

Synthesis and preliminary evaluation of biological activity of glycoconjugates, analogues of acyclic uridine derivatives

Roman Komor^{1*}, Gabriela Pastuch-Gawolek^{1,2*}, Ewelina Krol³ and Wiesław Szeja¹

¹Silesian University of Technology, Faculty of Chemistry, Chair of Organic Chemistry, Bioorganic Chemistry and Biotechnology, Krzywoustego 4, 44-100 Gliwice, Poland

²Silesian University of Technology, Biotechnology Center, Krzywoustego 8, 44-100 Gliwice, Poland

³University of Gdansk and Medical University of Gdansk, Department of Recombinant Vaccines, Intercollegiate Faculty of Biotechnology, Abrahama 58, 80-307 Gdansk, Poland

*Corresponding author. Phone: +48 32 237 21 38; e-mail: gabriela.pastuch@polsl.pl, roman.m.komor@gmail.com

1. Spectra

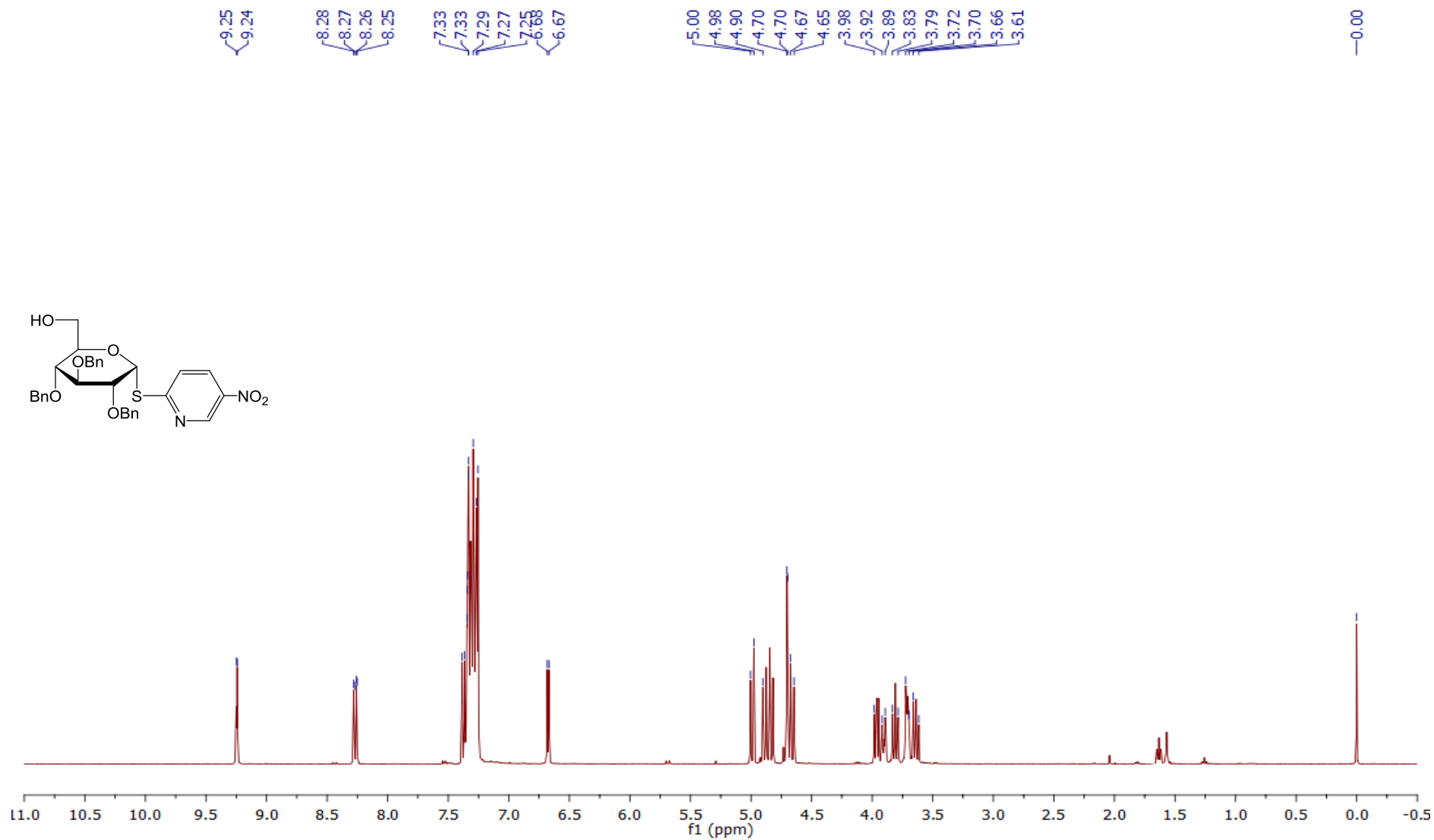


Fig. S1: ¹H NMR spectrum of (5-nitro-2-pyridyl) 2,3,4-tri-O-benzyl-1-thio- α -D-glucopyranoside **13**

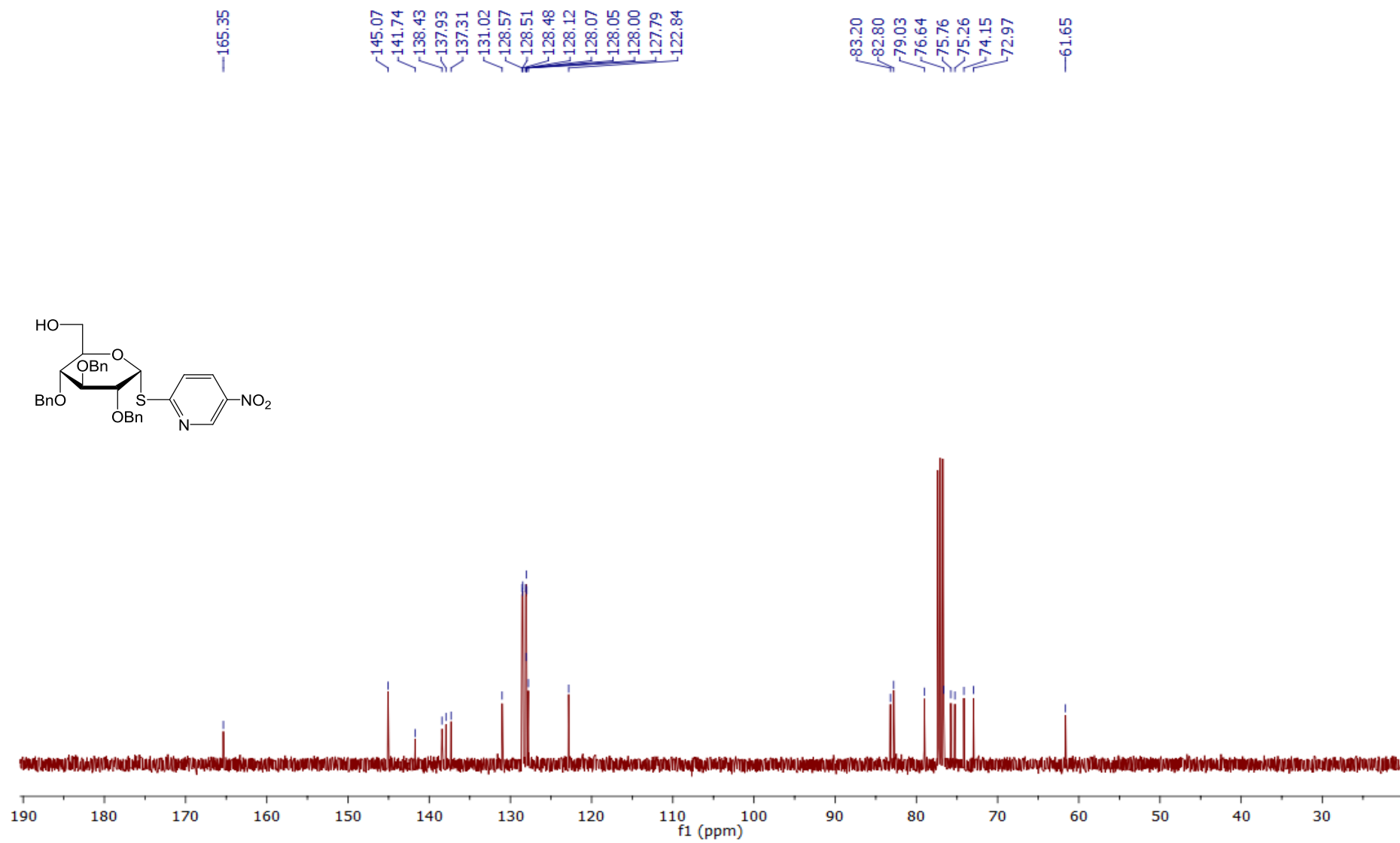


Fig. S2: ^{13}C NMR spectrum of (5-nitro-2-pyridyl) 2,3,4-tri-*O*-benzyl-1-thio- α -D-glucopyranoside **13**

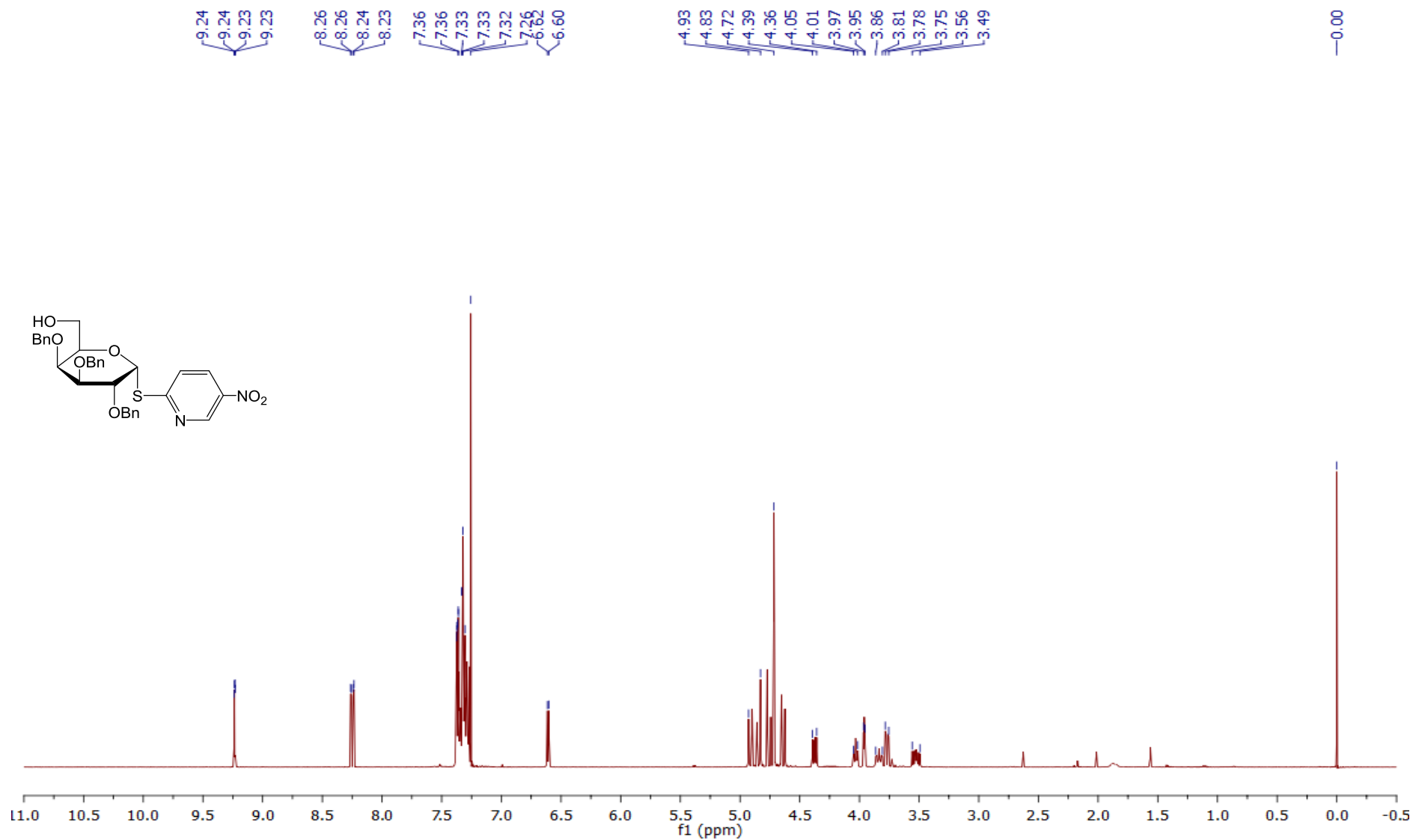


Fig. S3: ^1H NMR spectrum of (5-nitro-2-pyridyl) 2,3,4-tri-O-benzyl-1-thio- α -D-galactopyranoside **14**

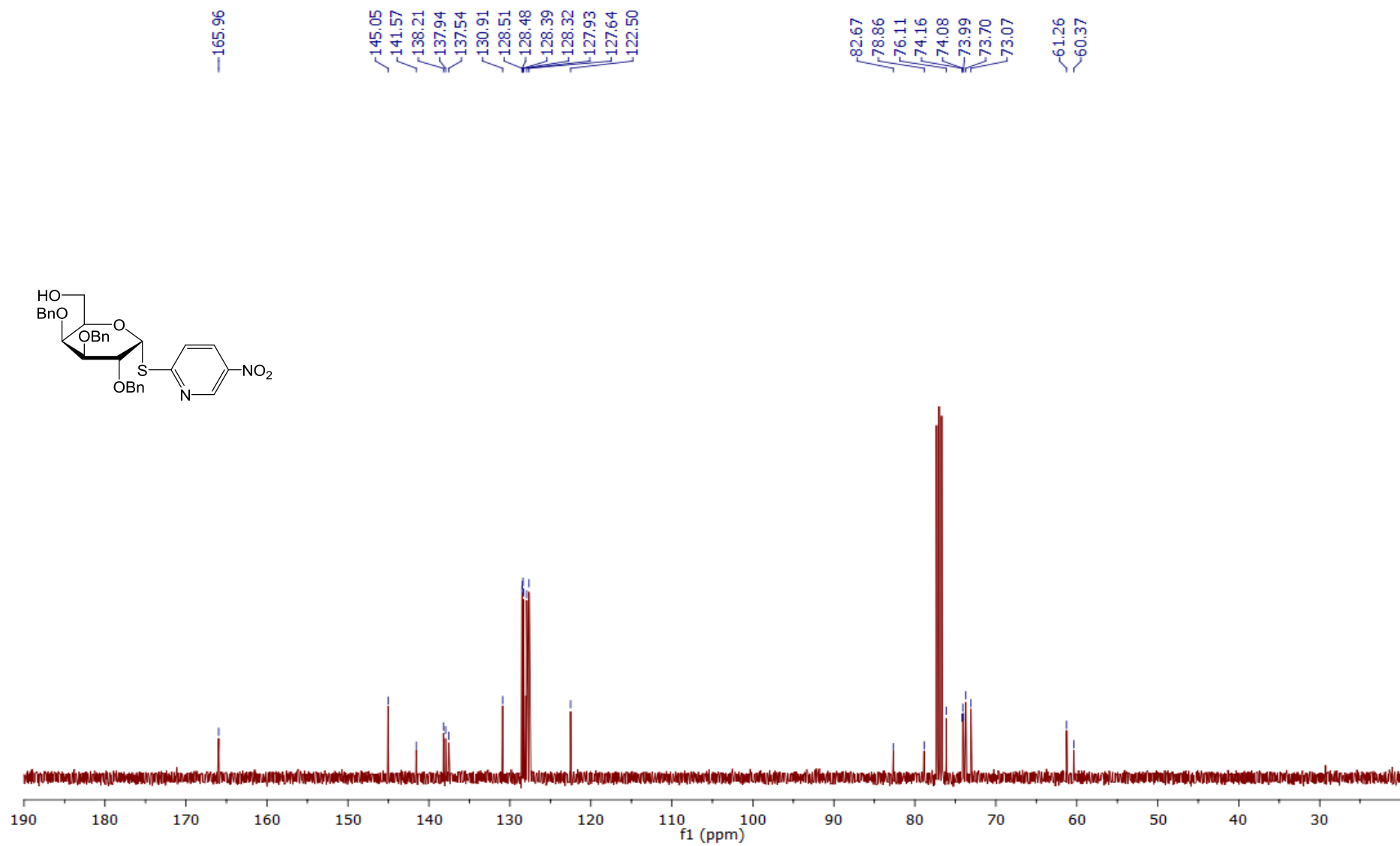


Fig. S4: ^{13}C NMR spectrum of (5-nitro-2-pyridyl) 2,3,4-tri-O-benzyl-1-thio- α -D-galactopyranoside **14**

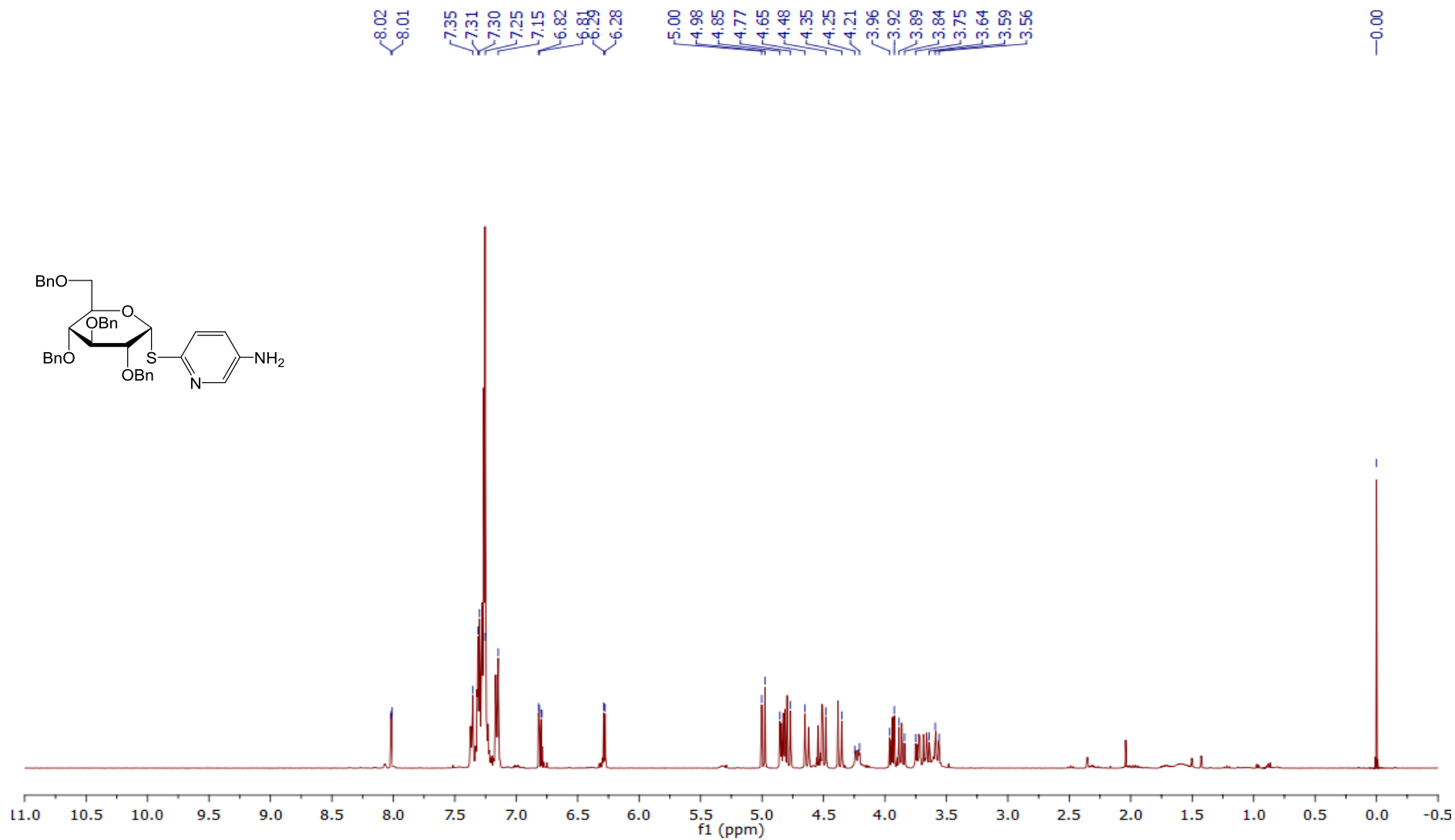


Fig. S5: ^1H NMR spectrum of (5-amino-2-pyridyl) 2,3,4,6-tetra-*O*-benzyl-1-thio- α -D-glucopyranoside **17**

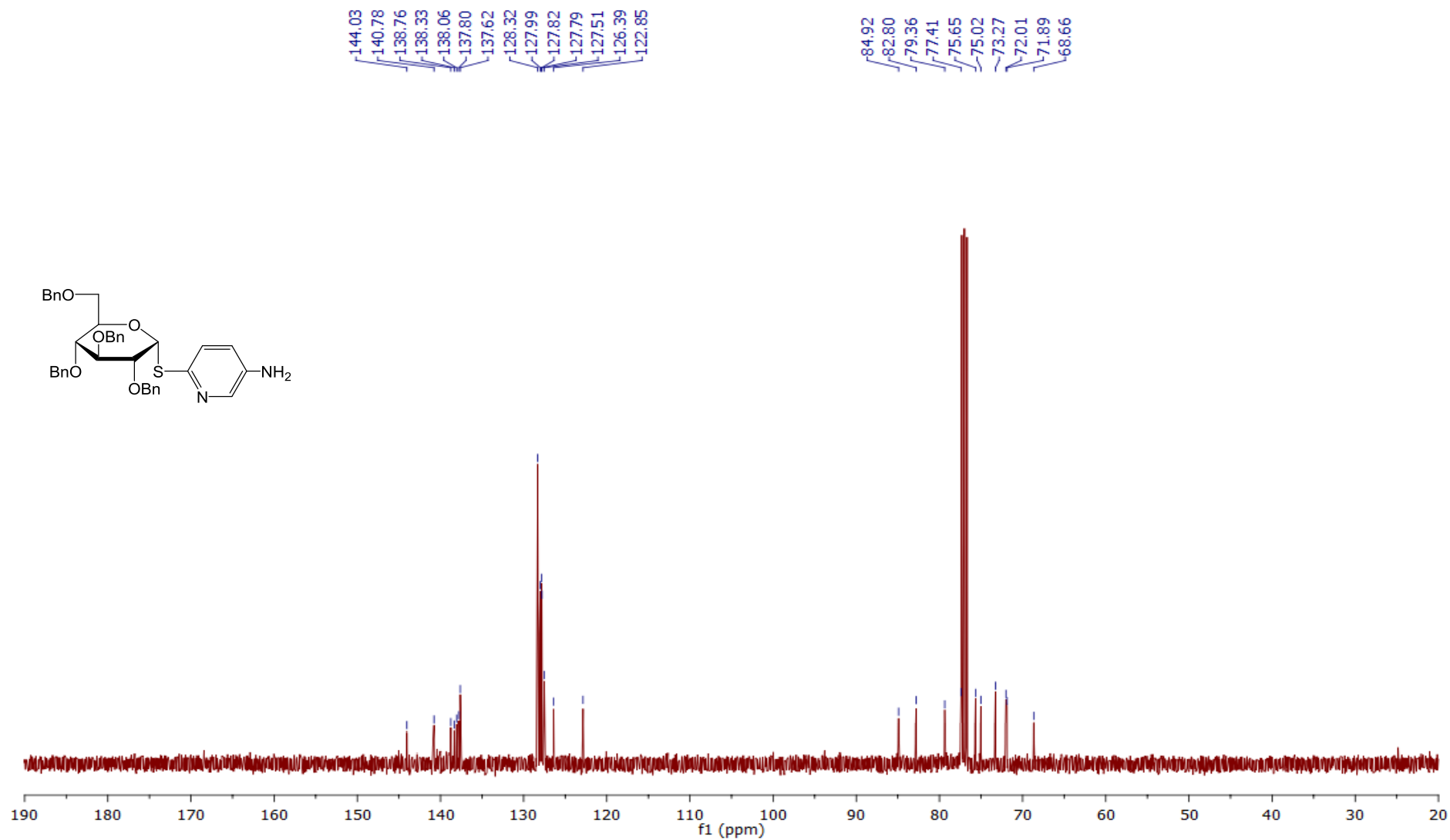


Fig. S6: ¹³C NMR spectrum of (5-amino-2-pyridyl) 2,3,4,6-tetra-O-benzyl-1-thio- α -D-glucopyranoside **17**

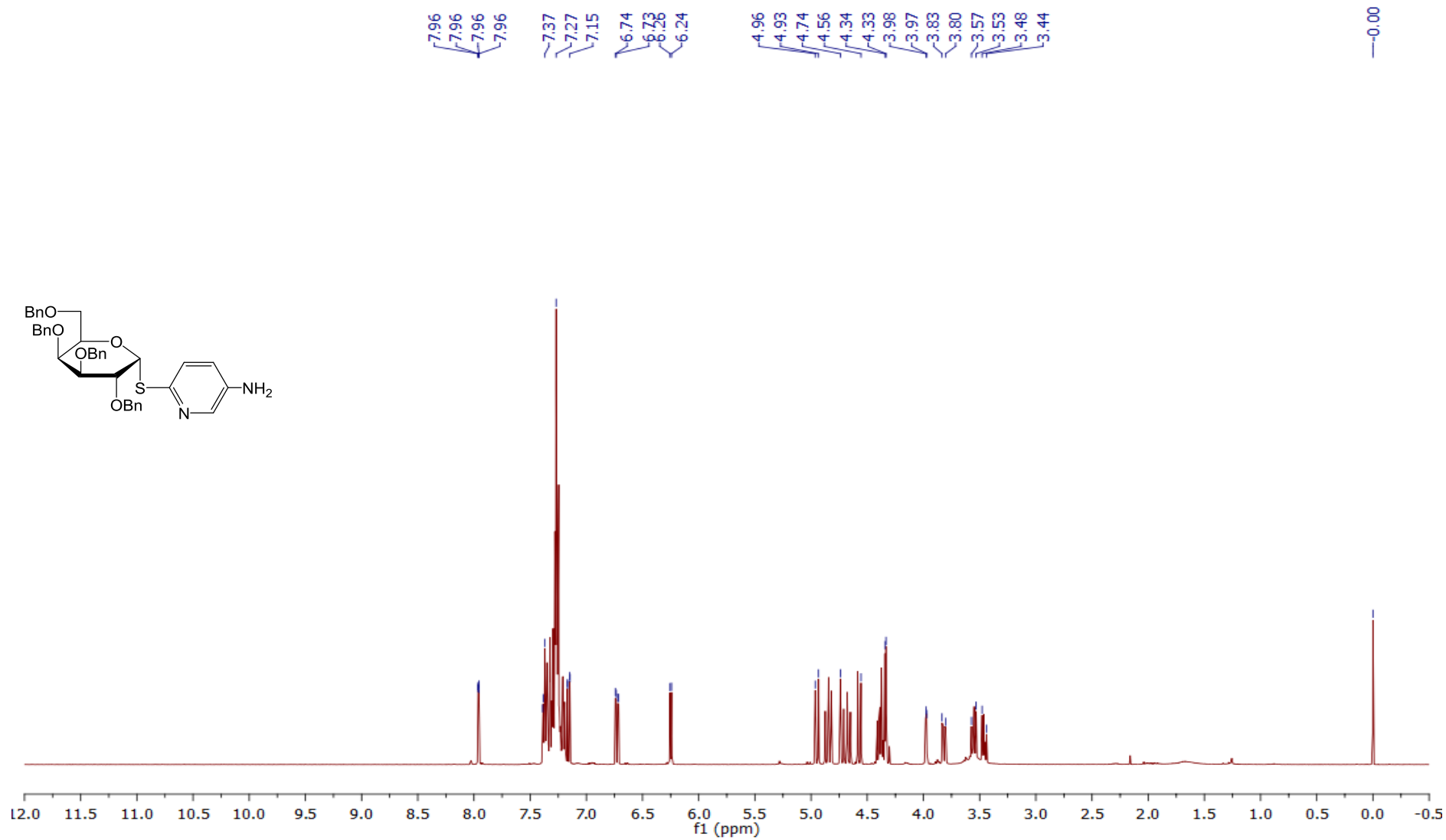


Fig. S7: ¹H NMR spectrum of (5-amino-2-pyridyl) 2,3,4,6-tetra-O-benzyl-1-thio- α -D-galactopyranoside **18**

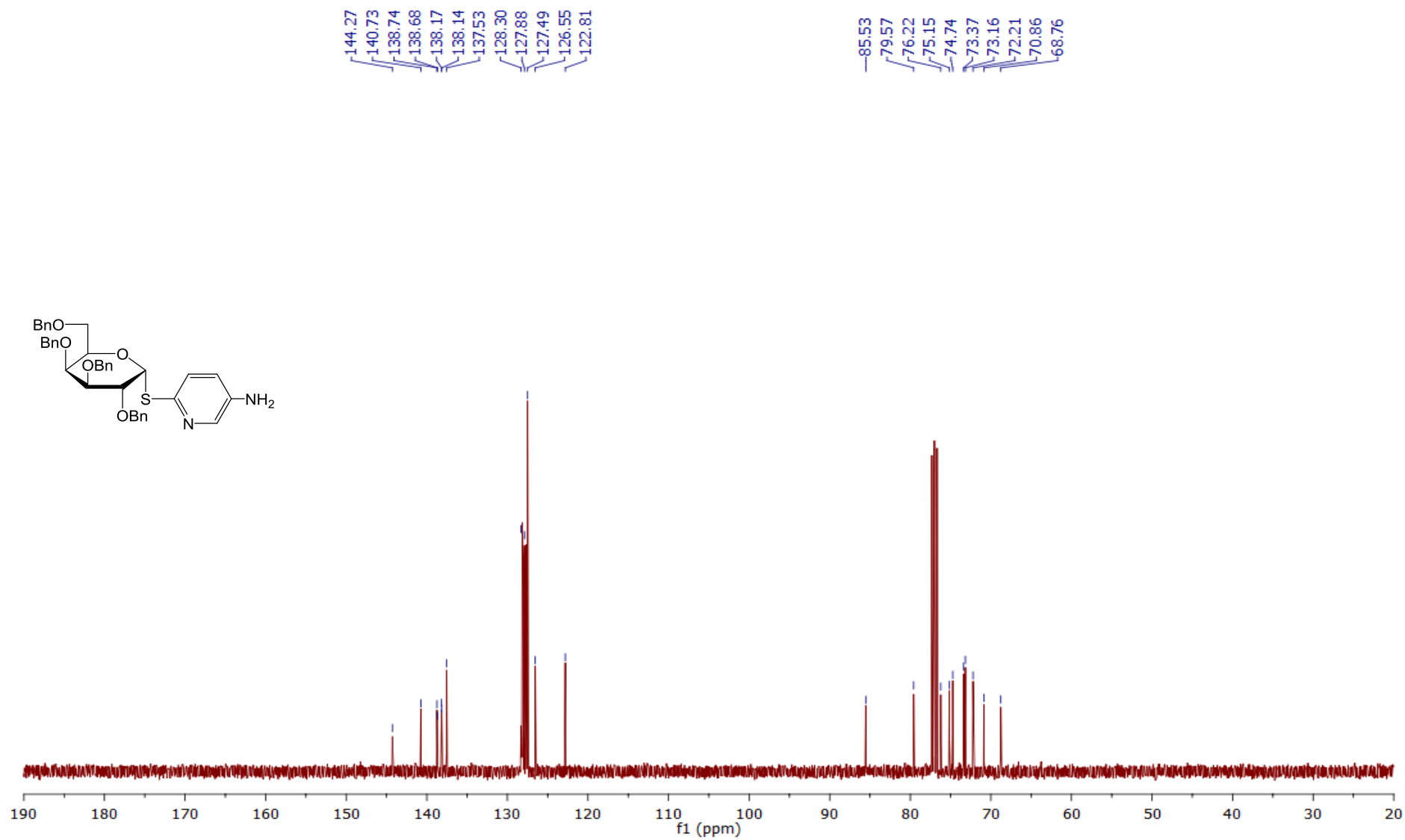


Fig. S8: ¹³C NMR spectrum of (5-amino-2-pyridyl) 2,3,4,6-tetra-*O*-benzyl-1-thio- α -D-galactopyranoside **18**

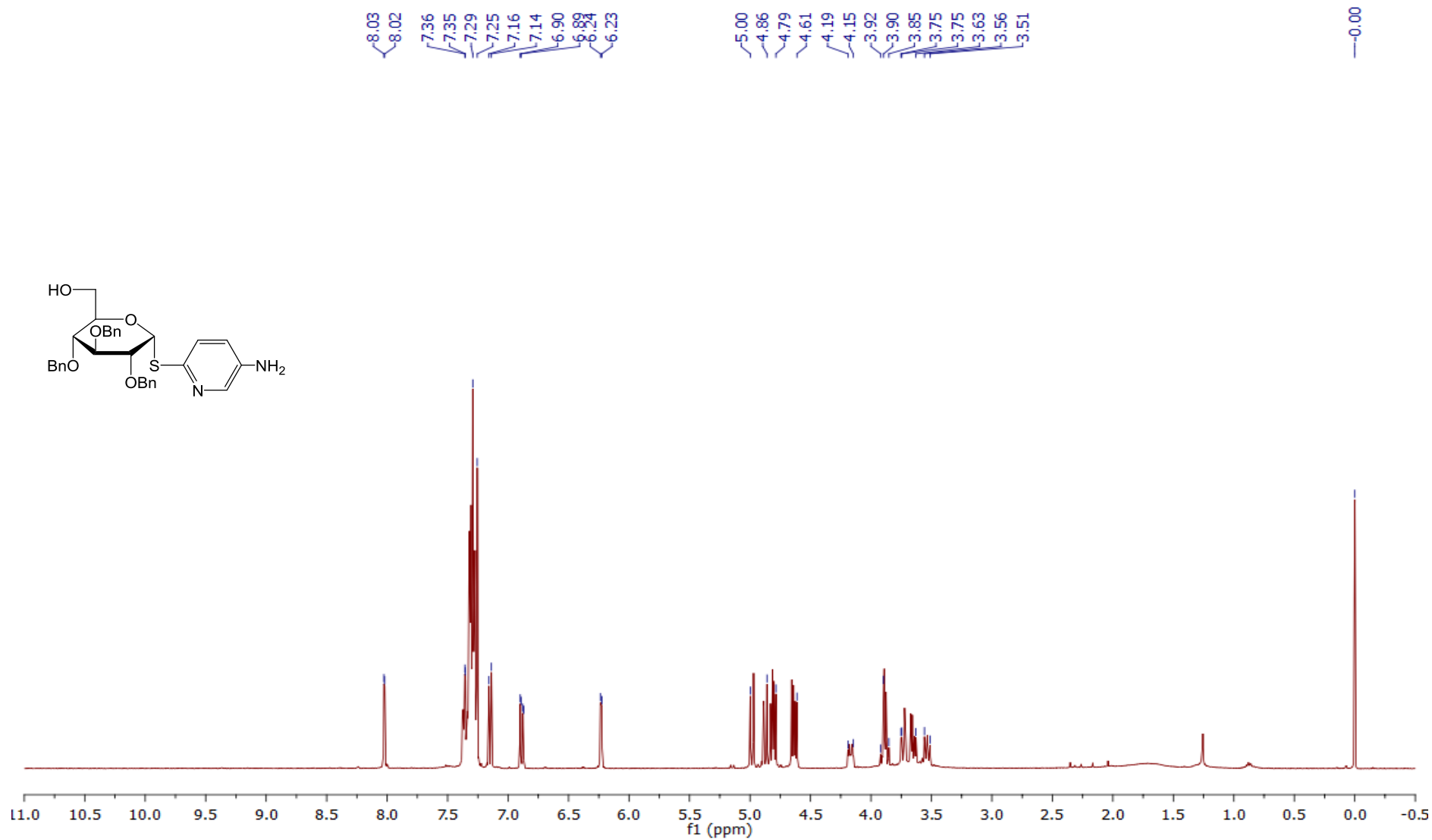


Fig. S9: ¹H NMR spectrum of (5-amino-2-pyridyl) 2,3,4-tri-O-benzyl-1-thio-α-D-glucopyranoside **19**

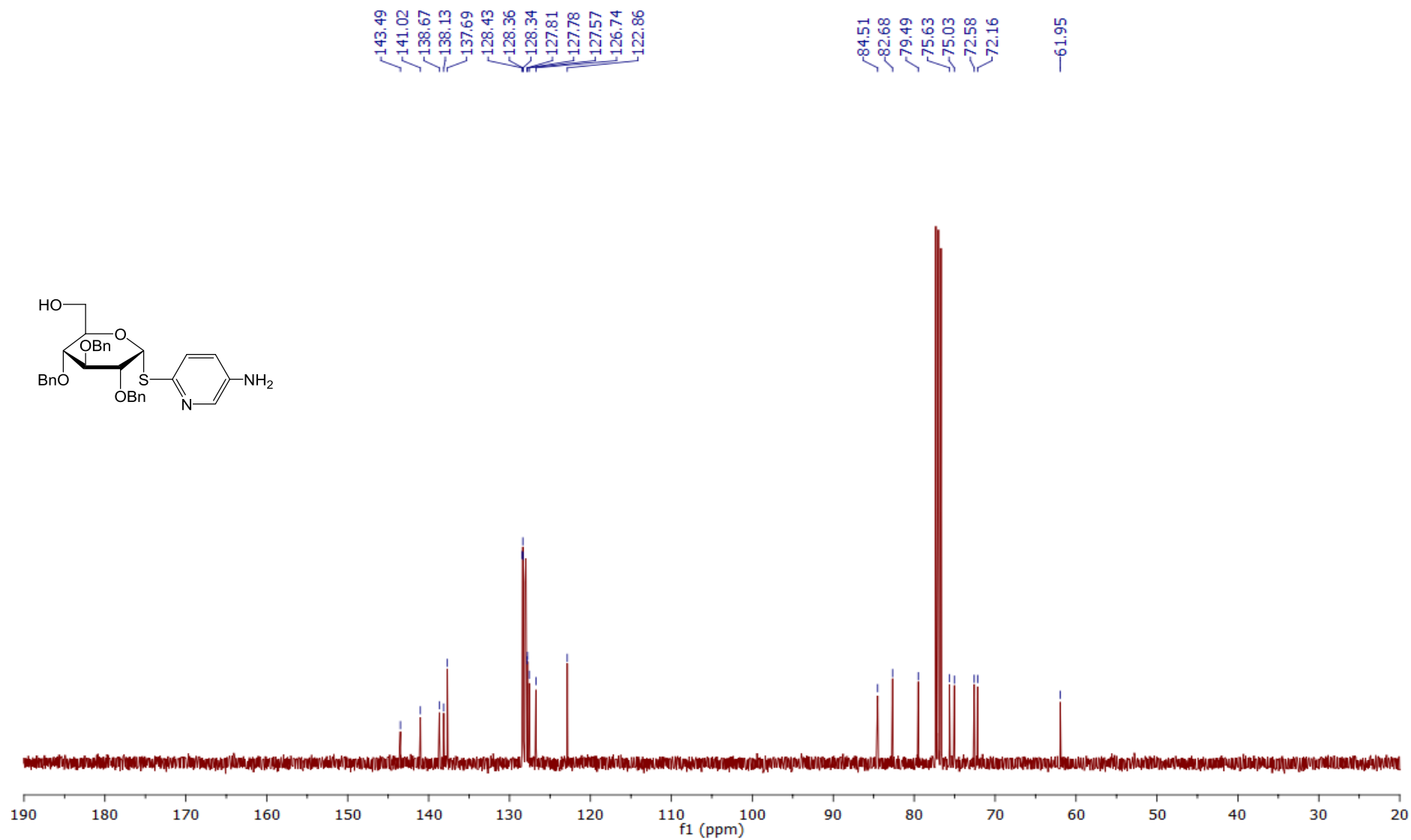


Fig. S10: ¹³C NMR spectrum of (5-amino-2-pyridyl) 2,3,4-tri-O-benzyl-1-thio- α -D-glucopyranoside **19**

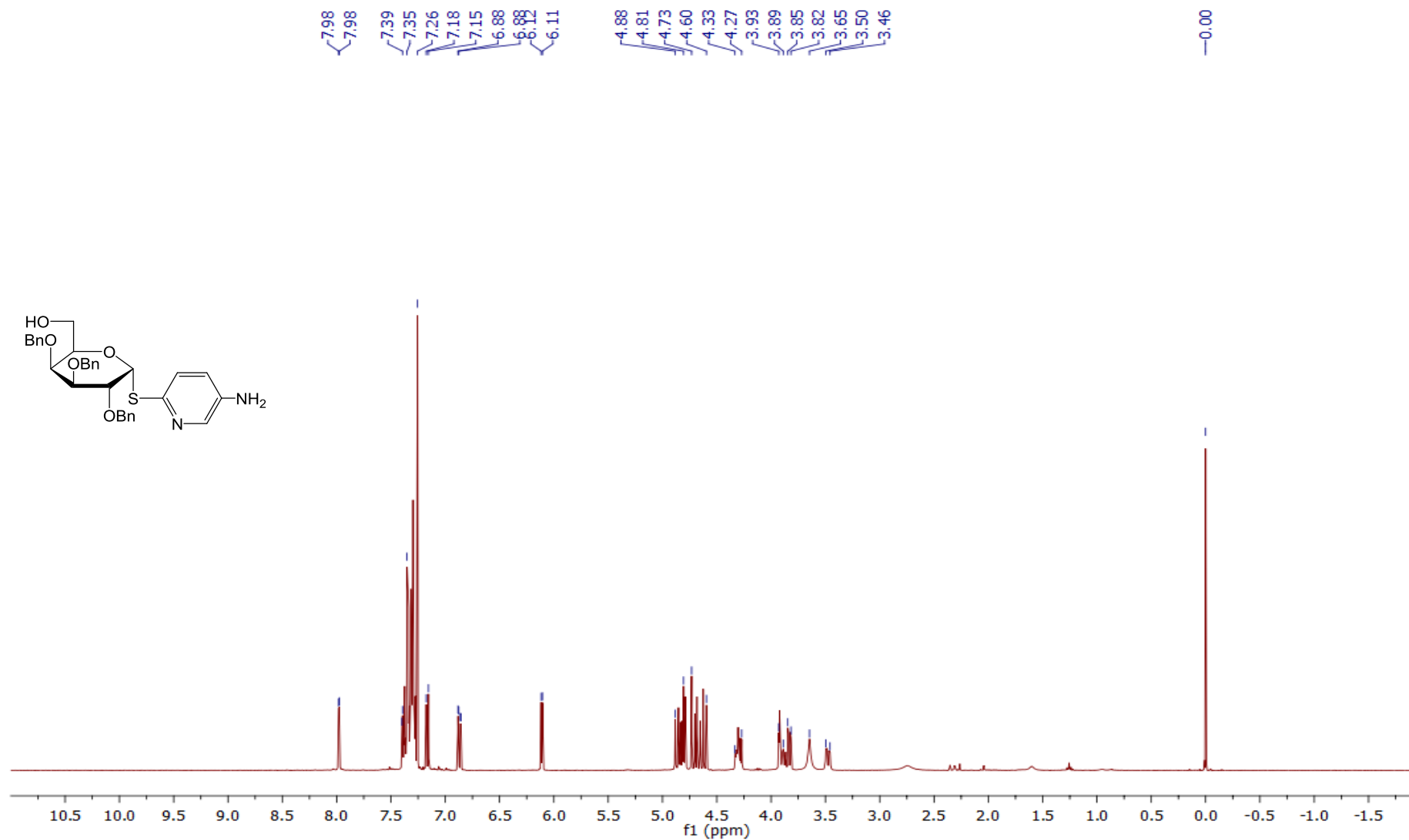


Fig. S11: ^1H NMR spectrum of (5-amino-2-pyridyl) 2,3,4-tri-*O*-benzyl-1-thio- α -D-galactopyranoside **20**

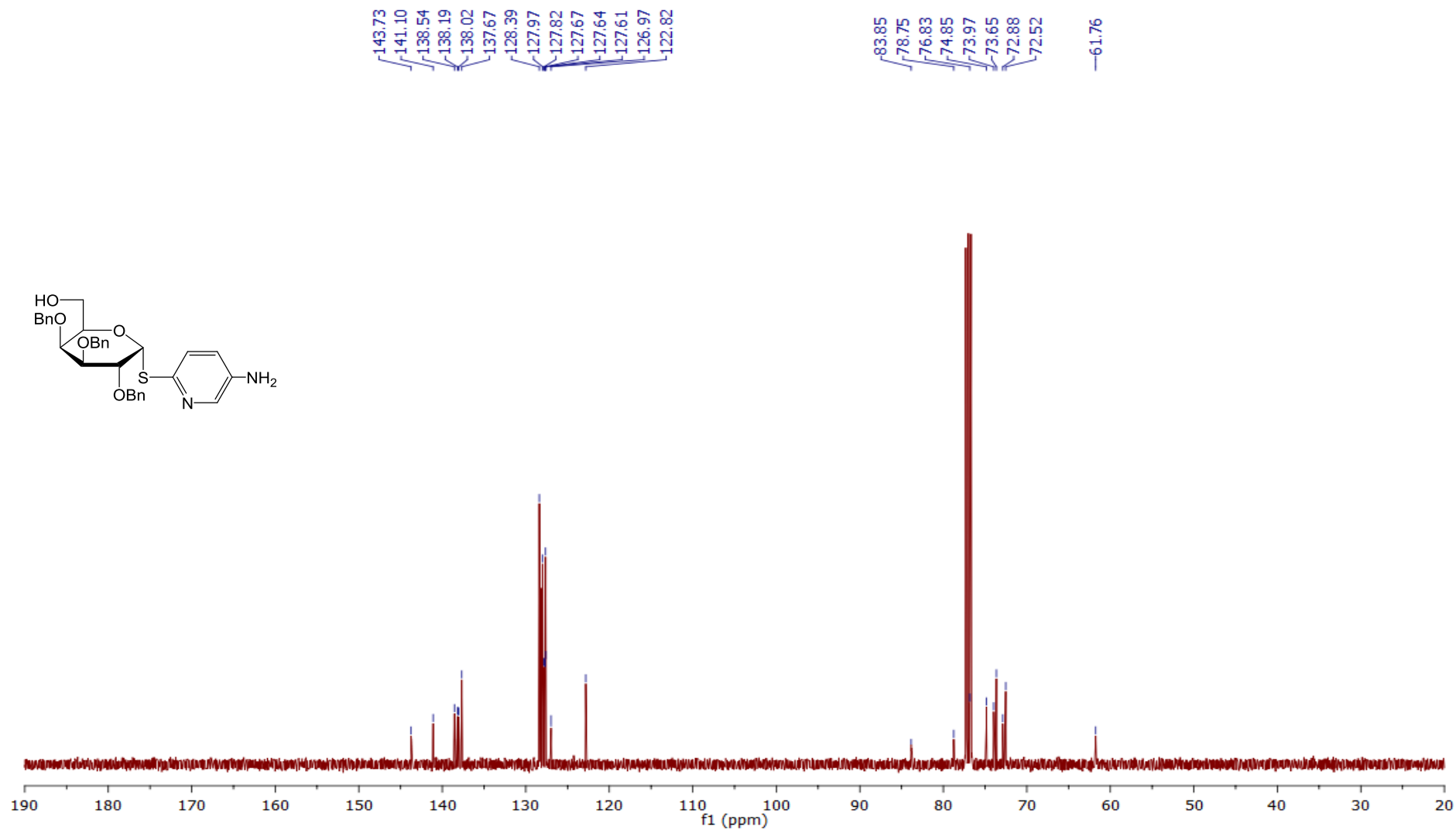


Fig. S12: ^{13}C NMR spectrum of (5-amino-2-pyridyl) 2,3,4-tri-*O*-benzyl-1-thio- α -D-galactopyranoside **20**

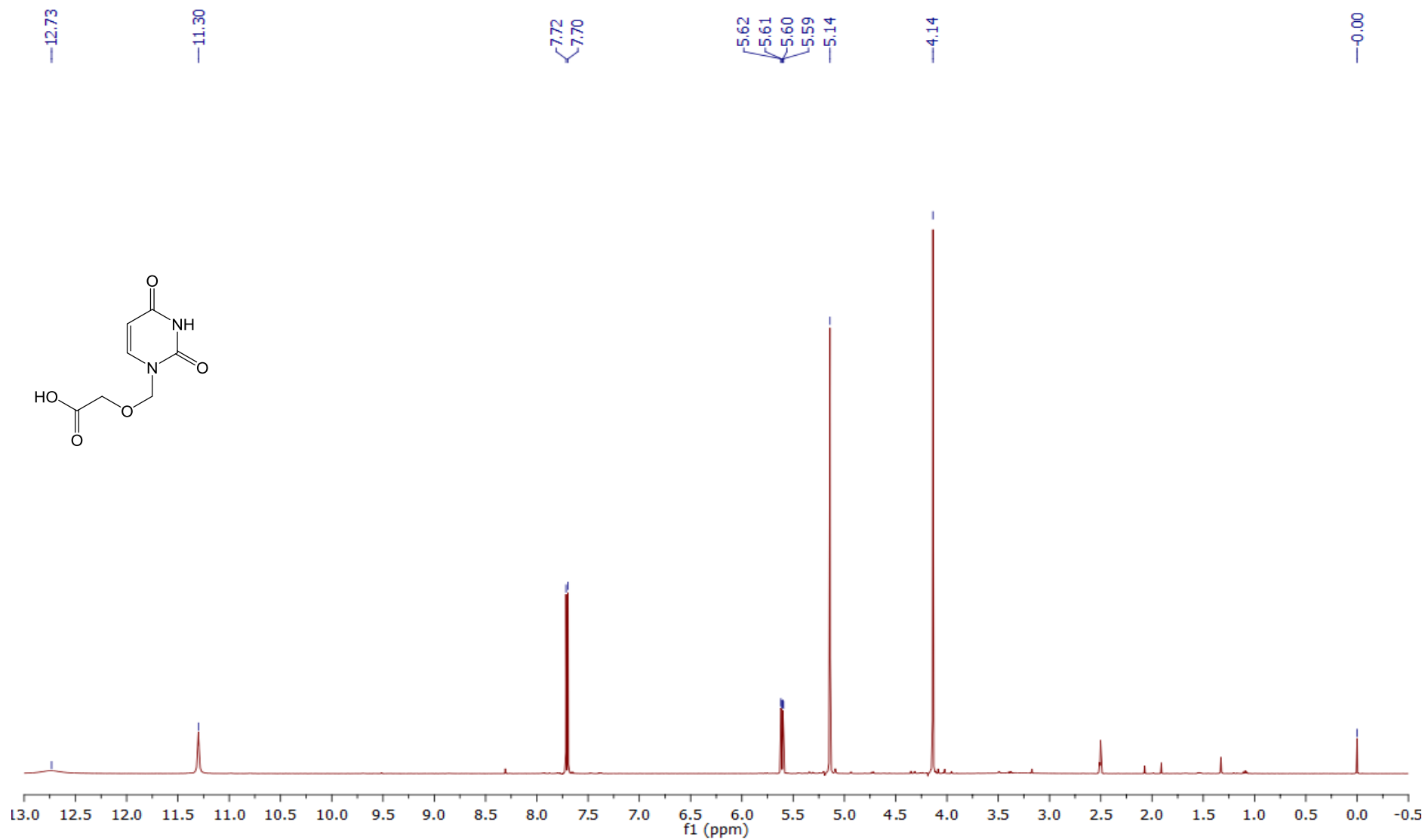


Fig. S13: ¹H NMR spectrum of [(2,4-2-[(2,4-dioxo-3,4-dihydropyrimidin-1-(2H)-yl) methoxy]acetic acid **27**

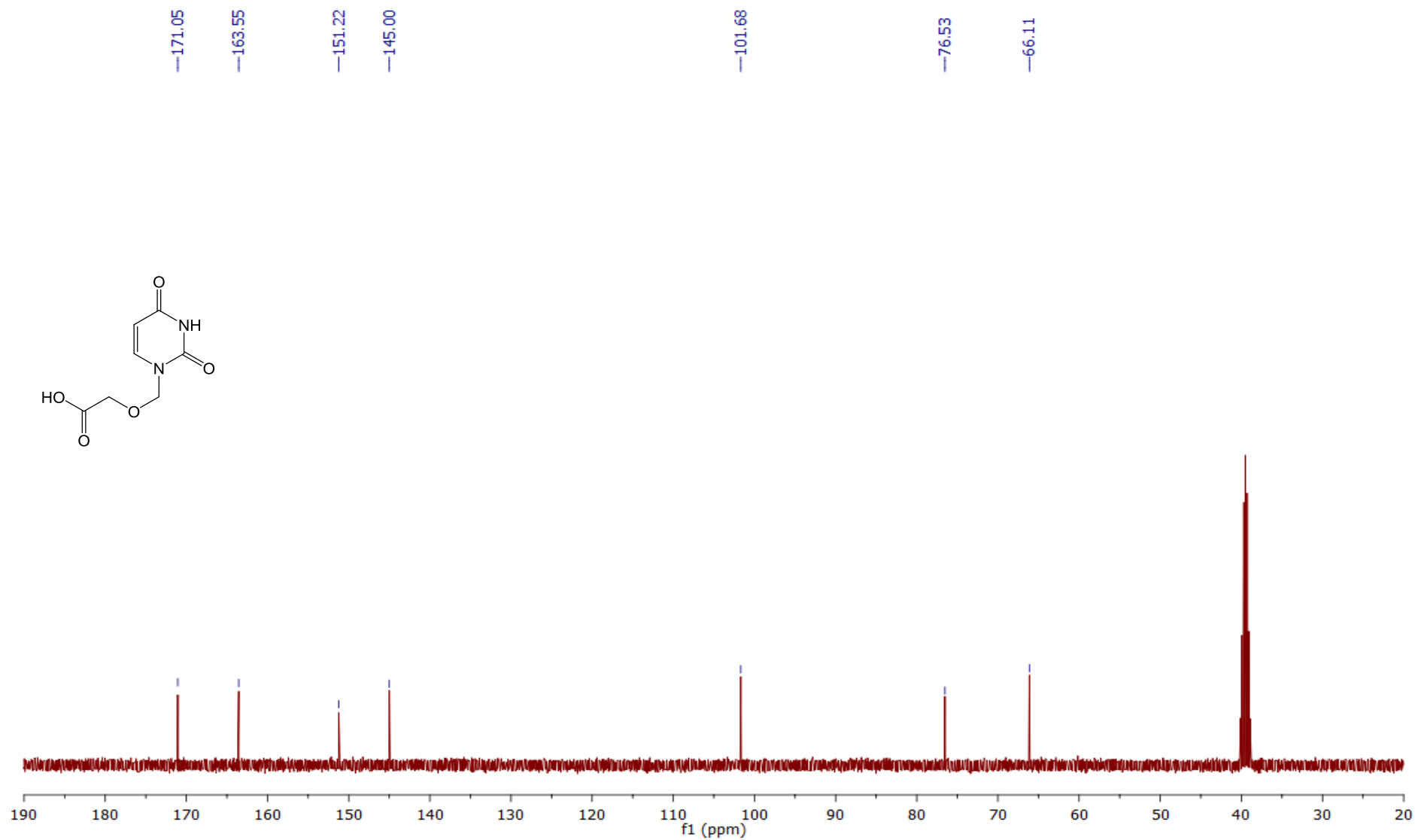


Fig. S14: ¹³C NMR spectrum of [(2,4-dioxo-3,4-dihydropyrimidin-1(2H)-yl) methoxy]acetic acid **27**

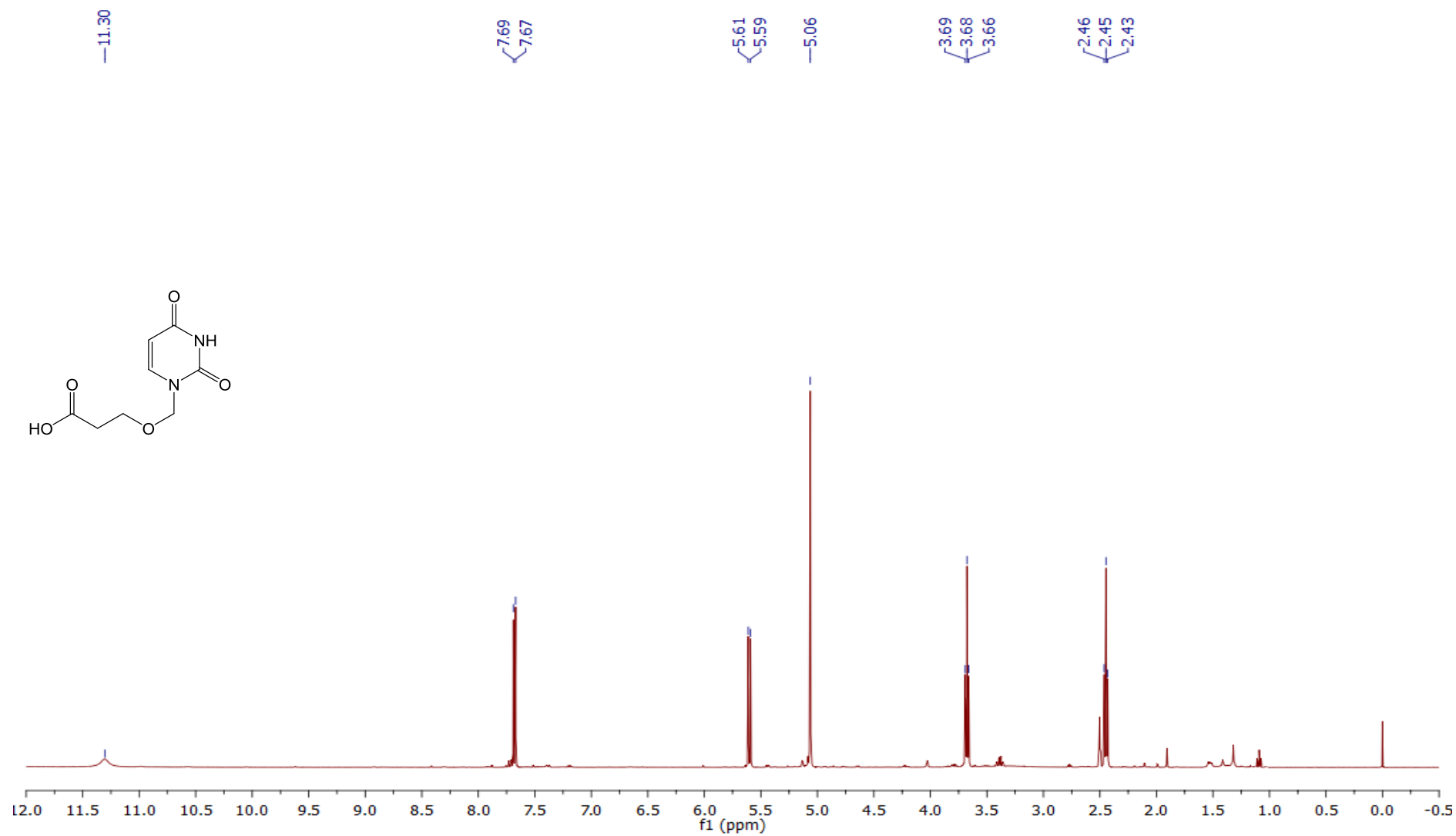


Fig. S15: ¹H NMR spectrum of 2-[(2,4-dioxo-3,4)-dihydropyrimidine-1-(2H)-yl] methoxy]propanoic acid **28**

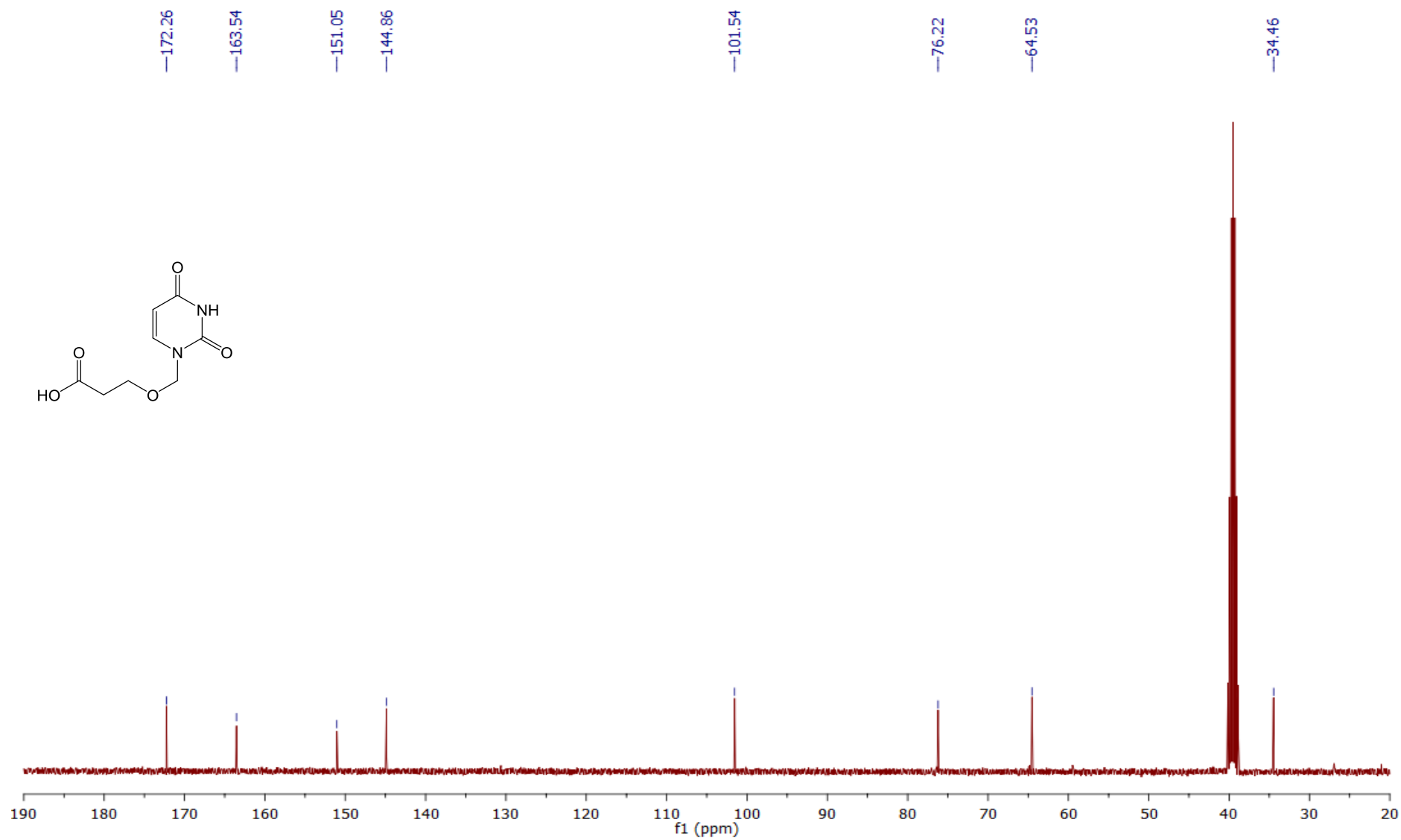


Fig. S16: ¹³C NMR spectrum of 2-[(2,4-dioxo-3,4)-dihydropyrimidine-1-(2H)-yl] methoxy]propanoic acid **28**

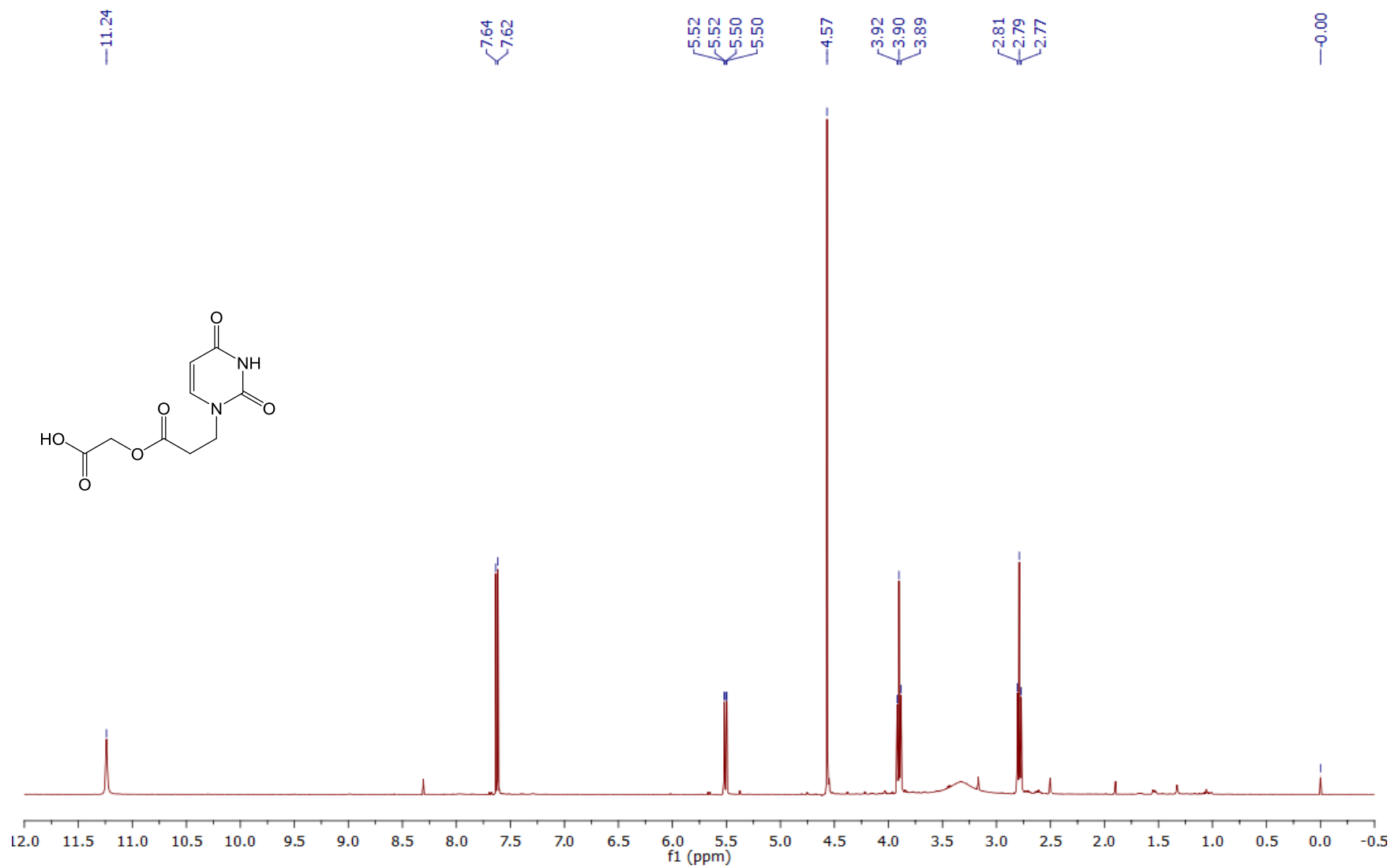


Fig. S17: ¹H NMR spectrum of ([3-(2,4-dioxo-3,4-dihydropyrimidin-1(2H)-yl)propanoyl] oxyacetic acid **30**

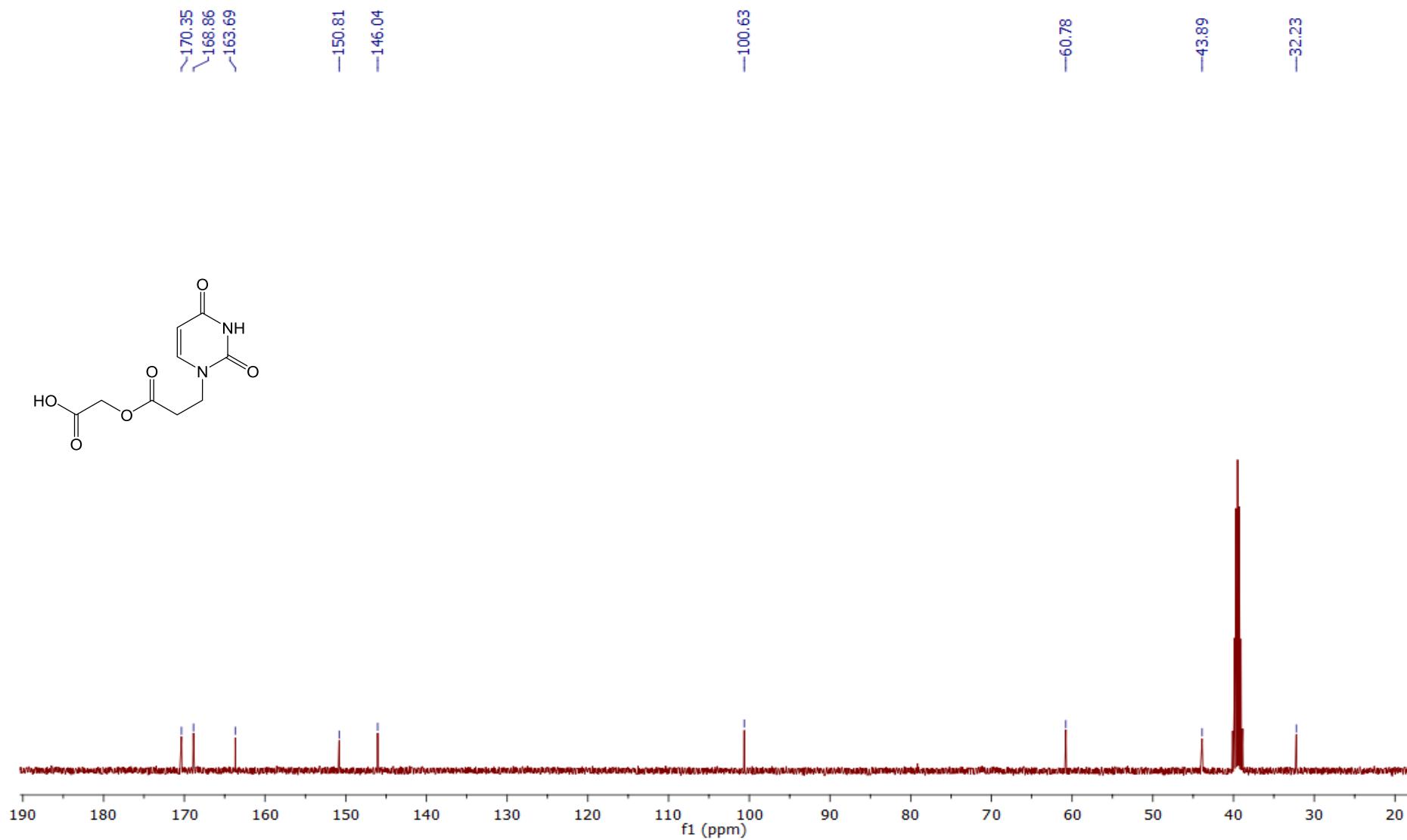


Fig. S18: ¹³C NMR spectrum of ([3-(2,4-dioxo-3,4-dihydropyrimidin-1(2H)-yl)propanoyl] oxyacetic acid **30**)

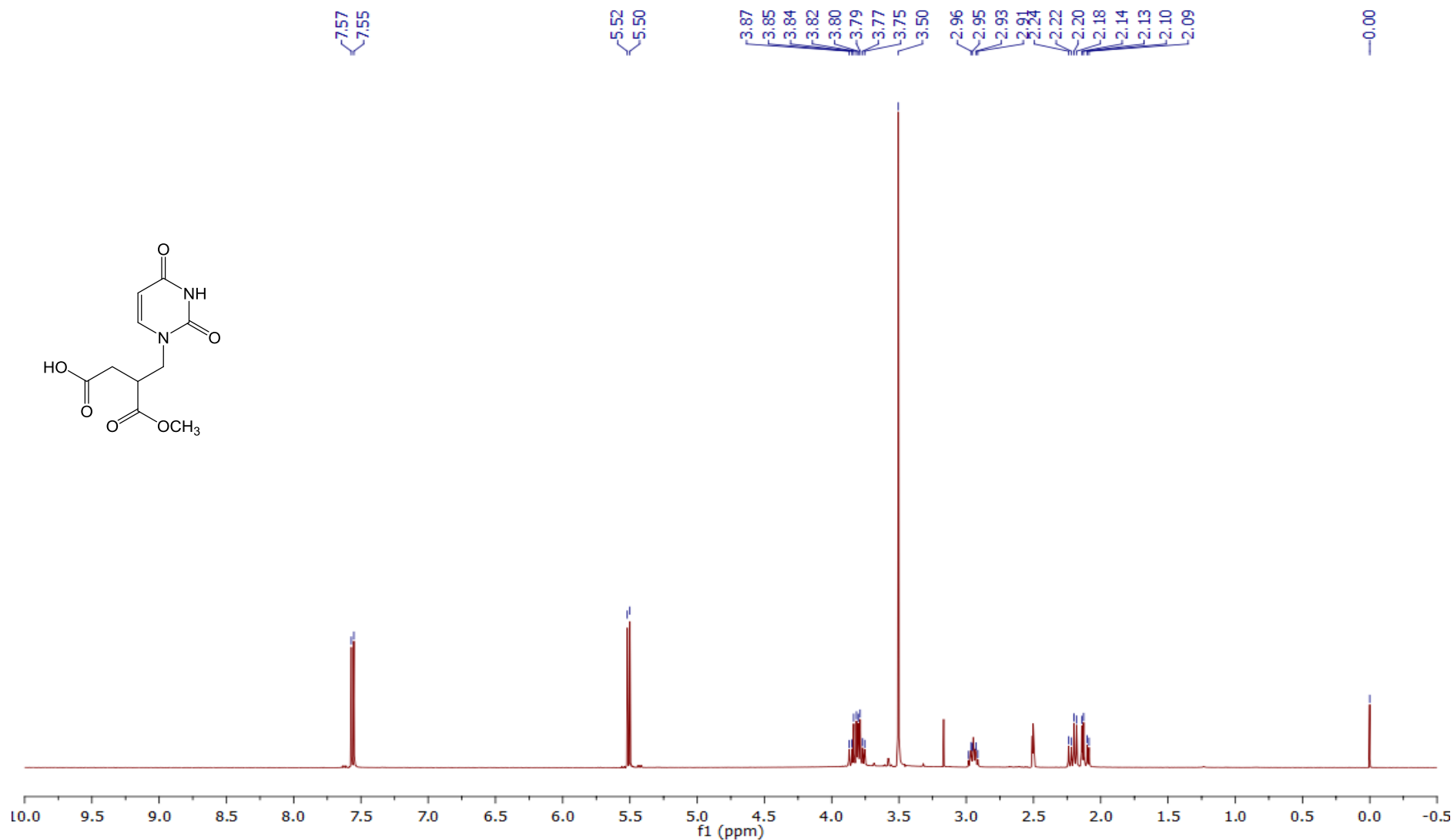


Fig. S19: ¹H NMR spectrum of 3-[(2,4-dioxo-3,4-dihydropyrimidin-1(2H)-yl)methyl]-4-oxobutanoic acid **32**

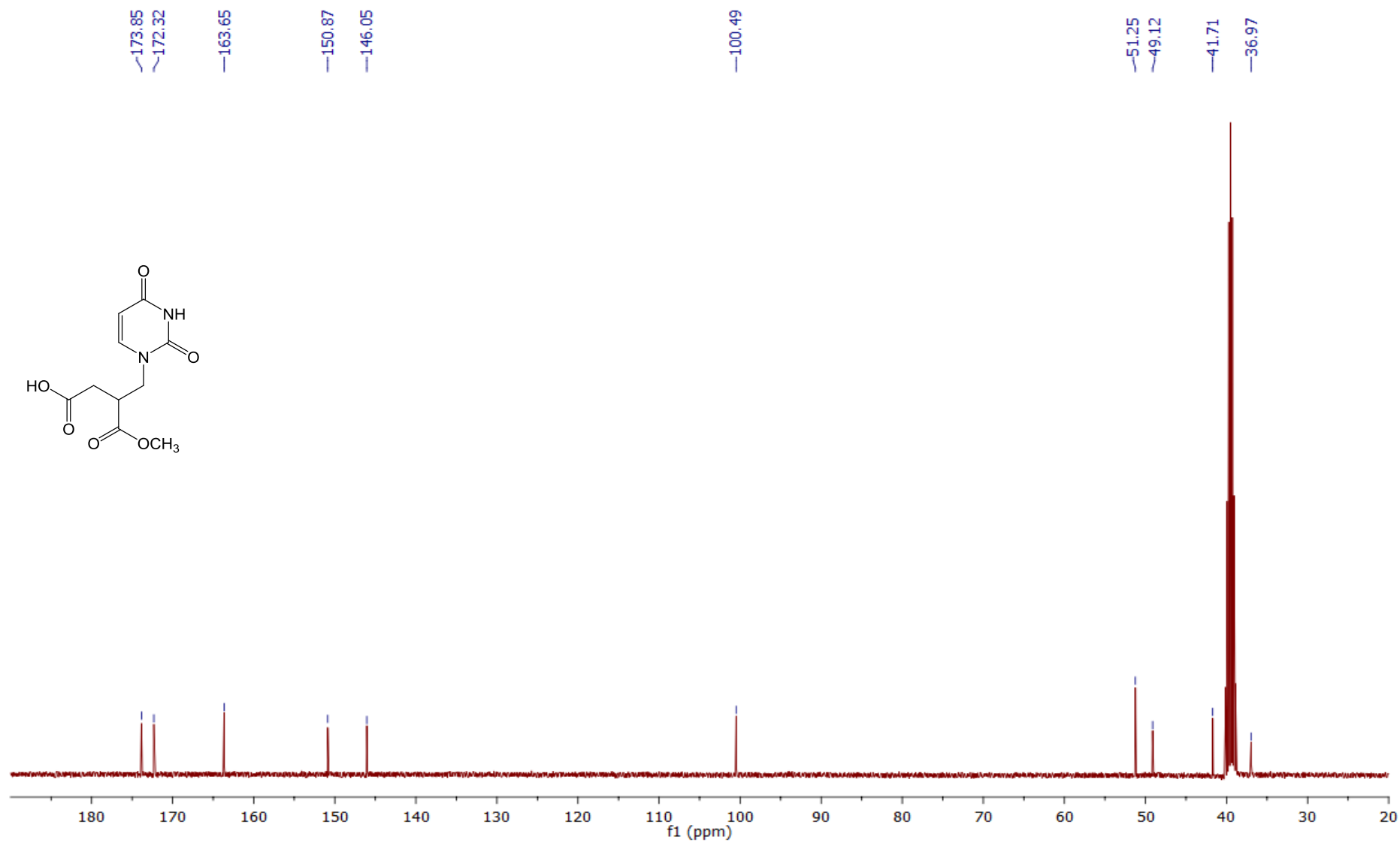


Fig. S20: ¹³C NMR spectrum of 3-[(2,4-dioxo-3,4-dihydropyrimidin-1(2H)-yl)methyl]-4-oxobutanoic acid **32**

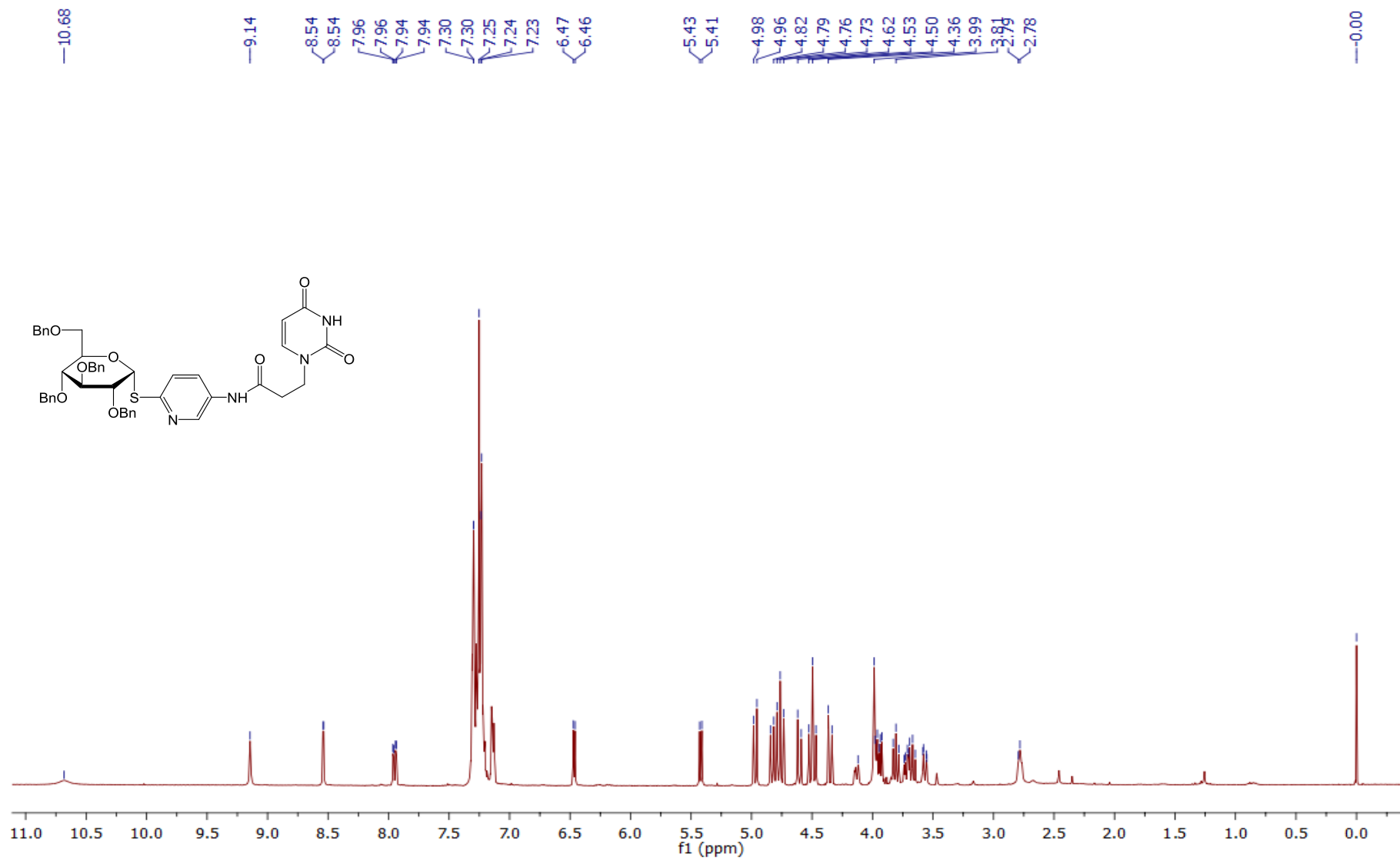


Fig. S21: ¹H NMR spectrum of glycoconjugate **33**

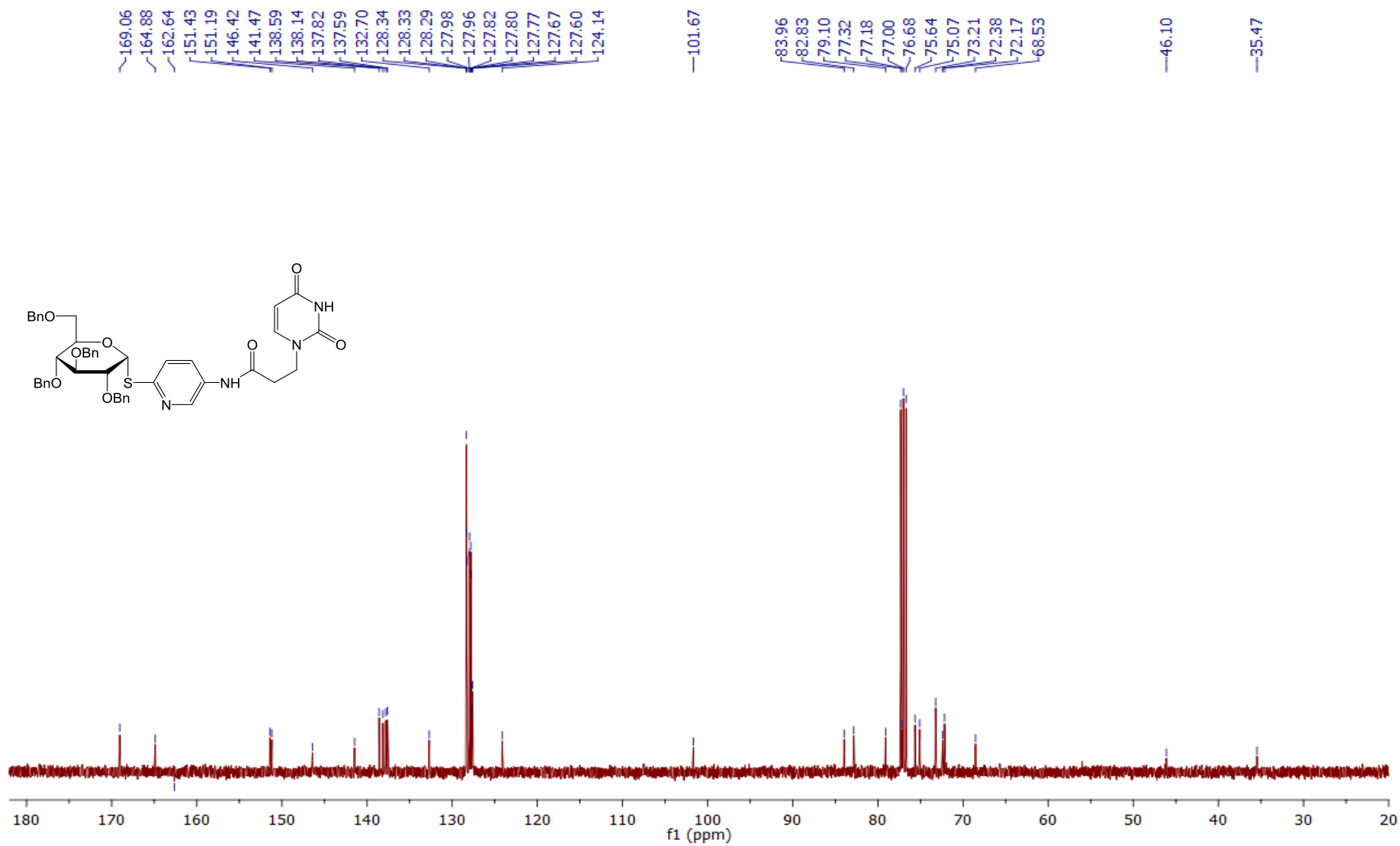


Fig. S22: ^{13}C NMR spectrum of glycoconjugate **33**

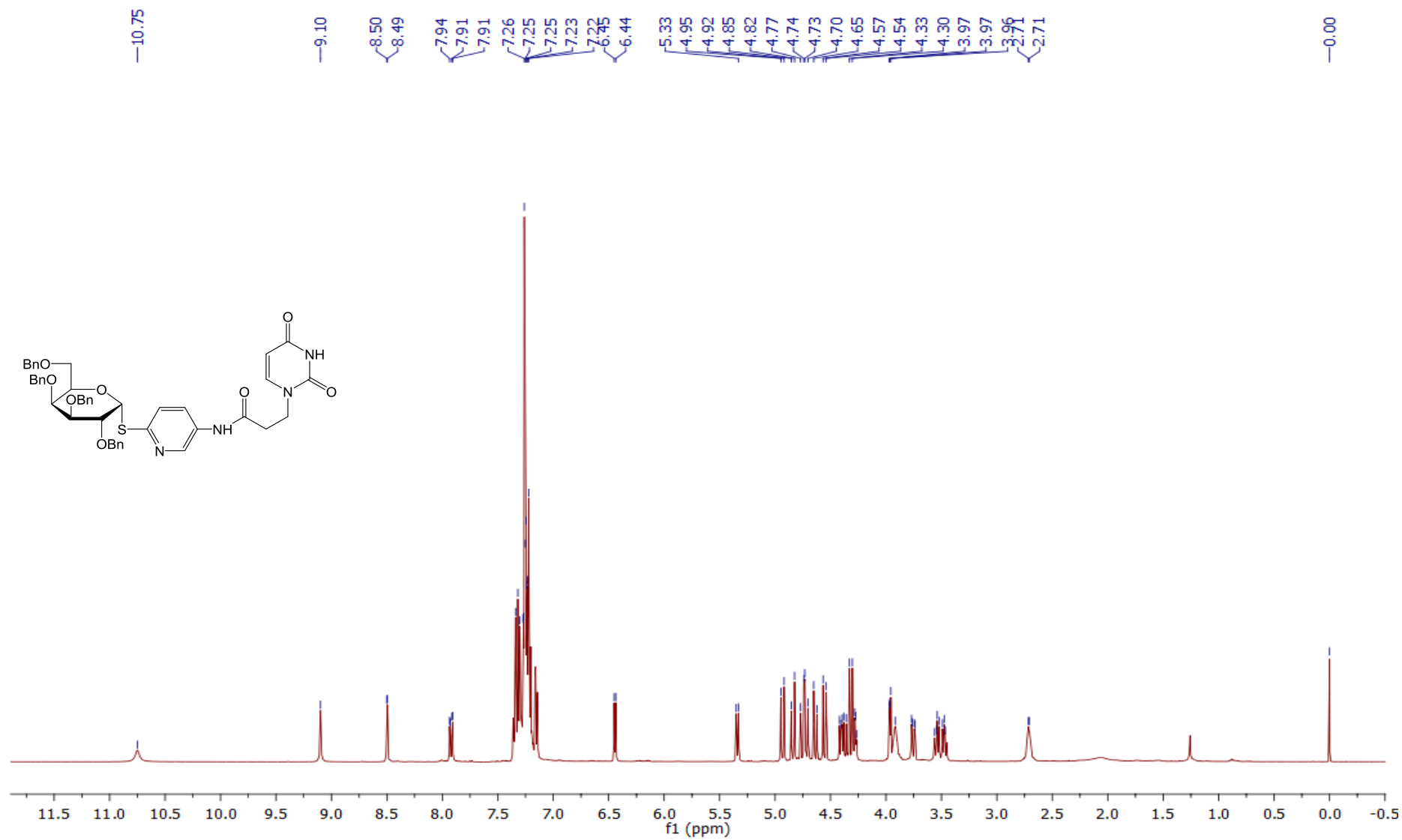


Fig. S23: ^1H NMR spectrum of glycoconjugate **34**

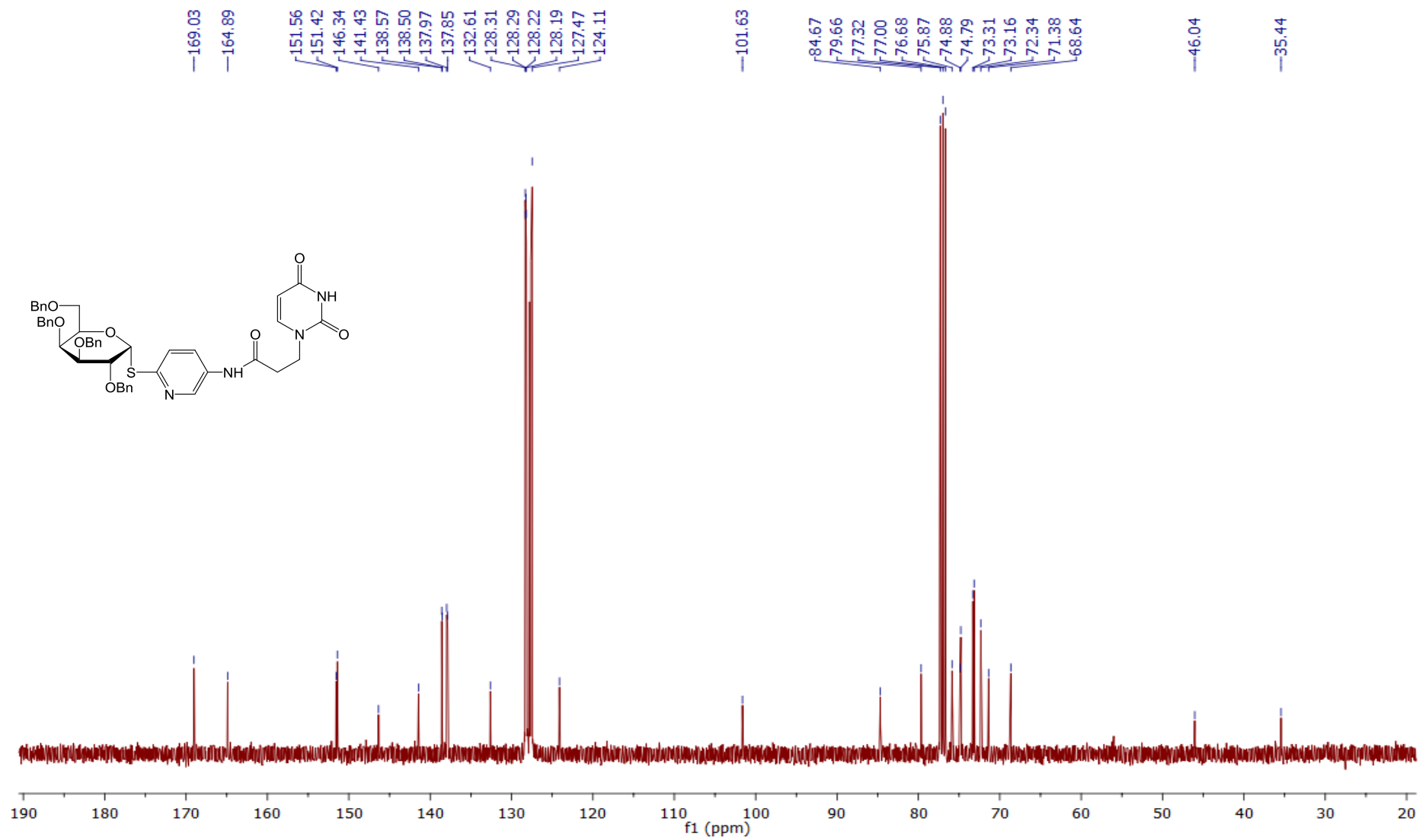


Fig. S24: ^{13}C NMR spectrum of glycoconjugate **34**

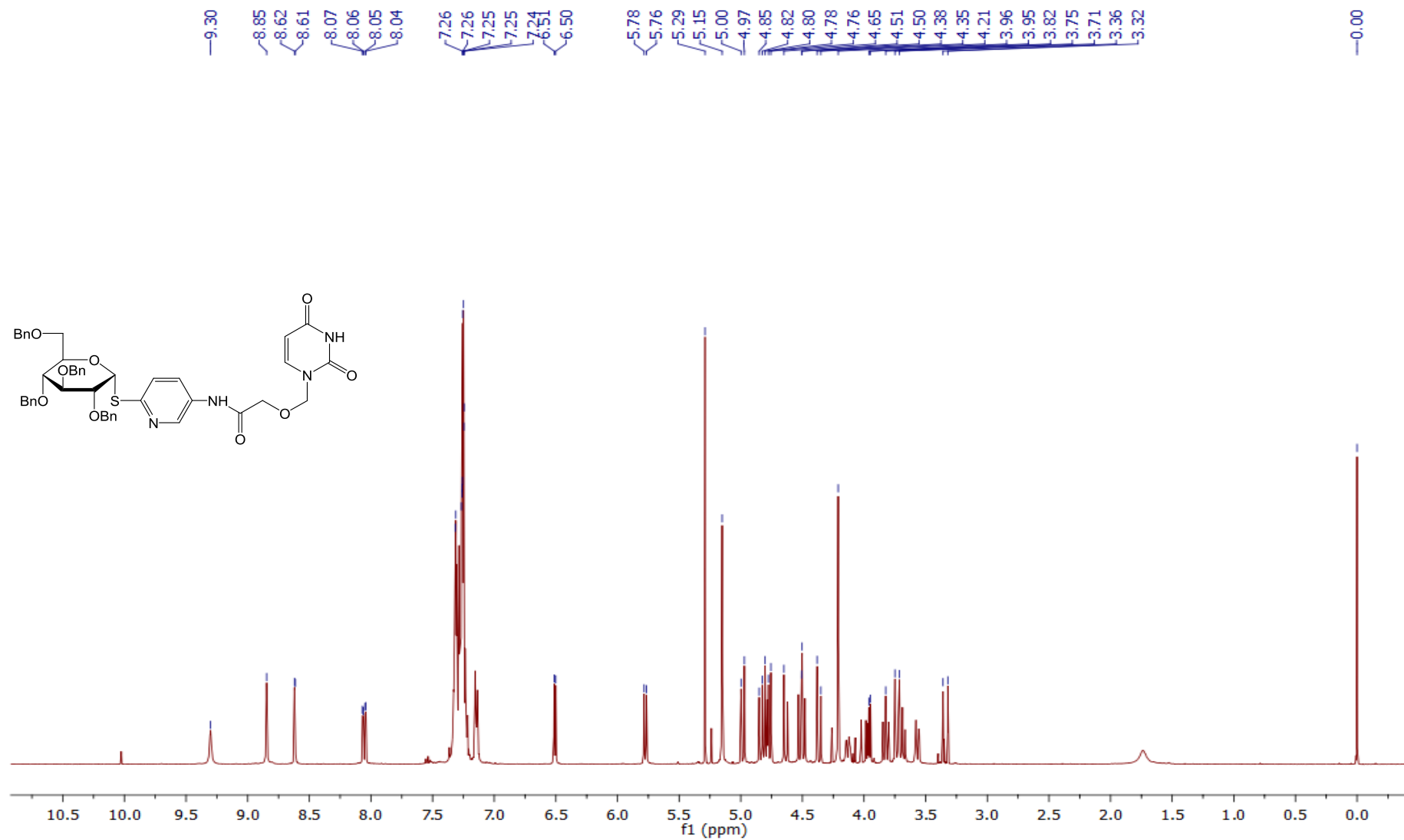


Fig. S25: ¹H NMR spectrum of glycoconjugate **35**

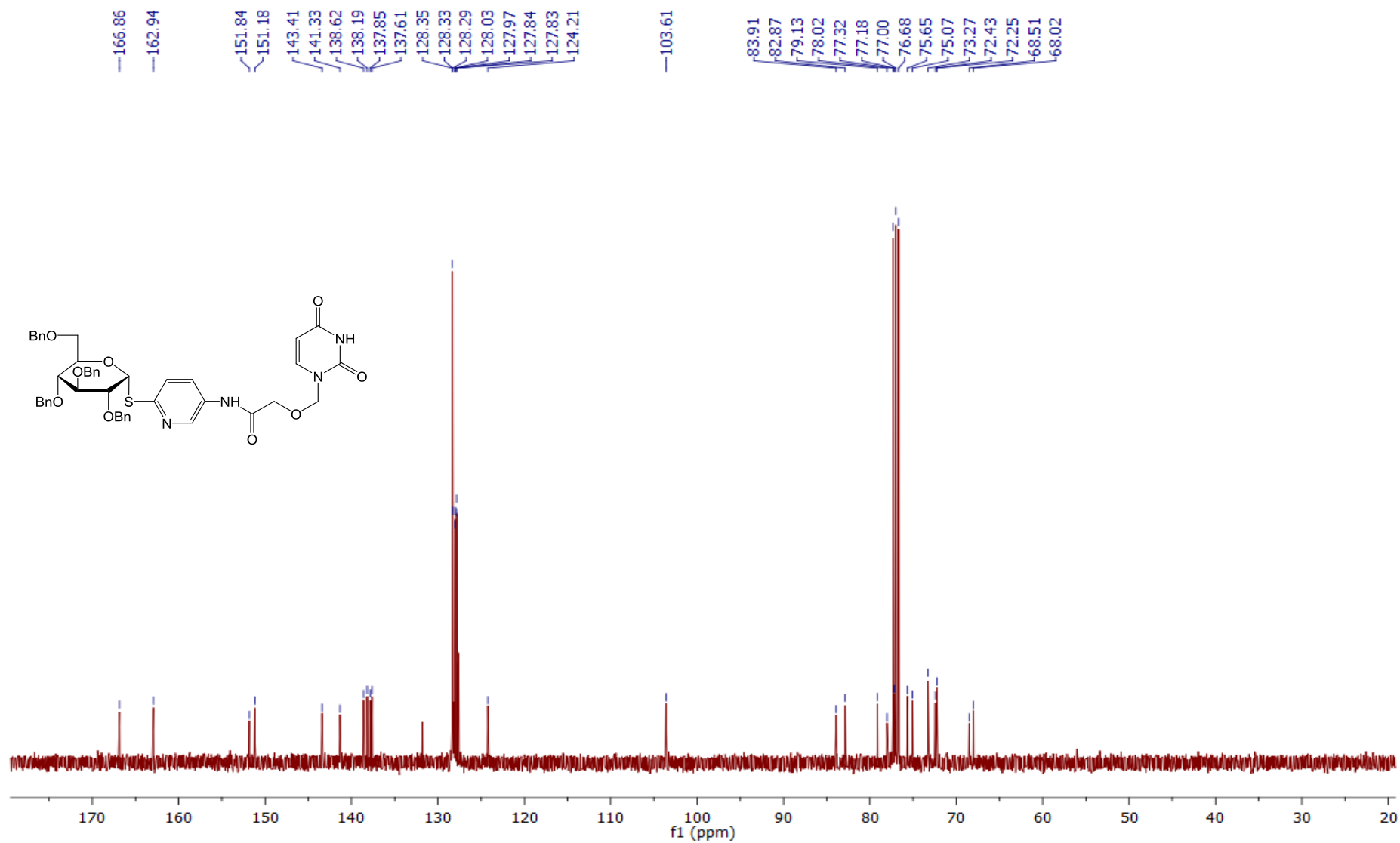


Fig. S26: ¹³C NMR spectrum of glycoconjugate **35**

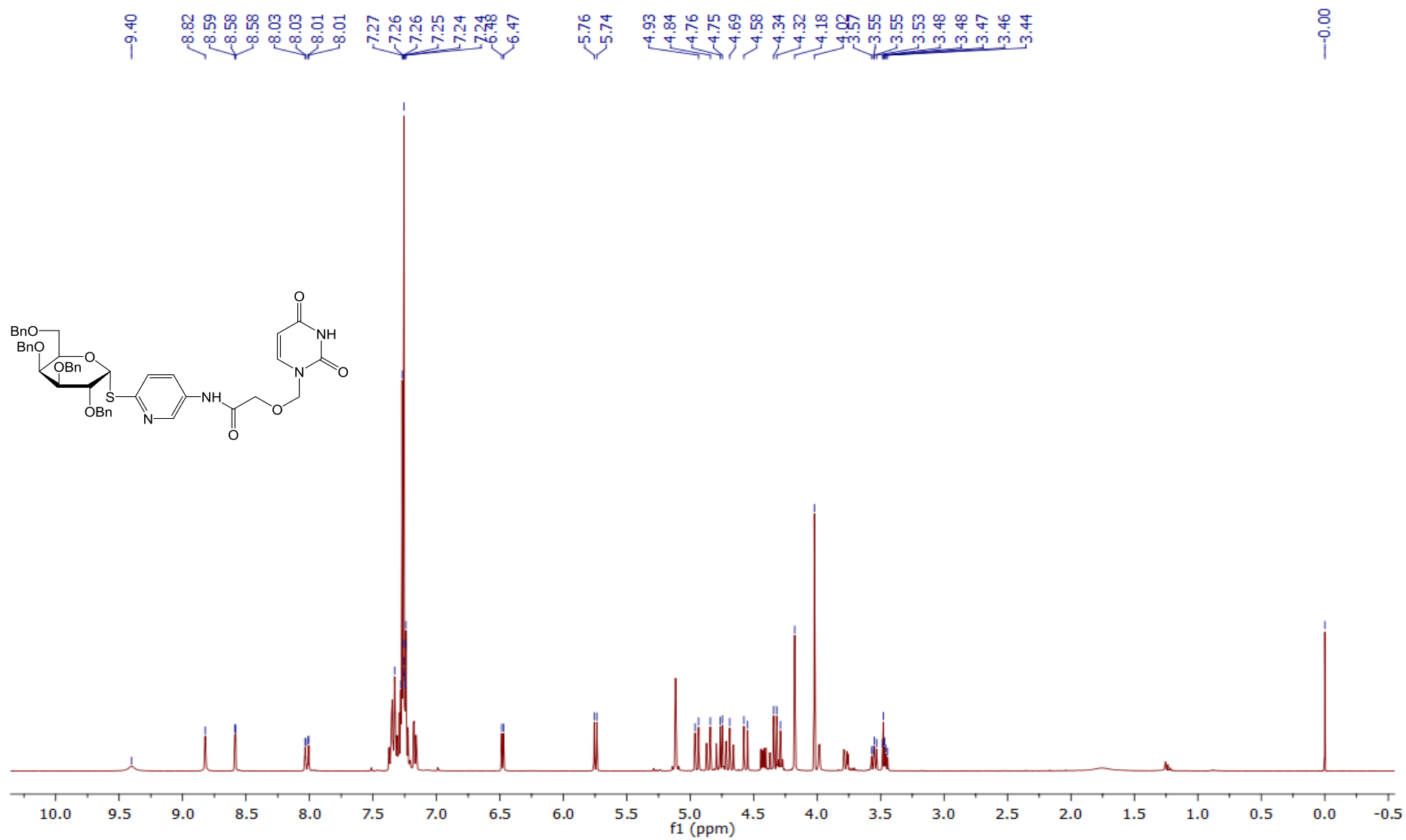


Fig. S27: ¹H NMR spectrum of glycoconjugate **36**

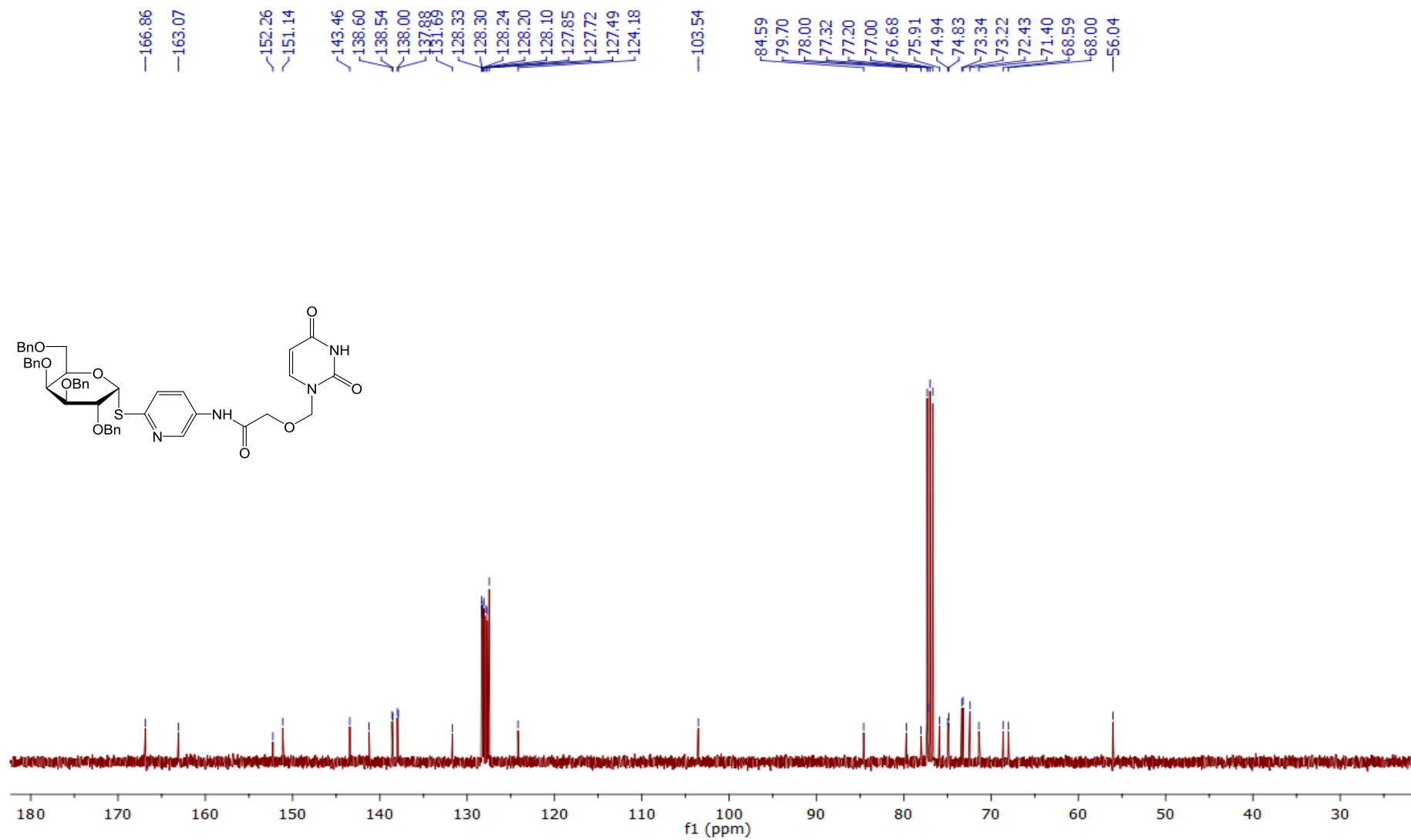


Fig. S28: ^{13}C NMR spectrum of glycoconjugate **36**

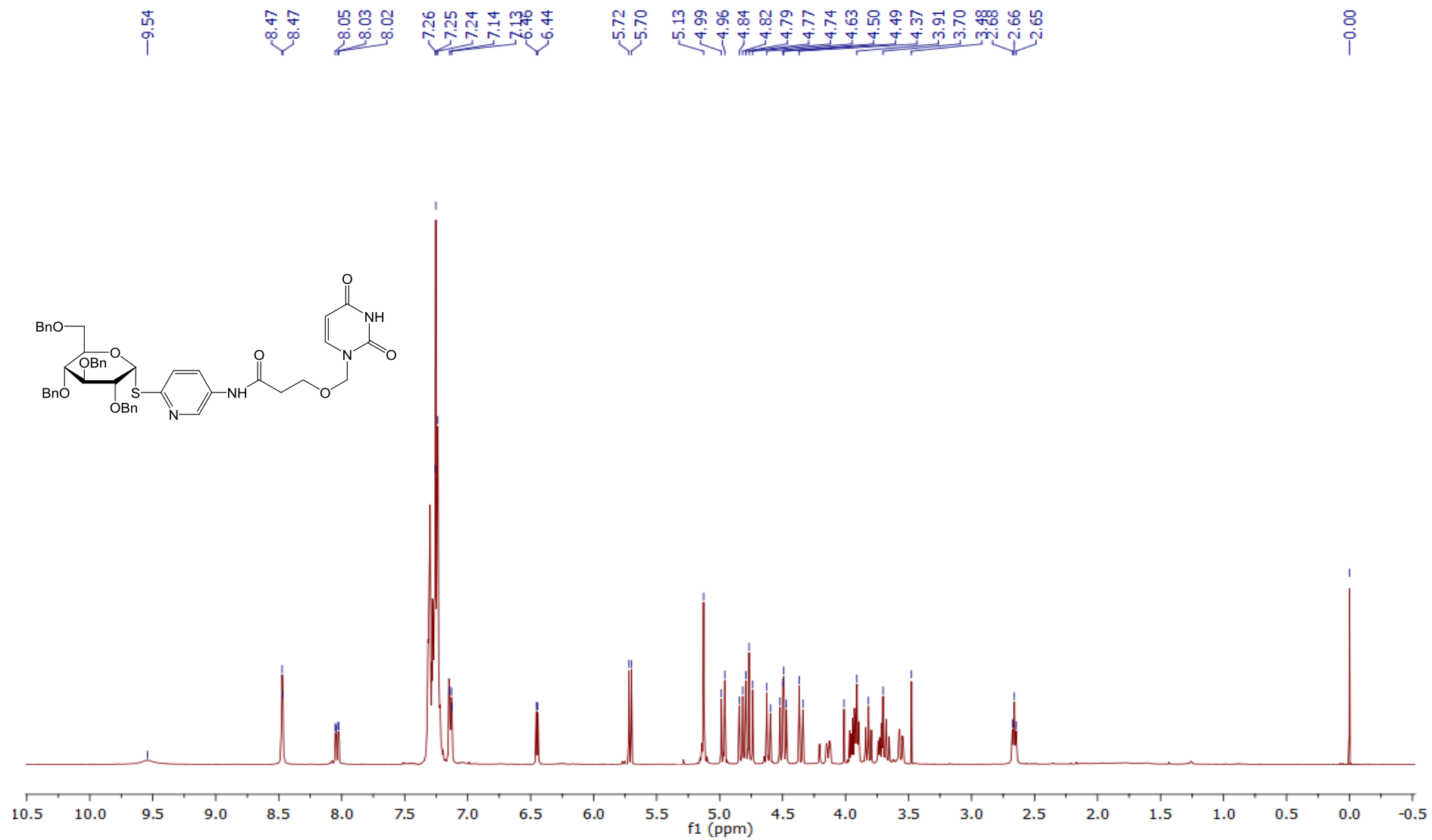


Fig. S29: ¹H NMR spectrum of glycoconjugate **37**

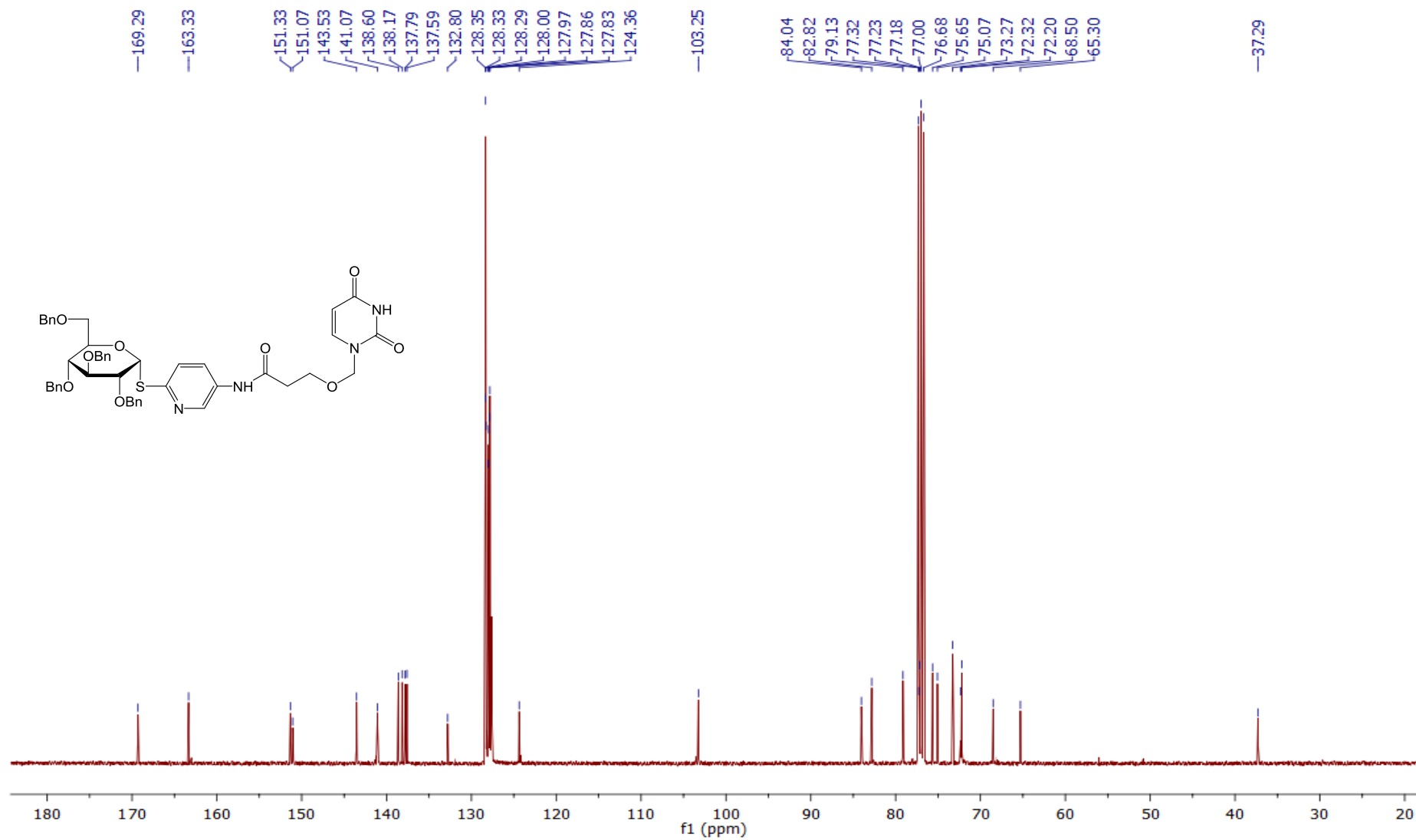


Fig. S30: ¹³C NMR spectrum of glycoconjugate **37**

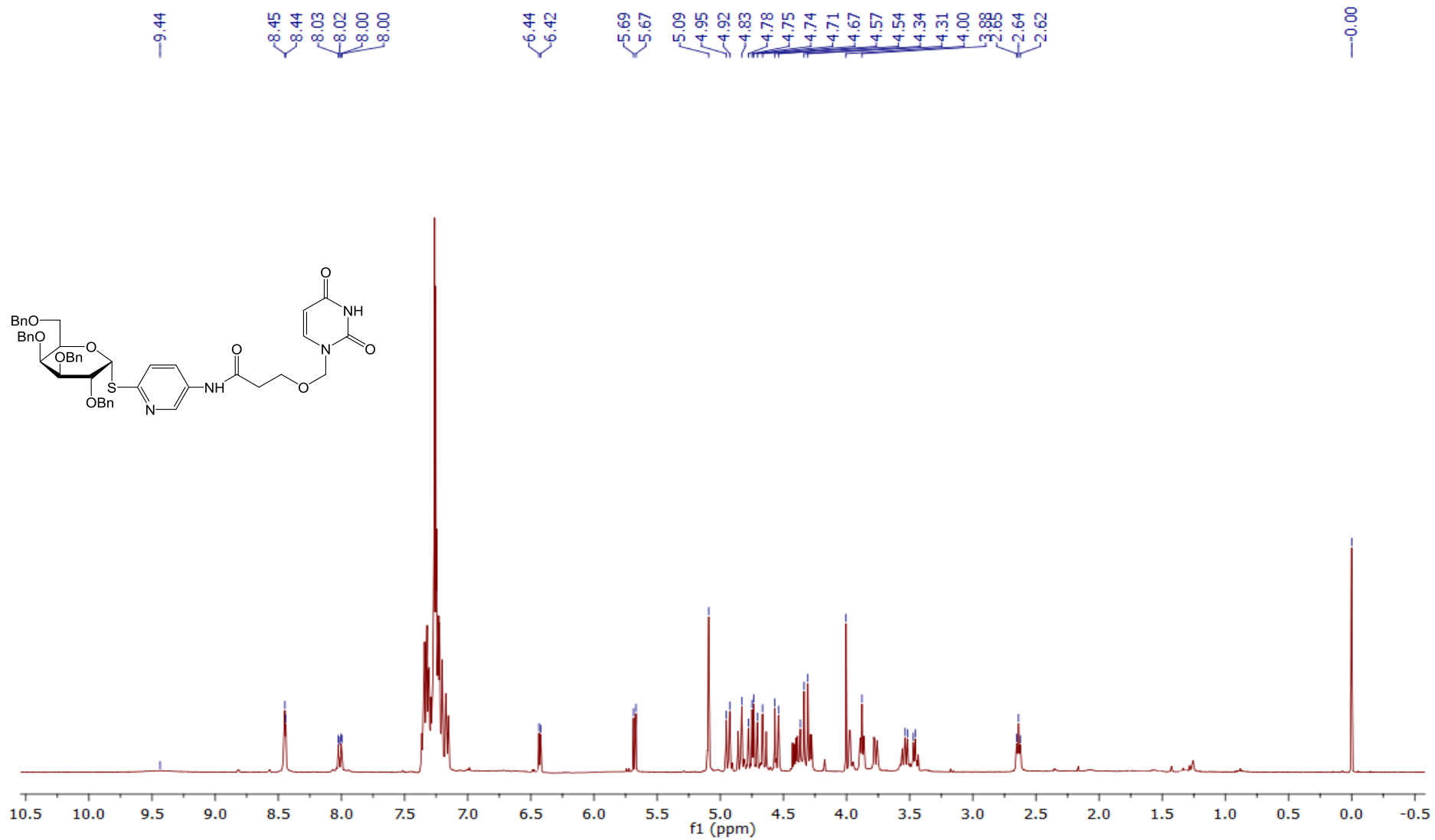


Fig. S31: ¹H NMR spectrum of glycoconjugate **38**

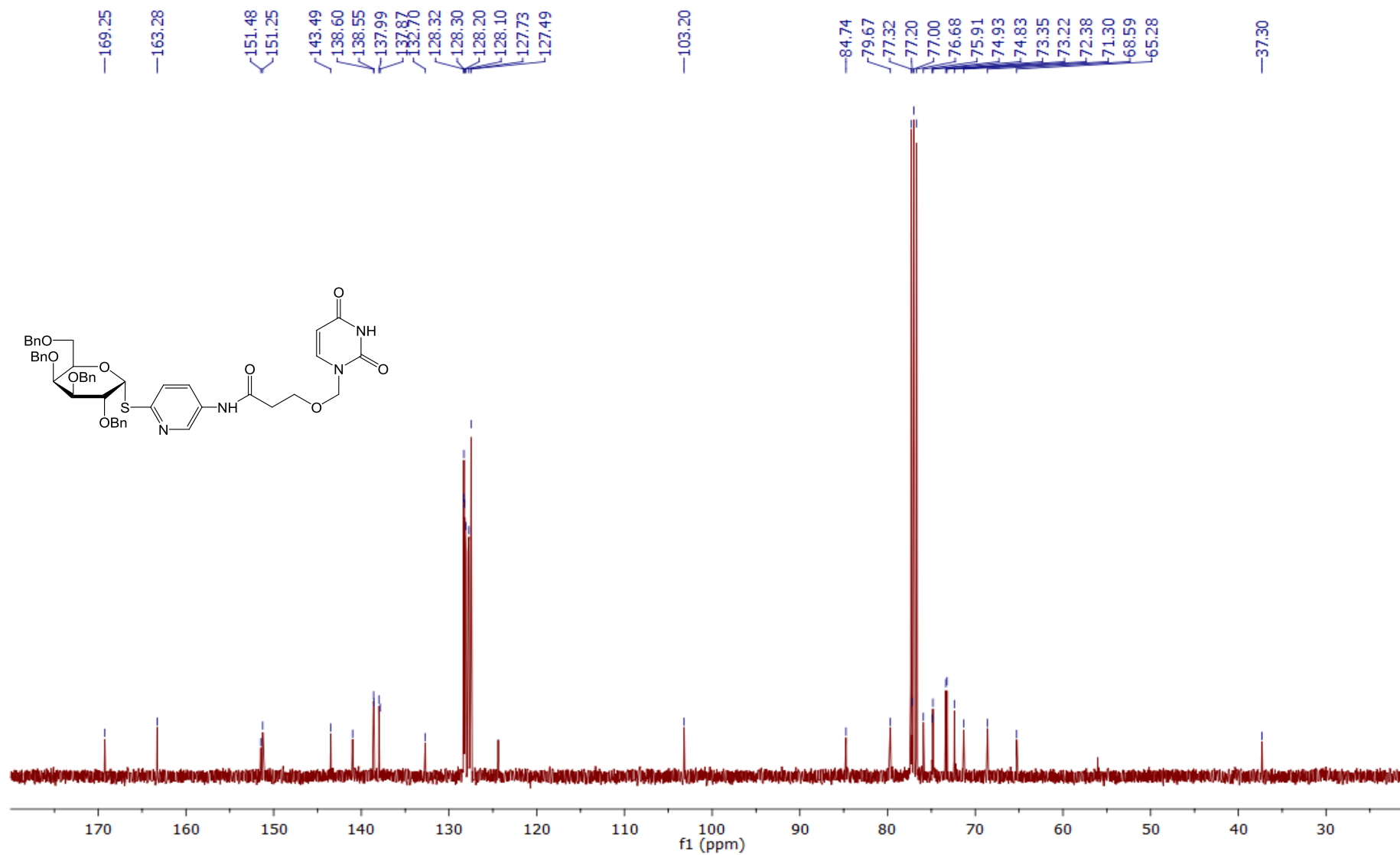


Fig. S32: ¹³C NMR spectrum of glycoconjugate **38**

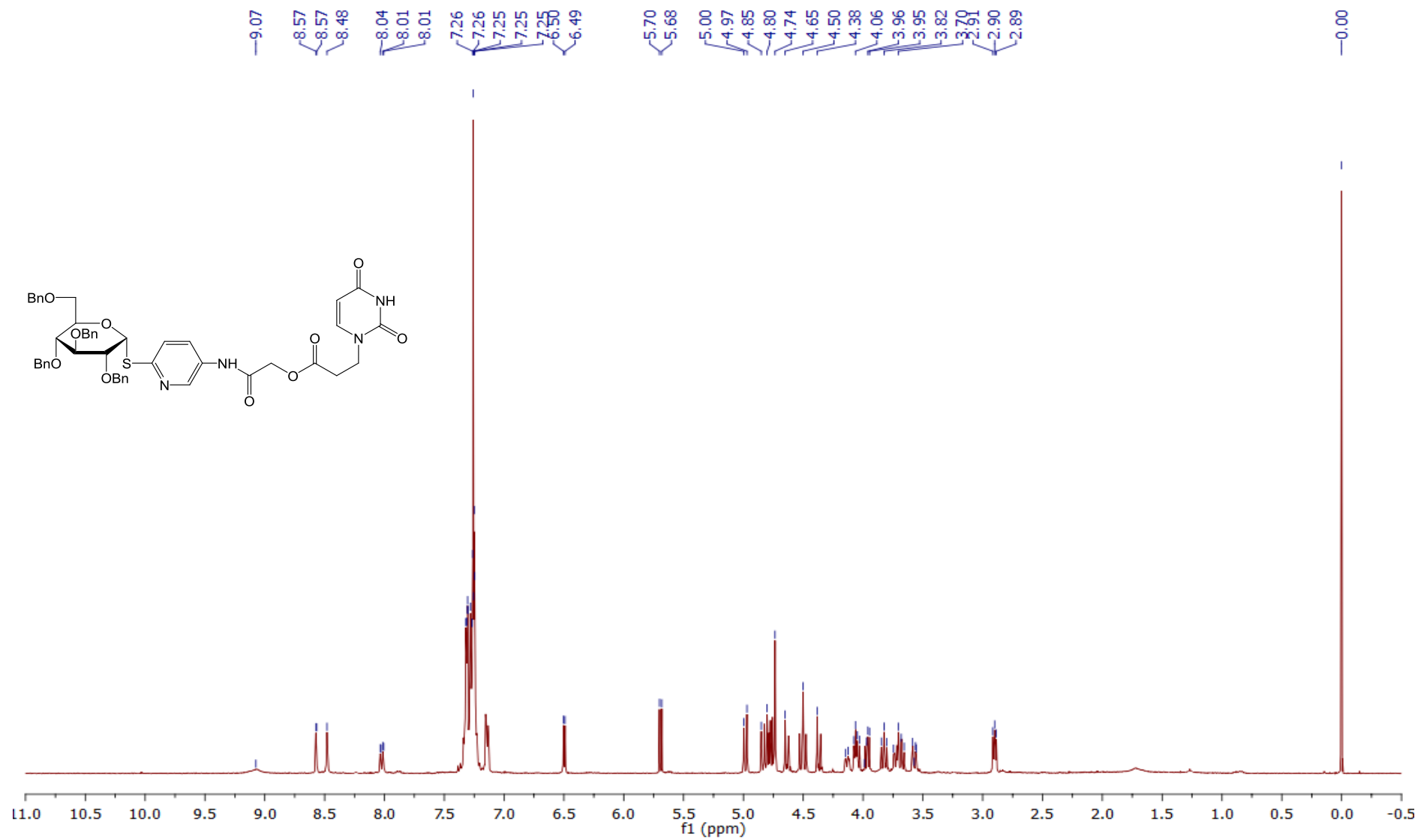


Fig. S33: ¹H NMR spectrum of glycoconjugate **39**.

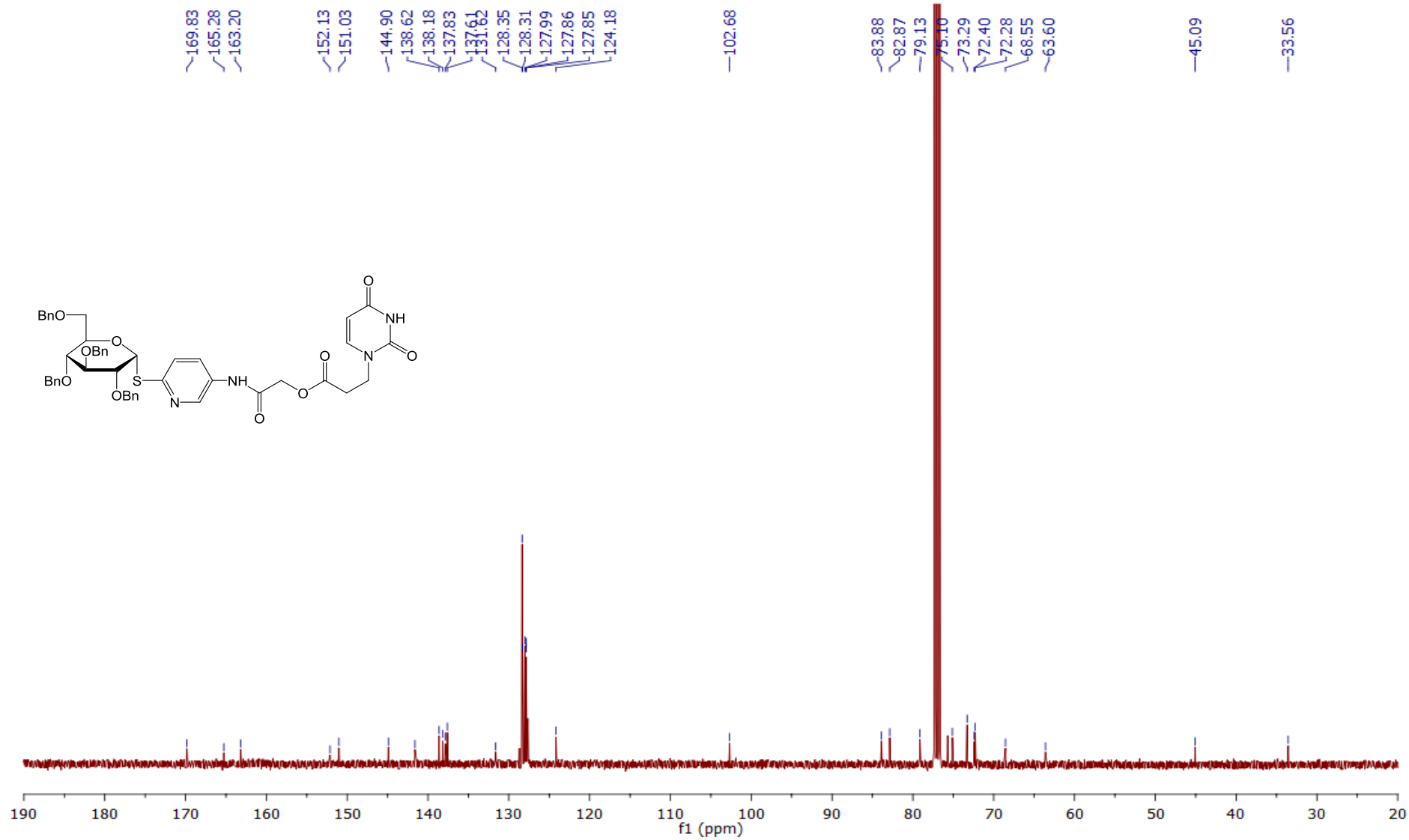


Fig. S34: ^{13}C NMR spectrum of glycoconjugate **39**

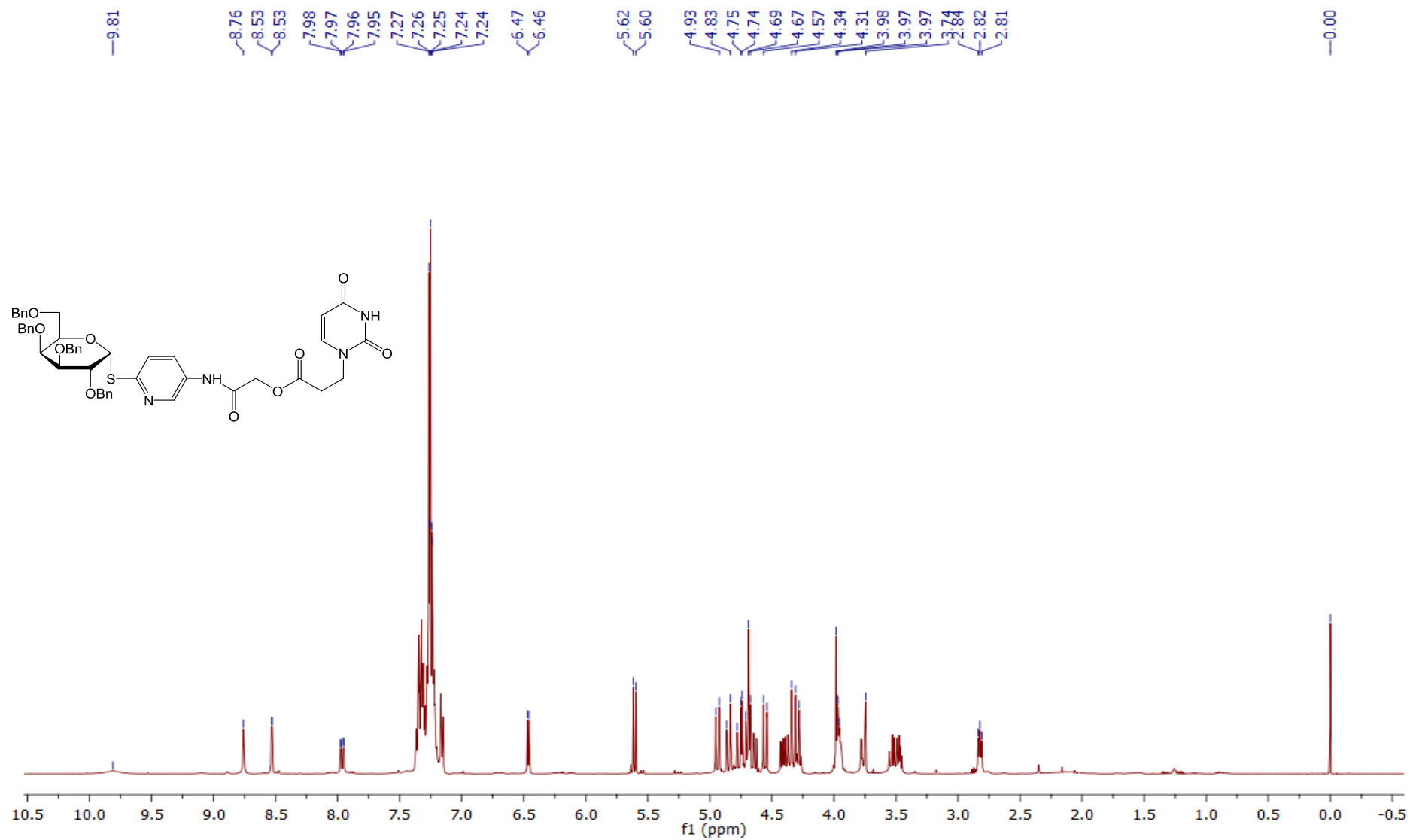


Fig. S35: ¹H NMR spectrum of glycoconjugate **40**

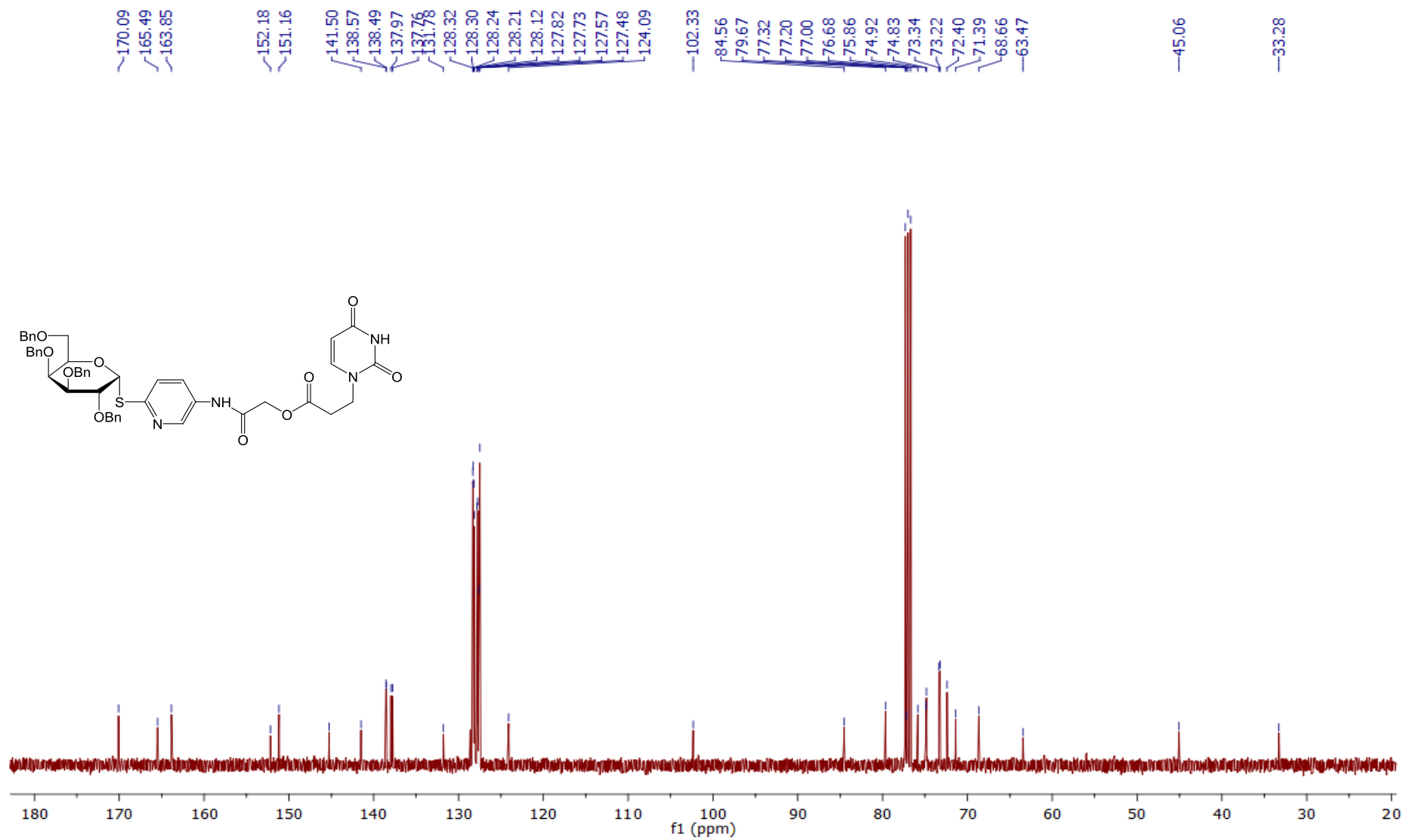


Fig. S36: ¹³C NMR spectrum of glycoconjugate **40**

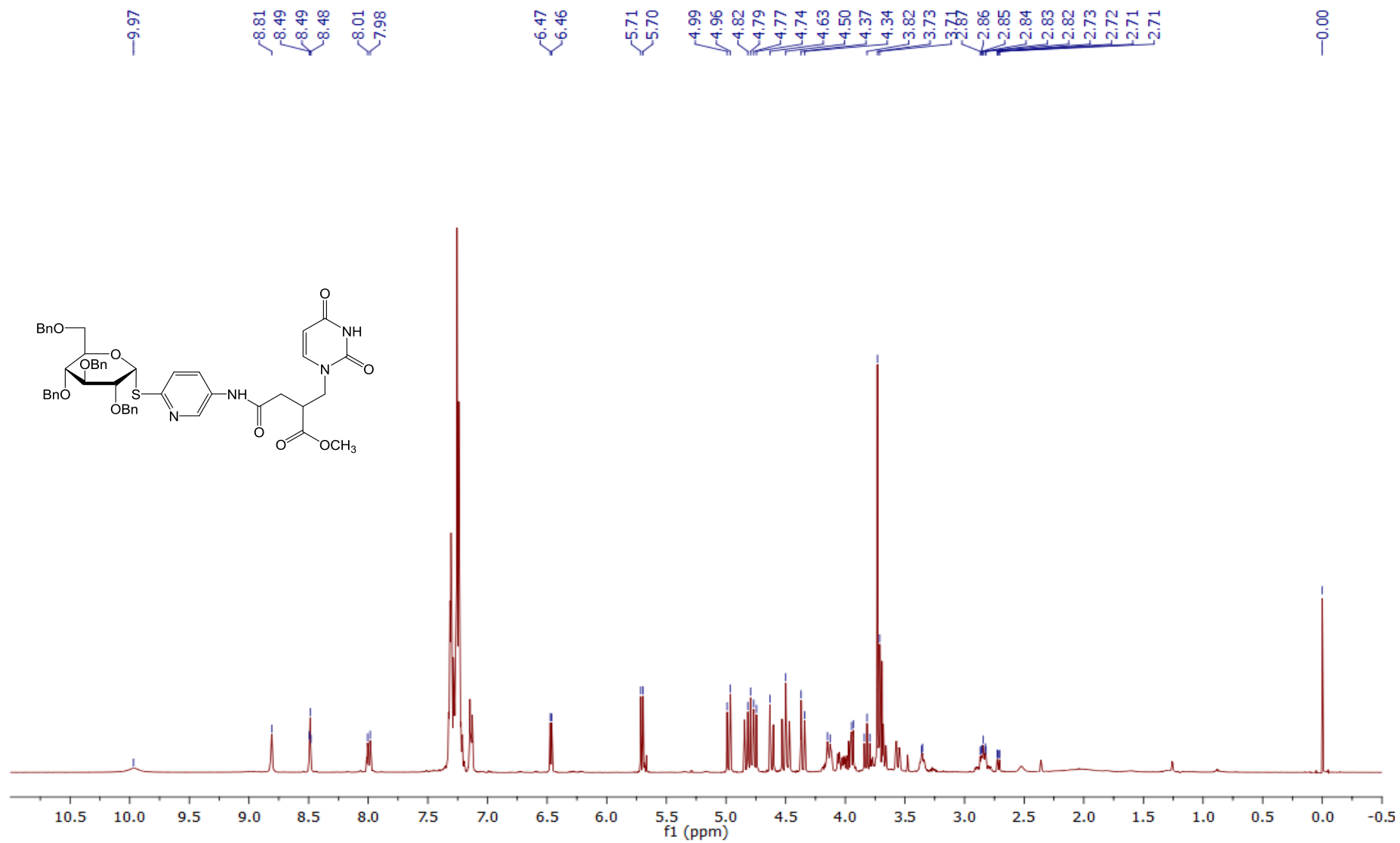


Fig. S37: ¹H NMR spectrum of glycoconjugate **41**

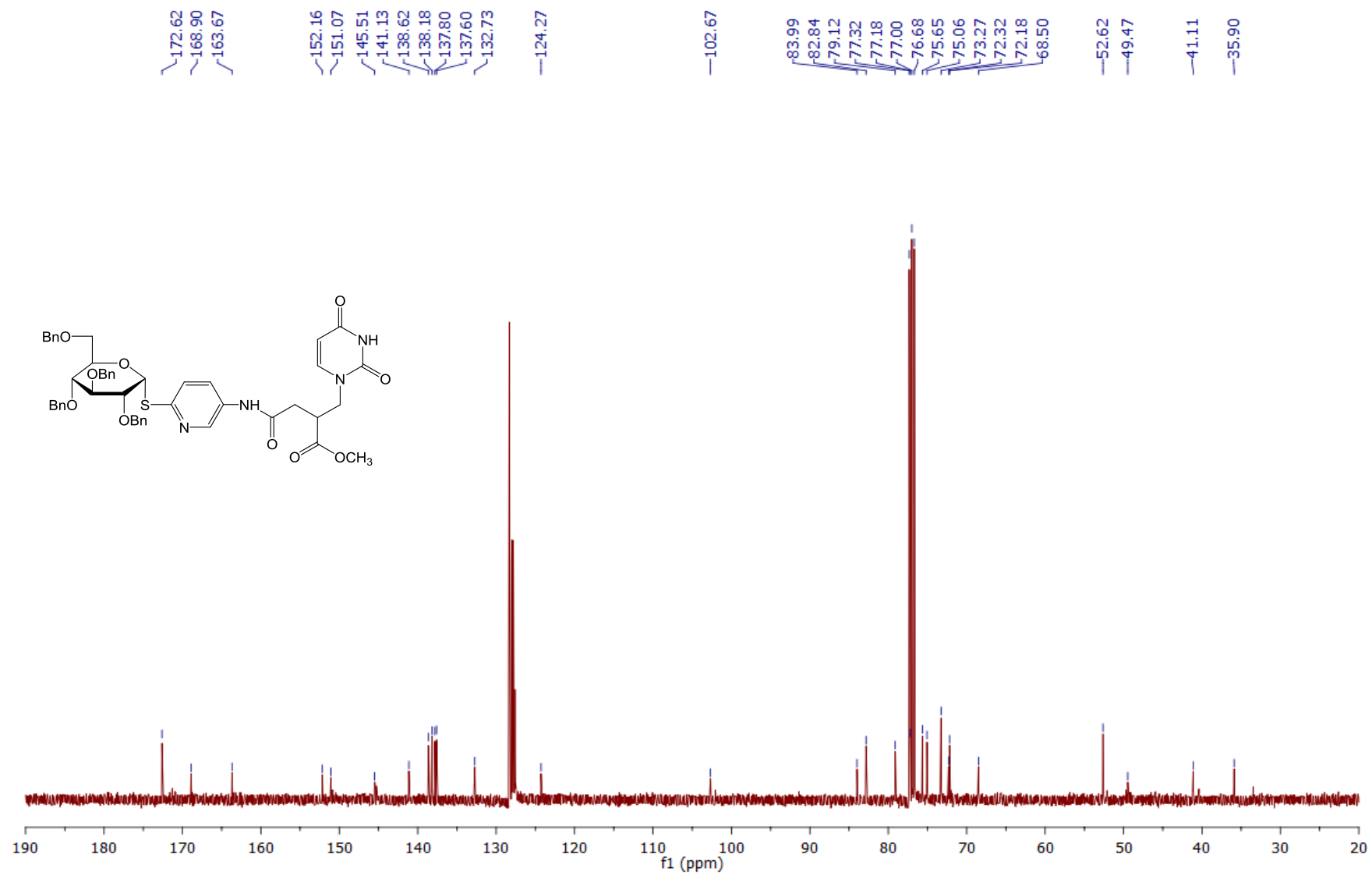


Fig. S38: ¹³C NMR spectrum of glycoconjugate **41**

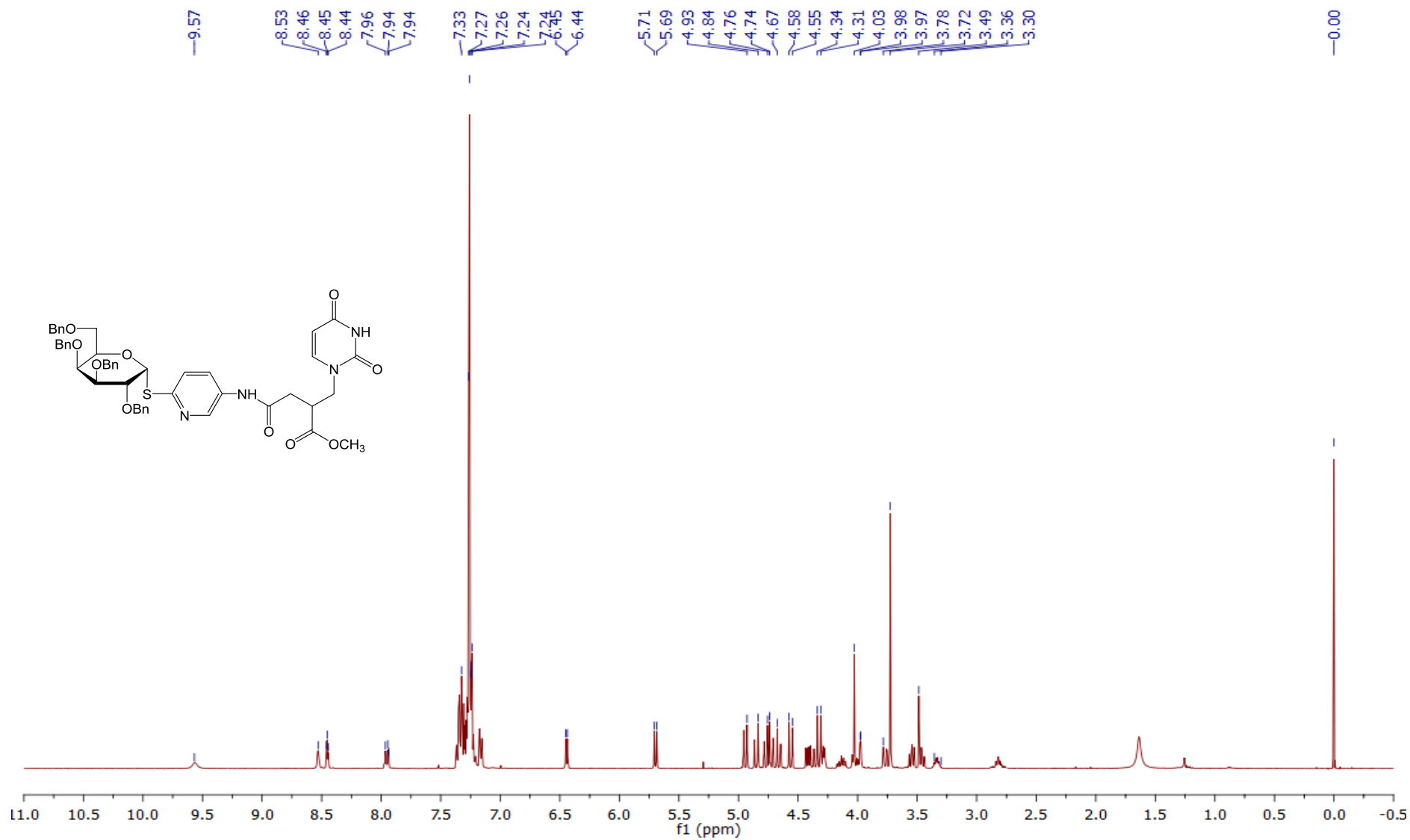


Fig. S39: ^1H NMR spectrum of glycoconjugate **42**

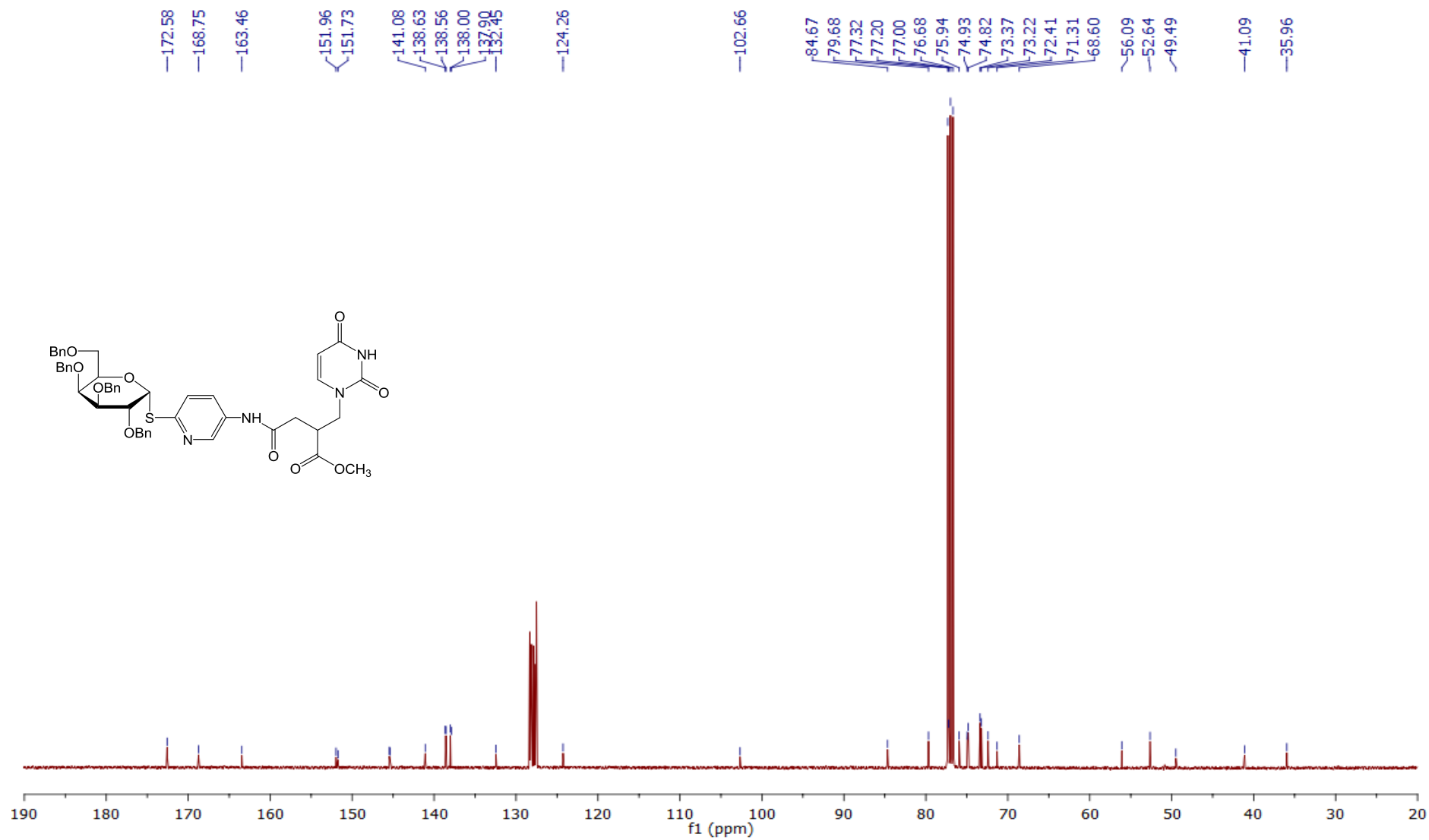


Fig. S40: ^{13}C NMR spectrum of glycoconjugate **42**

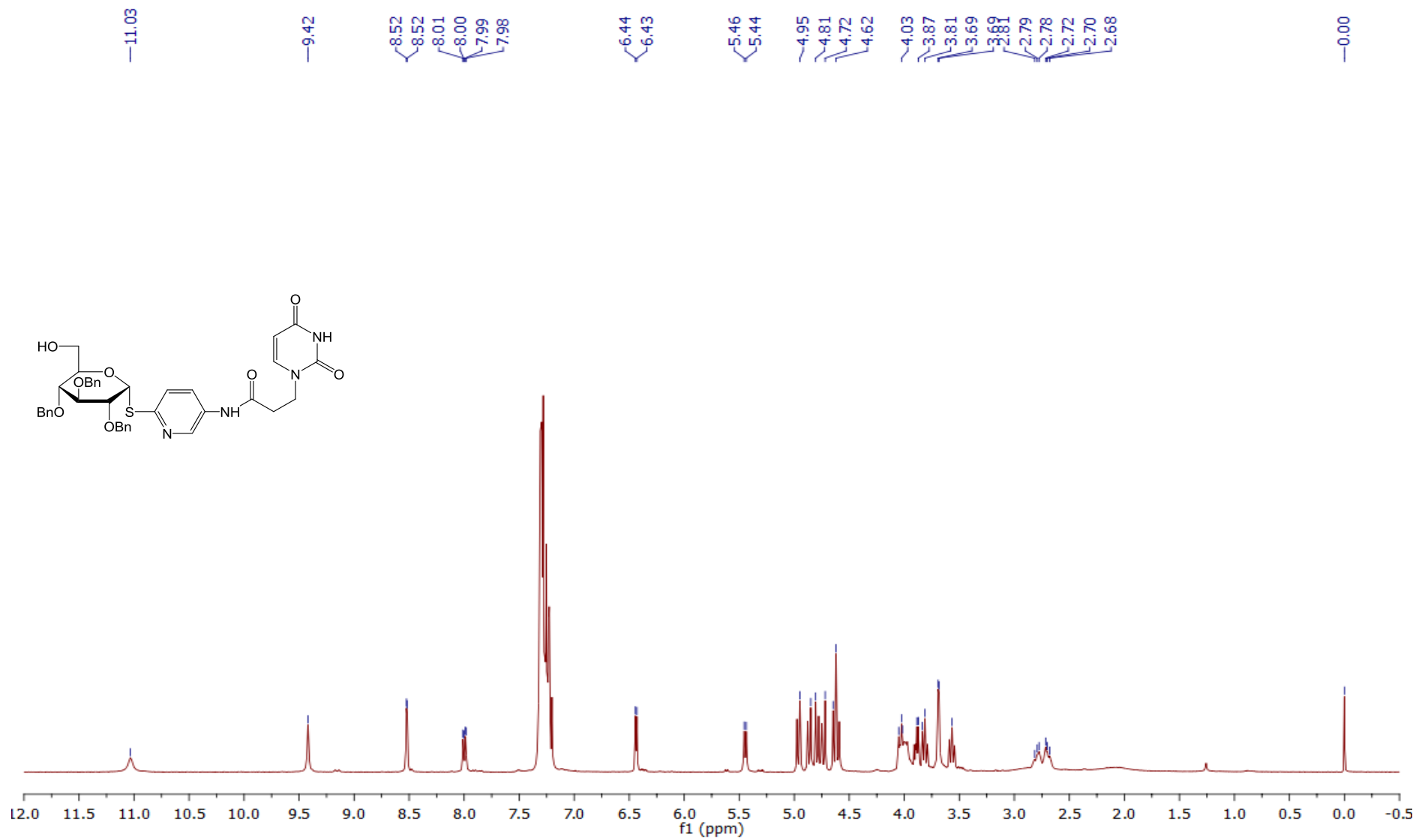


Fig. S41: ¹H NMR spectrum of glycoconjugate **43**

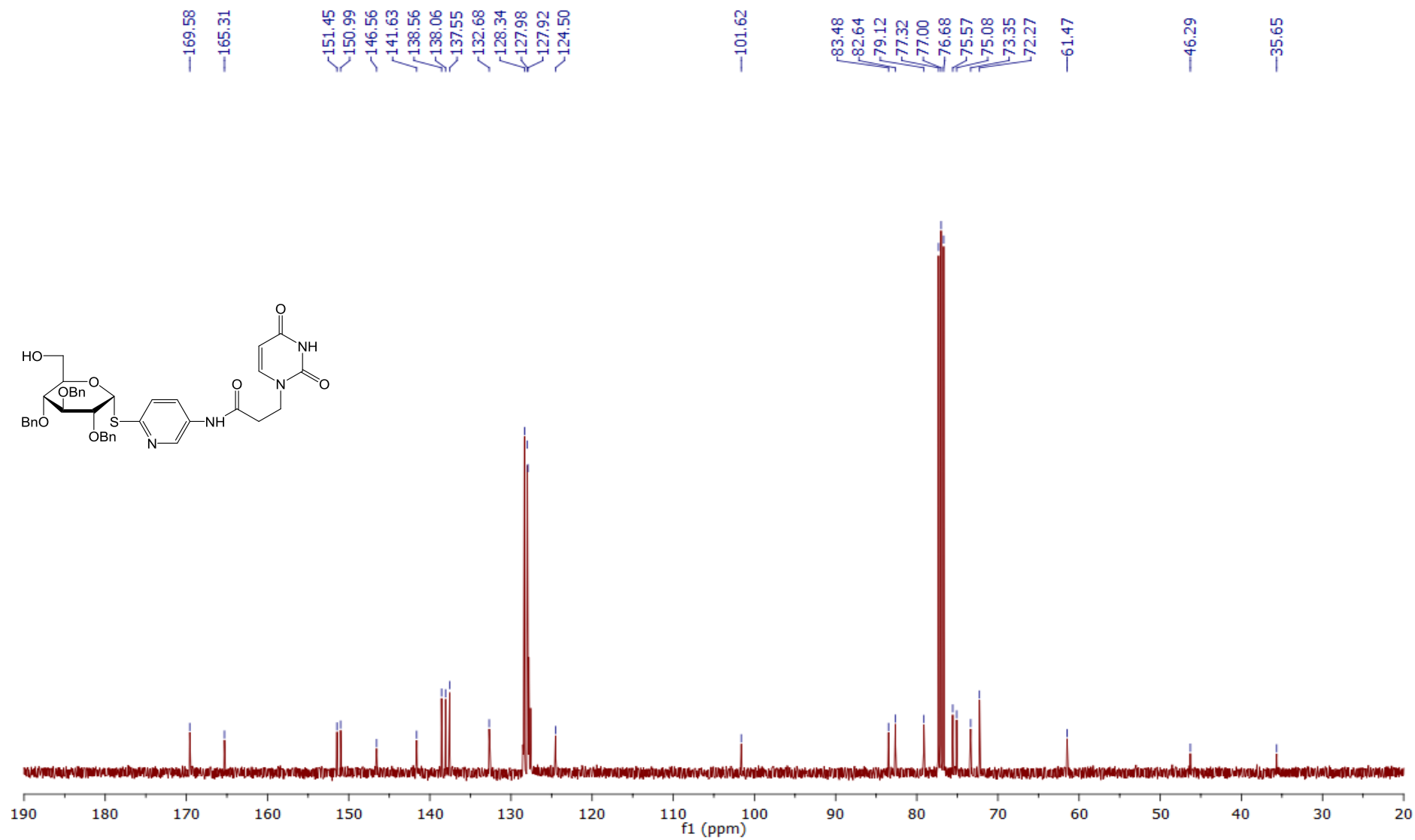


Fig. S42: ^{13}C NMR spectrum of glycoconjugate **43**

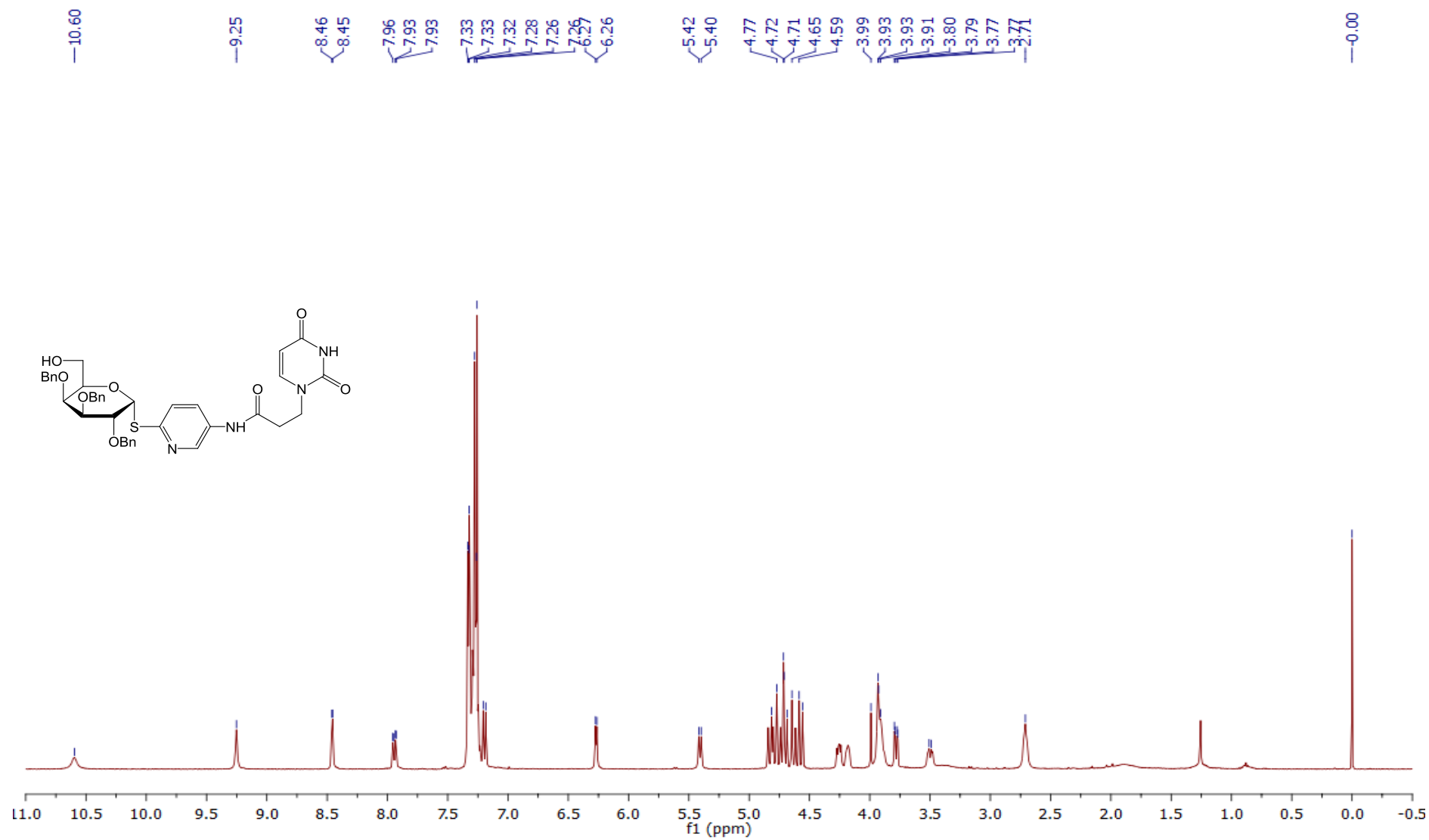


Fig. S43: ^1H NMR spectrum of glycoconjugate **44**

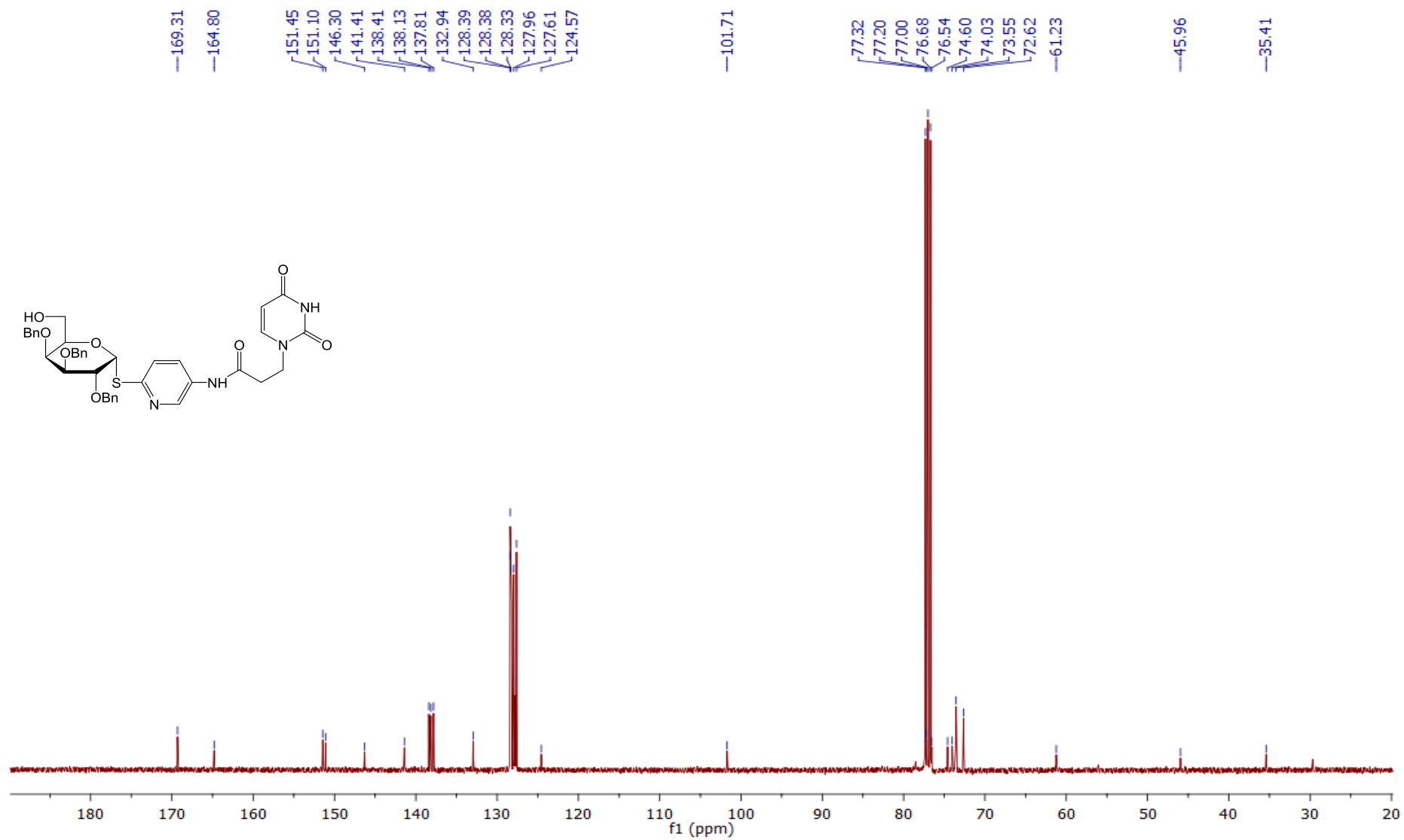


Fig. S44: ¹³C NMR spectrum of glycoconjugate **44**

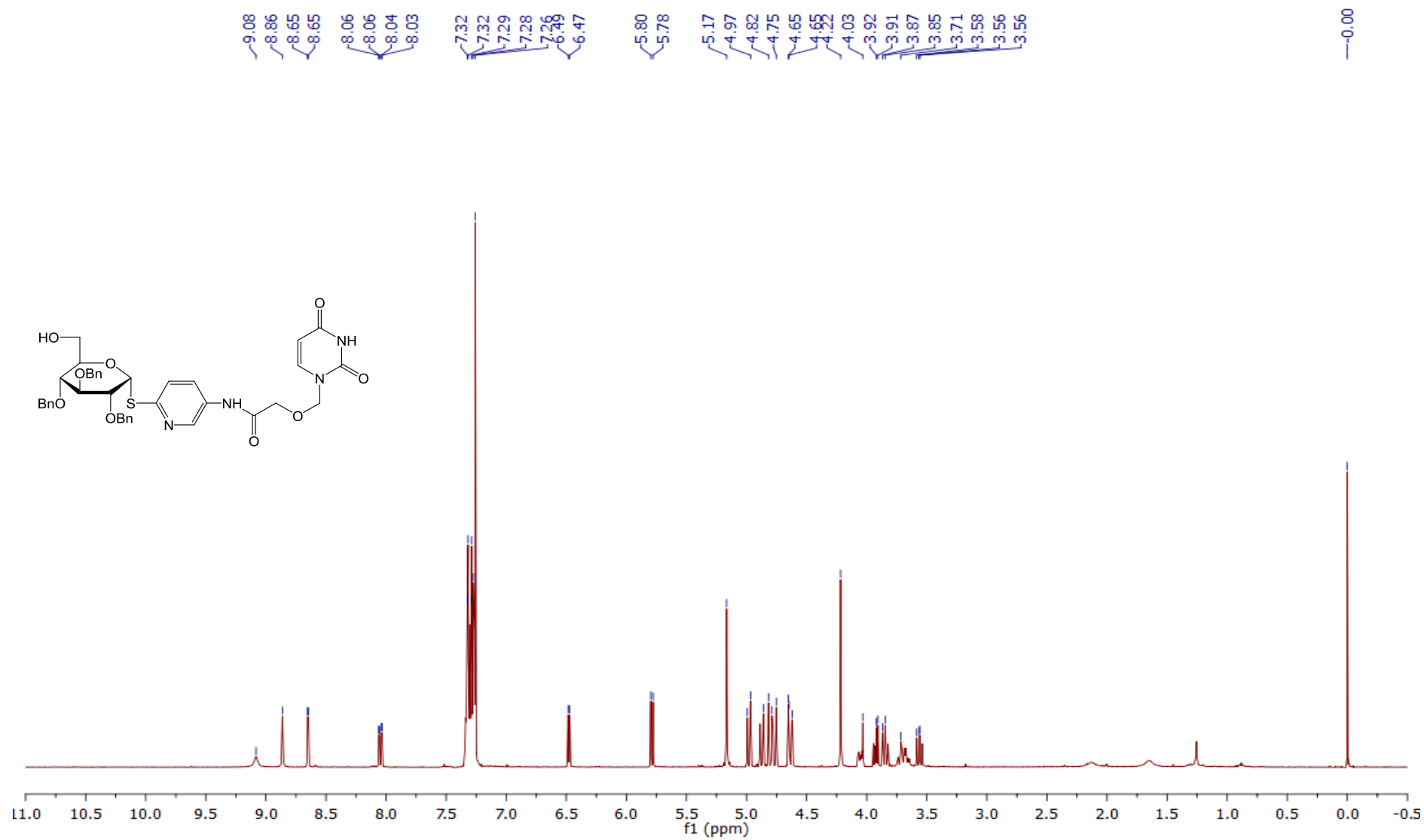


Fig. S45: ¹H NMR spectrum of glycoconjugate **45**

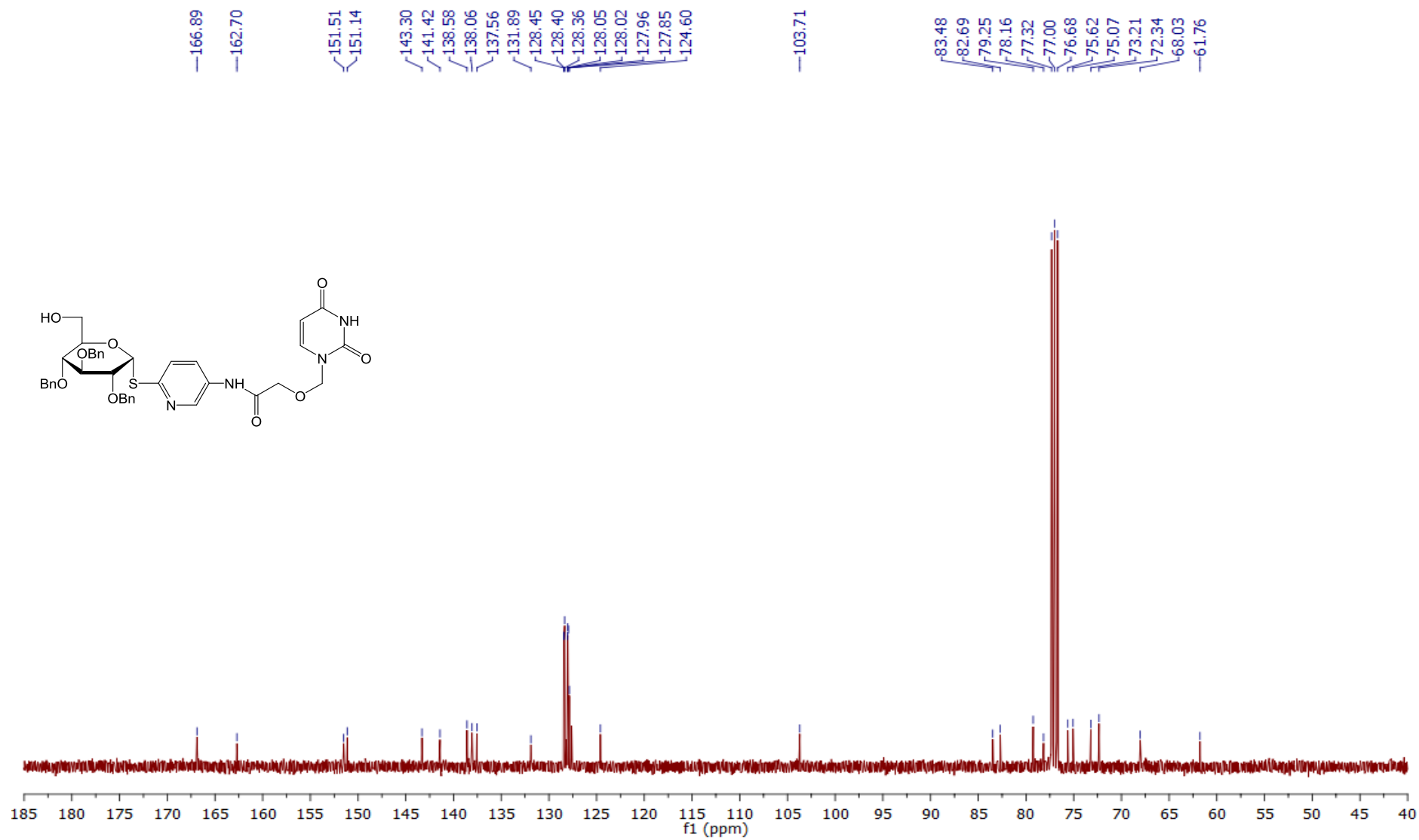


Fig. S46: ^{13}C NMR spectrum of glycoconjugate **45**

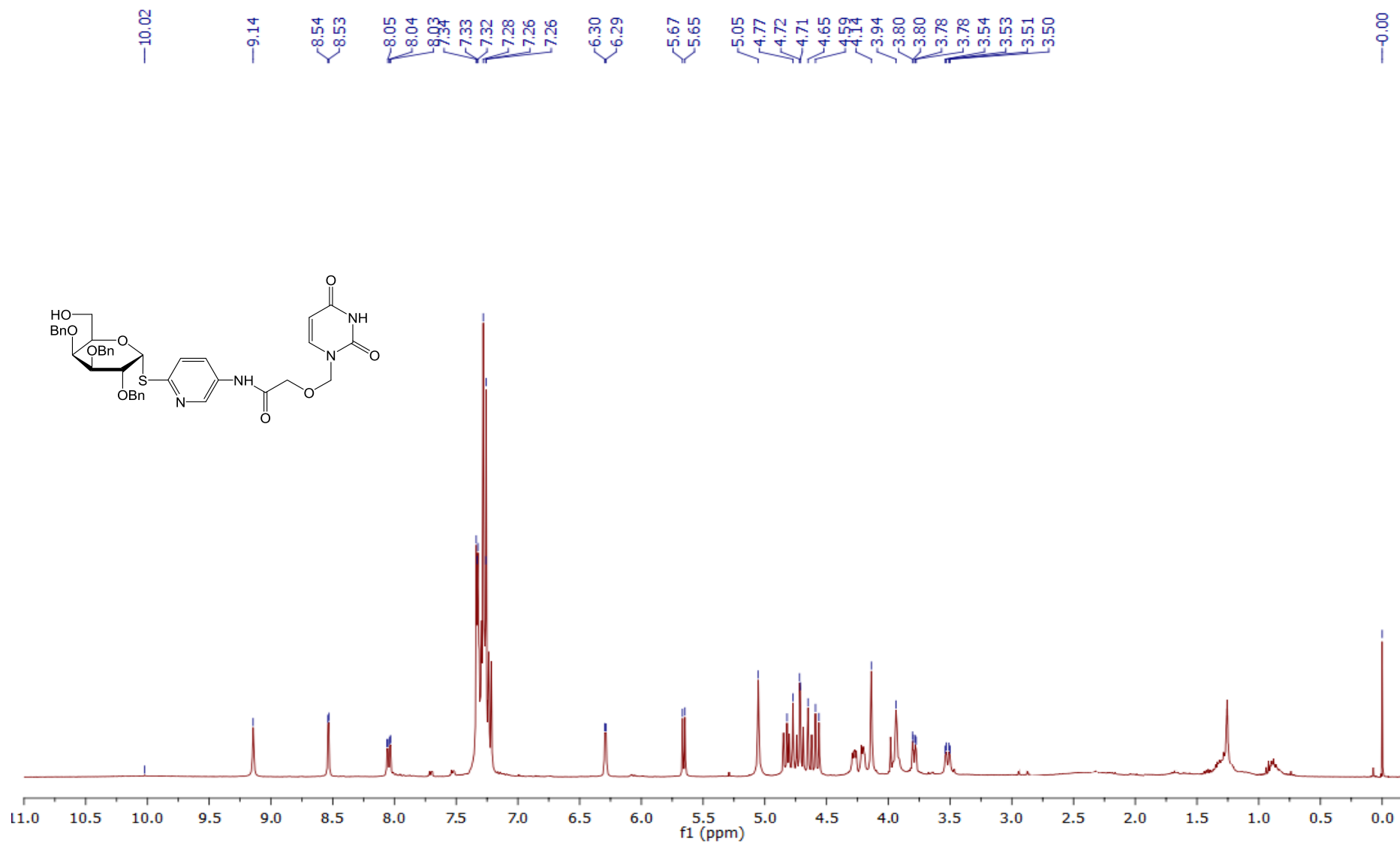


Fig. S47: ^1H NMR spectrum of glycoconjugate **46**

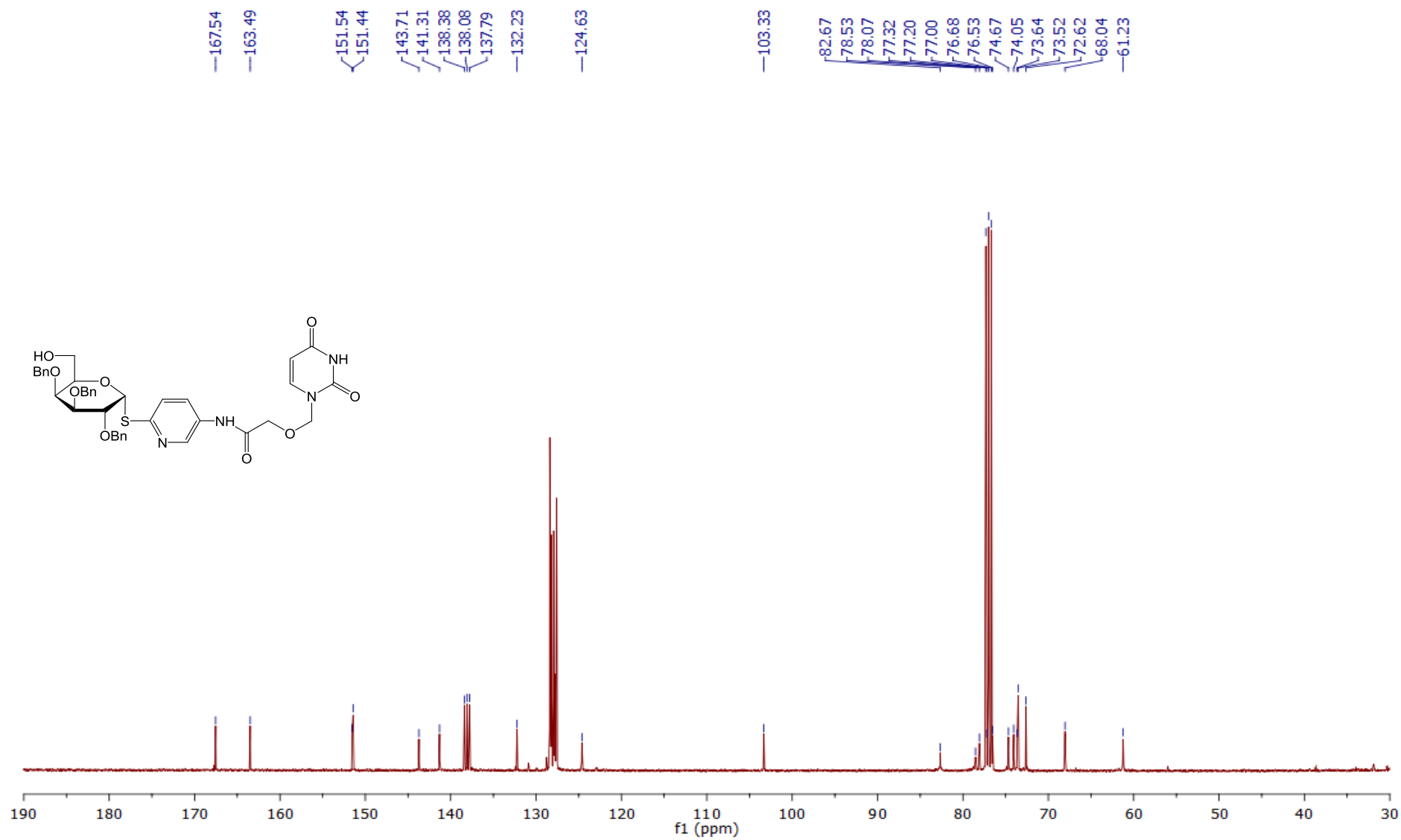


Fig. S48: ^{13}C NMR spectrum of glycoconjugate **46**

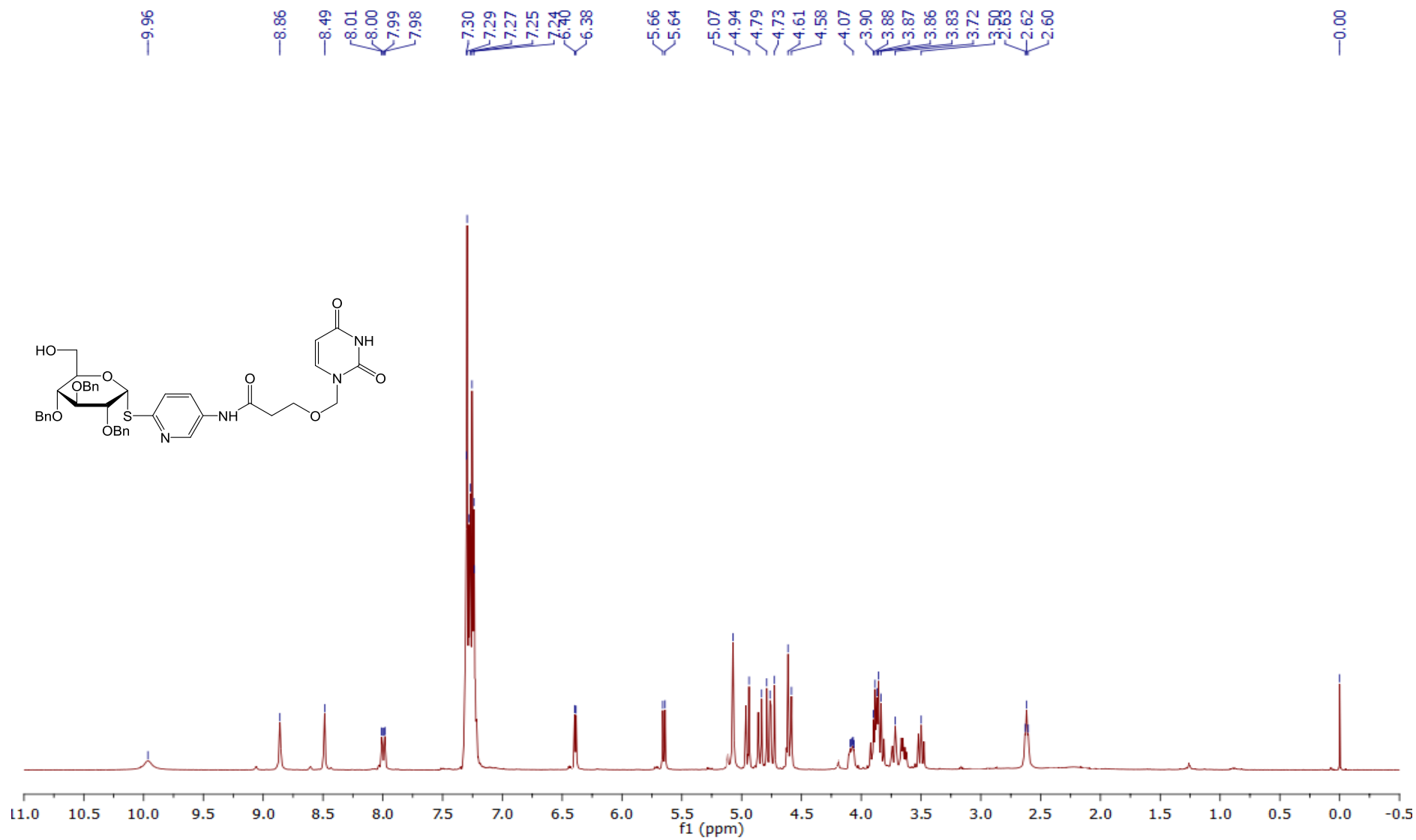


Fig. S49: ¹H NMR spectrum of glycoconjugate **47**

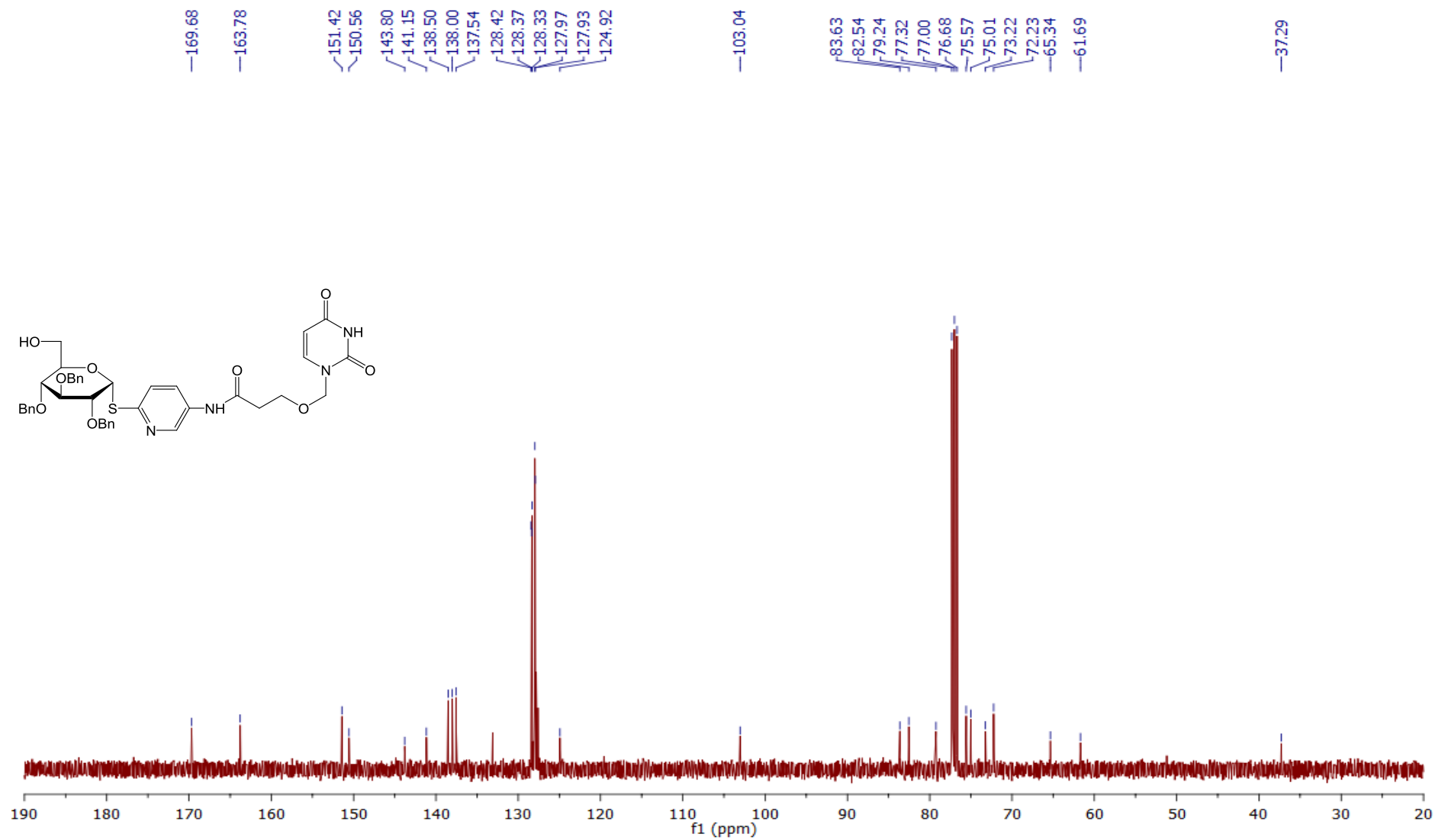


Fig. S50: ¹³C NMR spectrum of glycoconjugate **47**

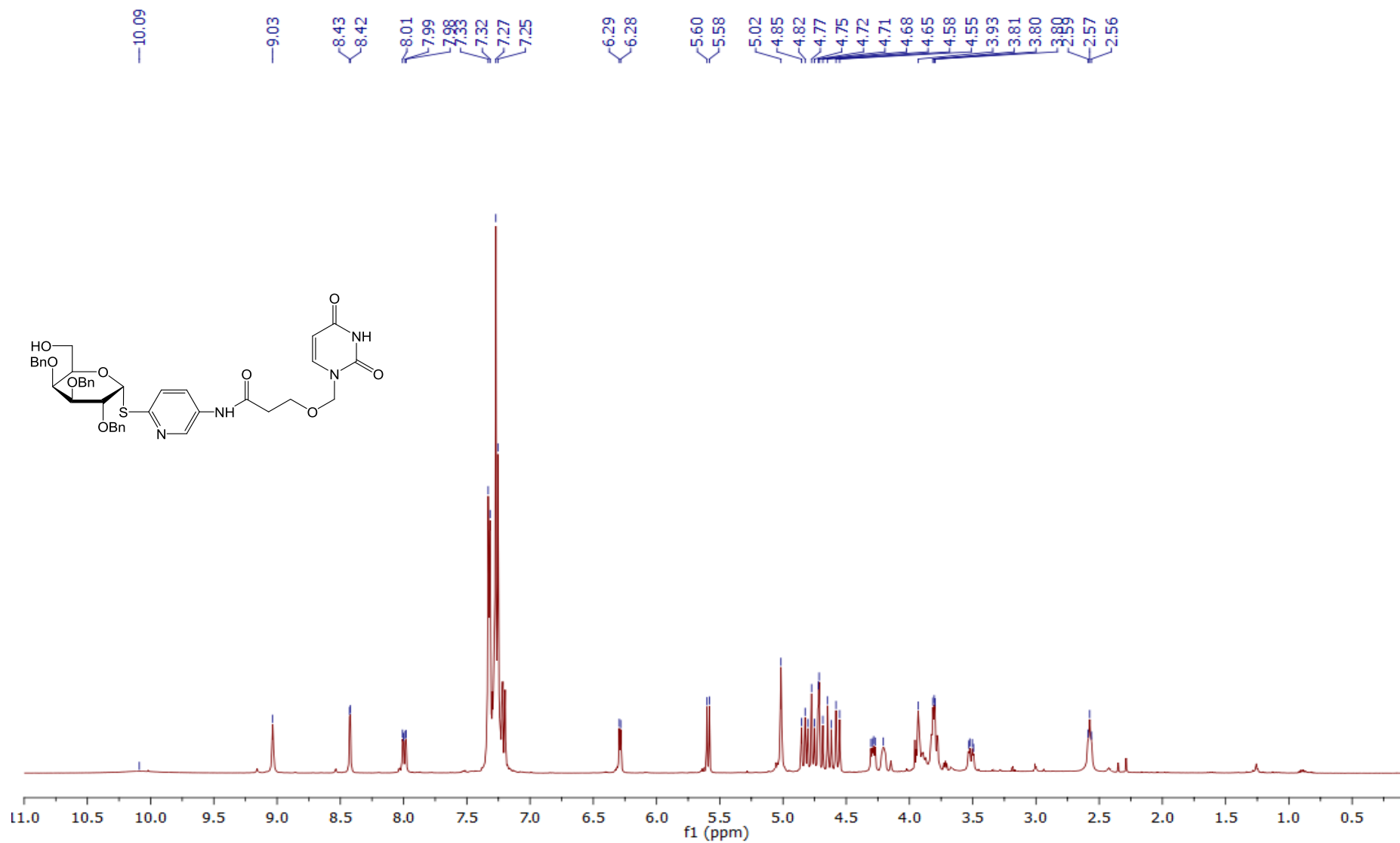


Fig. S51: ¹H NMR spectrum of glycoconjugate **48**

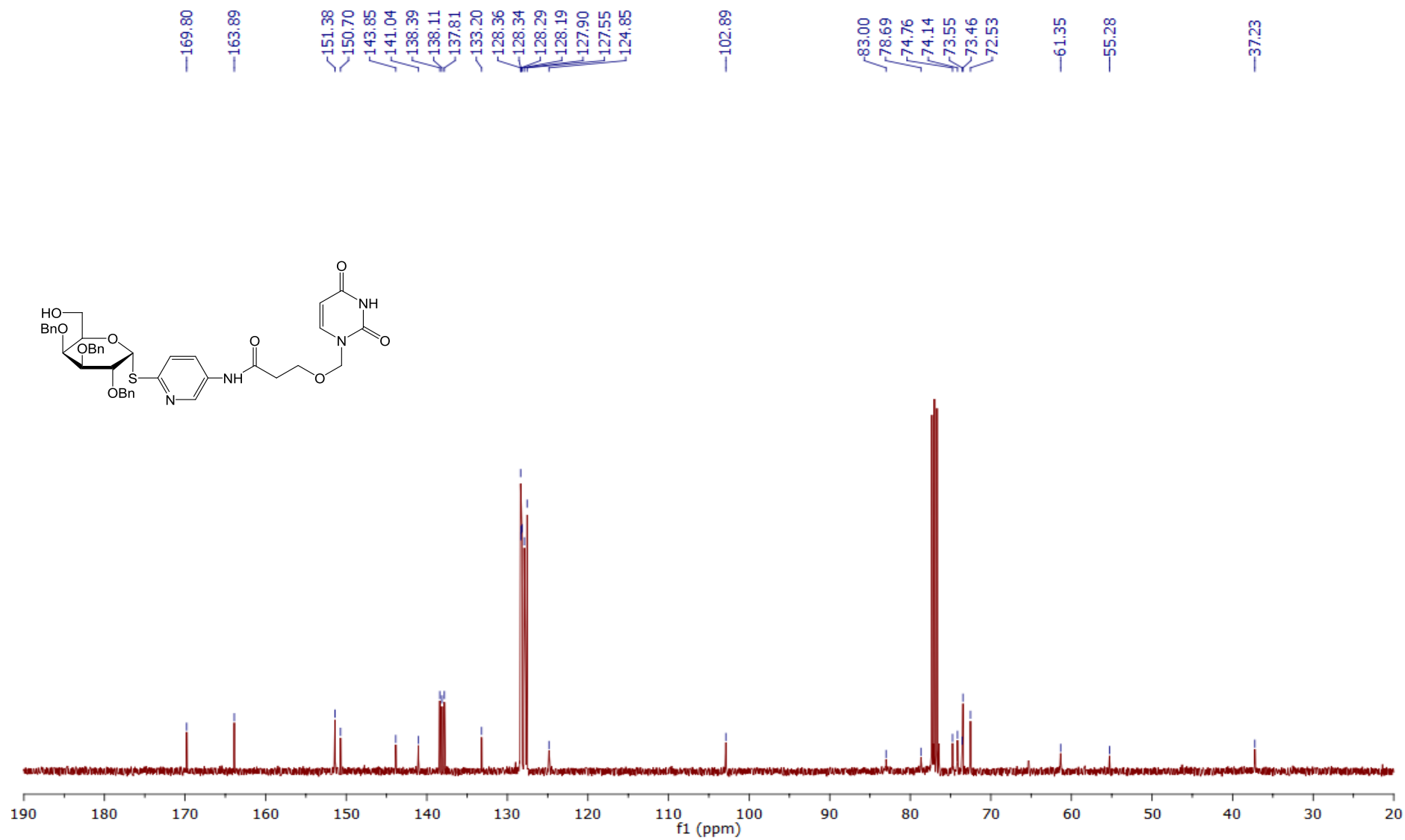


Fig. S52: ^{13}C NMR spectrum of glycoconjugate **48**

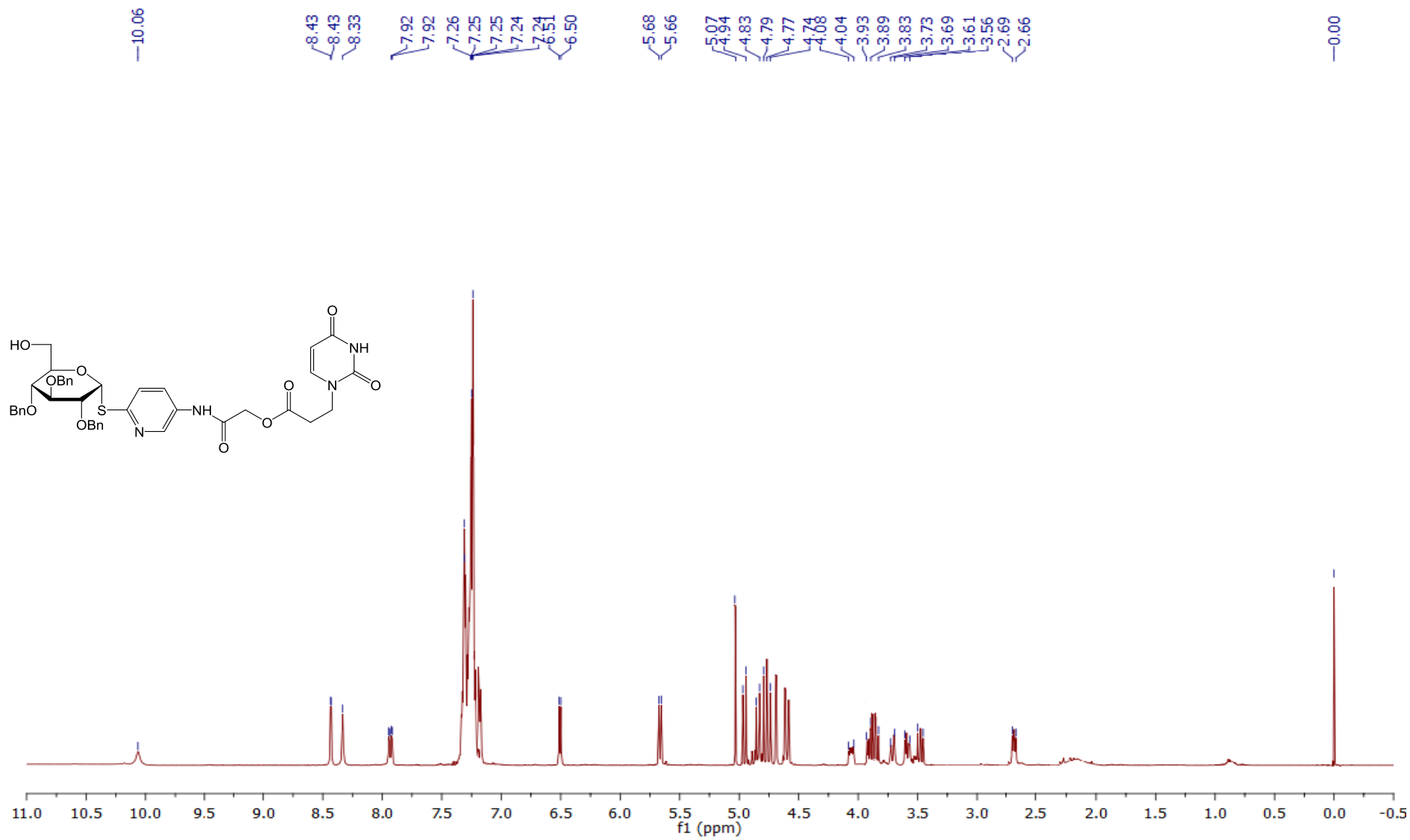


Fig. S53: ¹H NMR spectrum of glycoconjugate **49**

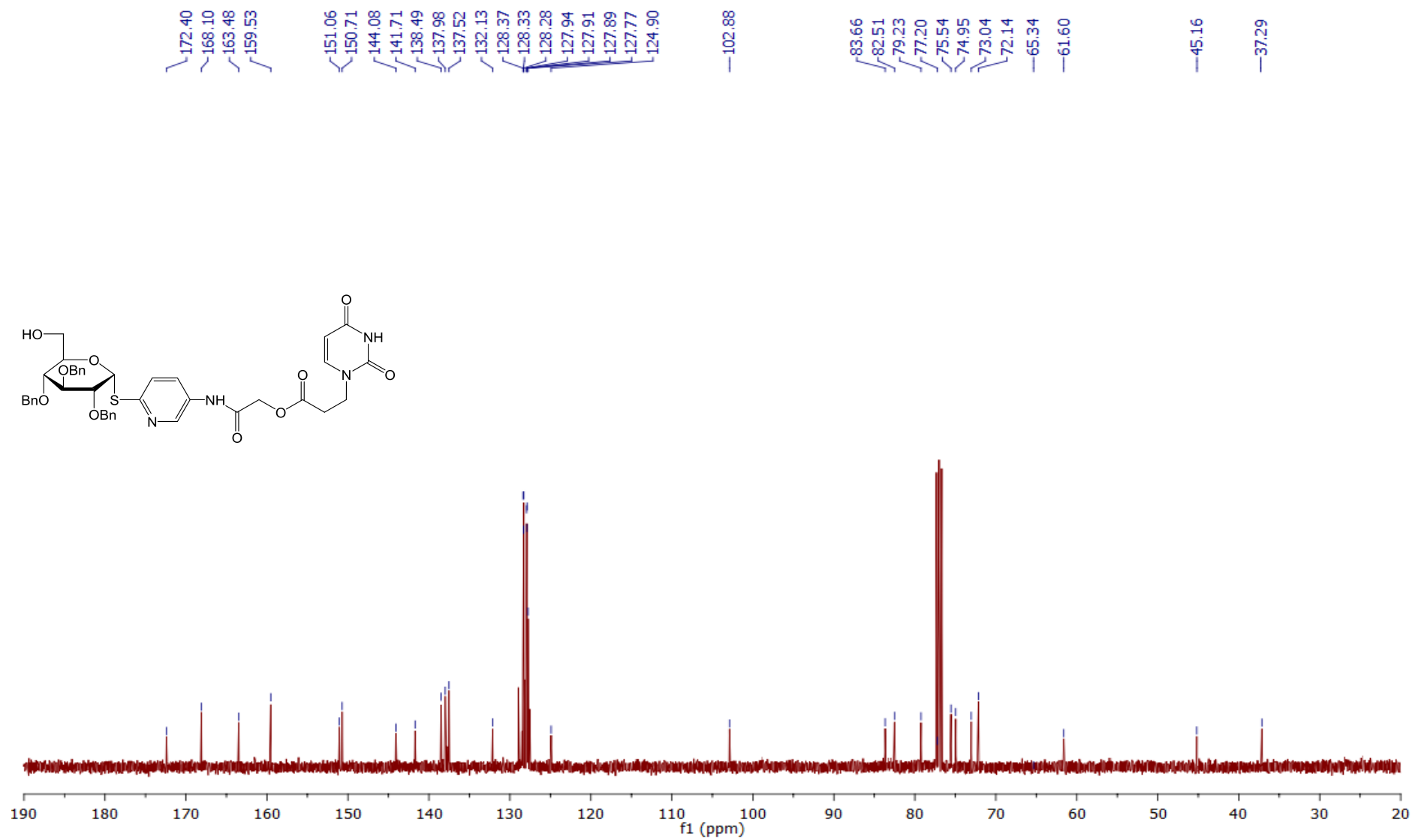


Fig. S54: ^{13}C NMR spectrum of glycoconjugate **49**

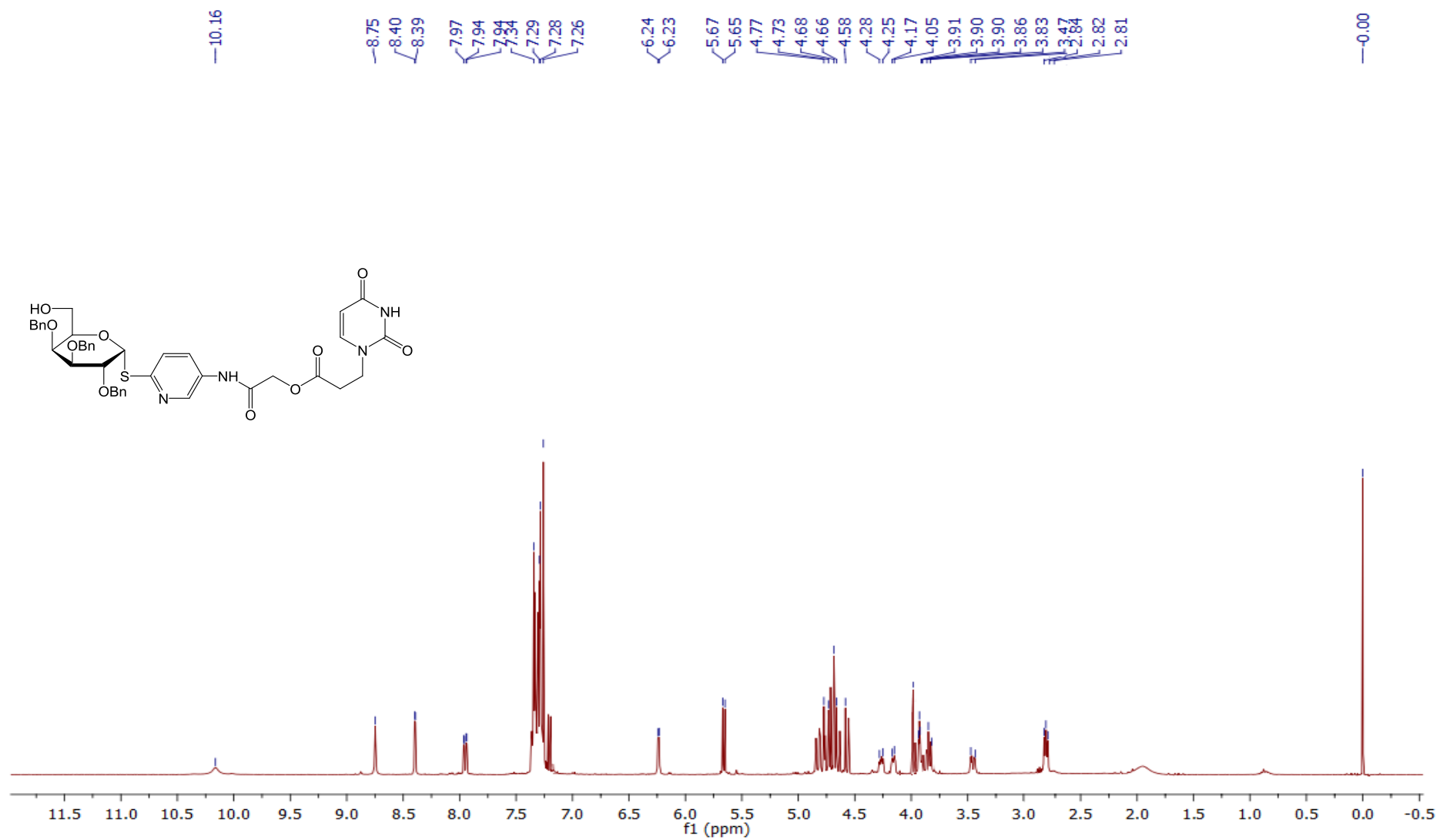


Fig. S55: ¹H NMR spectrum of glycoconjugate **50**

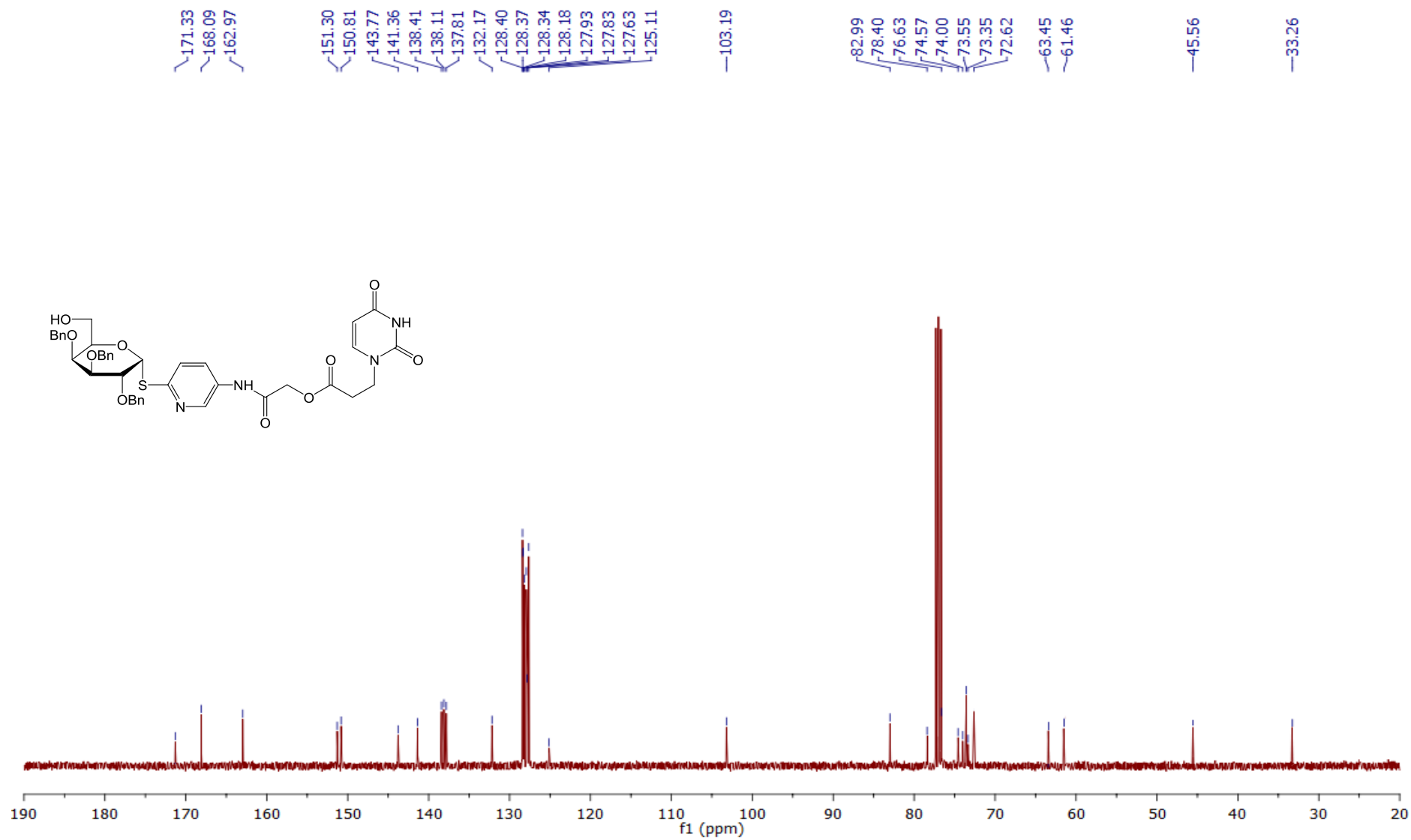


Fig. S56: ^{13}C NMR spectrum of glycoconjugate **50**

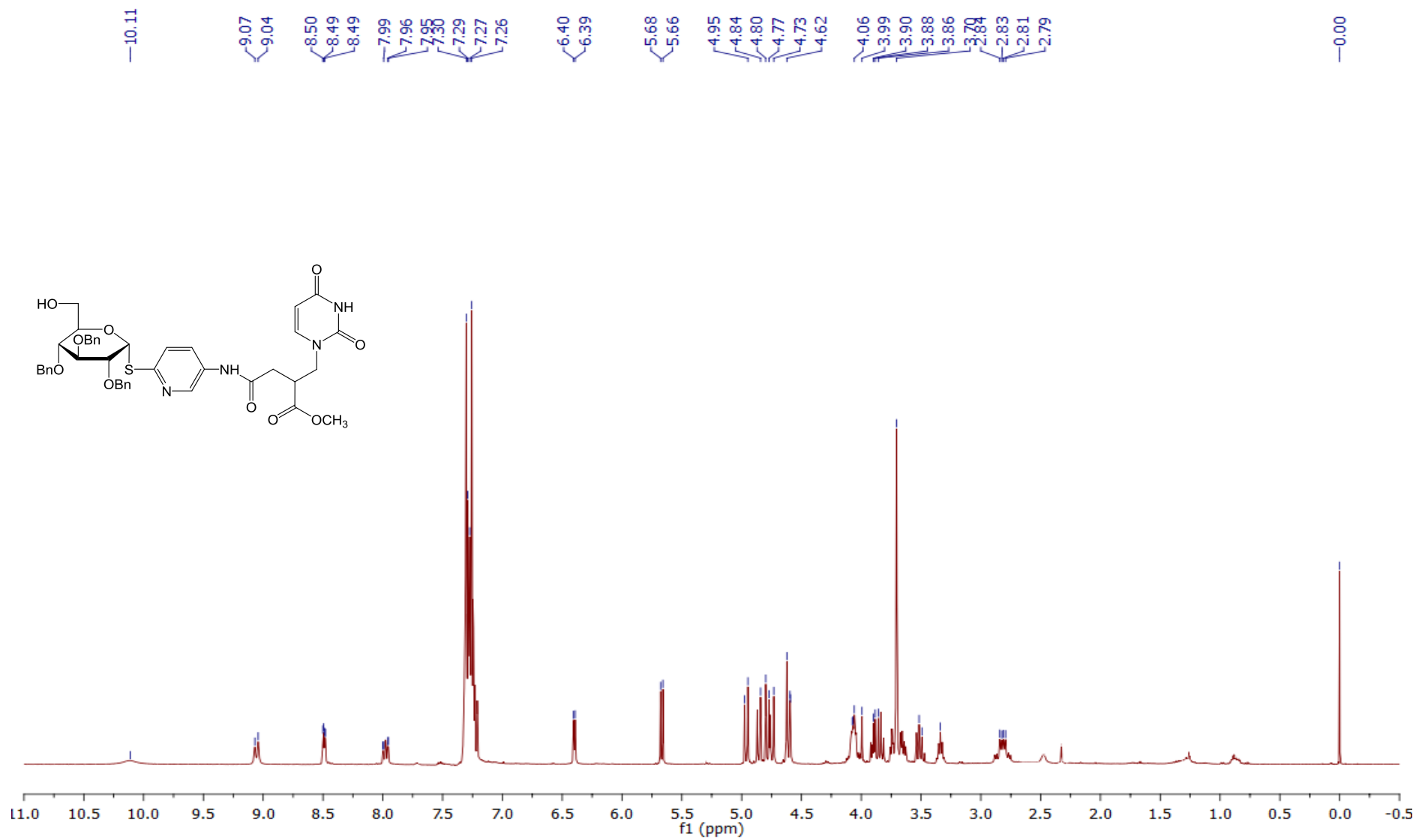


Fig. S57: ¹H NMR spectrum of glycoconjugate **51**

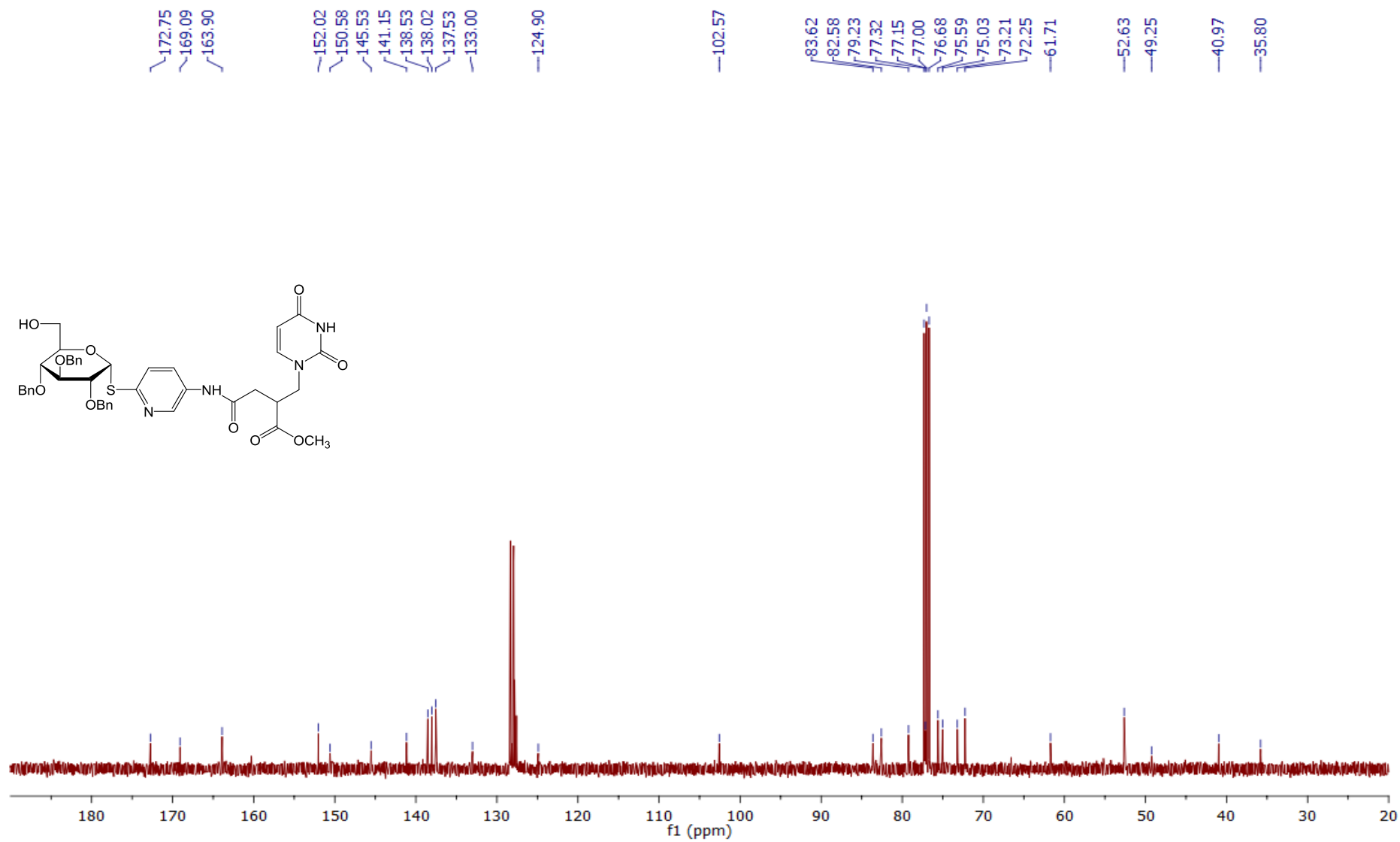


Fig. S58: ^{13}C NMR spectrum of glycoconjugate **51**

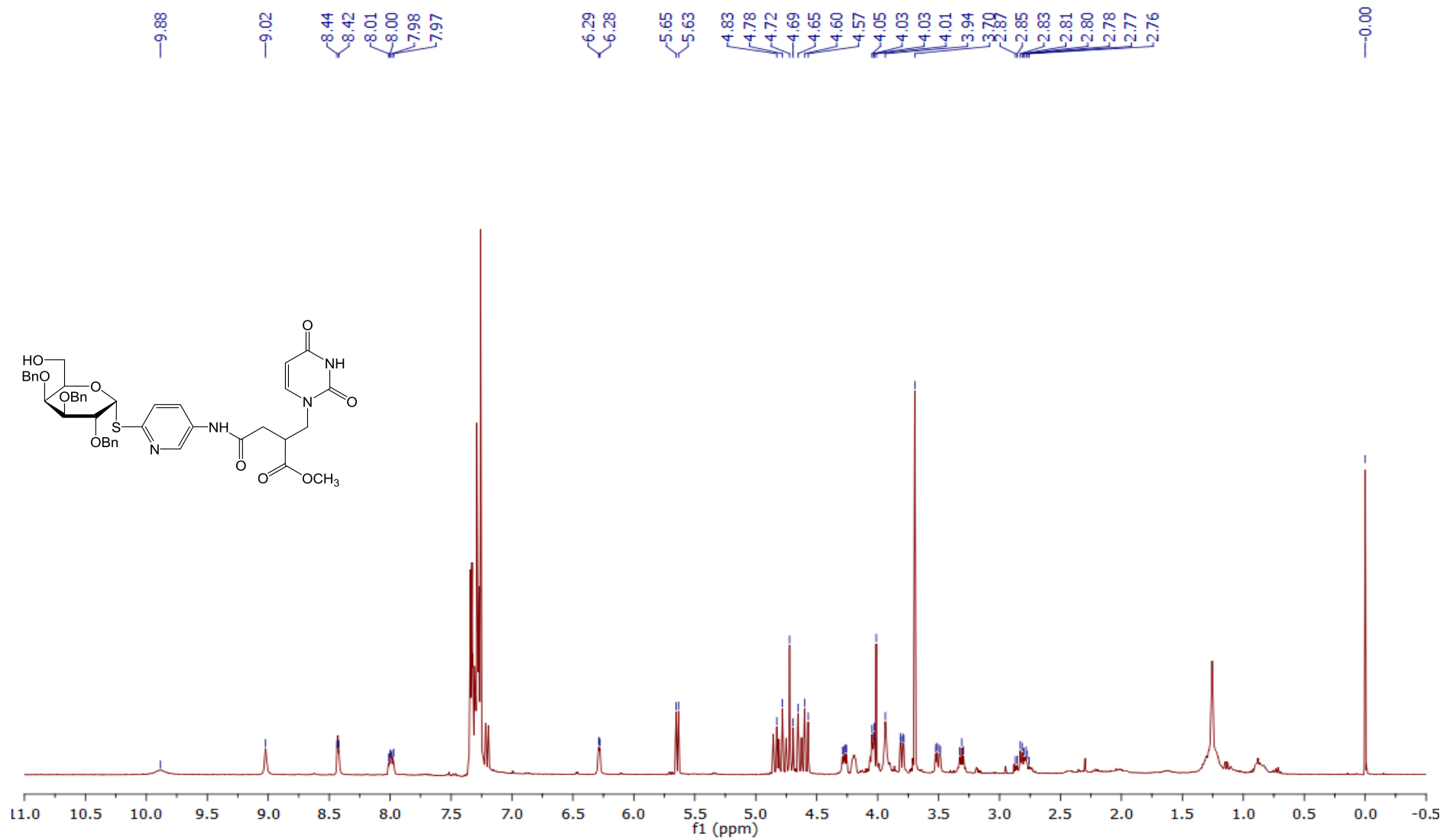


Fig. S59: ^1H NMR spectrum of glycoconjugate **52**

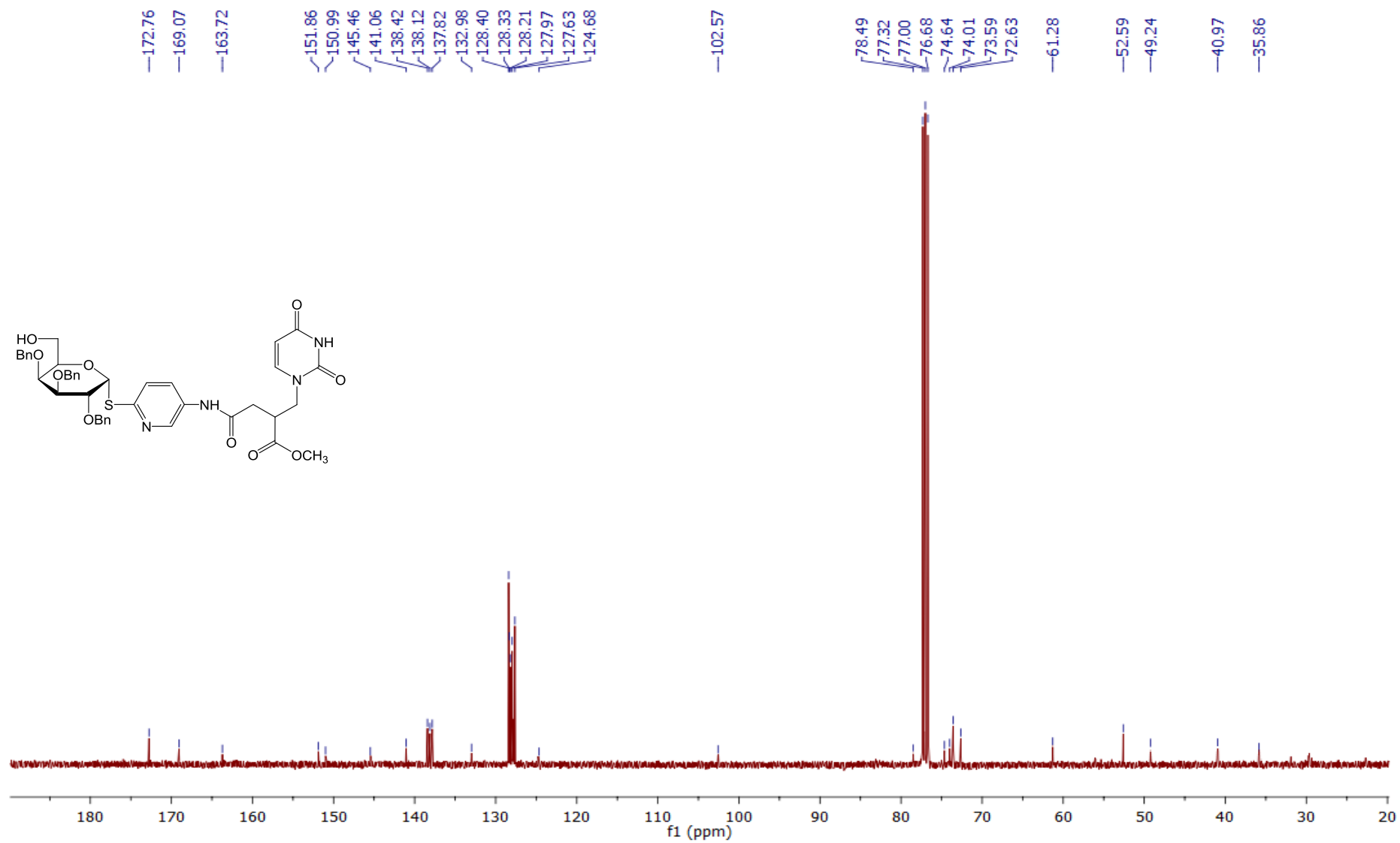


Fig. S60: ¹³C NMR spectrum of glycoconjugate **52**

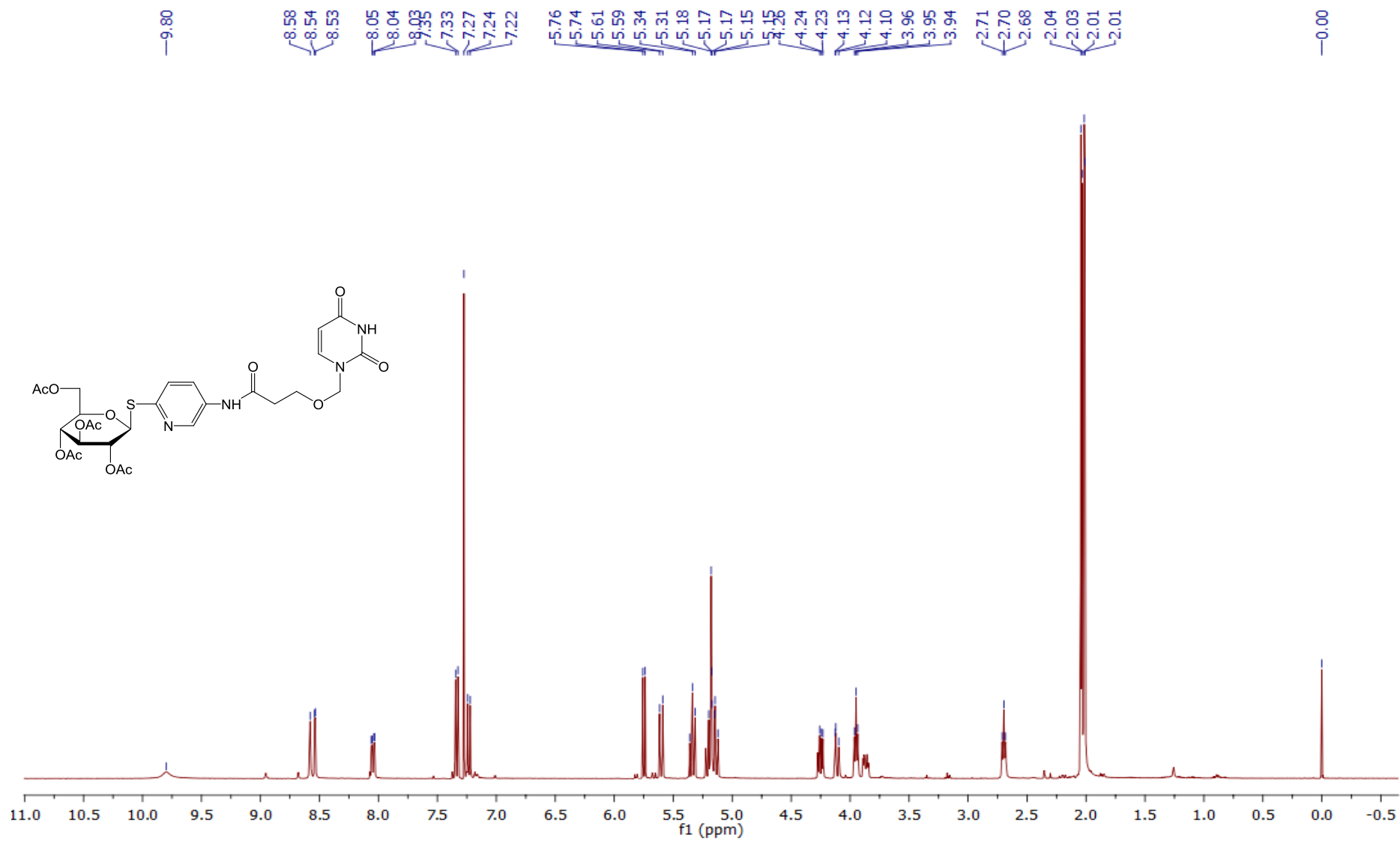


Fig. S61: ^1H NMR spectrum of glycoconjugate **53**

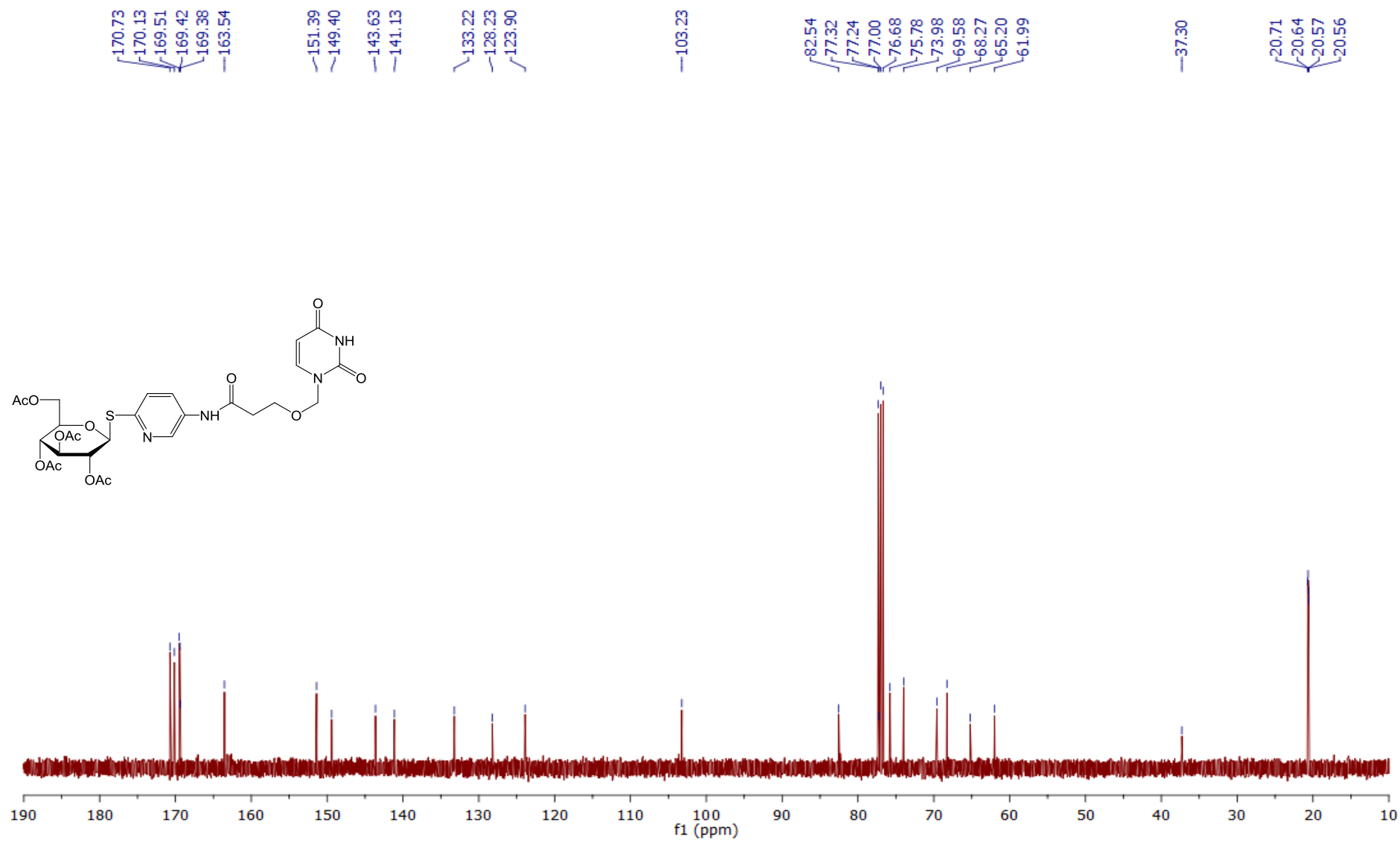


Fig. S62: ¹³C NMR spectrum of glycoconjugate **53**

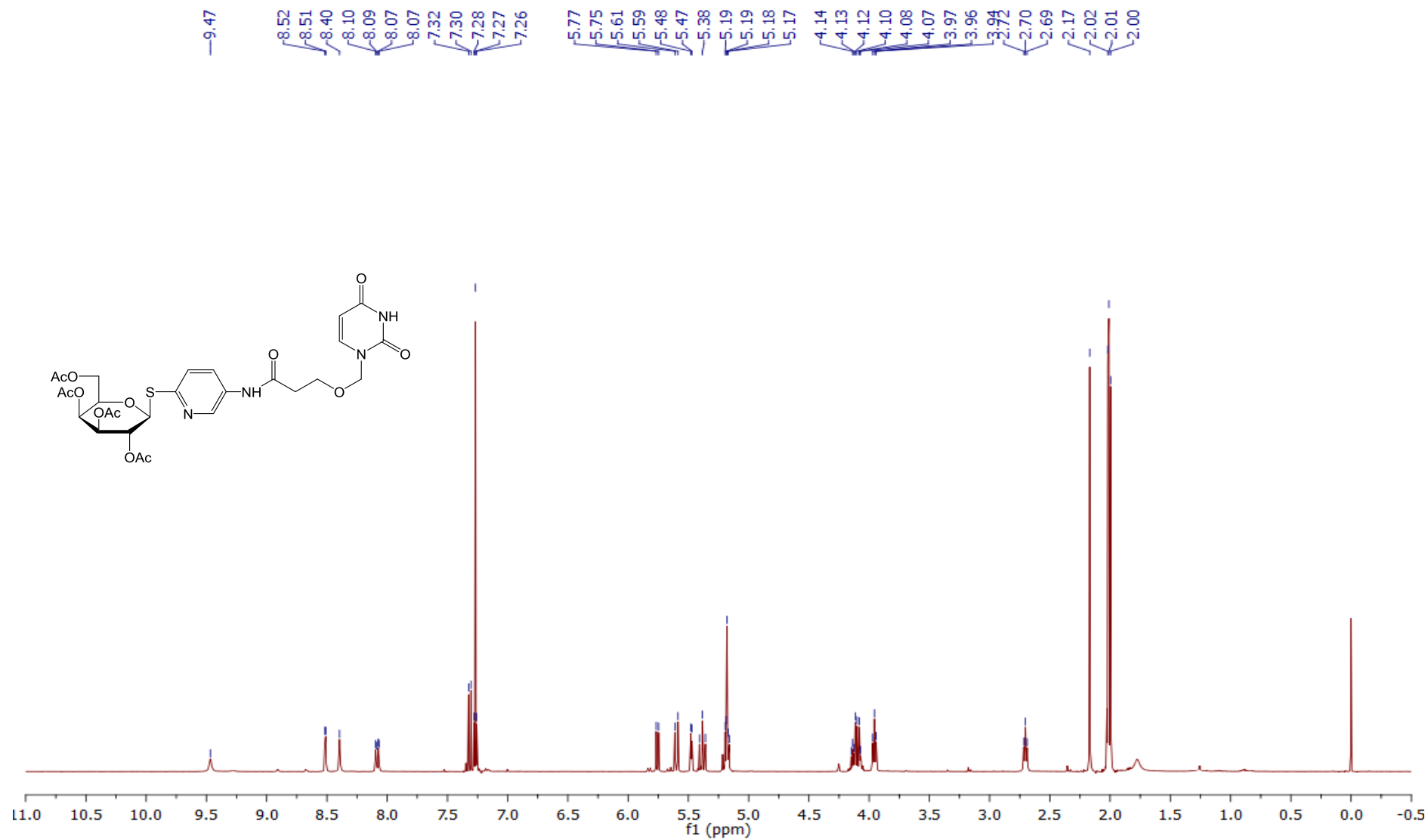


Fig. S63: ¹H NMR spectrum of glycoconjugate **54**

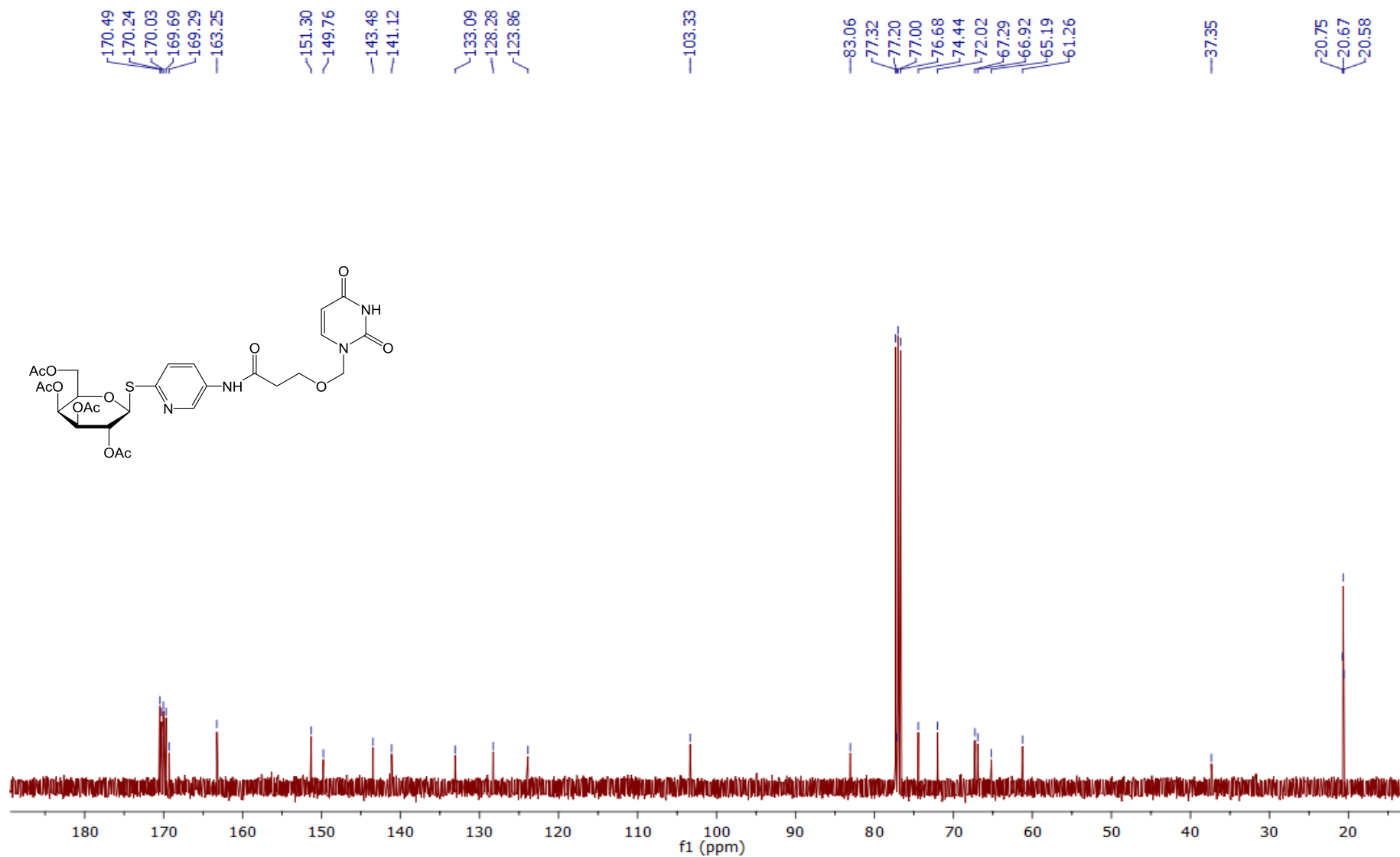


Fig. S64: ^{13}C NMR spectrum of glycoconjugate **54**

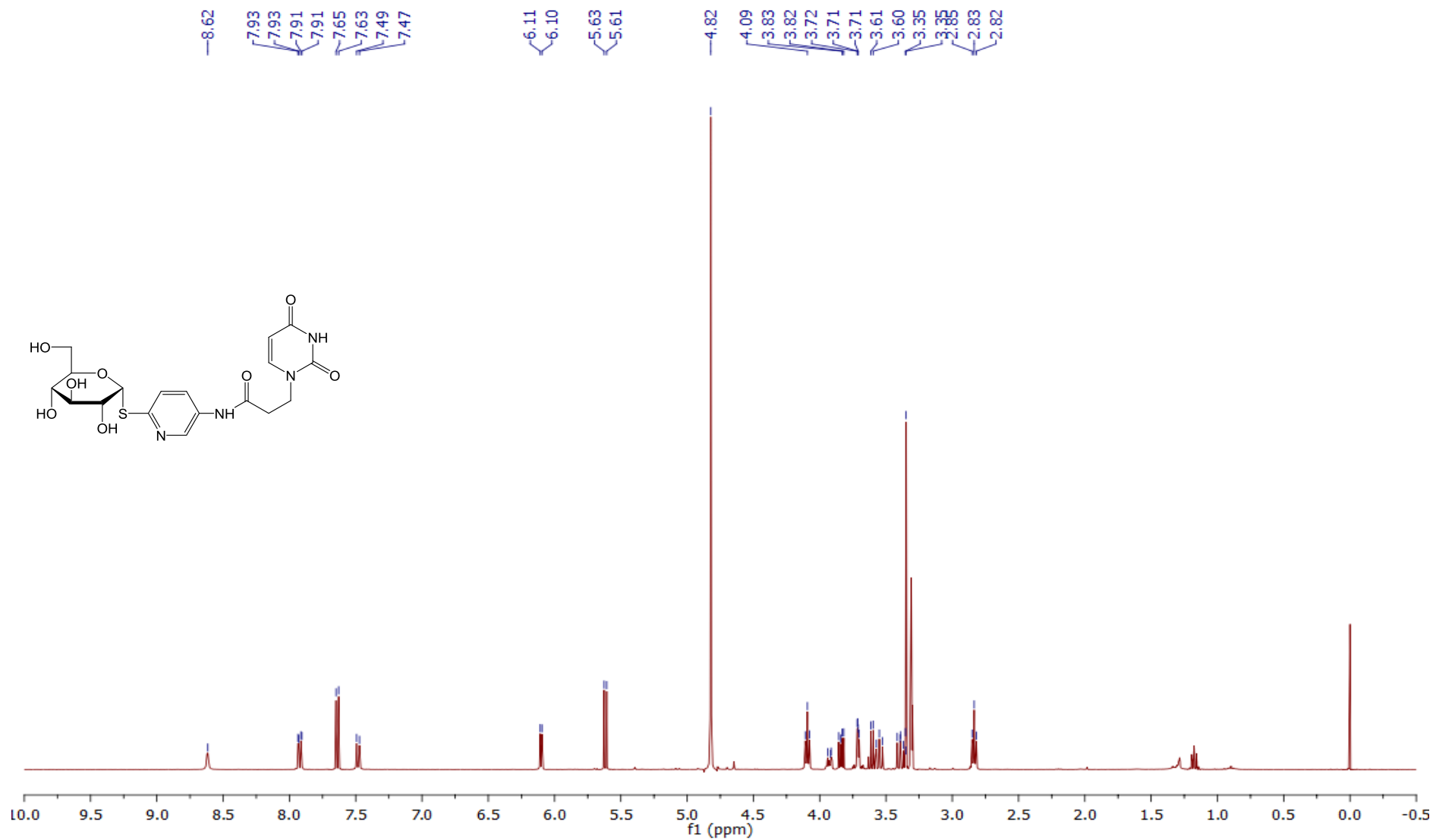


Fig. S65: ¹H NMR spectrum of glycoconjugate **55**

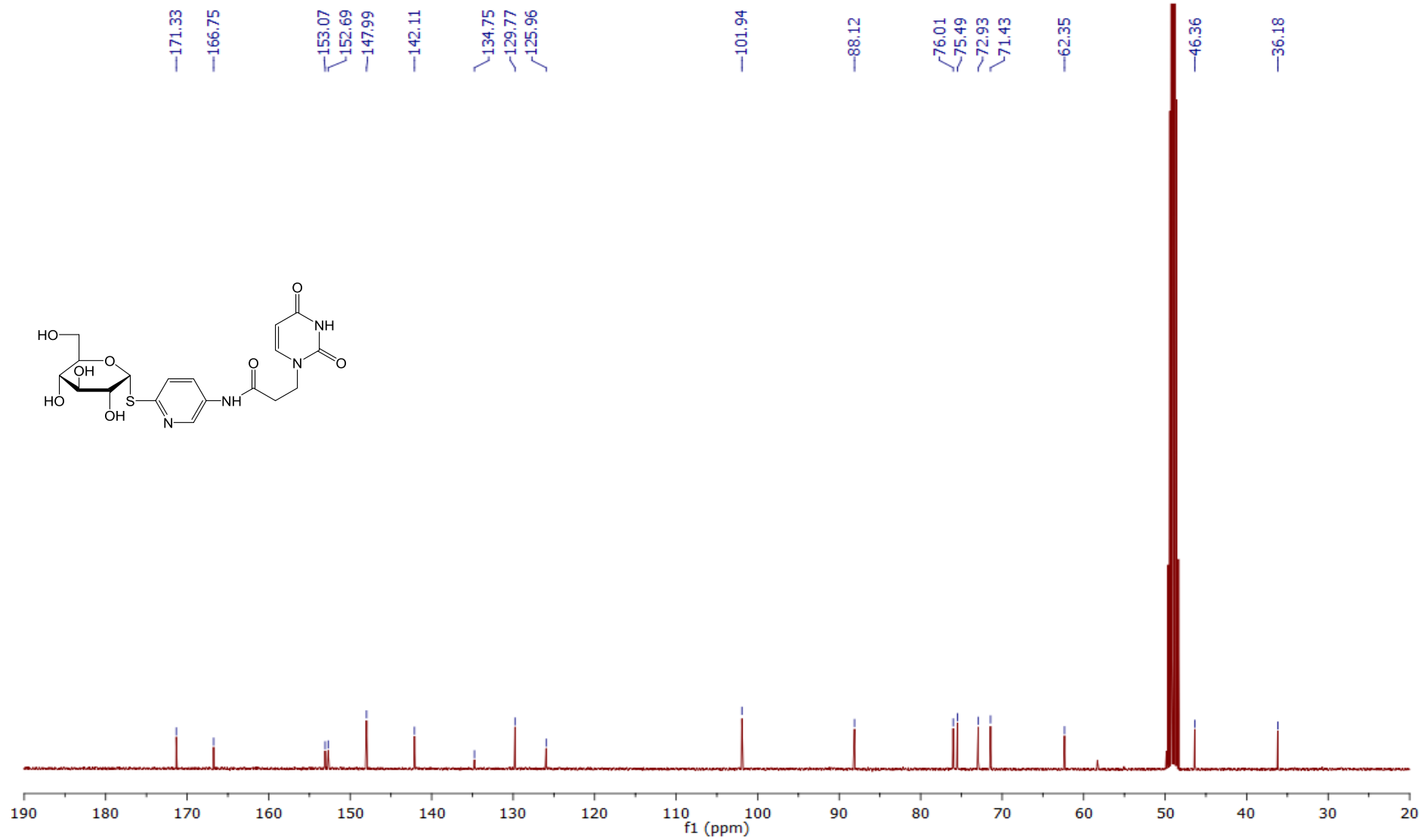


Fig. S66: ¹³C NMR spectrum of glycoconjugate **55**

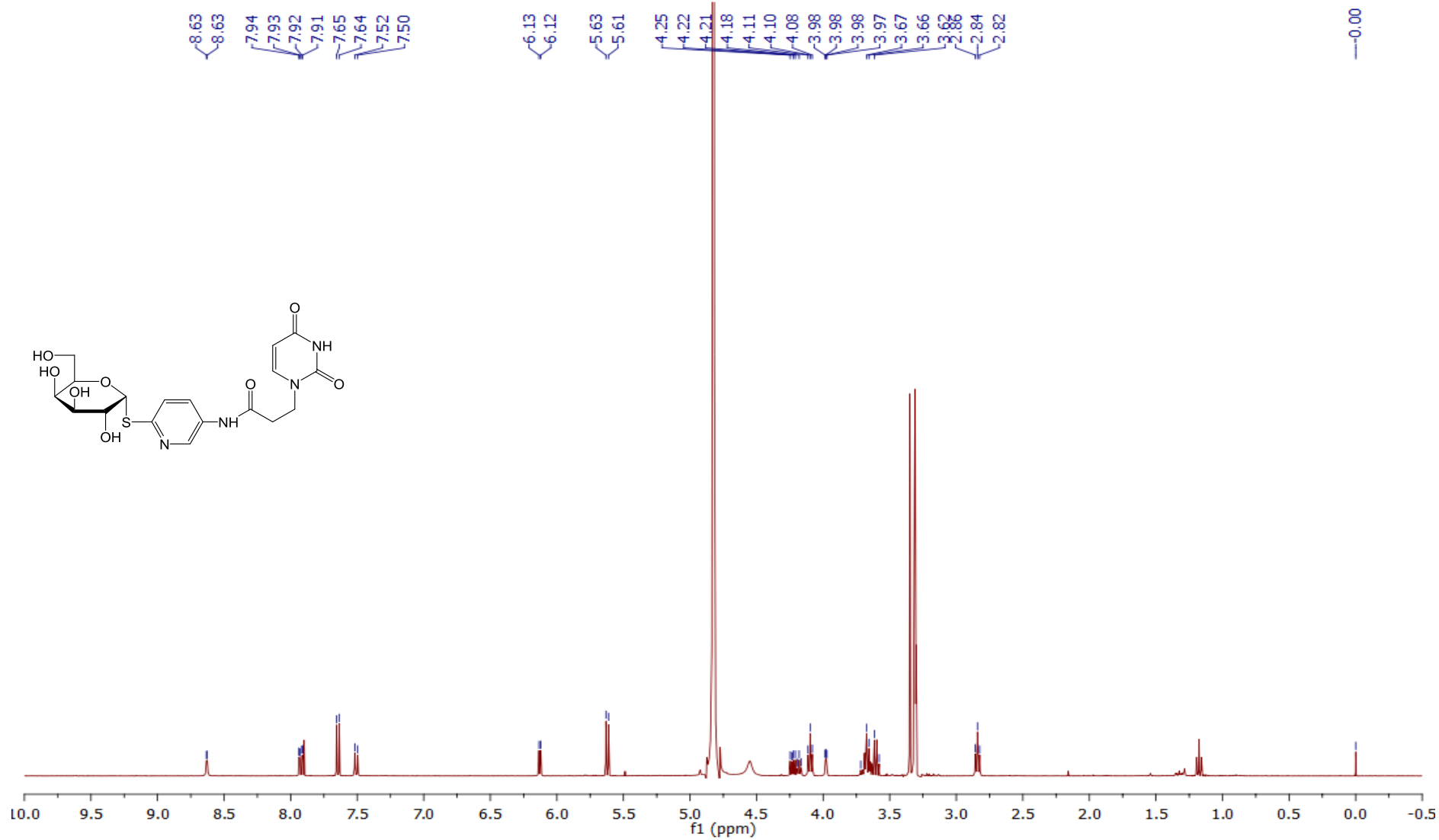


Fig. S67: ^1H NMR spectrum of glycoconjugate **56**

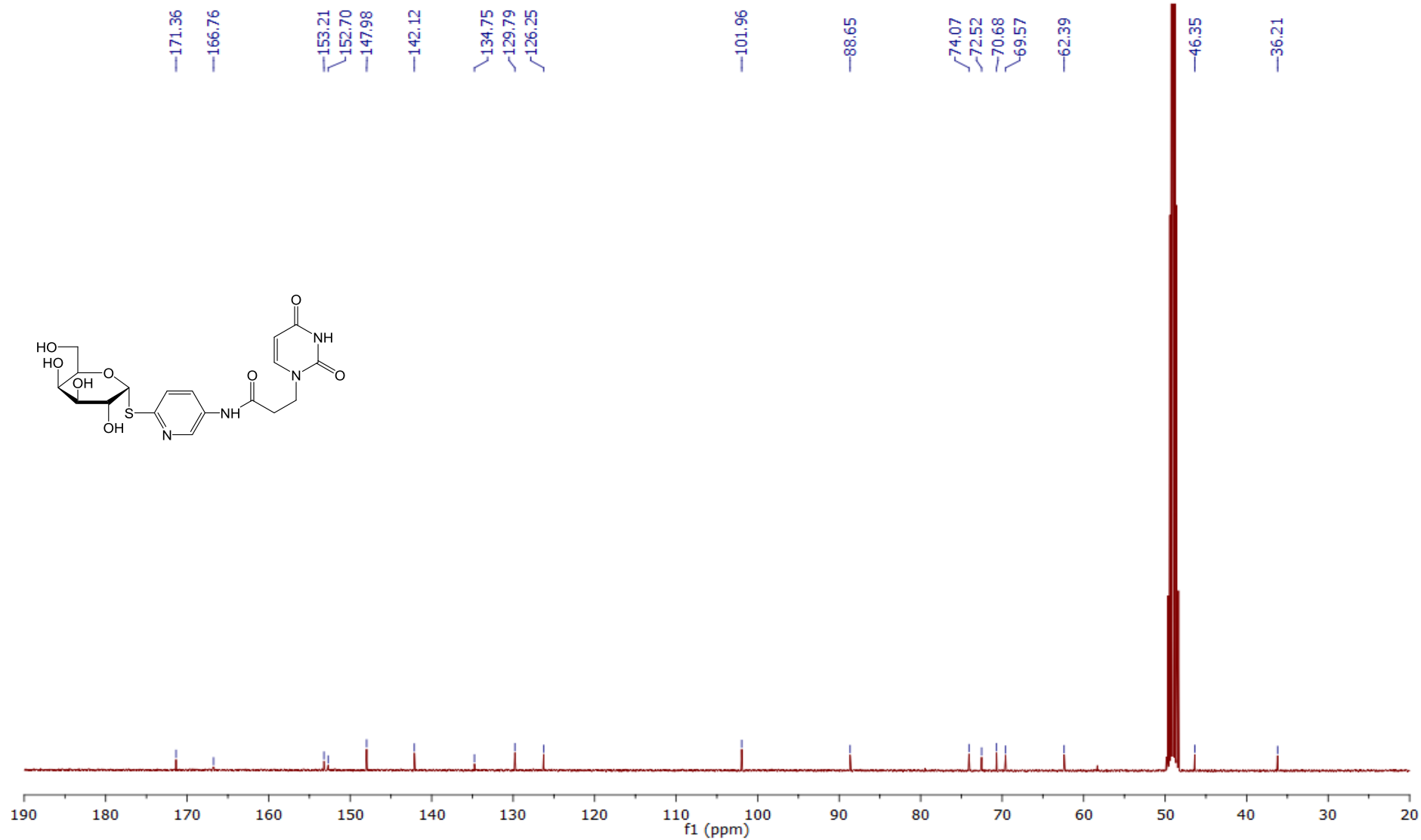


Fig. S68: ^{13}C NMR spectrum of glycoconjugate **56**

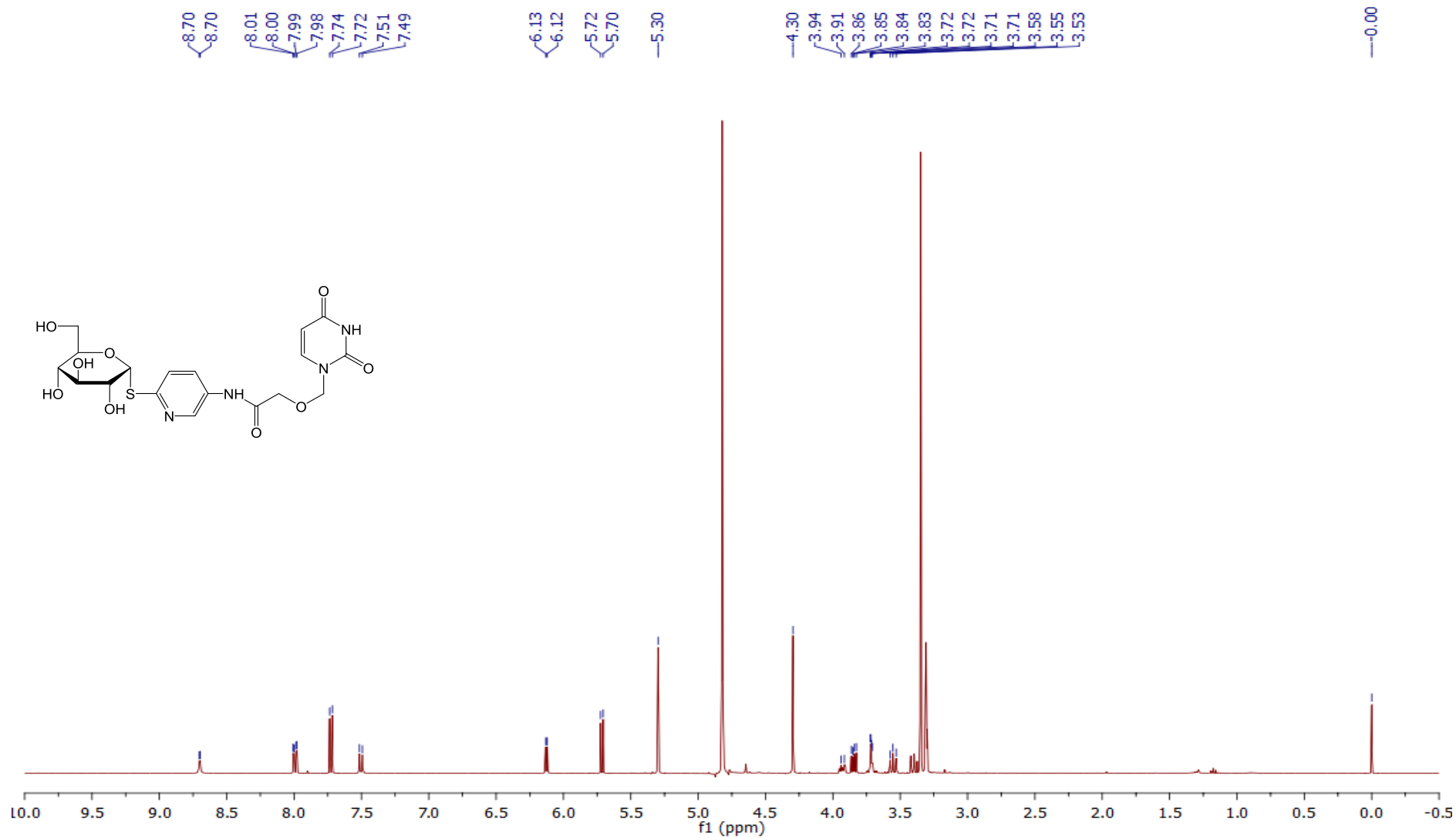


Fig. S69: ¹H NMR spectrum of glycoconjugate **57**

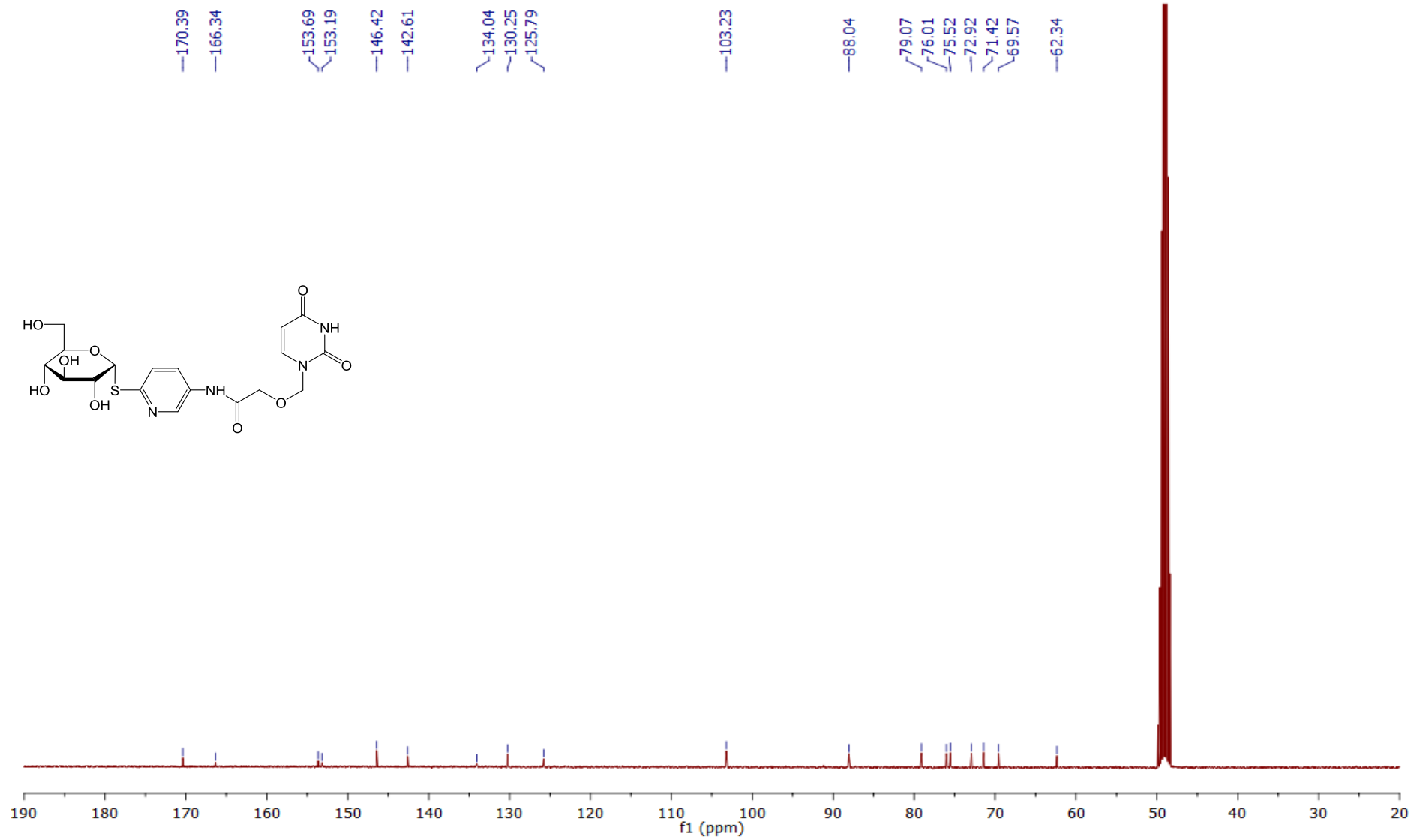


Fig. S70: ¹³C NMR spectrum of glycoconjugate **57**

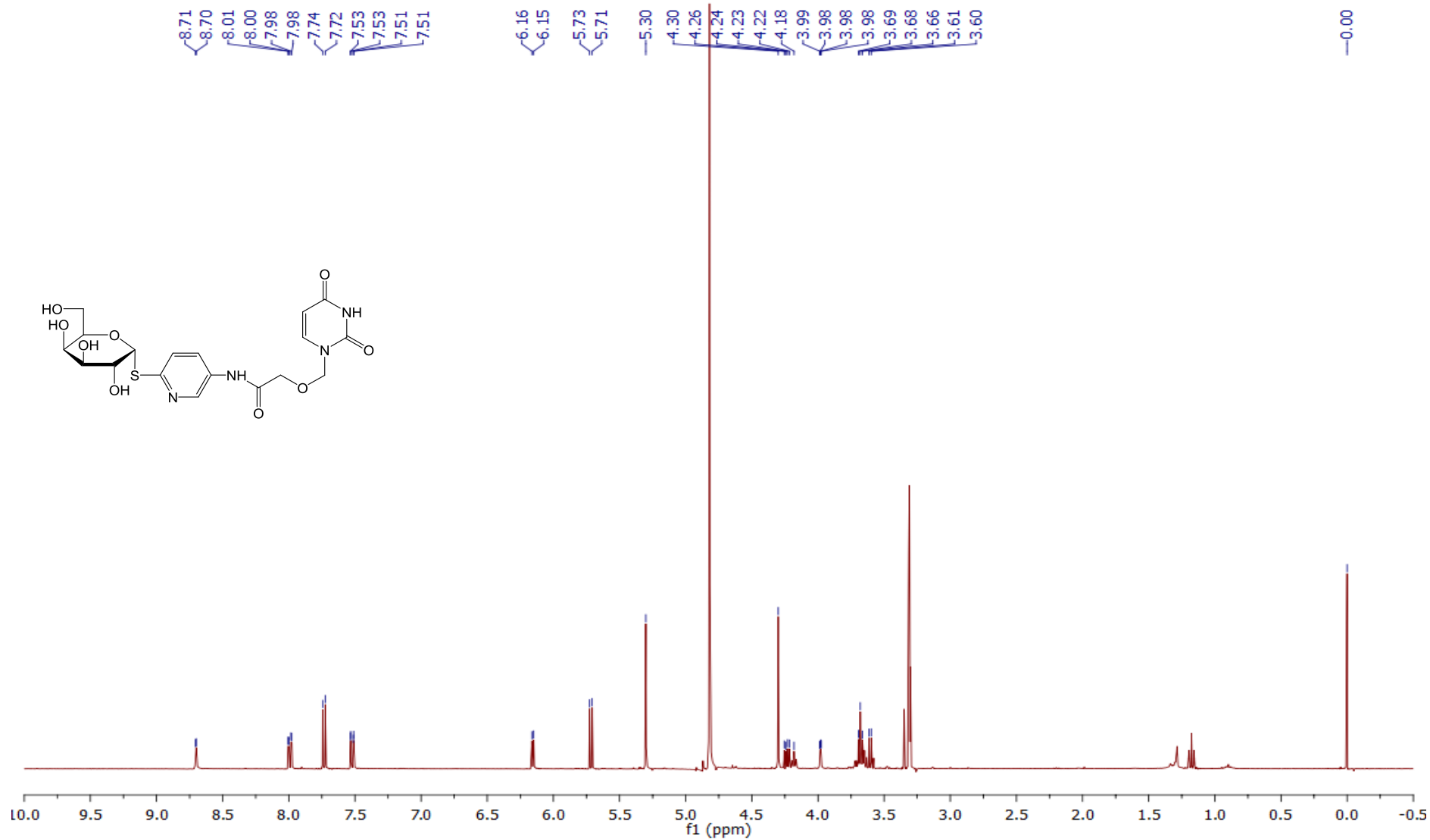


Fig. S71: ¹H NMR spectrum of glycoconjugate **58**

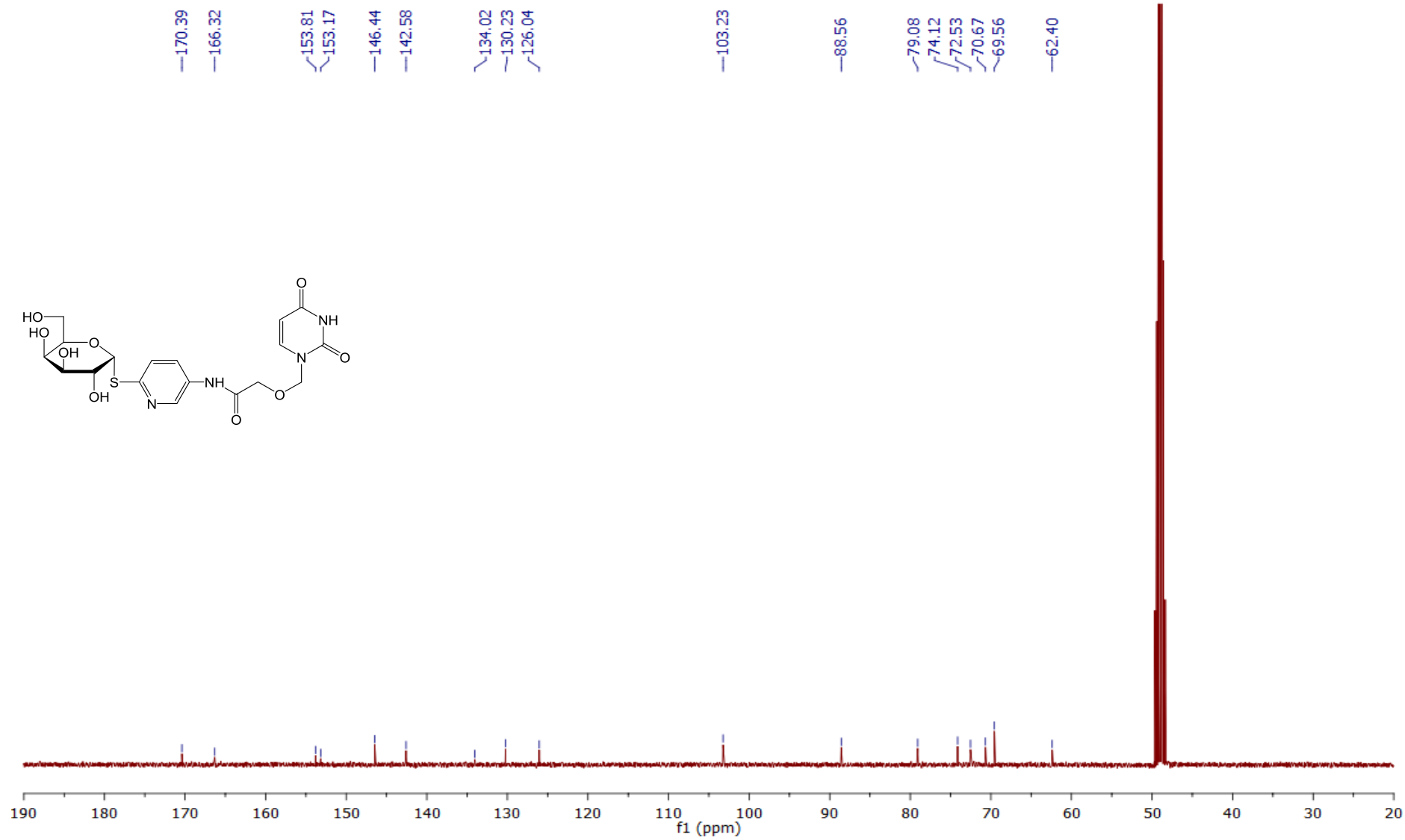


Fig. S72: ^{13}C NMR spectrum of glycoconjugate **58**

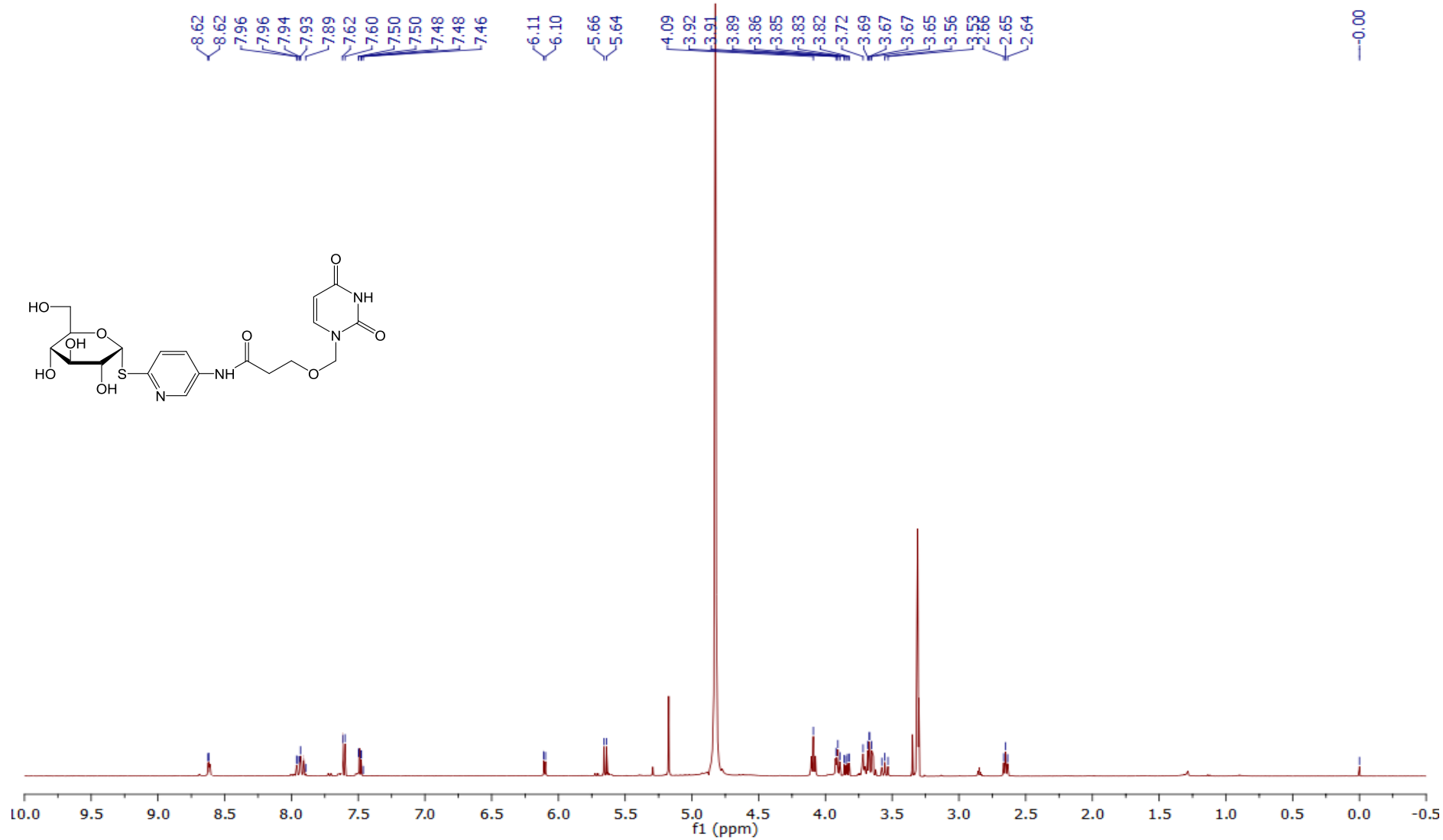


Fig. S73: ¹H NMR spectrum of glycoconjugate **59**

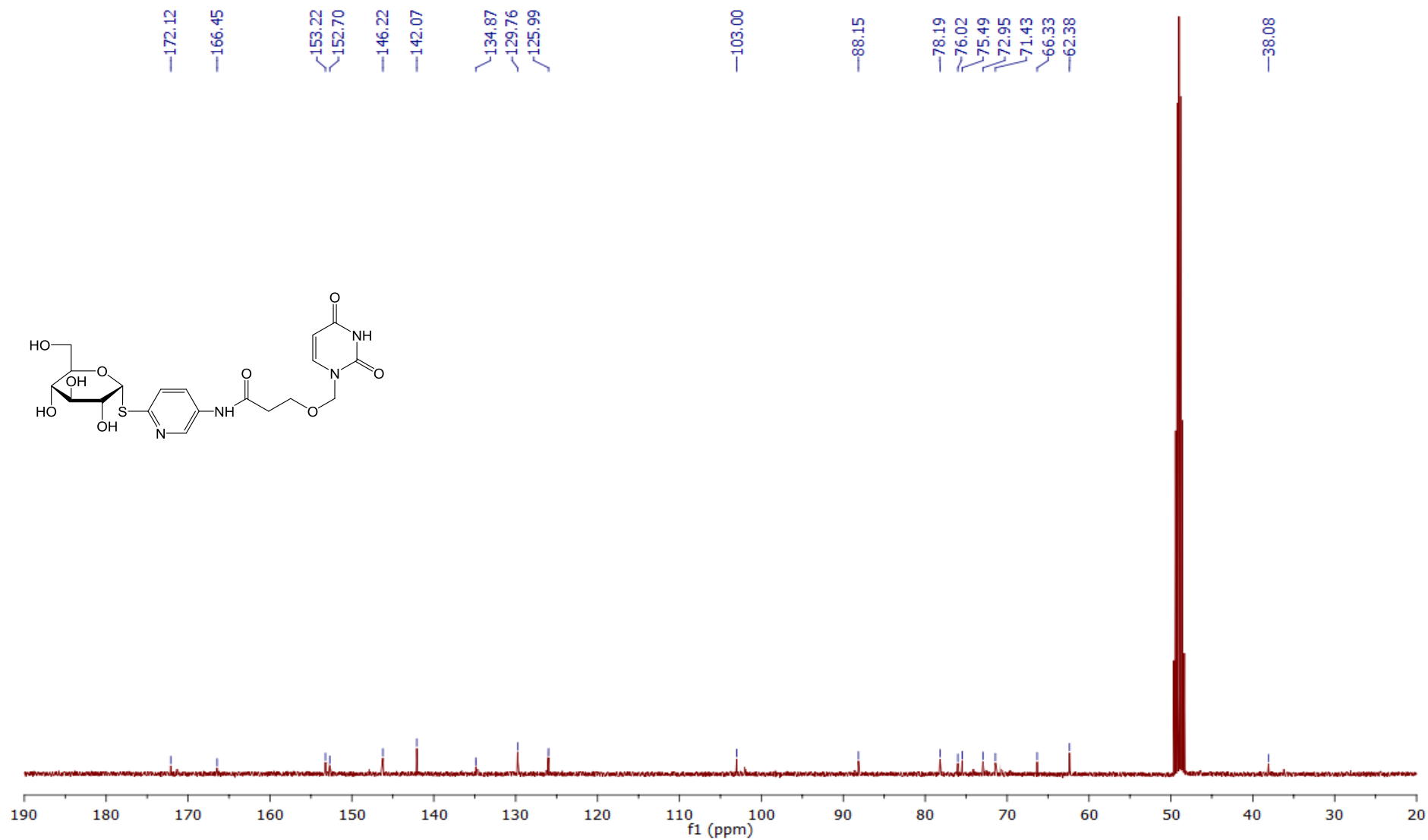


Fig. S74: ^{13}C NMR spectrum of glycoconjugate **59**

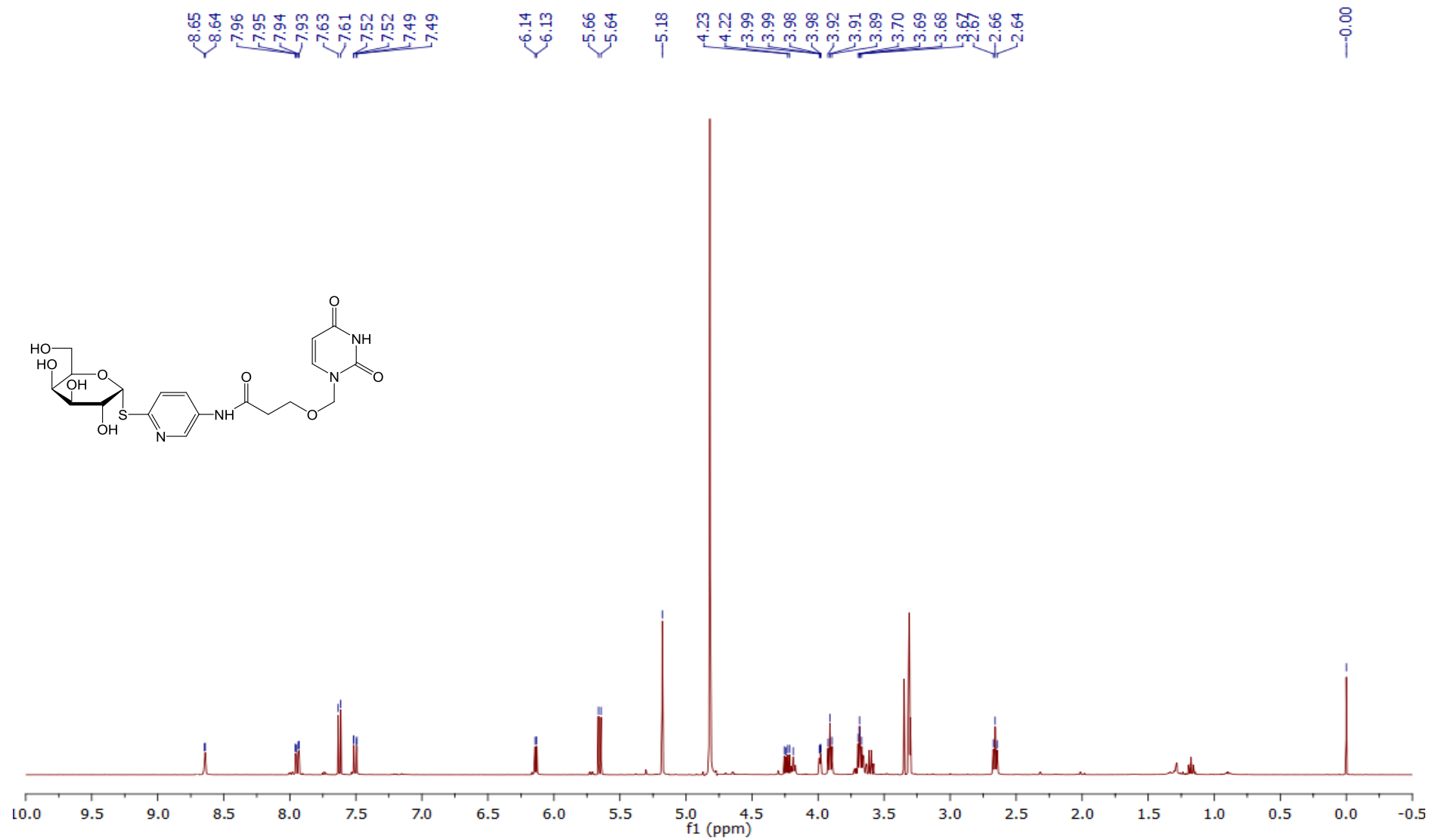


Fig. S75: ^1H NMR spectrum of glycoconjugate **60**

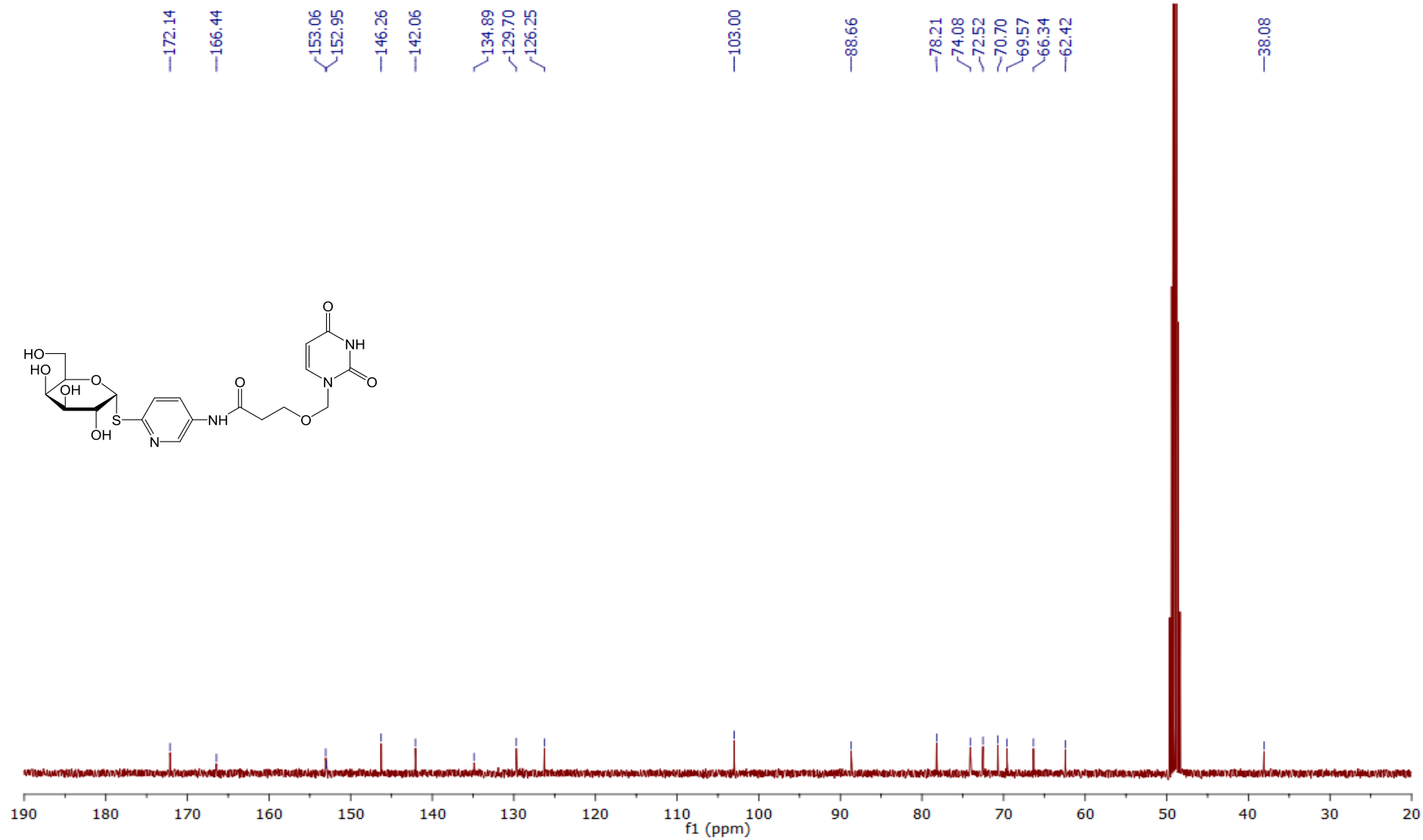


Fig. S76: ^{13}C NMR spectrum of glycoconjugate **60**

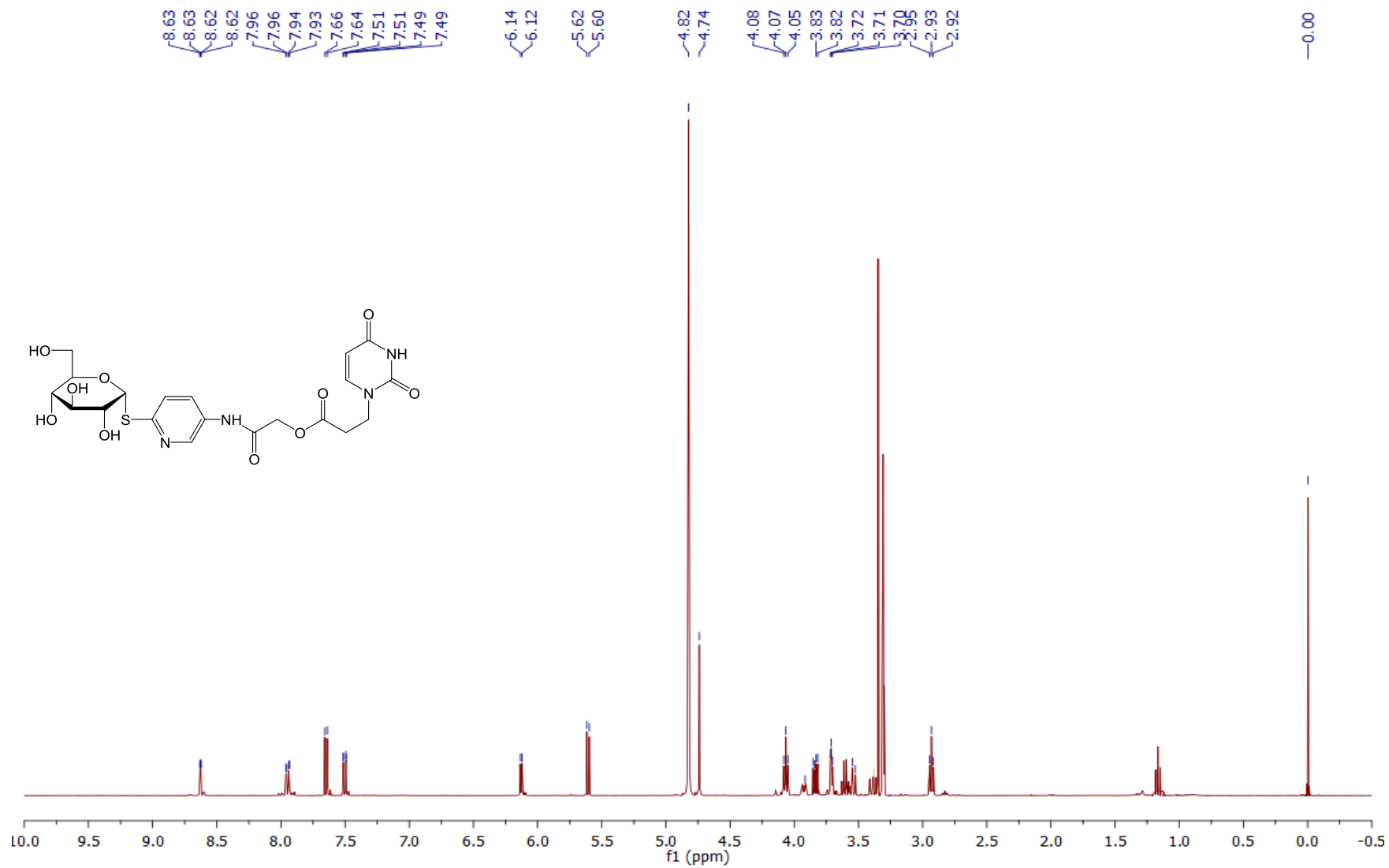


Fig. S77: ¹H NMR spectrum of glycoconjugate **61**

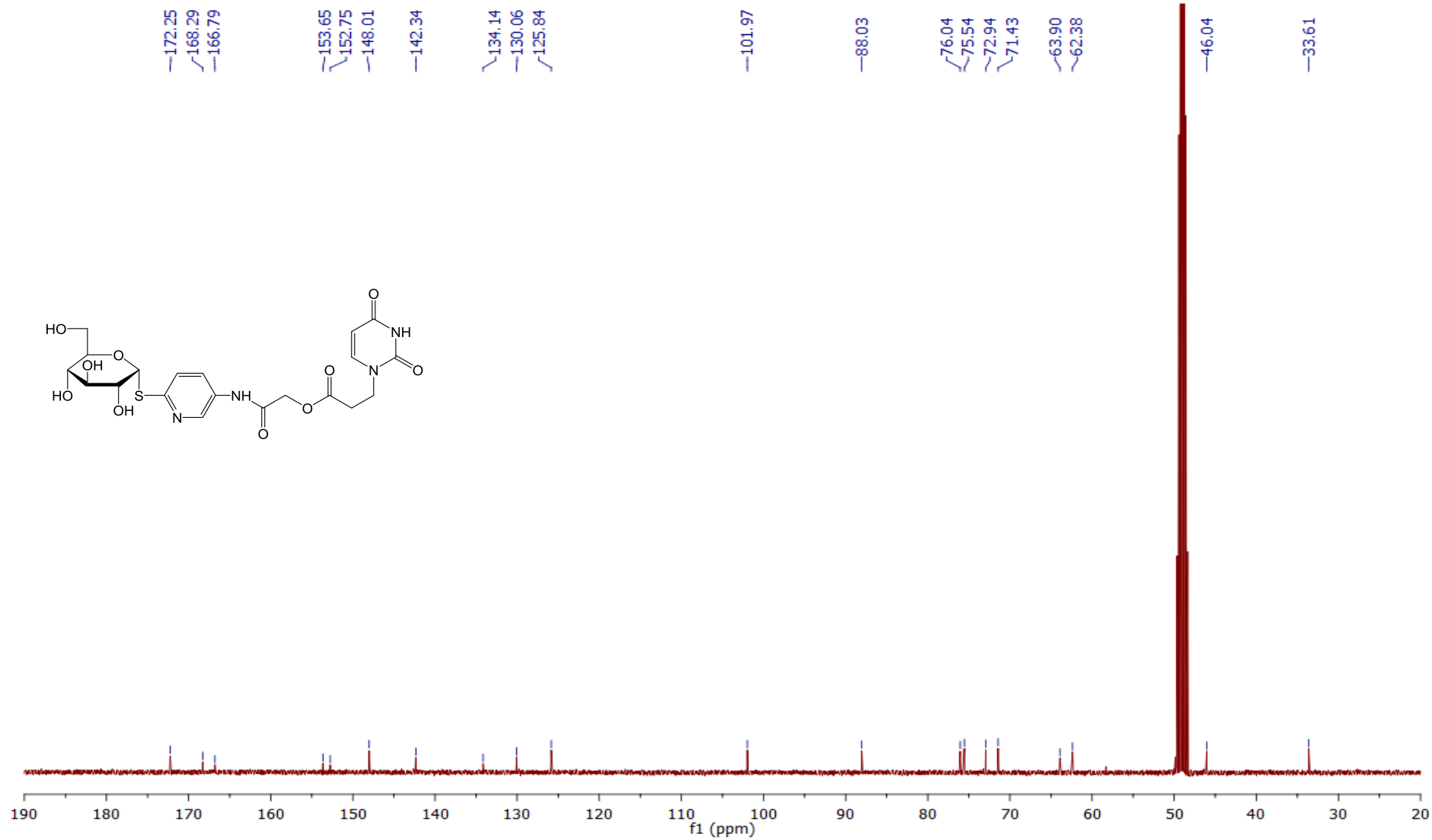


Fig. S78: ^{13}C NMR spectrum of glycoconjugate **61**

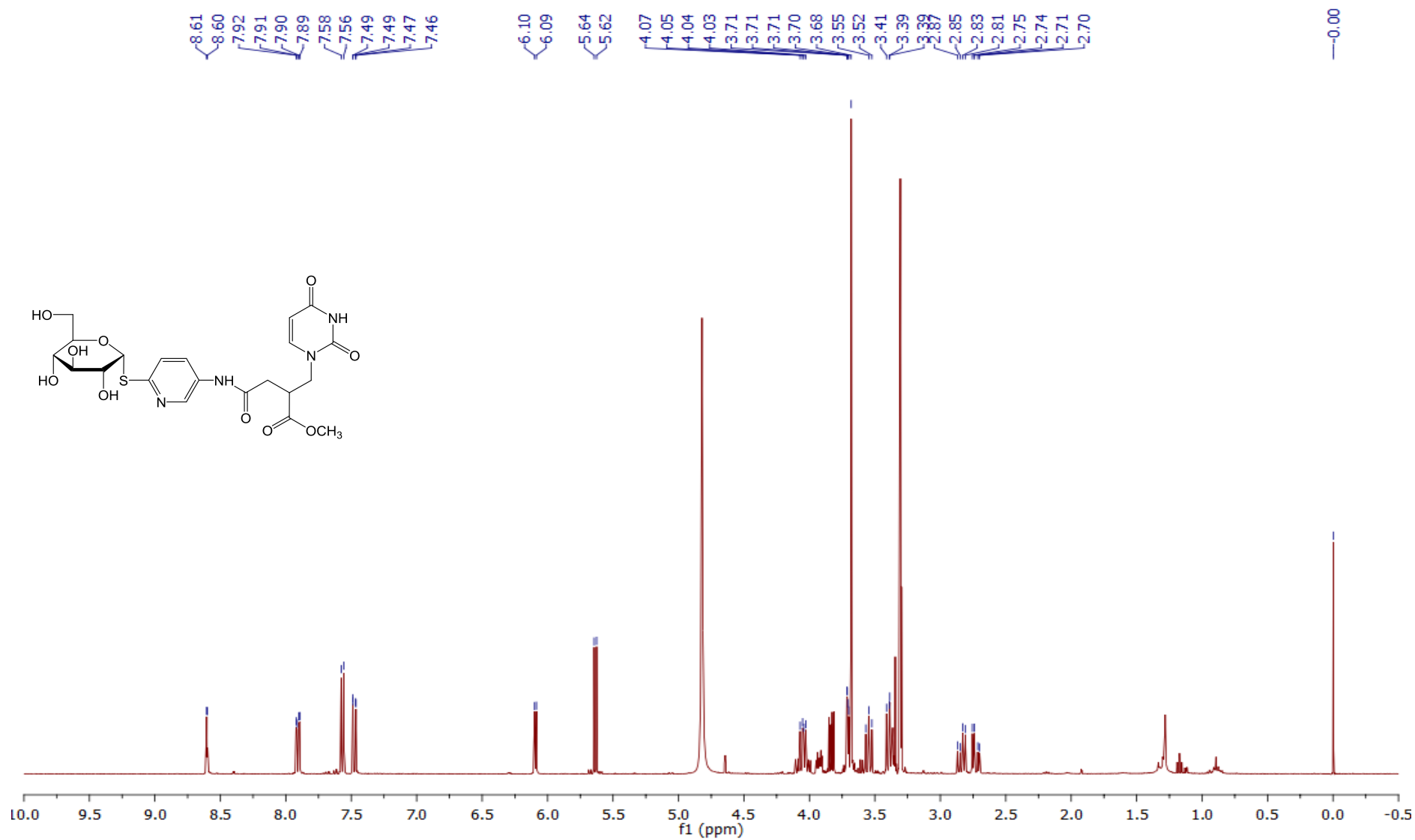


Fig. S79: ¹H NMR spectrum of glycoconjugate **62**

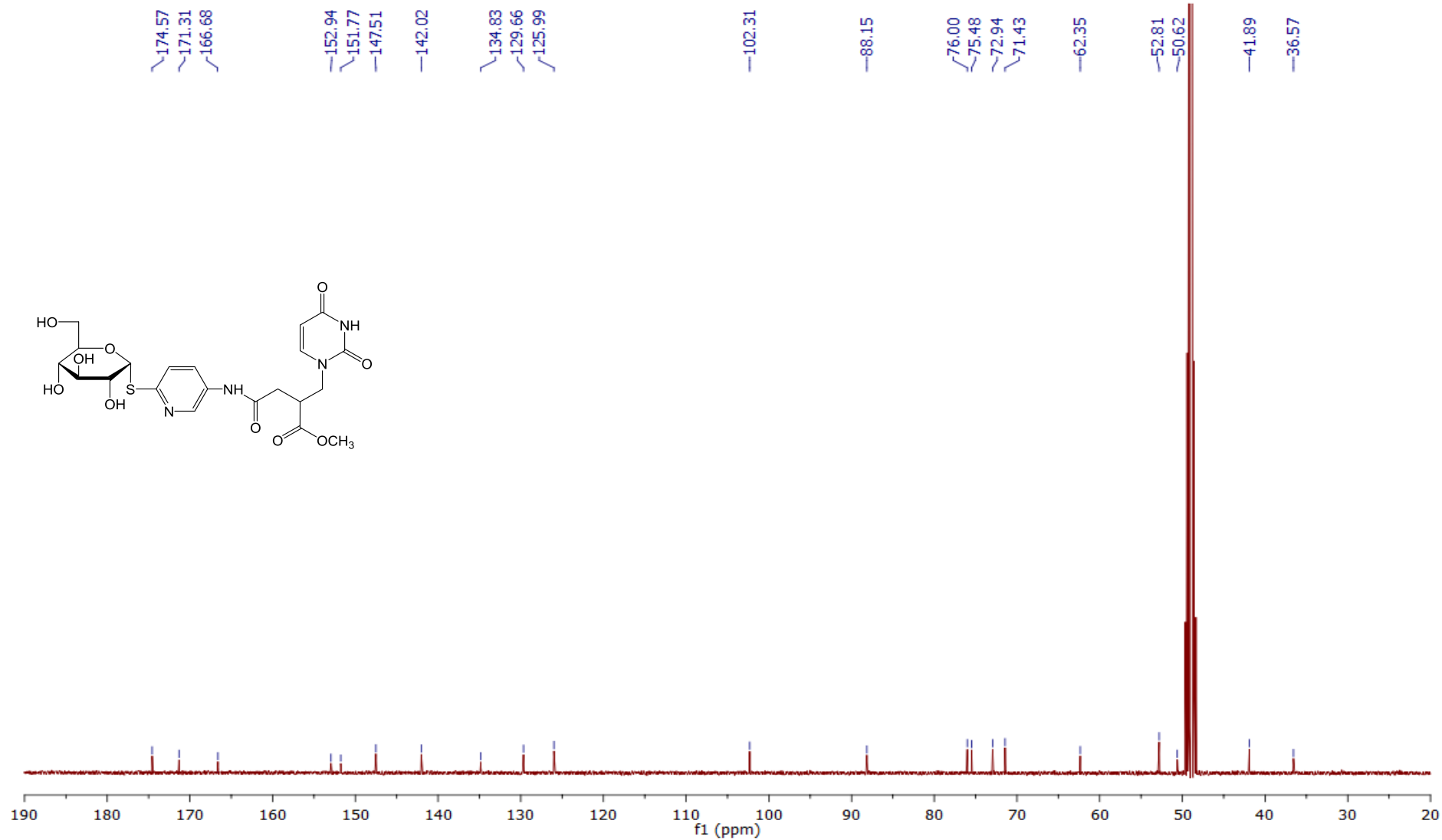


Fig. S80: ¹³C NMR spectrum of glycoconjugate **62**

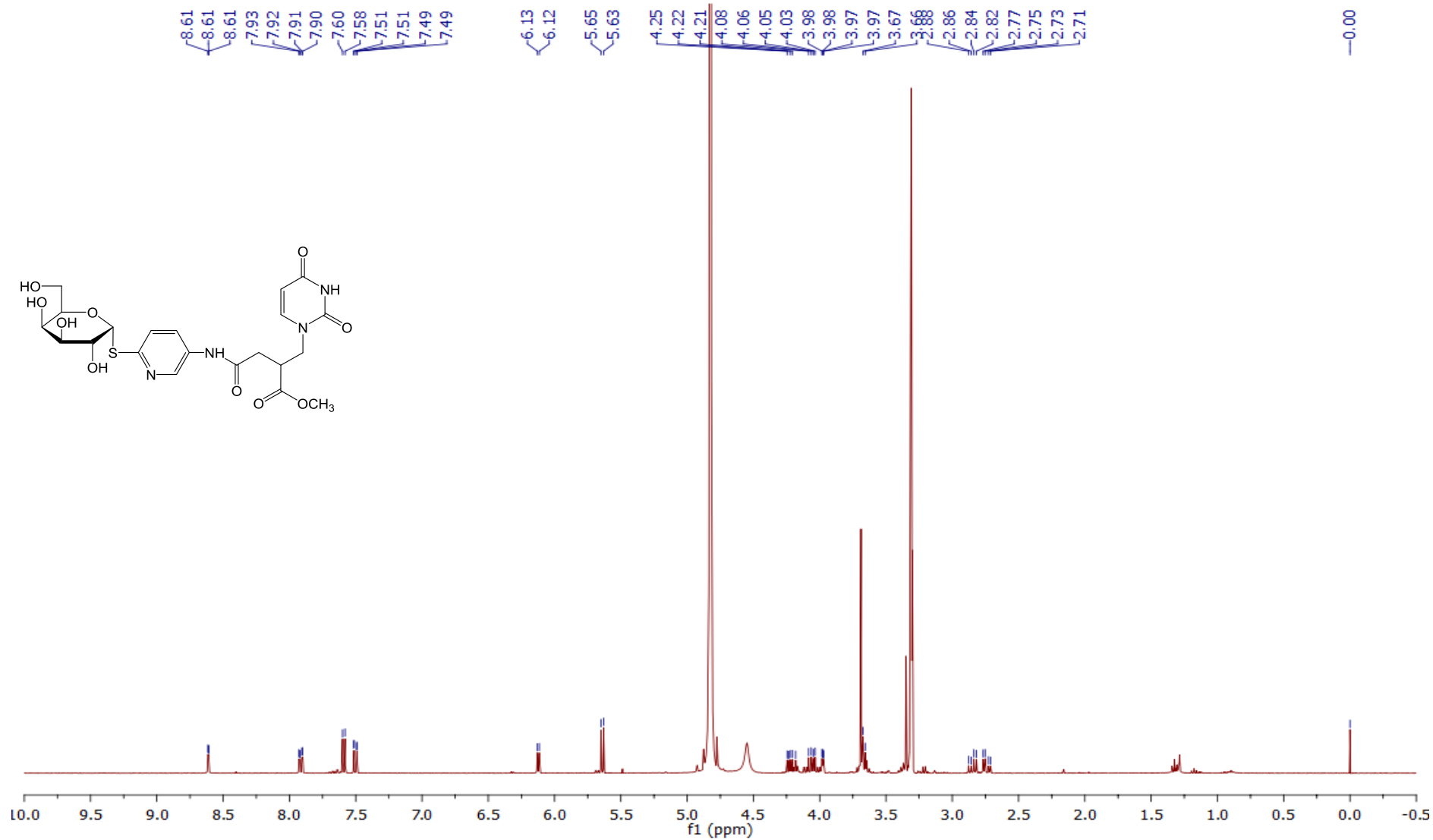


Fig. S81: ¹H NMR spectrum of glycoconjugate **63**

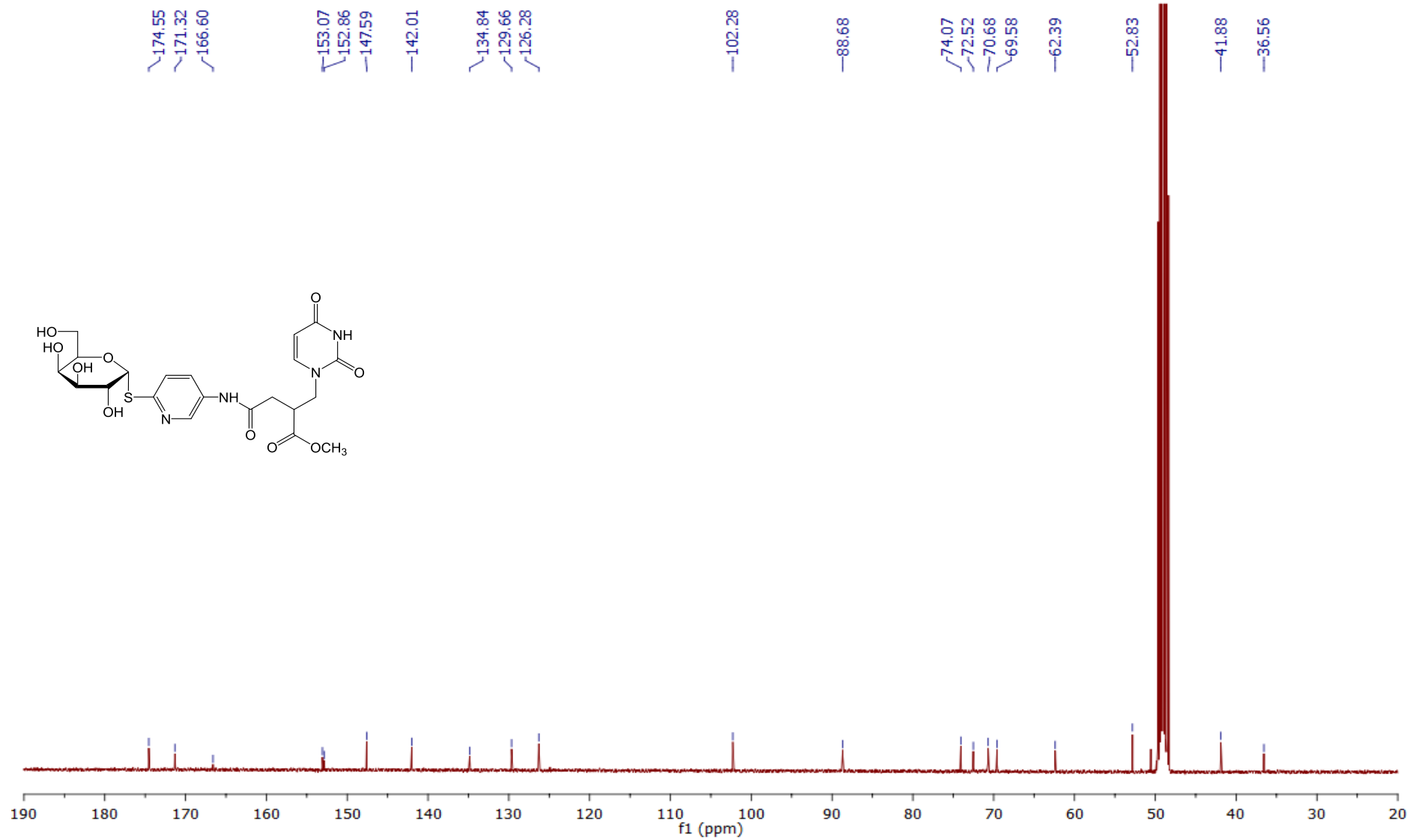


Fig. S82: ¹³C NMR spectrum of glycoconjugate **63**

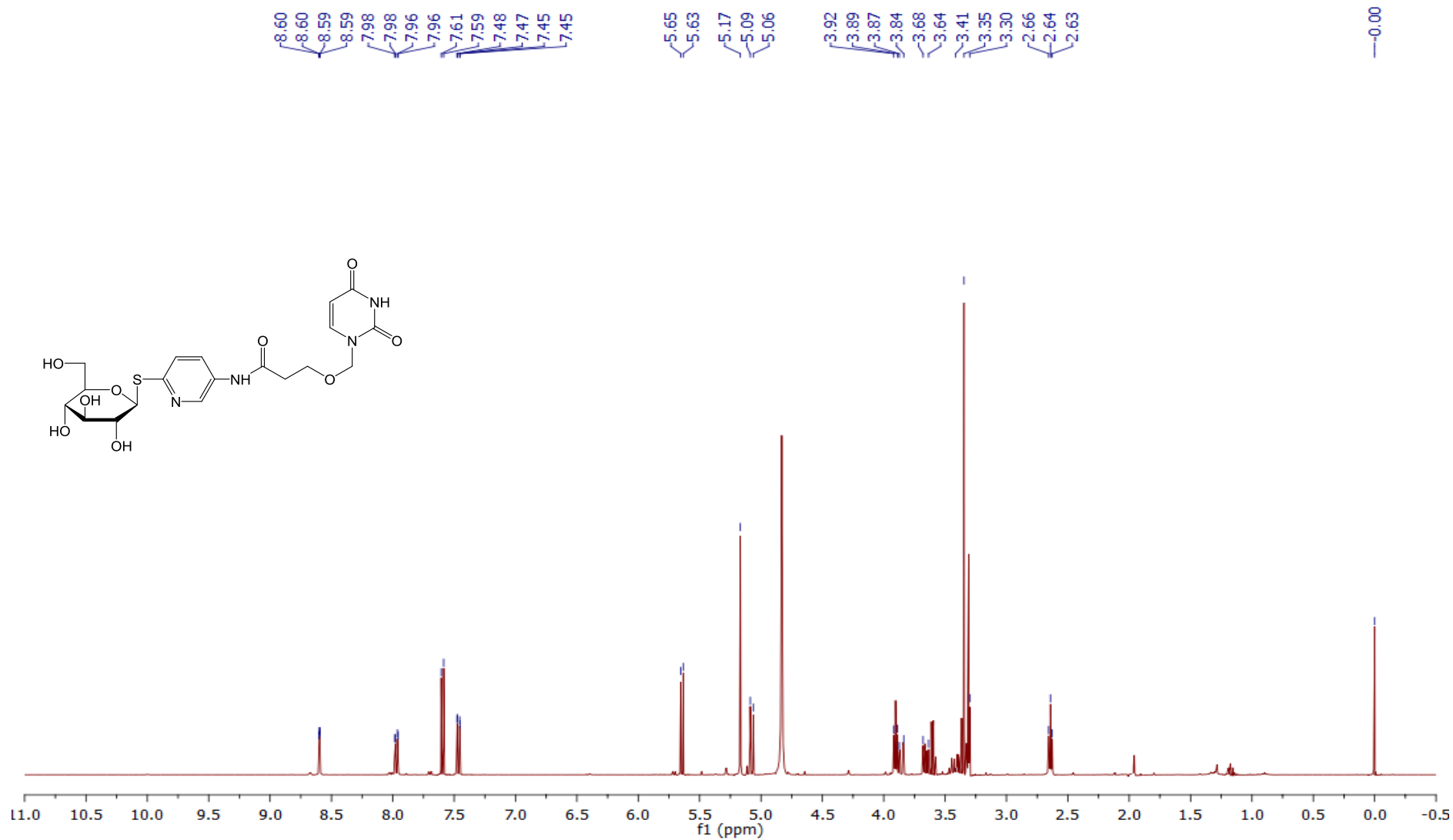


Fig. S83: ¹H NMR spectrum of glycoconjugate **64**

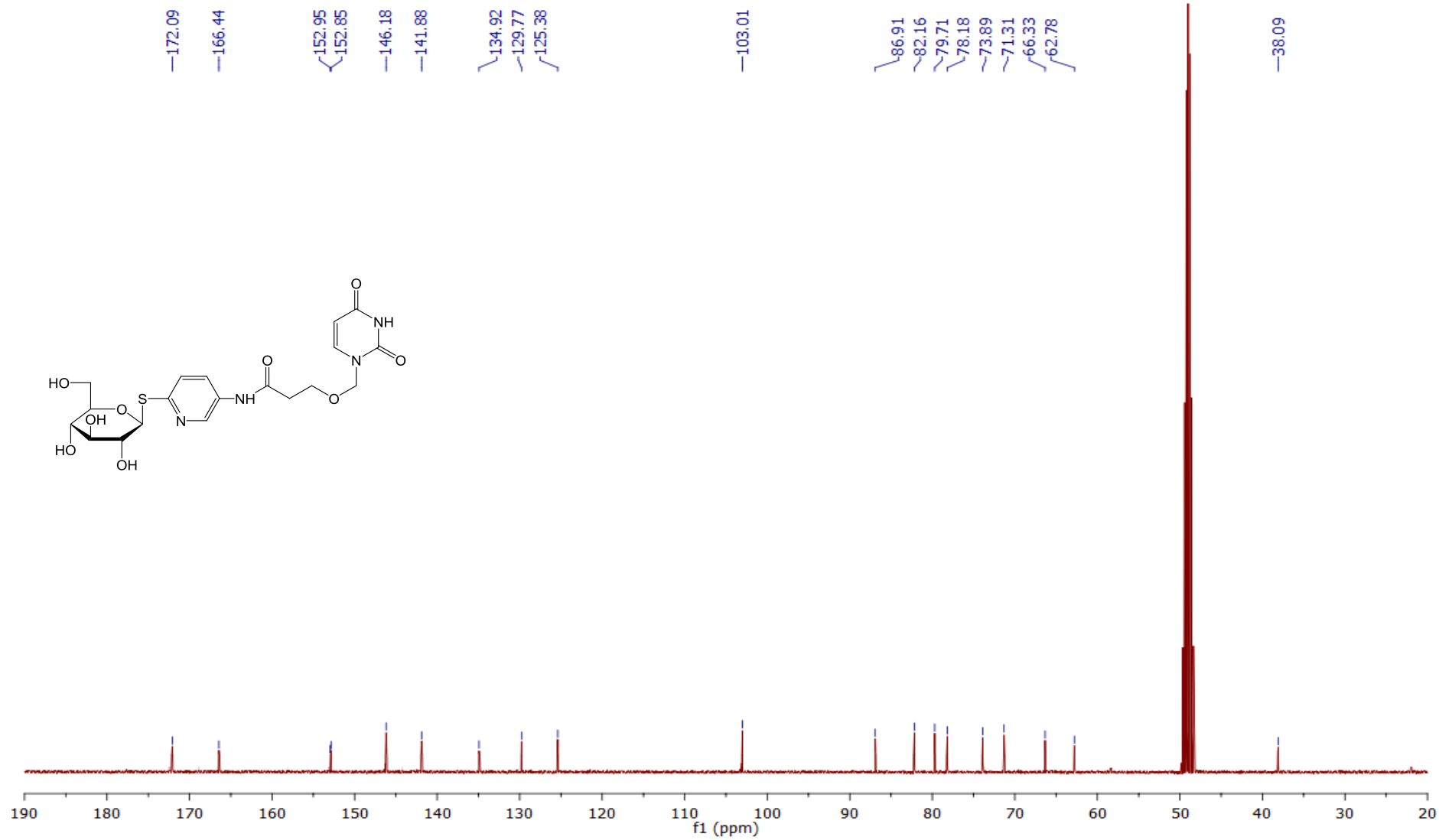


Fig. S84: ^{13}C NMR spectrum of glycoconjugate **64**

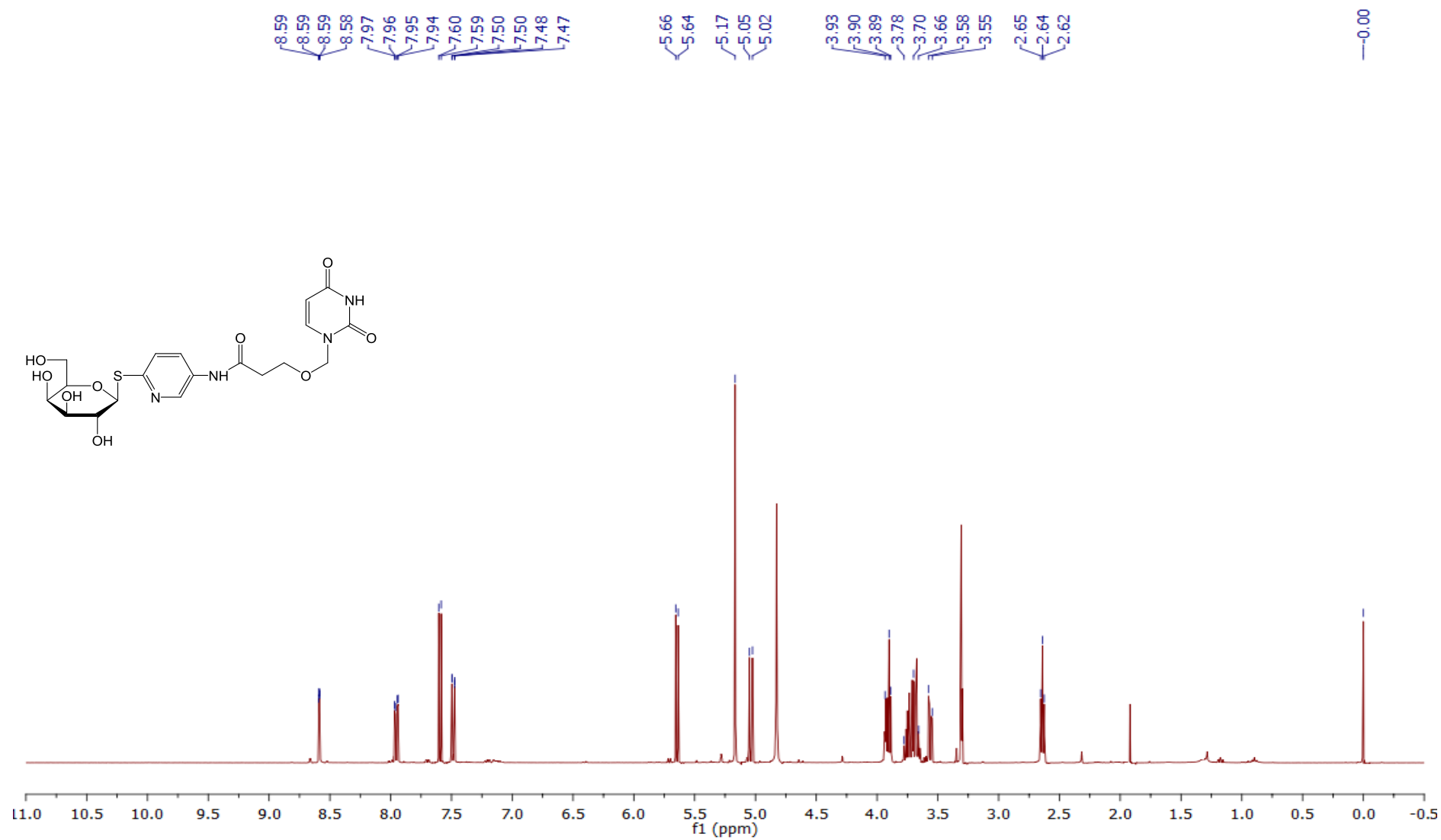


Fig. S85: ¹H NMR spectrum of glycoconjugate **65**

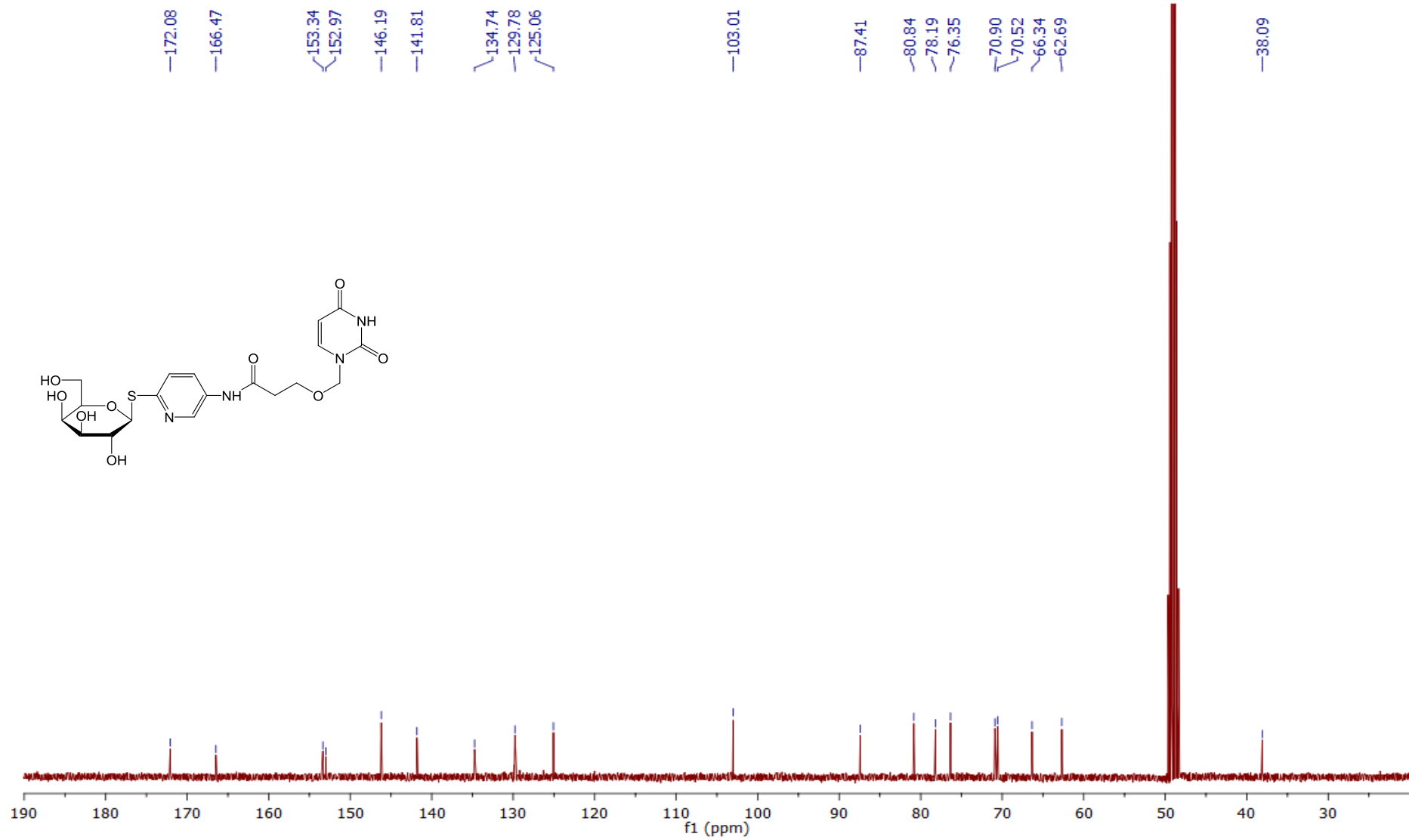


Fig. S86: ^{13}C NMR spectrum of glycoconjugate **65**