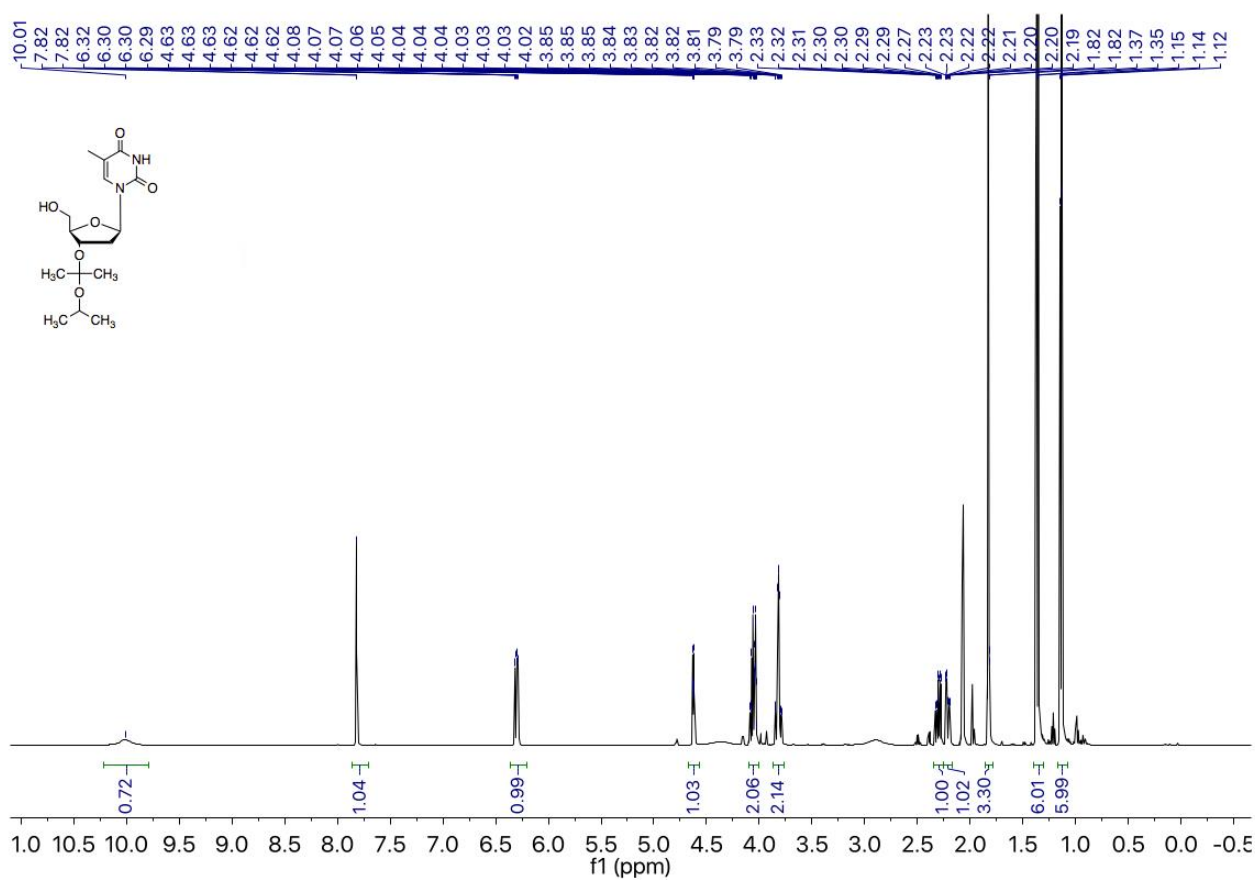


^{13}C -NMR (125 MHz, Acetone- d_6)

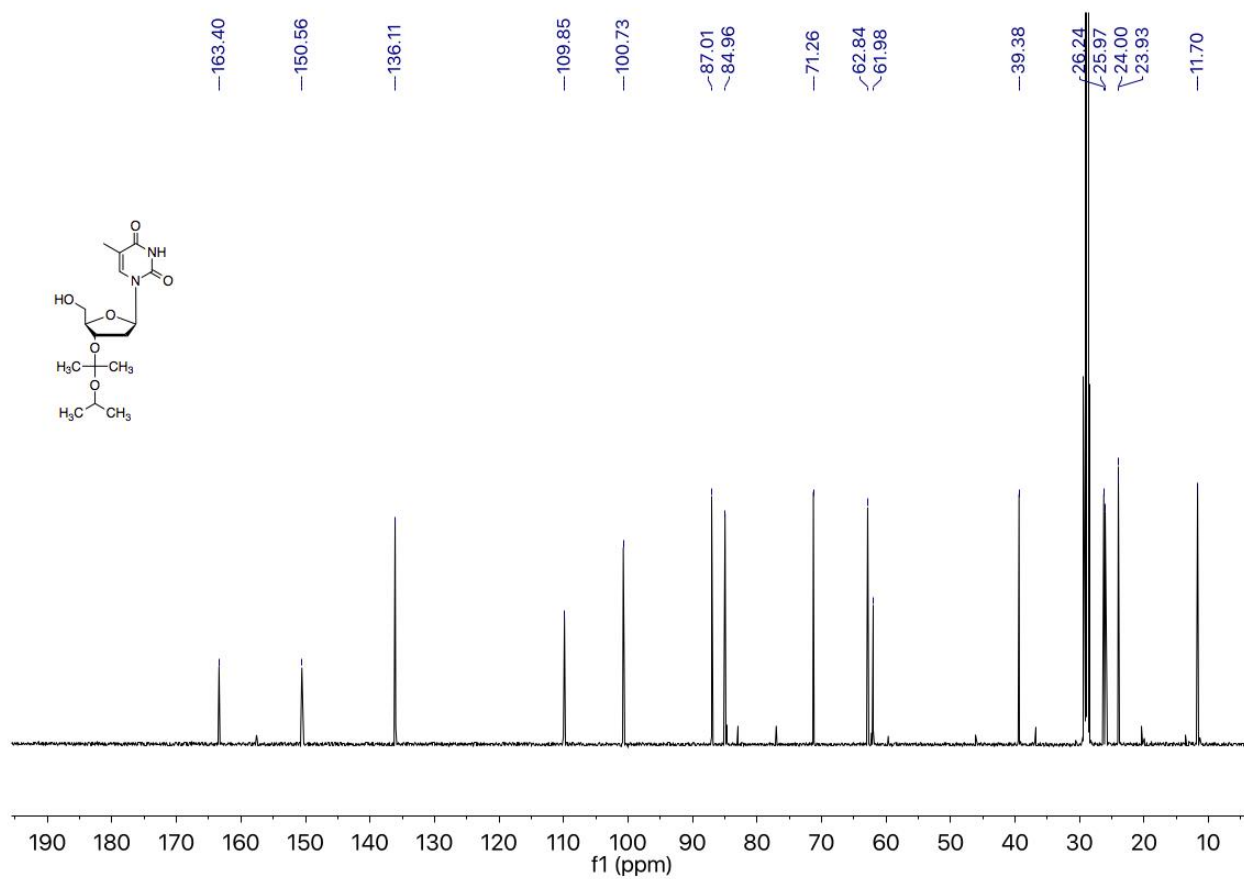


3'-O-Isopropoxypropan-2-yl-2'-deoxythymidine (**7d**).

¹H-NMR (500 MHz, Acetone-d₆)

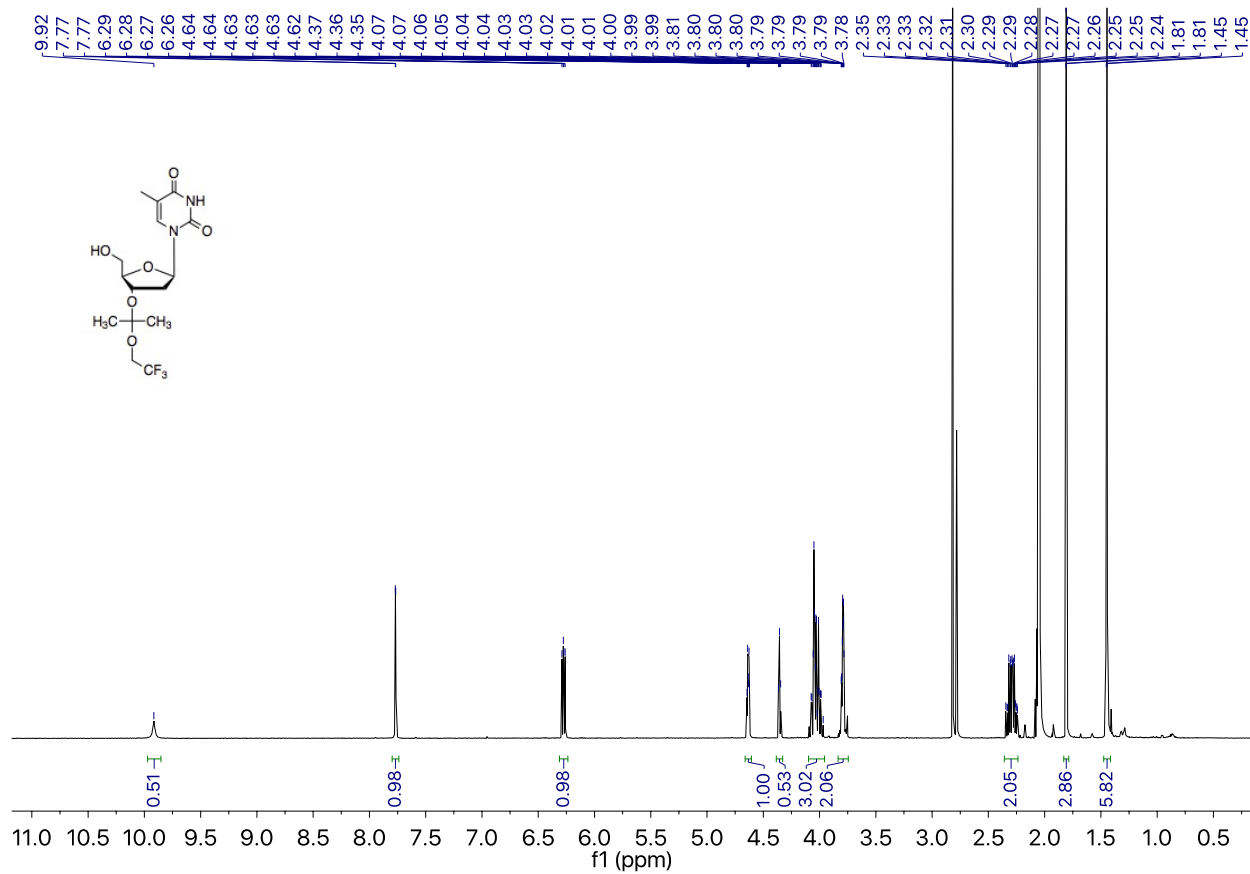


^{13}C -NMR (125 MHz, Acetone- d_6)

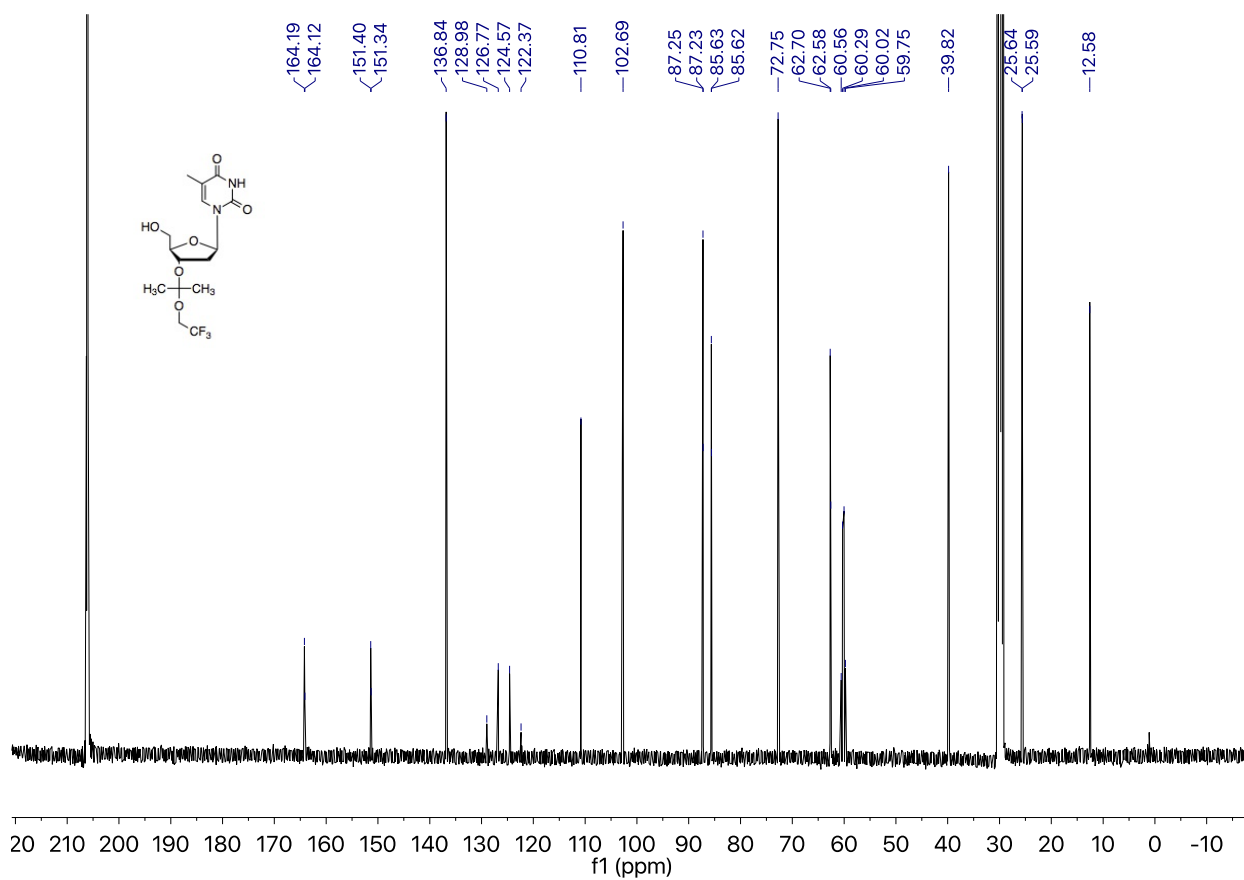


3'-O-(2,2,2-Trifluoroethoxy)propan-2-yl-2'-deoxythymidine (**7e**).

¹H-NMR (500 MHz, Acetone-d₆)

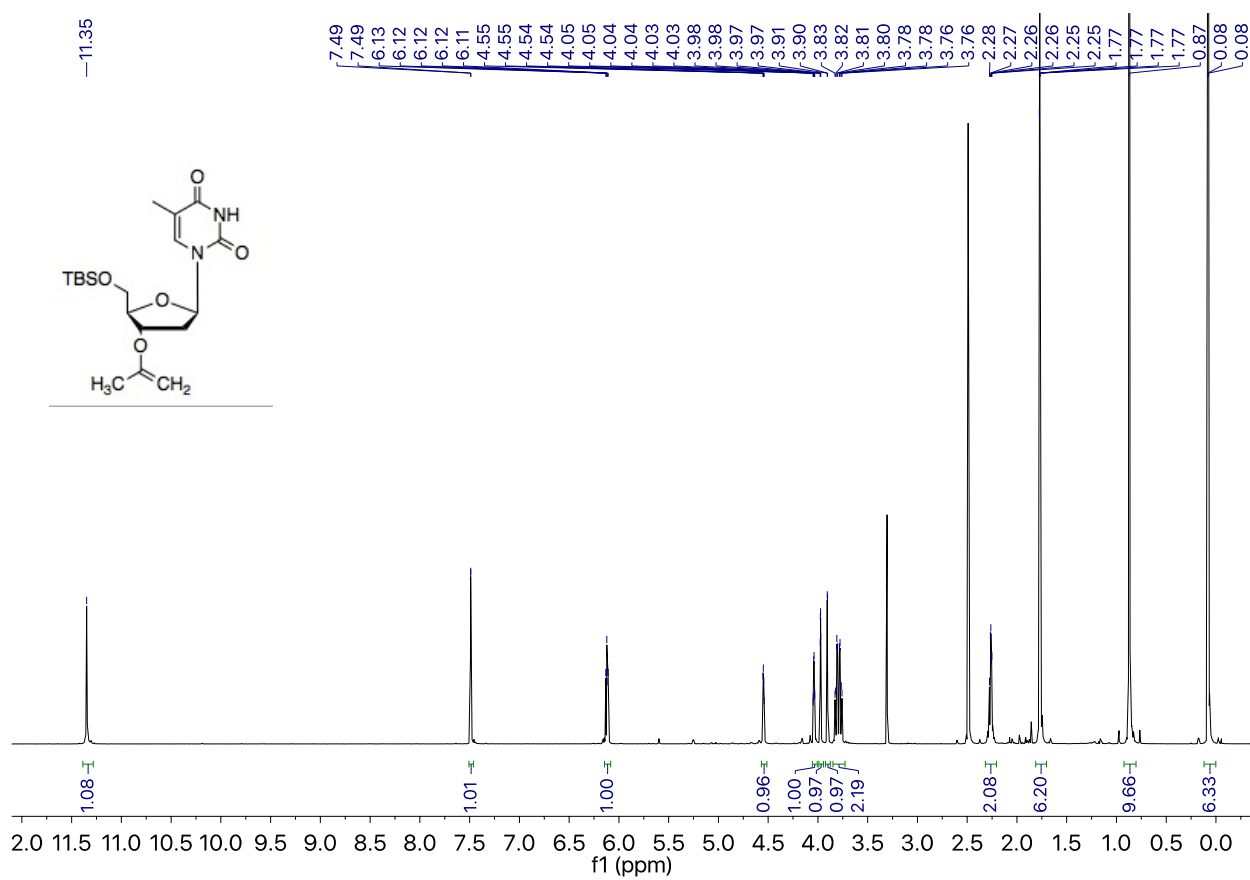


^{13}C -NMR (125 MHz, Acetone- d_6)



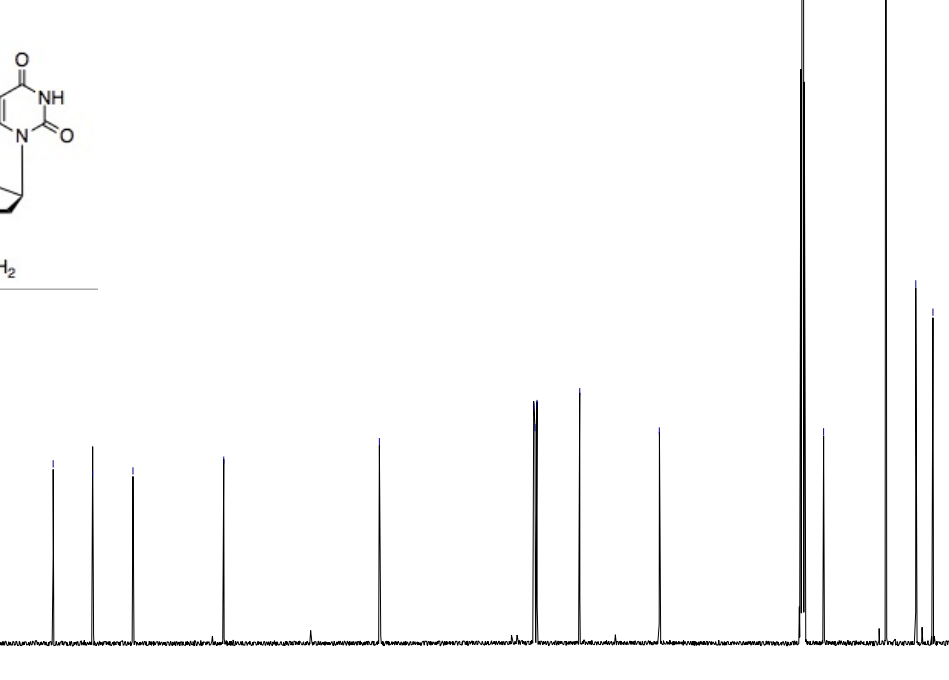
3'-O-Propen-2-yl-5'-O-tert-butyldimethylsilyl-2'-deoxythymidine (**8a**).

¹H-NMR (600 MHz, DMSO-d₆)



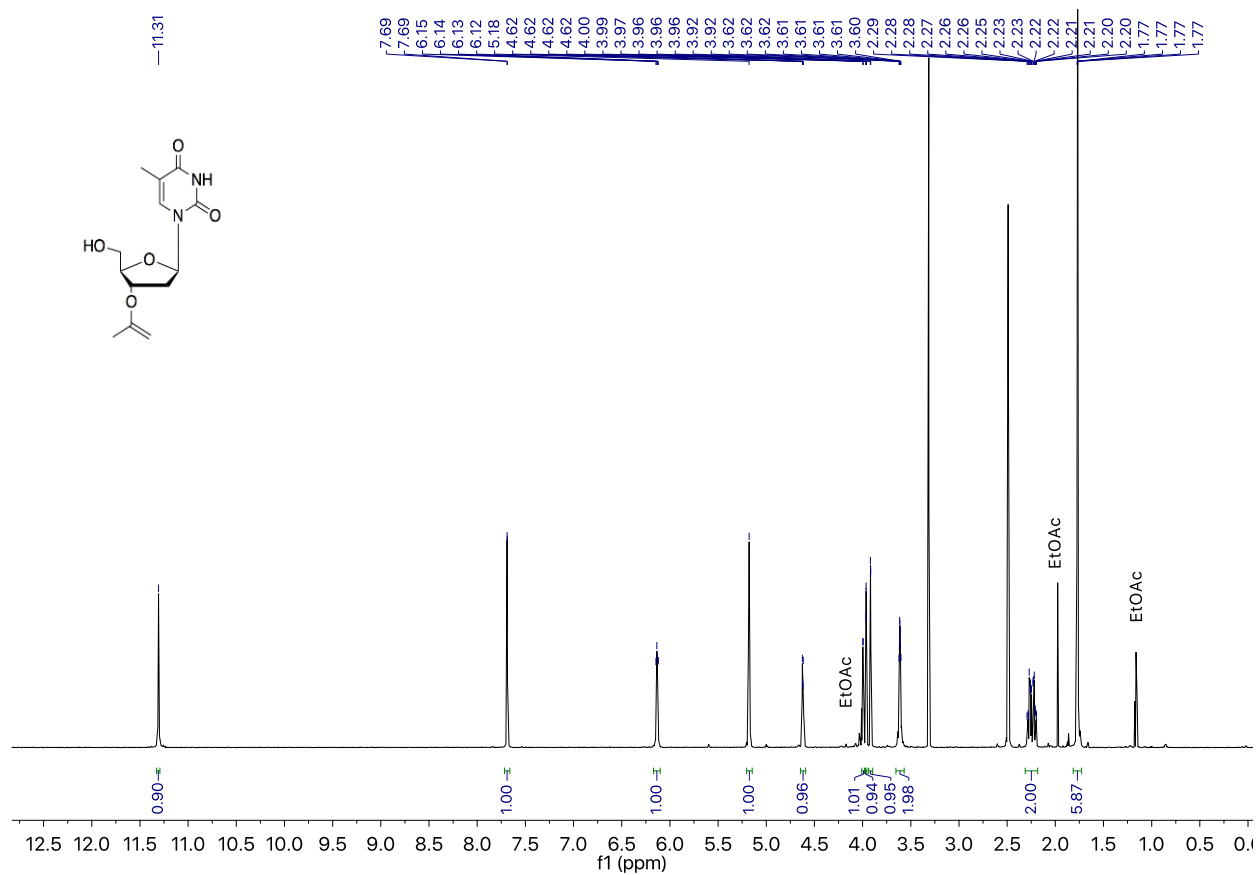
Chemical structure of the compound is shown above the spectrum. The spectrum displays peaks corresponding to the chemical structure, with the following chemical shifts (ppm) labeled above the peaks:

- 164.06
- 157.53
- 150.84
- 135.81
- 110.05
- 84.50
- 84.29
- 83.96
- 76.88
- 63.70
- 36.50
- 26.19
- 21.25
- 18.41
- 12.67
- 5.04
- 5.07

CC1=CC(=NC2C(=C1)C(=O)N2)C3C(COC(=O)C)OC(C3)C(C)(C)C(C)(C)C(C)(C)C

3'-O-Propen-2'-yl-2'-deoxythymidine (**8b**).

¹H-NMR (600 MHz, DMSO-d₆)



^{13}C -NMR (150 MHz, DMSO- d_6)

