Supporting Information

Enzymatic Synthesis and Properties of Uridine-5´-*O*-(2-thiodiphospho)-*N*-acetylglucosamine

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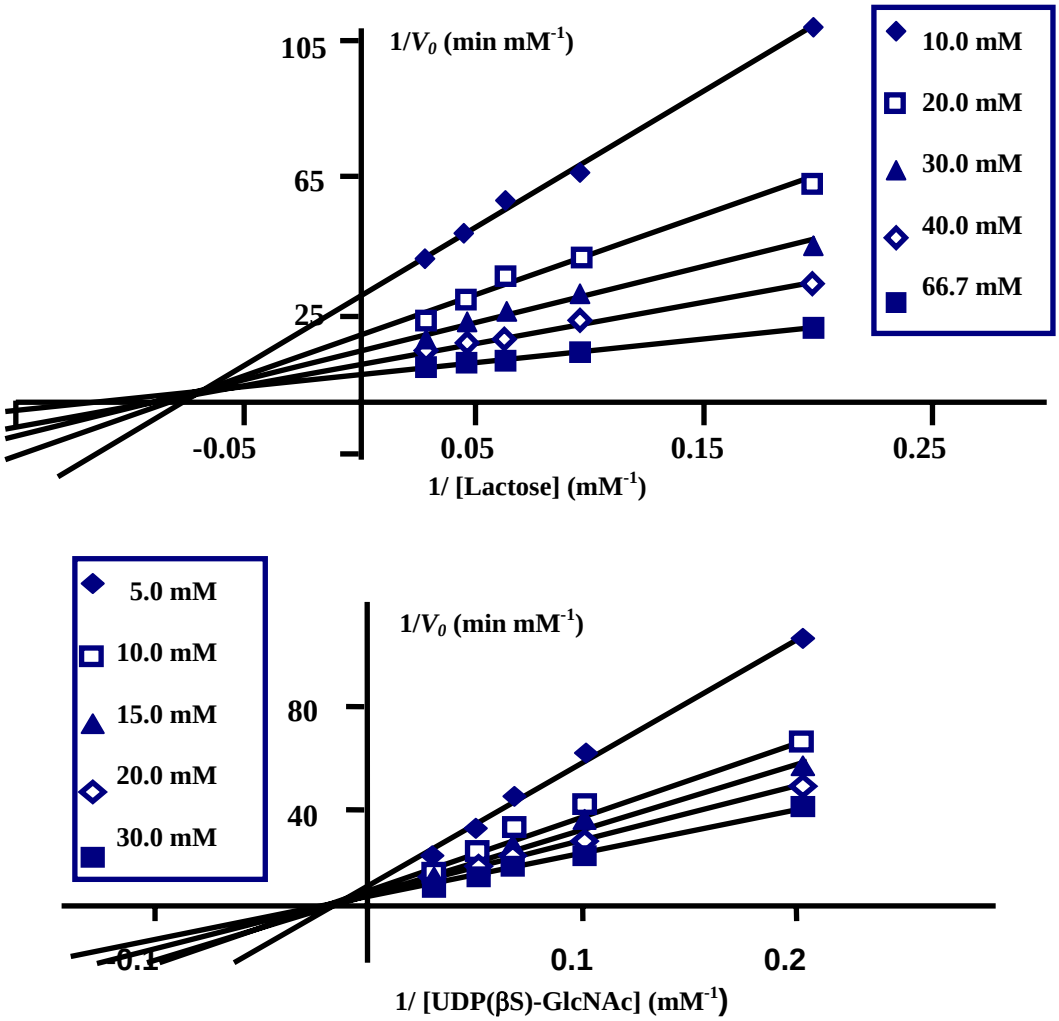


Figure S1. Double reciprocal plots

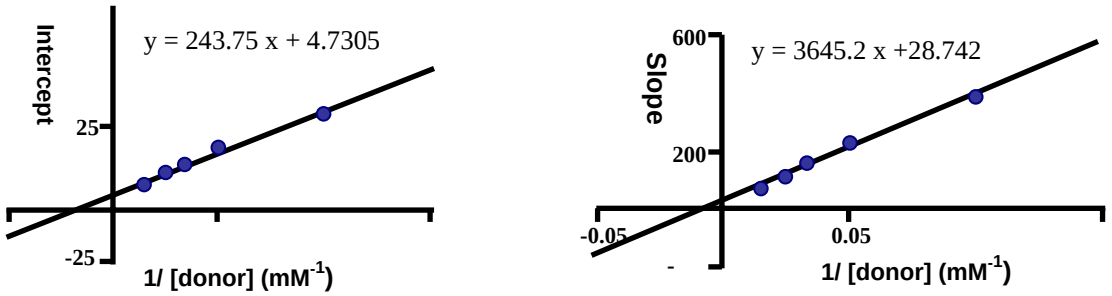
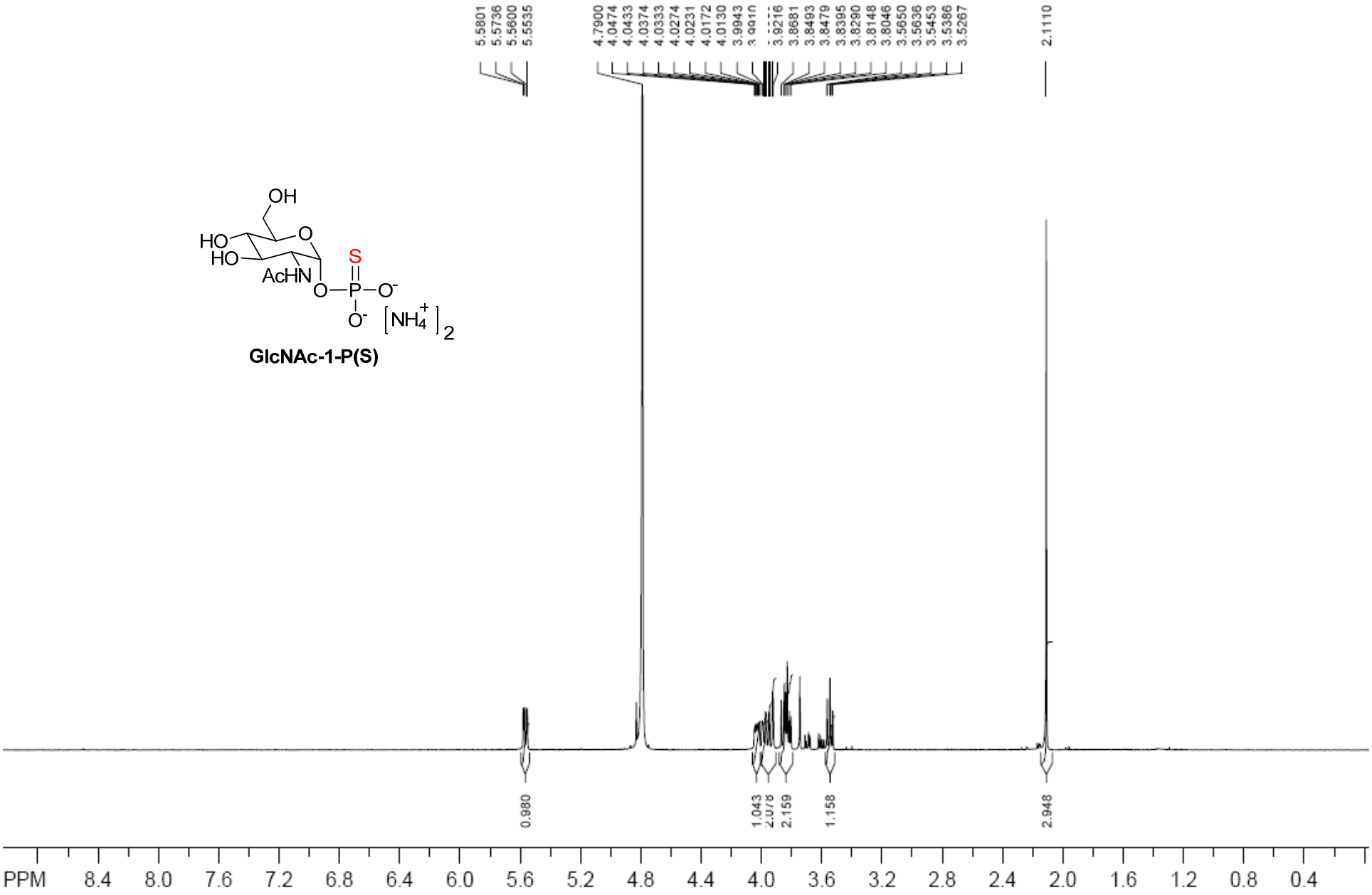
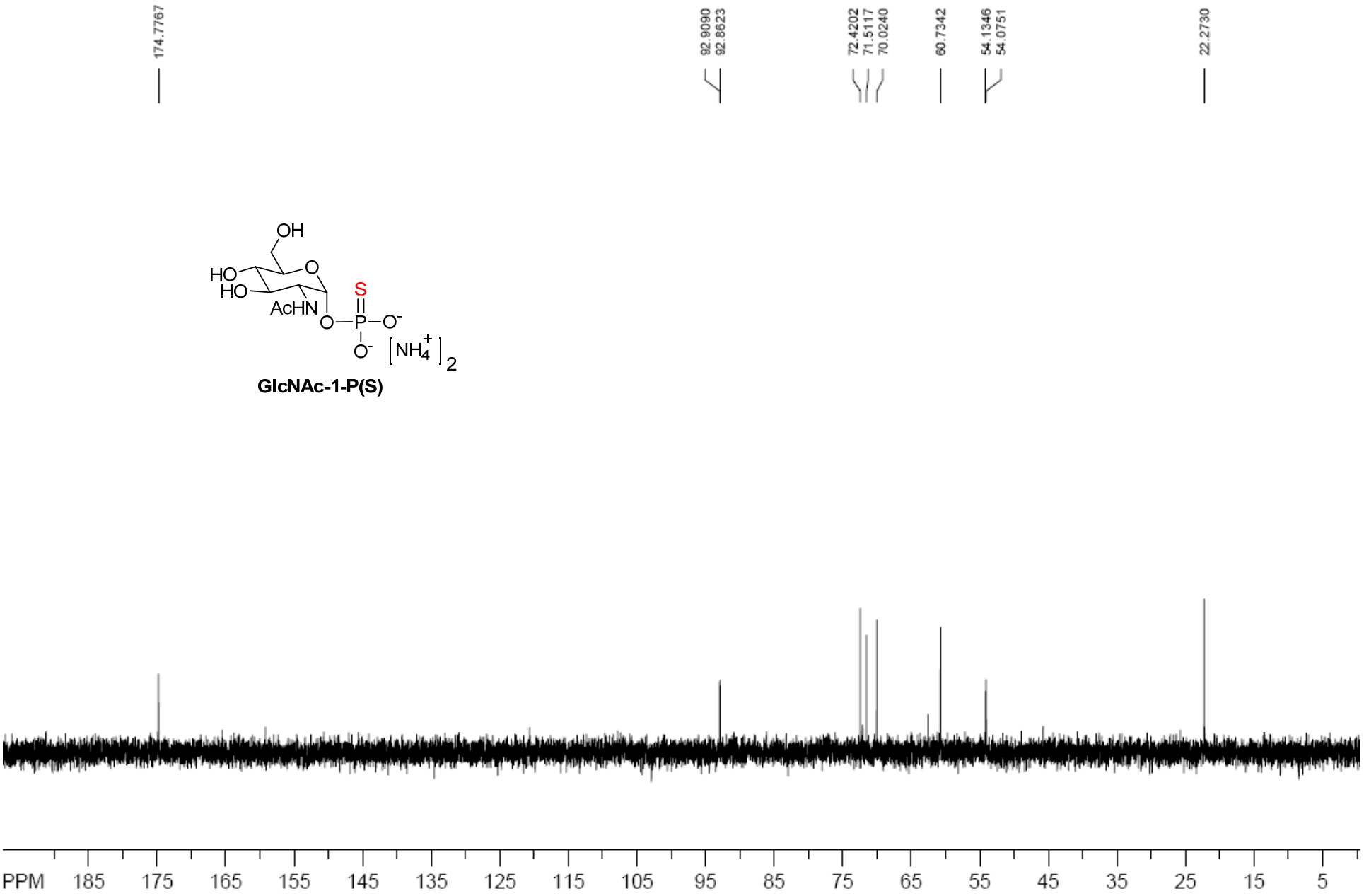


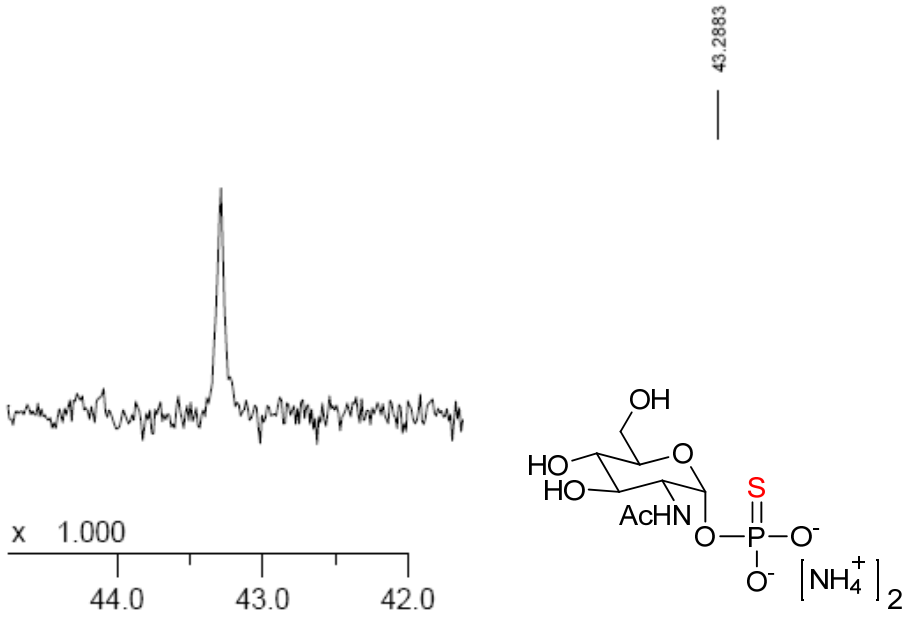
Figure S2. Secondary plots from the primary plot where lactose is the variable substrate and UDP(βS)-GlcNAc is the fixed substrate


5.5801
5.5736
5.5600
5.5535
4.7900
4.0474
4.0433
4.0374
4.0333
4.0274
4.0231
4.0172
4.0130
3.9943
3.9216
3.8681
3.8493
3.8479
3.8395
3.8290
3.8148
3.8046
3.5650
3.5636
3.5453
3.5386
3.5267
2.1110
OH
HO
HO
O
AcHN
S
O—P—O⁻
O⁻
[NH4+]2
0.980
1.043
2.159
1.158
2.948
PPM
8.4
8.0
7.6
7.2
6.8
6.4
6.0
5.6
5.2
4.8
4.4
4.0
3.6
3.2
2.8
2.4
2.0
1.6
1.2
0.8
0.4

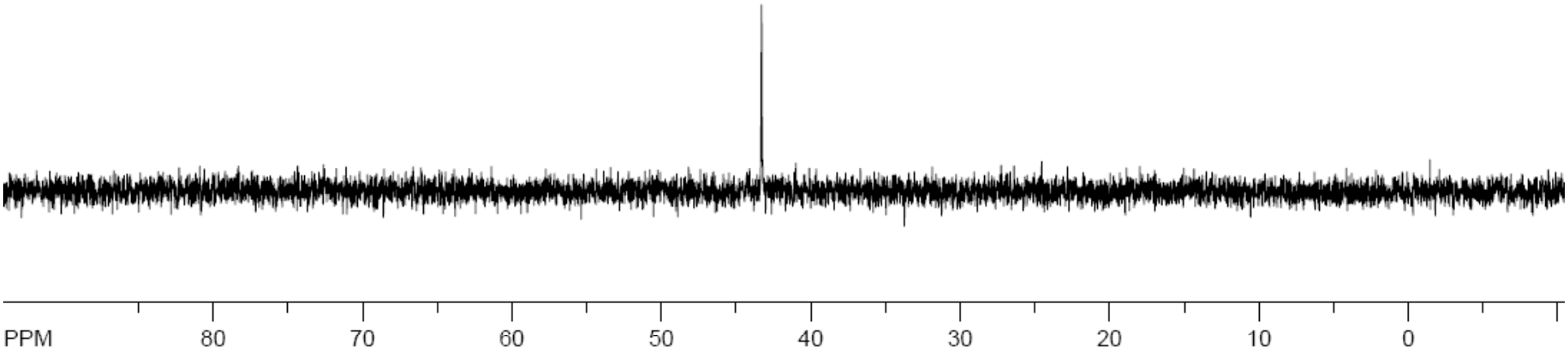
GlcNAc-1-P(S)

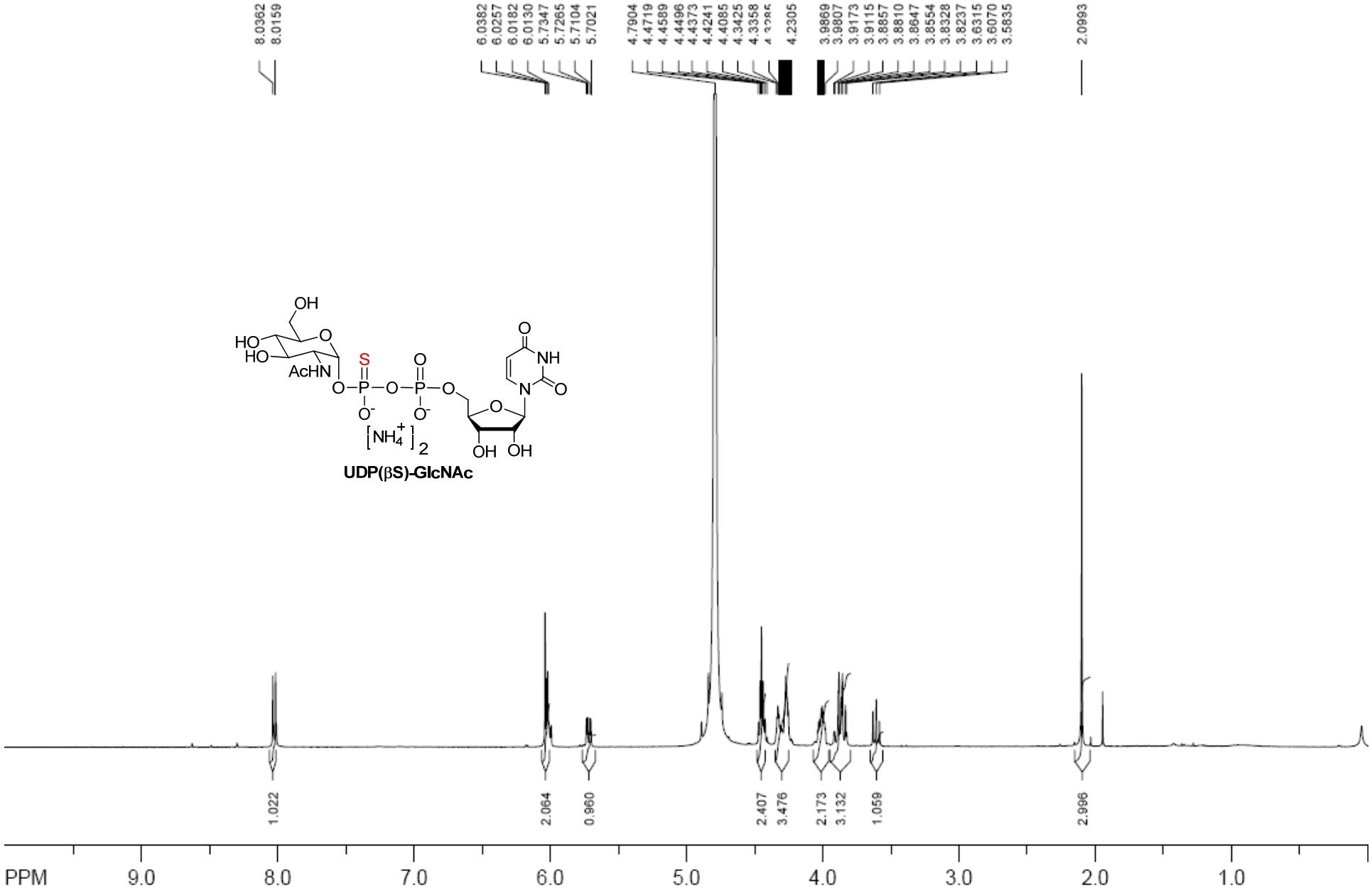

174.7767
92.9090
92.8623
72.4202
71.5117
70.0240
60.7342
54.1346
54.0751
22.2730
OH
HO
HO
O
AcHN
S
O—P—O⁻
O⁻
[NH4+]2
PPM
185
175
165
155
145
135
125
115
105
95
85
75
65
55
45
35
25
15
5

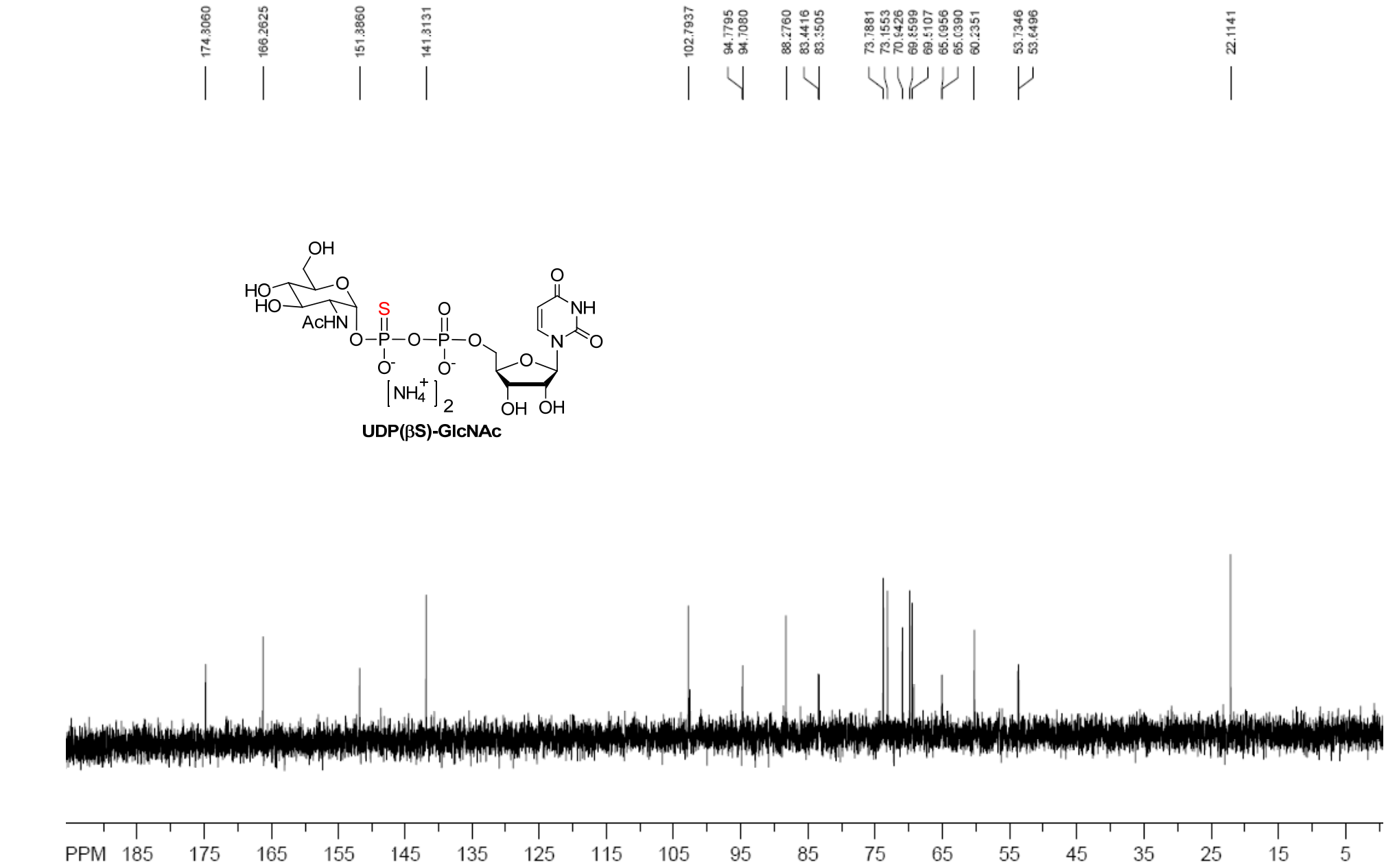
GlcNAc-1-P(S)


43.2883
x 1.000
44.0
43.0
42.0
OH
HO
HO
AcHN
O
S
O
P
O-
O-
NH4+
2

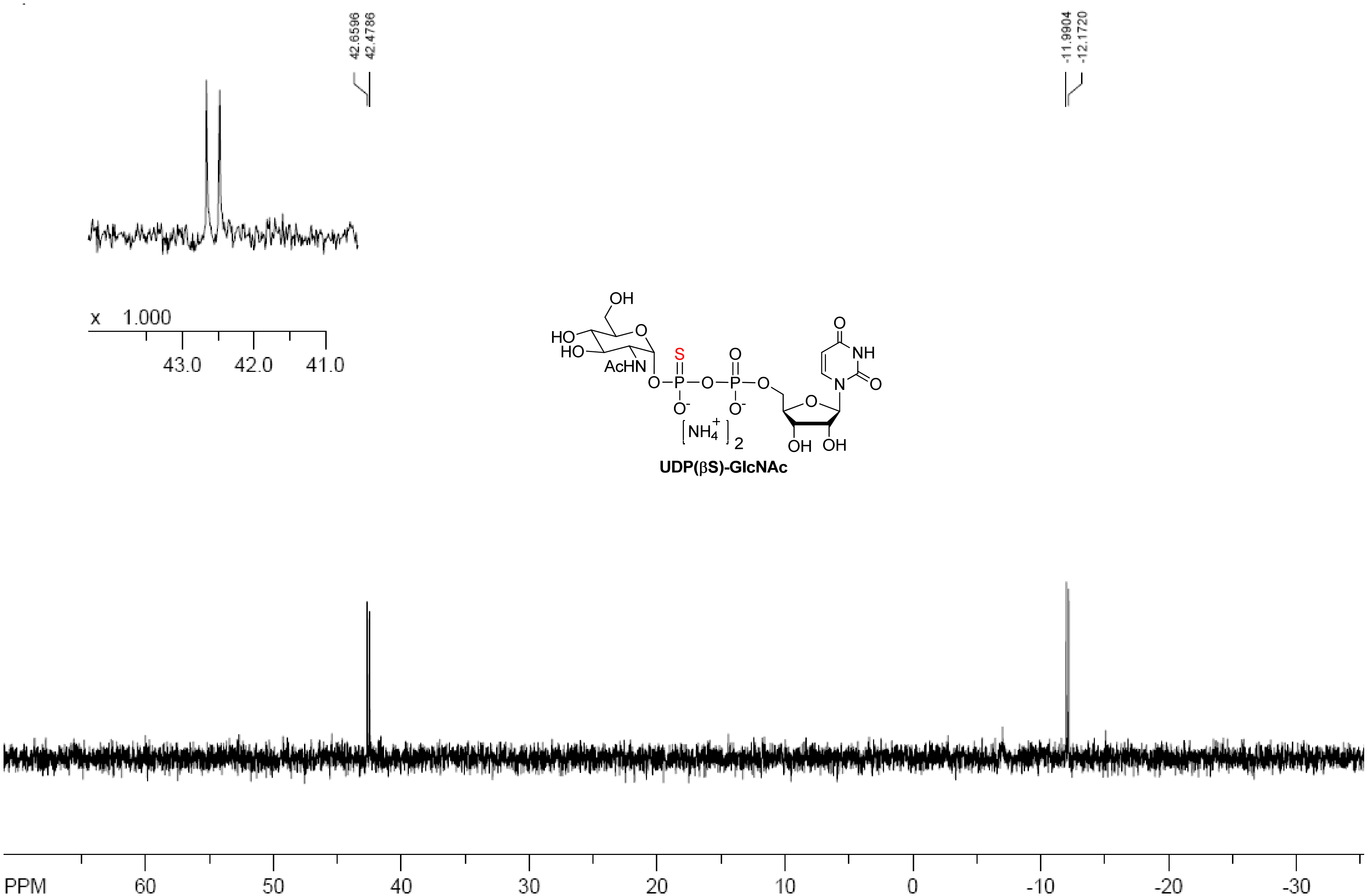
GlcNAc-1-P(S)


PPM
80
70
60
50
40
30
20
10
0


8.0362
8.0159
6.0382
6.0257
6.0182
6.0130
5.7347
5.7265
5.7104
5.7021
4.7904
4.4719
4.4589
4.4496
4.4373
4.4241
4.4085
4.3425
4.3358
4.2305
3.9869
3.9807
3.9173
3.9115
3.8857
3.8810
3.8647
3.8554
3.8328
3.8237
3.6315
3.6070
3.5835
2.0993
OH
HO
HO
O
AcHN
S
O
O
O
O
O
O
O
O
NH
N
O
O
[NH4+]2
OH
OH
UDP(βS)-GlcNAc
1.022
2.064
0.960
2.407
3.476
2.173
3.132
1.059
2.996
PPM
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0



UDP(βS)-GlcNAc


42.6596
42.4786
-11.9904
-12.1720
x 1.000
43.0
42.0
41.0
OH
HO
HO
AcHN
O
S
NH
N
[NH4+]2
OH
OH
UDP(βS)-GlcNAc
PPM
60
50
40
30
20
10
0
-10
-20
-30