

Figura 86. Espectro de RMN ^1H , do 5-trifluormetil-3-[2-tienil]-1*H*-pirazol (**11b**) em CDCl_3 .

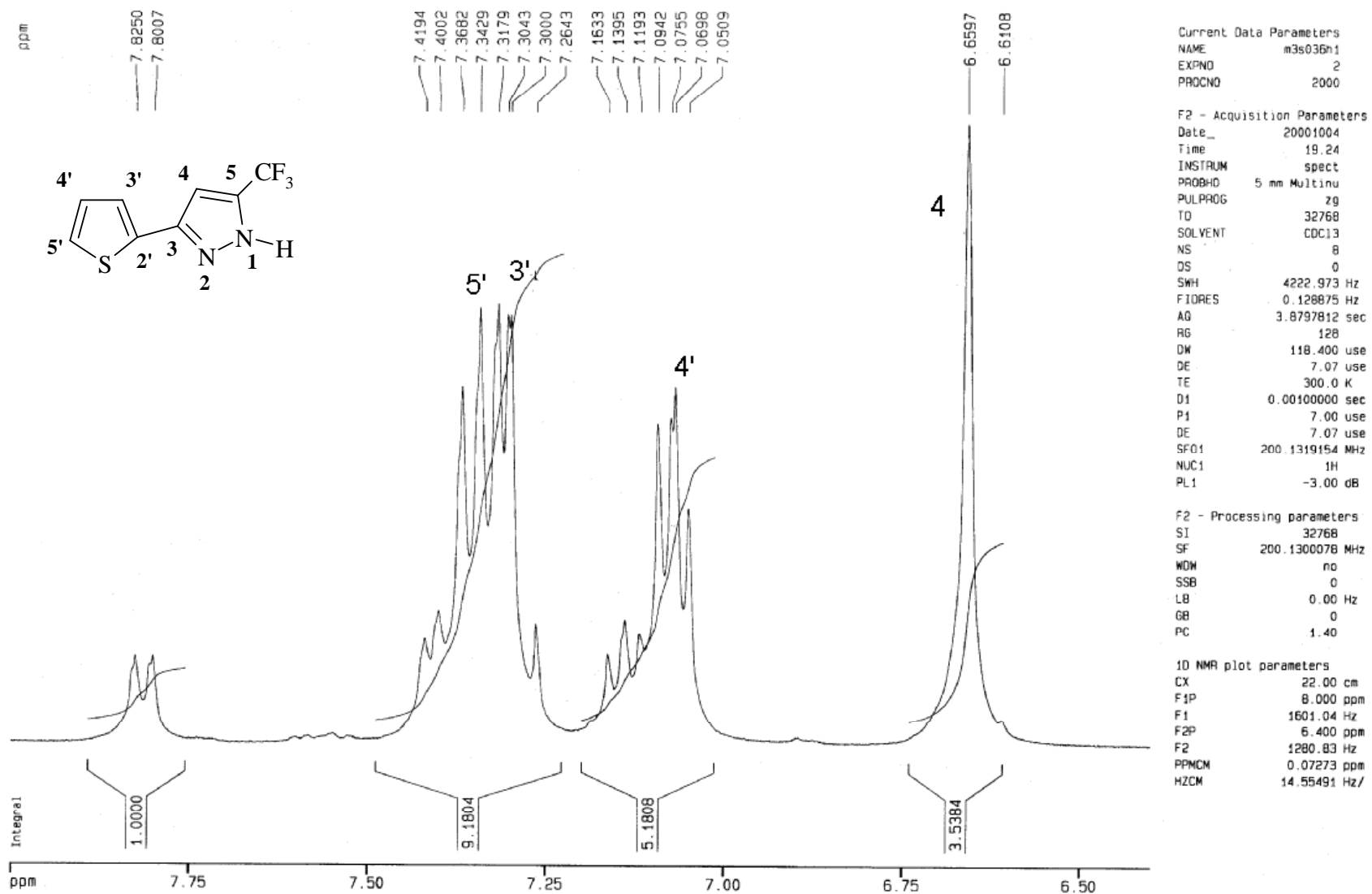


Figura 87. Espectro de RMN ¹H, expansão entre 6,5-7,5 ppm do 5-trifluorometil-3-[2-tienil]-1H-pirazol (**11b**) em CDCl₃.

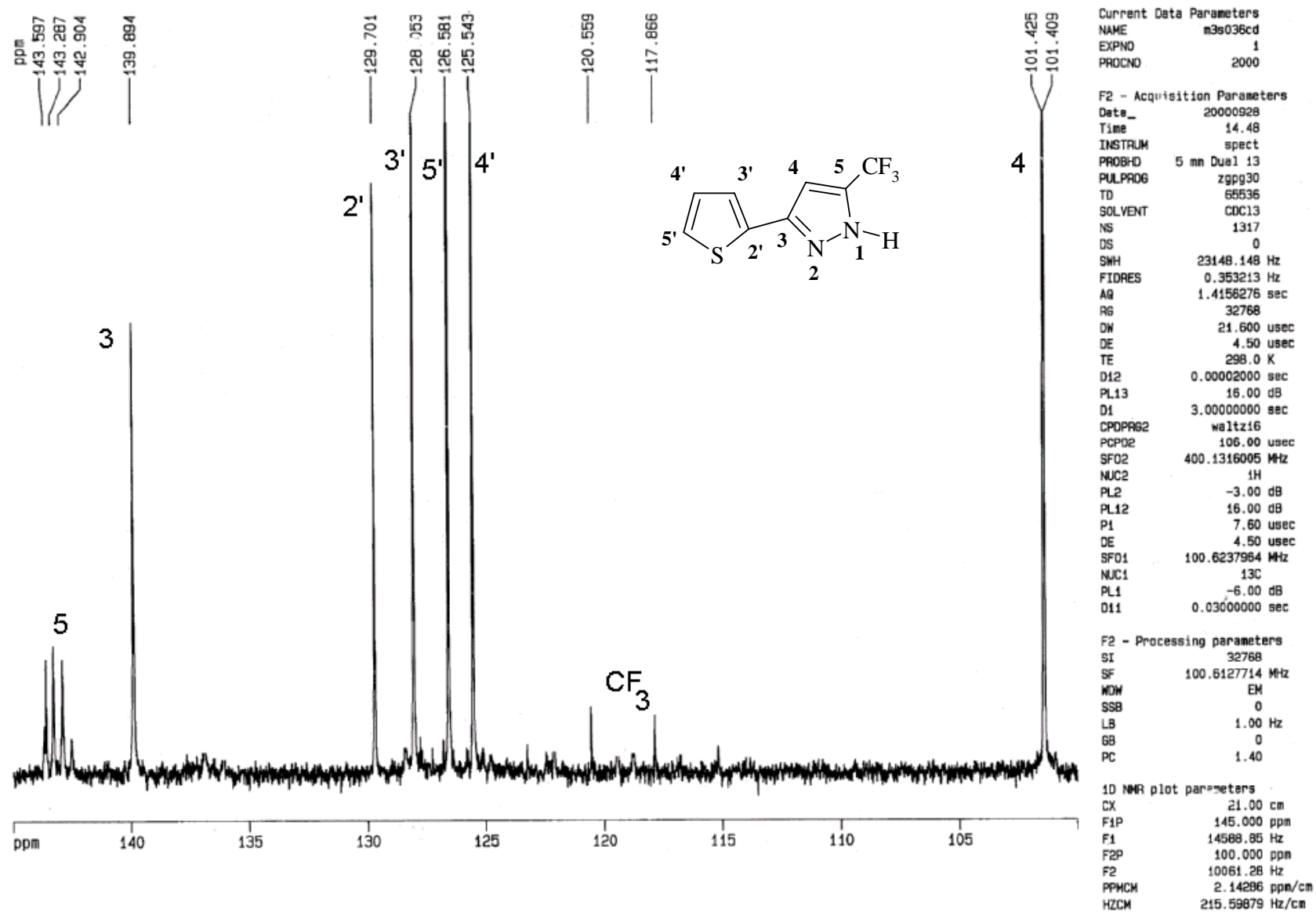


Figura 88. Espectro de RMN ^{13}C a 100,62 MHz, do 5-trifluormetil-3-[2-tienil]-1H-pirazol (**11b**) em CDCl_3 .

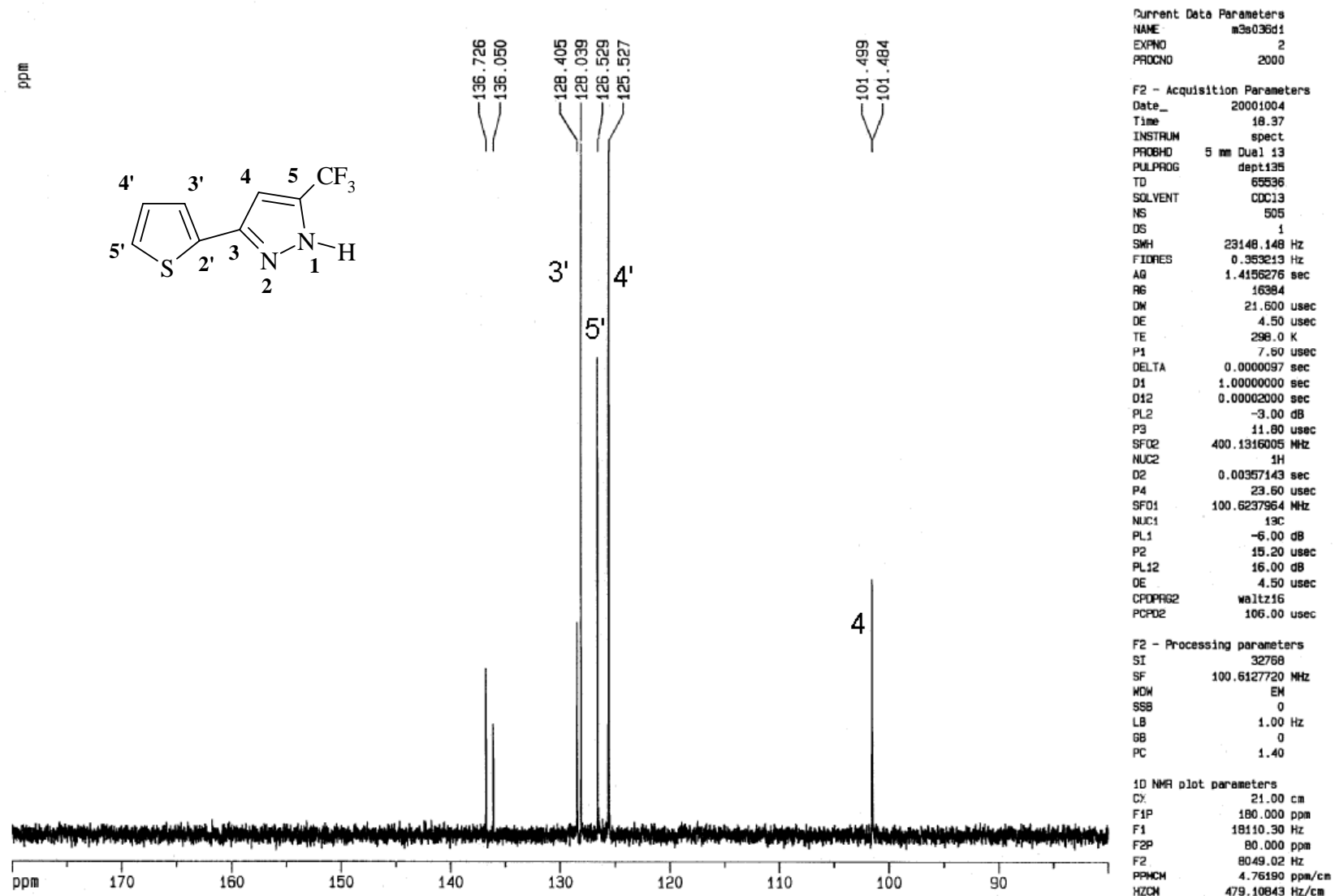
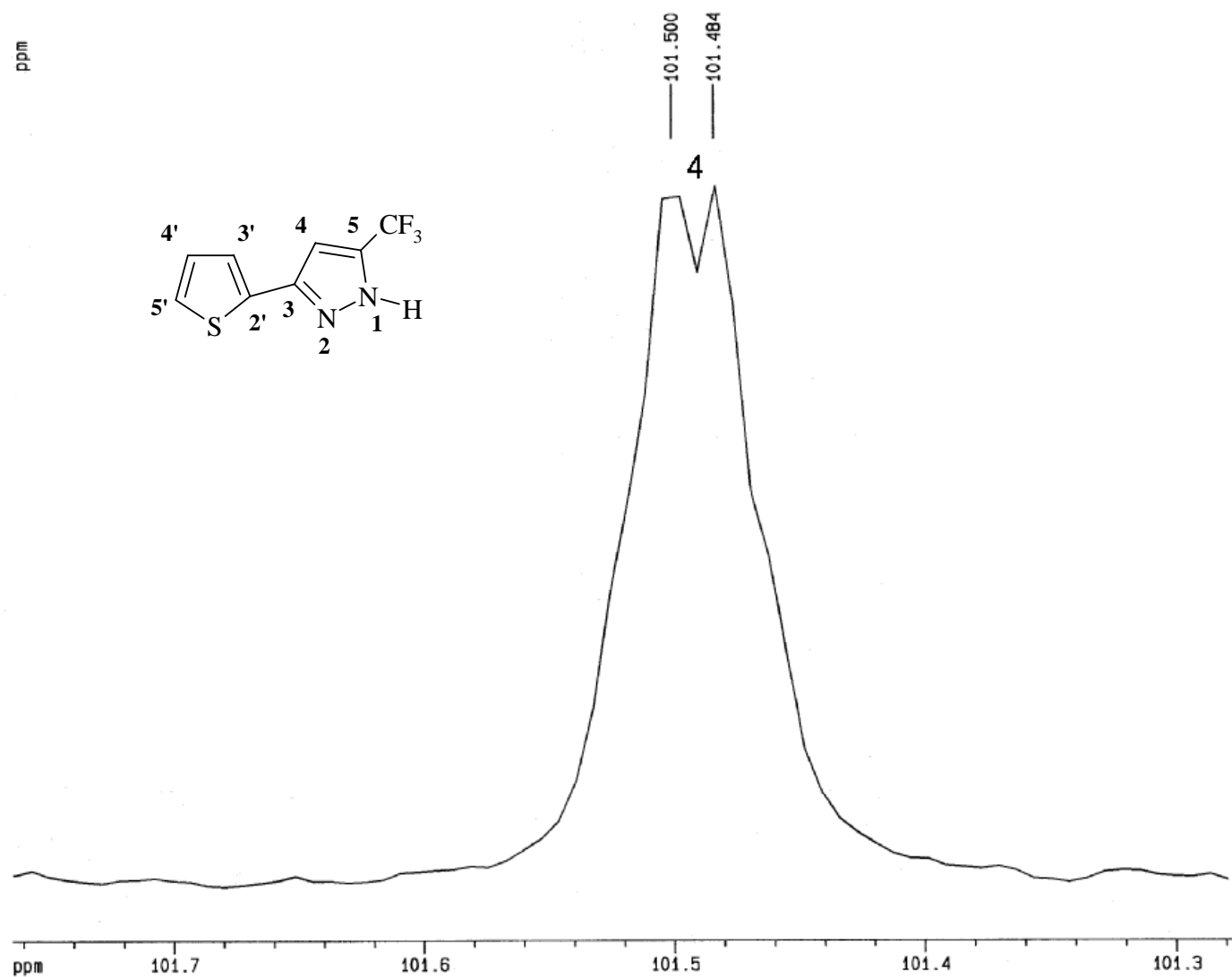


Figura 89. Espectro de RMN DEPT 135 do 5-trifluormetil-3-[2-tienil]-1H-pirazol (**11b**) em CDCl₃.



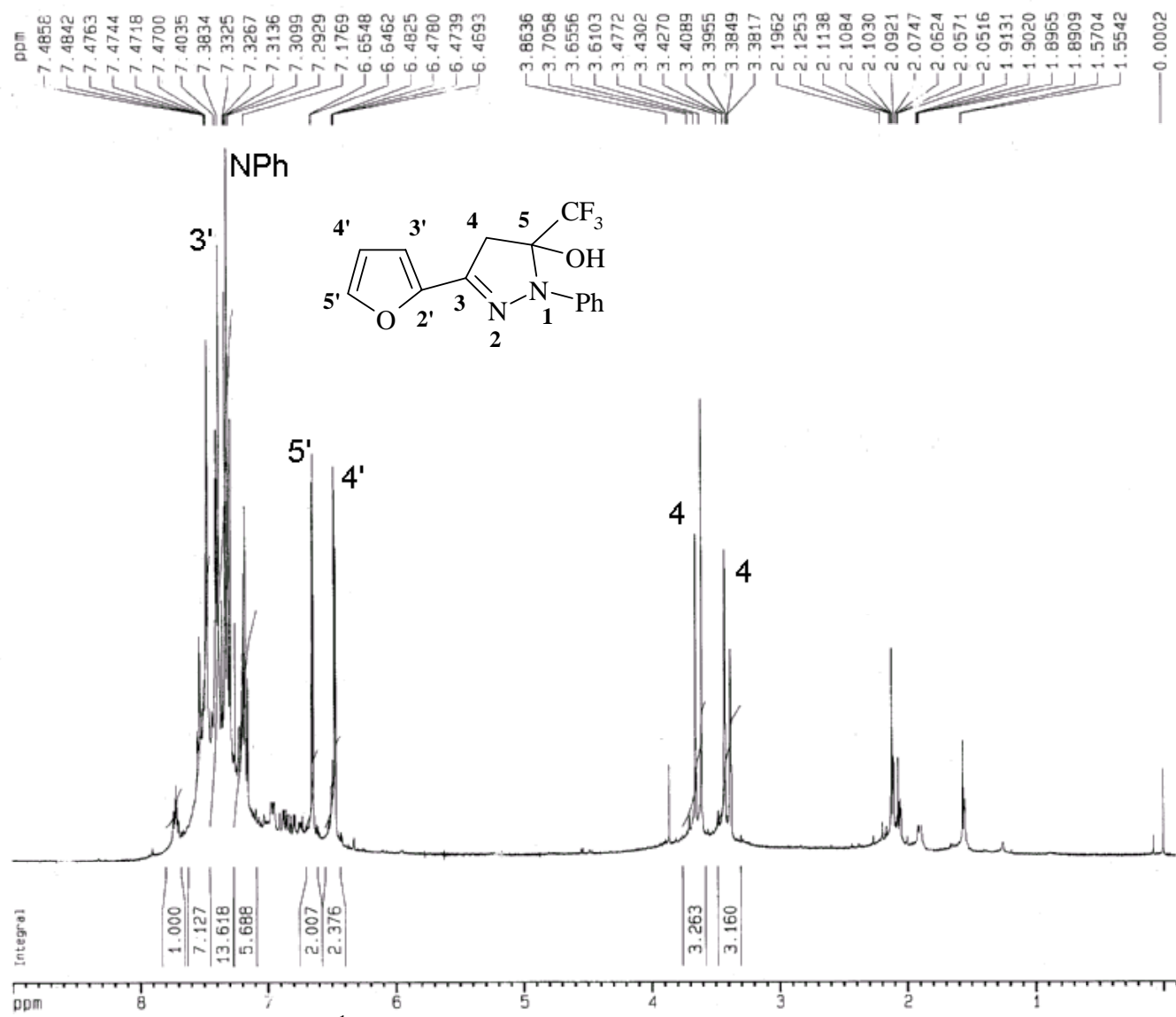
Current Data Parameters
 NAME m3e036cd
 EXPNO 2
 PROCNO 2000

F2 - Acquisition Parameters
 Date_ 20001004
 Time 17.00
 INSTRUM spect
 PROSHD 5 mm Dual 13
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 1298
 DS 0
 SWH 23148.148 Hz
 FIDRES 0.353213 Hz
 AQ 1.4156276 sec
 RG 32768
 DW 21.600 usec
 DE 4.50 usec
 TE 298.0 K
 D12 0.00002000 sec
 PL13 16.00 dB
 D1 3.00000000 sec
 CPDPRG2 waltz16
 PCPD2 106.00 usec
 SF02 400.1316005 MHz
 NUC2 1H
 PL2 -3.00 dB
 PL12 16.00 dB
 P1 7.60 usec
 DE 4.50 usec
 SF01 100.6237964 MHz
 NUC1 13C
 PL1 -6.00 dB
 D11 0.03000000 sec

F2 - Processing parameters
 SI 32768
 SF 100.6127721 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

1D NMR plot parameters
 CX 21.00 cm
 F1P 101.764 ppm
 F1 10238.80 Hz
 F2P 101.273 ppm
 F2 10189.33 Hz
 PPMCM 0.02342 ppm/cm
 HZCM 2.35588 Hz/cm

Figura 90. Espectro de RMN ¹³C, expansão entre 1001,3-101,7 do 5-trifluorometil-3-[2-tienil]-1H-pirazol (**11b**) em CDCl₃.



Current Data Parameters
 NAME 63m097h1
 EXPNO 2
 PROCNO 2001

F2 - Acquisition Parameters
 Date_ 20020428
 Time 16.30
 INSTRUM spect
 PROBHD 5 mm Dual 13
 PULPROG zg
 TO 65506
 SOLVENT CDC13
 NS 8
 DS 0
 SWH 4960.317 Hz
 FIDRES 0.075688 Hz
 AQ 6.6060786 sec
 RG 35.9
 DM 100.800 usec
 DE 4.50 usec
 TE 298.0 K
 D1 1.00000000 sec
 P1 12.00 usec
 DE 4.50 usec
 SFO1 400.1322614 MHz
 NUC1 1H
 PL1 -3.00 dB

F2 - Processing parameters
 SI 32768
 SF 400.1300109 MHz
 WDW no
 SSB 0
 LB 0.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.50 cm
 F1P 9.000 ppm
 F1 3601.17 Hz
 F2P 0.100 ppm
 F2 -40.01 Hz
 PPMCM 0.44390 ppm/cm
 HZCM 177.61870 Hz/cm

Figura 91. Espectro de RMN ¹H do 1-fenil-5-trifluormetil-3-[2-furil]-5-hidroxi-4,5-diidro-1H-pirazol (13a) em CDCl₃.

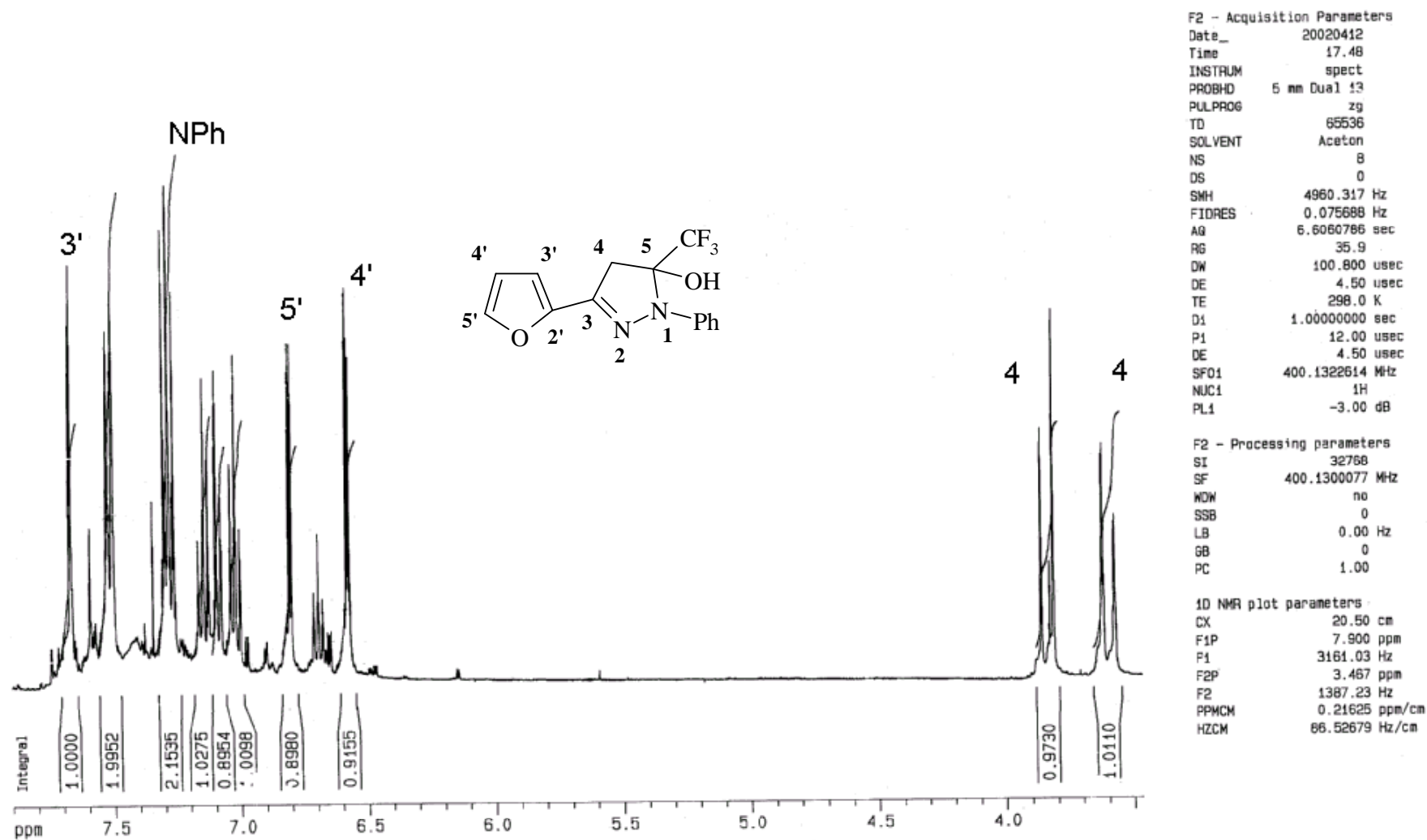


Figura 92. Espectro de RMN ^1H do 1-fenil-5-trifluormetil-3-[2-furil]-5-hidroxi-4,5-diidro-1*H*-pirazol (**13a**) em acetona.

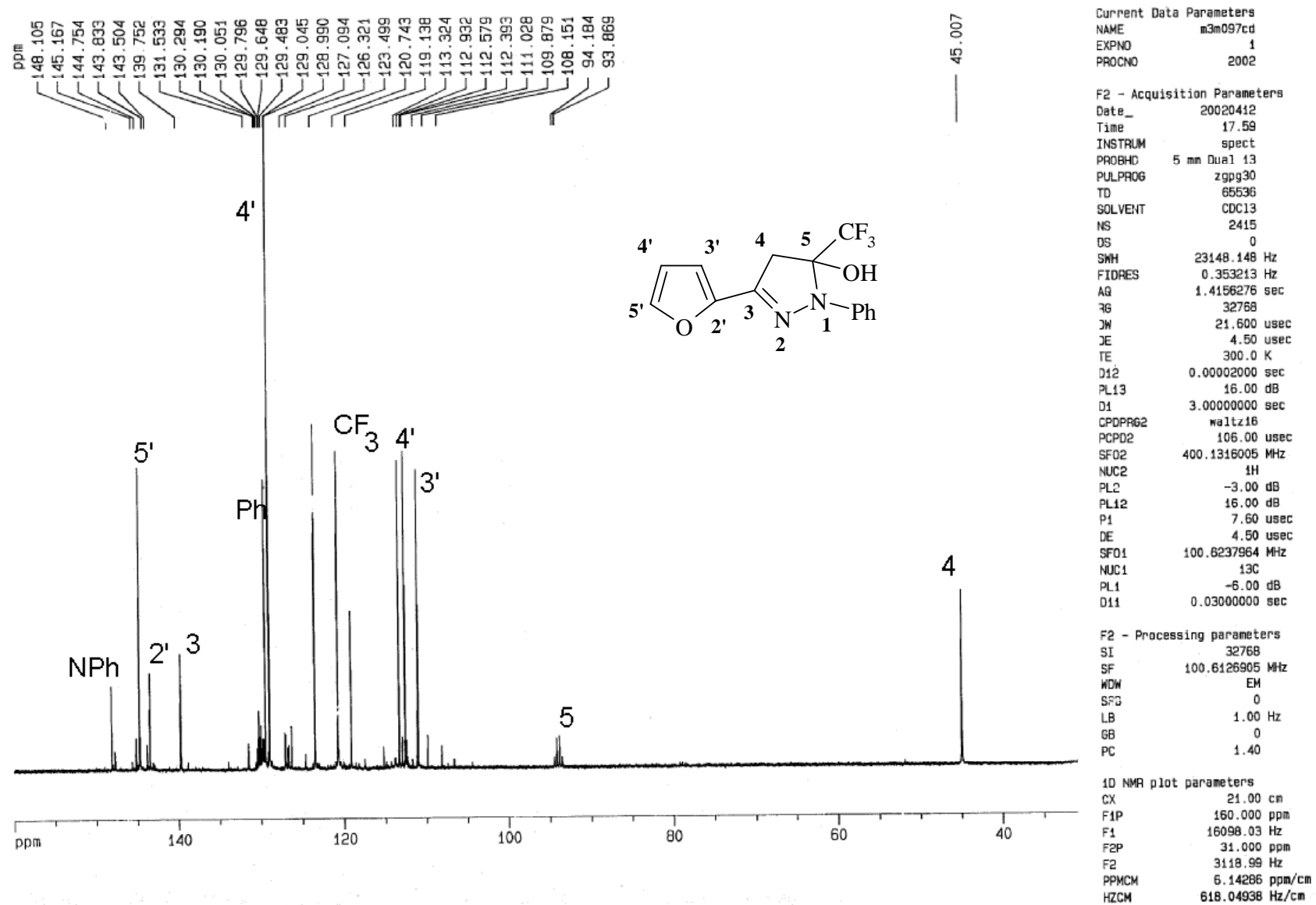
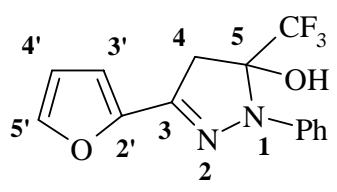
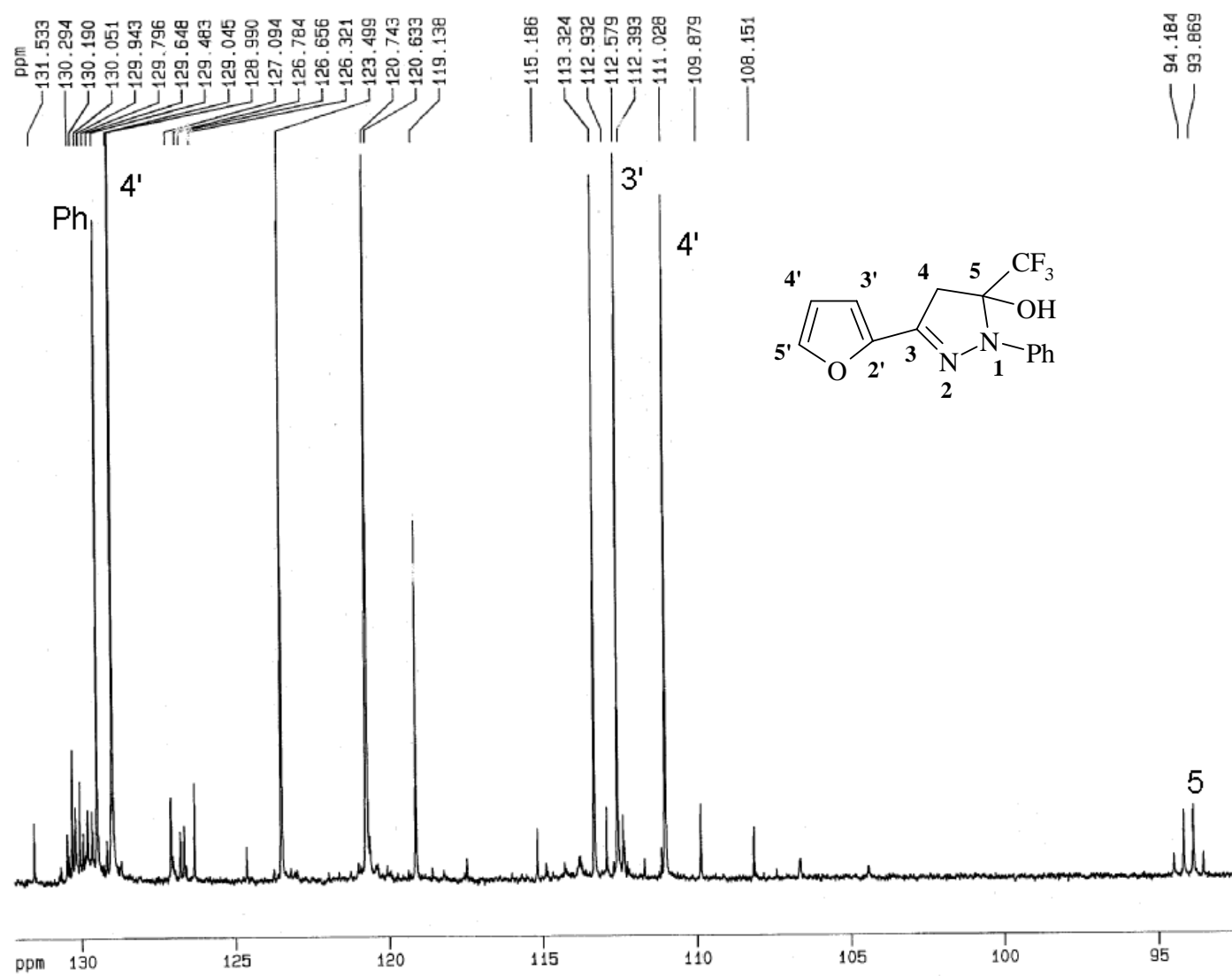


Figura 93. Espectro de RMN ¹³C do 1-fenil-5-trifluormetil-3-[2-furil]-5-hidroxi-4,5-diidro-1H-pirazol (**13a**) em CDCl₃.



Current Data Parameters
 NAME m3m097cd
 EXPNO 1
 PROCNO 2002

F2 - Acquisition Parameters
 Date_ 20020412
 Time 17.59
 INSTRUM spect
 PROBHD 5 mm Dual 13
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 2415
 DS 0
 SWH 23148.148 Hz
 FIDRES 0.353213 Hz
 AQ 1.4156276 sec
 RG 32768
 DW 21.600 usec
 DE 4.50 usec
 TE 300.0 K
 D12 0.00002000 sec
 PL13 16.00 dB
 D1 3.00000000 sec
 CPDPRG2 waltz16
 PCPD2 106.00 usec
 SF02 400.1316005 MHz
 NUC2 1H
 PL2 -3.00 dB
 PL1z 16.00 dB
 P1 7.60 usec
 DE 4.50 usec
 SF01 100.6237964 MHz
 NUC1 13C
 PL1 -6.00 dB
 D11 0.03000000 sec

F2 - Processing parameters
 SI 32768
 SF 100.6126905 MHz
 WDM EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

1D NMR plot parameters
 CX 21.00 cm
 F1P 132.192 ppm
 F1 13300.17 Hz
 F2P 92.536 ppm
 F2 9310.31 Hz
 PPMCM 1.88837 ppm/cm
 HZCM 189.99359 Hz/cm

Figura 94. Espectro de RMN ¹³C do 1-fenil-5-trifluormetil-3-[2-furil]-5-hidroxi-4,5-diidro-1H-pirazol (13a) em CDCl₃.

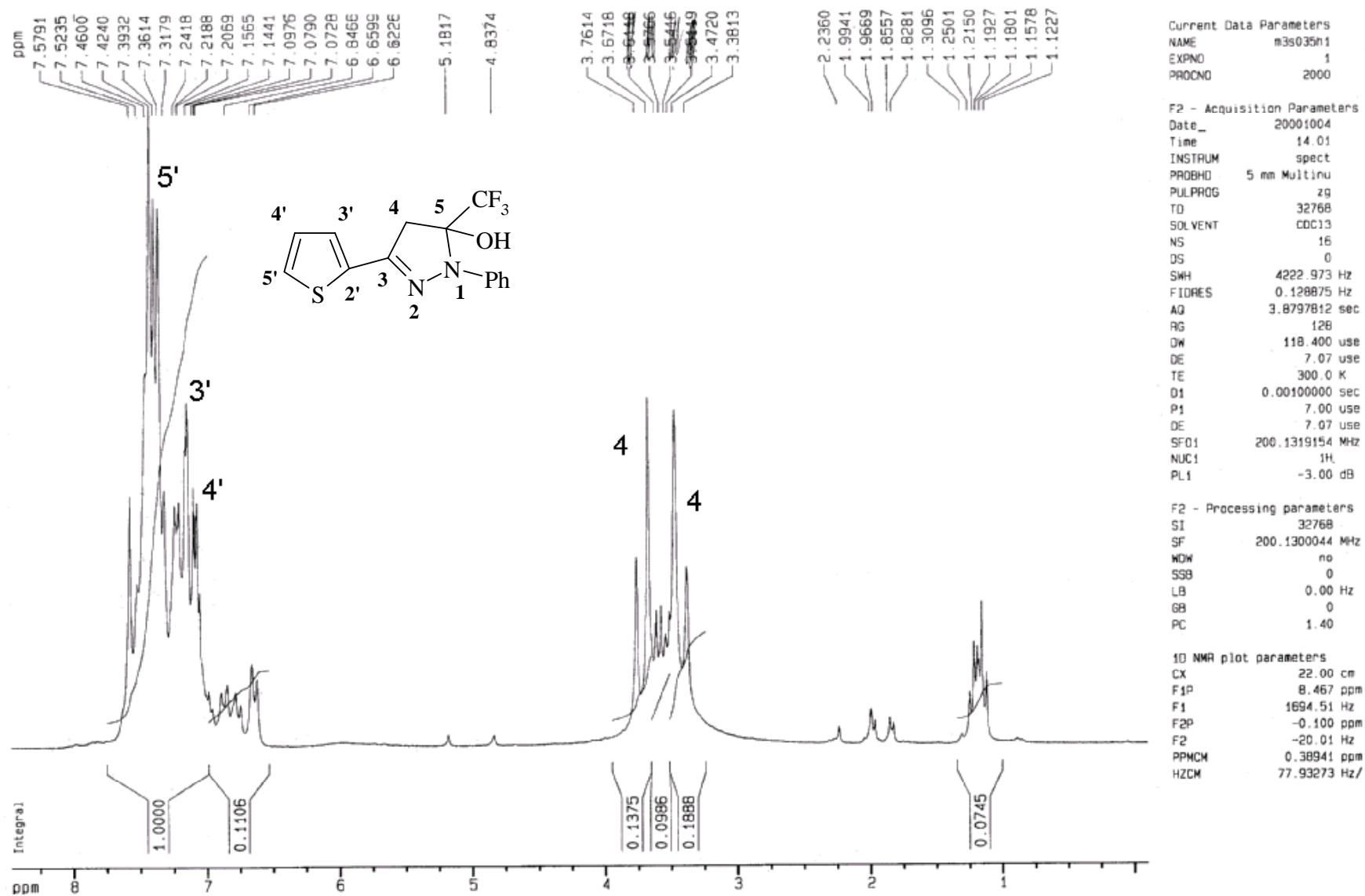


Figura 95. Espectro de RMN ^1H do 1-fenil-5-trifluormetil-3-[2-tienil]-5-hidroxi-4,5-diidro-1*H*-pirazol (**13b**) em CDCl_3 .

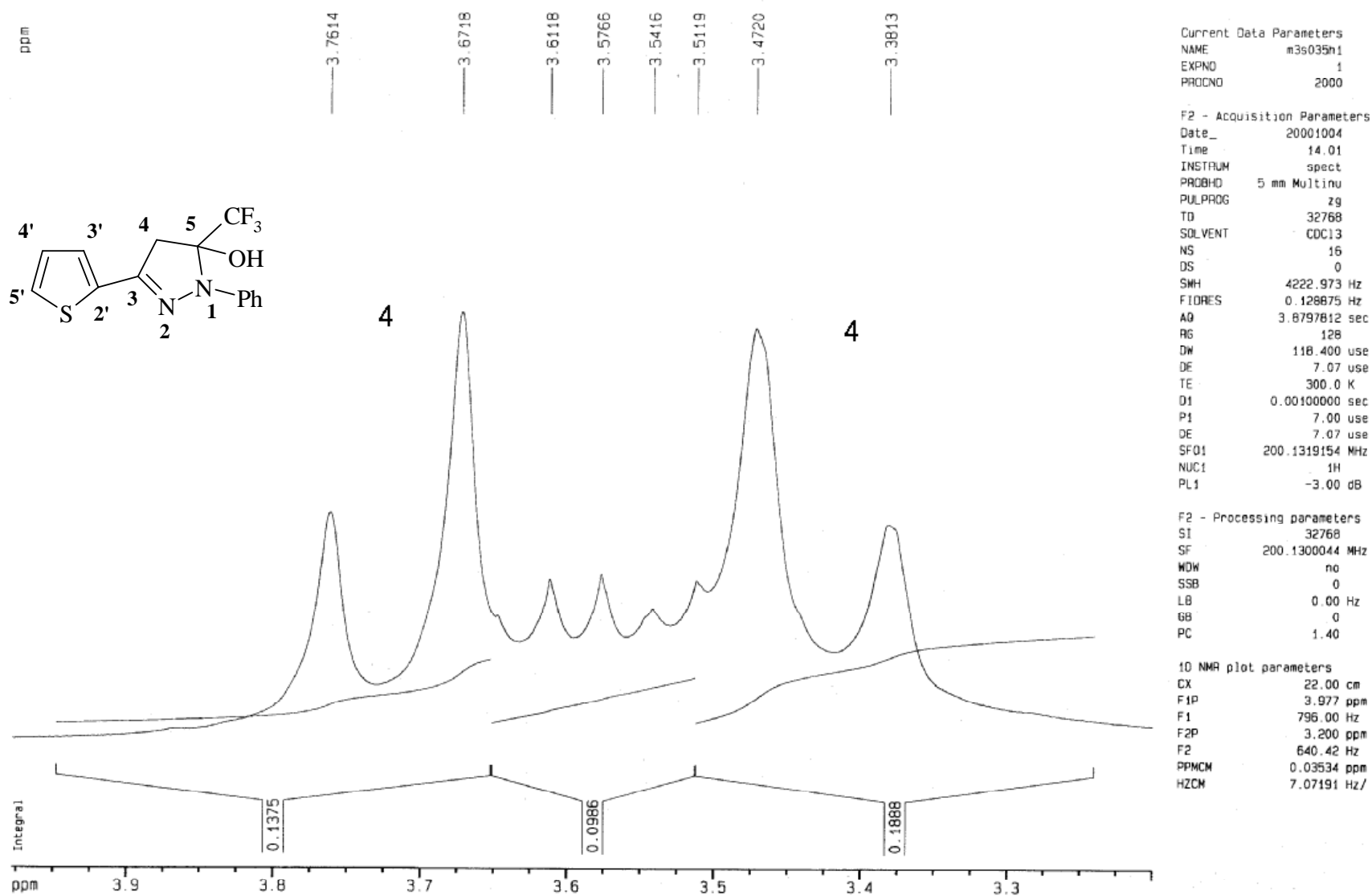


Figura 96. Espectro de RMN ¹H do 1-fenil-5-trifluormetil-3-[2-tienil]-5-hidroxi-4,5-diidro-1*H*-pirazol (**13b**) em CDCl₃.

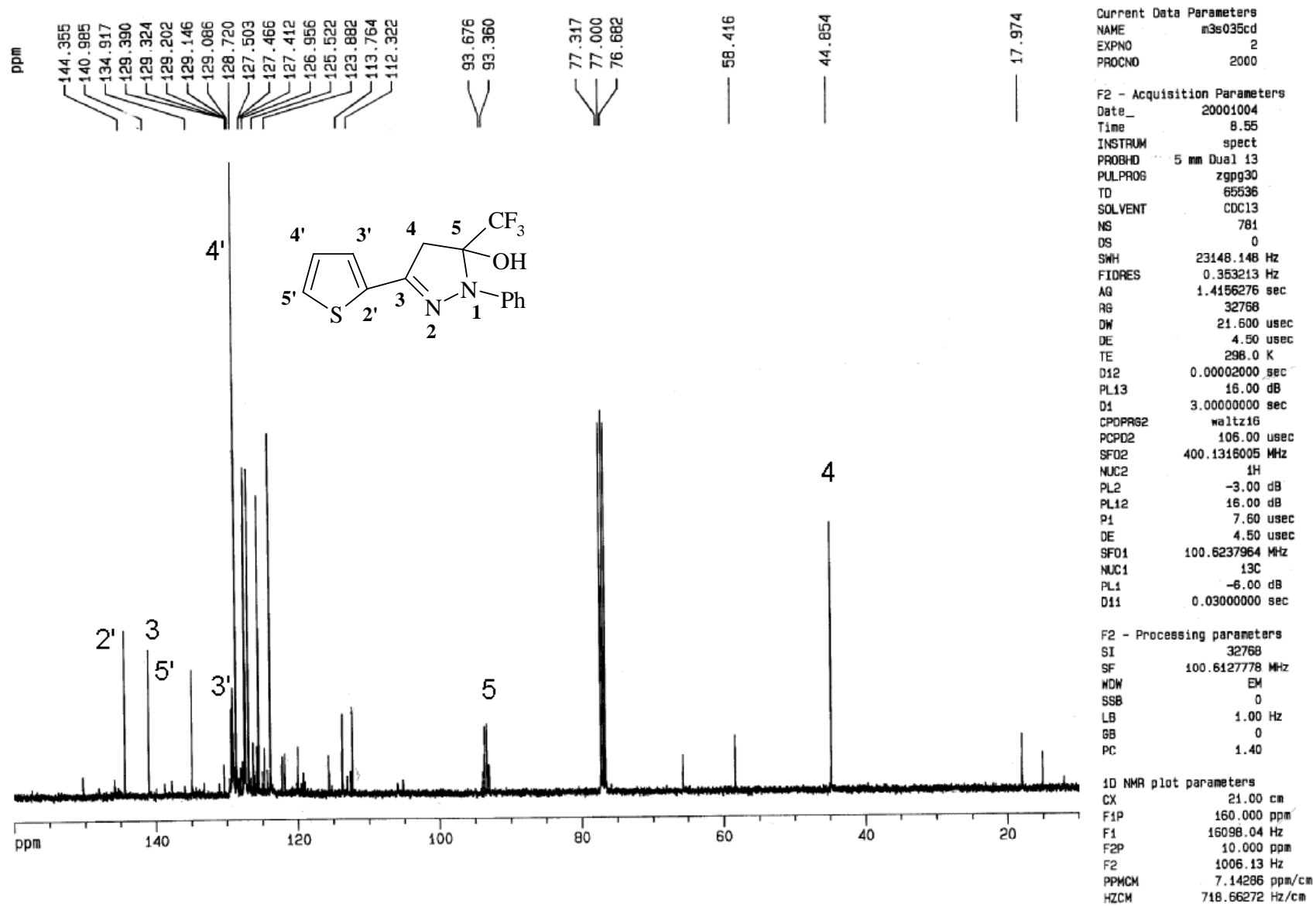


Figura 97. Espectro de RMN ^{13}C do 1-fenil-5-trifluormetil-3-[2-tienil]-5-hidroxi-4,5-diidro-1H-pirazol (**13b**) em CDCl_3 .

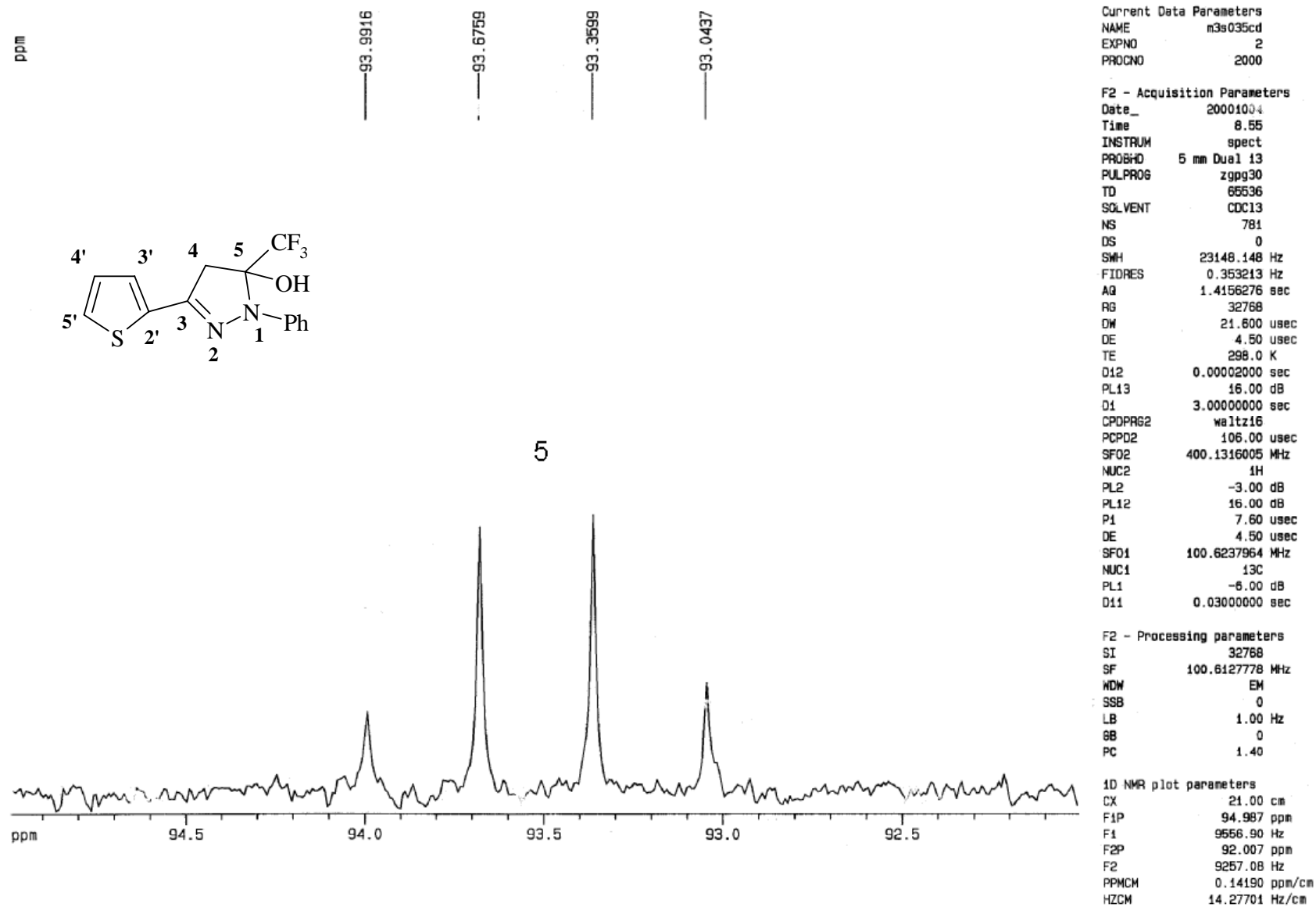


Figura 98. Espectro de RMN ^{13}C do 1-fenil-5-trifluormetil-3-[2-tienil]-5-hidroxi-4,5-diidro-1H-pirazol (**13b**) em CDCl_3 .

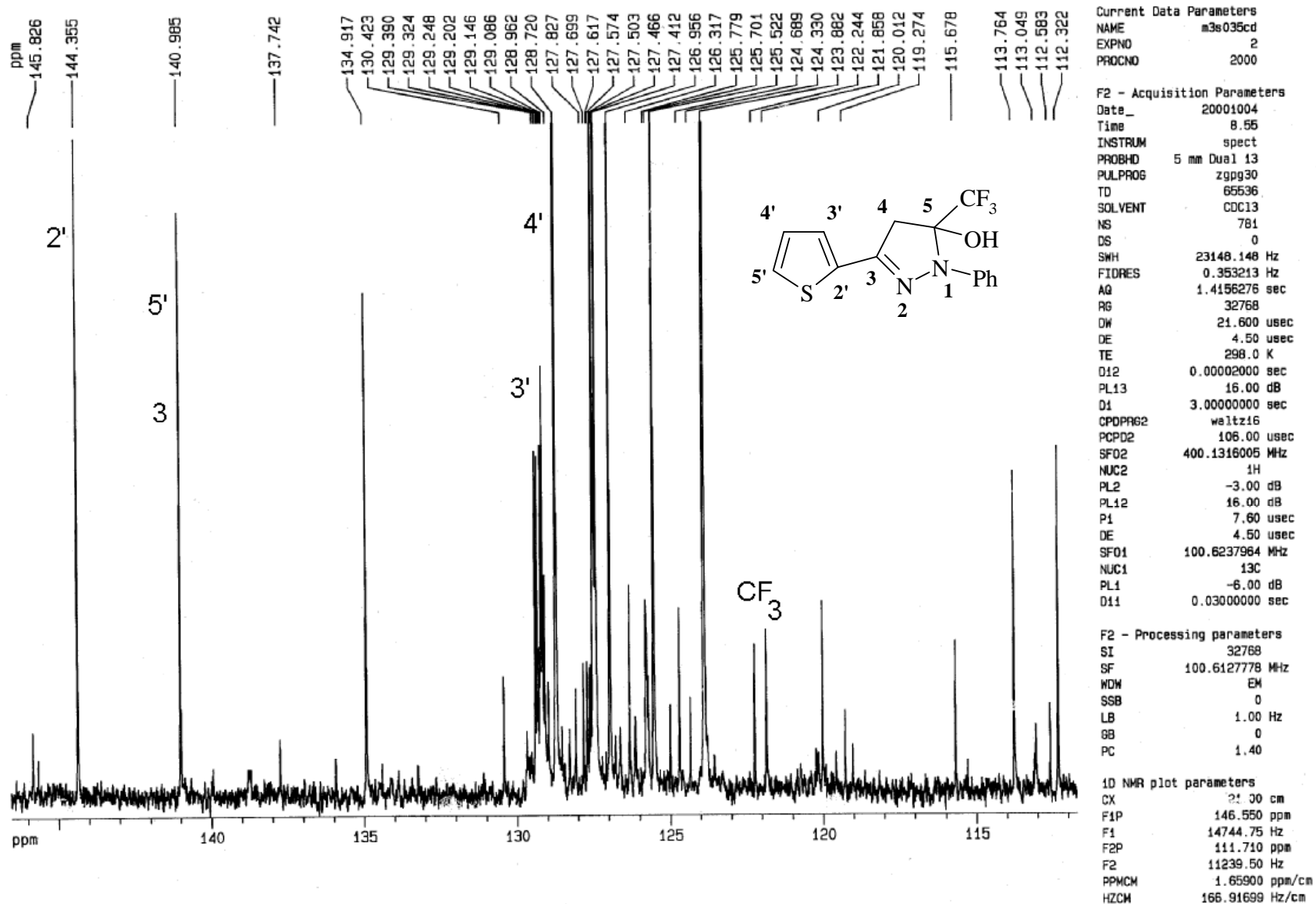


Figura 99. Espectro de RMN ^{13}C do 1-fenil-5-trifluormetil-3-[2-tienil]-5-hidroxi-4,5-diidro-1H-pirazol (**13b**) em CDCl_3 .

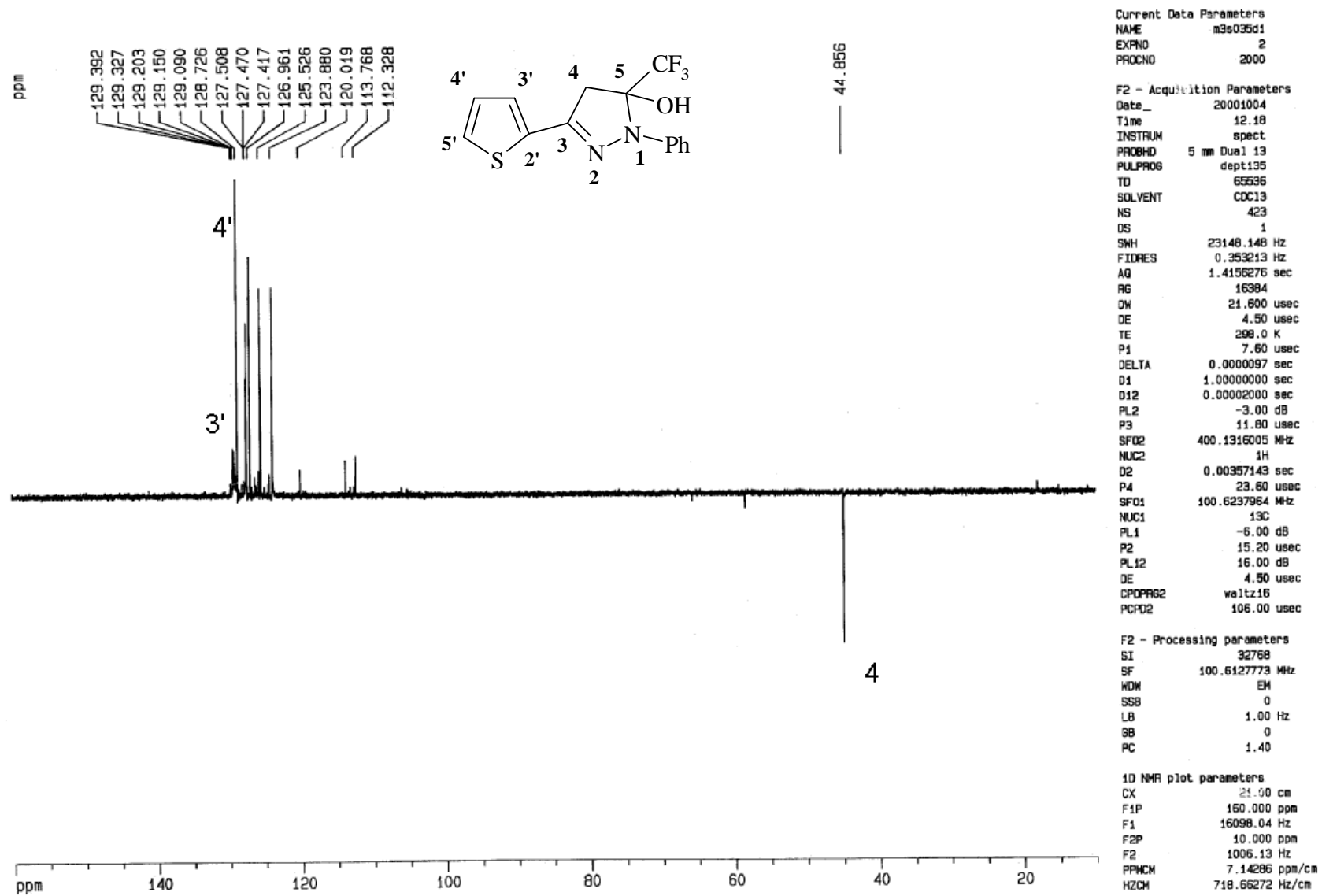


Figura 100. Espectro de RMN ¹³C do 1-fenil-5-trifluorometil-3-[2-tienil]-5-hidroxi-4,5-diidro-1H-pirazol (**13b**) em CDCl₃.

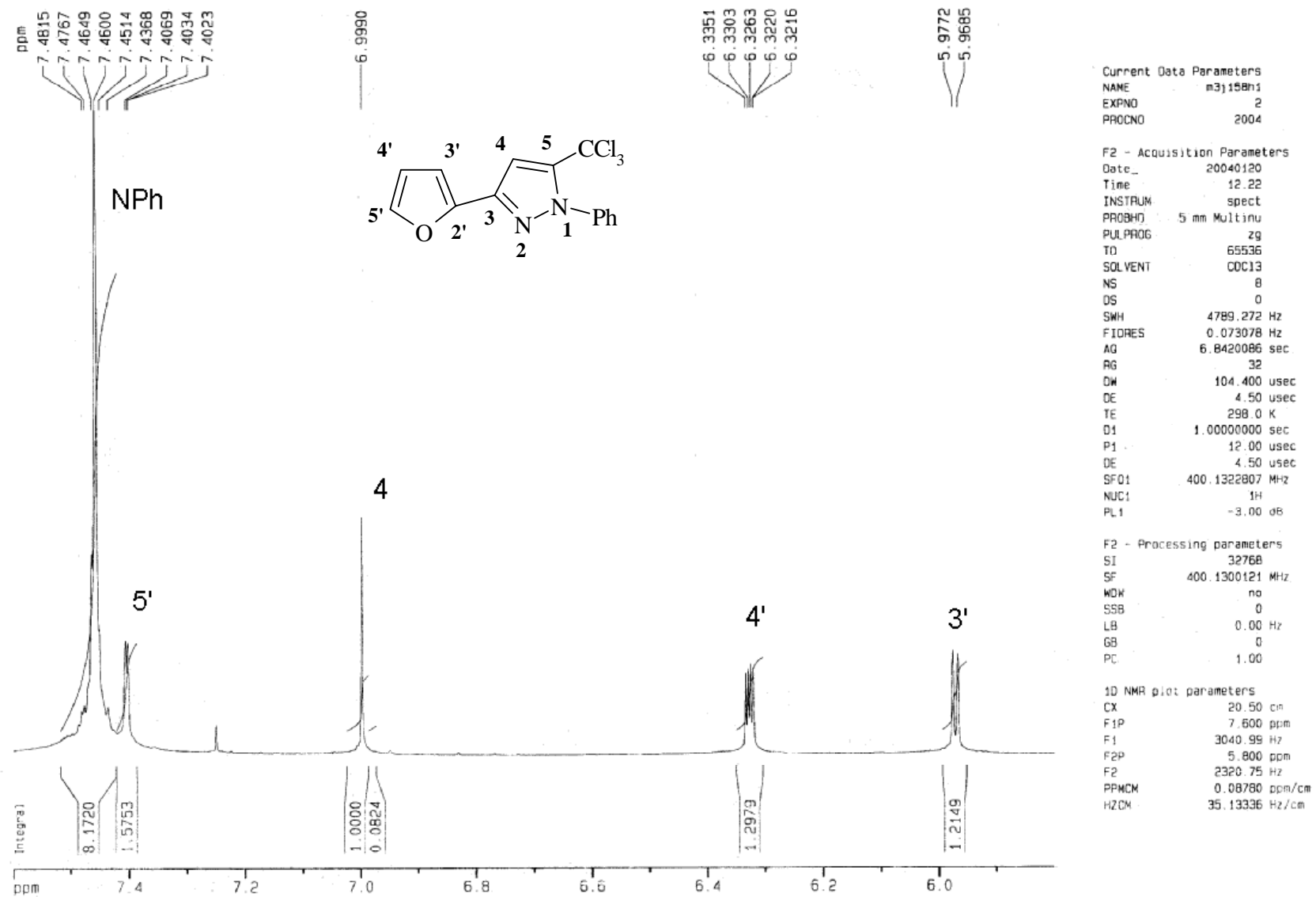


Figura 101. Espectro de RMN ^1H do 5-triclorometil-1-fenil-3-[2-furil]-1*H*-pirazol (**14a**) em CDCl_3 .

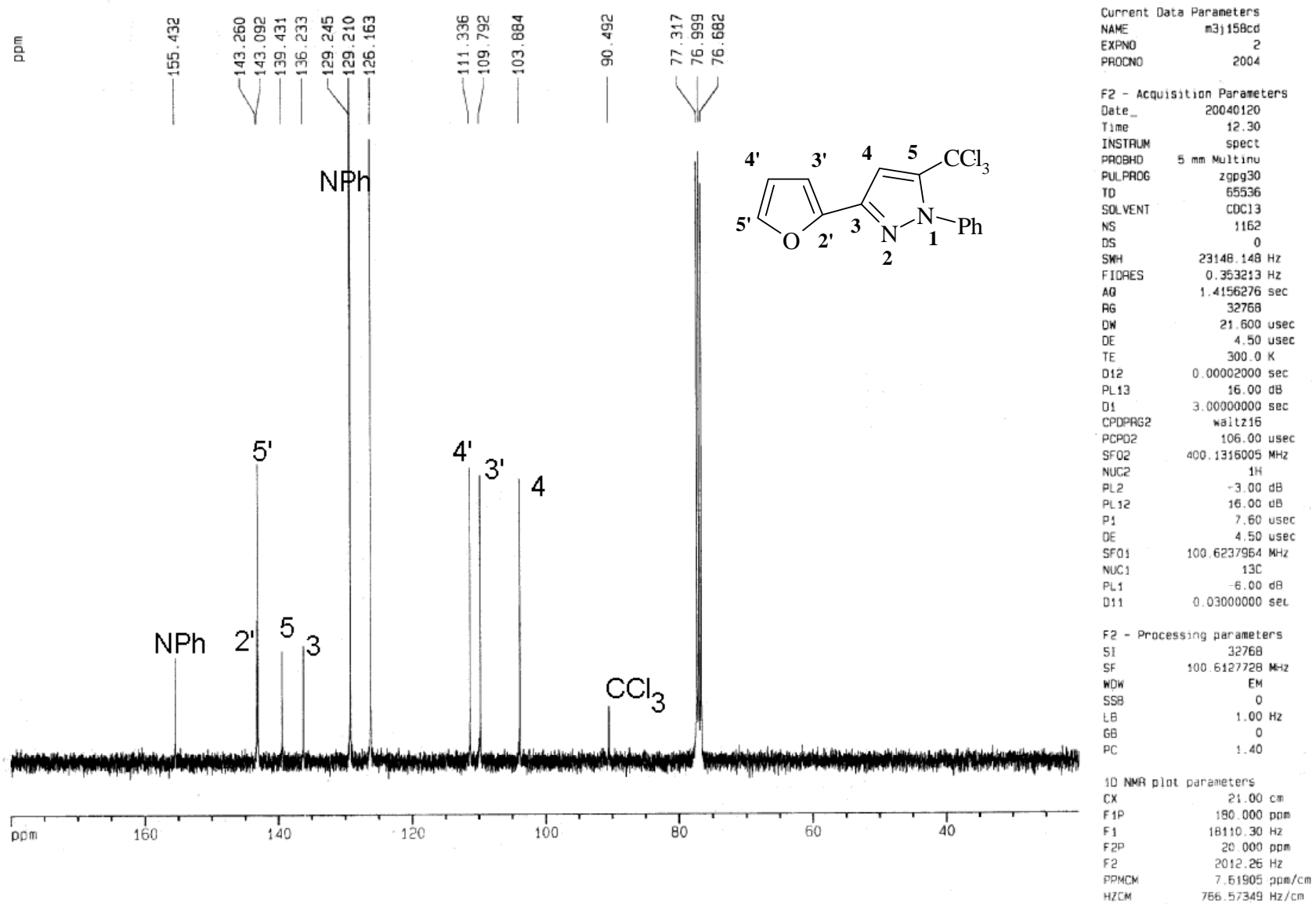
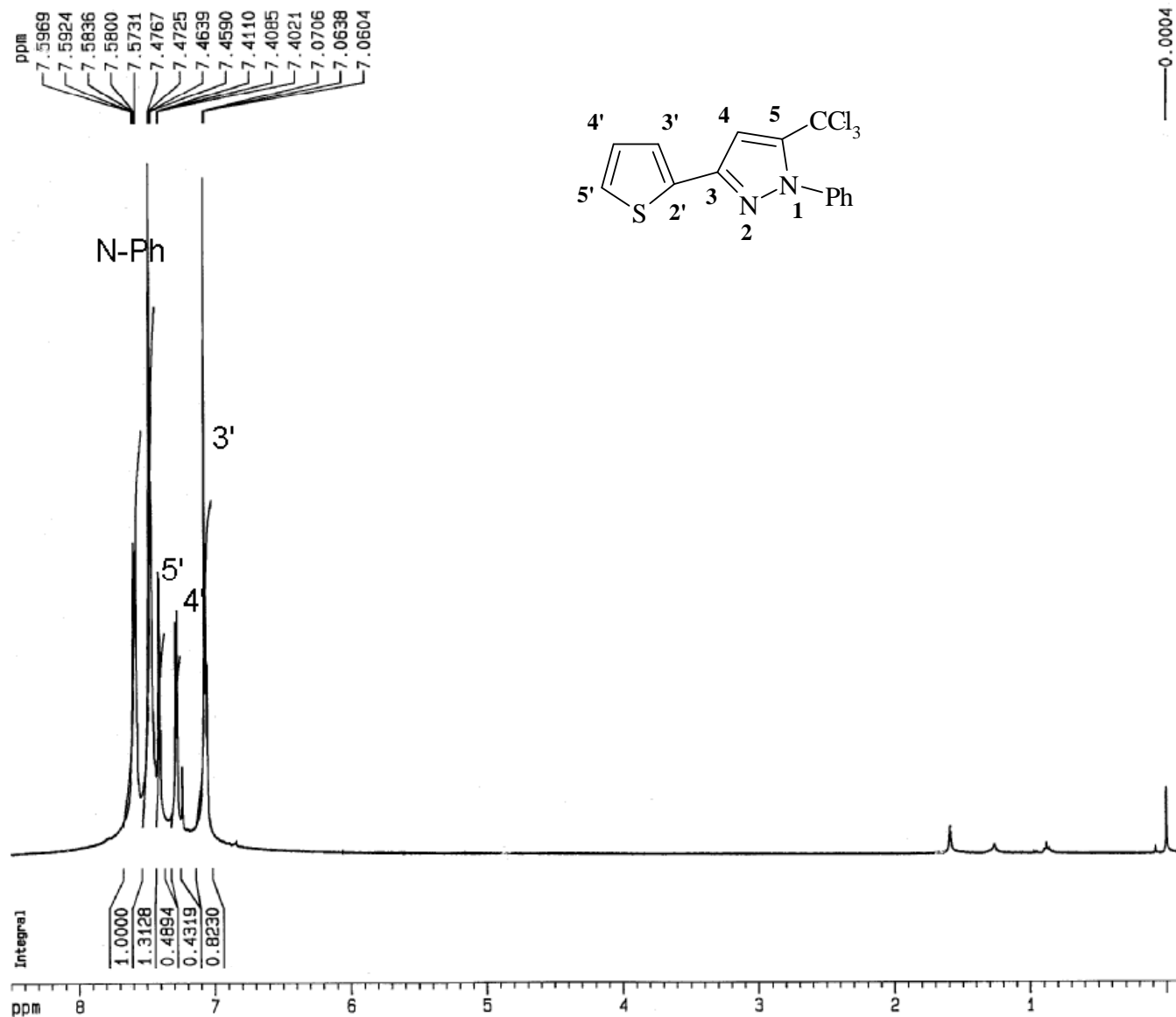


Figura 102. Espectro de RMN ¹³C do 5-triclorometil-1-fenil-3-[2-furil]-1H-pirazol (**14a**) em CDCl₃.



Current Data Parameters
 NAME m3n070h1
 EXPNO 2
 PROCNO 2001

F2 - Acquisition Parameters
 Date_ 20011112
 Time 15.09
 INSTRUM spect
 PROBHD 5 mm Dual 13
 PULPROG zg
 TD 65536
 SOLVENT CDCl3
 NS 8
 DS 0
 SWH 4960.317 Hz
 FIDRES 0.075688 Hz
 AQ 6.6060786 sec
 RG 71.8
 DW 100.800 usec
 DE 4.50 usec
 TE 298.0 K
 D1 1.00000000 sec
 P1 12.00 usec
 DE 4.50 usec
 SF01 400.1322614 MHz
 NUC1 1H
 PL1 -3.00 dB

F2 - Processing parameters
 SI 32768
 SF 400.1300174 MHz
 WDW no
 SSB 0
 LB 0.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.50 cm
 F1P 8.500 ppm
 F1 3401.10 Hz
 F2P -0.100 ppm
 F2 -40.01 Hz
 PPMCM 0.41951 ppm/cm
 HZCM 167.85942 Hz/cm

Figura 103. Espectro de RMN ¹H do 5-triclorometil-1-fenil-3-[2-tienil]-1H-pirazol (**14b**) em CDCl₃.

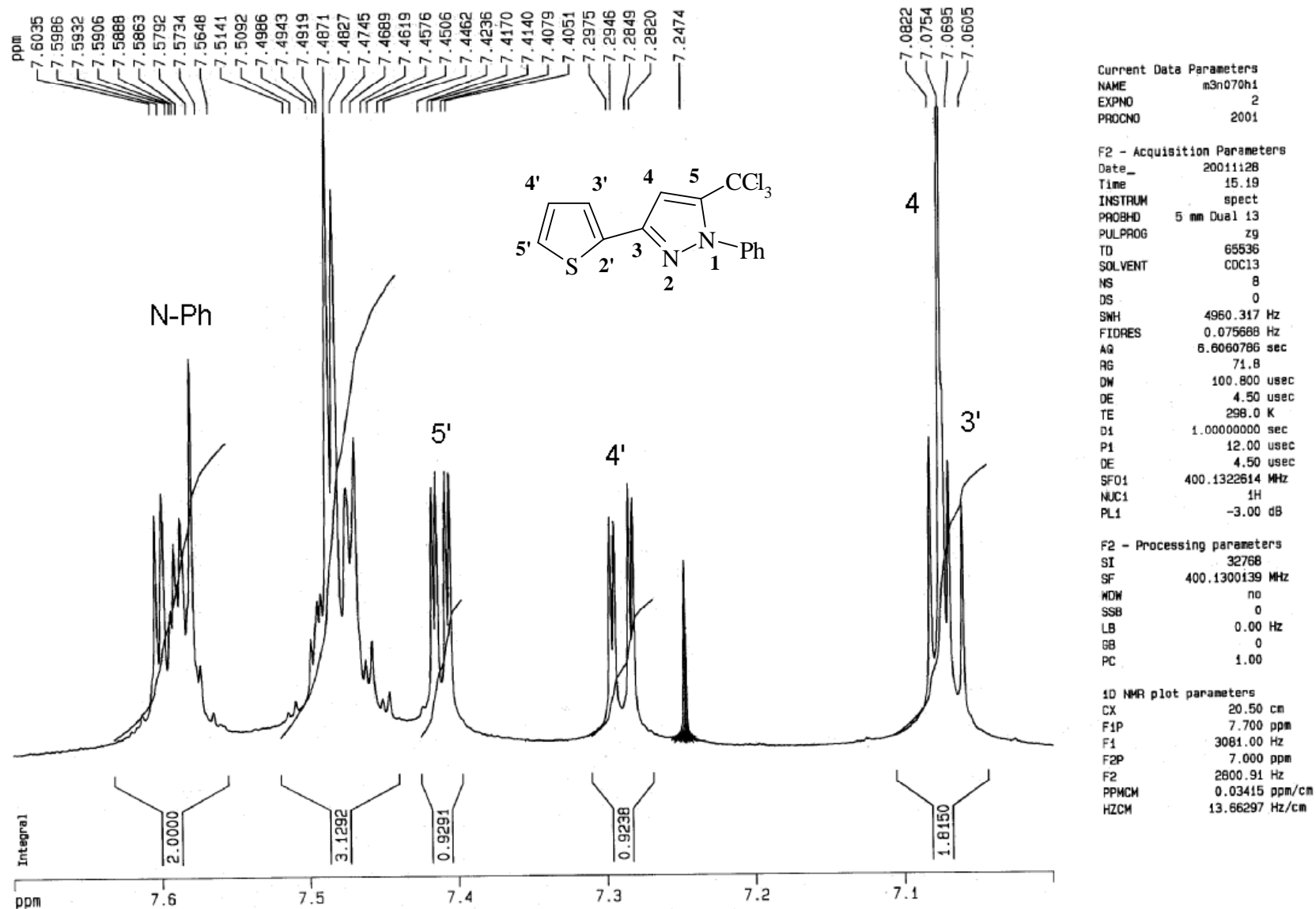


Figura 104. Espectro de RMN ^1H do 5-triclorometil-1-fenil-3-[2-tienil]-1H-pirazol (**14b**) em CDCl_3 .

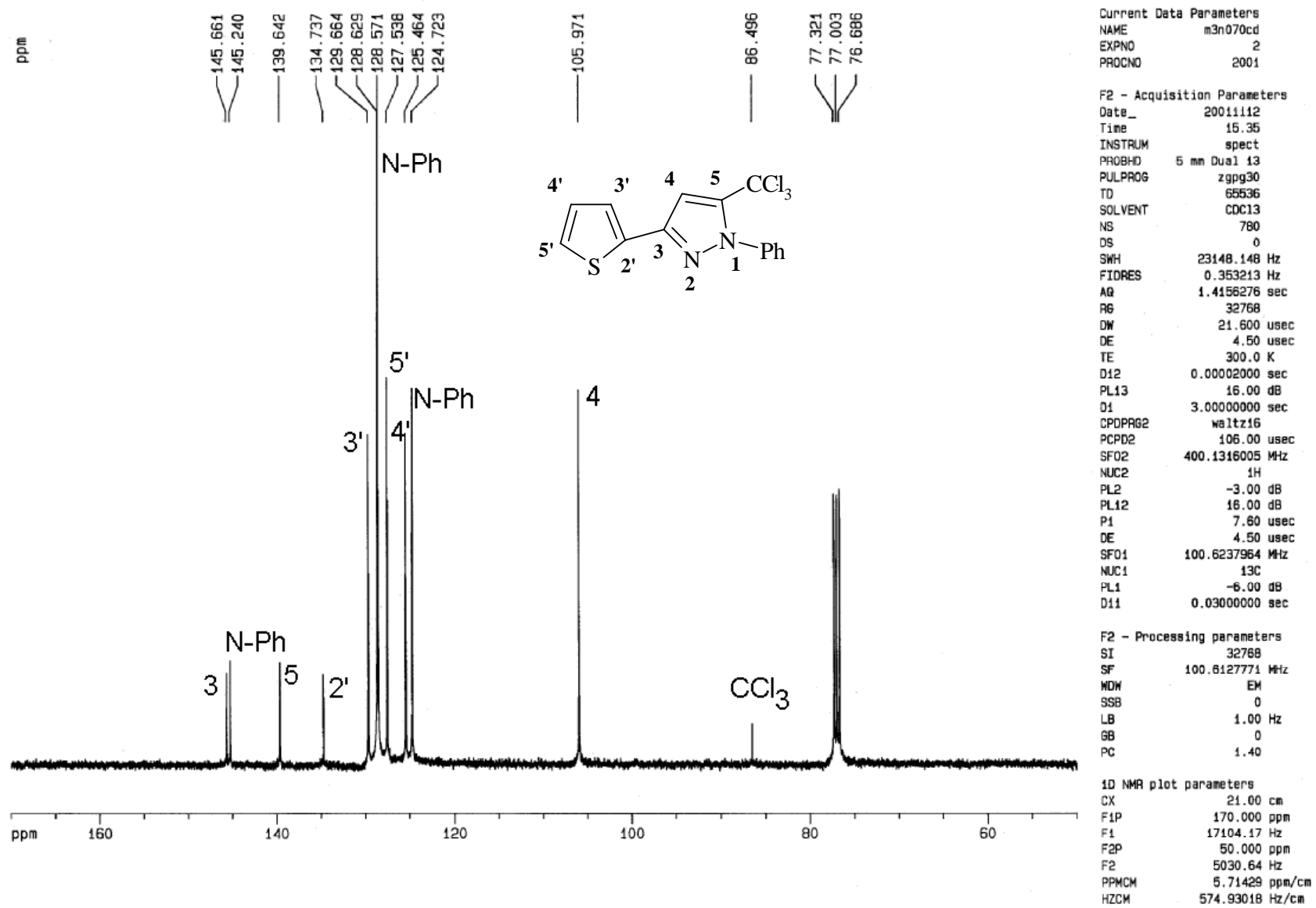


Figura 105. Espectro de RMN ^{13}C do 5-triclorometil-1-fenil-3-[2-tienil]-1*H*-pirazol (**14b**) em CDCl_3 .

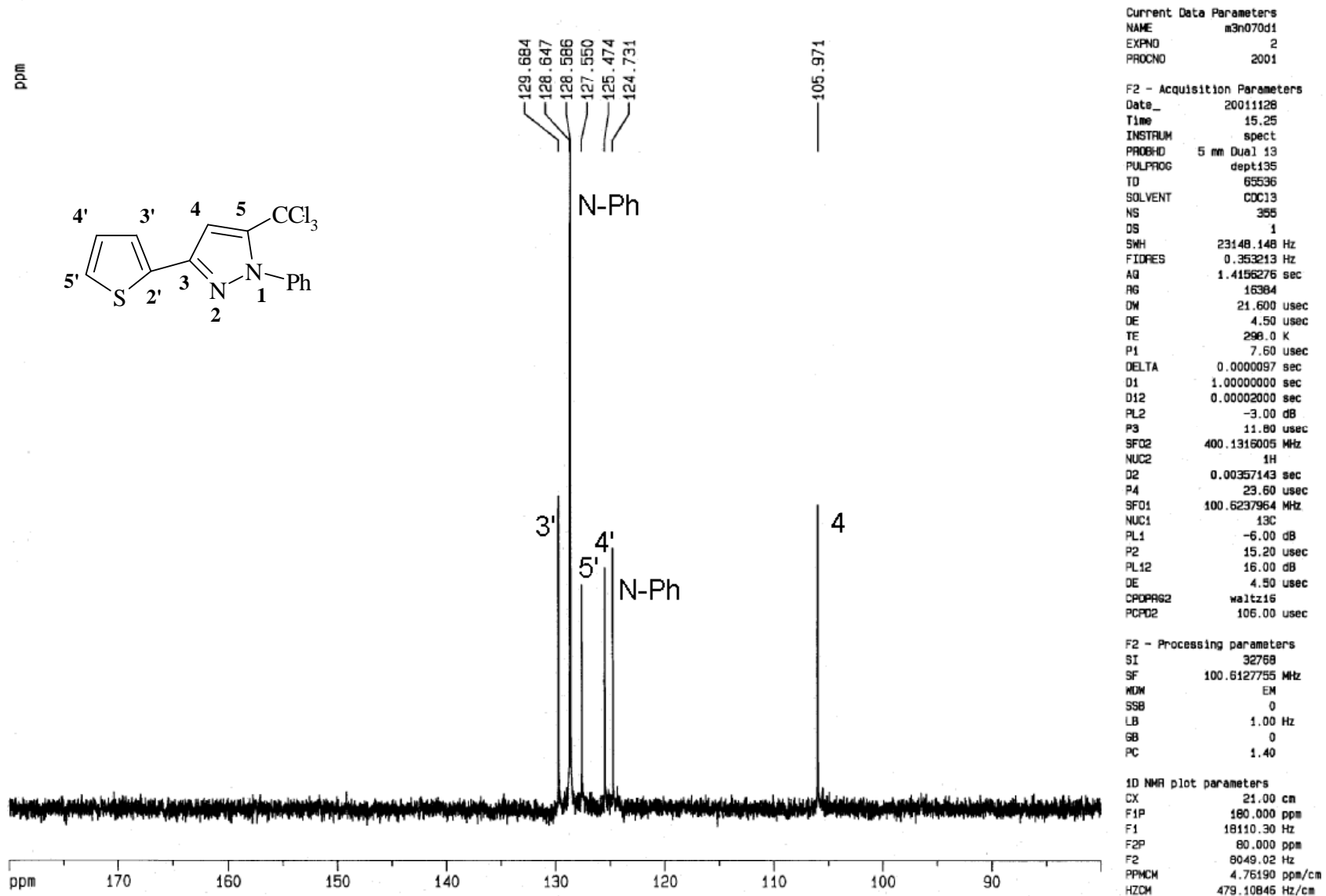


Figura 106. Espectro de RMN DEPT 135 do 5-triclorometil-1-fenil-3-[2-tienil]-1H-pirazol (**14b**) em CDCl₃.

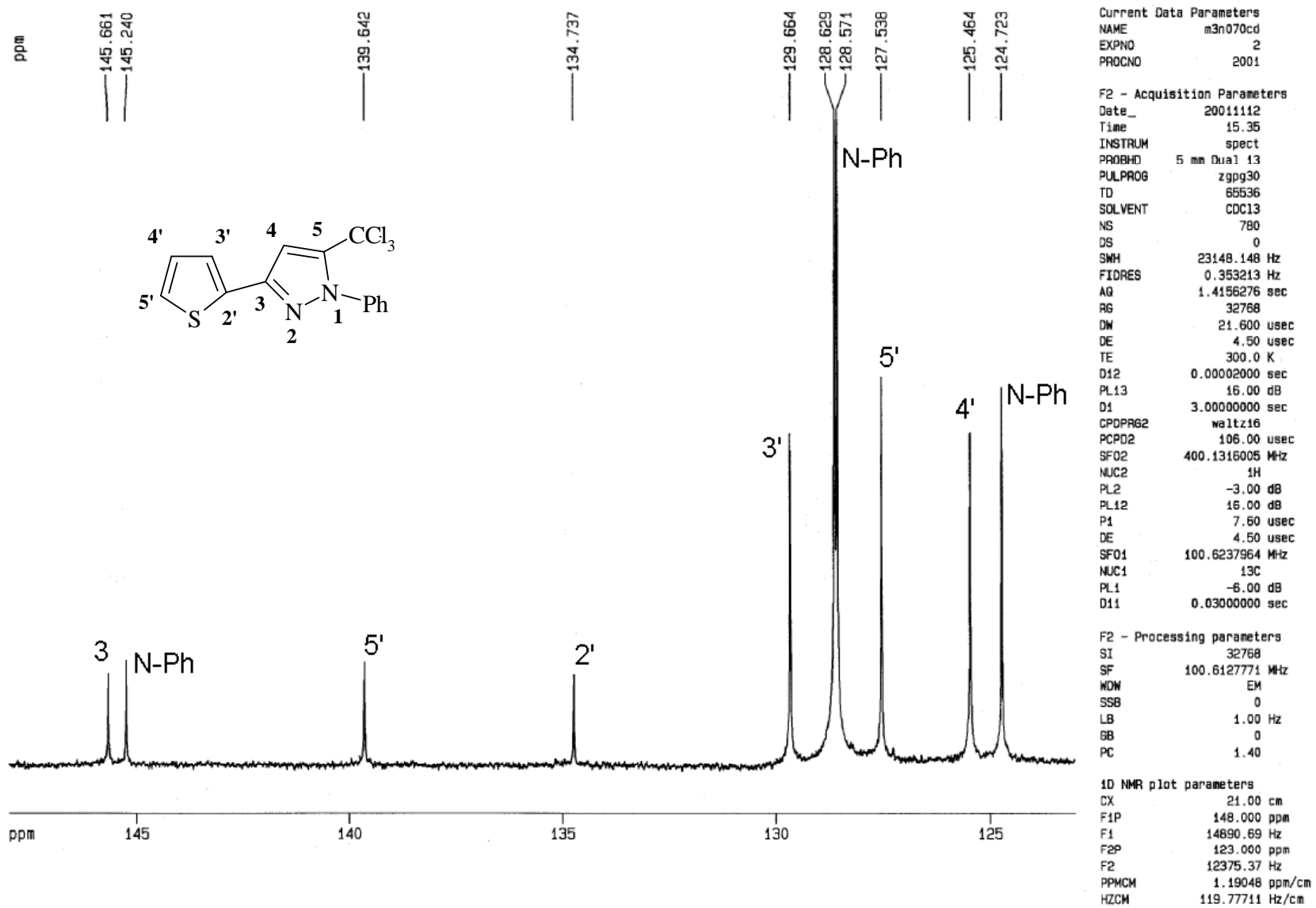
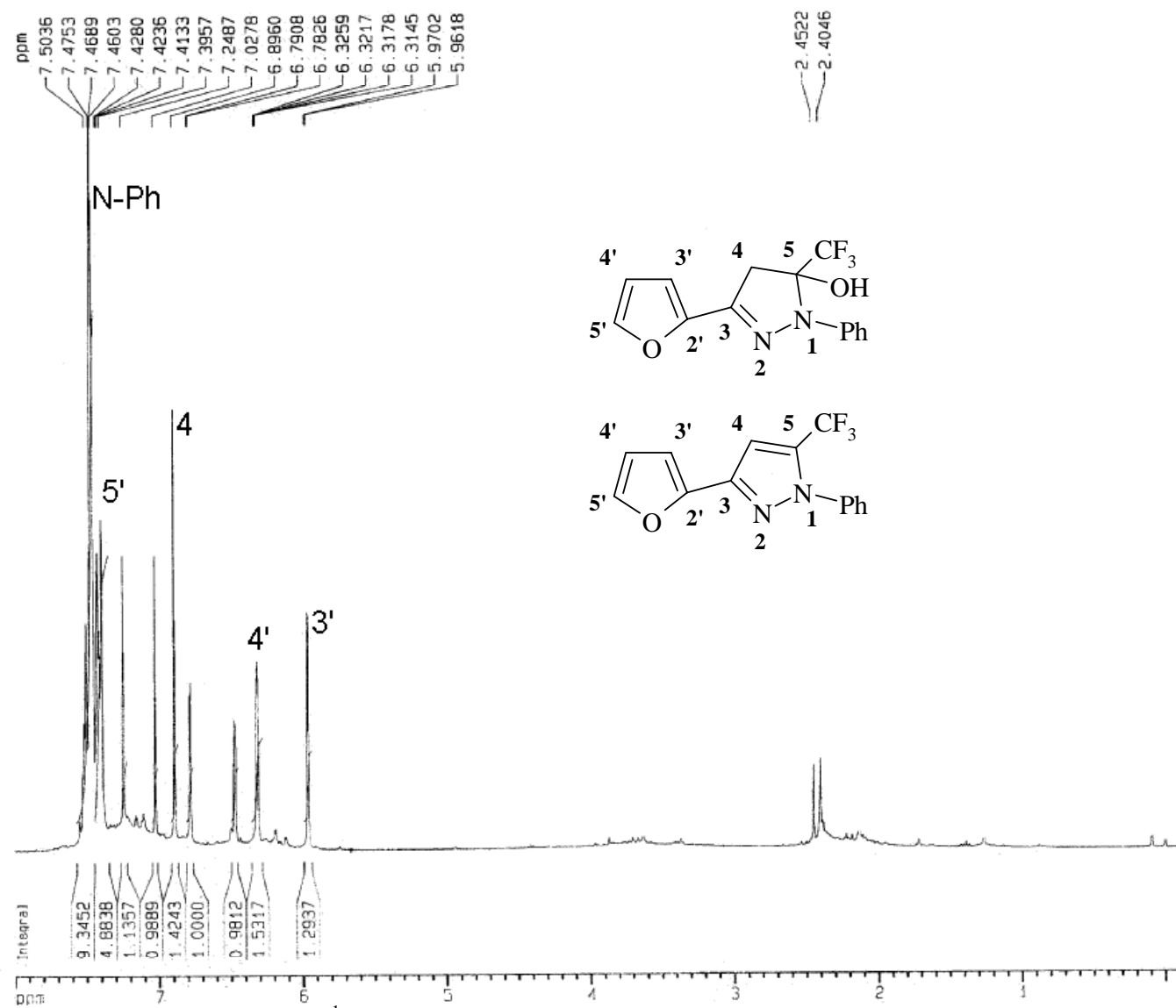


Figura 107. Espectro de RMN ^{13}C do 5-triclorometil-1-fenil-3-[2-tienil]-1H-pirazol (**14b**) em CDCl_3 .



Current Data Parameters
 NAME m3j161h1
 EXPNO 3
 PROCNO 2004

F2 - Acquisition Parameters
 Date_ 20040112
 Time 15.46
 INSTRUM spect
 PROBHD 5 mm Dual 13
 PULPROG zg
 TD 65536
 SOLVENT CDCl3
 NS 8
 DS 0
 SWH 4789.272 Hz
 FIDRES 0.073078 Hz
 AQ 6.8420086 sec
 RG 64
 DW 104.400 usec
 DE 4.50 usec
 TE 298.0 K
 D1 1.0000000 sec
 P1 12.00 usec
 DE 4.50 usec
 SFO1 400.1322807 MHz
 NUC1 1H
 PL1 -3.00 dB

F2 - Processing parameters
 SI 32768
 SF 400.1300133 MHz
 WDW no
 SSB 0
 LB 0.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.50 cm
 F1P 8.000 ppm
 F1 3201.04 Hz
 F2P -0.100 ppm
 F2 -40.01 Hz
 PPMCM 0.39512 ppm/cm
 HZCM 158.10016 Hz/cm

Figura 108. Espectro de RMN ¹H do 5-trifluormetil-1-fenil-3-[2-furil]-1H-pirazol (**15a**) em CDCl₃.

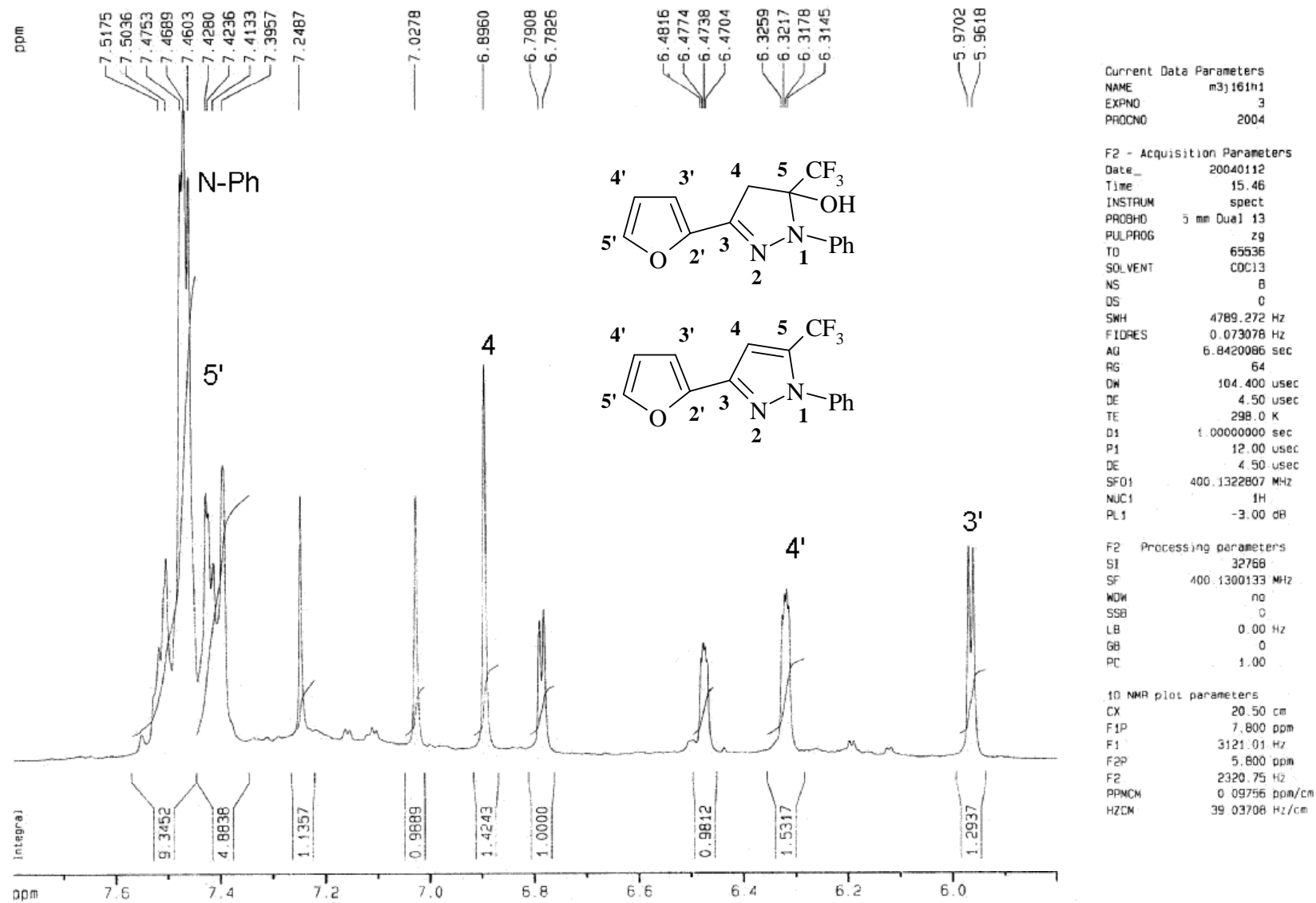


Figura 109. Espectro de RMN ^1H do 5-trifluormetil-1-fenil-3-[2-furil]-1H-pirazol (**15a**) em CDCl_3 .

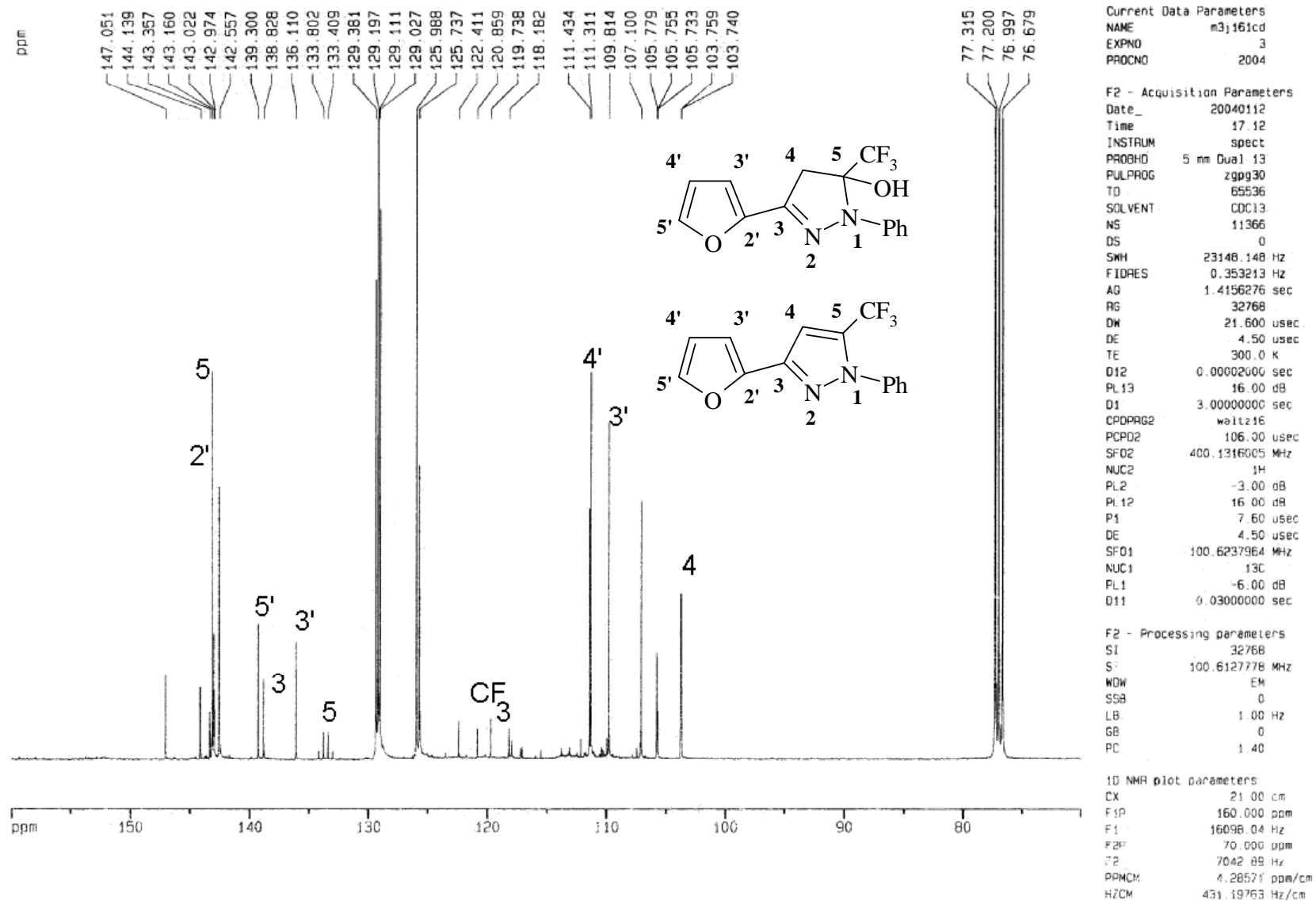


Figura 110. Espectro de RMN ¹³C do 5-trifluorometil-1-fenil-3-[2-furil]-1H-pirazol (**15a**) em CDCl₃.

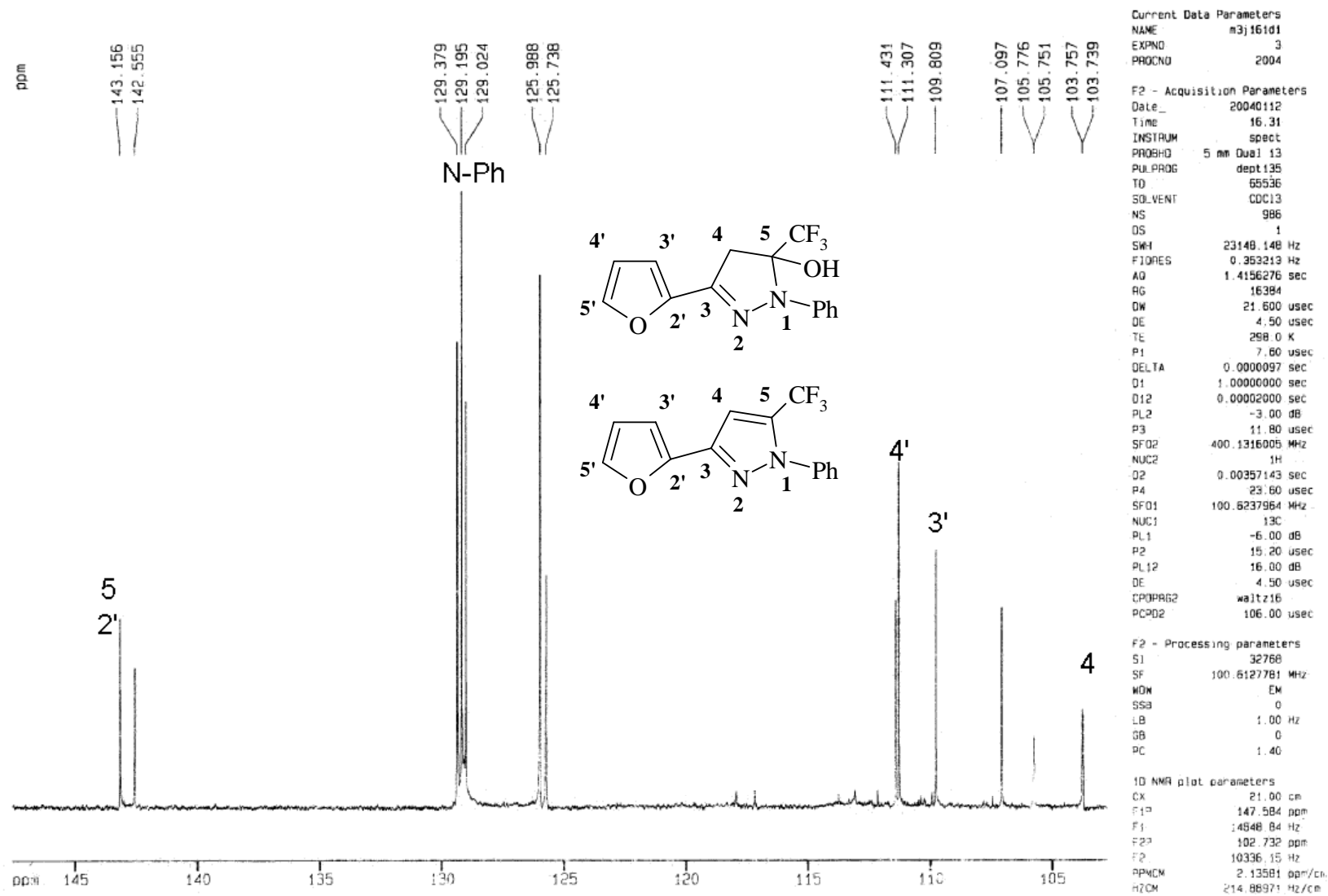


Figura 111. Espectro de RMN ^{13}C do 5-trifluorometil-1-fenil-3-[2-furil]-1H-pirazol (**15a**) em CDCl_3 .

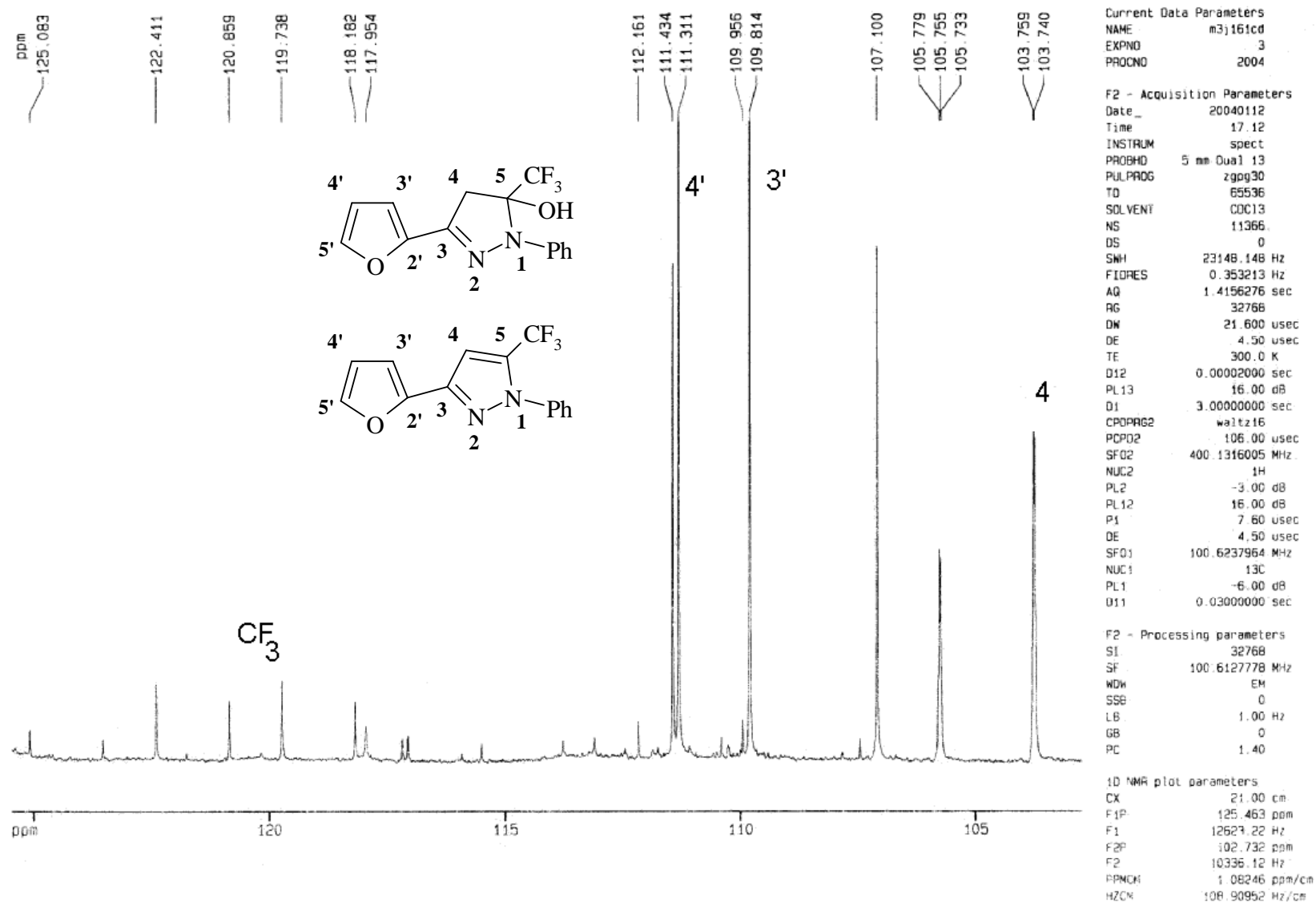


Figura 112. Espectro de RMN ¹³C do 5-trifluormetil-1-fenil-3-[2-furil]-1H-pirazol (**15a**) em CDCl₃.

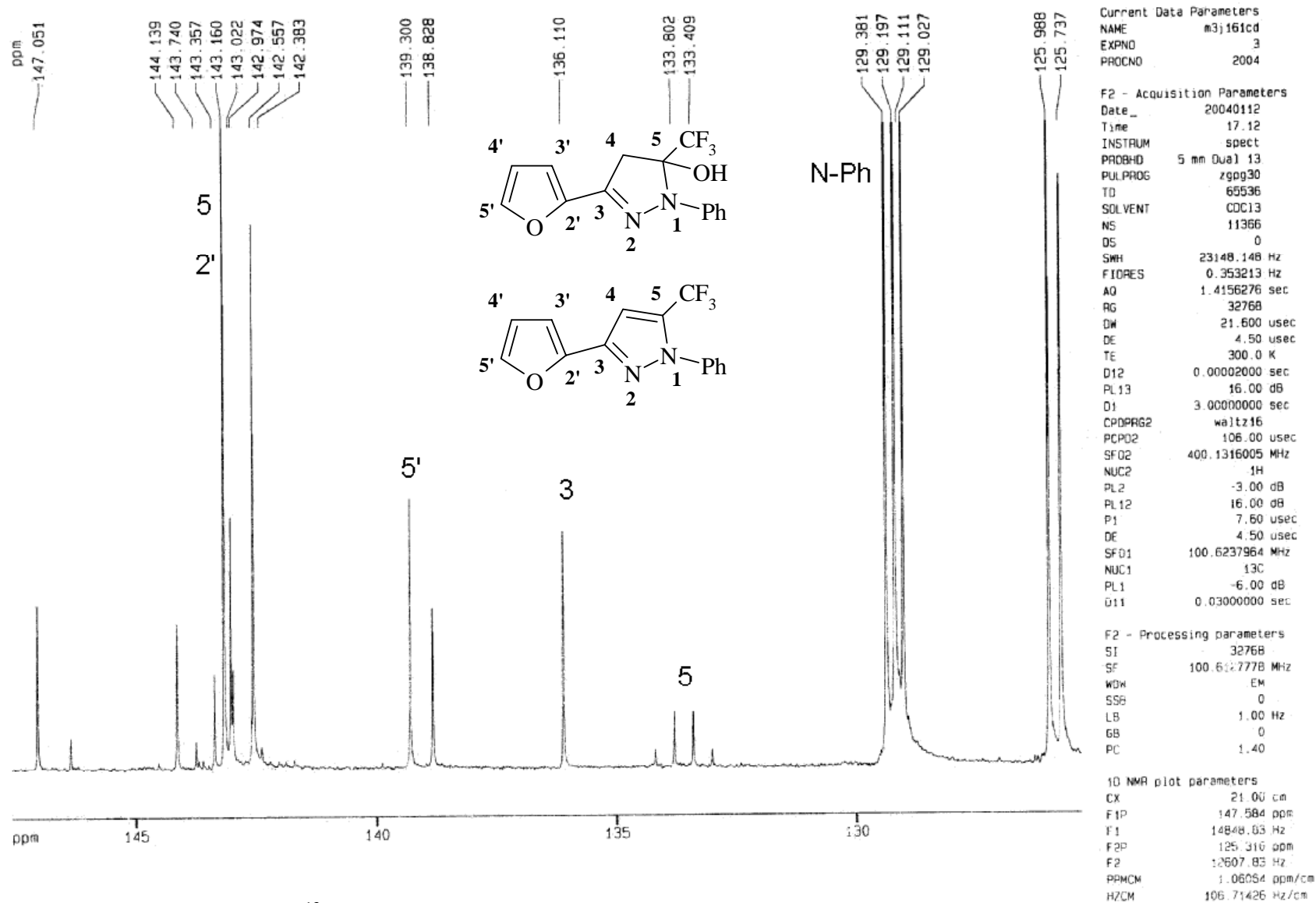


Figura 113. Espectro de RMN ^{13}C do 5-trifluorometil-1-fenil-3-[2-furil]-1*H*-pirazol (**15a**) em CDCl_3 .

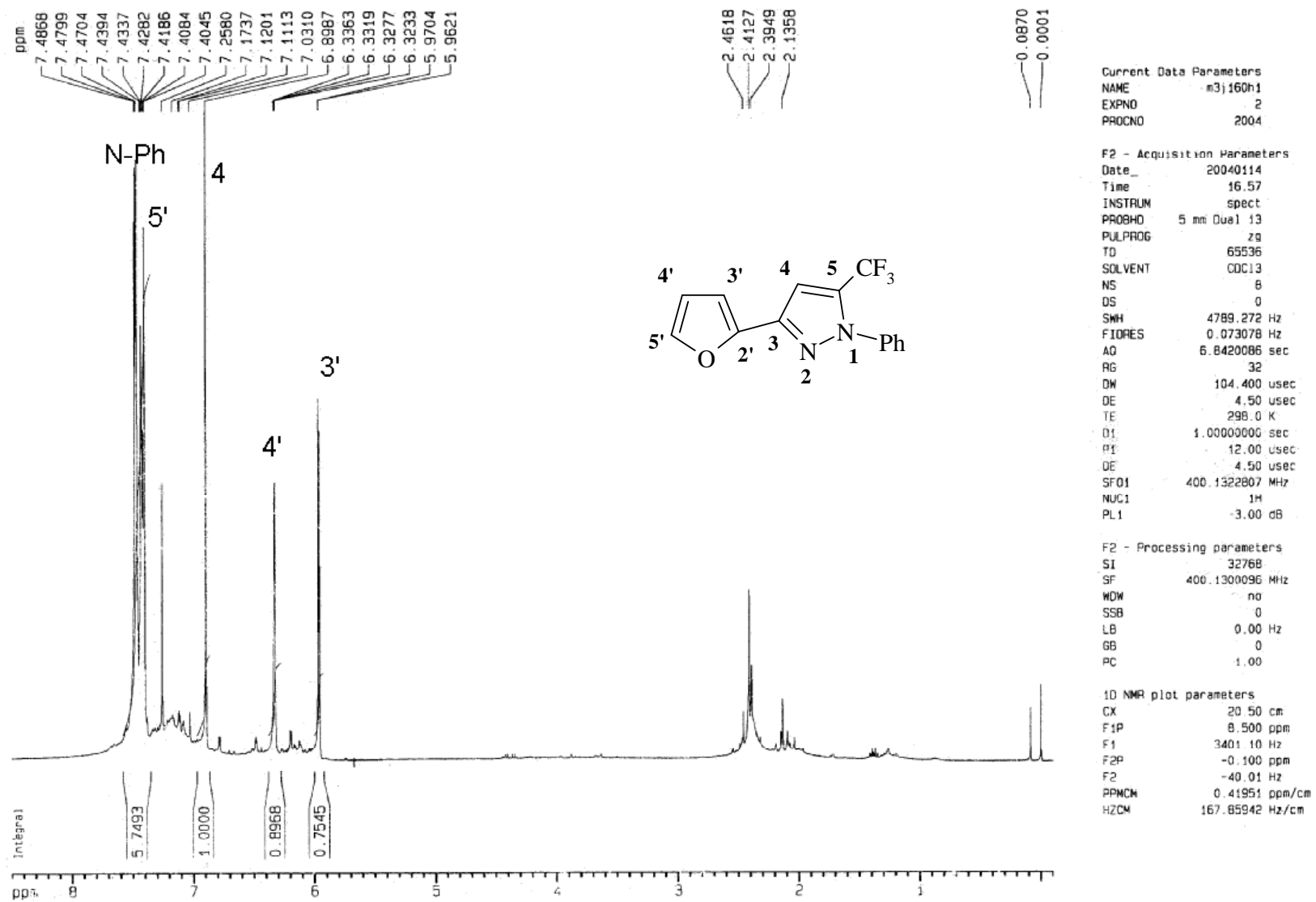


Figura 114. Espectro de RMN ^1H do 5-trifluormetil-1-fenil-3-[2-furil]-1*H*-pirazol (**15a**) em CDCl_3 .

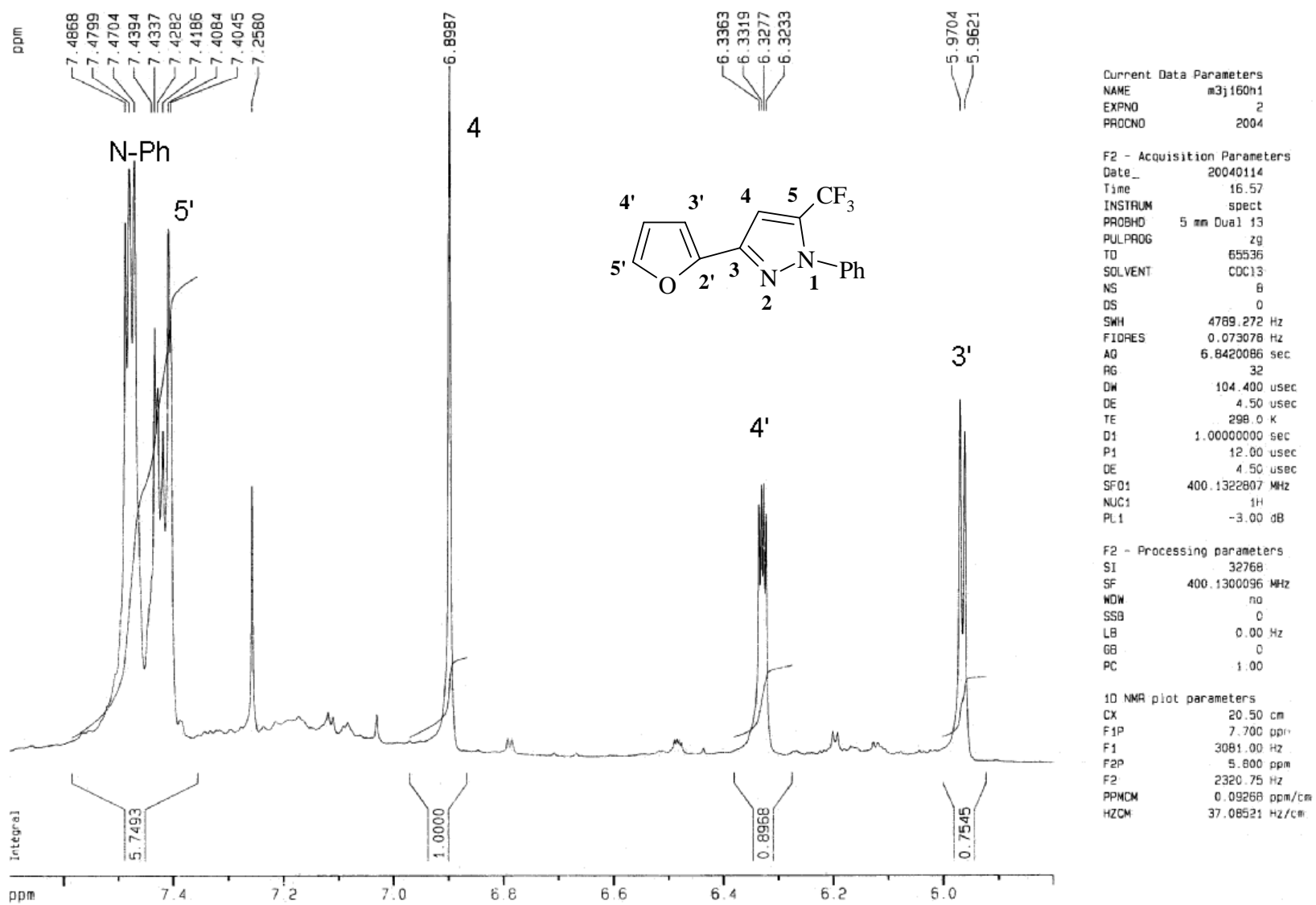


Figura 115. Espectro de RMN ¹H do 5-trifluorometil-1-fenil-3-[2-furil]-1H-pirazol (**15a**) em CDCl₃.

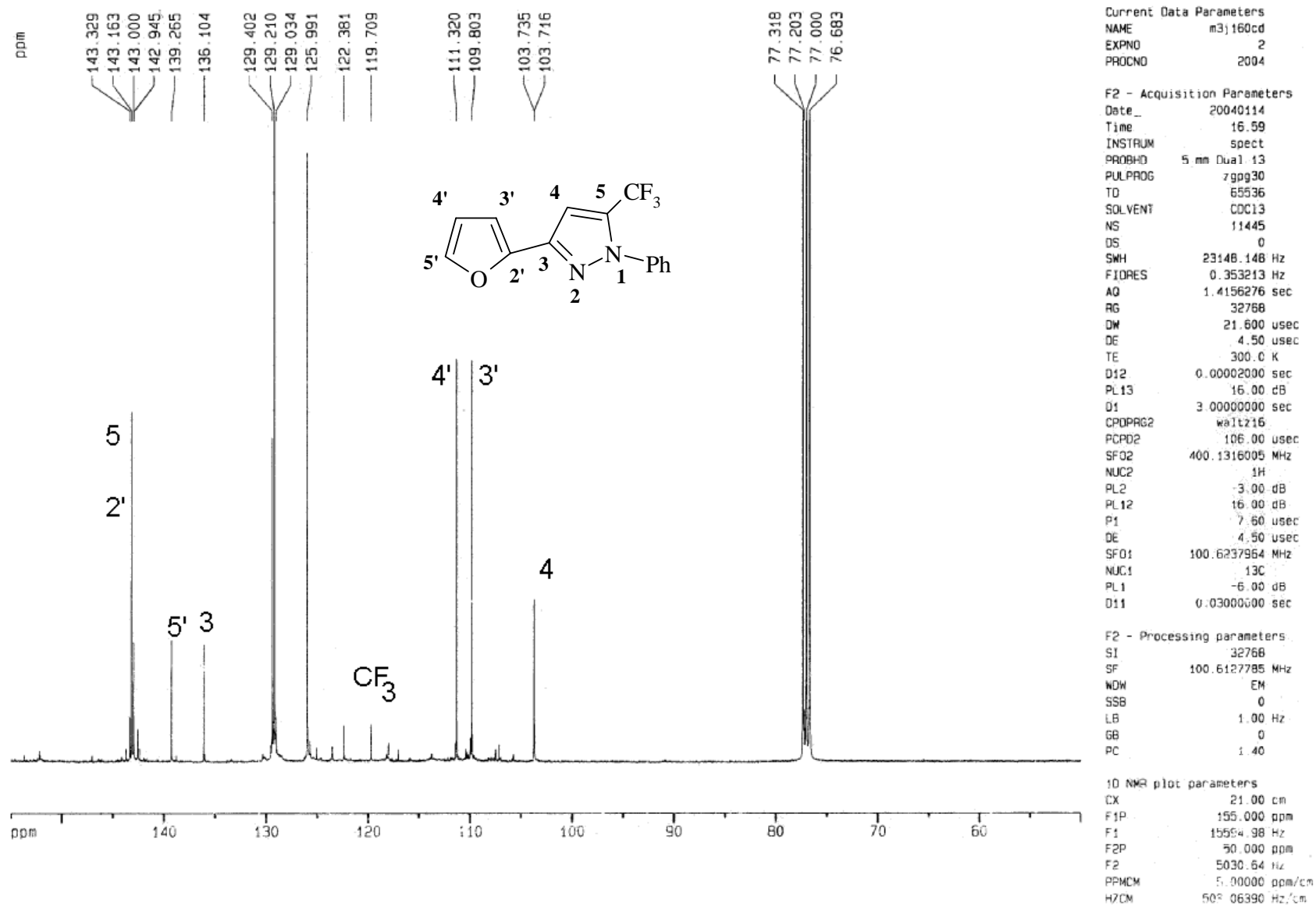


Figura 116. Espectro de RMN ^{13}C do 5-trifluorometil-1-fenil-3-[2-furil]-1H-pirazol (**15a**) em CDCl_3 .

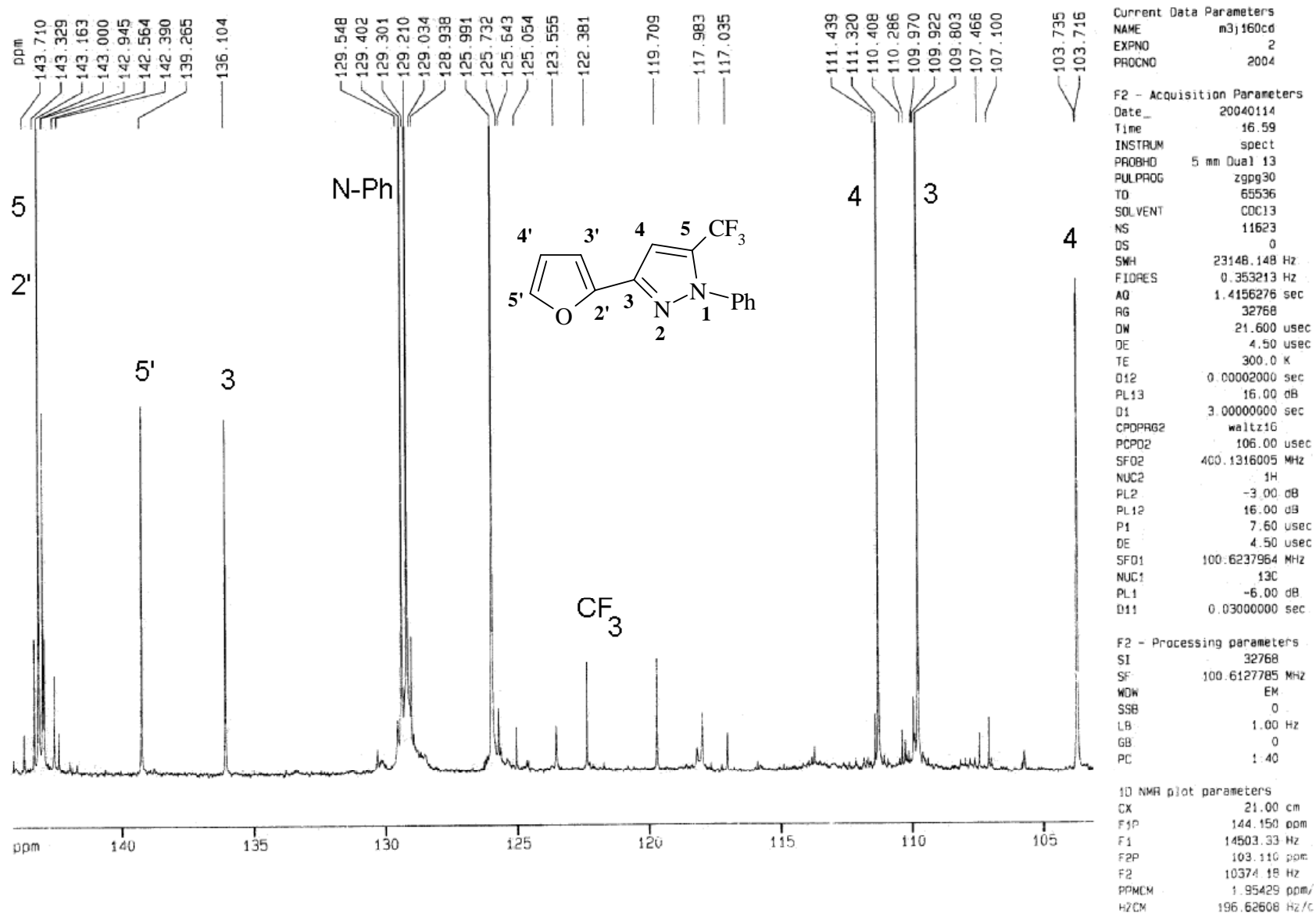


Figura 117. Espectro de RMN ^{13}C do 5-trifluorometil-1-fenil-3-[2-furil]-1H-pirazol (**15a**) em CDCl_3 .

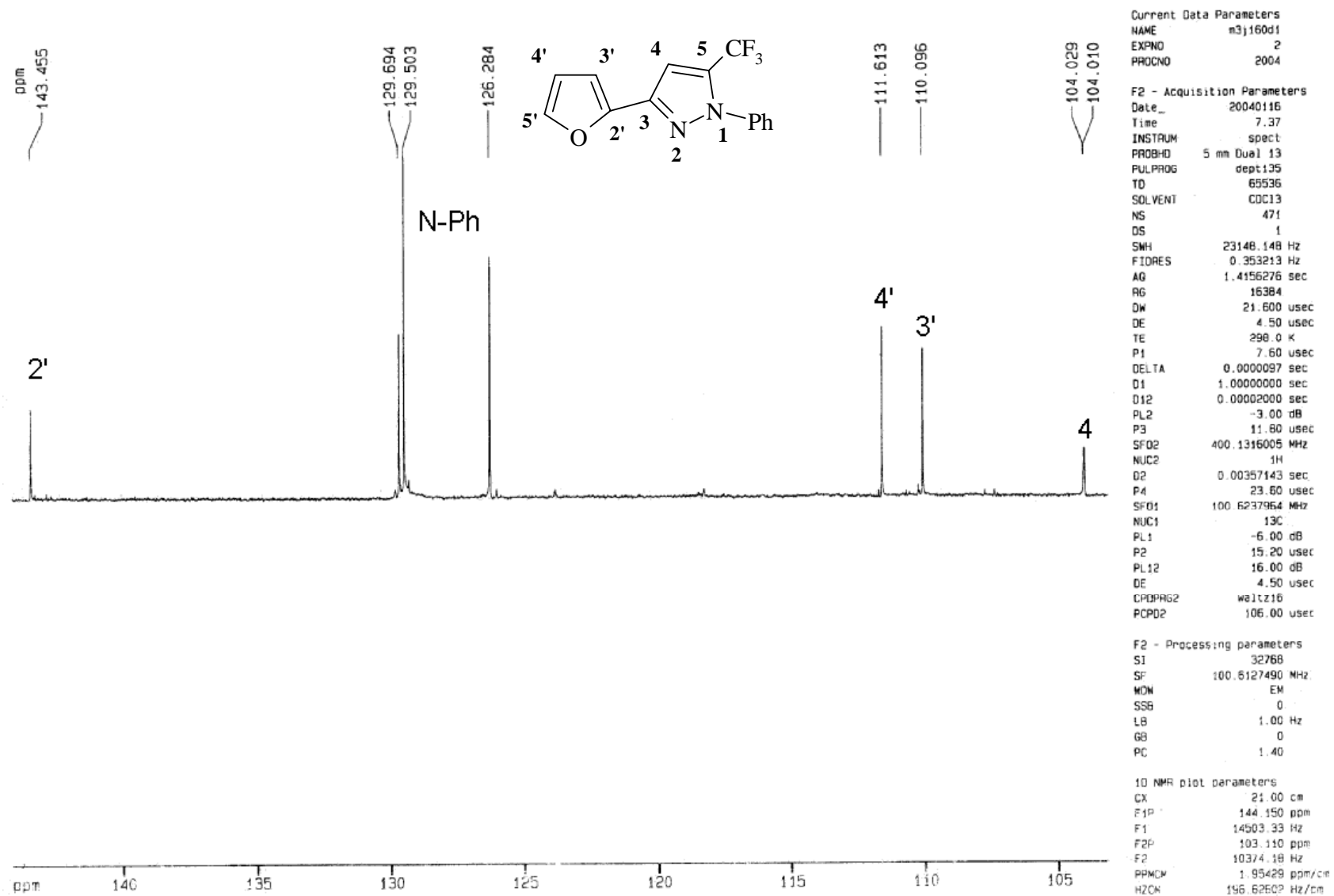


Figura 118. Espectro de RMN (DEPT 135), do 5-trifluormetil-1-fenil-3-[2-furil]-1H-pirazol (**15a**) em CDCl_3 .

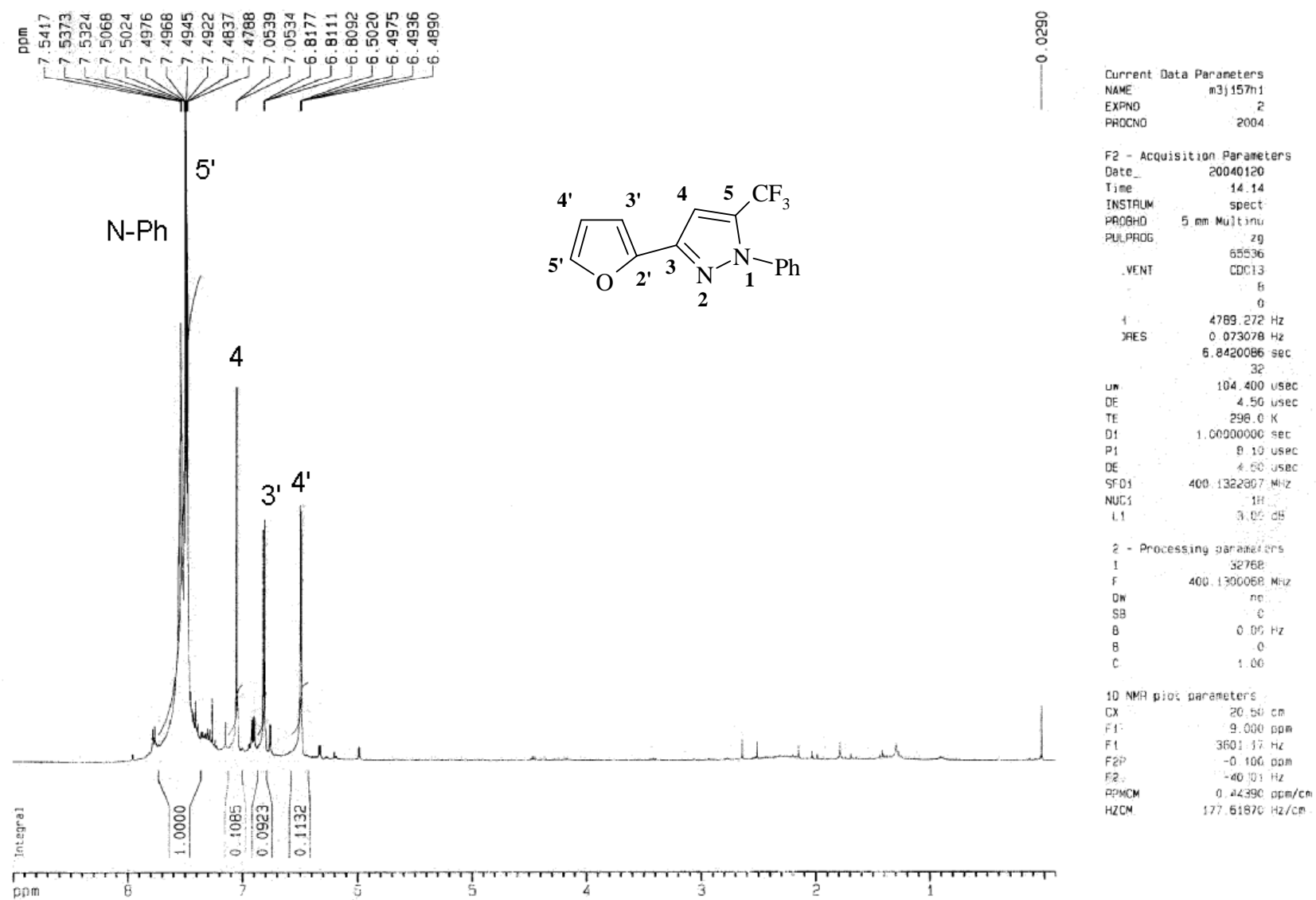


Figura 119. Espectro de RMN ¹H do 5-trifluormetil-1-fenil-3-[2-furil]-1H-pirazol (**15a**) em CDCl₃.

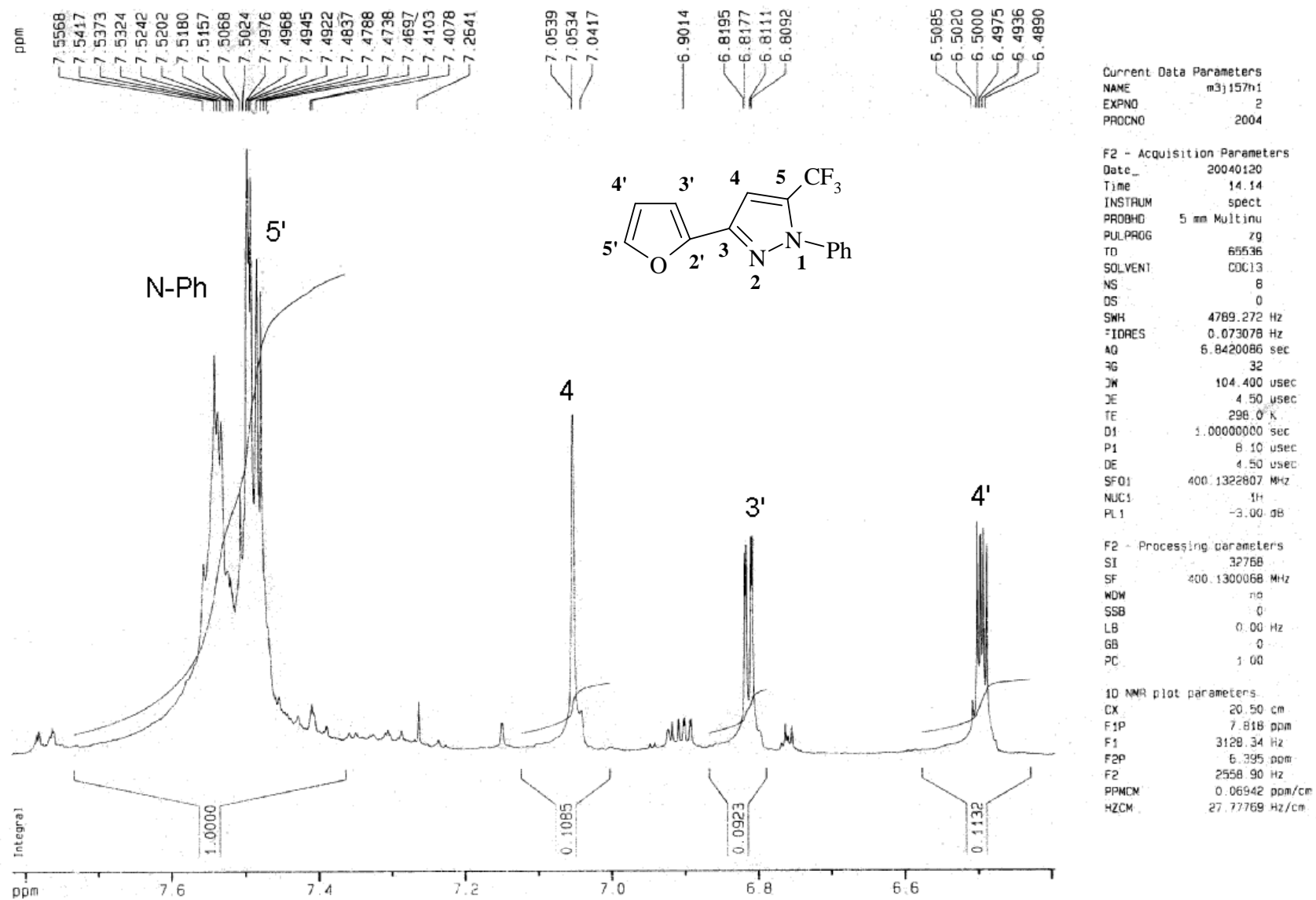


Figura 120. Espectro de RMN ^1H do 5-trifluormetil-1-fenil-3-[2-furil]-1H-pirazol (**15a**) em CDCl_3 .

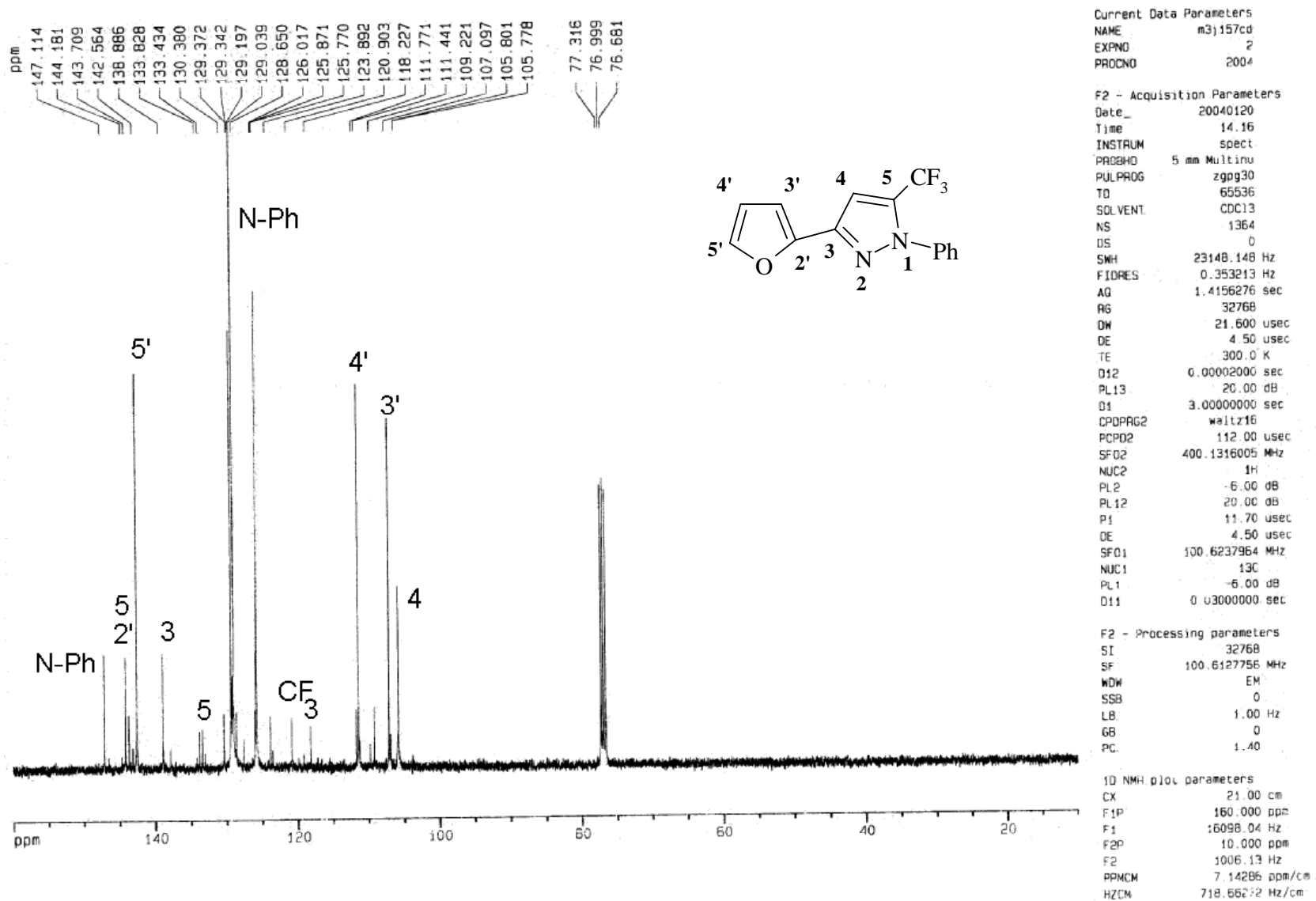


Figura 121. Espectro de RMN ^{13}C do 5-trifluorometil-1-fenil-3-[2-furil]-1H-pirazol (**15a**) em CDCl_3 .

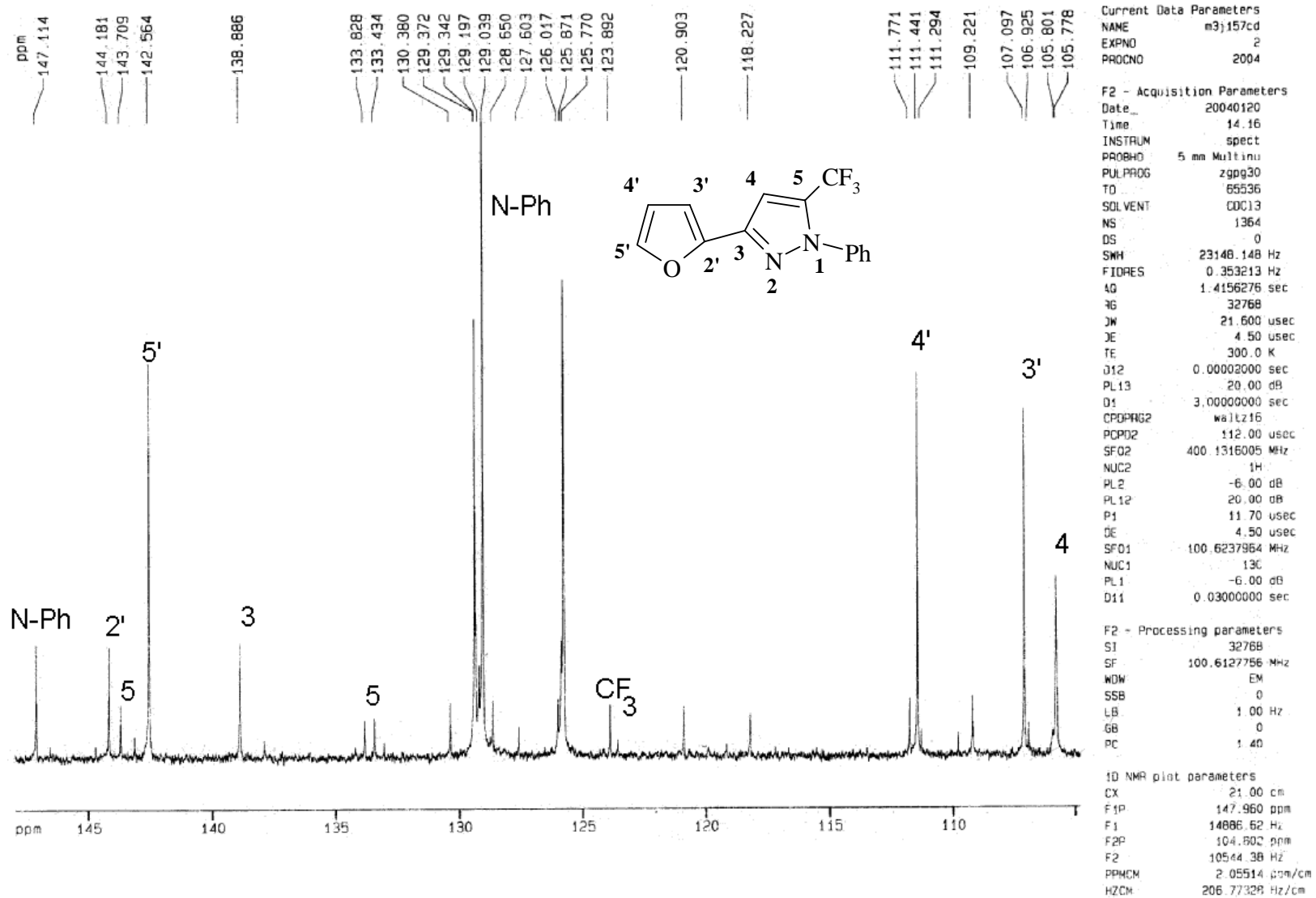


Figura 122. Espectro de RMN ¹³C do 5-trifluorometil-1-fenil-3-[2-furil]-1H-pirazol (**15a**) em CDCl₃.

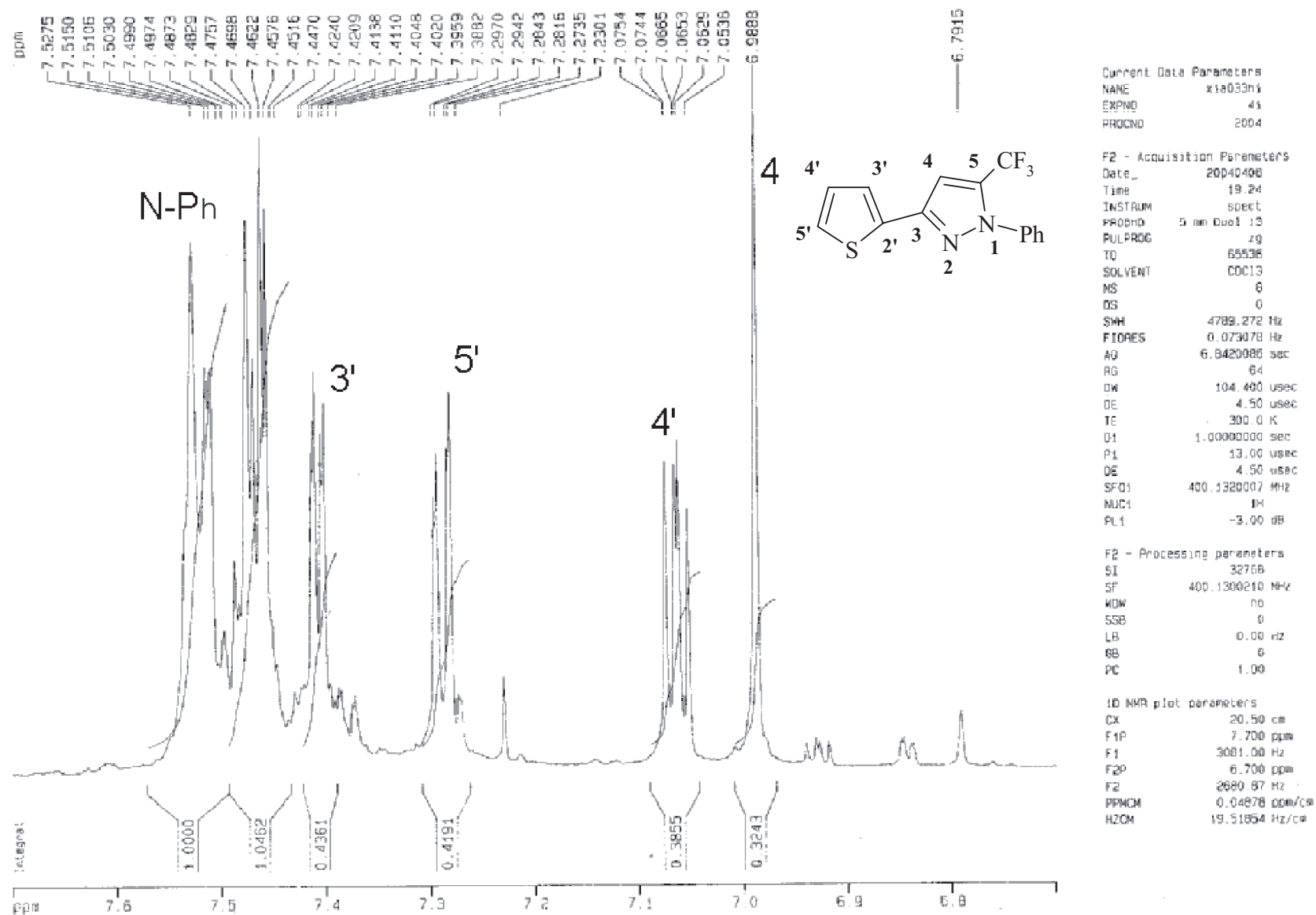


Figura 123. Espectro de RMN ^1H do 5-trifluorometil-1-fenil-3-[2-tienil]-1H-pirazol (**15b**) em CDCl_3 .

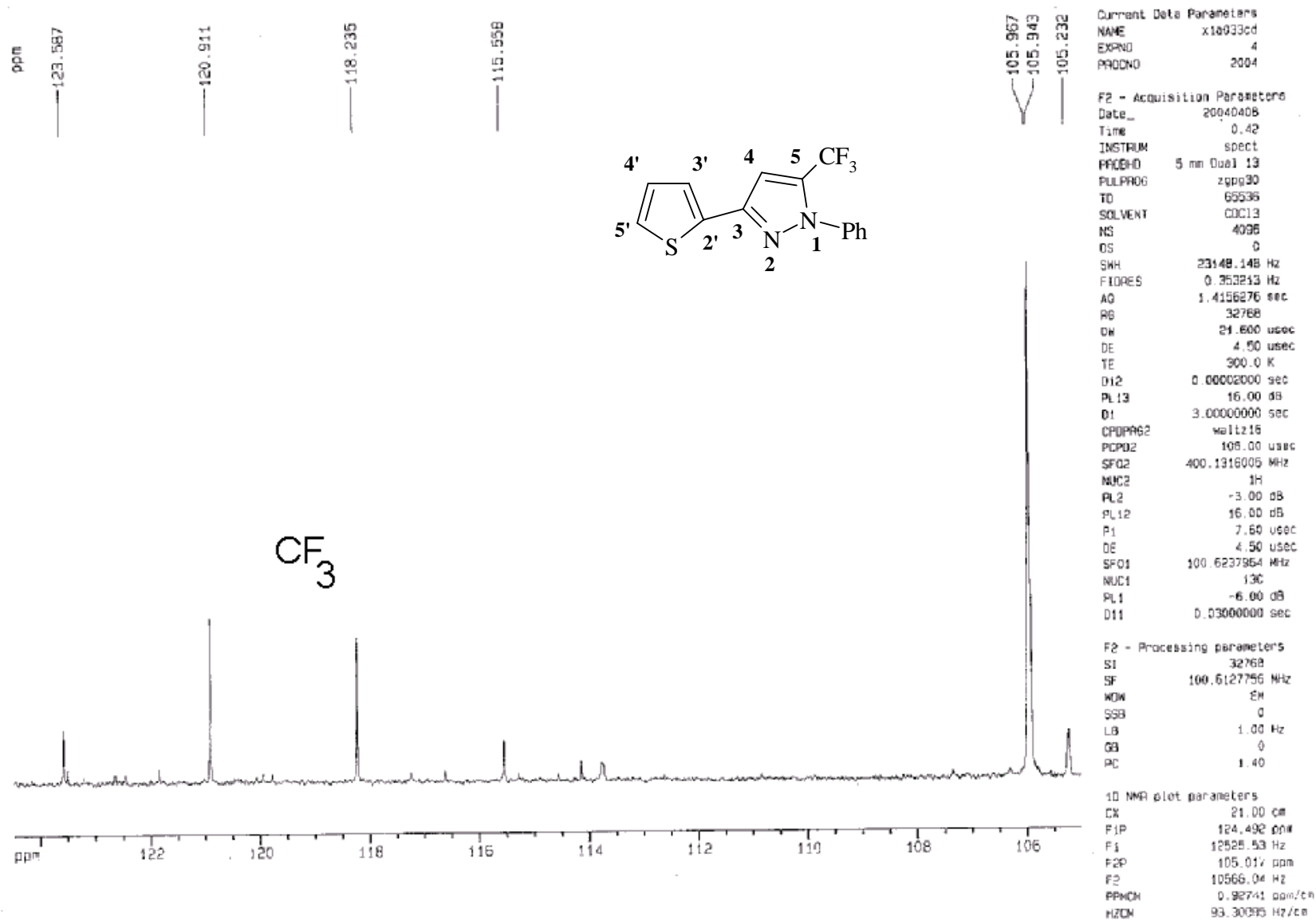


Figura 124. Espectro de RMN ^{13}C do 5-trifluorometil-1-fenil-3-[2-tienil]-1H-pirazol (**15b**) em CDCl_3 .

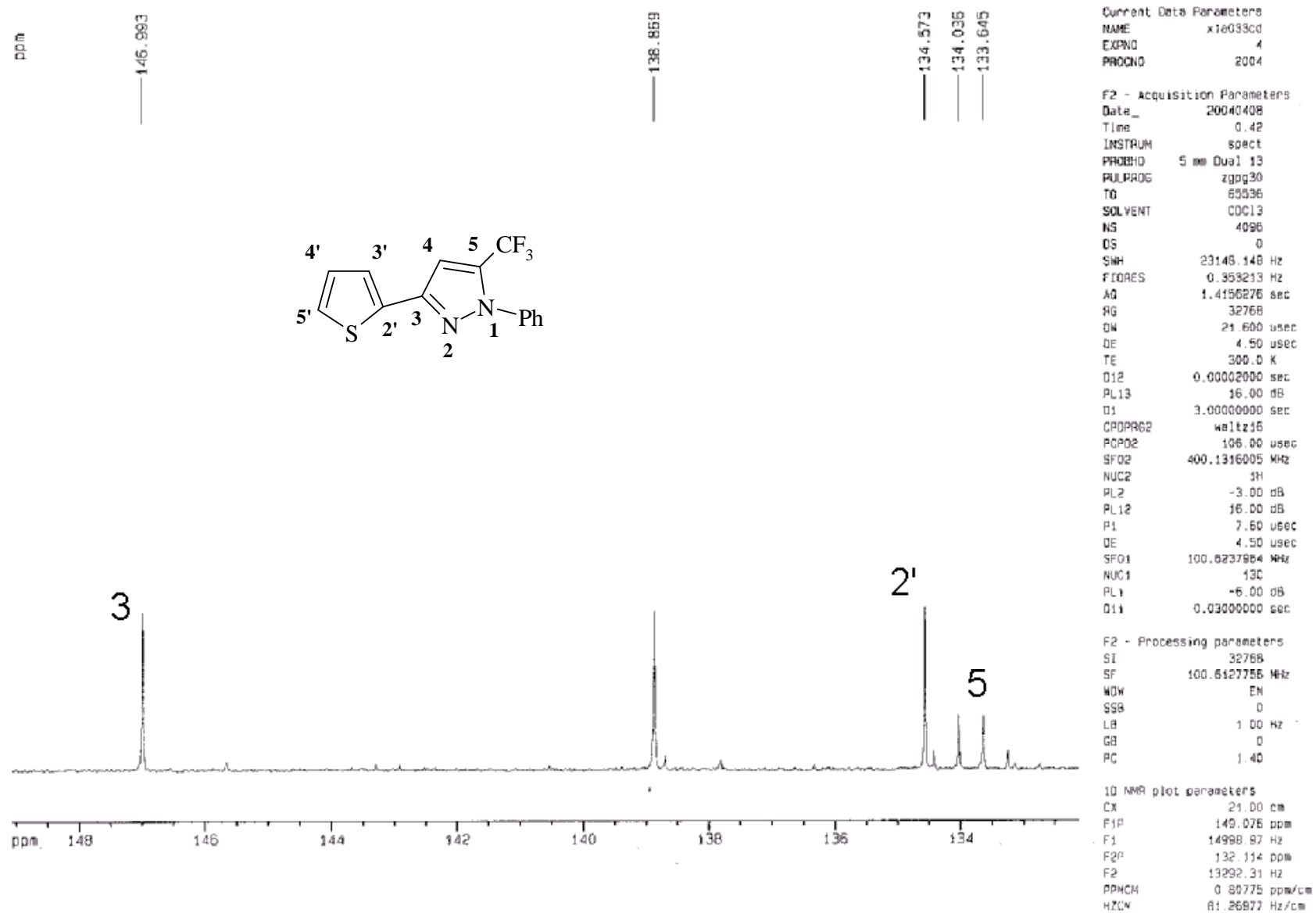


Figura 125. Espectro de RMN ^{13}C do 5-trifluorometil-1-fenil-3-[2-tienil]-1*H*-pirazol (**15b**) em CDCl_3 .