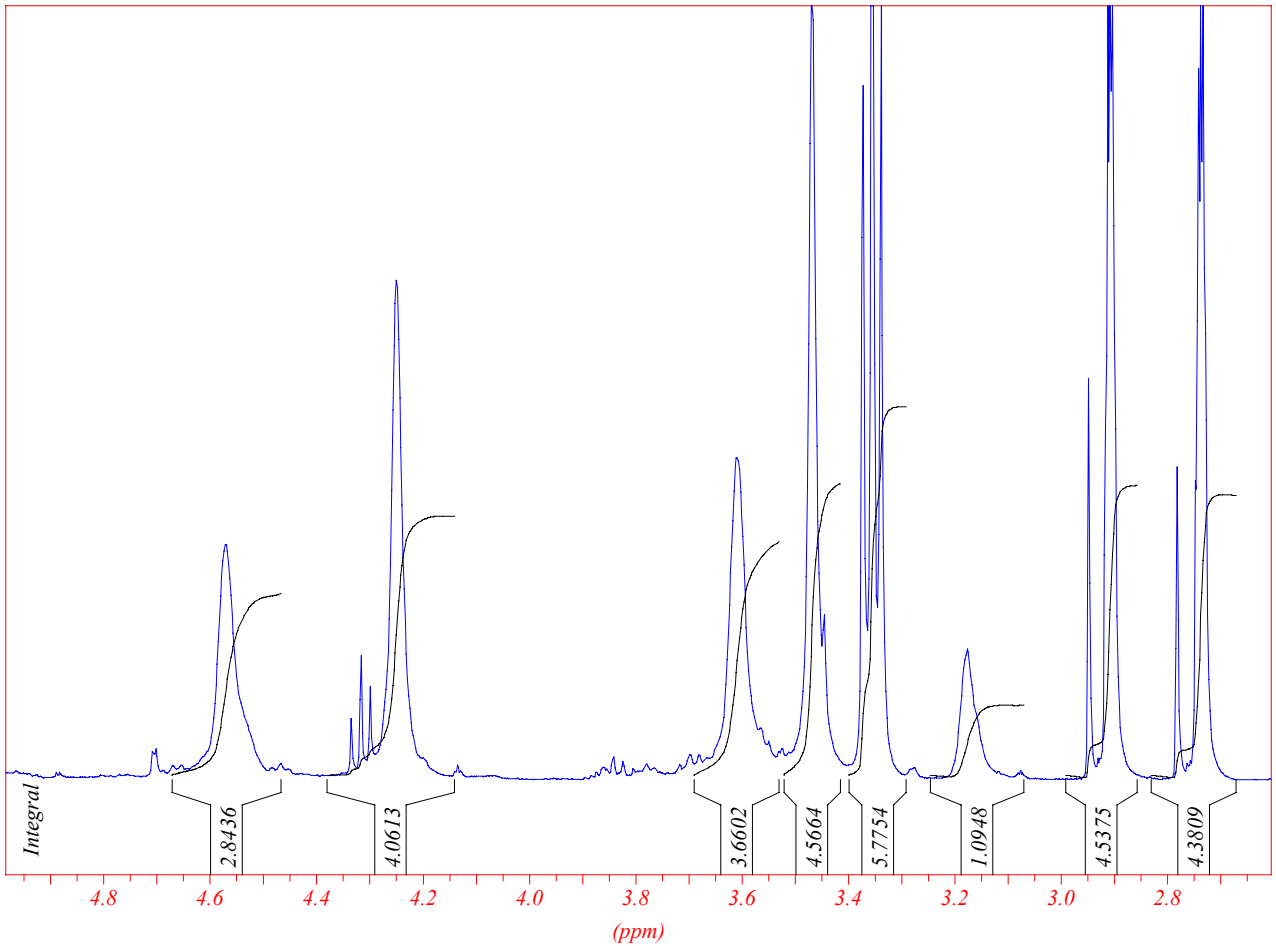
Supplementary

Combining Ring Opening Metathesis Polymerization (ROMP) with Sharpless-type „click“ Reactions : an Easy Method for the Preparation of Sidechain Functionalized Poly(oxynorbornenes)

Wolfgang H. Binder* and Christian Kluger

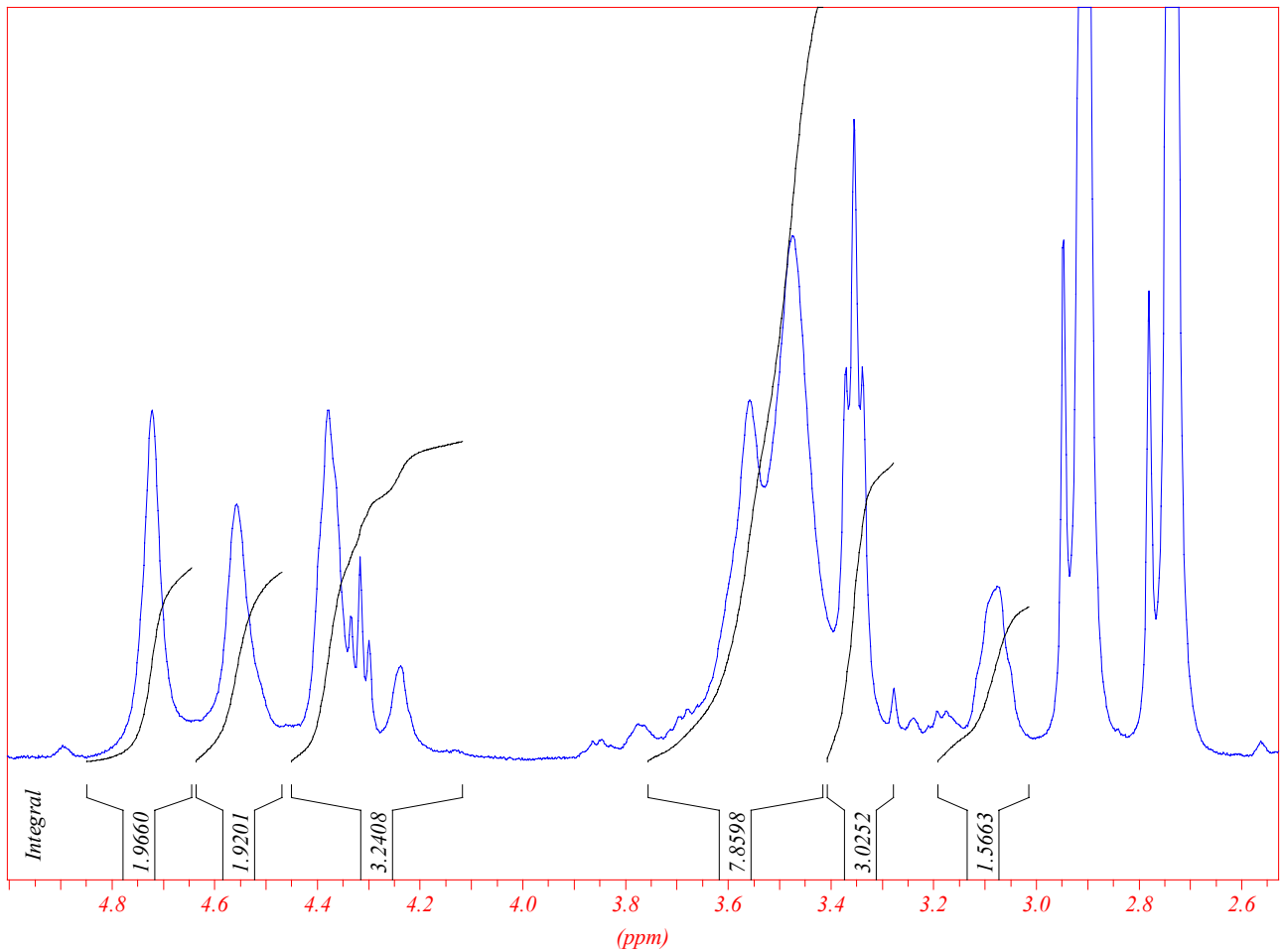
Kinetik : *polymer 24* plus C18-N3 ----> *polymer 28*

t = 0



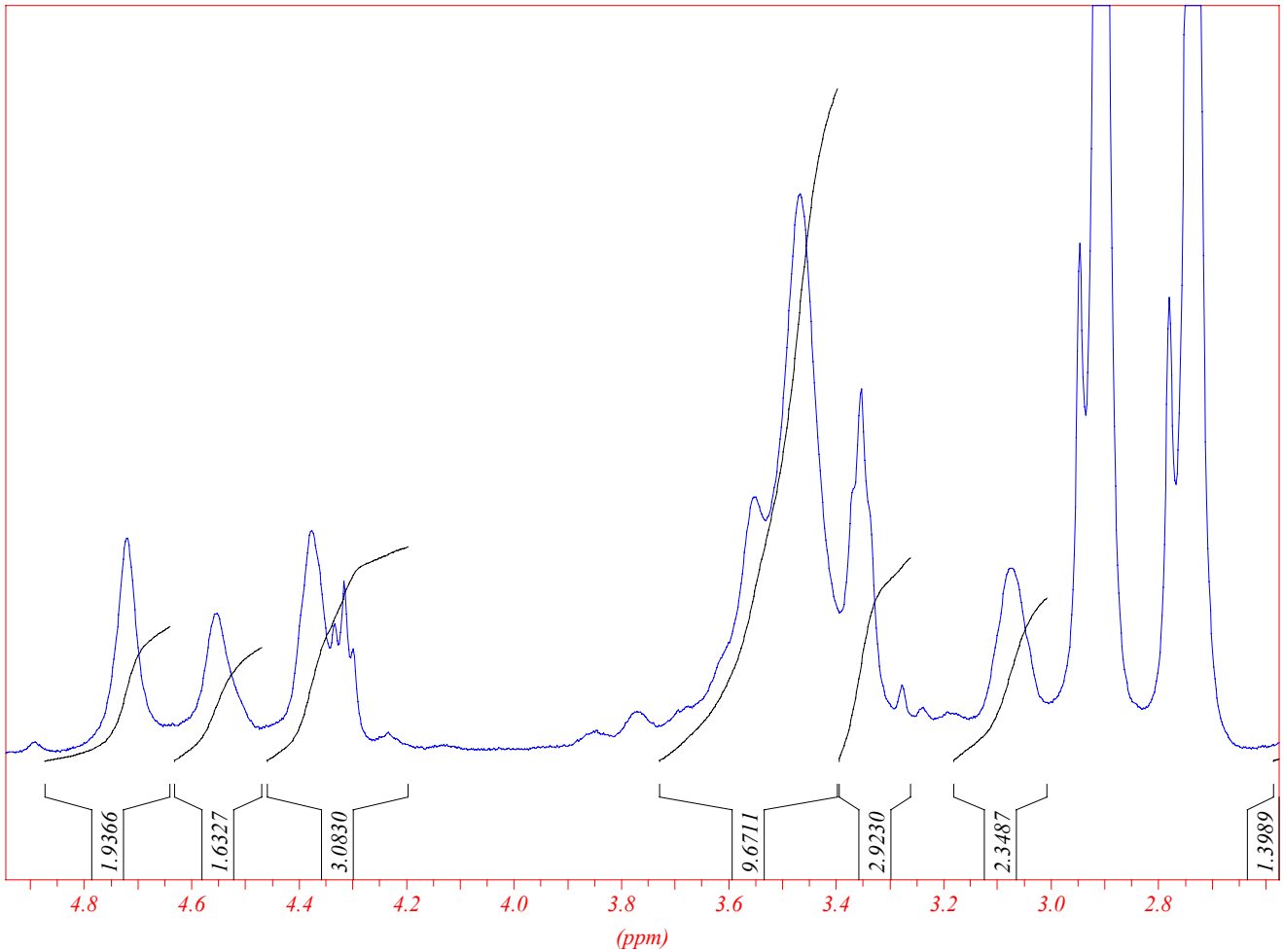
Kinetik : *polymer 24* plus C18-N3 ----> *polymer 28*

t = 2h



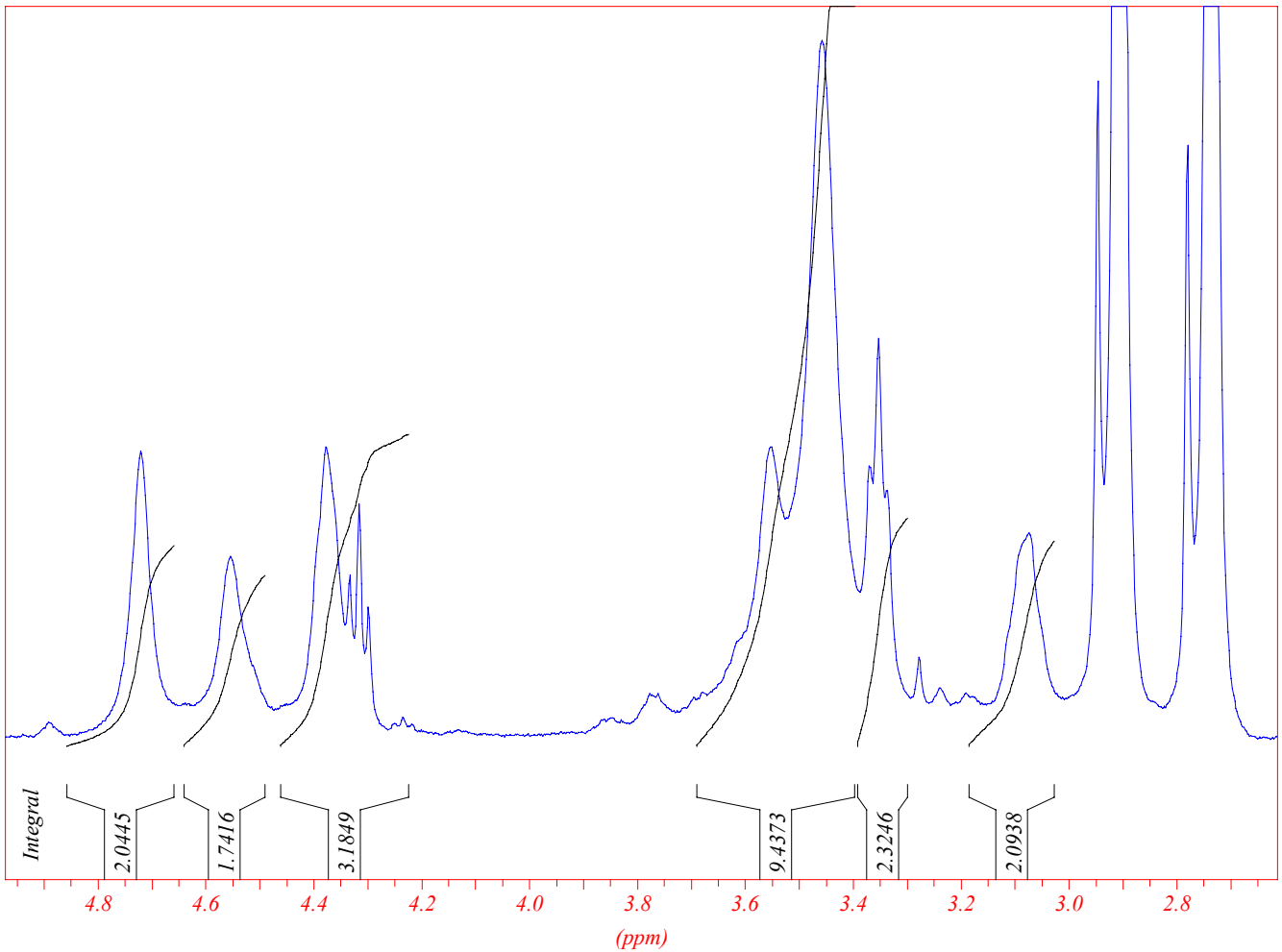
Kinetik : *polymer 24* plus C18-N3 ----> *polymer 28*

t = 4h



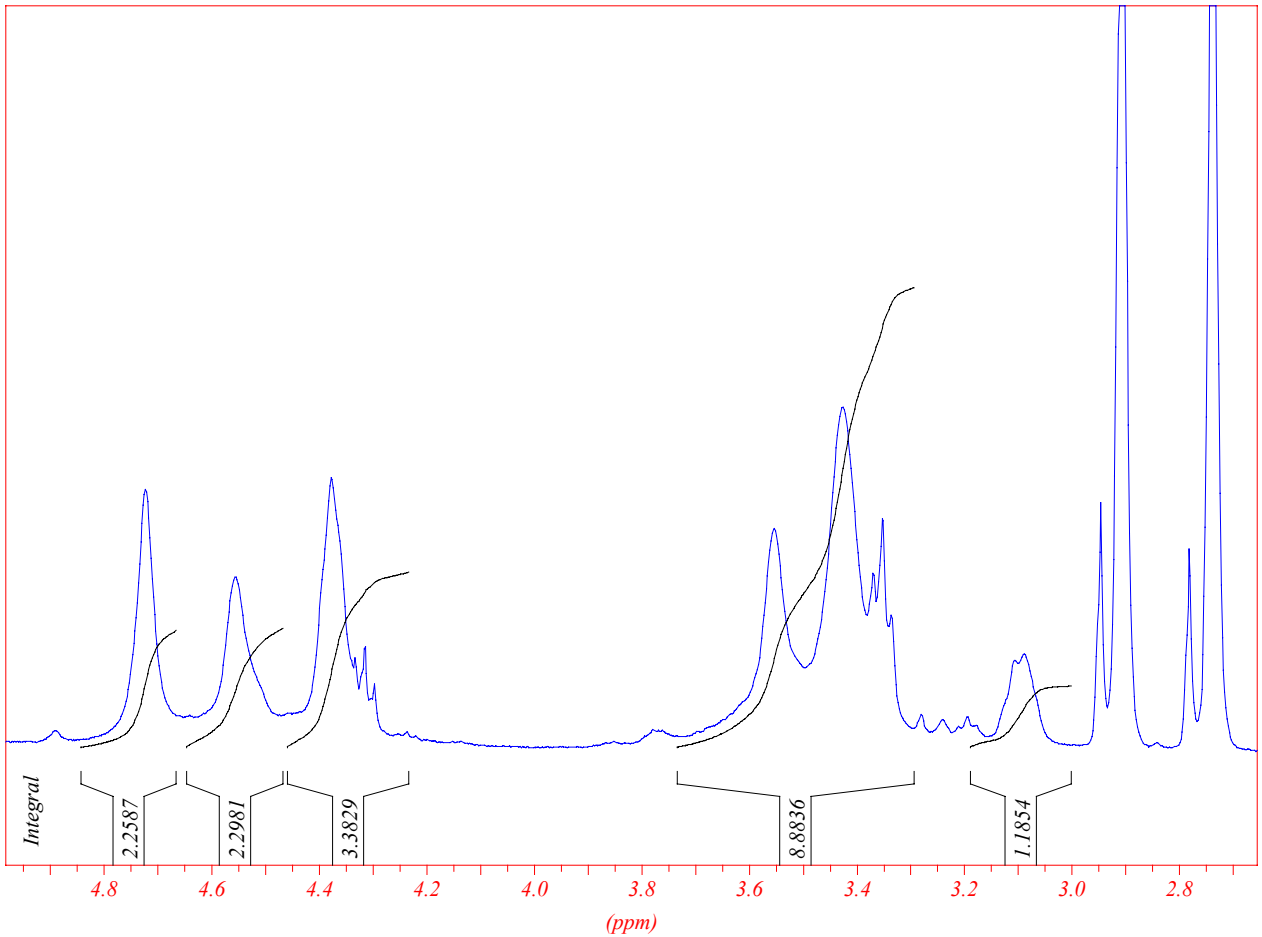
Kinetik : *polymer 24* plus C18-N3 ----> *polymer 28*

t = 6h



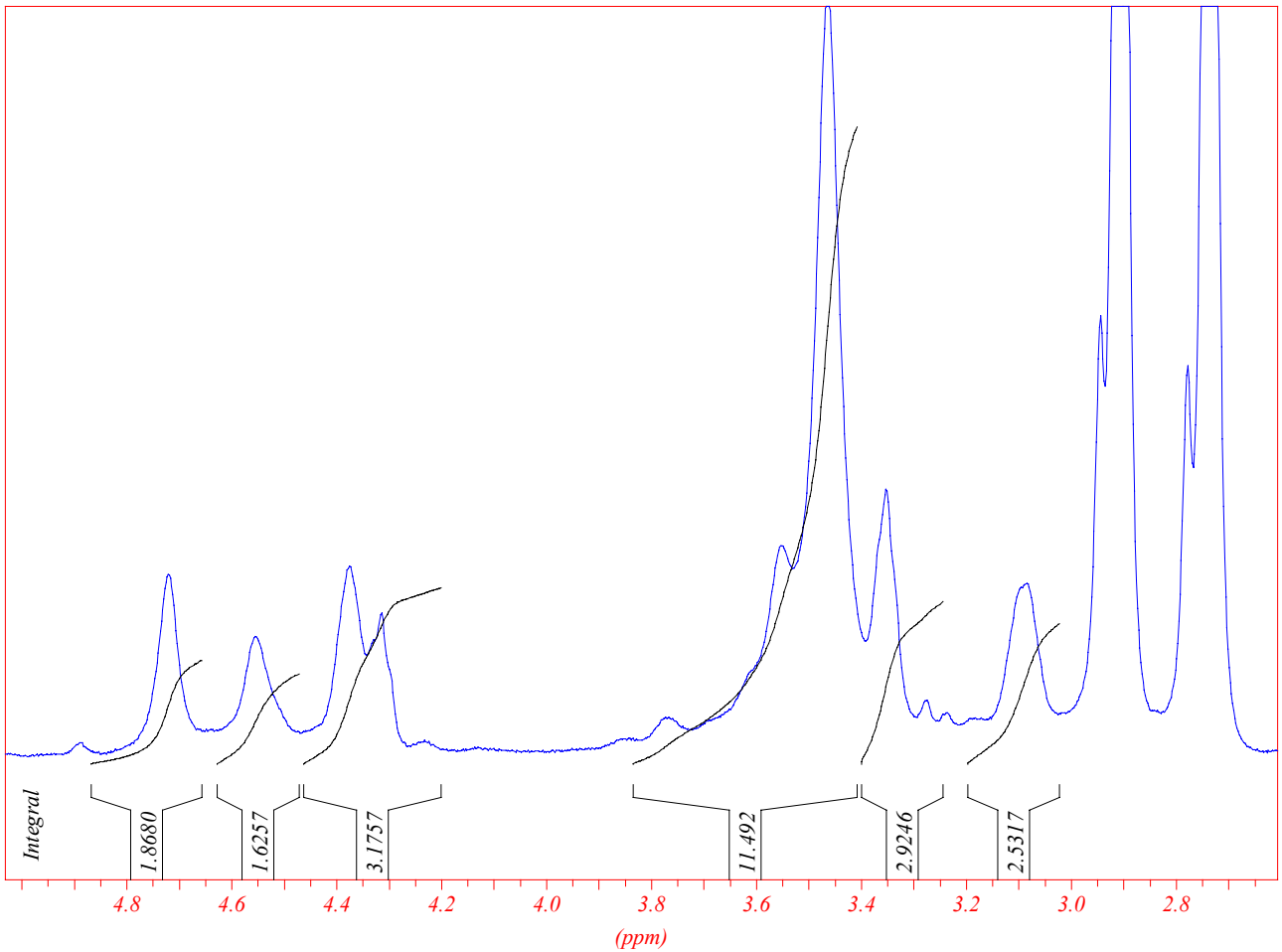
Kinetik : *polymer 24* plus C18-N3 ----> *polymer 28*

t = 8h

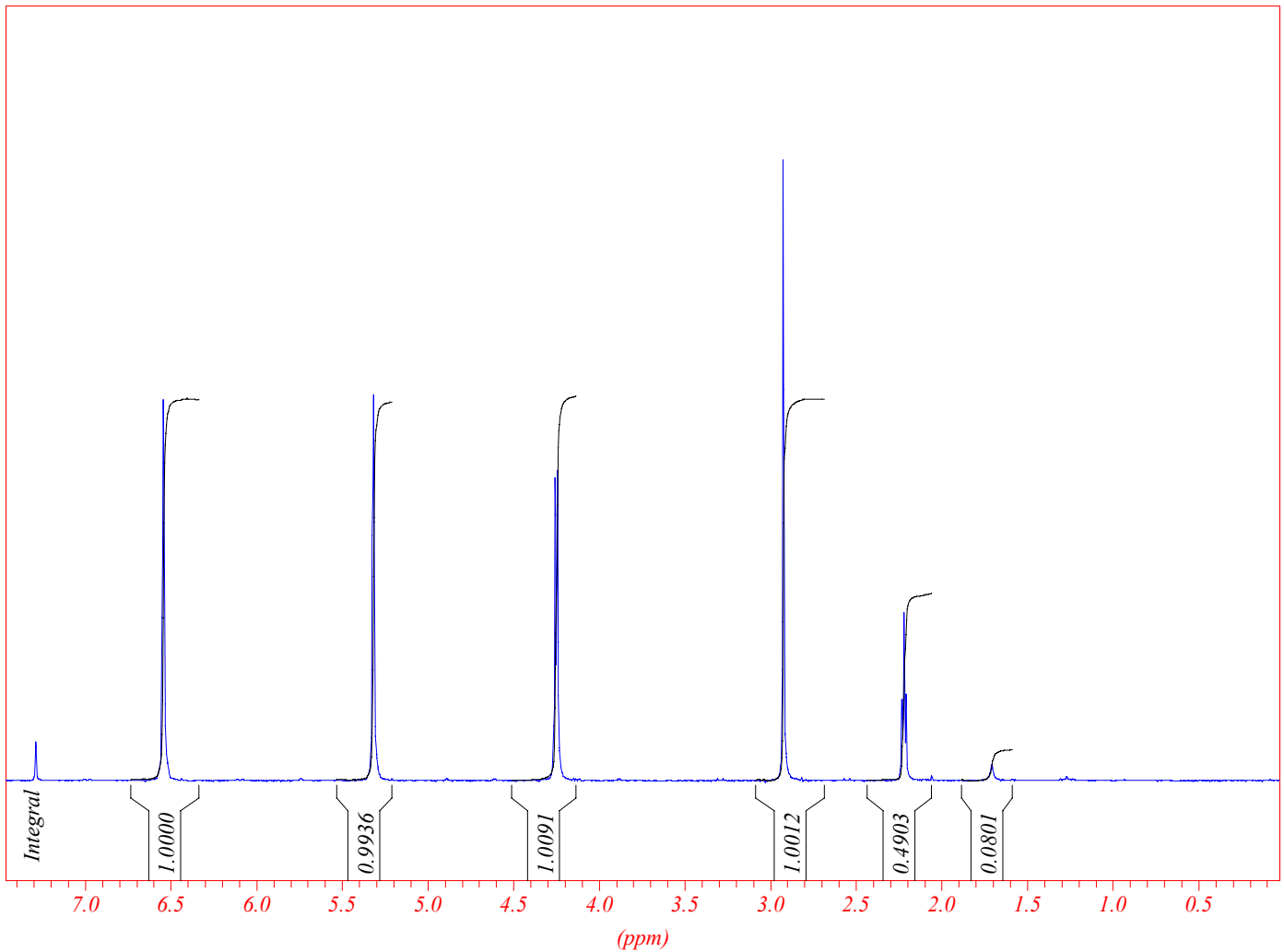


Kinetik : *polymer 24* plus C18-N3 ----> *polymer 28*

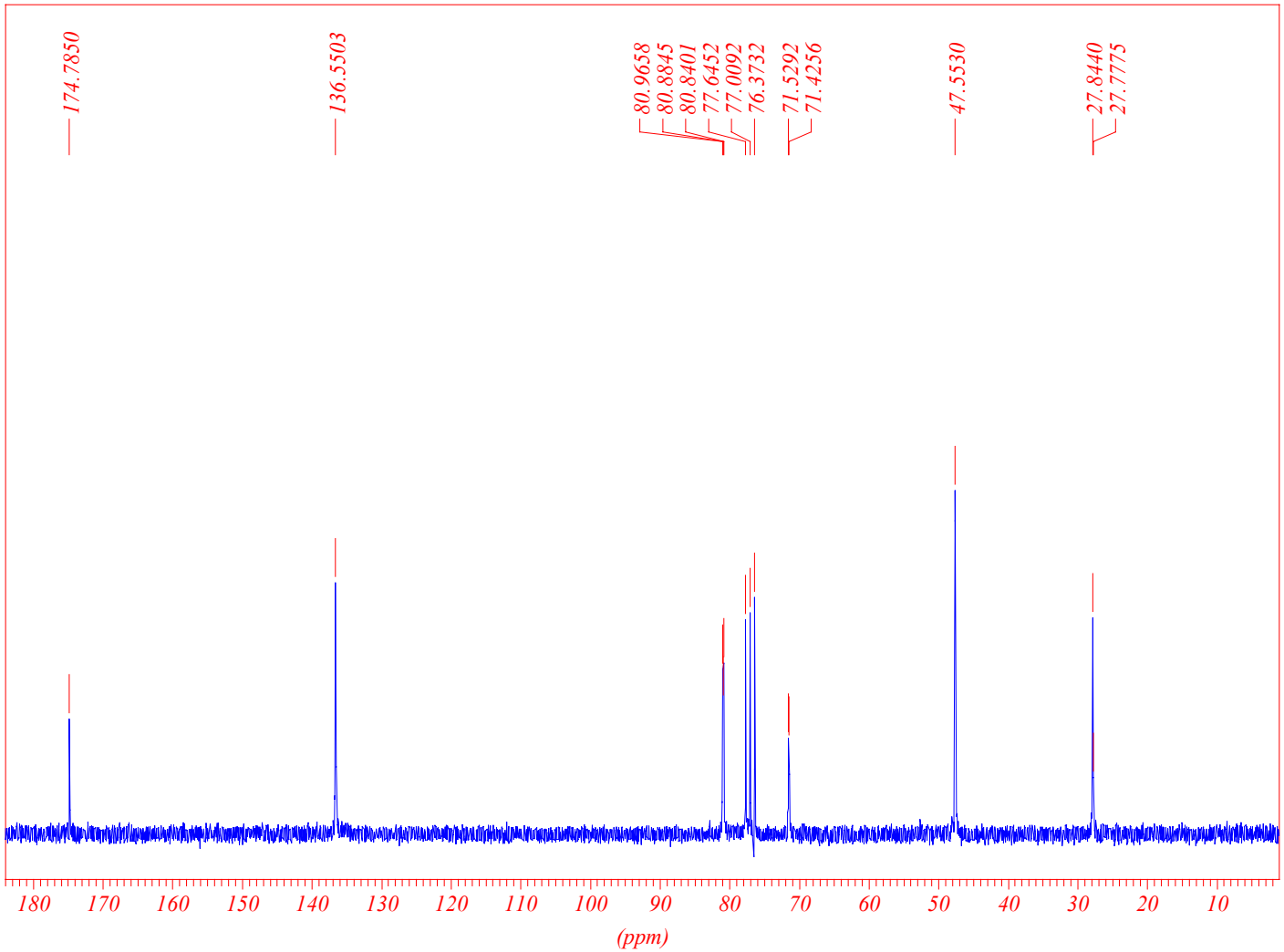
t = 9h



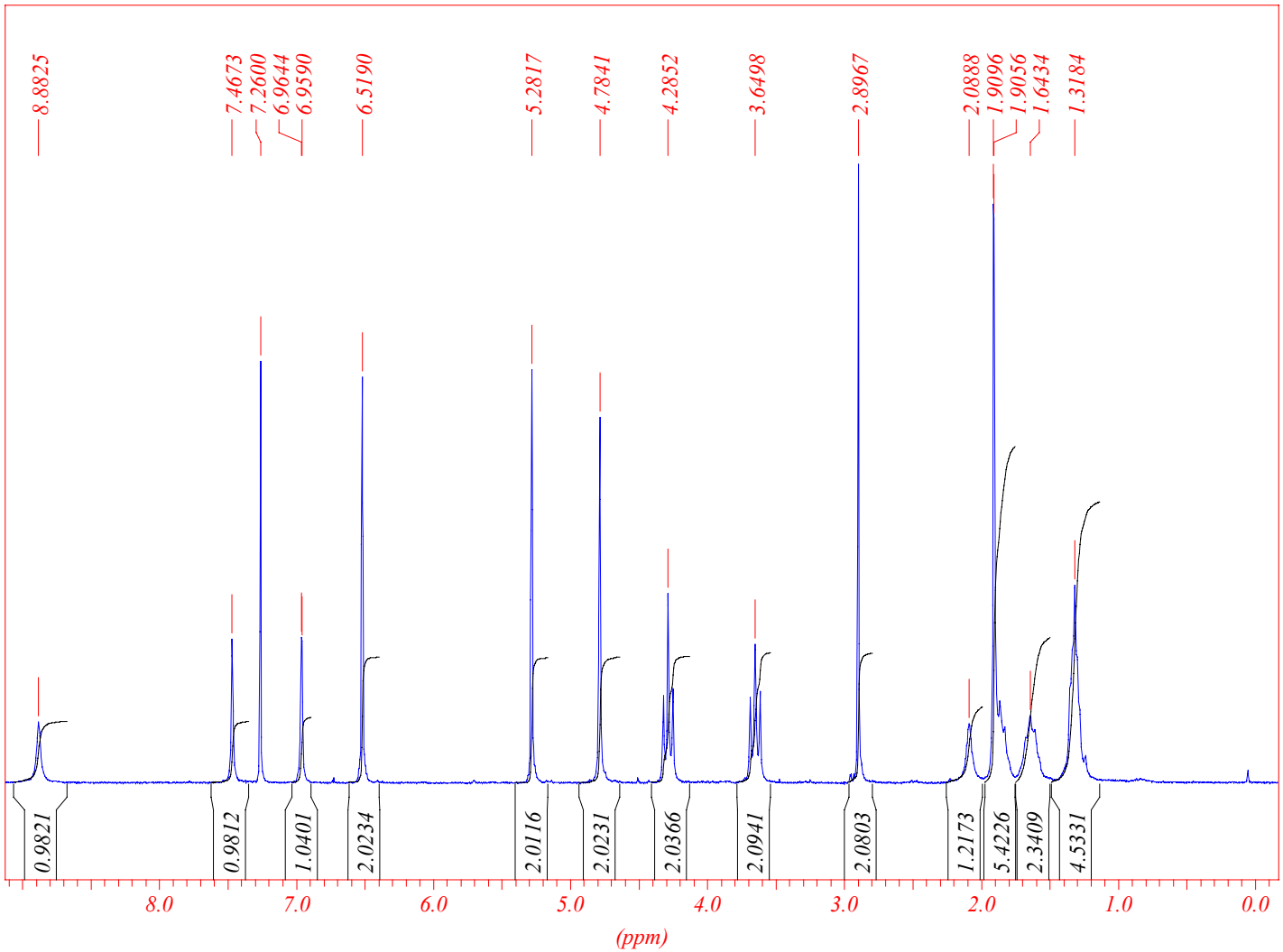
Klug.389 (7)


Integral
1.0000
0.9936
1.0091
1.0012
0.4903
0.0801
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
(ppm)

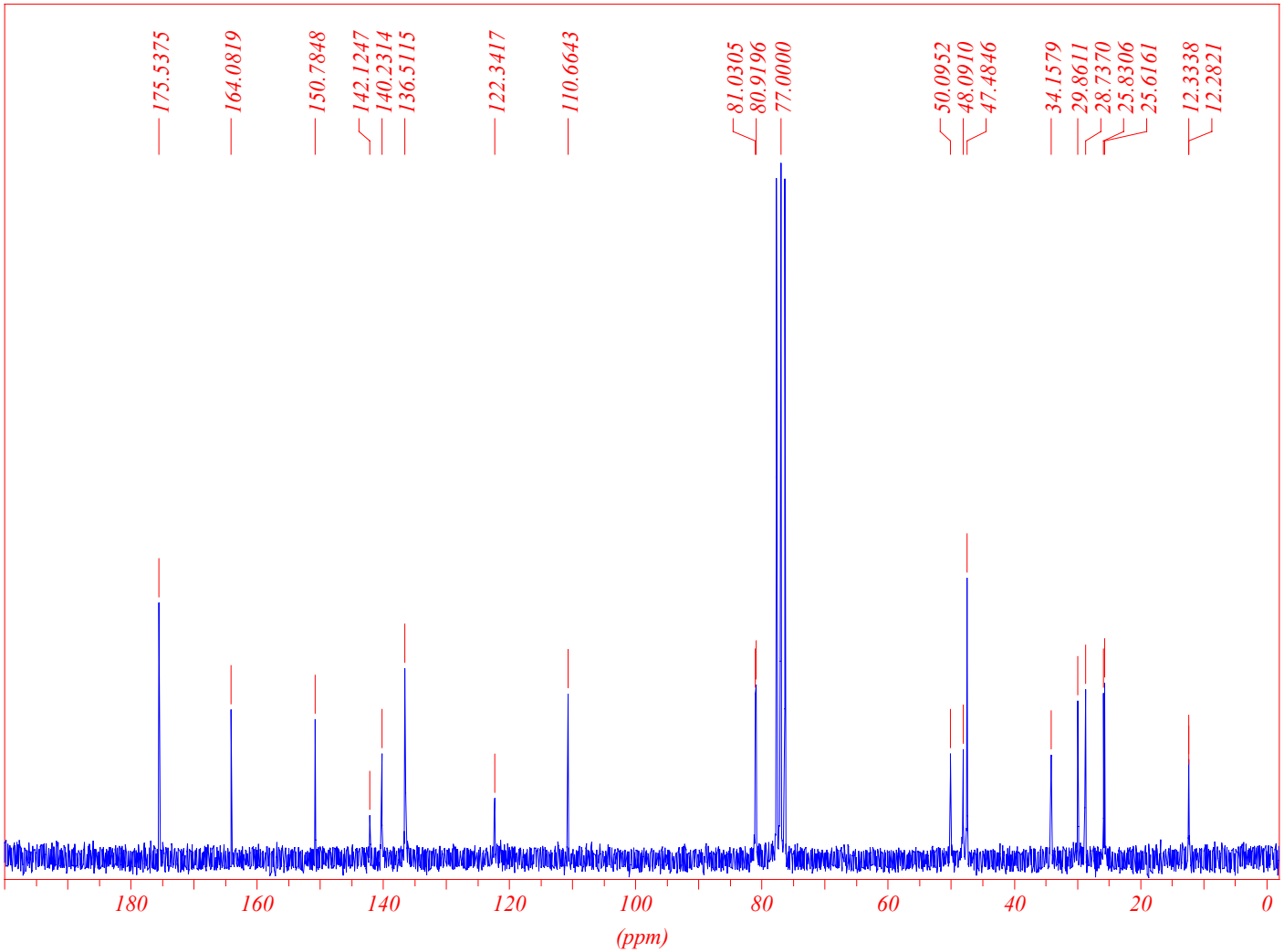
Klug.390 (7)


174.7850
136.5503
80.9658
80.8845
80.8401
77.6452
77.0092
76.3732
71.5292
71.4256
47.5530
27.8440
27.7775
180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10
(ppm)

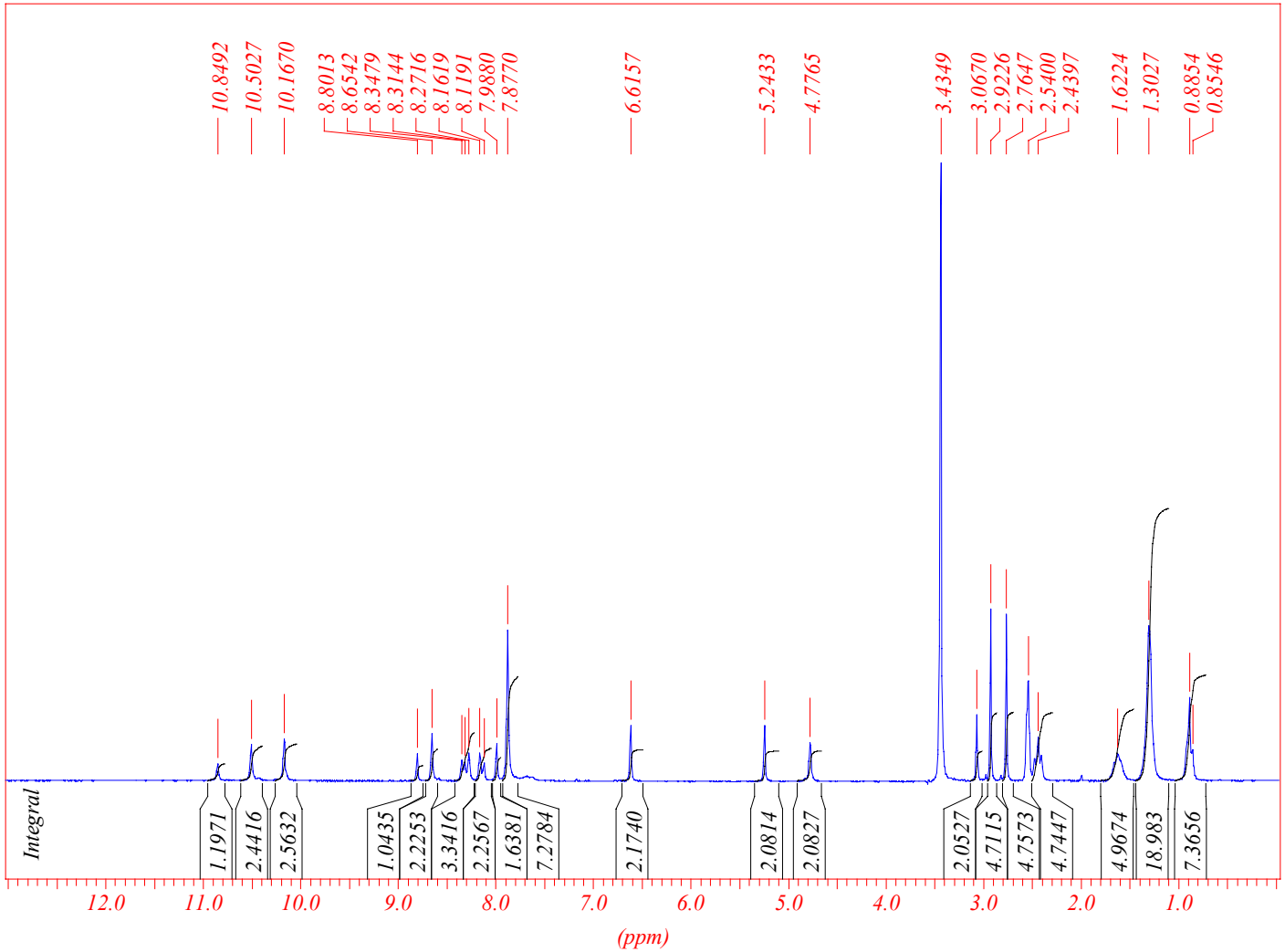
Klug.403 (9)


8.8825
7.4673
7.2600
6.9644
6.9590
6.5190
5.2817
4.7841
4.2852
3.6498
2.8967
2.0888
1.9096
1.9056
1.6434
1.3184
0.9821
0.9812
1.0401
2.0234
2.0116
2.0231
2.0366
2.0941
2.0803
1.2173
5.4226
2.3409
4.5331
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
(ppm)

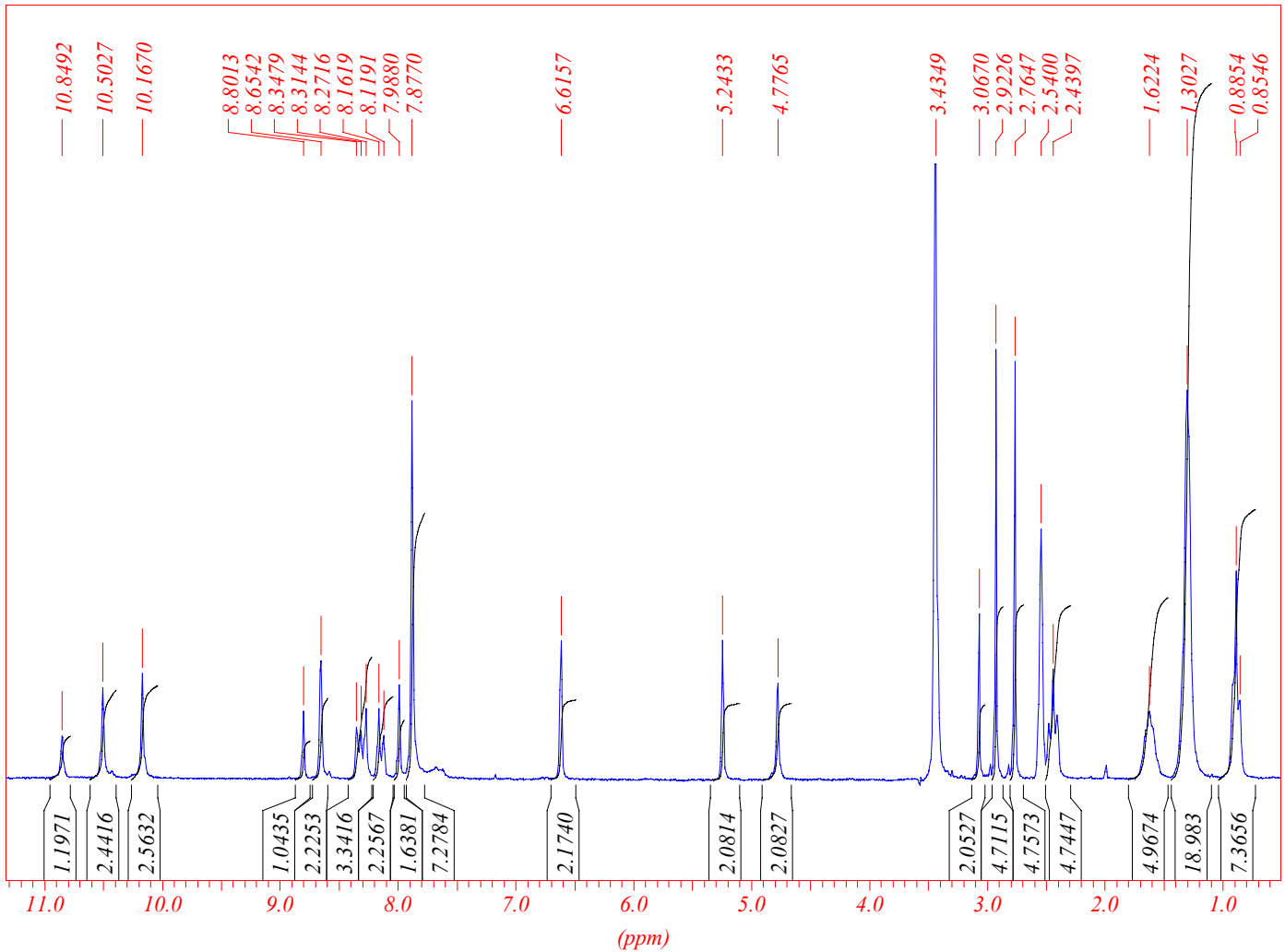
Klug.404 (9)


175.5375
164.0819
150.7848
142.1247
140.2314
136.5115
122.3417
110.6643
81.0305
80.9196
77.0000
50.0952
48.0910
47.4846
34.1579
29.8611
28.7370
25.8306
25.6161
12.3338
12.2821
180
160
140
120
100
80
60
40
20
0
(ppm)

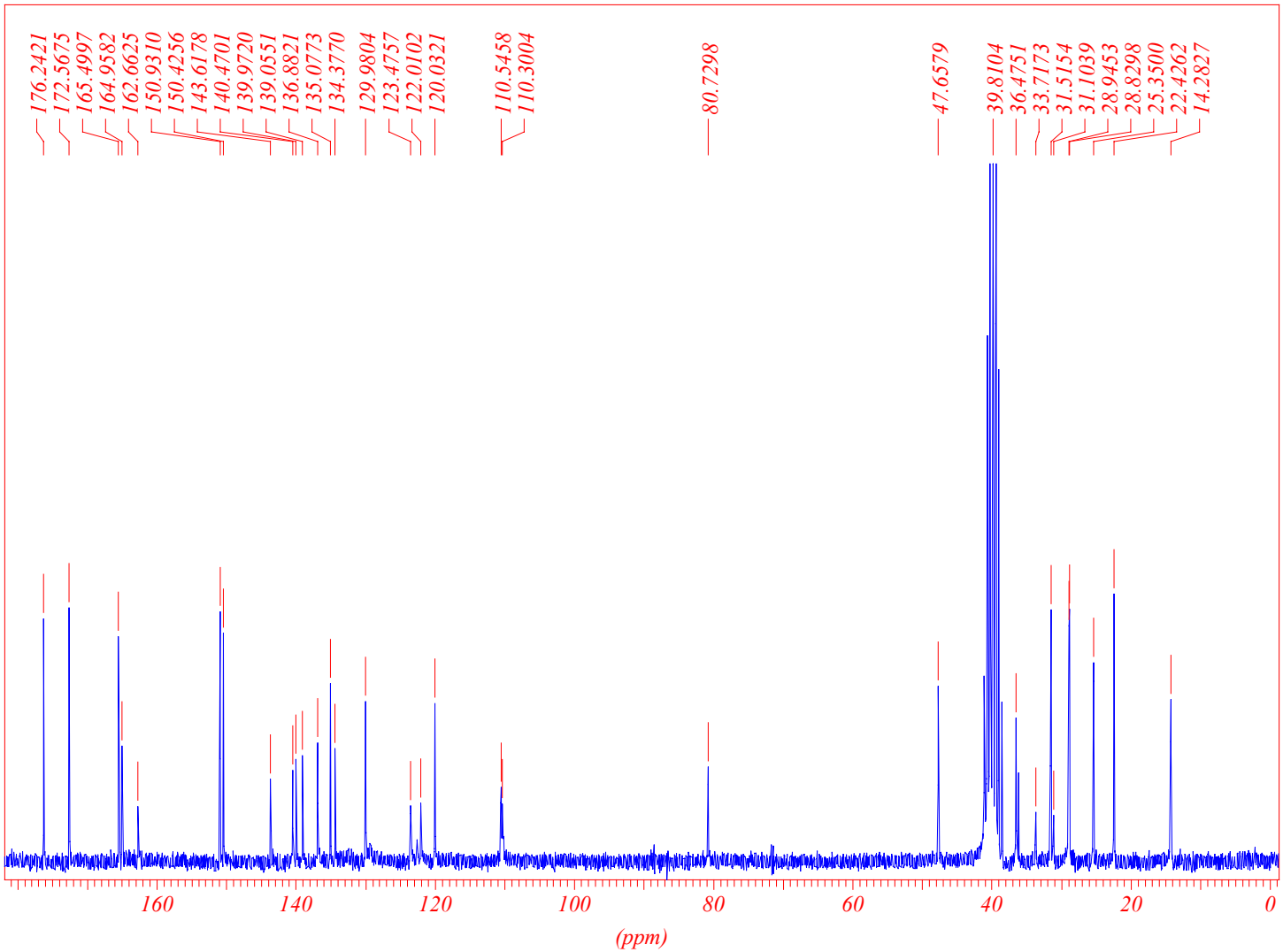
Klug.421 (10)


10.8492
10.5027
10.1670
8.8013
8.6542
8.3479
8.3144
8.2716
8.1619
8.1191
7.9880
7.8770
6.6157
5.2433
4.7765
3.4349
3.0670
2.9226
2.7647
2.5400
2.4397
1.6224
1.3027
0.8854
0.8546
Integral
1.1971
2.4416
2.5632
1.0435
2.2253
3.3416
2.2567
1.6381
7.2784
2.1740
2.0814
2.0827
2.0527
4.7115
4.7573
4.7447
4.9674
18.983
7.3656
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
(ppm)

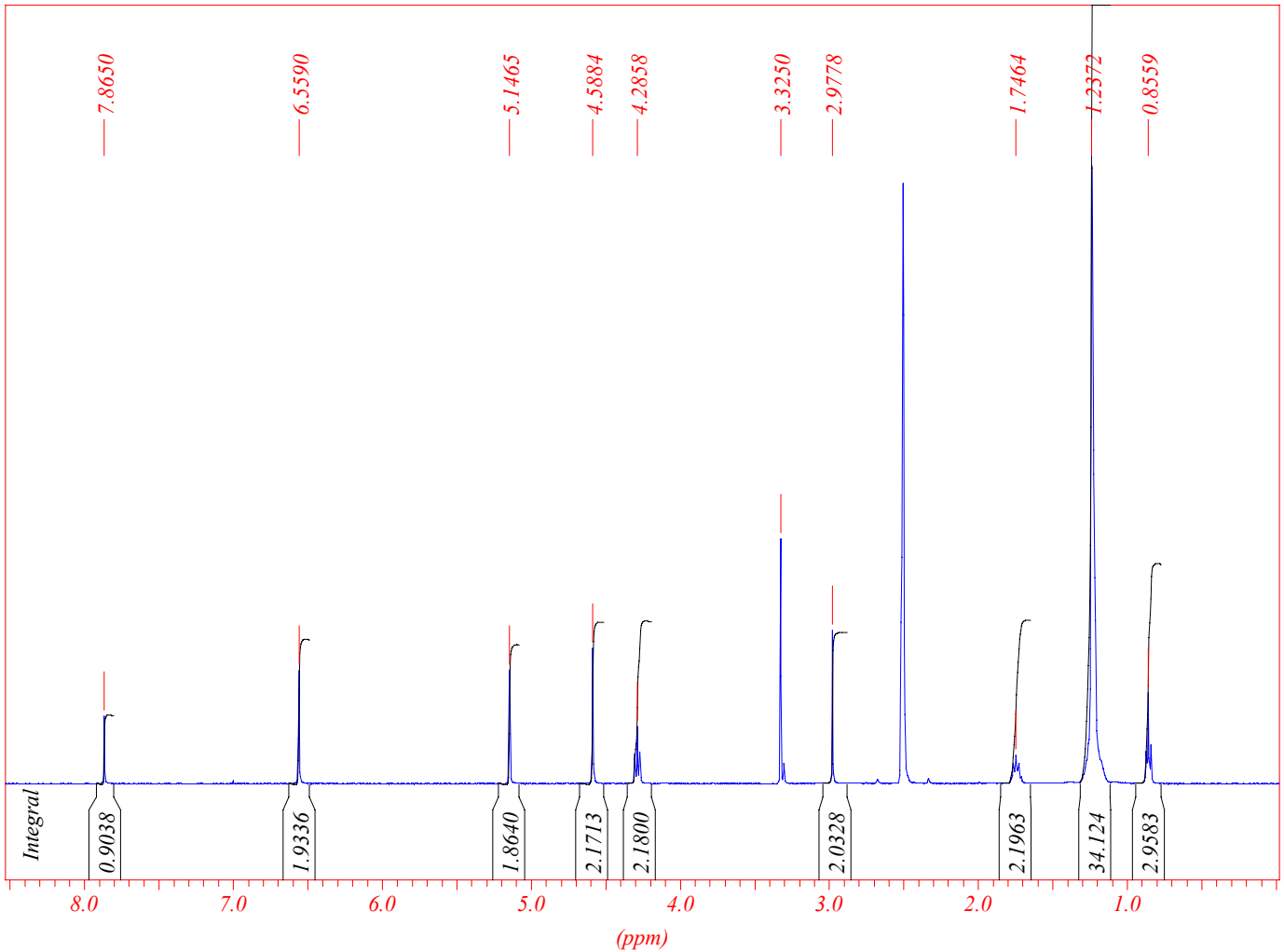
Klug.421 (10)


10.8492
10.5027
10.1670
8.8013
8.6542
8.3479
8.3144
8.2716
8.1619
8.1191
7.9880
7.8770
6.6157
5.2433
4.7765
3.4349
3.0670
2.9226
2.7647
2.5400
2.4397
1.6224
1.3027
0.8854
0.8546
1.1971
2.4416
2.5632
1.0435
2.2253
3.3416
2.2567
1.6381
7.2784
2.1740
2.0814
2.0827
2.0527
4.7115
4.7573
4.7447
4.9674
18.983
7.3656
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
(ppm)

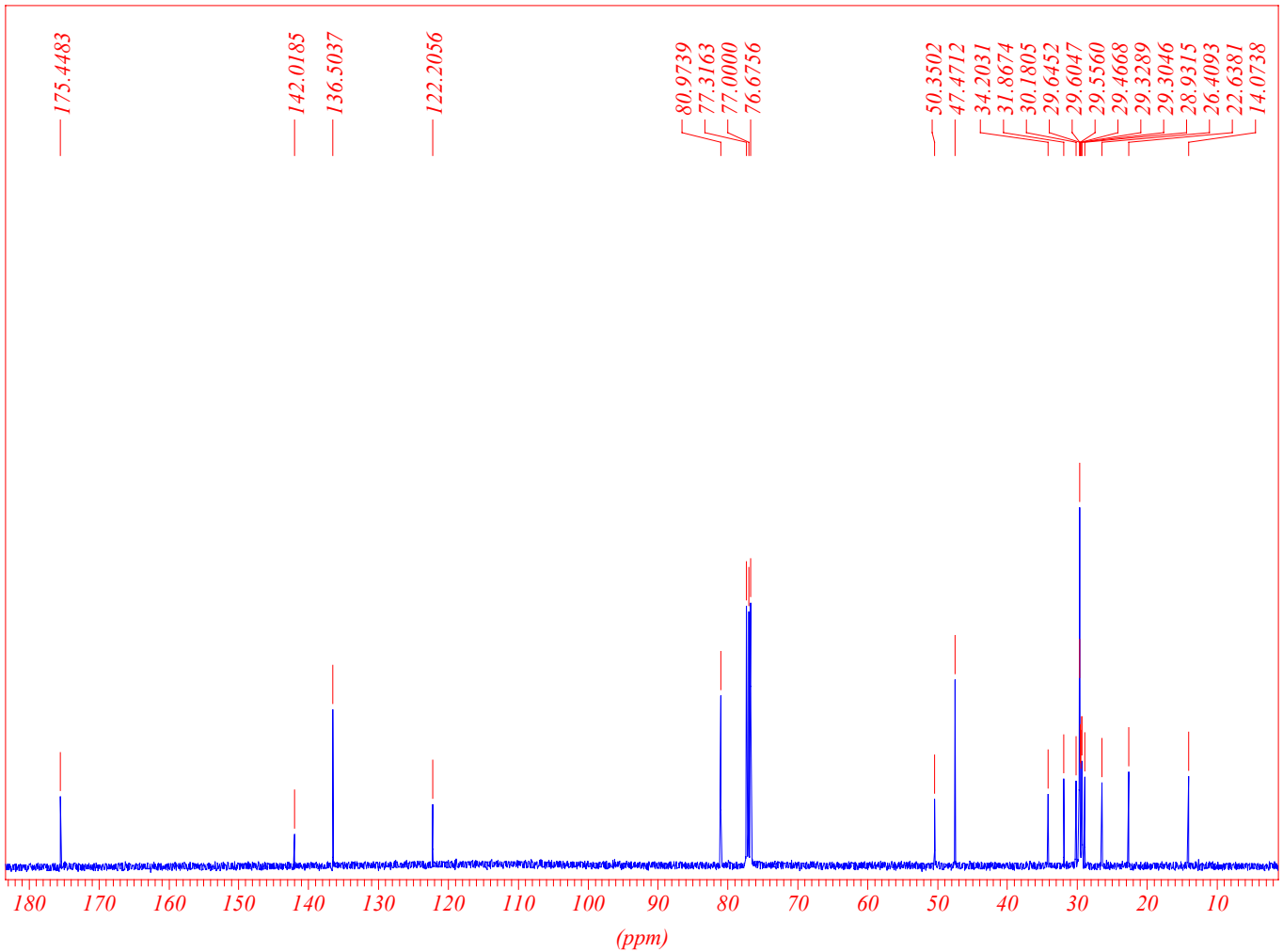
Klug.422 (10)


176.2421
172.5675
165.4997
164.9582
162.6625
150.9310
150.4256
143.6178
140.4701
139.9720
139.0551
136.8821
135.0773
134.3770
129.9804
123.4757
122.0102
120.0321
110.5458
110.3004
80.7298
47.6579
39.8104
36.4751
33.7173
31.5154
31.1039
28.9453
28.8298
25.3500
22.4262
14.2827
160
140
120
100
80
60
40
20
0
(ppm)

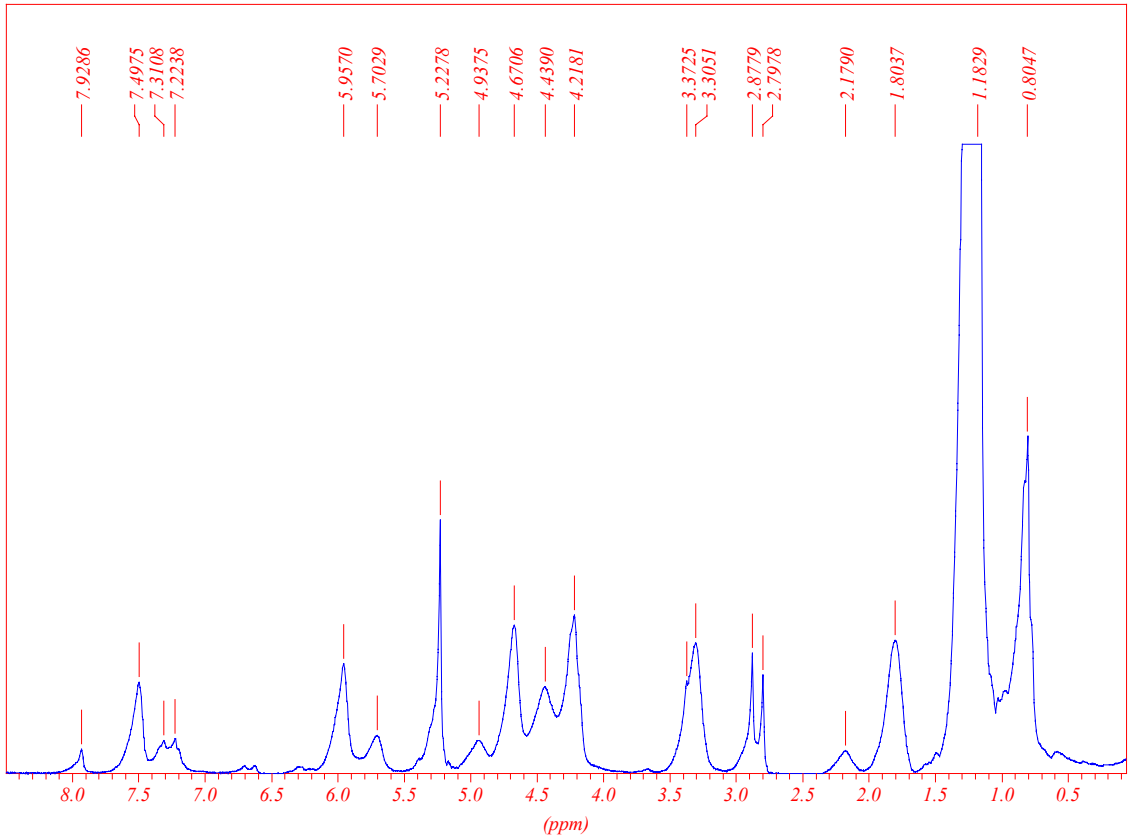
CK468 (11)

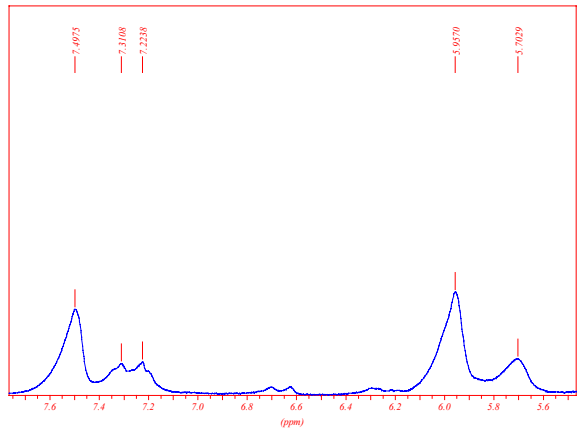

7.8650
6.5590
5.1465
4.5884
4.2858
3.3250
2.9778
1.7464
1.2372
0.8559
Integral
0.9038
1.9336
1.8640
2.1713
2.1800
2.0328
2.1963
34.124
2.9583
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
(ppm)

CK469 (11)

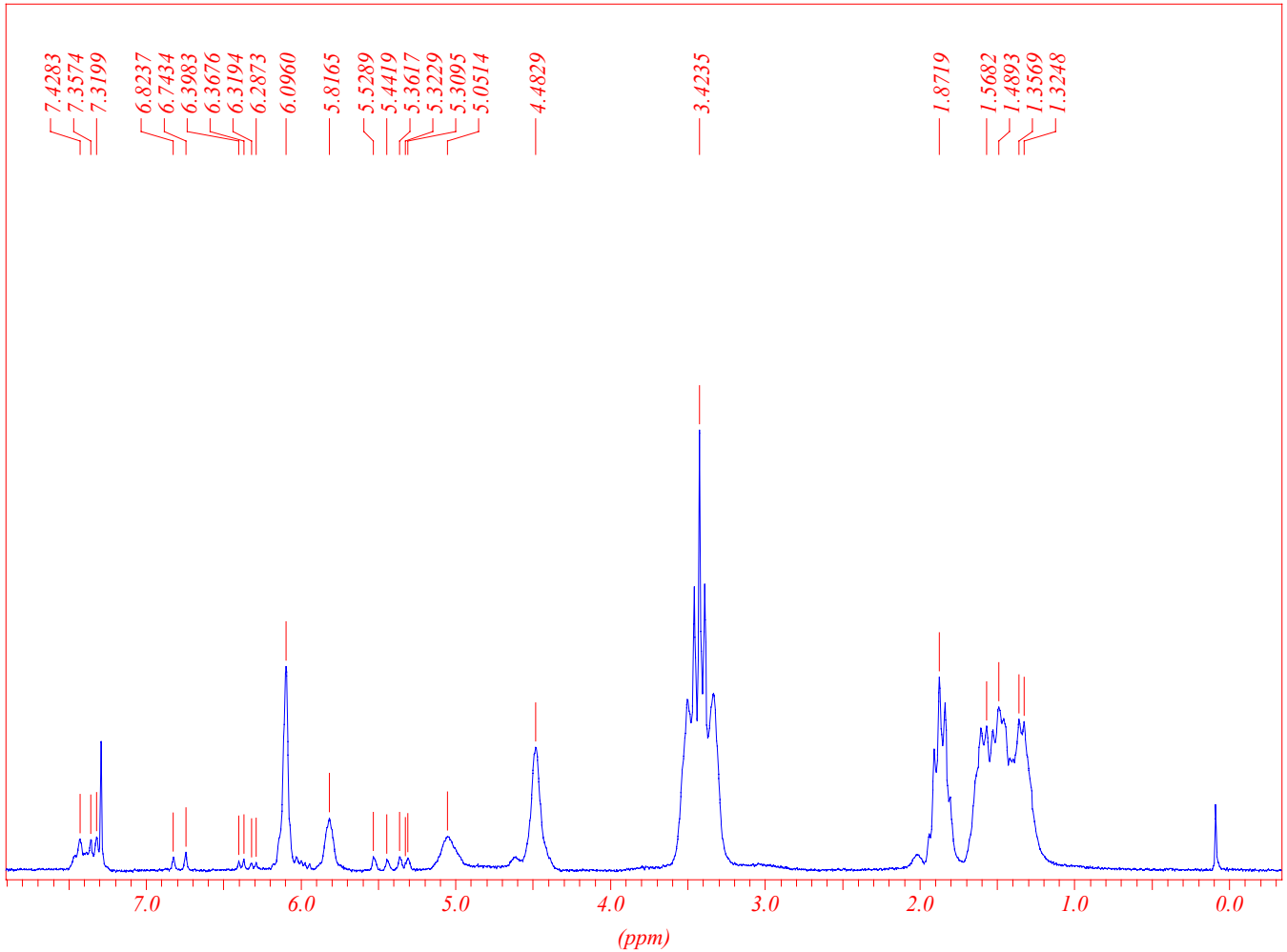

175.4483
142.0185
136.5037
122.2056
80.9739
77.3163
77.0000
76.6756
50.3502
47.4712
34.2031
31.8674
30.1805
29.6452
29.6047
29.5560
29.4668
29.3289
29.3046
28.9315
26.4093
22.6381
14.0738
180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10
(ppm)

Klug.485 (polymer 19)

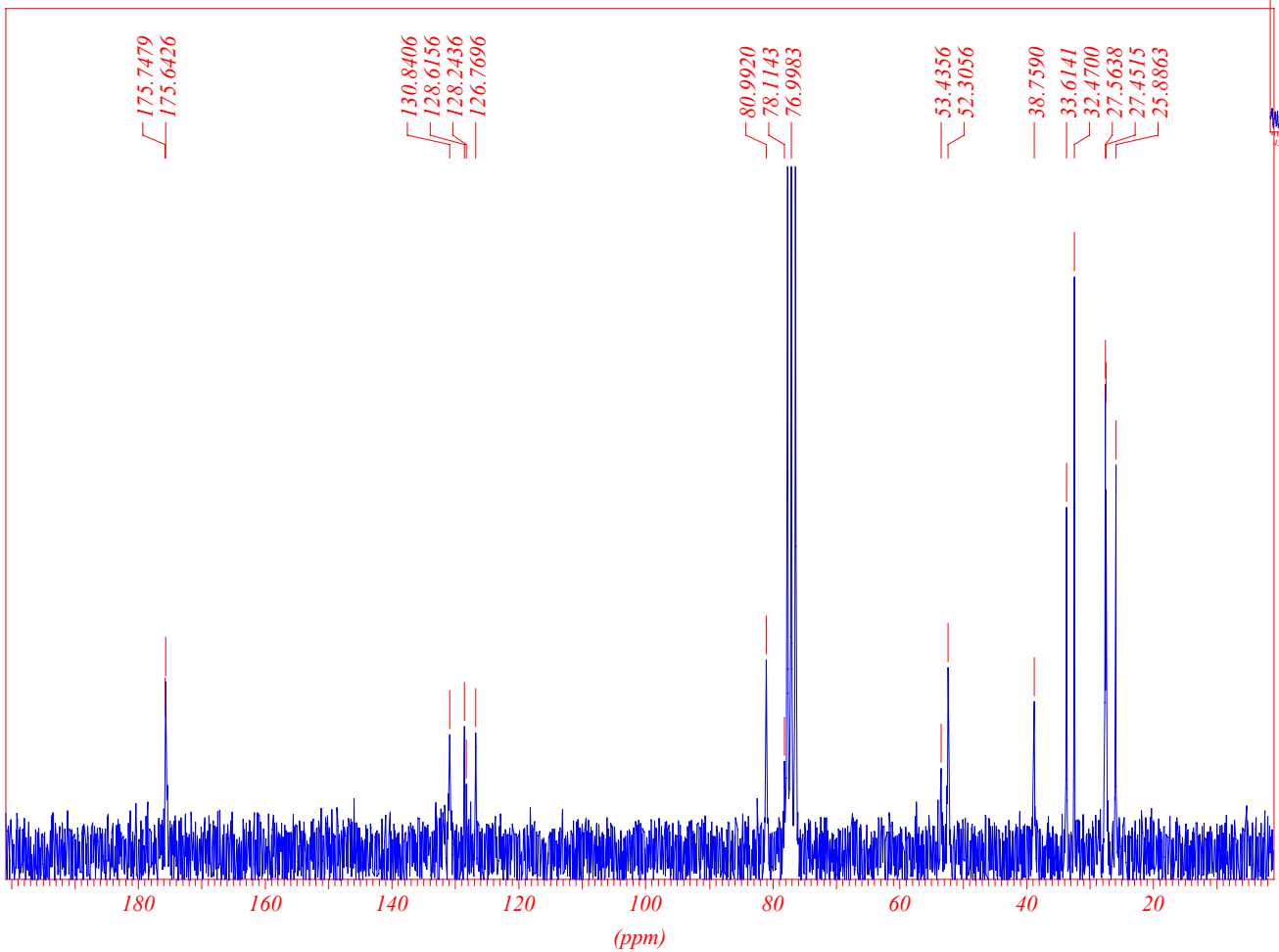


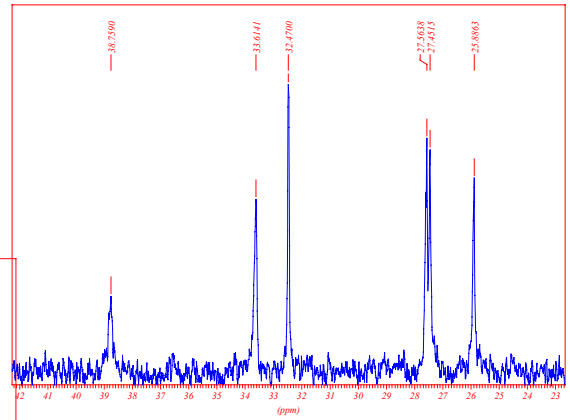


Klug.412 (polymer 23)

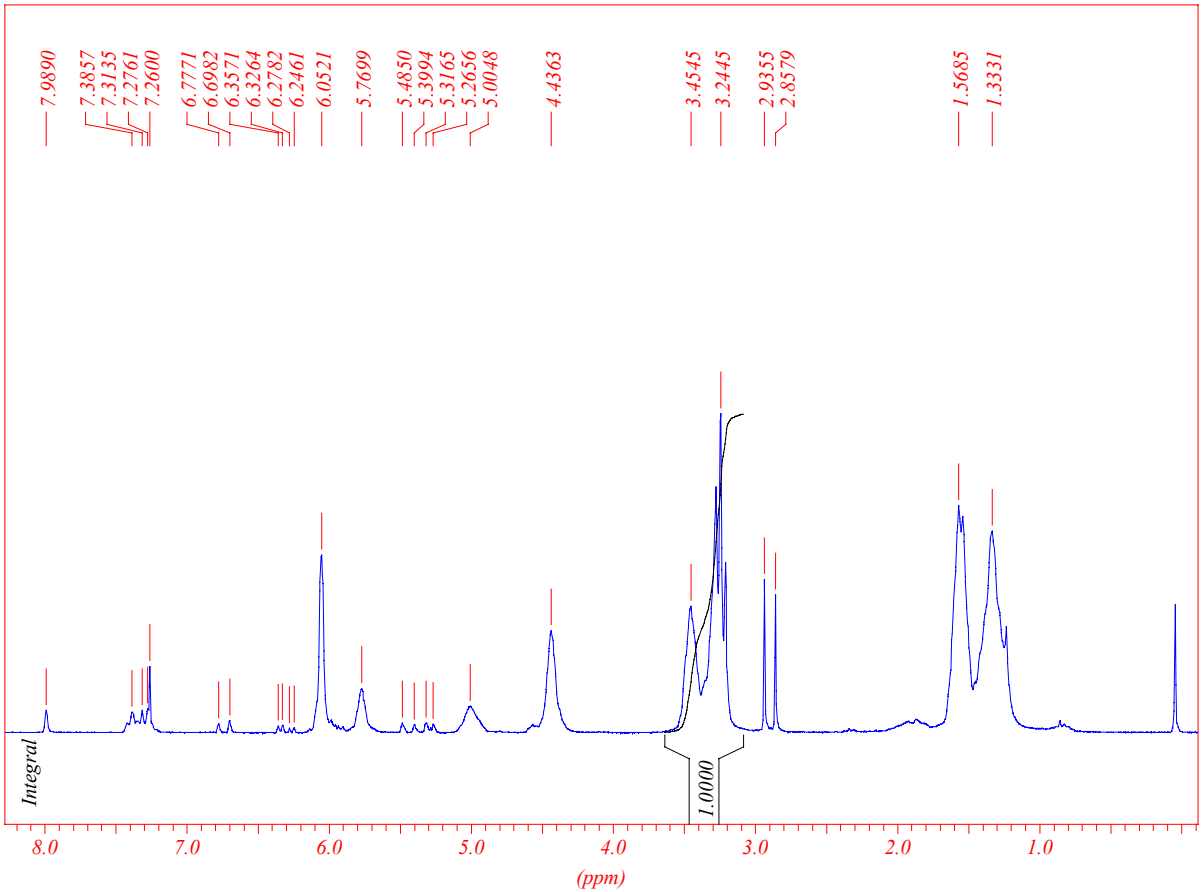


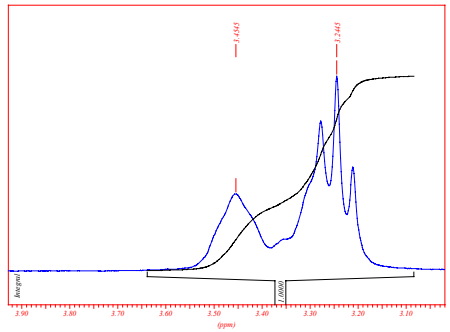
Klug.413 (polymer 23)



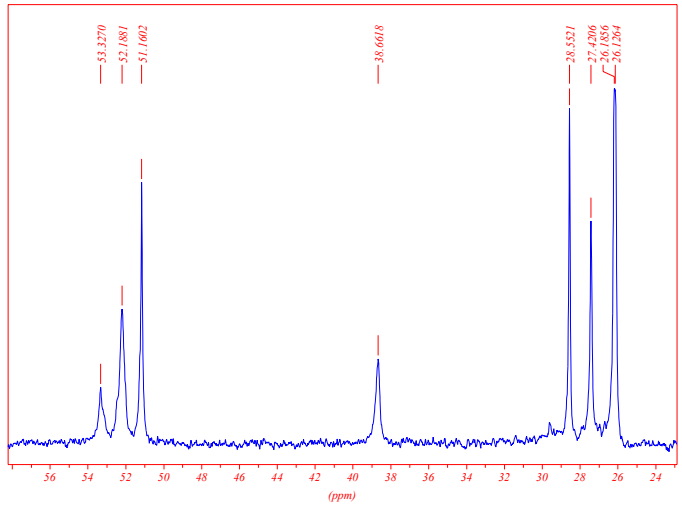


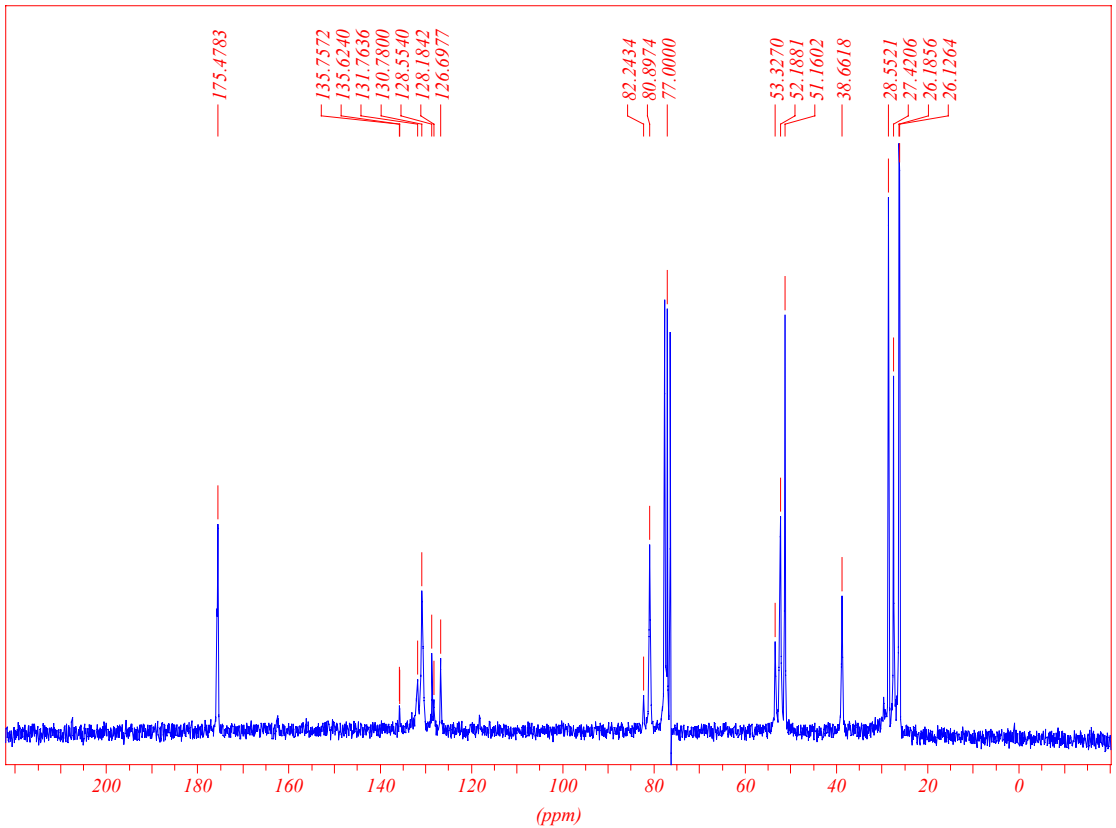
Klug.444 (polymer 25)



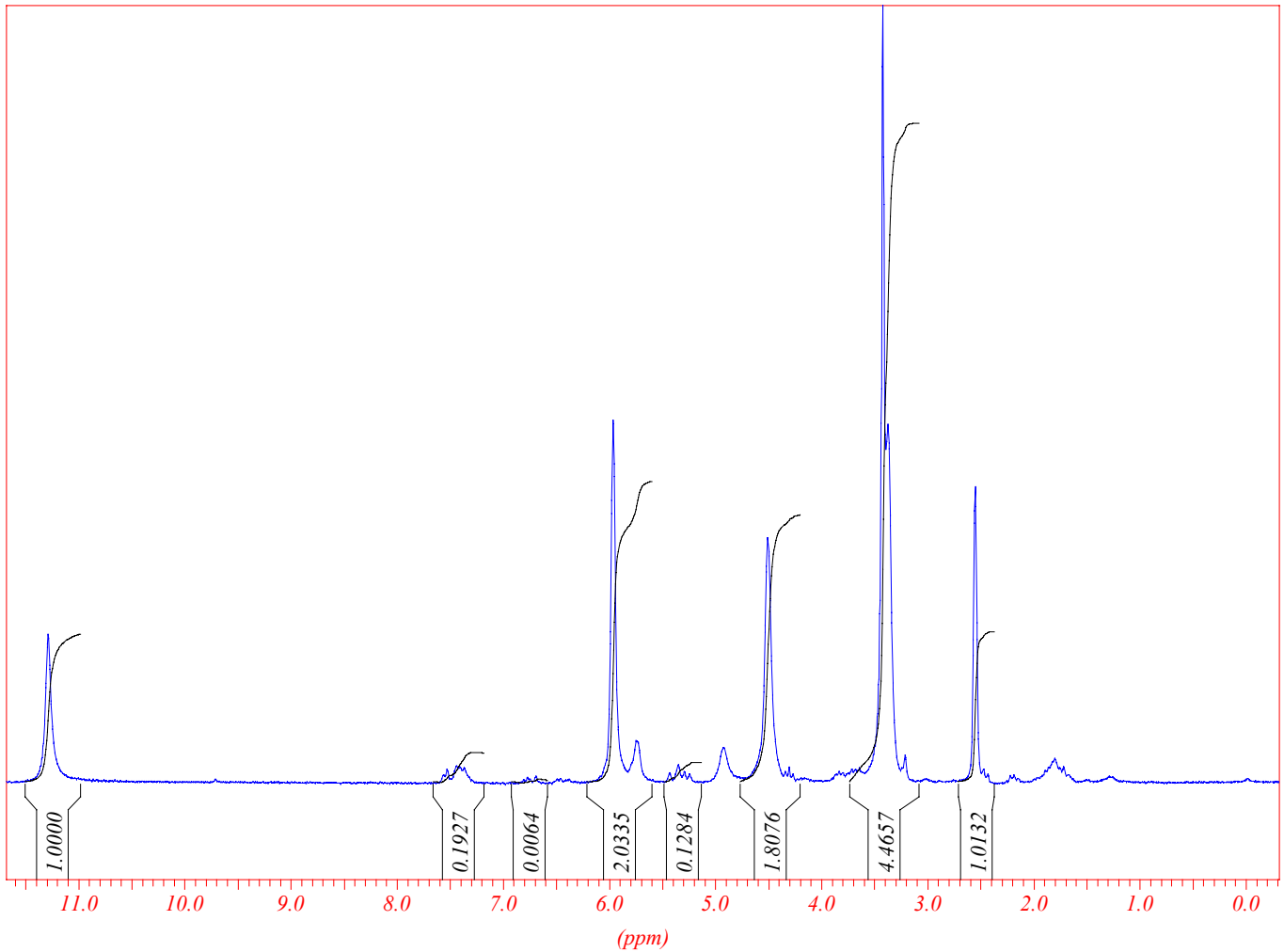


Klug.445 (polymer 25)

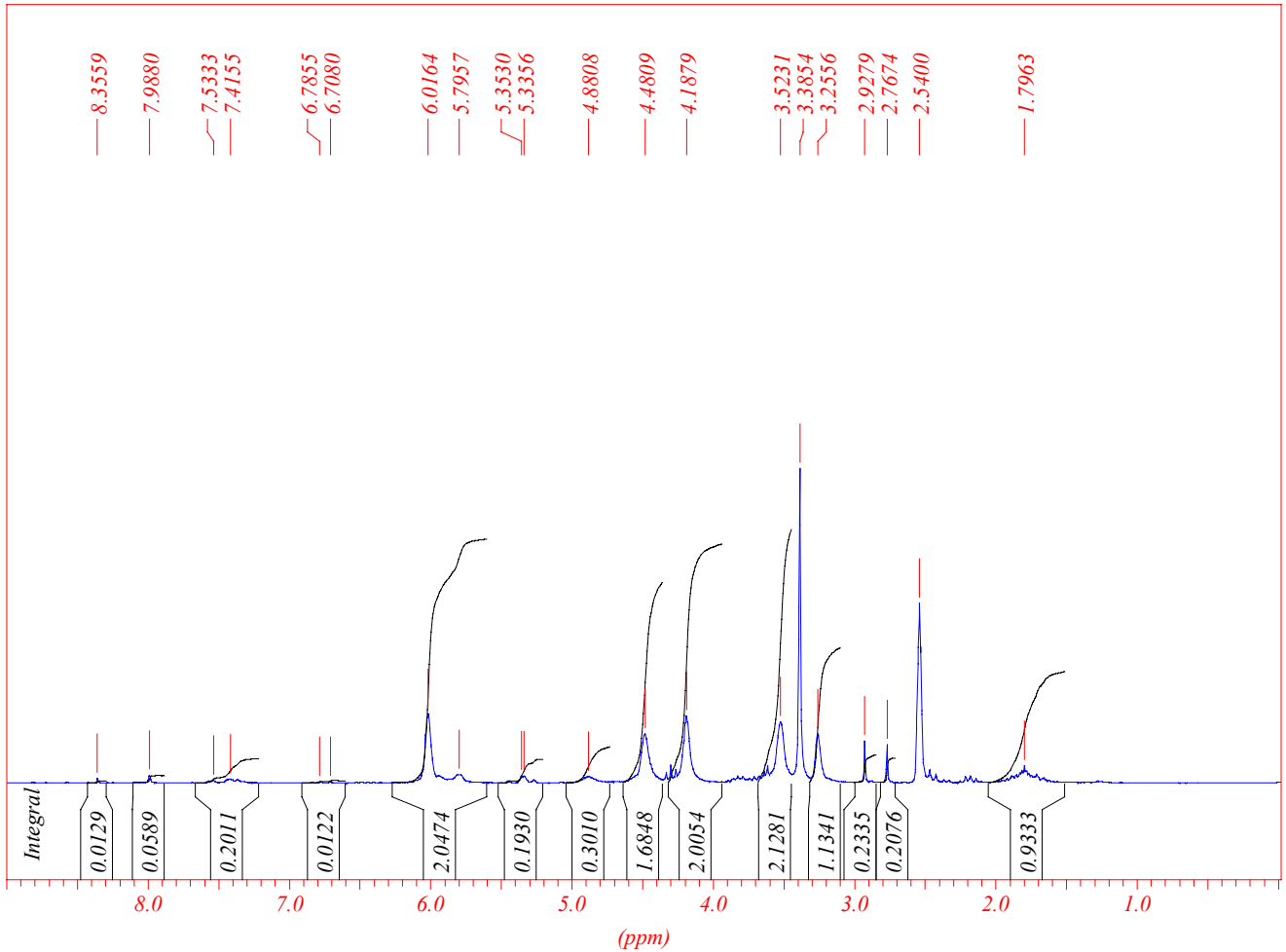




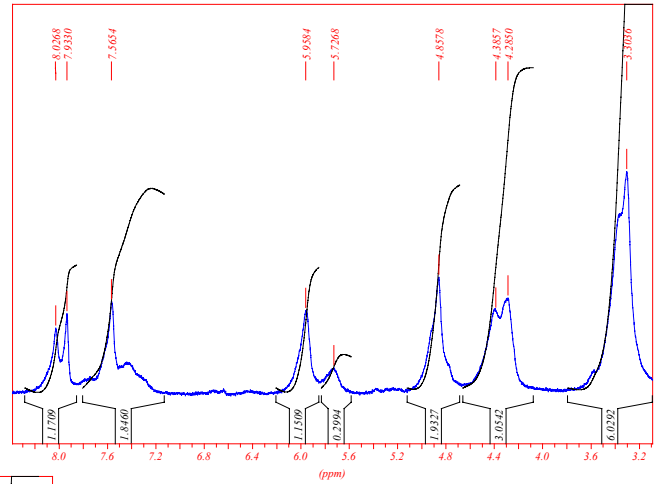
Klug.397 (polymer 21)

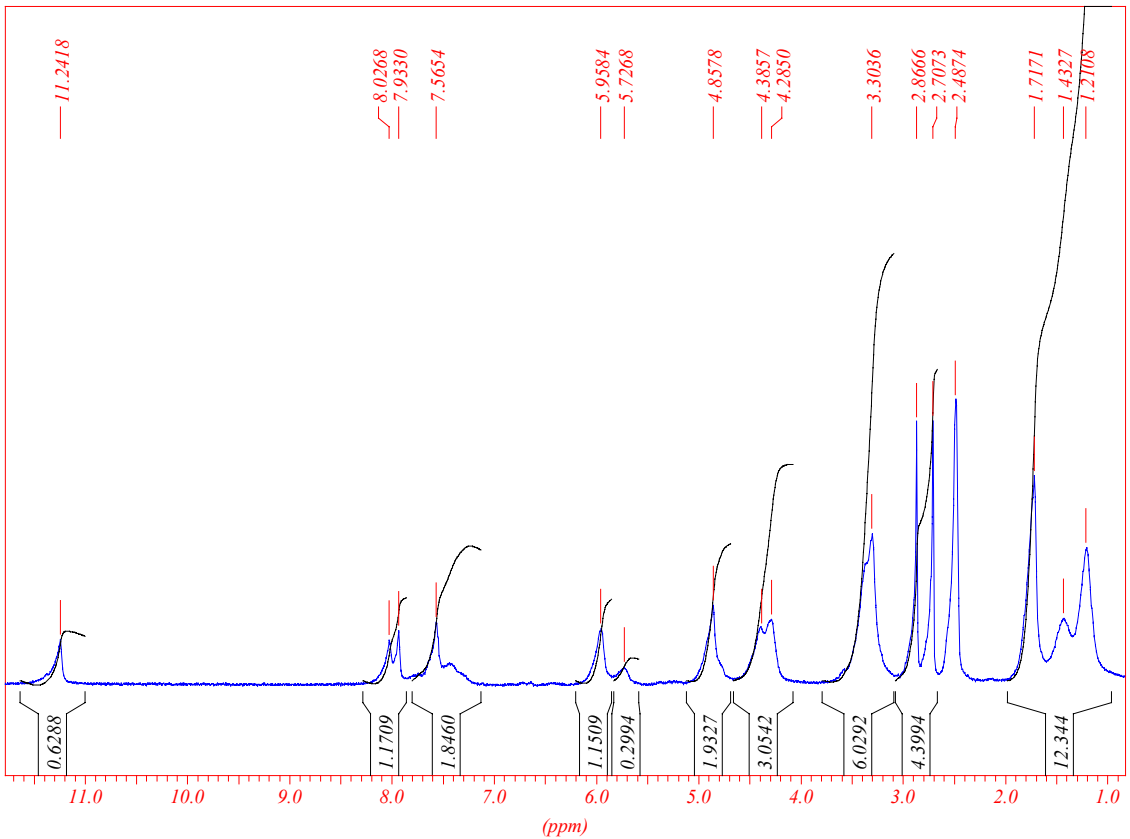


Klug.399 (polymer 24)

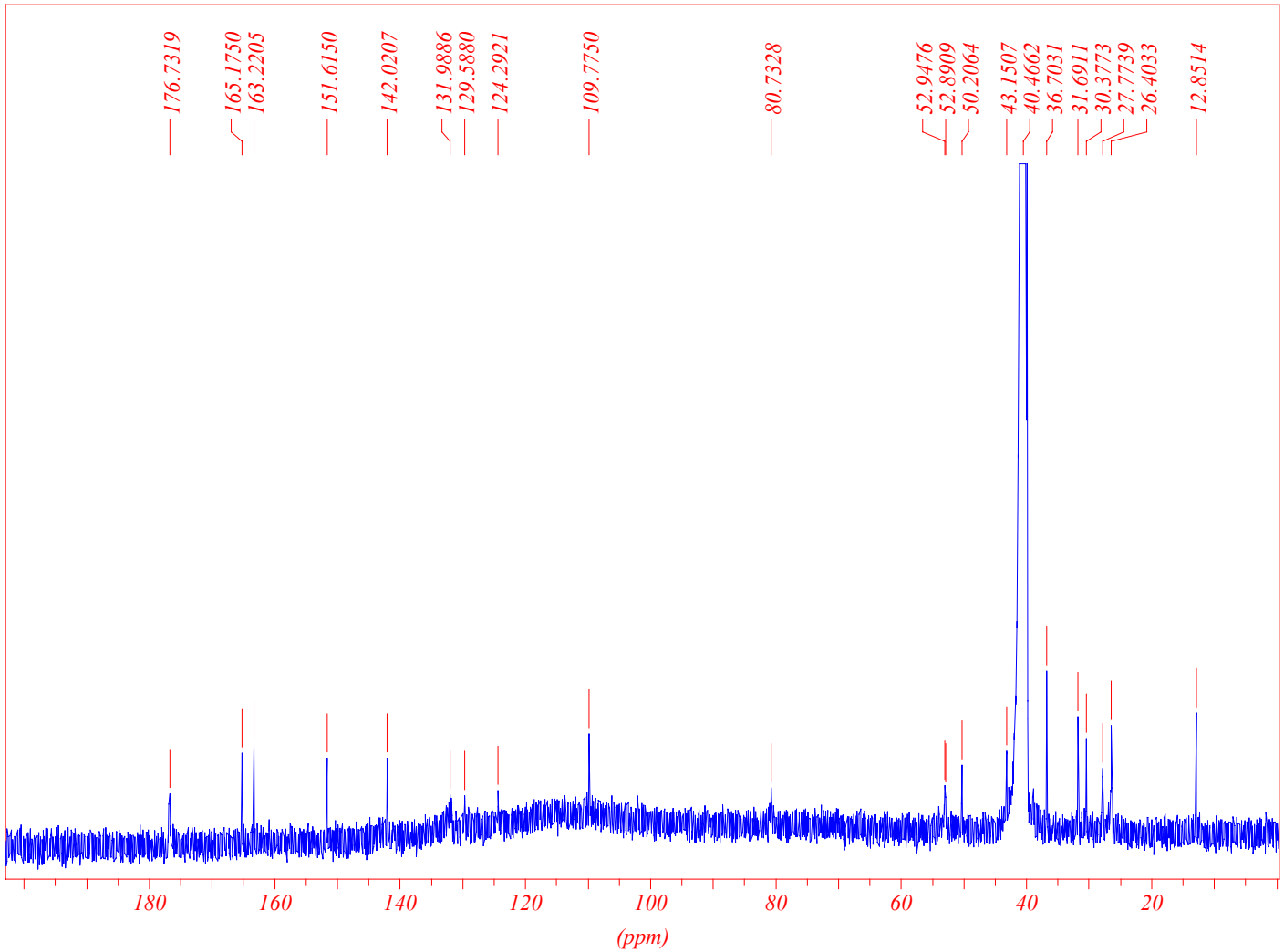


Klug.475 (polymer 29)

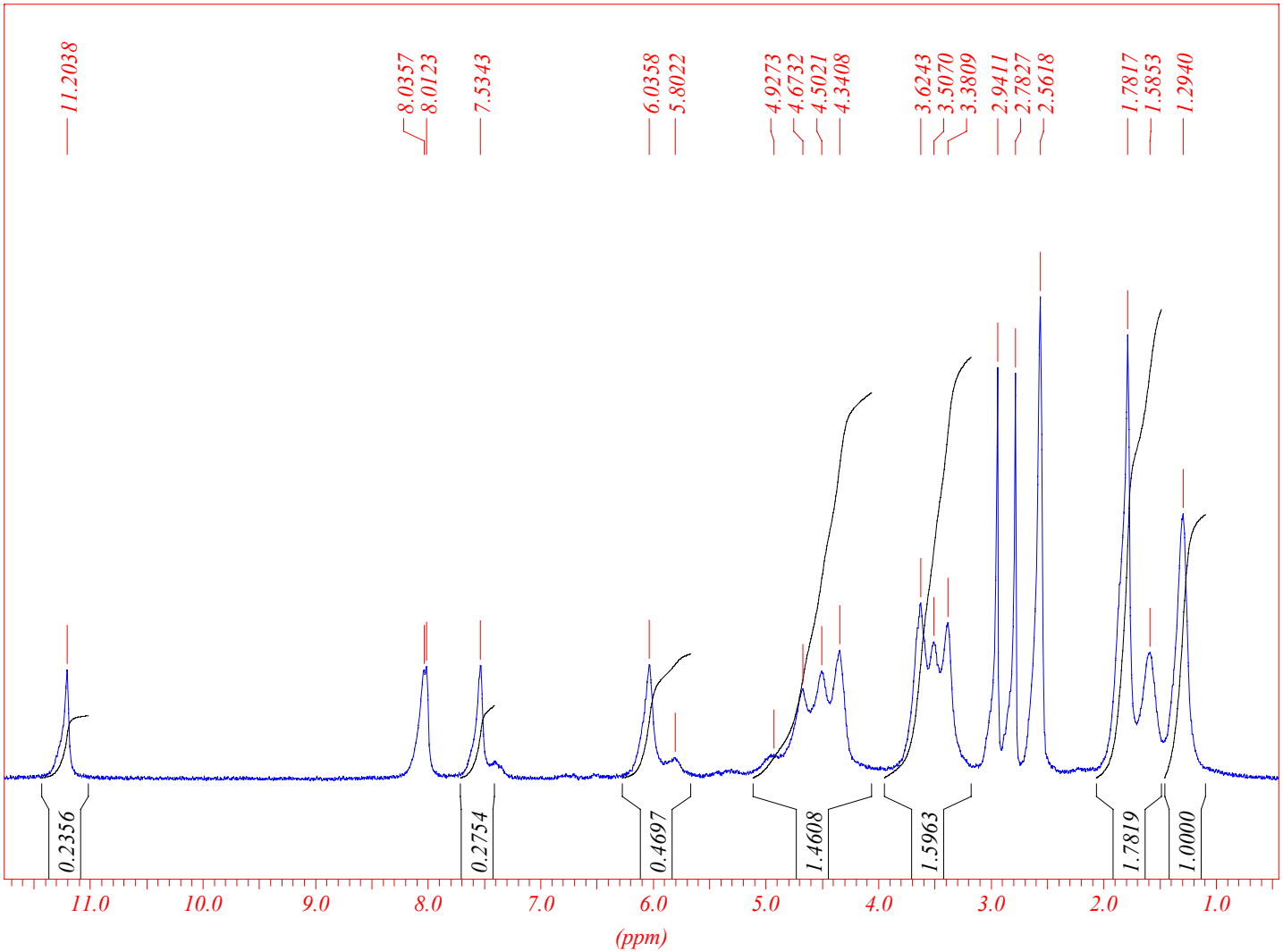




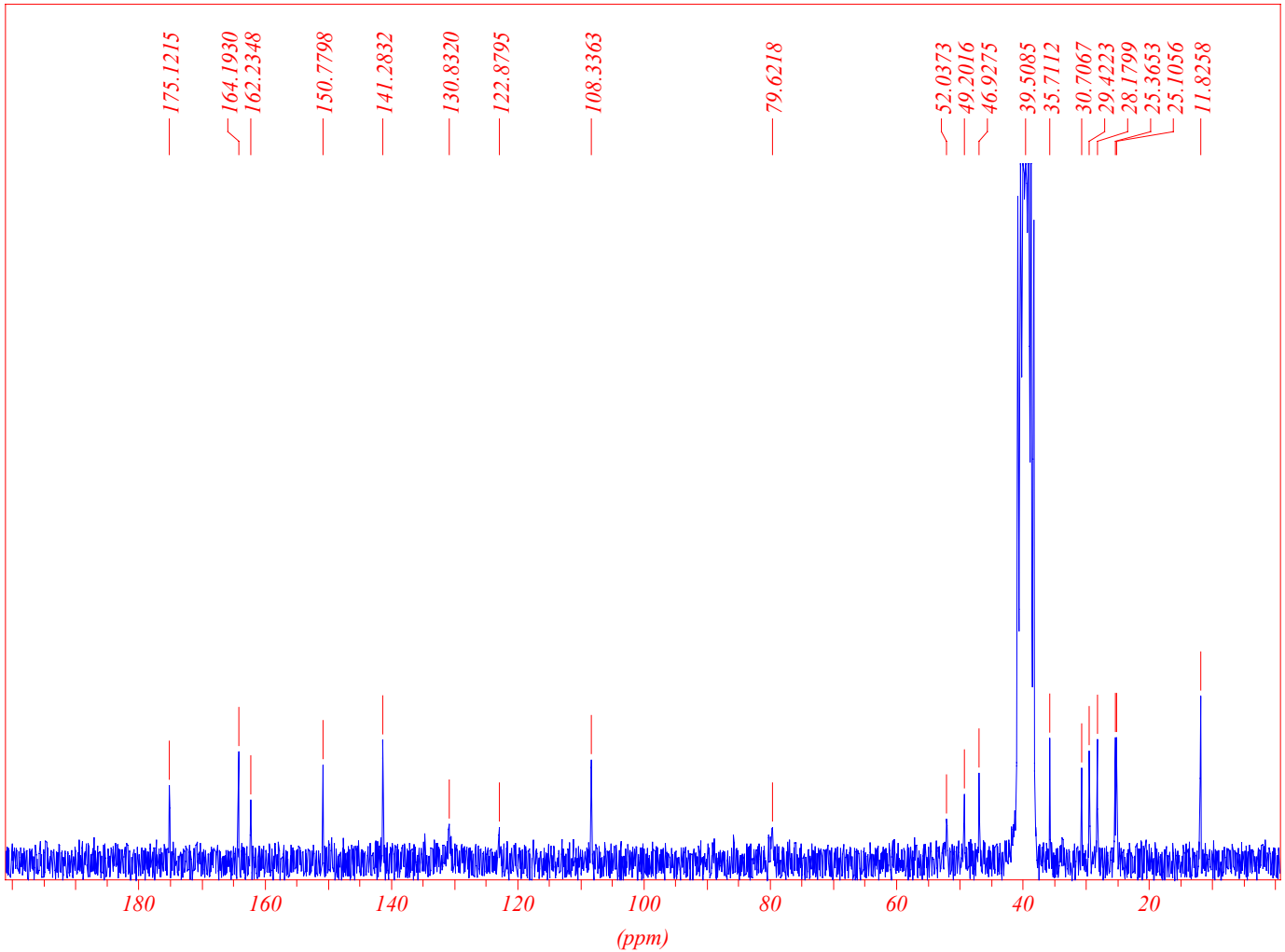
Klug.476 (polymer 29)



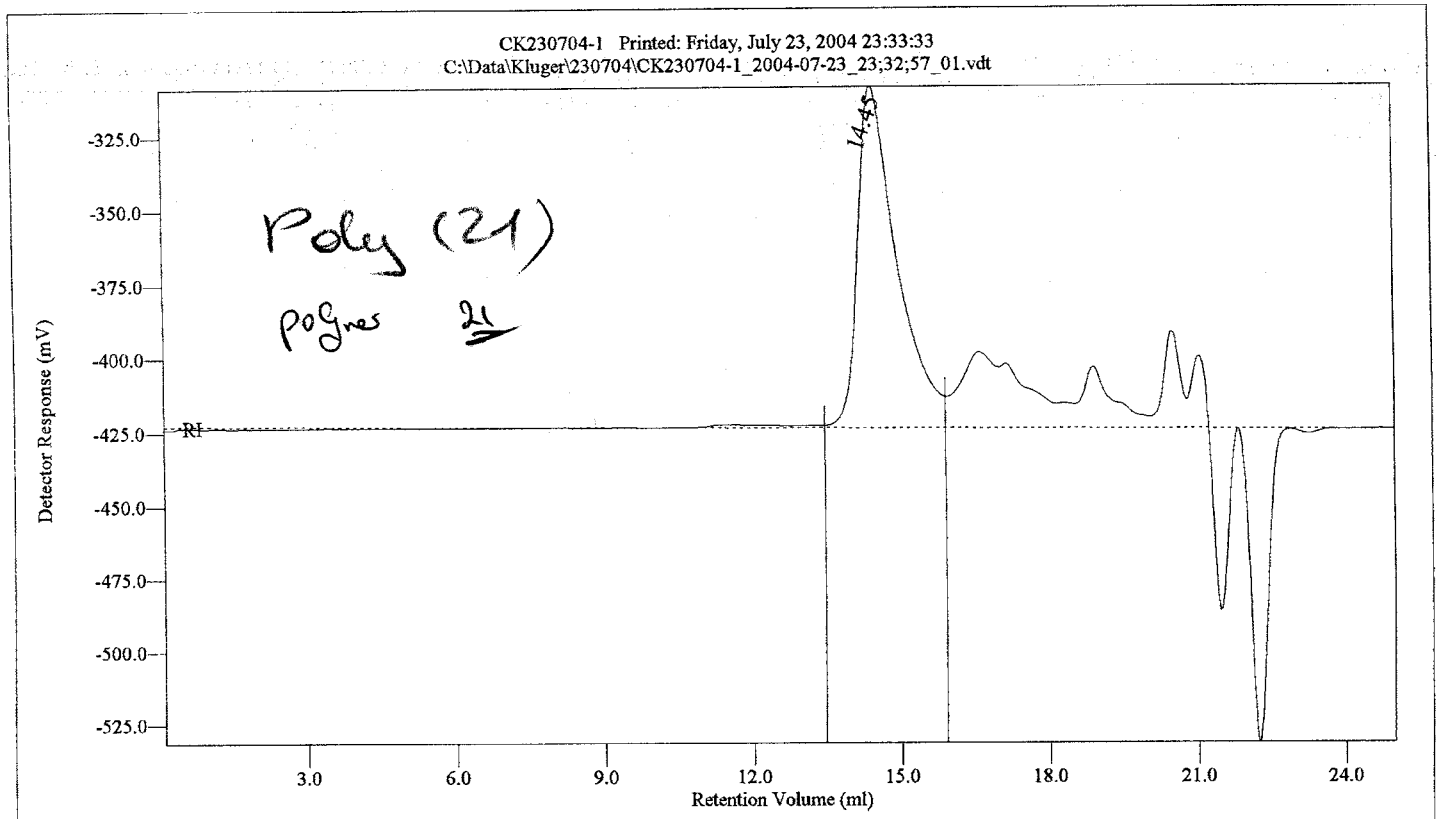
Klug.473 (polymer 26)



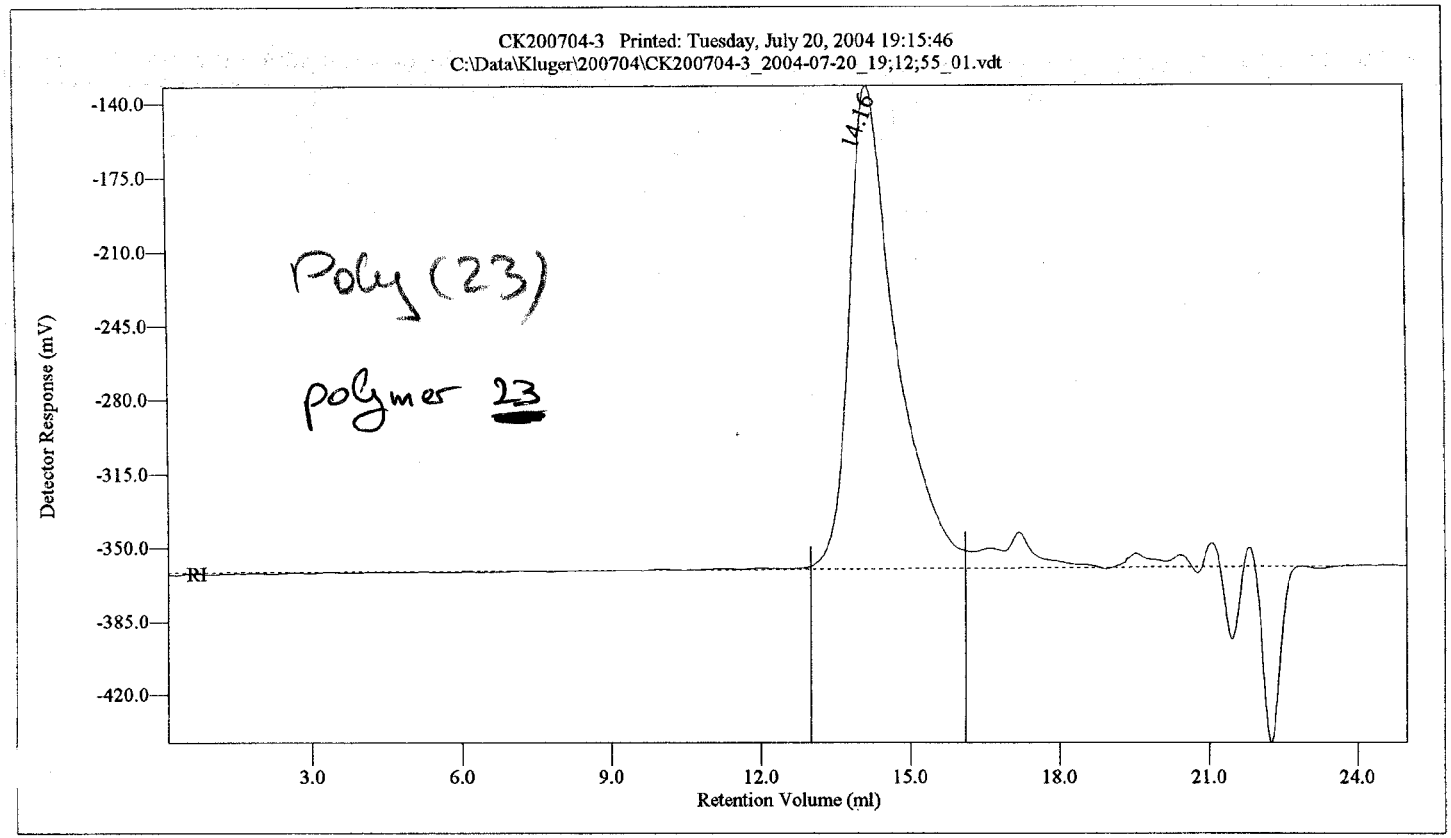
Klug.474 (polymer 26)



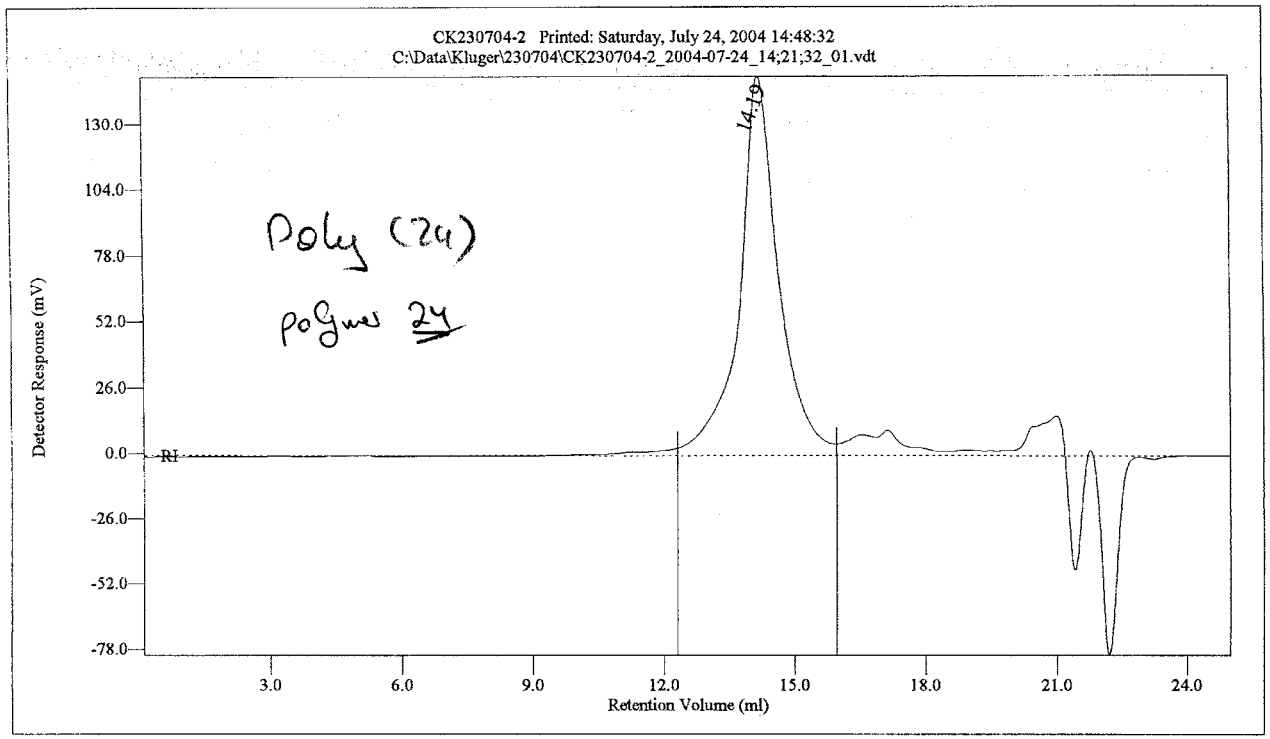
GPC-trace (polymer 21)



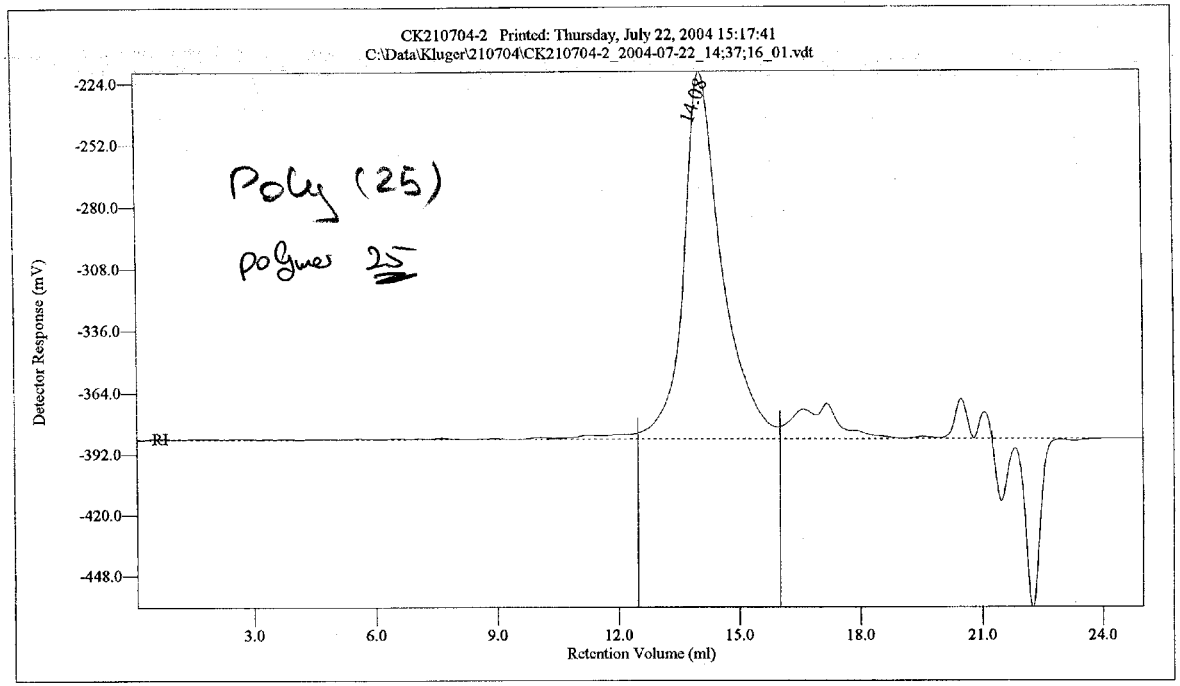
GPC-trace (polymer 23)



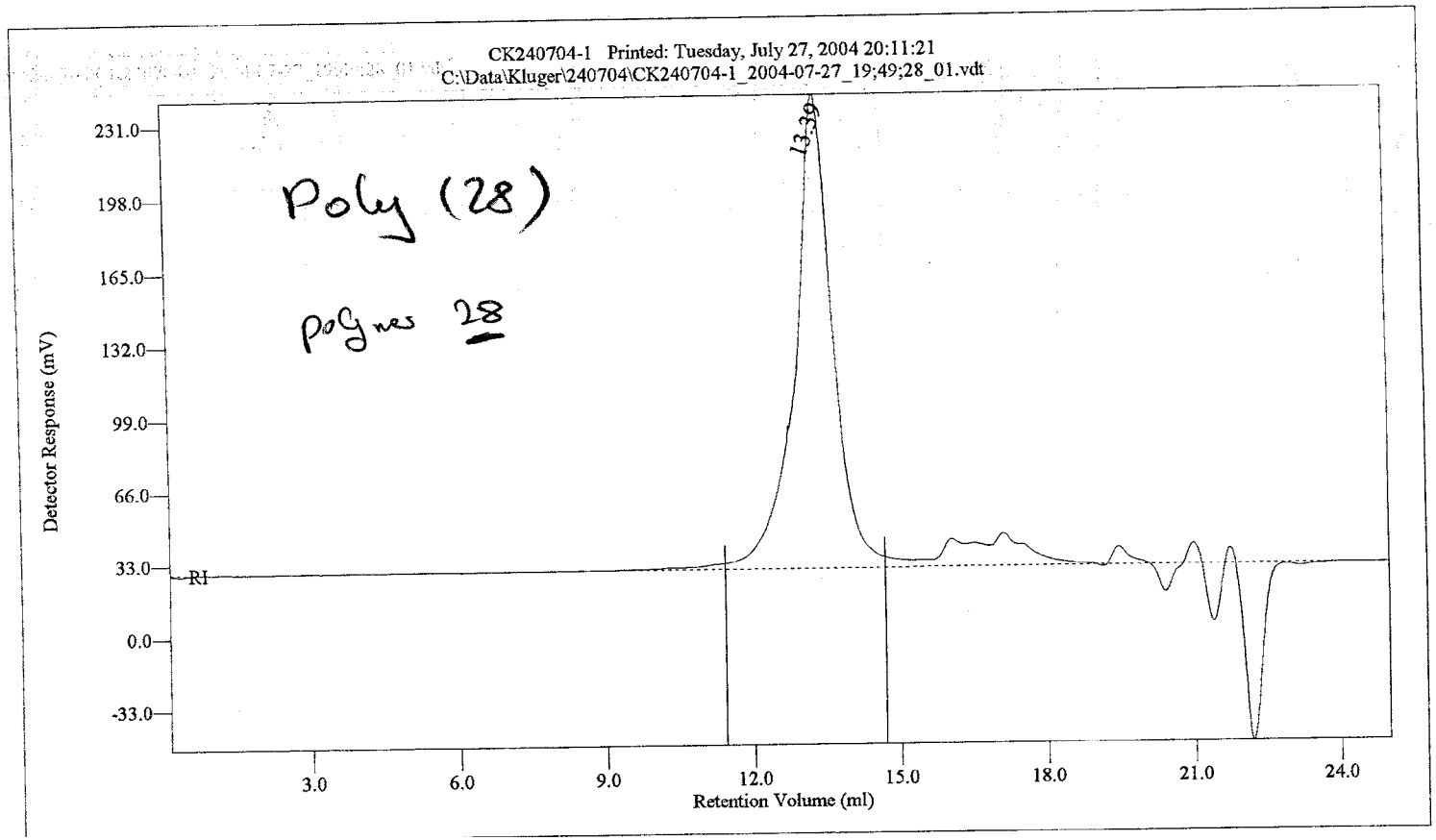
GPC-trace (polymer 24)



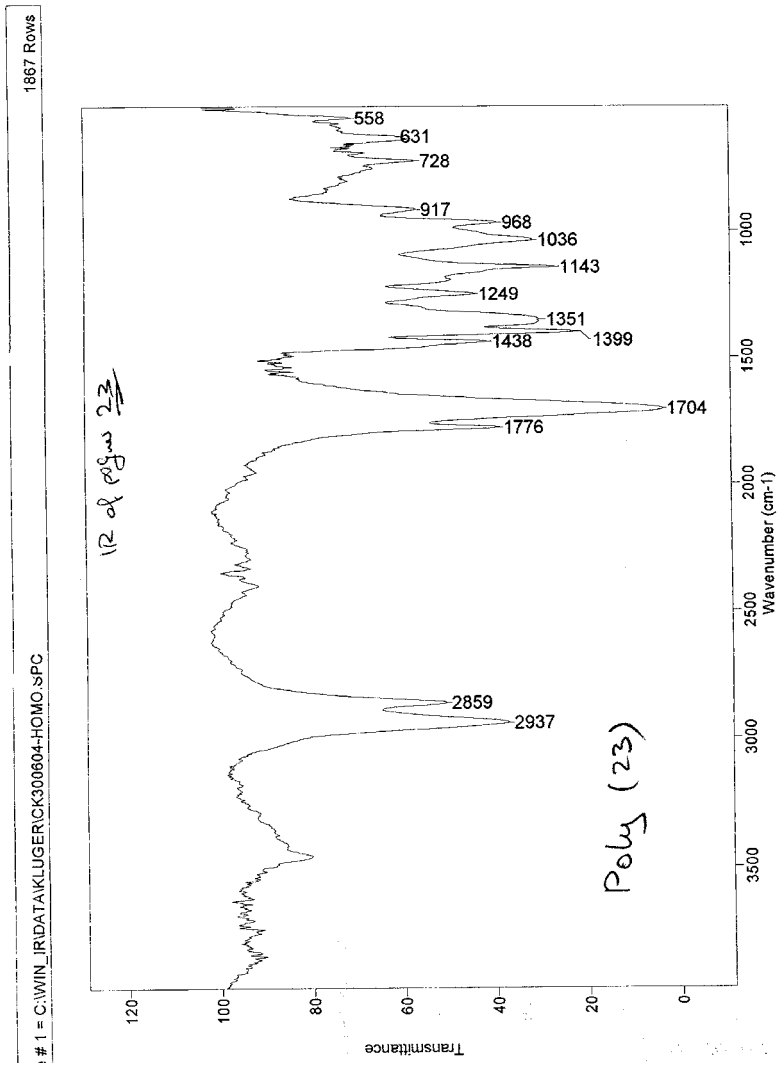
GPC-trace (polymer 25)



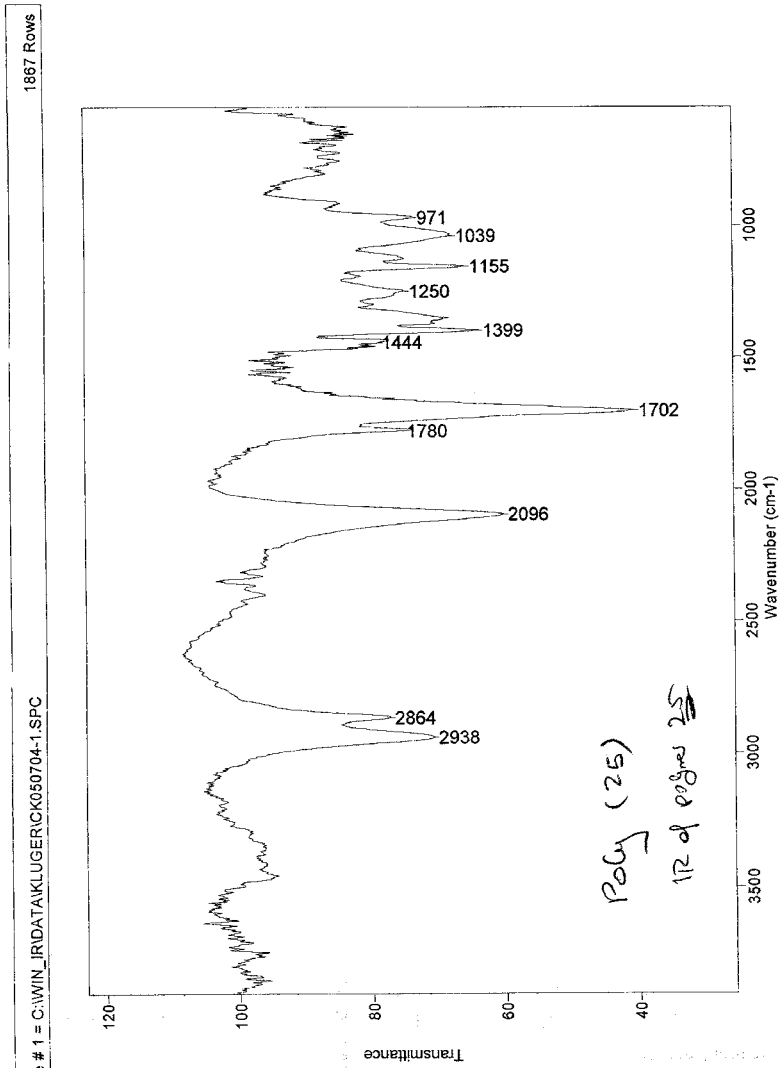
GPC-trace (polymer 28)



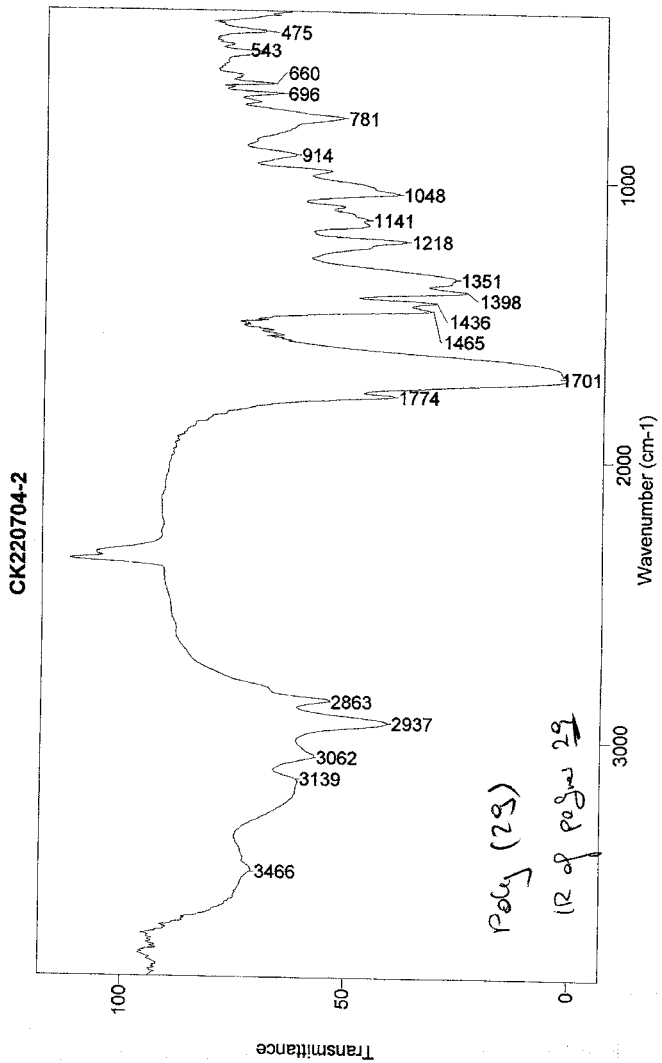
IR (polymer 23)



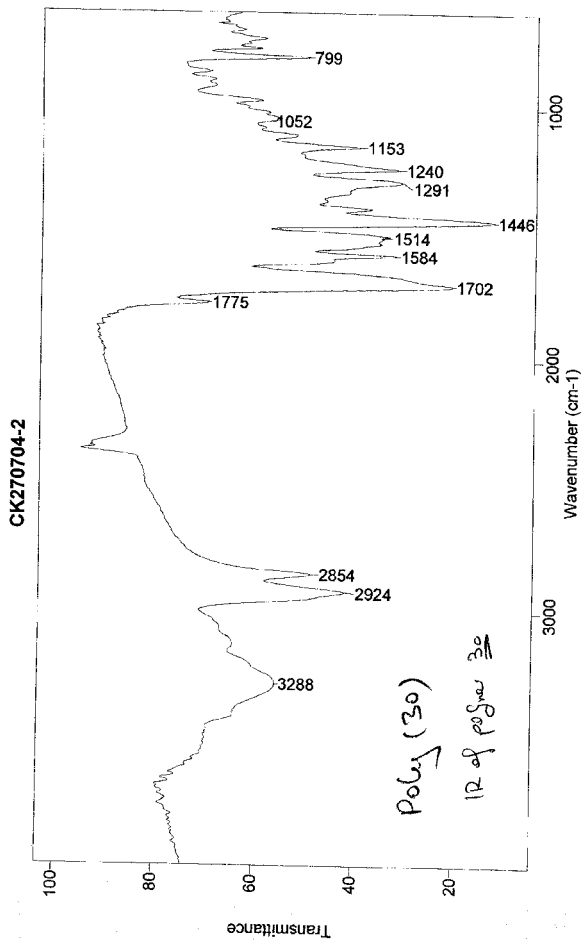
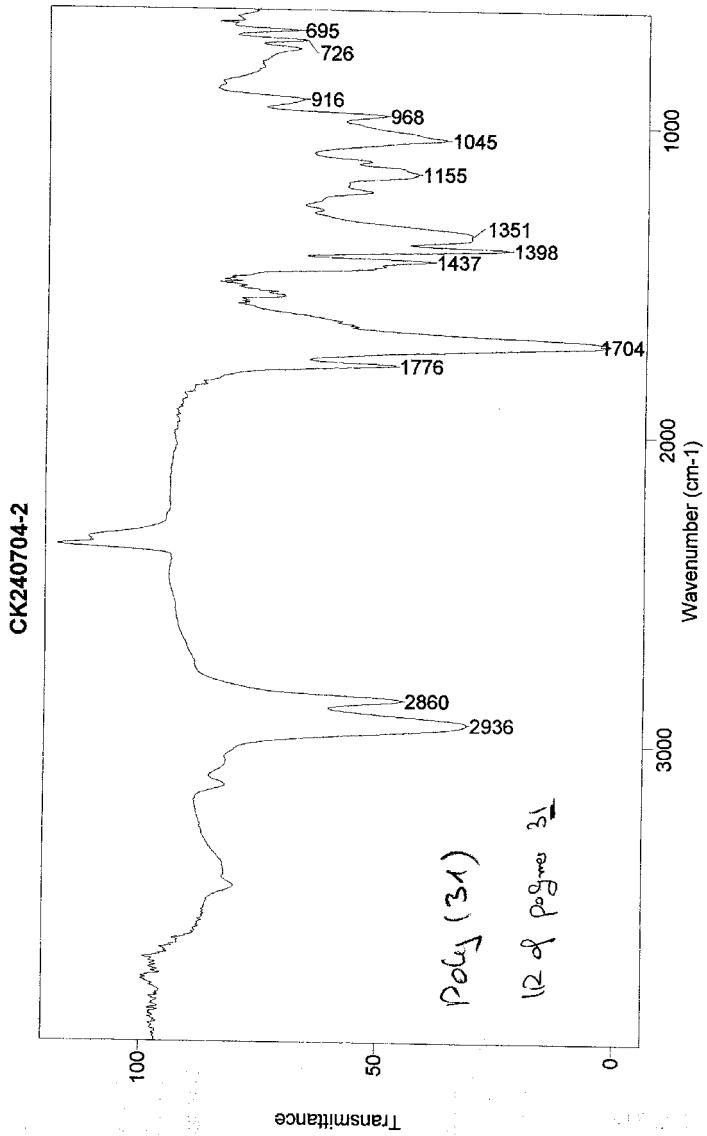
IR (polymer 25)



IR (polymer 29)



IR (polymer 30)



IR (polymer 31)