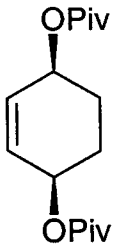
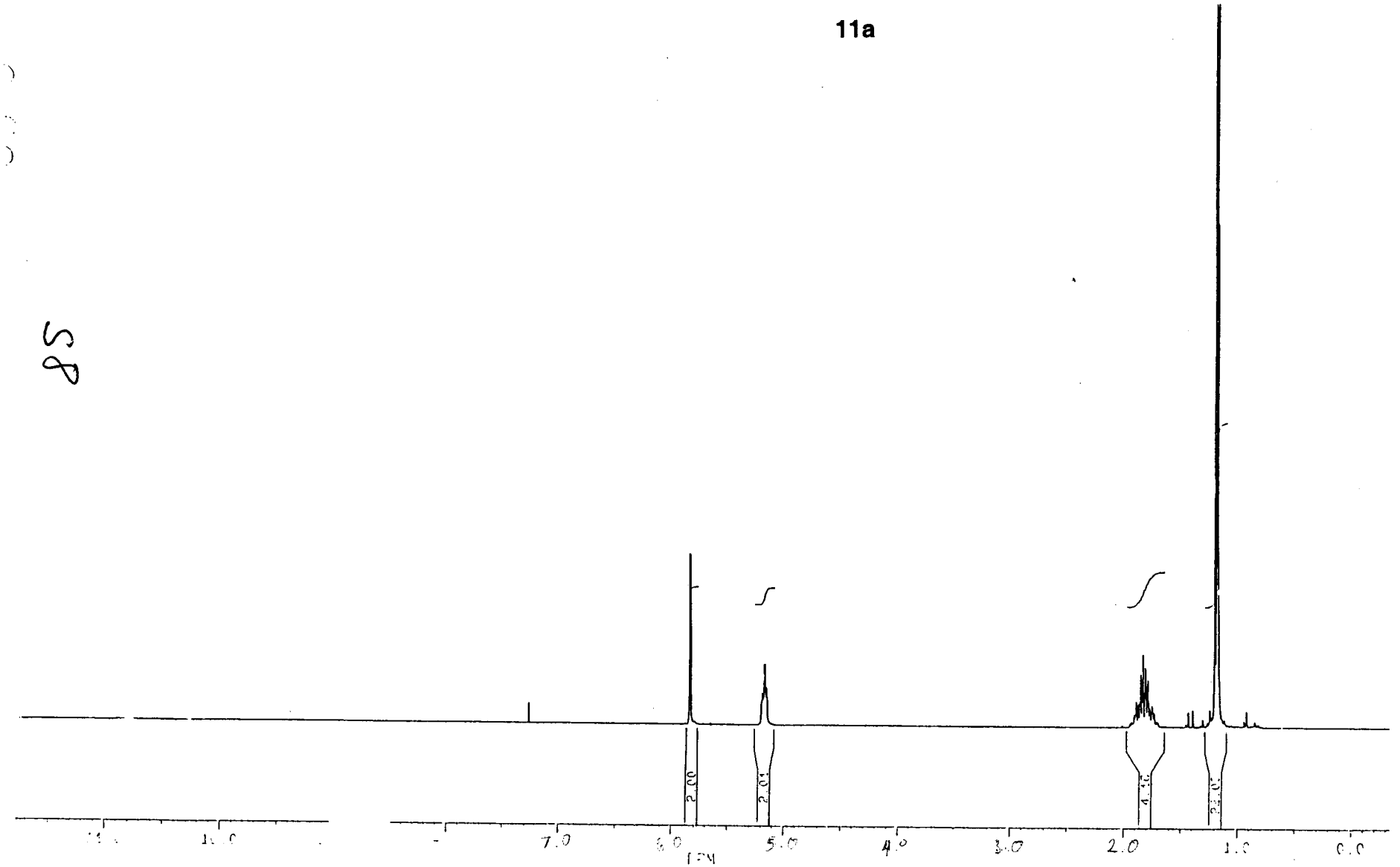
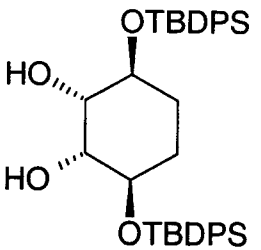

OPiv
OPiv

11a


LAVA336 FR. 10-26
2.00
2.01
4.16
9.00
7.0
5.0
4.0
3.0
2.0
1.0
0.0
PPM

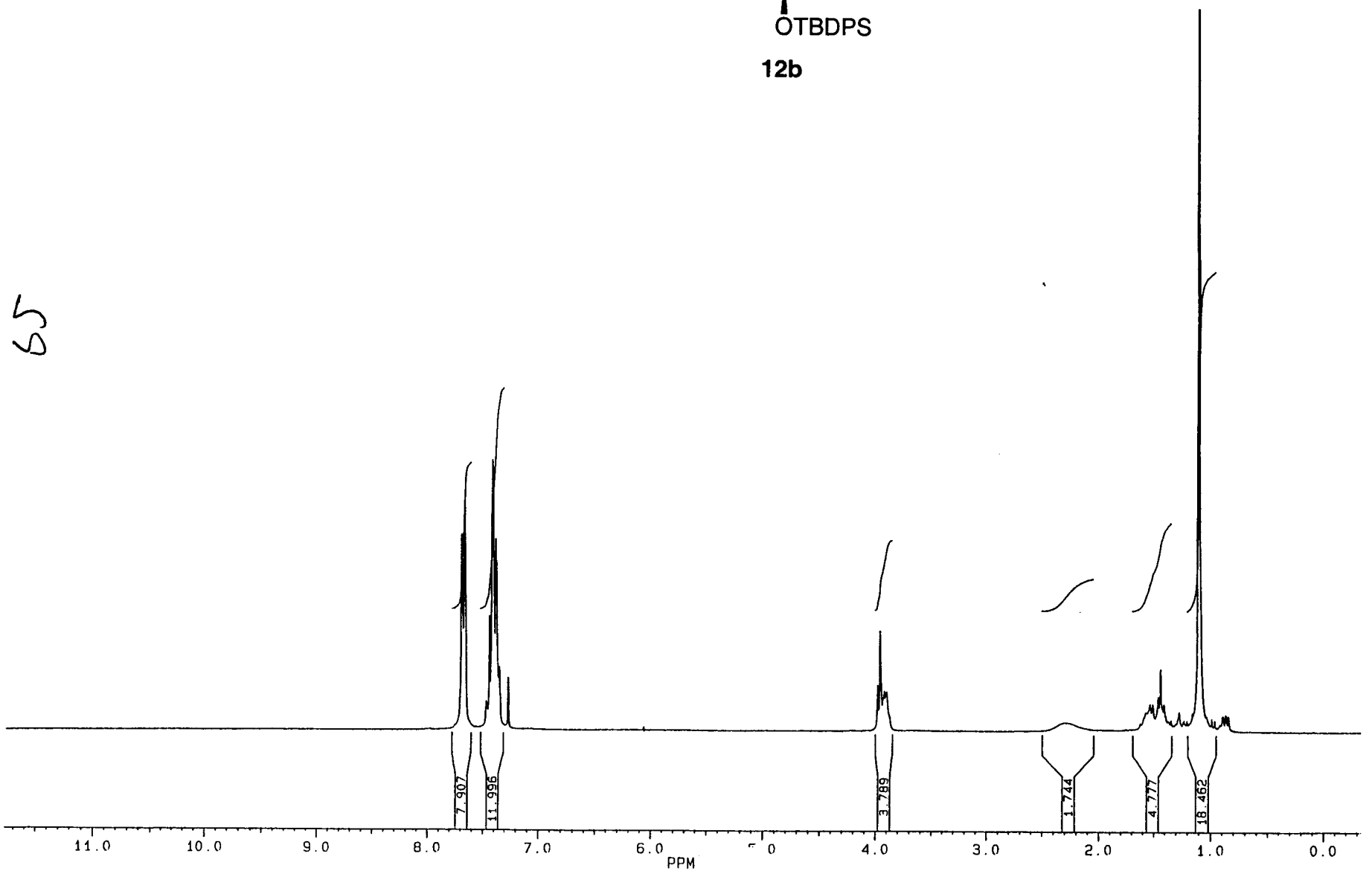
58

LAVA425 FR. 11-20



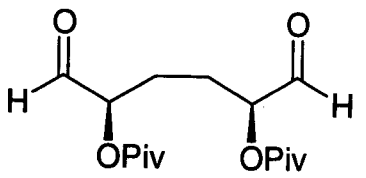
12b

65

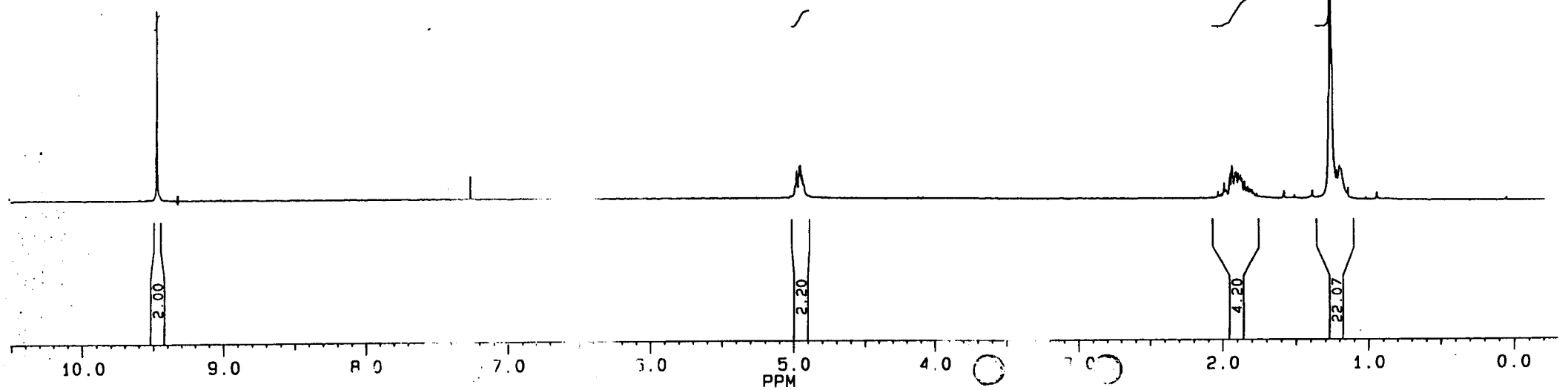


LAVA348 CRUDE

200MHz

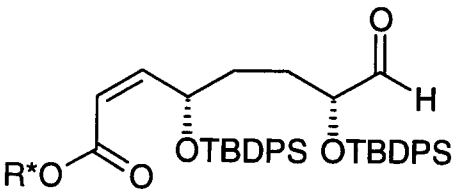


13a

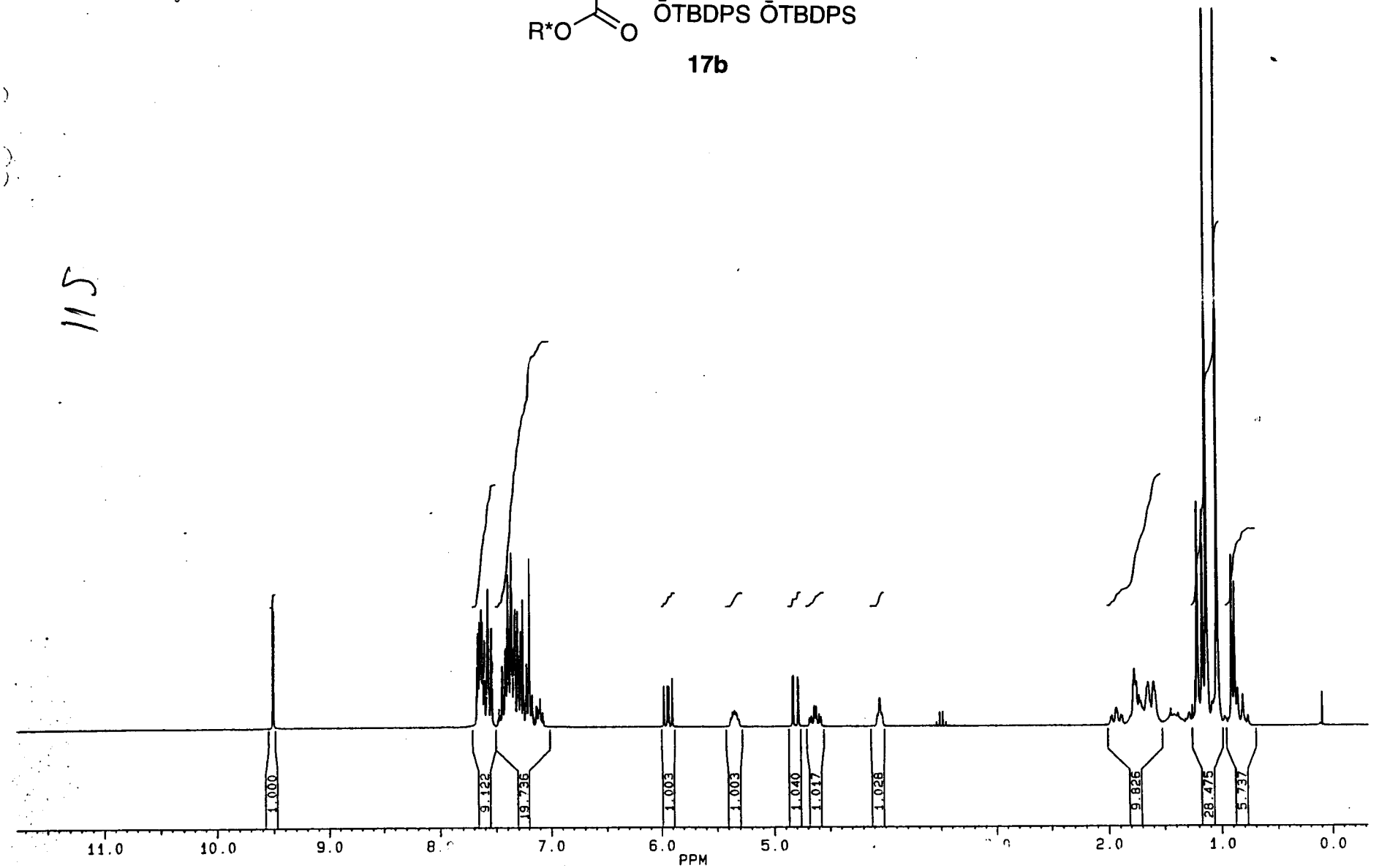


2 s NH3
LAVA378 FR. 15-22

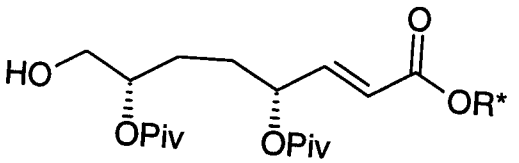
115



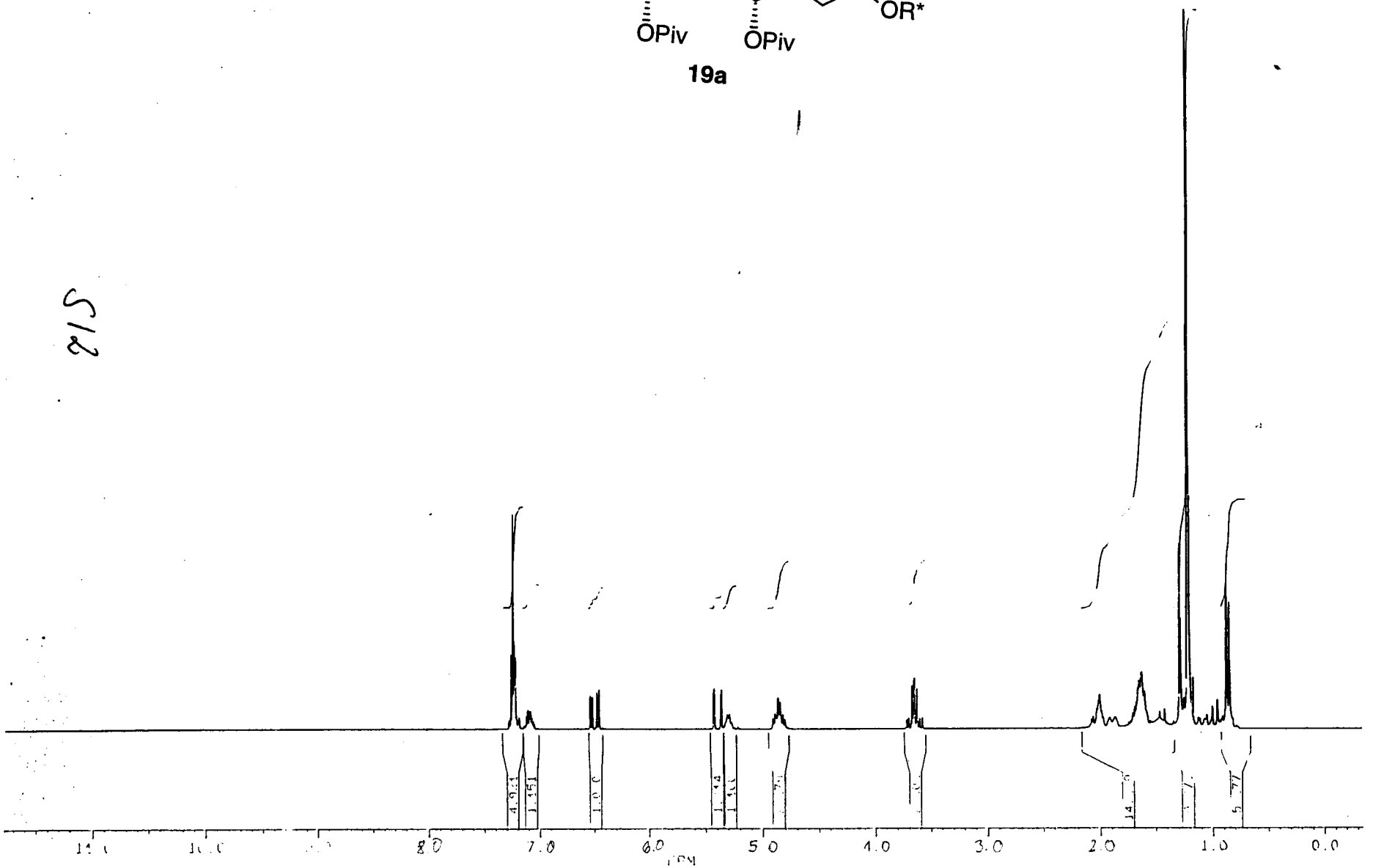
17b



LAVA344 FR. 14-23

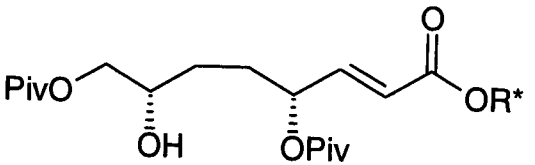


19a

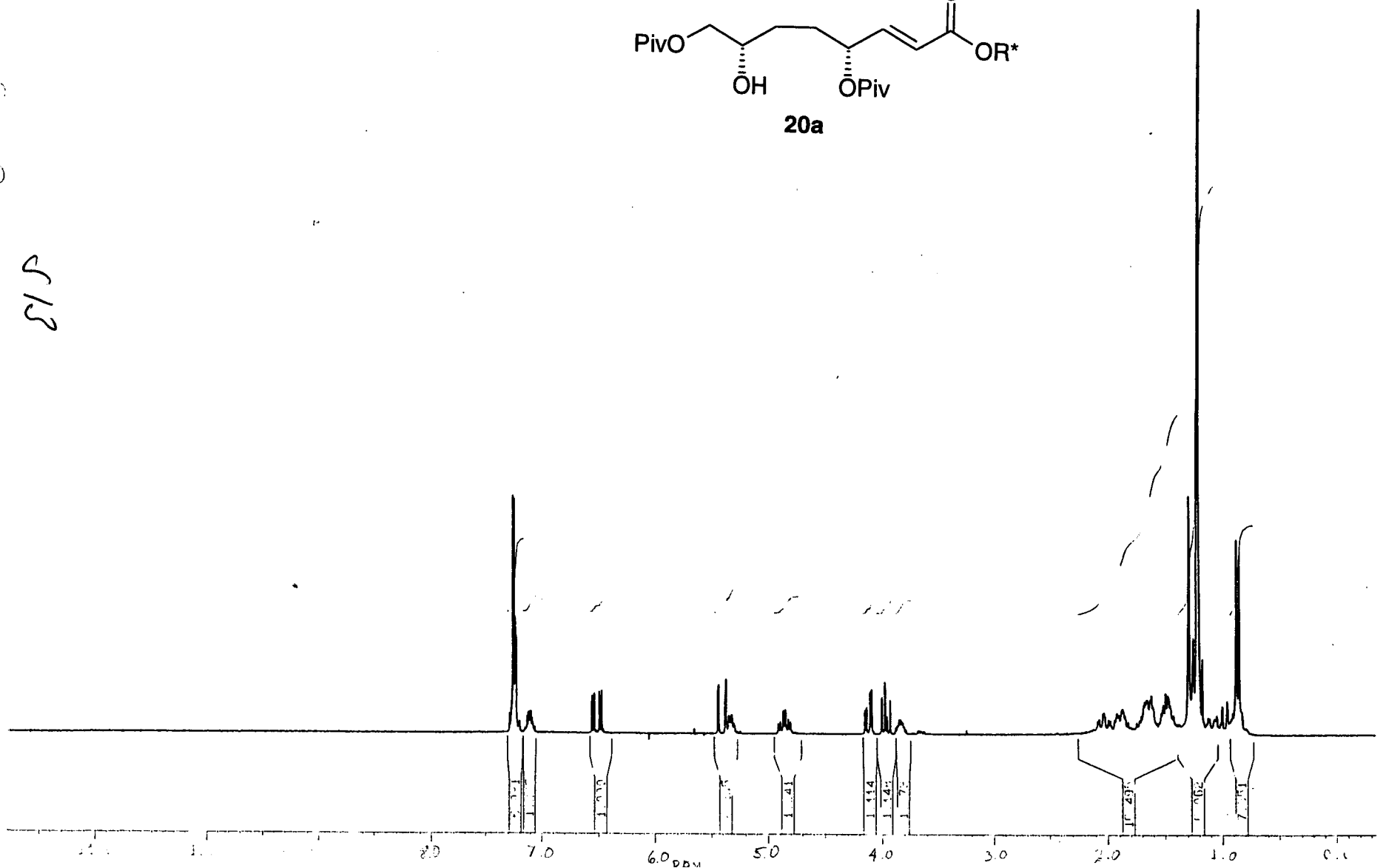


S12

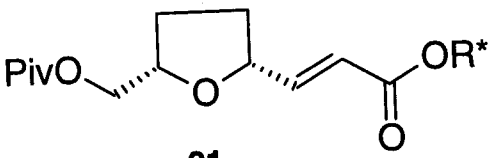
LAVA346 FR. 13-18



20a



S13

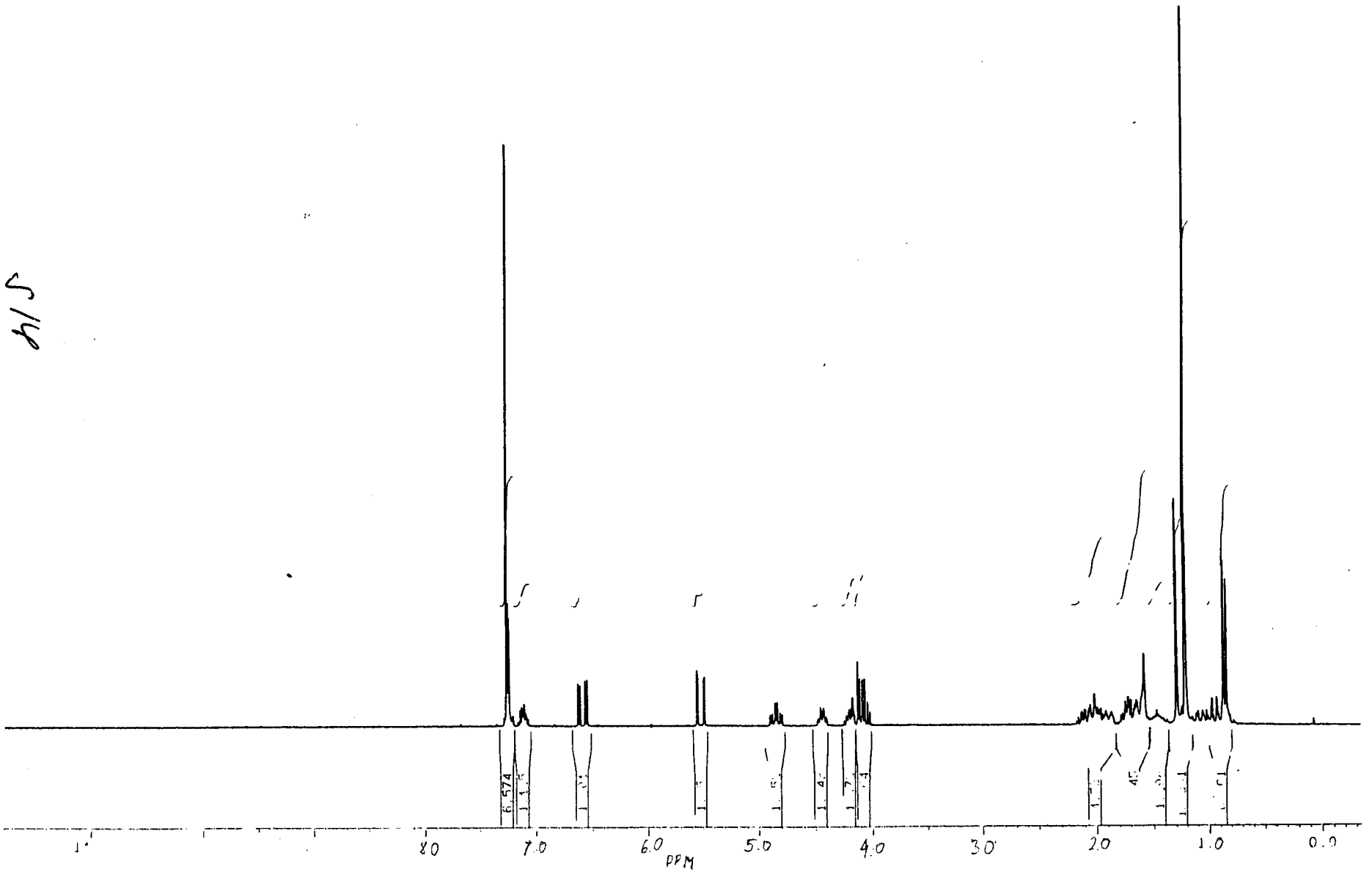


21

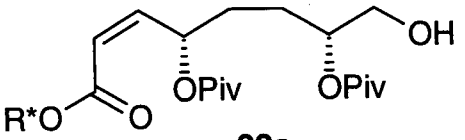
2 solvents

LAVA347 FR. 9-16

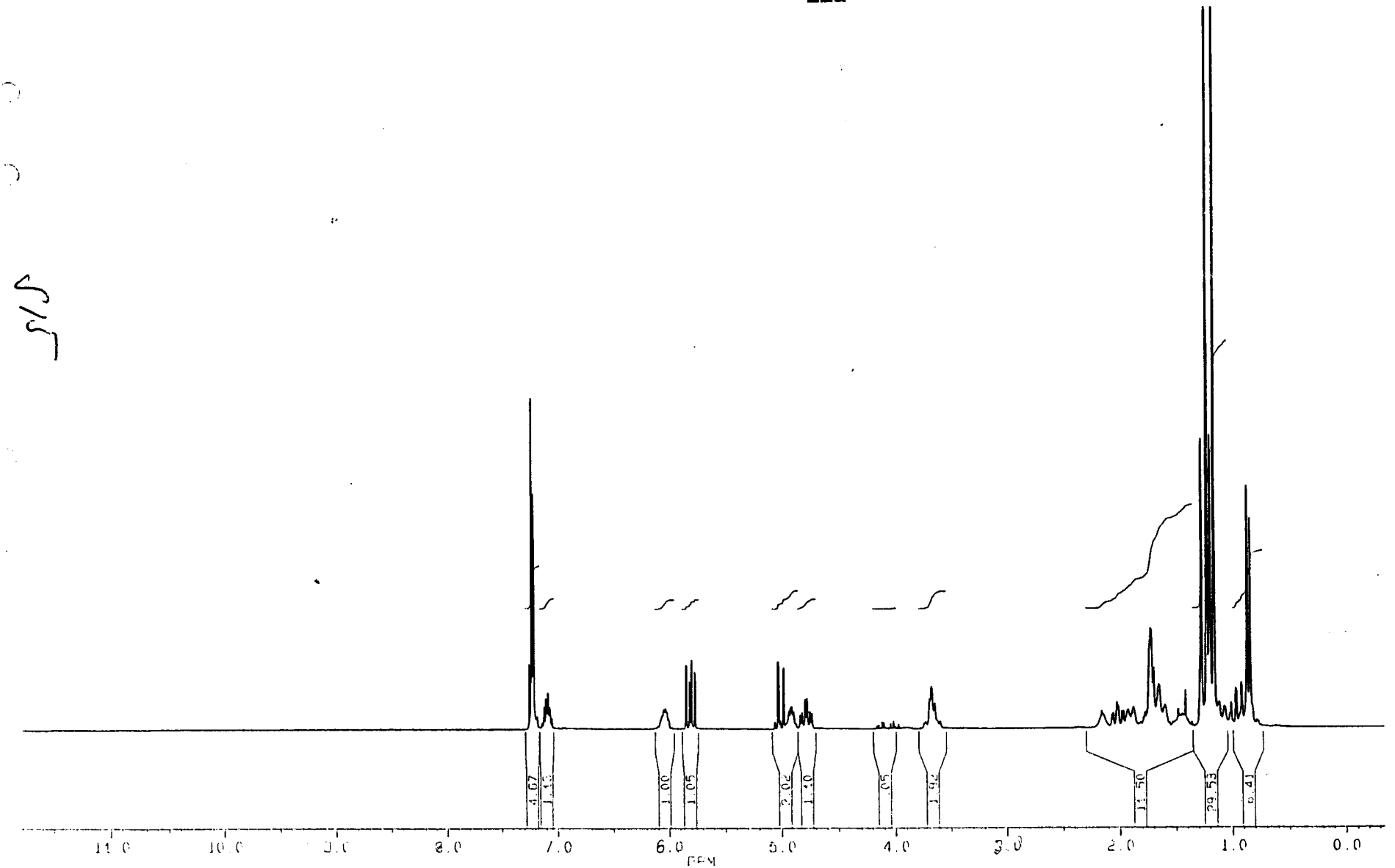
S 19



LAVA350 FR. 10-16

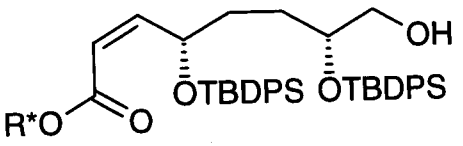


22a



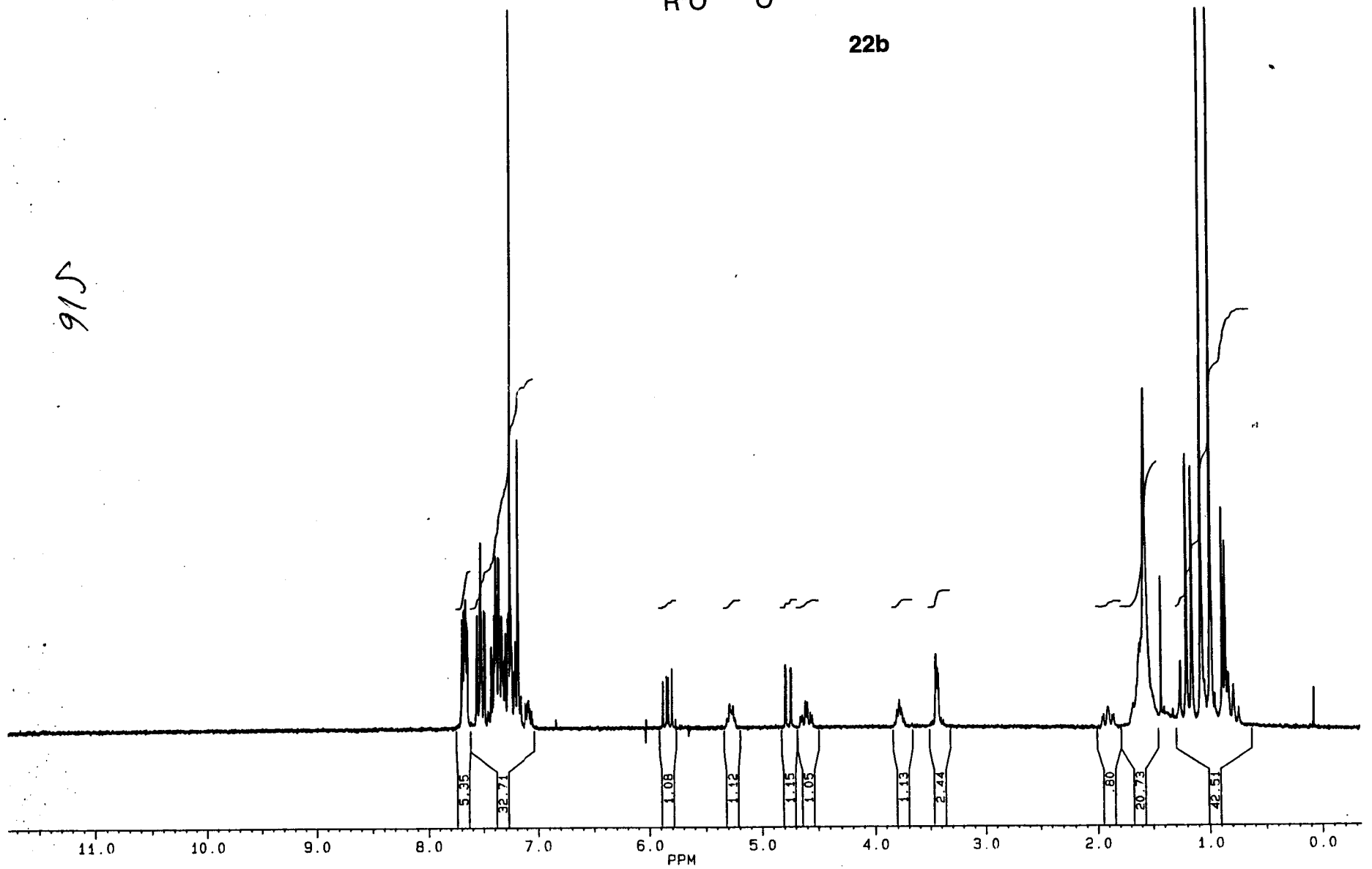
250 MHz

LAVA394 FR. 9-15



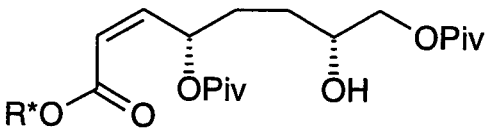
22b

915

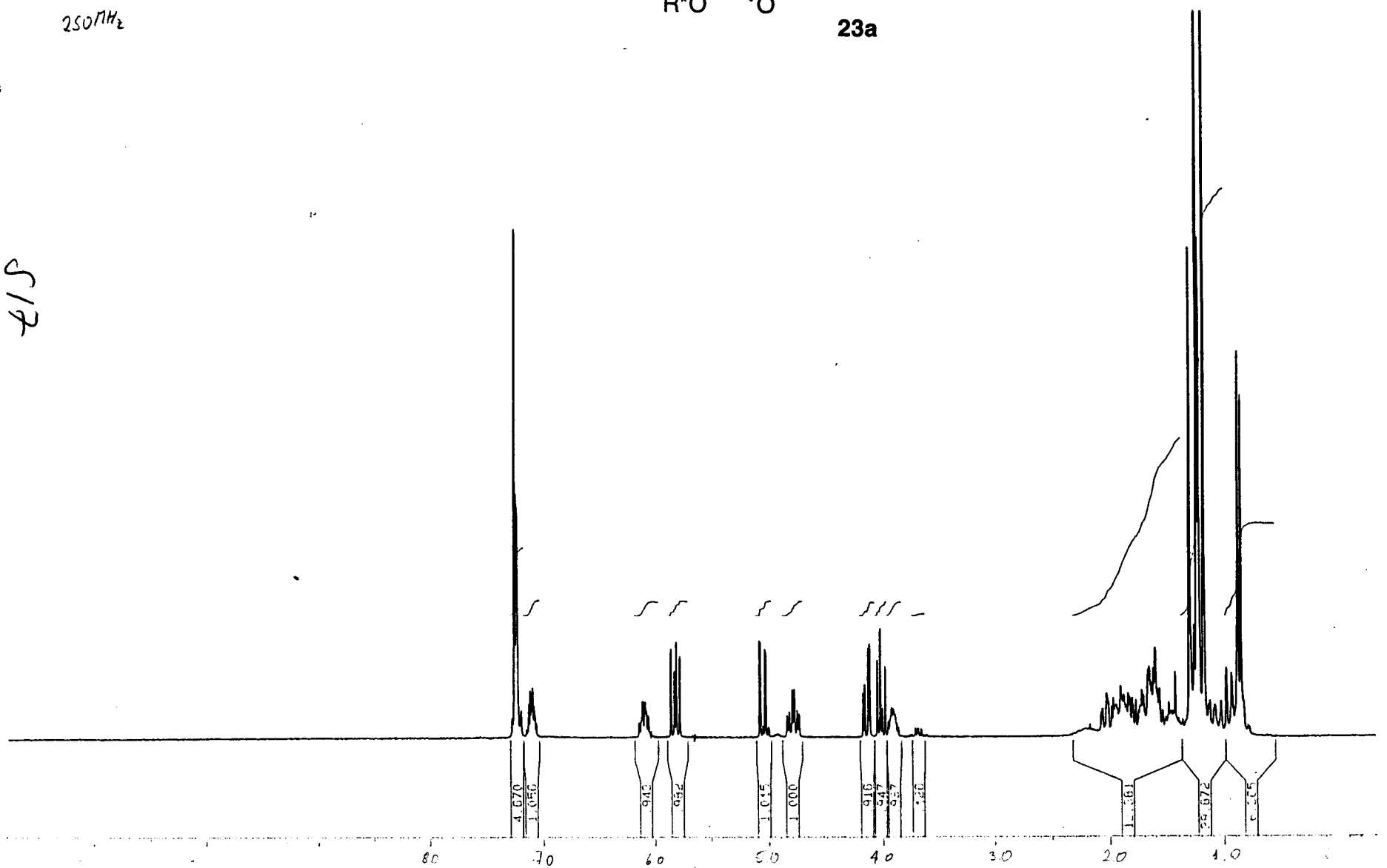


LAVA352 FR. 22-39

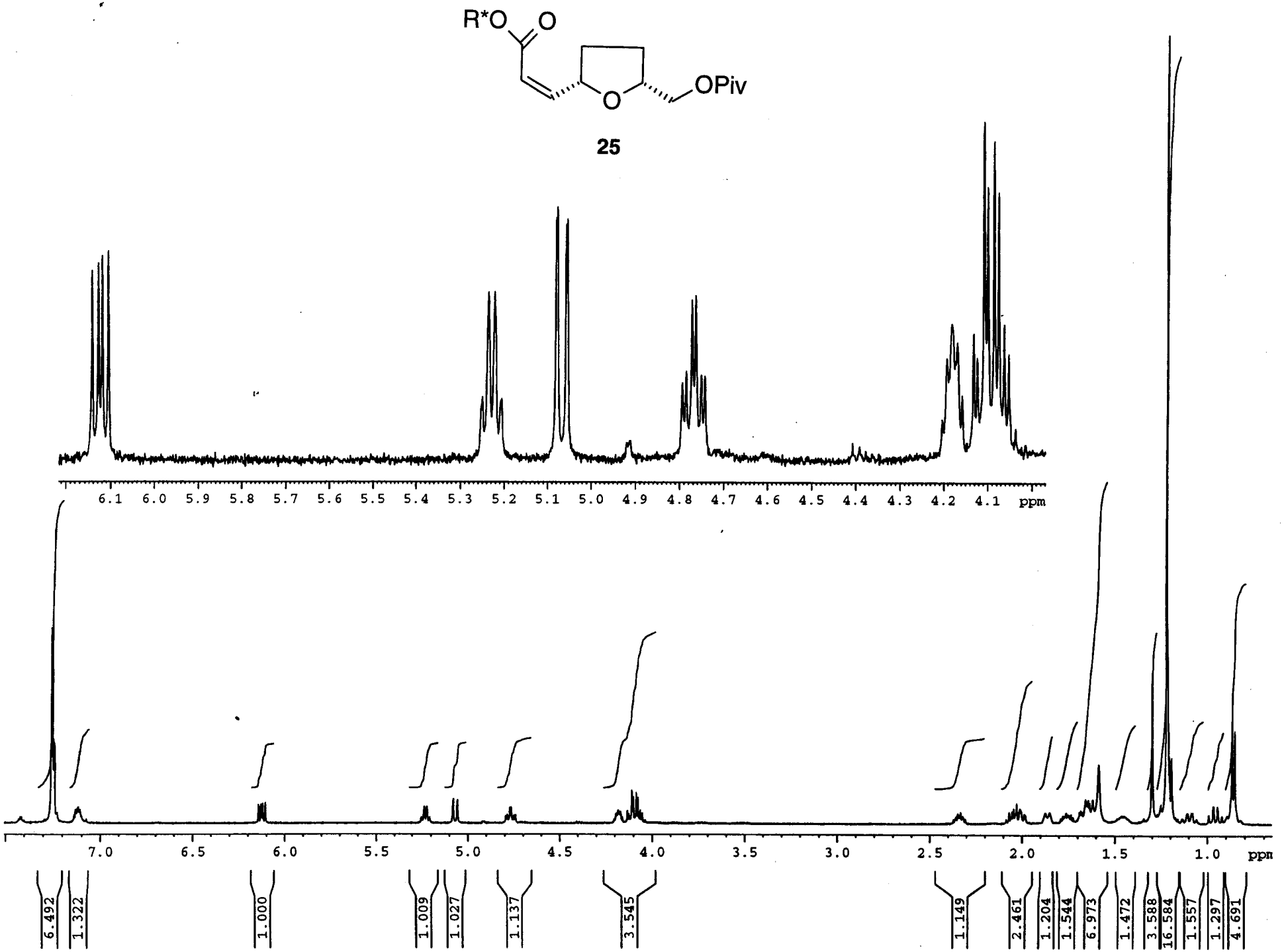
250MHz



23a

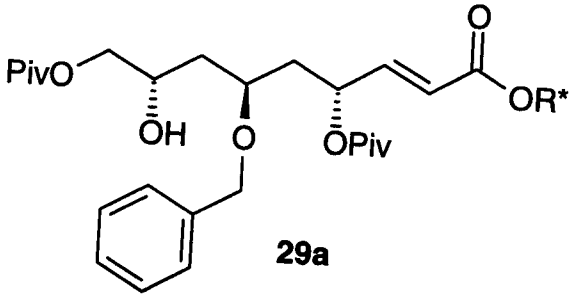


S17

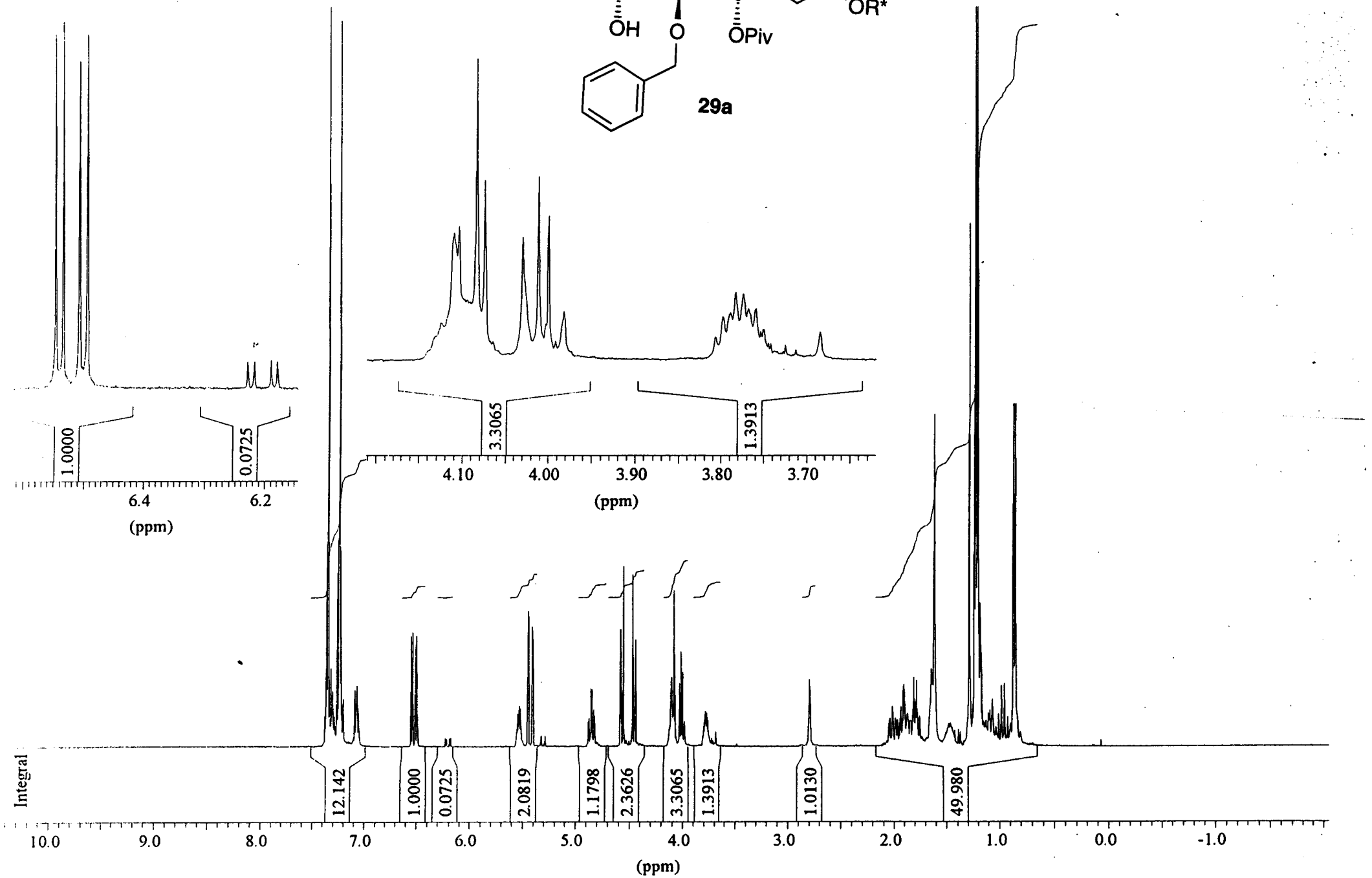

R*O
O
O
OPiv
25
6.1 6.0 5.9 5.8 5.7 5.6 5.5 5.4 5.3 5.2 5.1 5.0 4.9 4.8 4.7 4.6 4.5 4.4 4.3 4.2 4.1 ppm
7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 ppm
6.492
1.322
1.000
1.009
1.027
1.137
3.545
1.149
2.461
1.204
1.544
6.973
1.472
3.588
16.584
1.557
1.297
4.691

S18

LAV 80 FR. 12-18



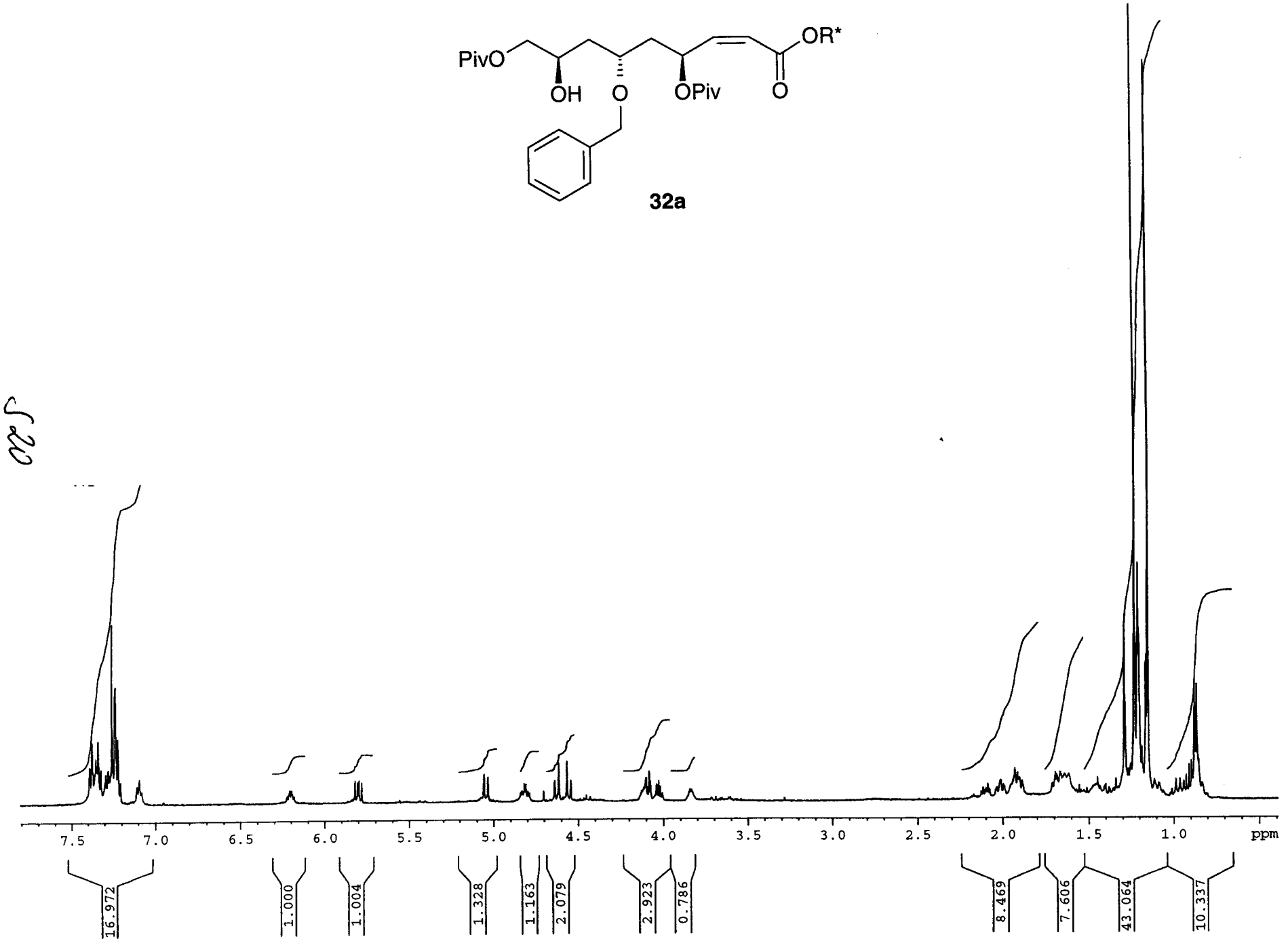
29a



81 S

PivO
OH
O
OPiv
O
OR*

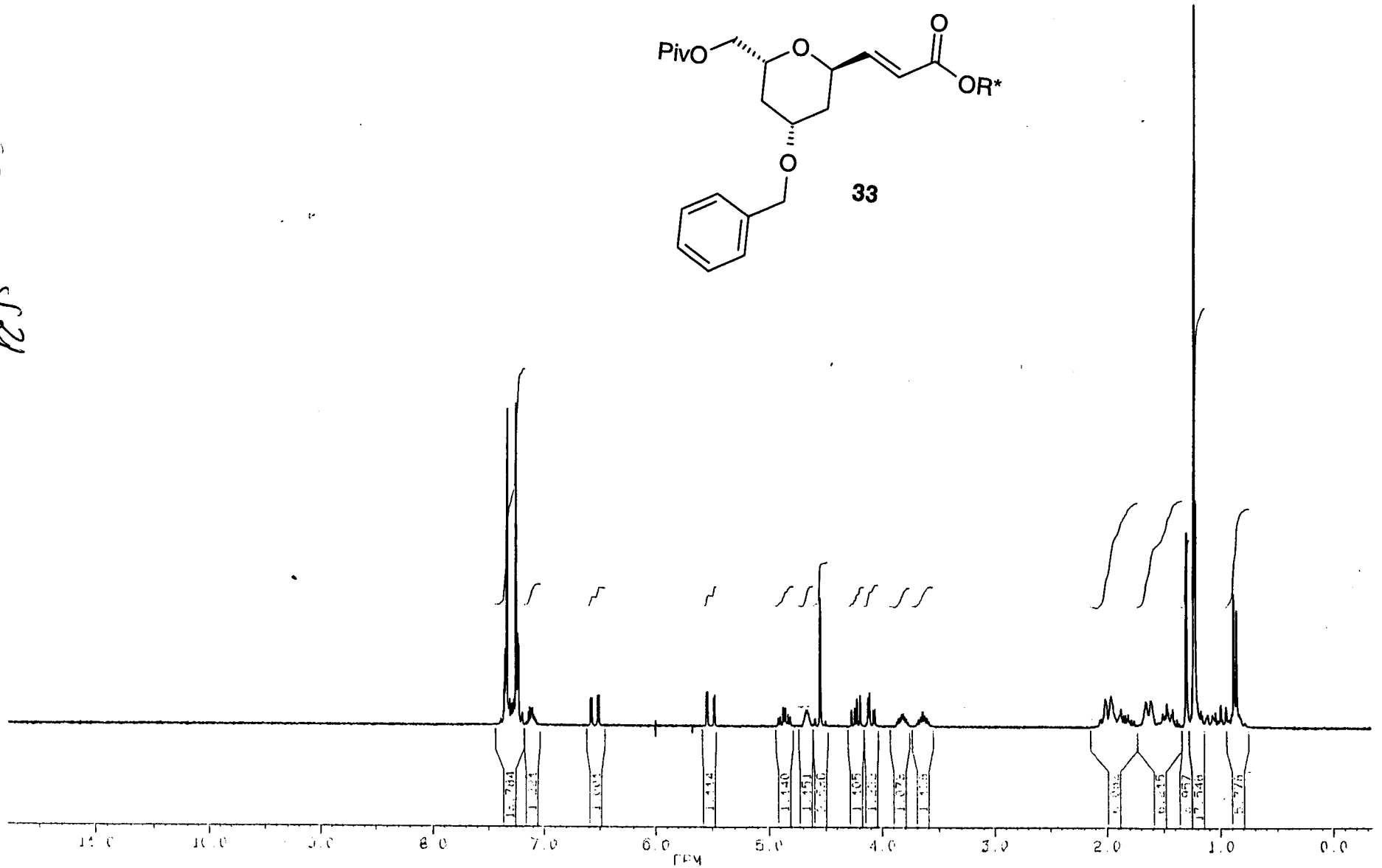
32a


7.5
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
ppm
16.972
1.000
1.004
1.328
1.163
2.079
2.923
0.786
8.469
7.606
43.064
10.337

S20

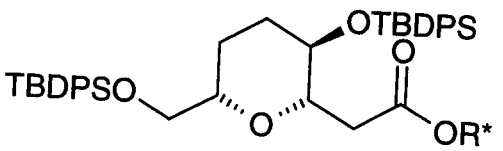
7.26 ppm ($CHCl_3$)

LAVA306 FR. 21-26 250 MHz

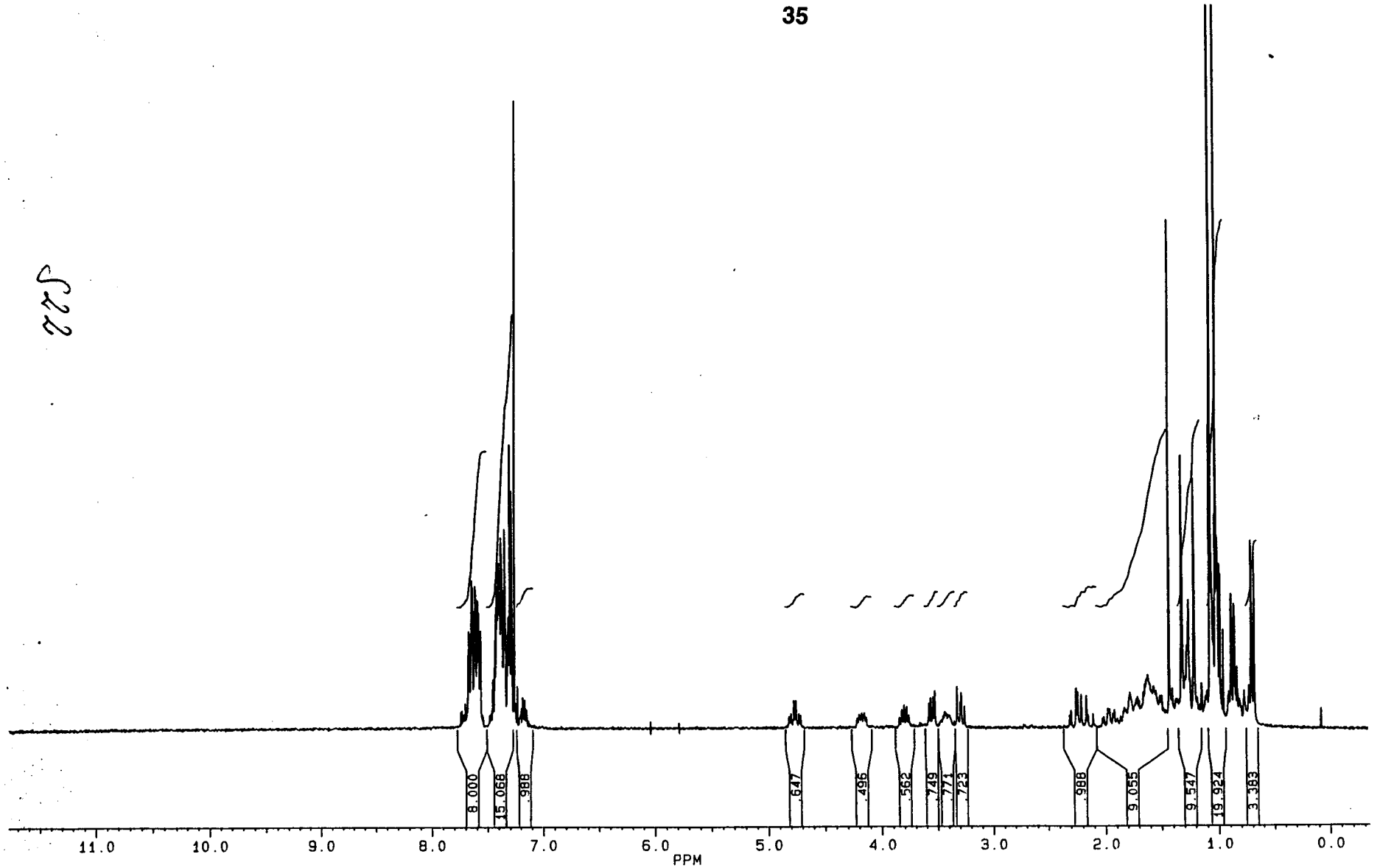


S21

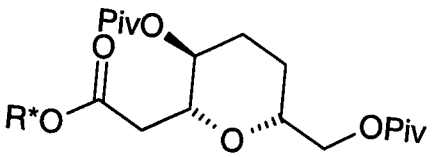
LAVA410 FR. 2



35

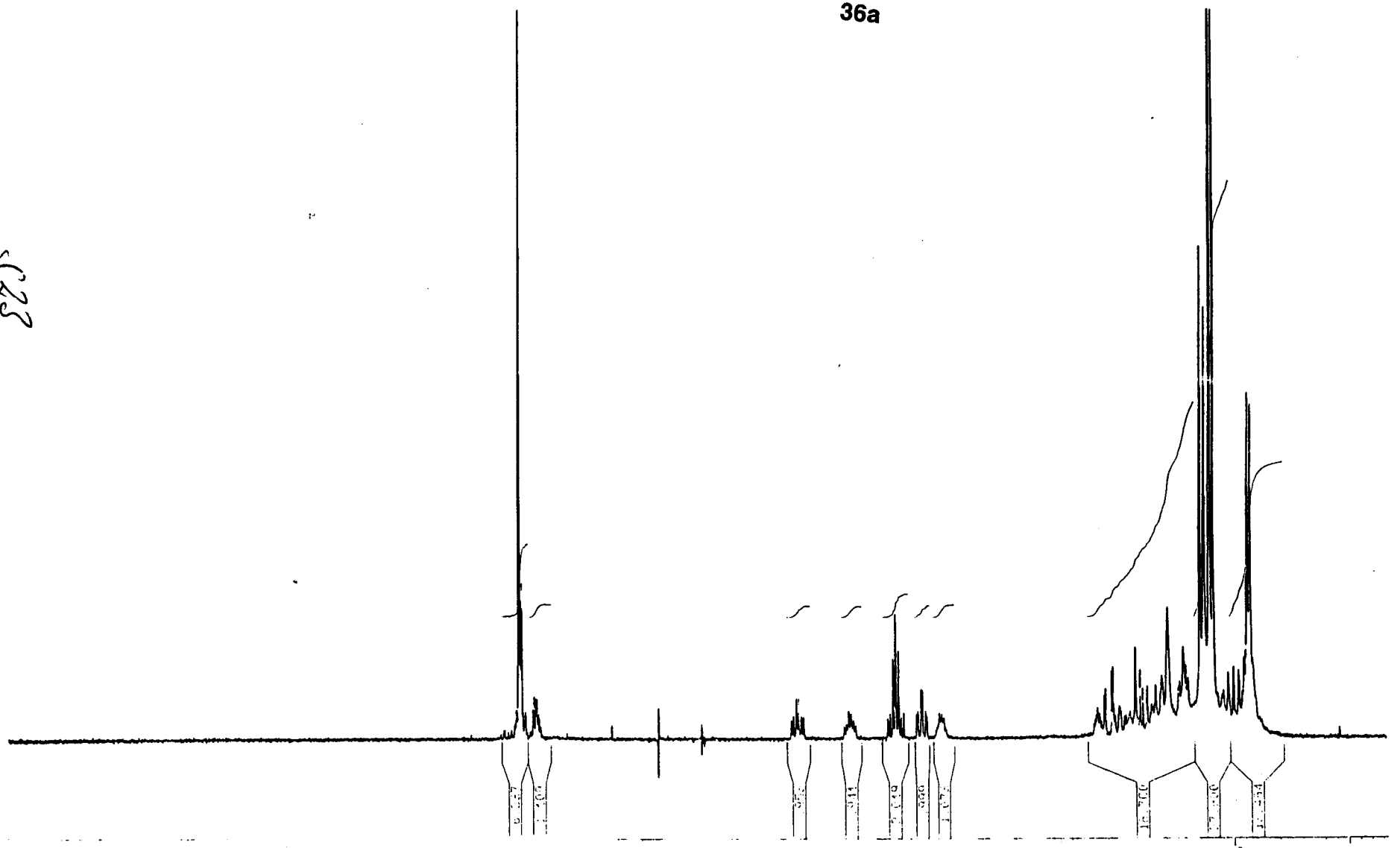


225



36a

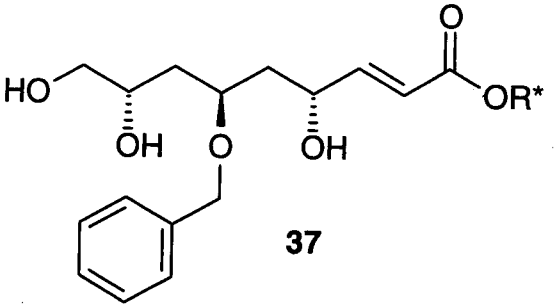
LAVA355 FR. 9-15



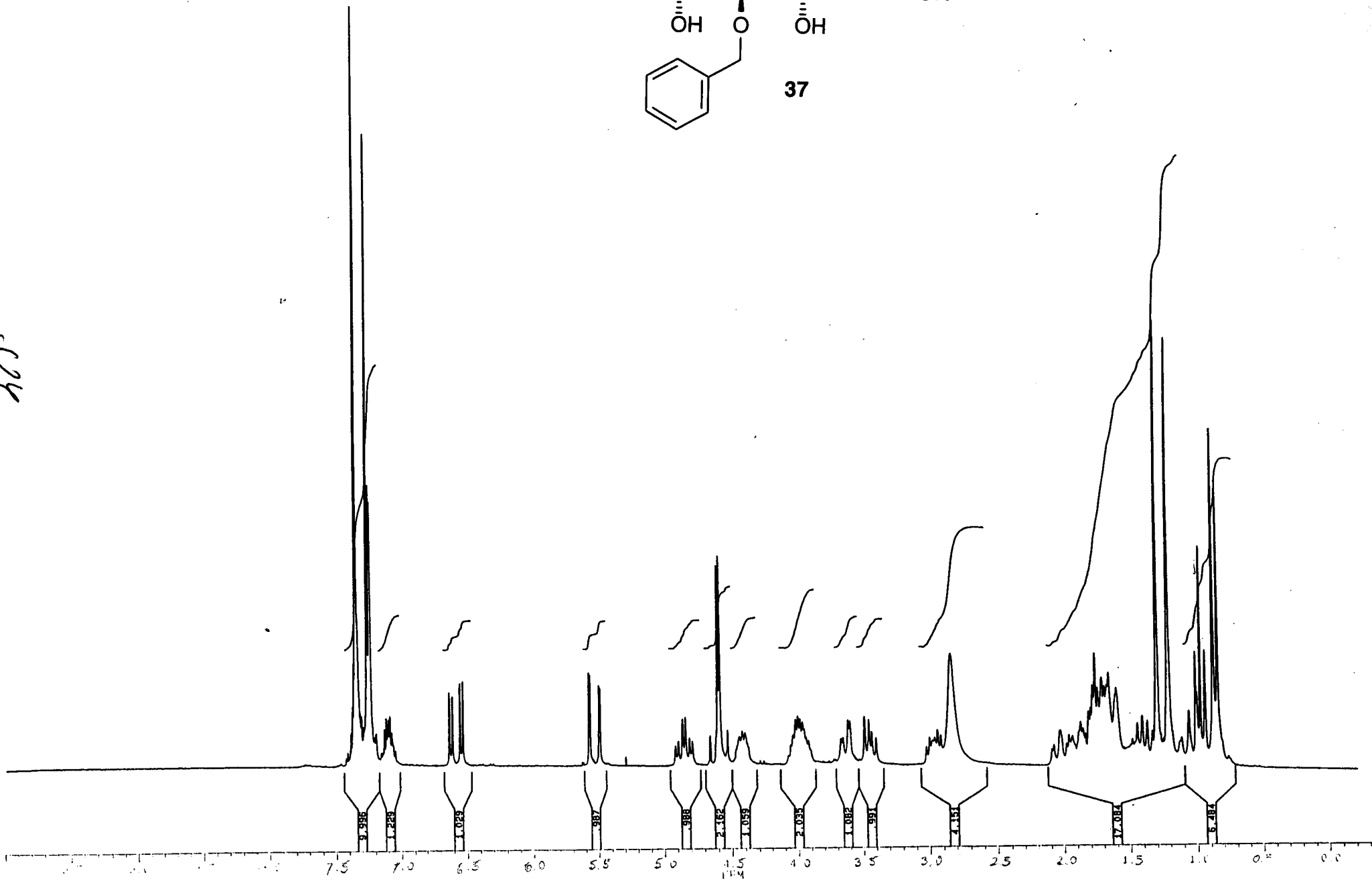
S23

200MHz 7.26 ppm ($CHCl_3$)

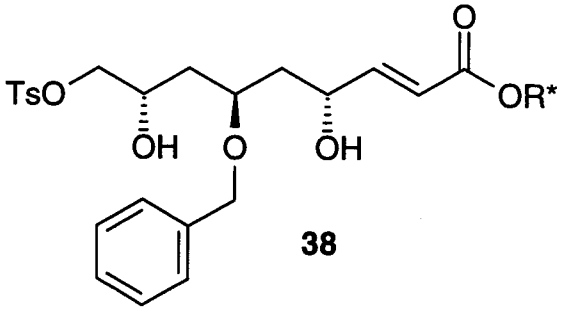
I.AVA191 FR. 8-21



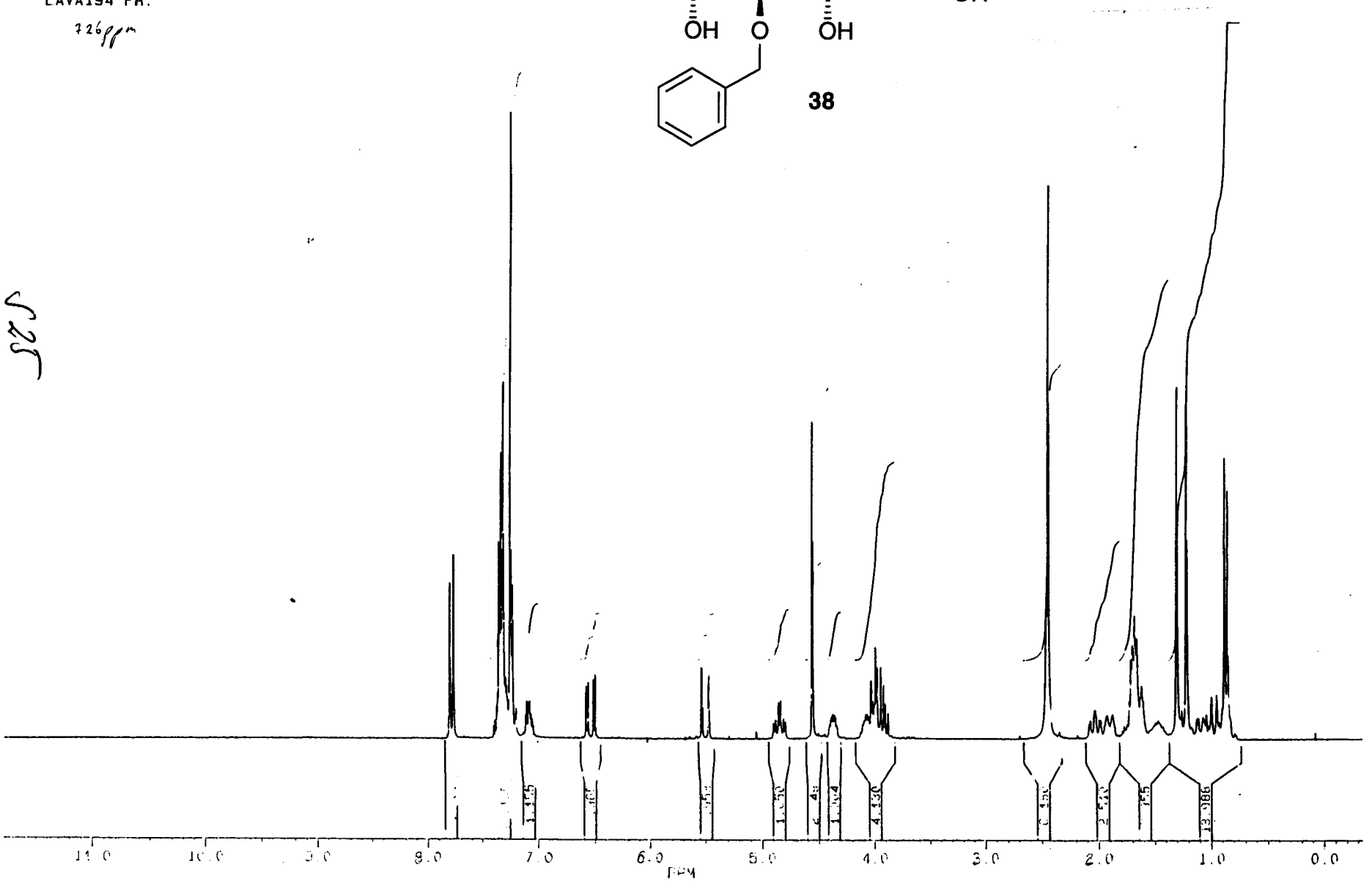
37



250 MHz
LAVA194 FR.
226 ppm

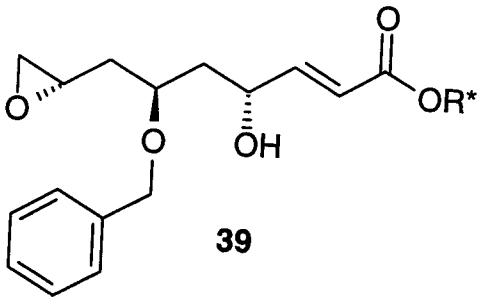


38

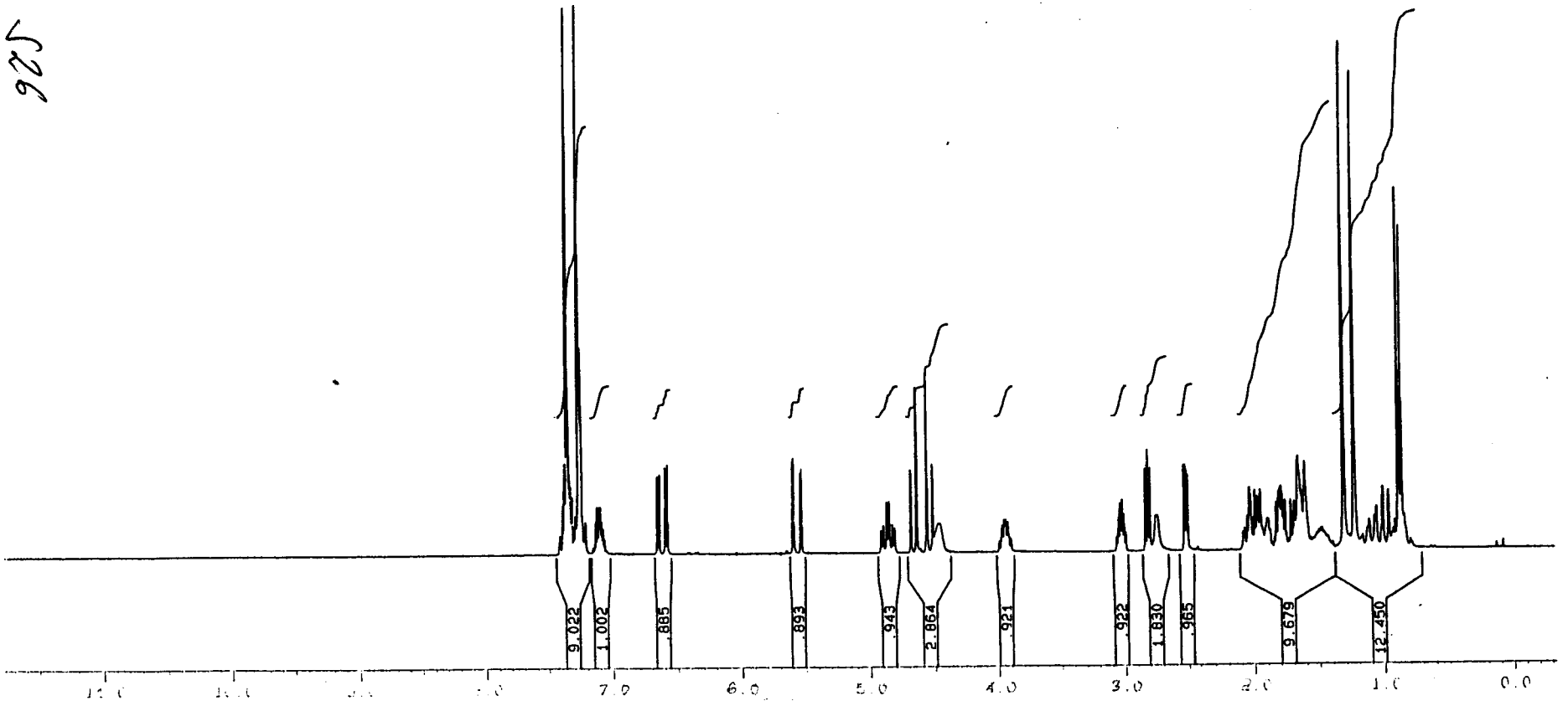


S25

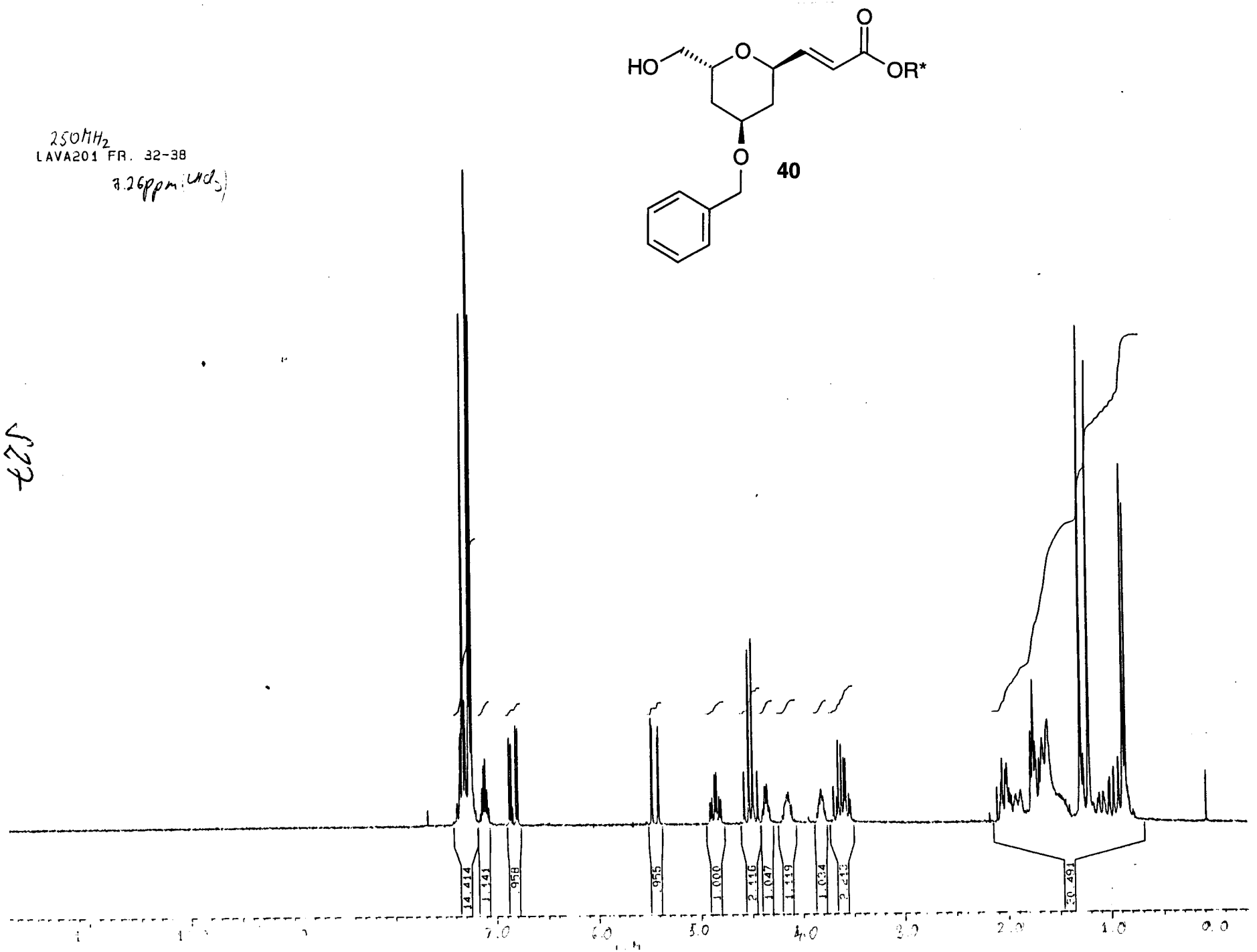
250MHz
LAVA198 FR 10-20



39



925


250MHz
LAVA201 FR. 32-38
7.26ppm ($CDCl_3$)
HO
O
O
OR*
O
40
14.414
1.141
958
955
1.000
2.116
1.047
1.119
1.034
2.213
30.491
7.0
6.0
5.0
4.0
2.0
1.0
0.0