

SUPPLEMENTARY MATERIAL

New anti-hypoxic metabolites from Co-Culture of Marine-Derived Fungi *Aspergillus carneus* KMM 4638 and *Amphichorda* sp. KMM 4639

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Abstract: The KMM 4639 strain was identified as *Amphichorda* sp. based on two molecular genetic markers: ITS and β -tubulin regions. Chemical investigation of co-culture marine-derived fungi *Amphichorda* sp. KMM 4639 and *Aspergillus carneus* KMM 4638 led to the identification of five new quinazolinone alkaloids felicarnezolines A–E (1–5), a new highly oxygenated chromene derivative oxirapentyn M (6) and five previously reported related compounds. Their structures were established using spectroscopic methods and by comparison with related known compounds. The isolated compounds shown low cytotoxicity against human prostate and breast cancer cells but felicarnezoline B (2) protected rat cardiomyocytes H9c2 and human neuroblastoma SH-SY5Y cells against CoCl₂-induced damage.

Keywords: marine-derived fungi; co-culture; secondary metabolites; quinazoline alkaloid; oxirapentyn; cytoprotection; cobalt chloride (II); antioxidants; ITS; β -tubulin; phylogeny.

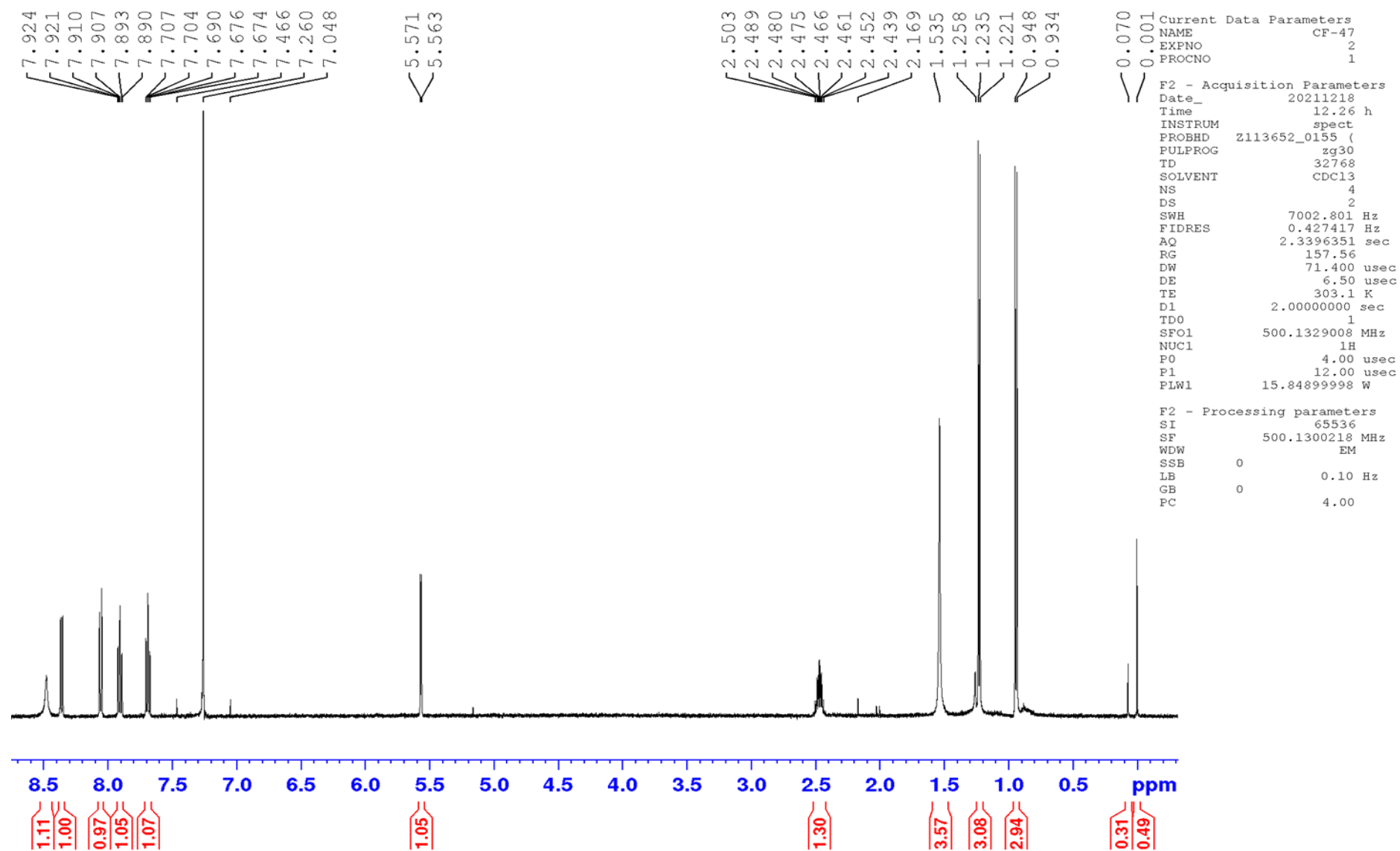
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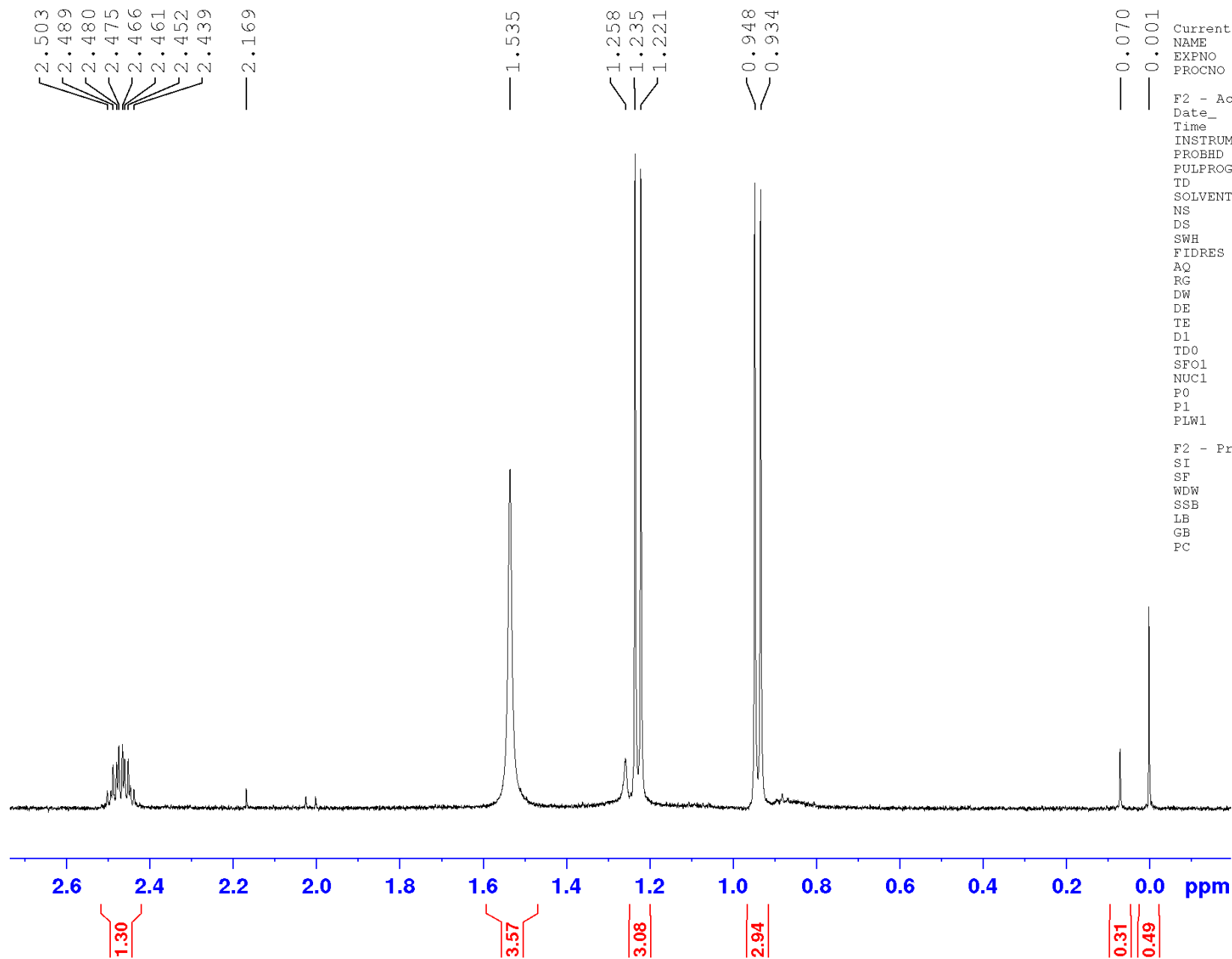
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Figure S1. ^1H NMR spectrum of felicarnezoline A (1)





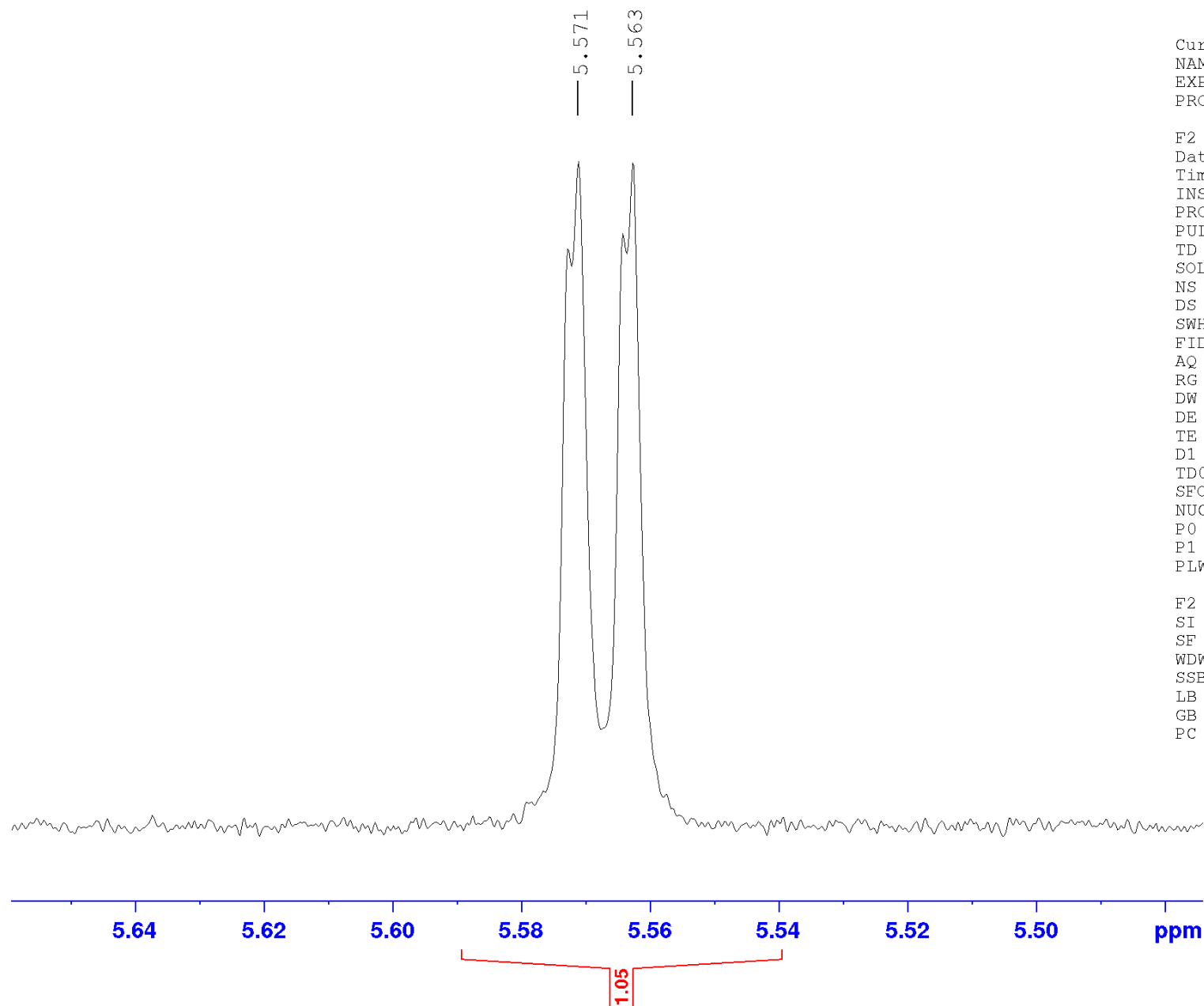
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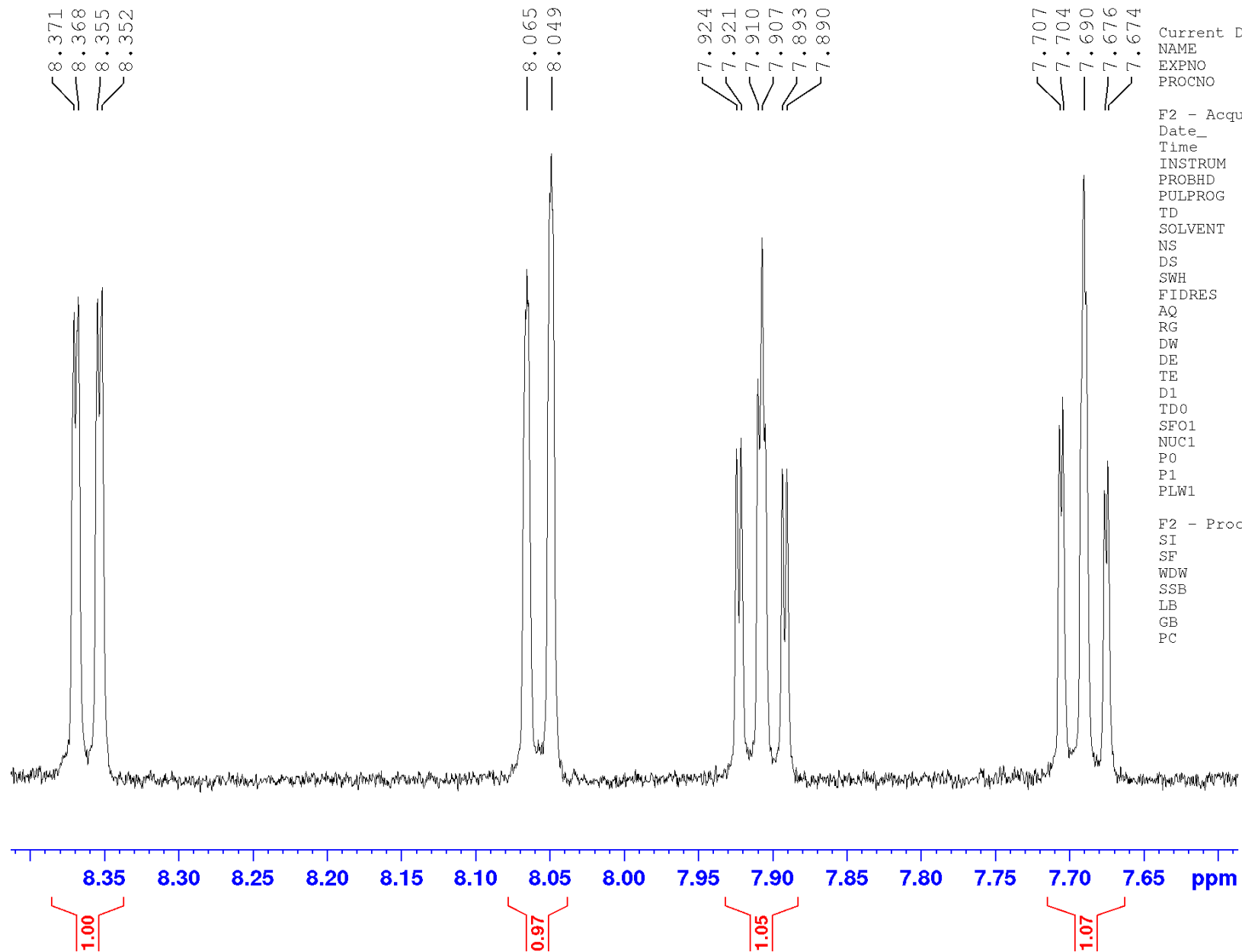
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Figure S2. ^{13}C NMR spectrum of felicarnezoline A (1)

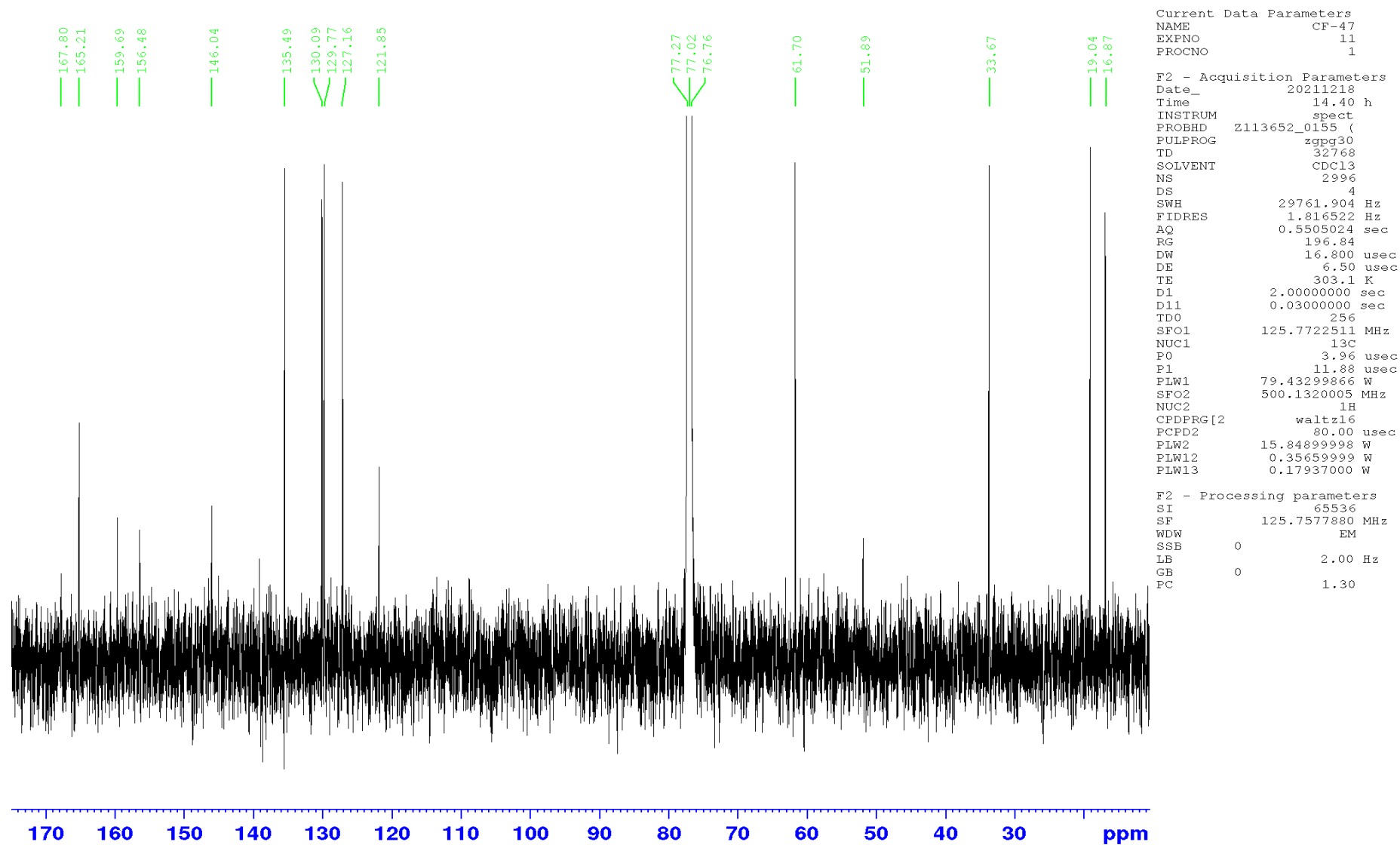


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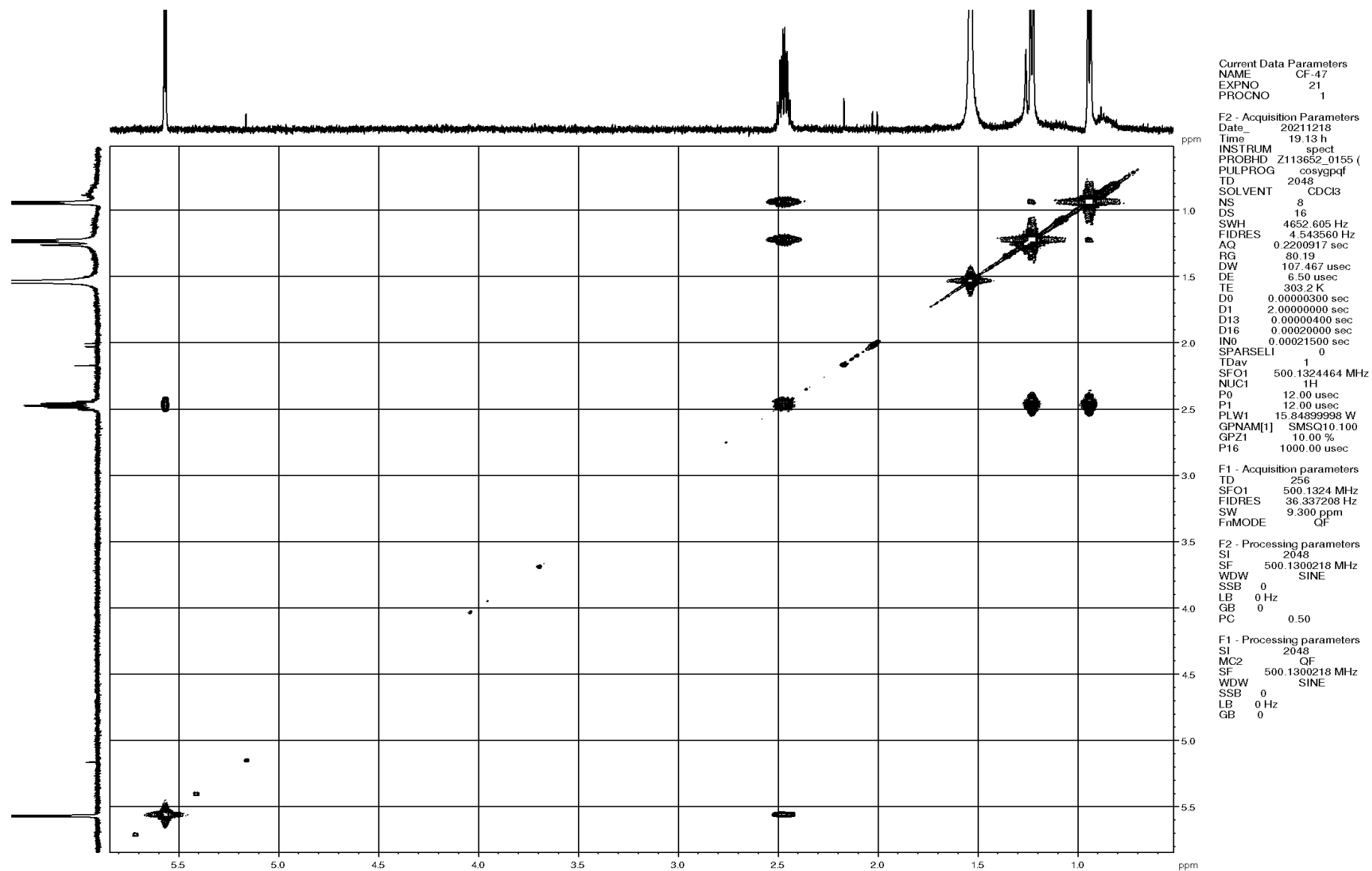


Figure S4. HSQC spectrum of felicarnezoline A (1)

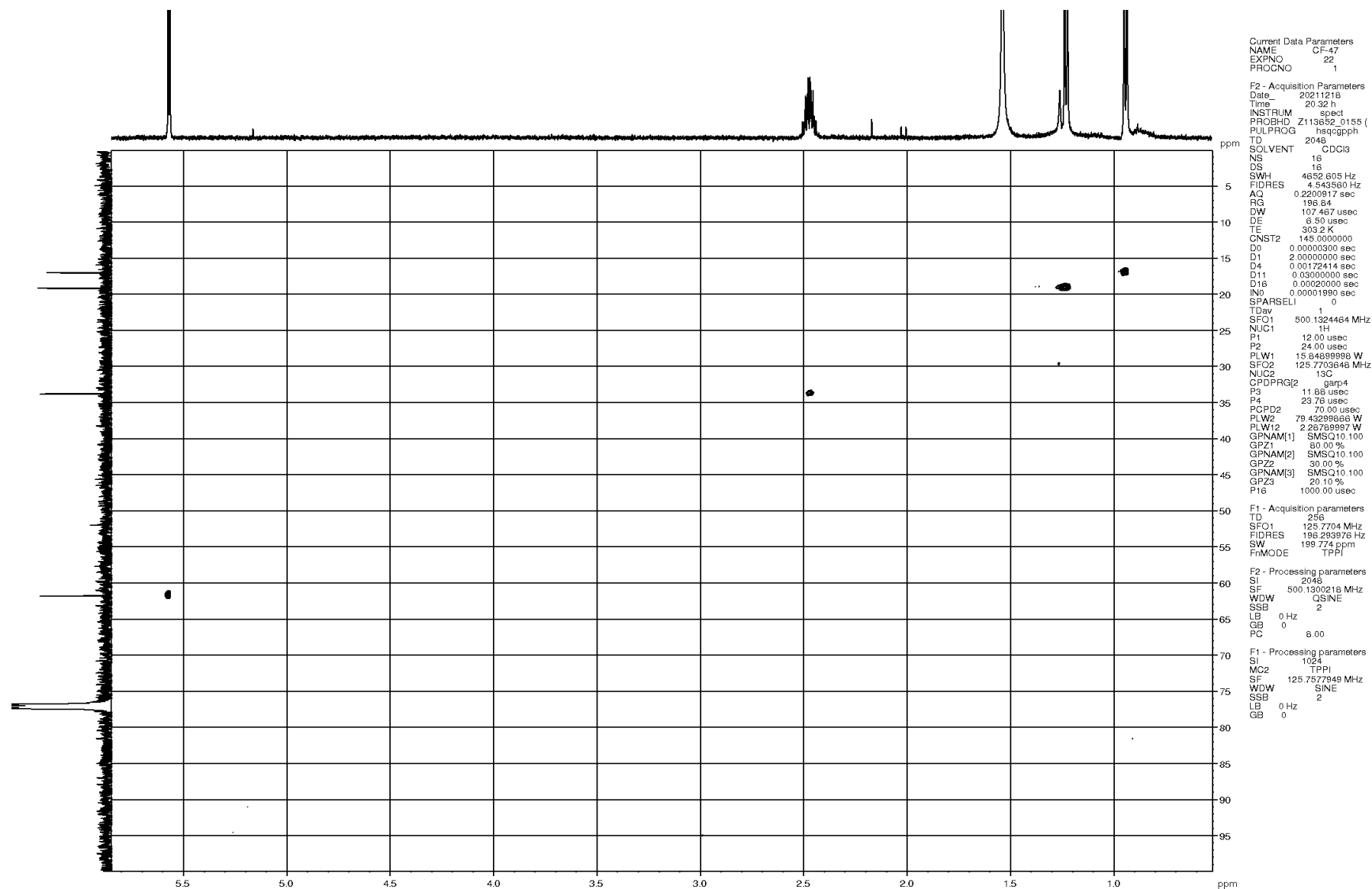


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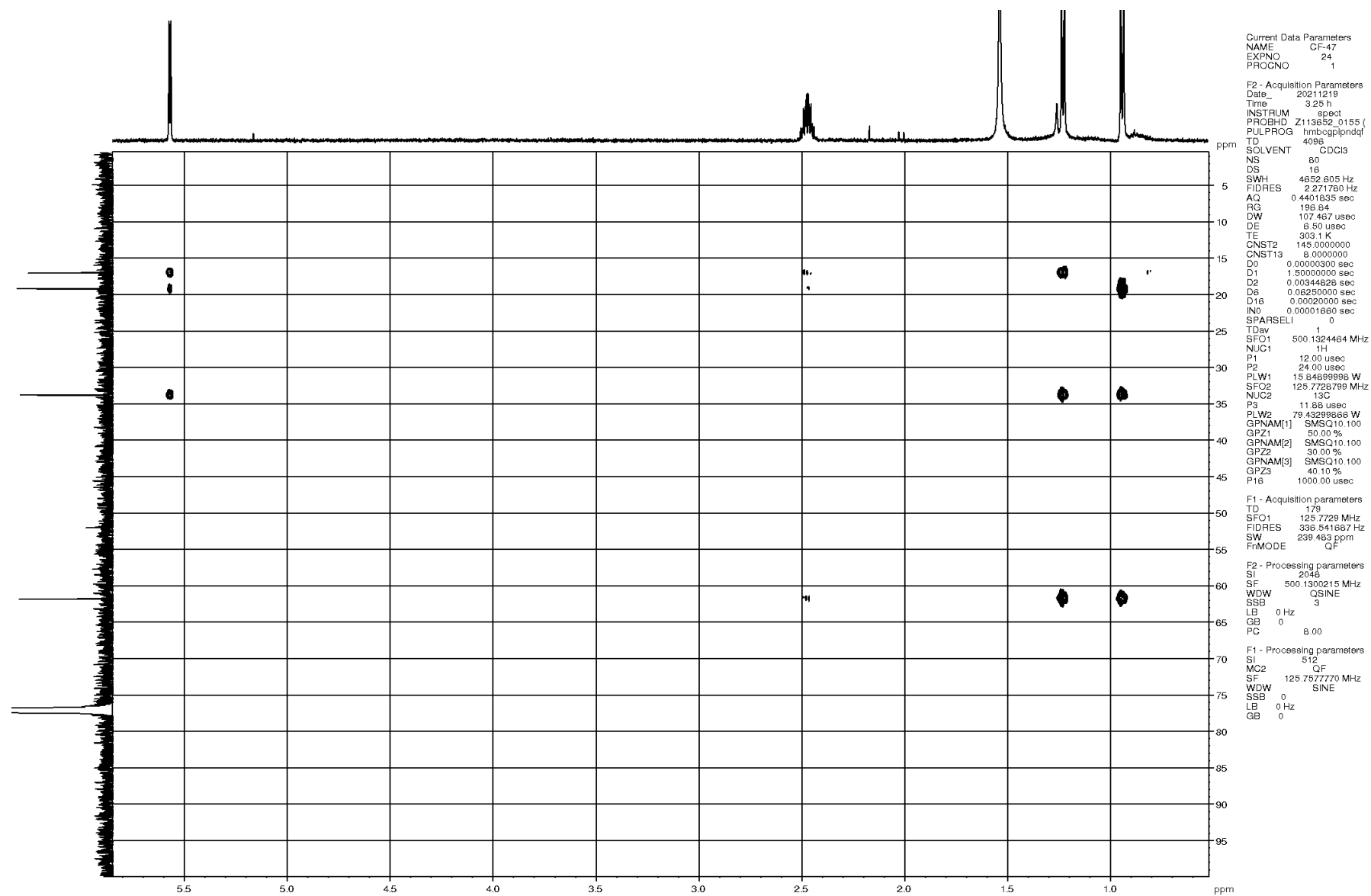


Figure S6. ROESY spectrum of felicarnezoline A (1)

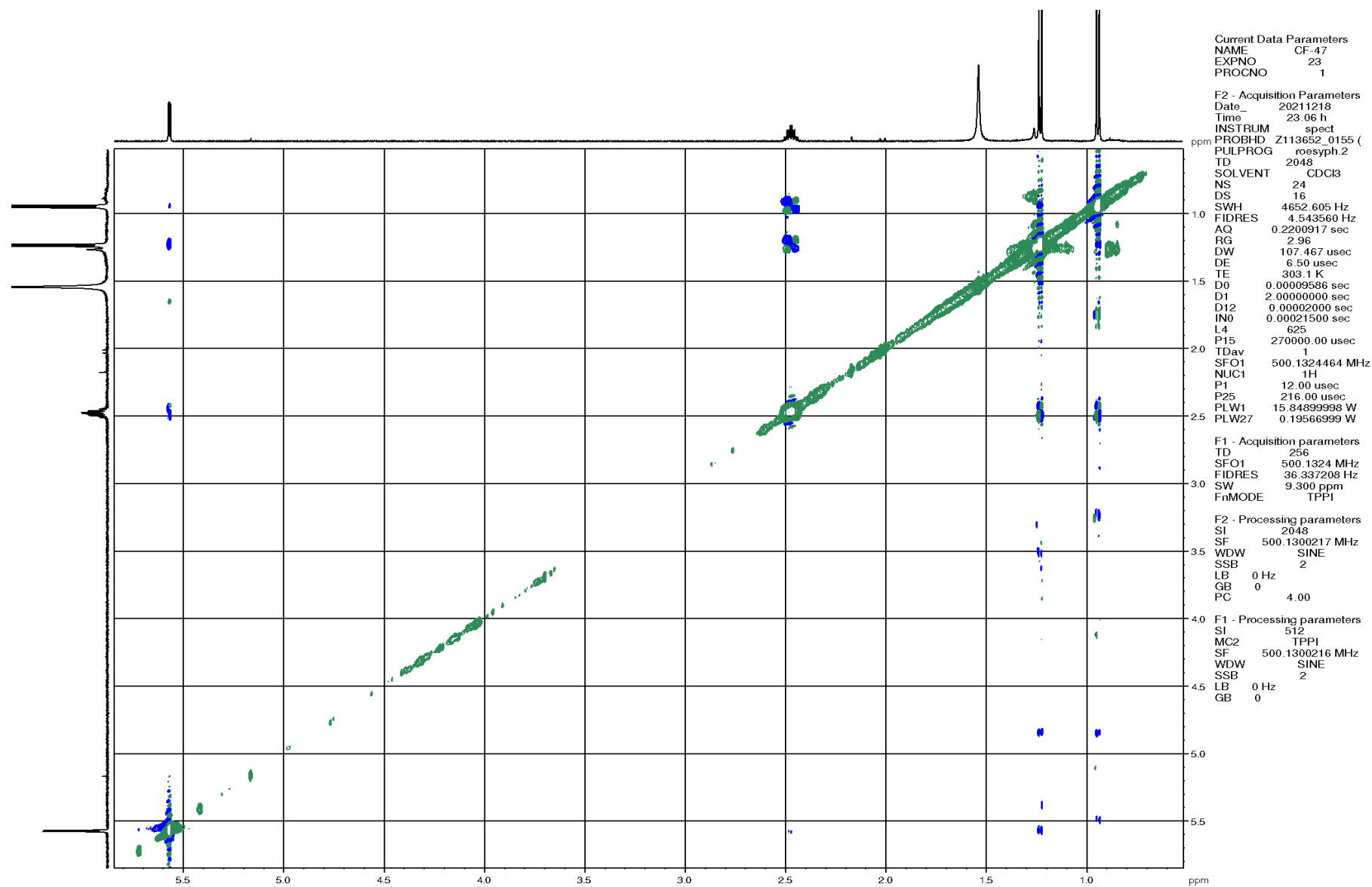
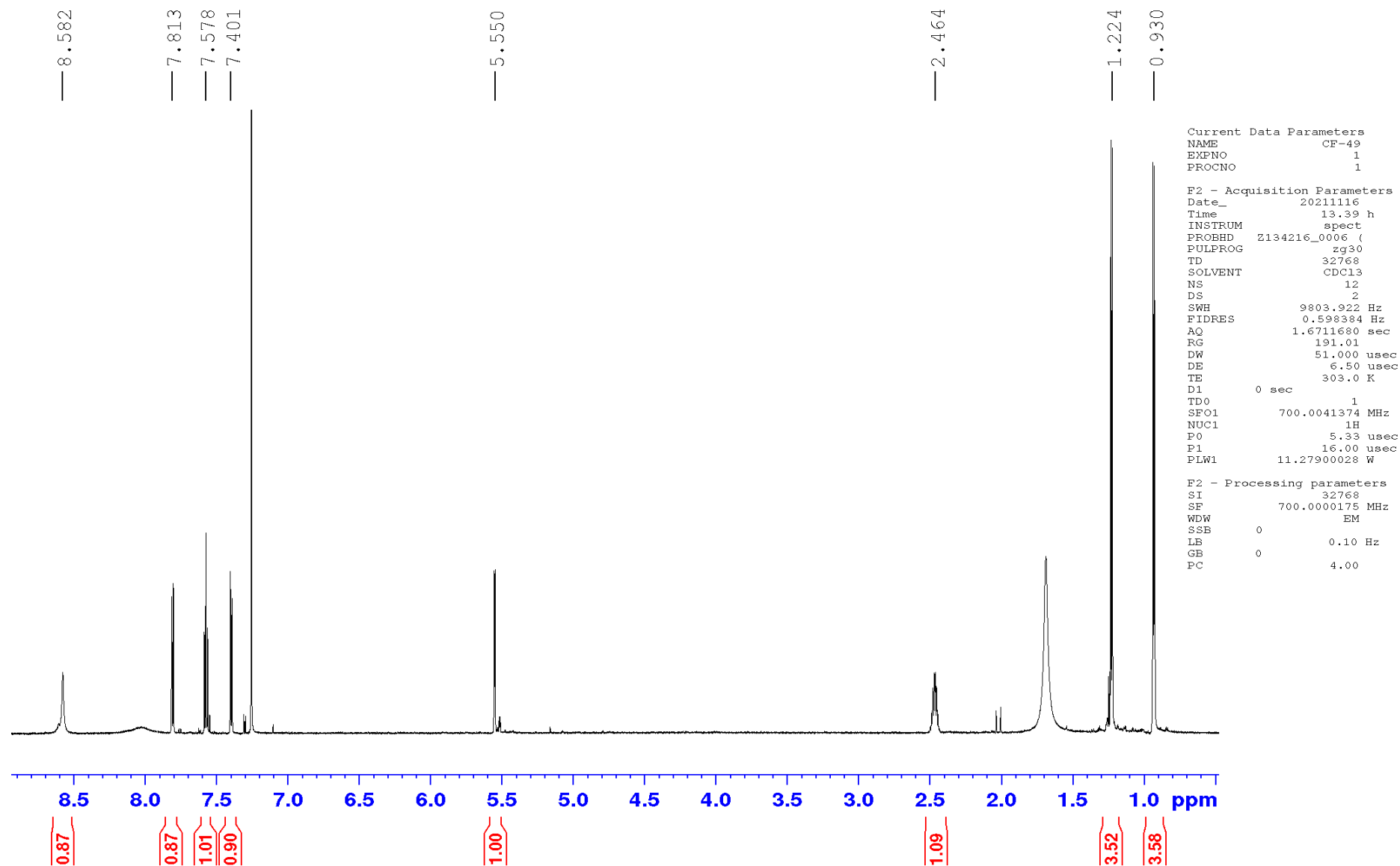
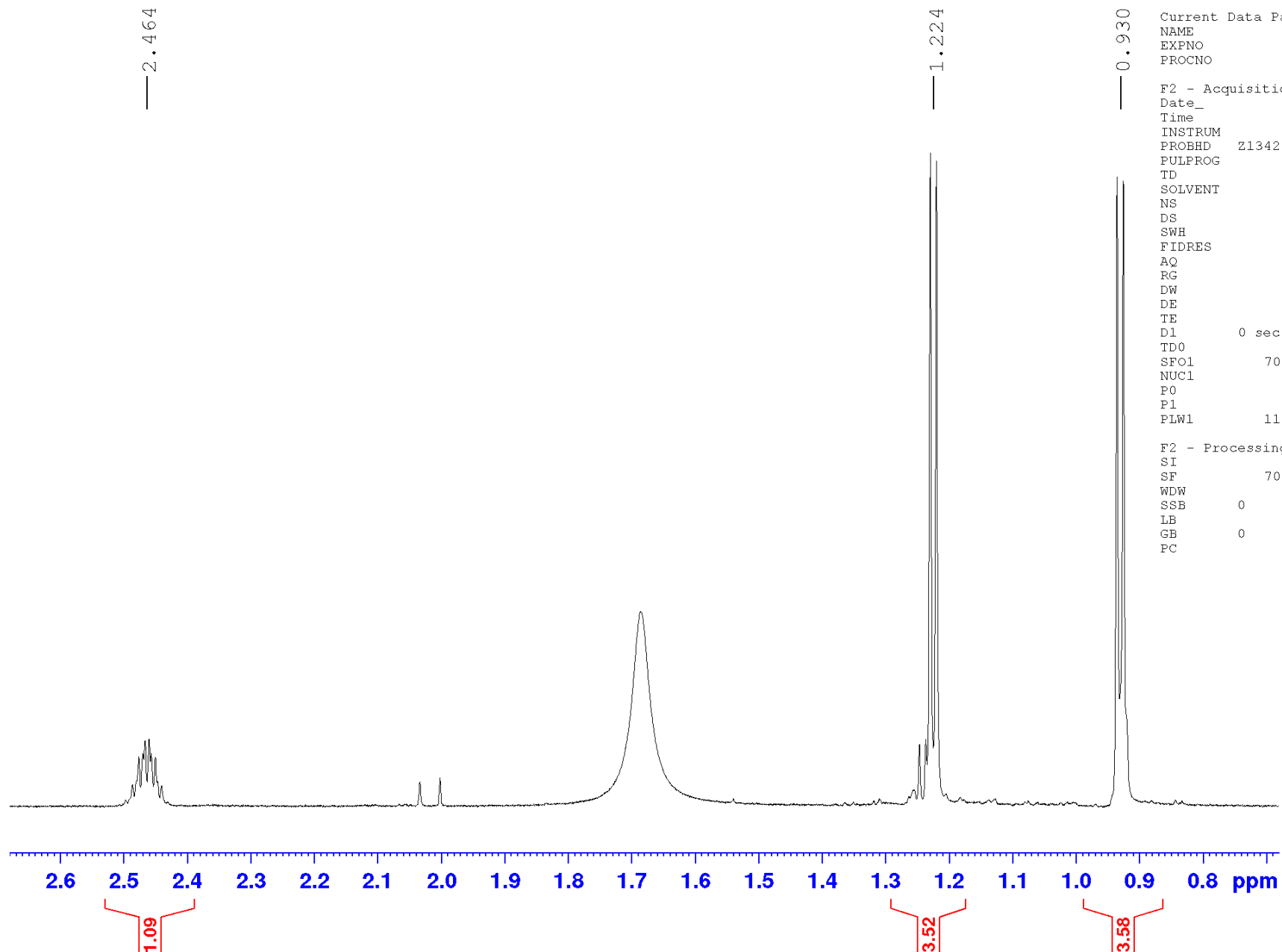


Figure S7. ^1H NMR spectrum of felicarnezoline B (2)

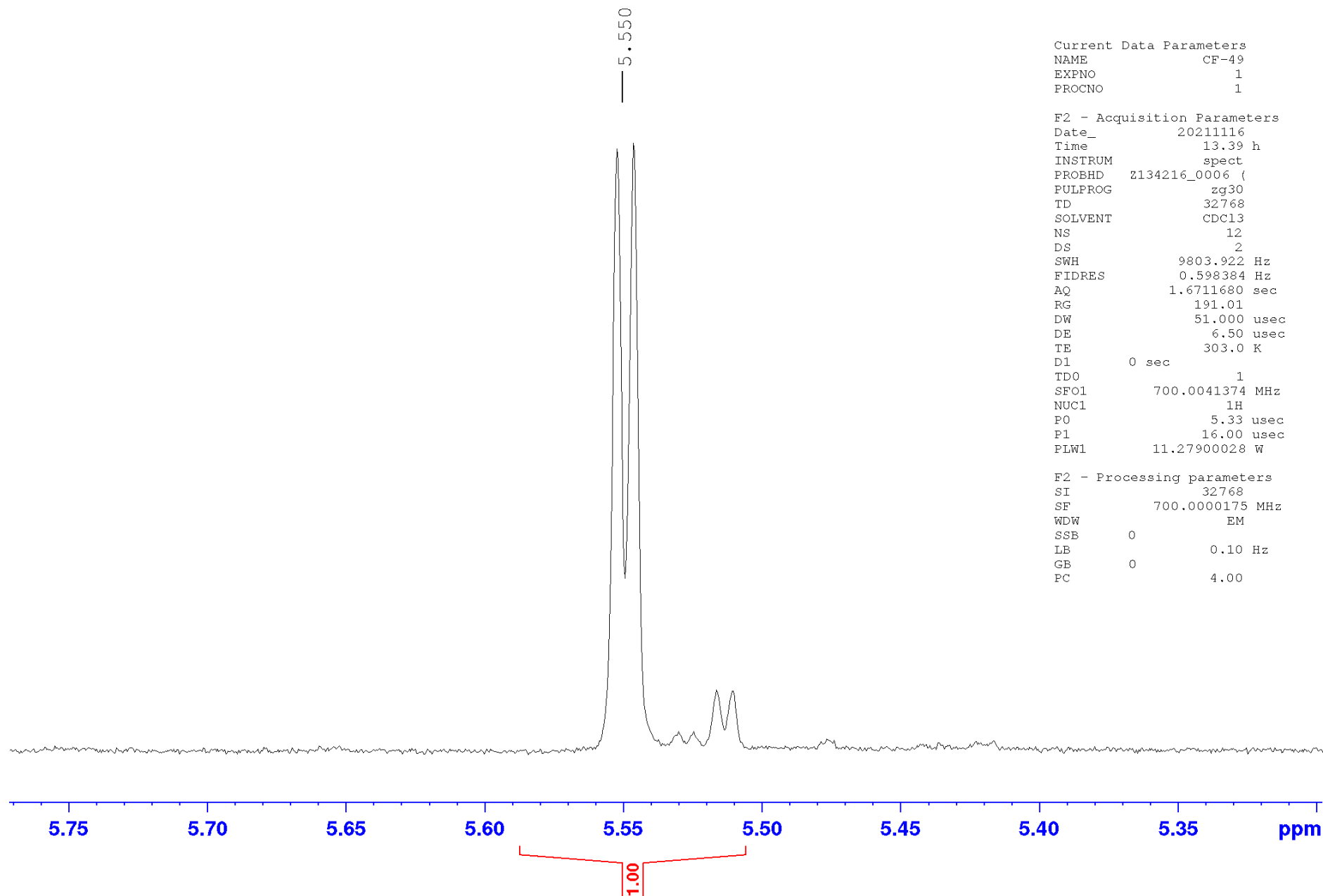


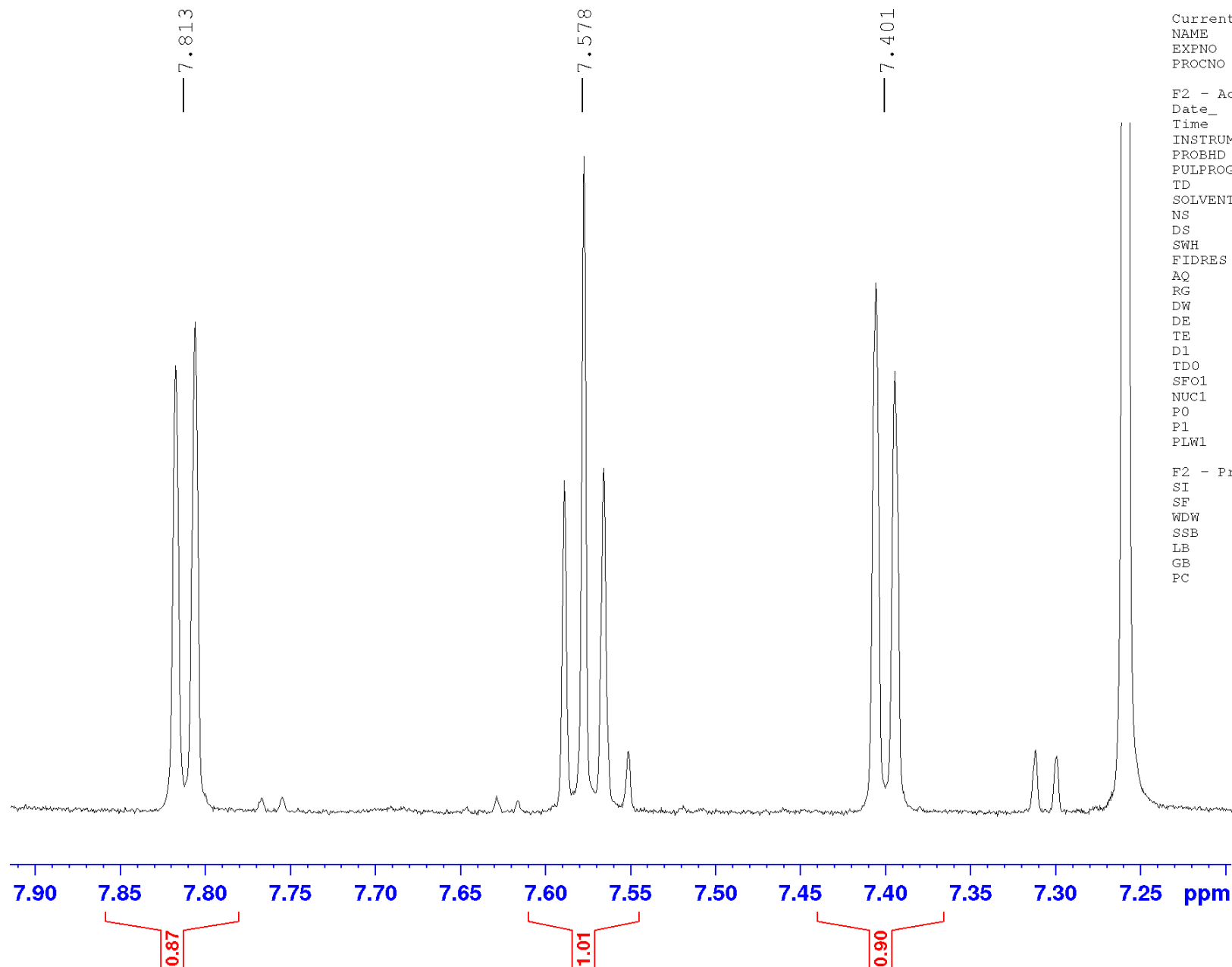


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Figure S8. ^{13}C NMR spectrum of felicarnezoline B (2)

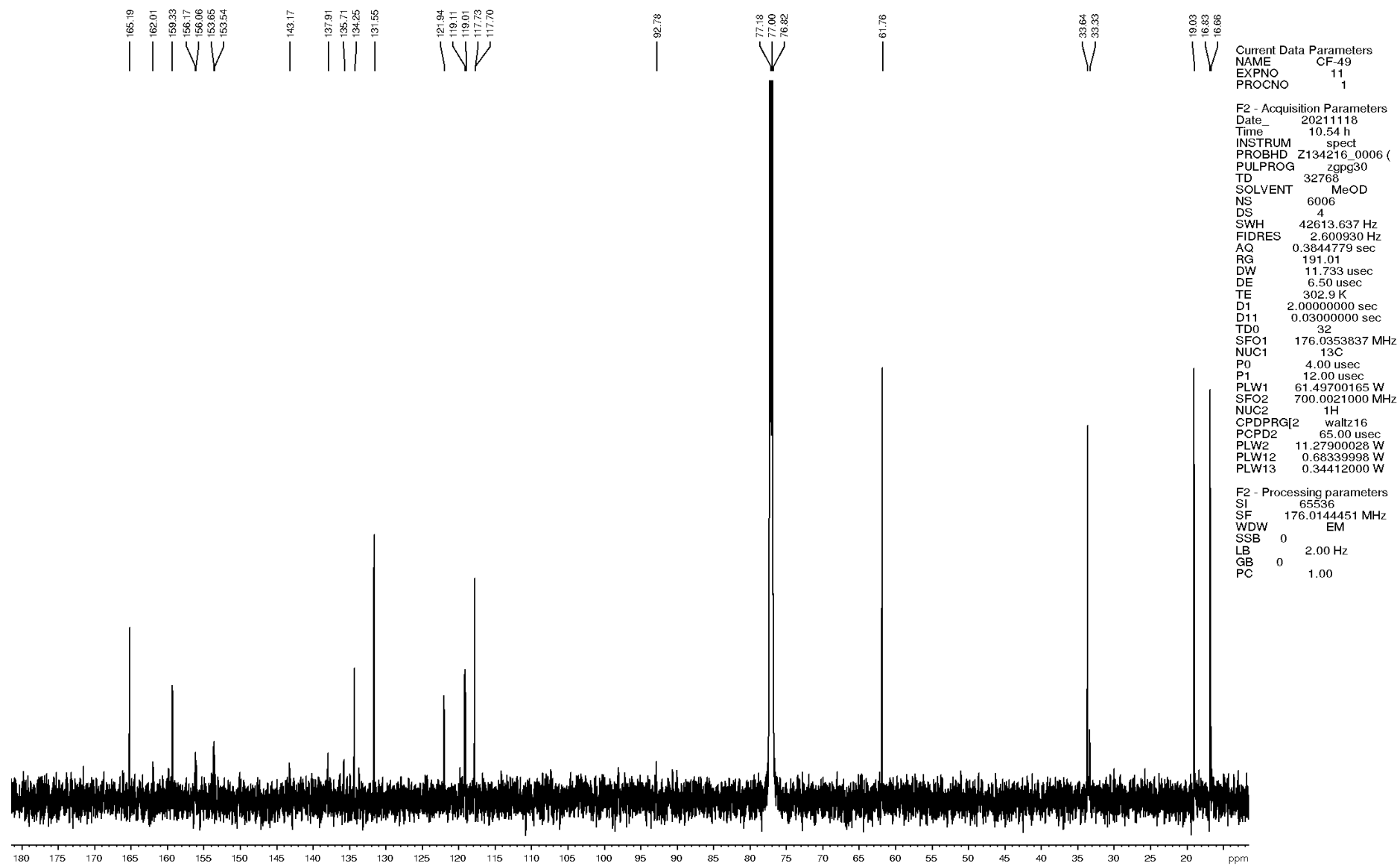


Figure S9. DEPT-135 spectrum of felicarnezoline B (2)

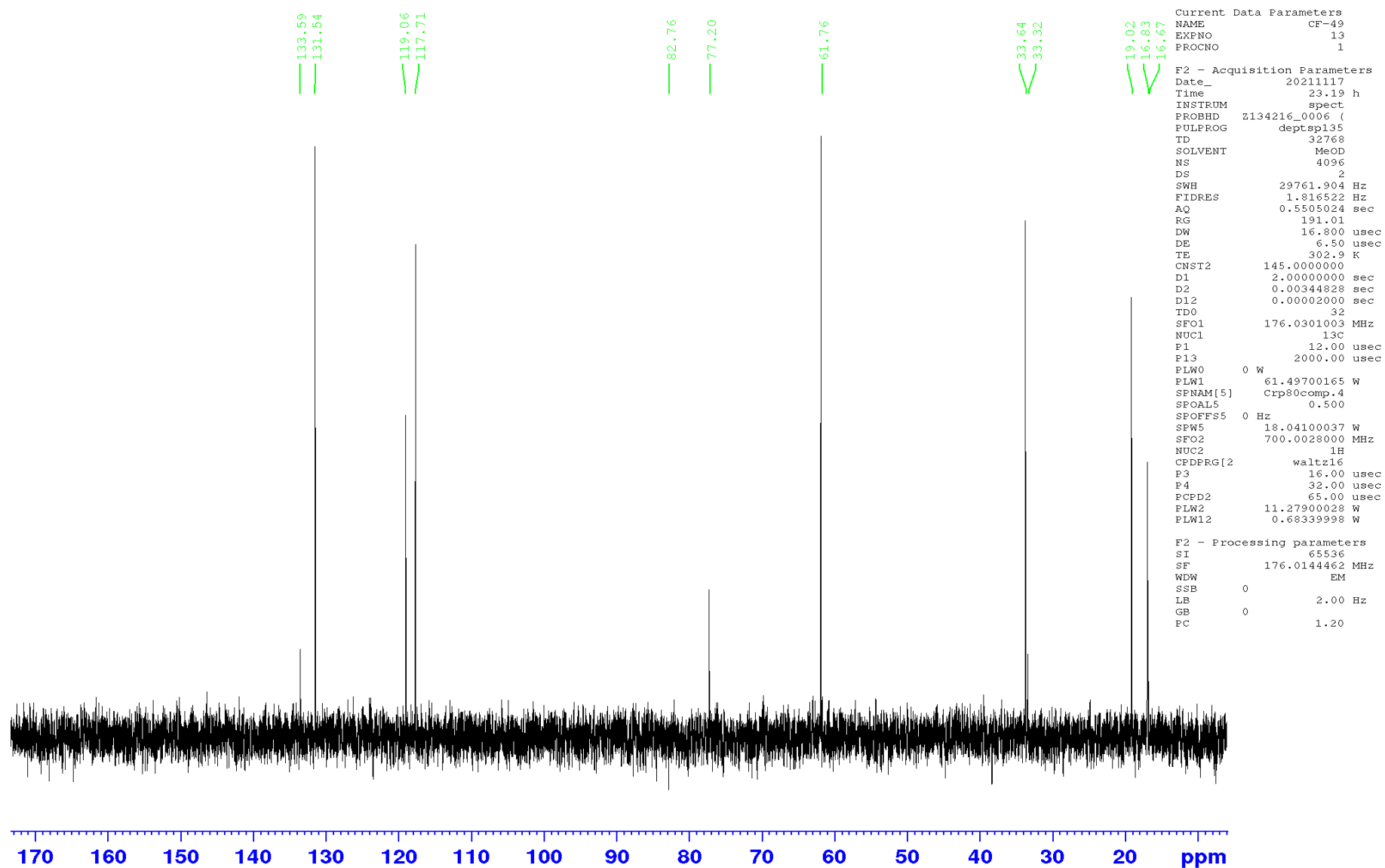


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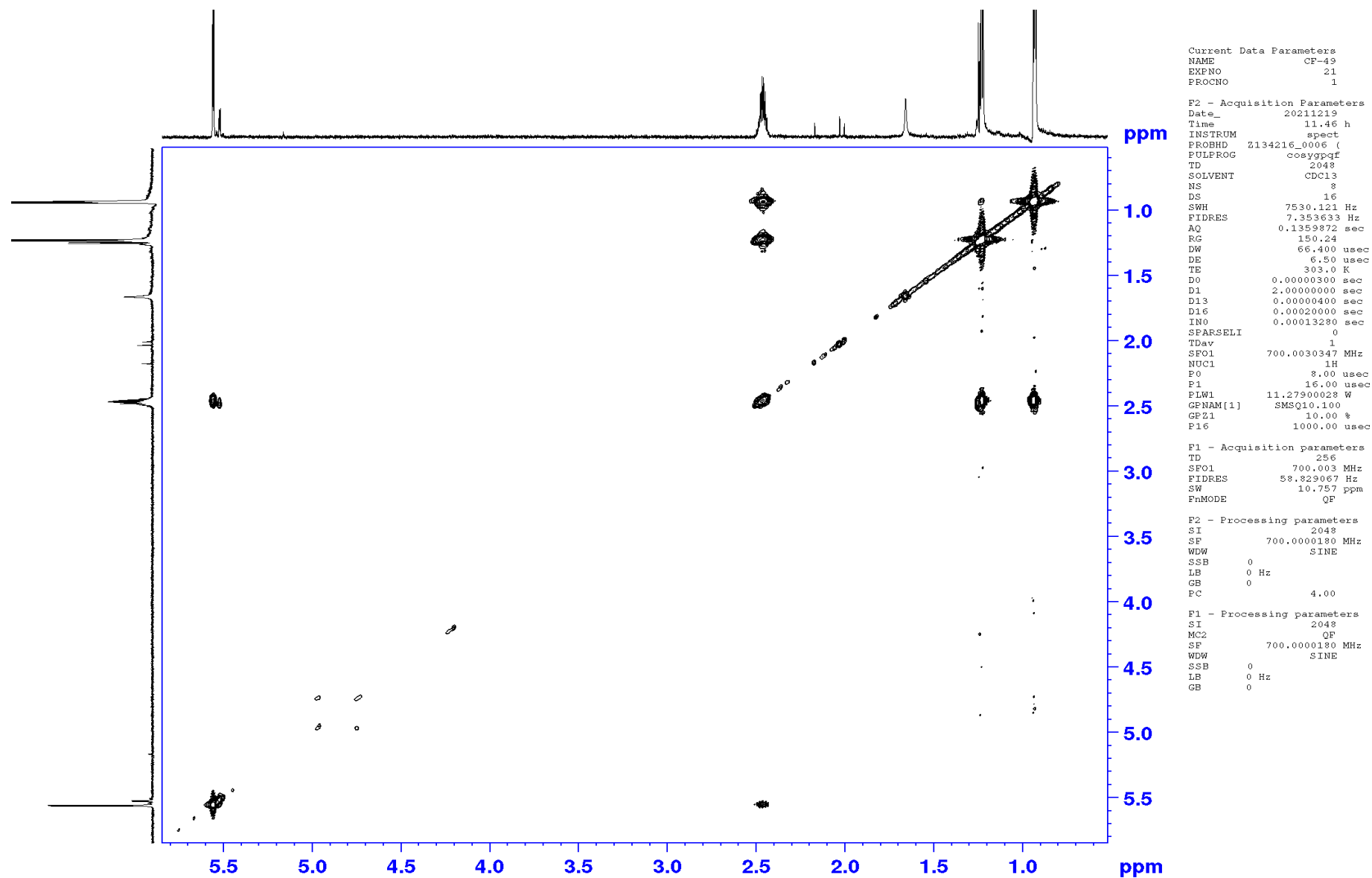


Figure S11. HSQC spectrum of felicarnezoline B (2)

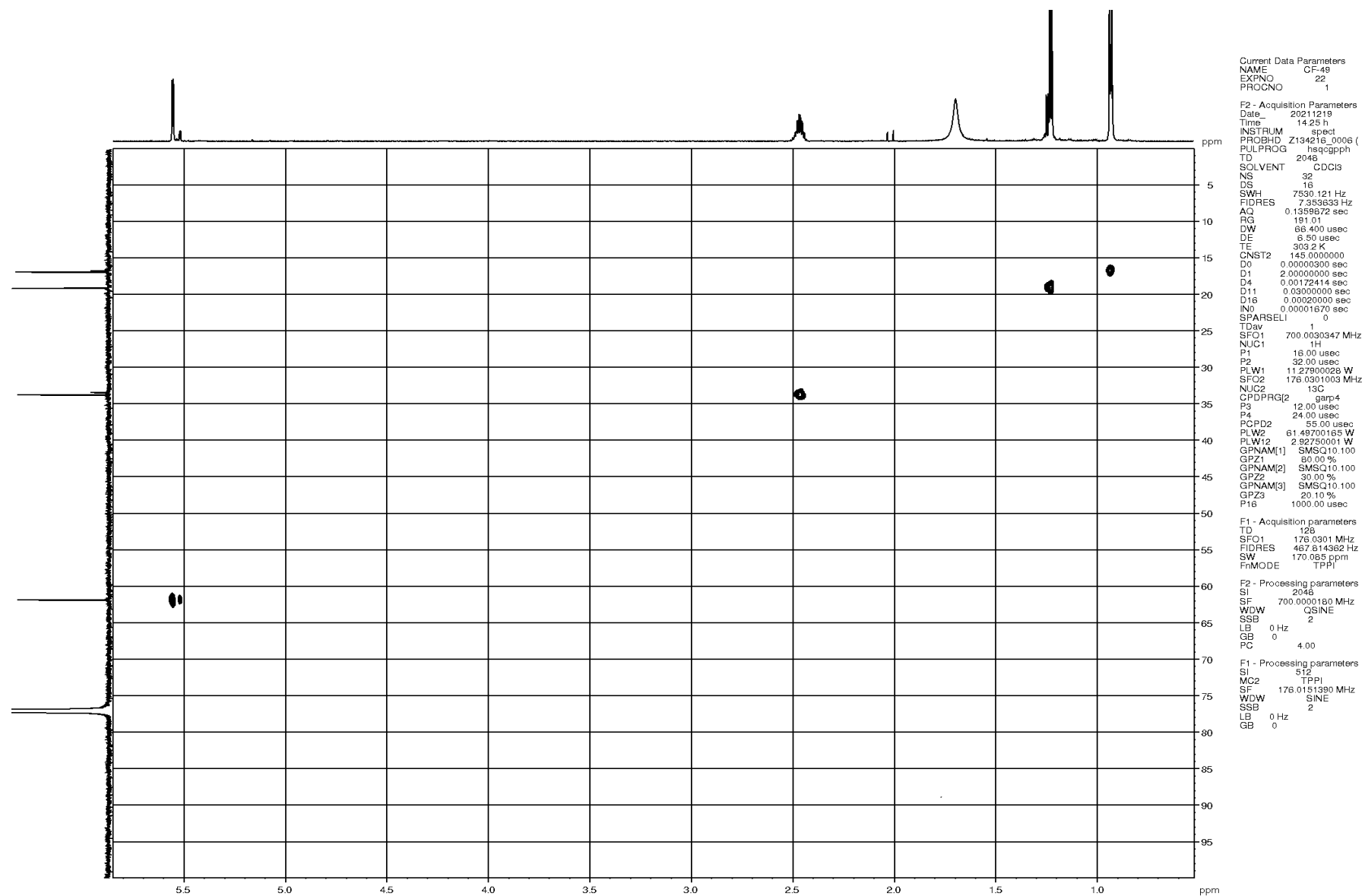


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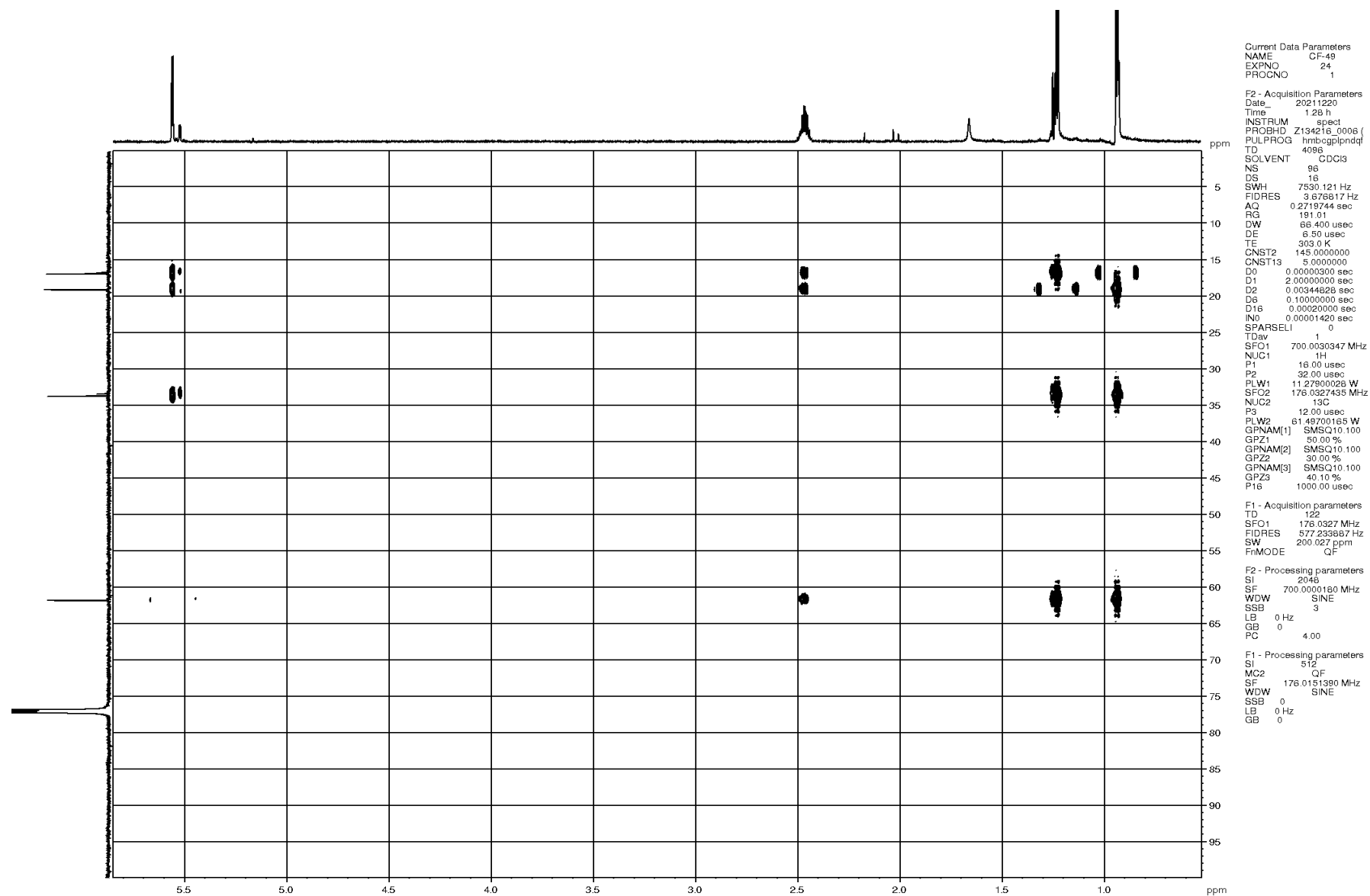


Figure S13. ROESY spectrum of felicarnezoline B (2)

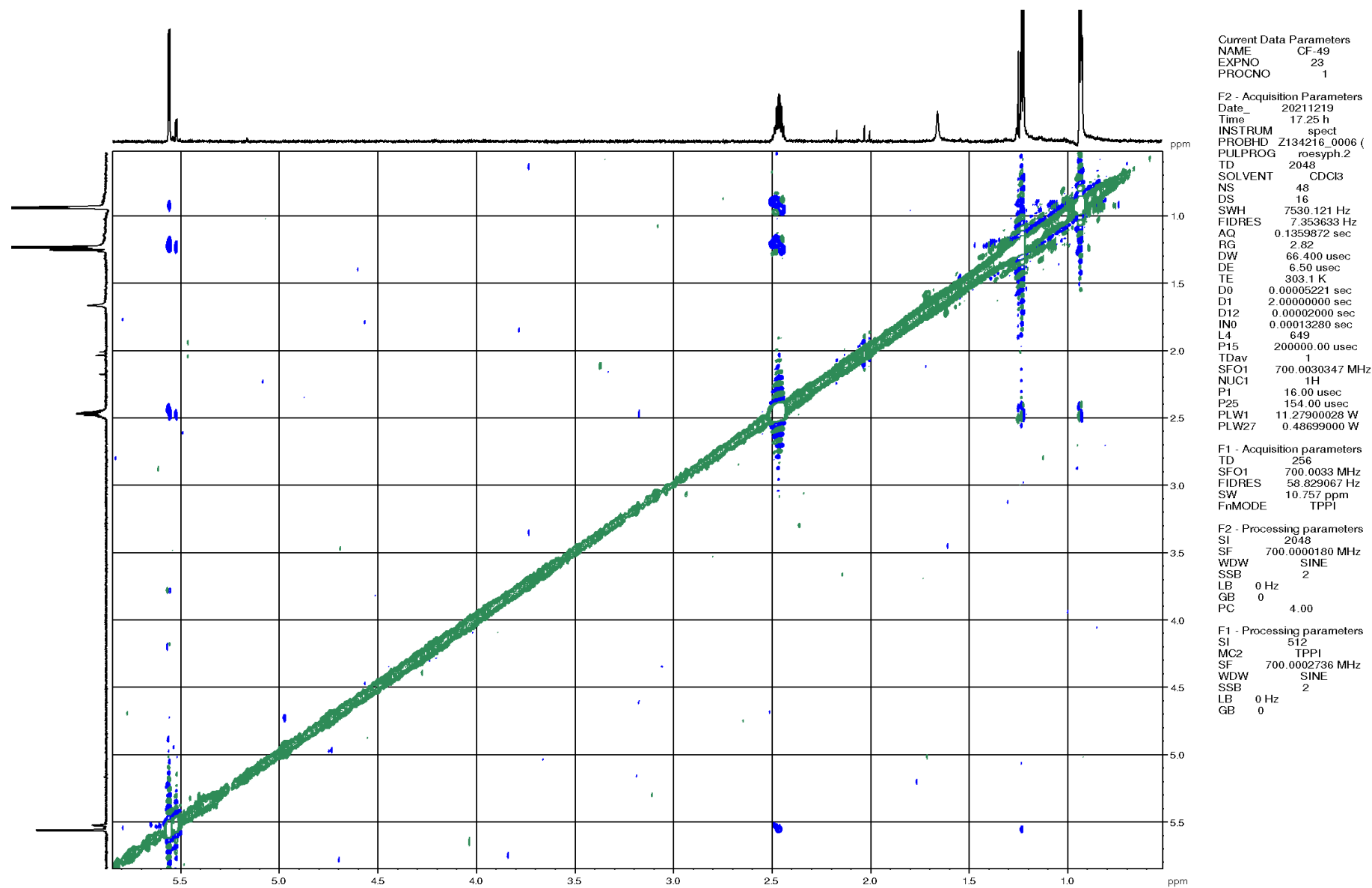
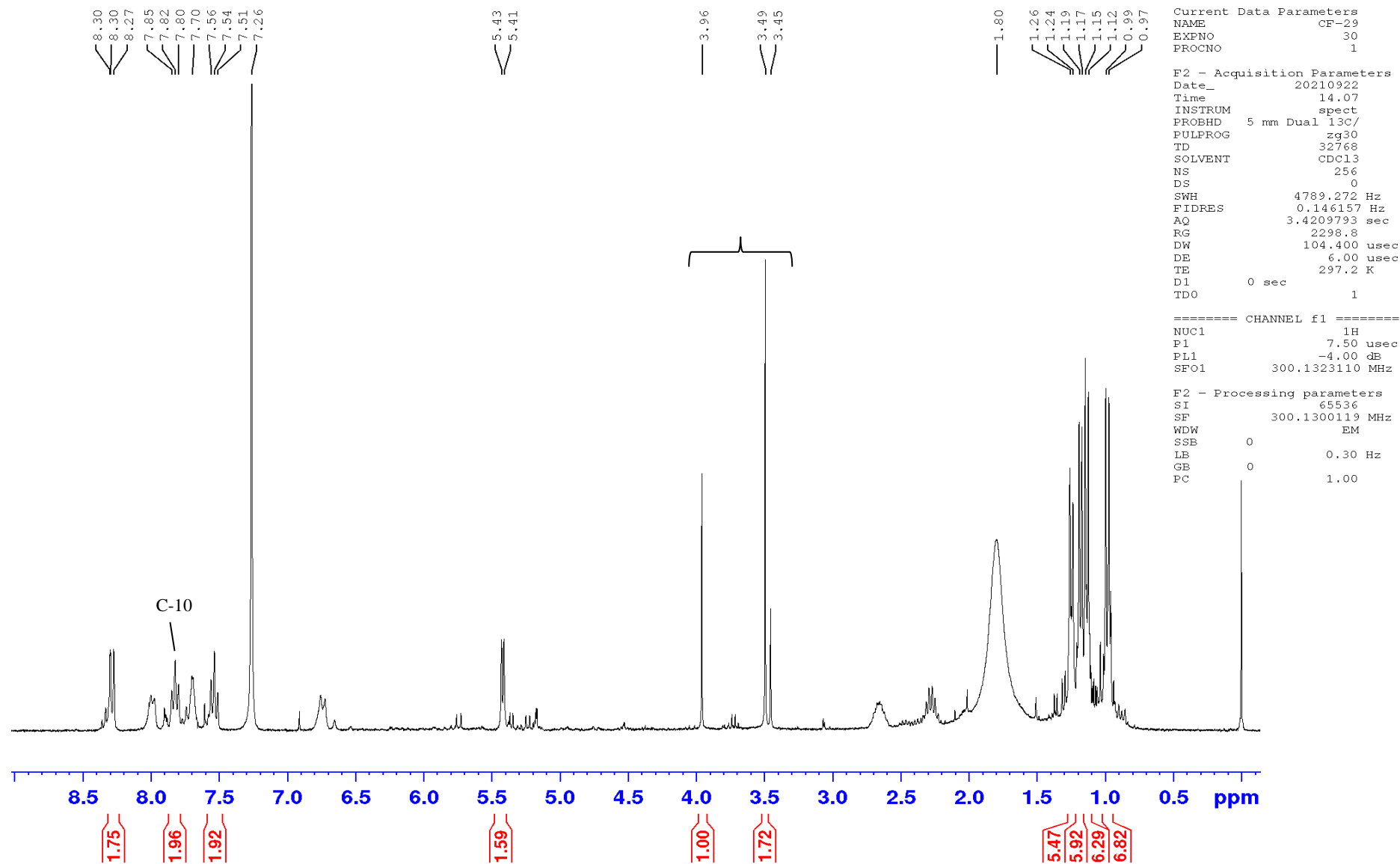
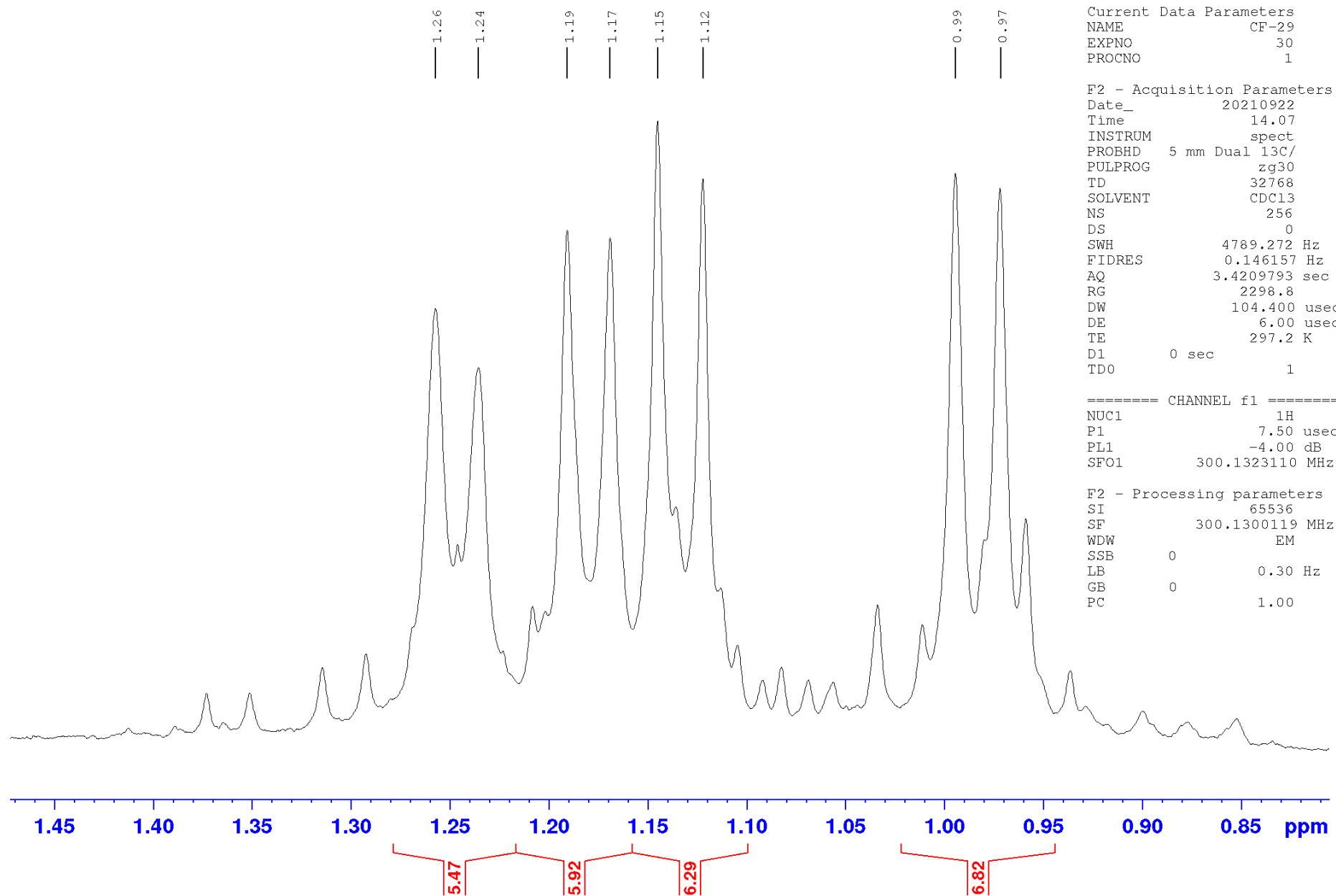
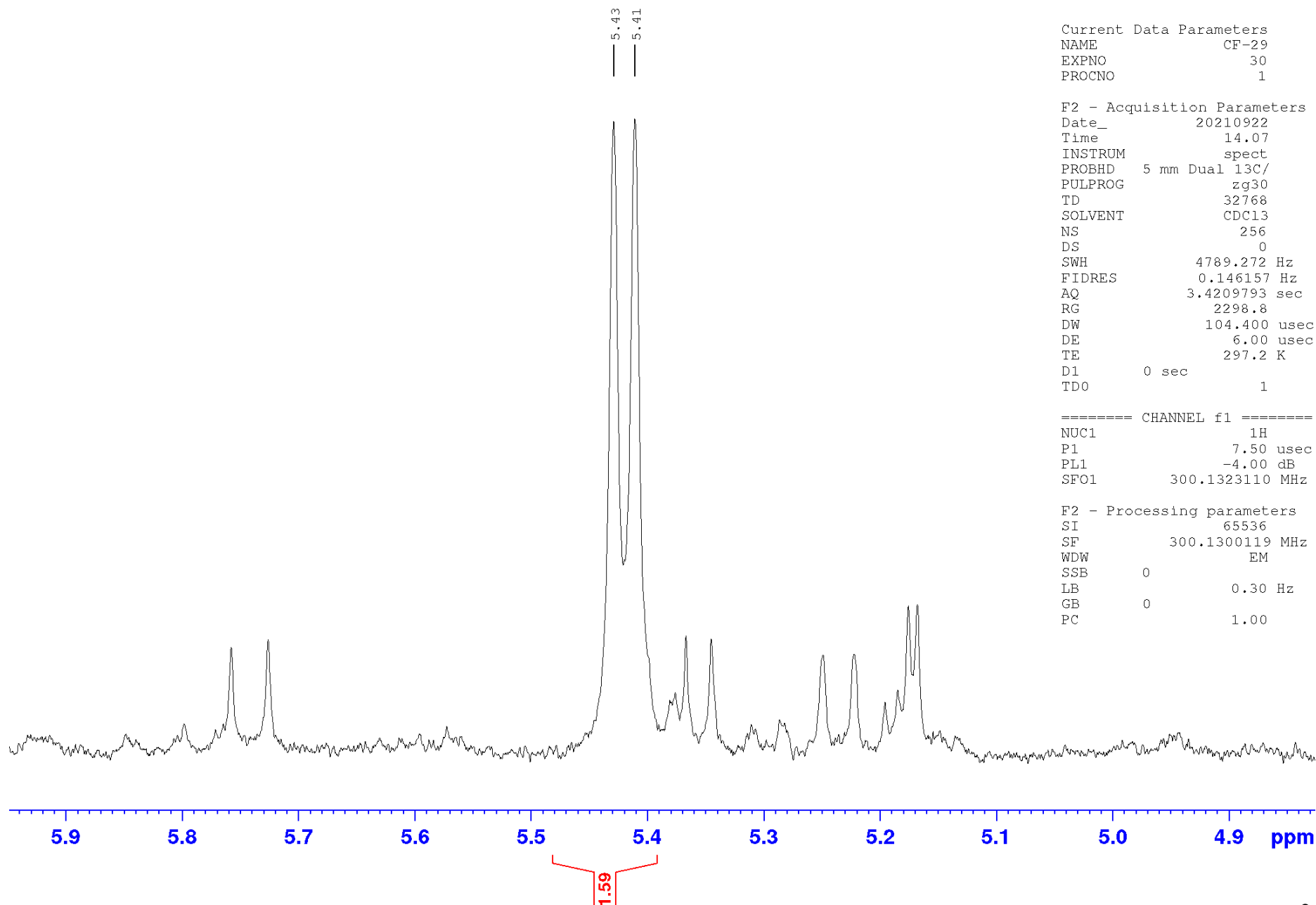
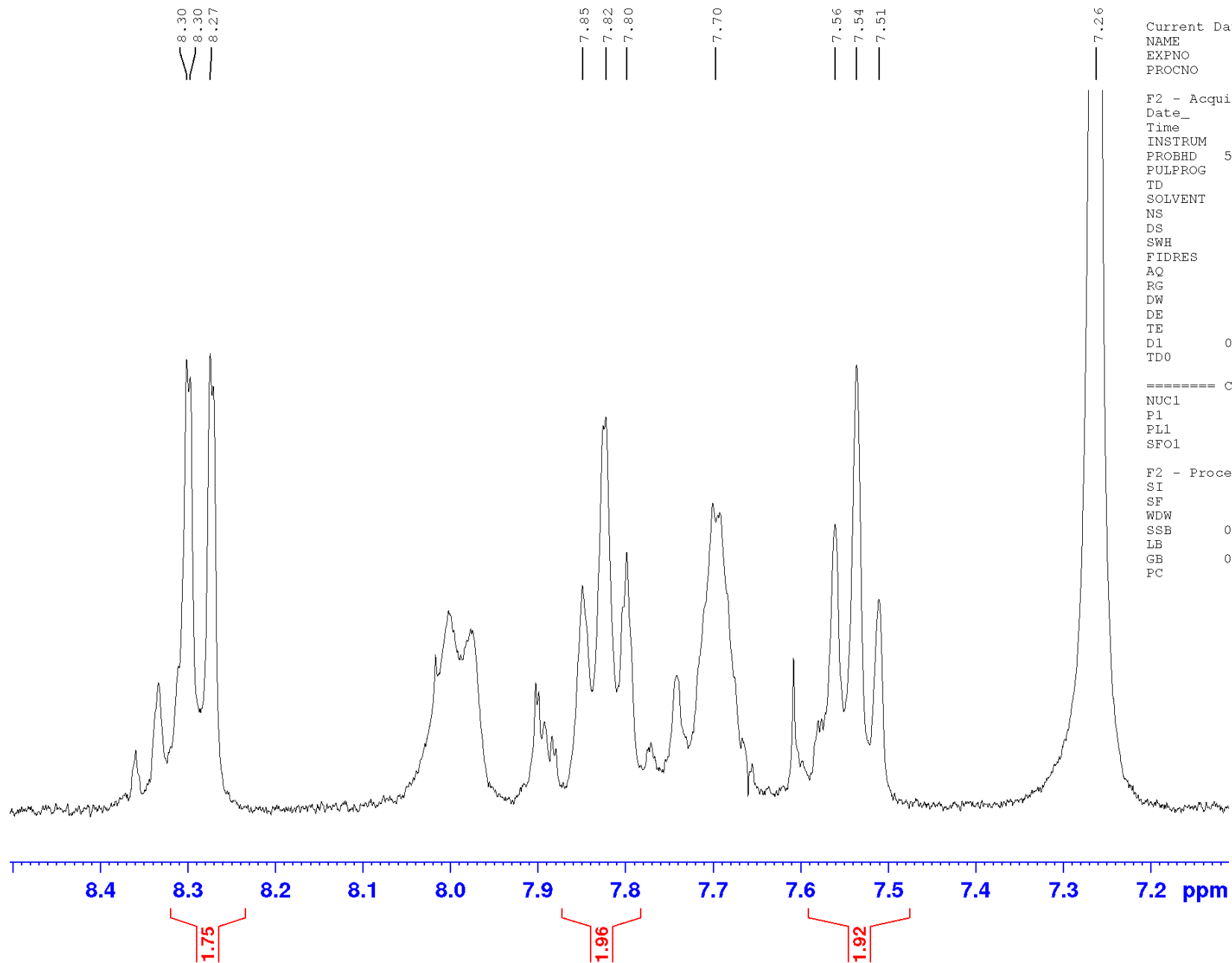


Figure S14. ¹H NMR spectrum of felicarnezoline C (3)









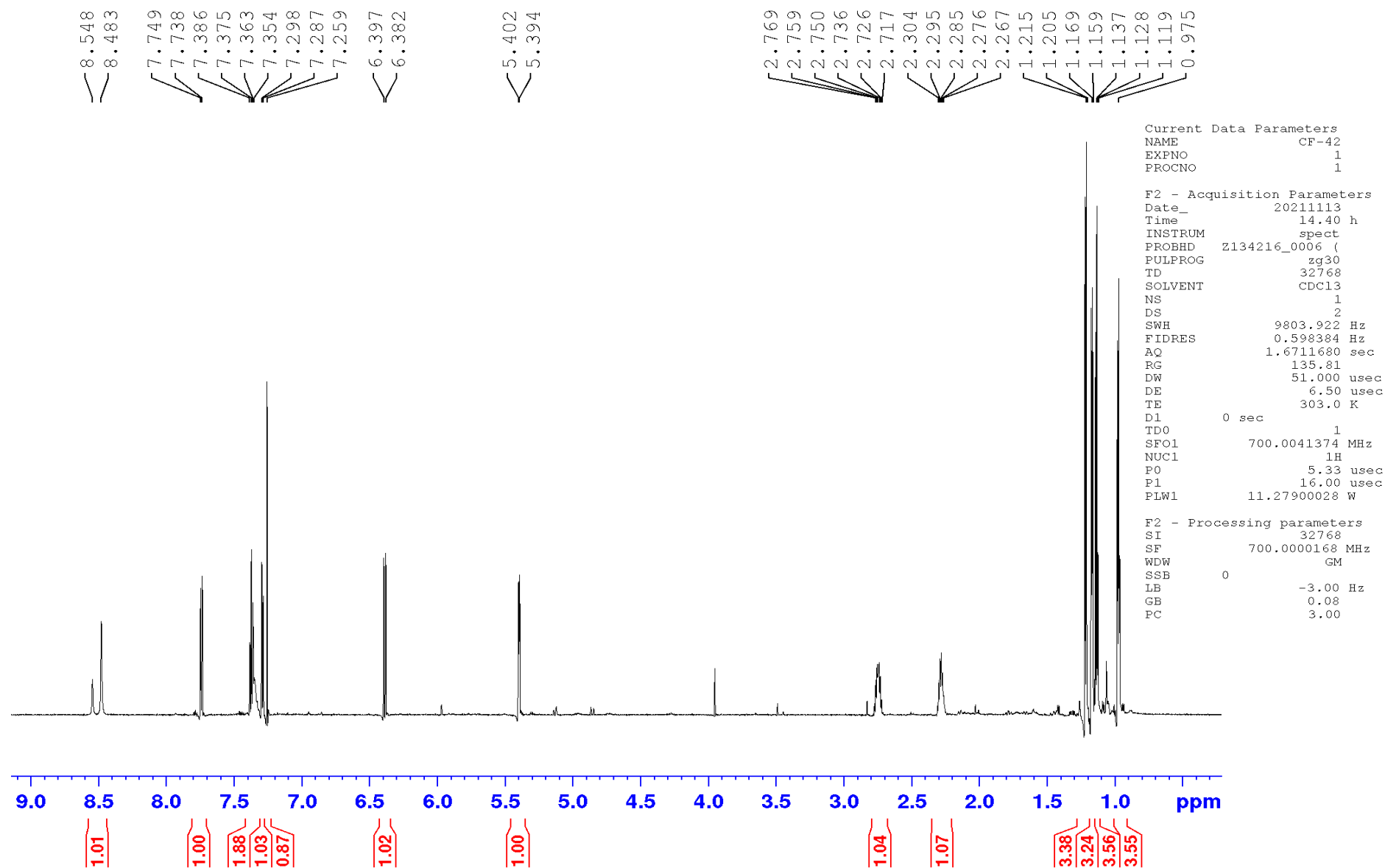
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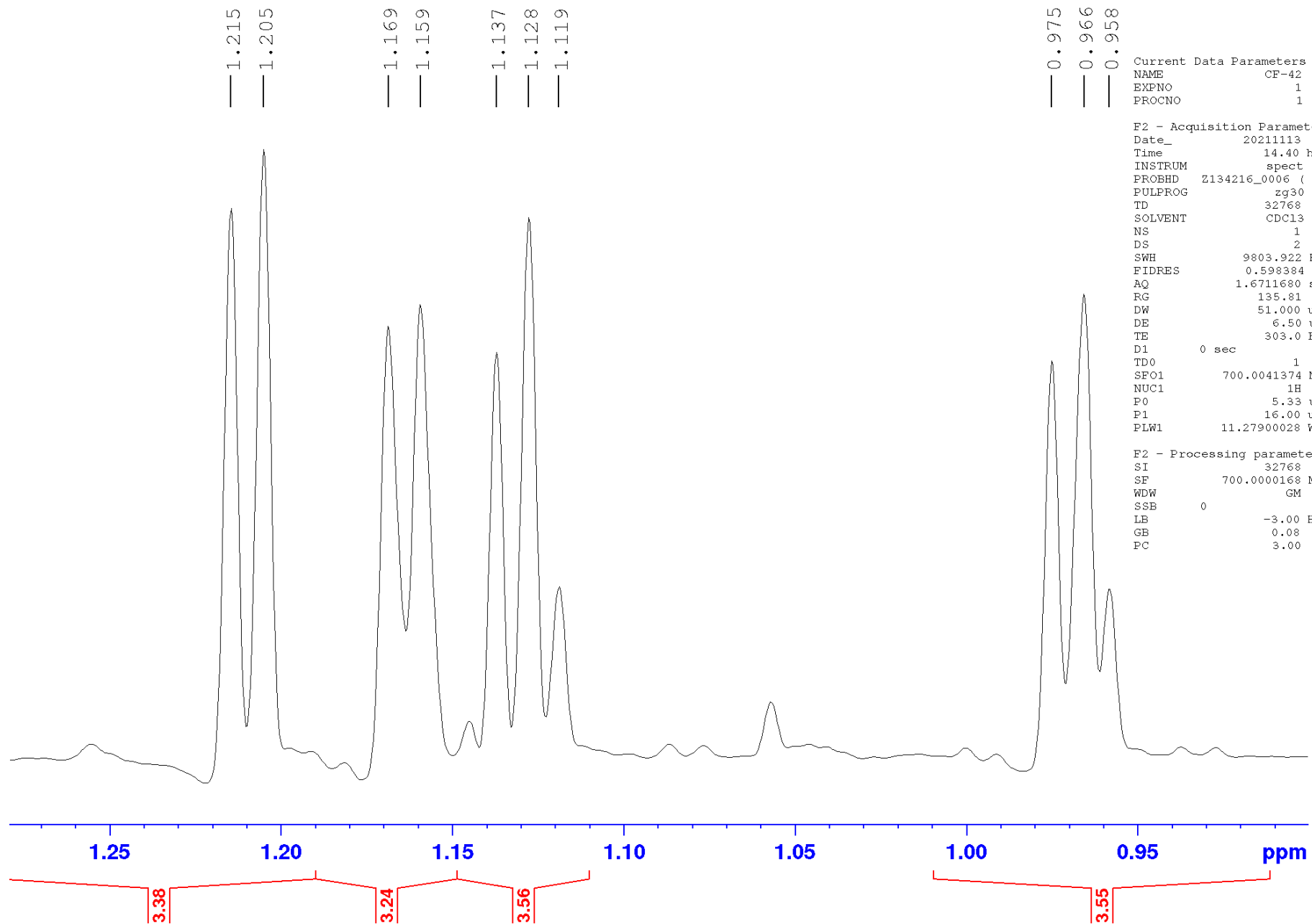
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Figure S15. ¹H NMR spectrum of felicarnezoline D (4)





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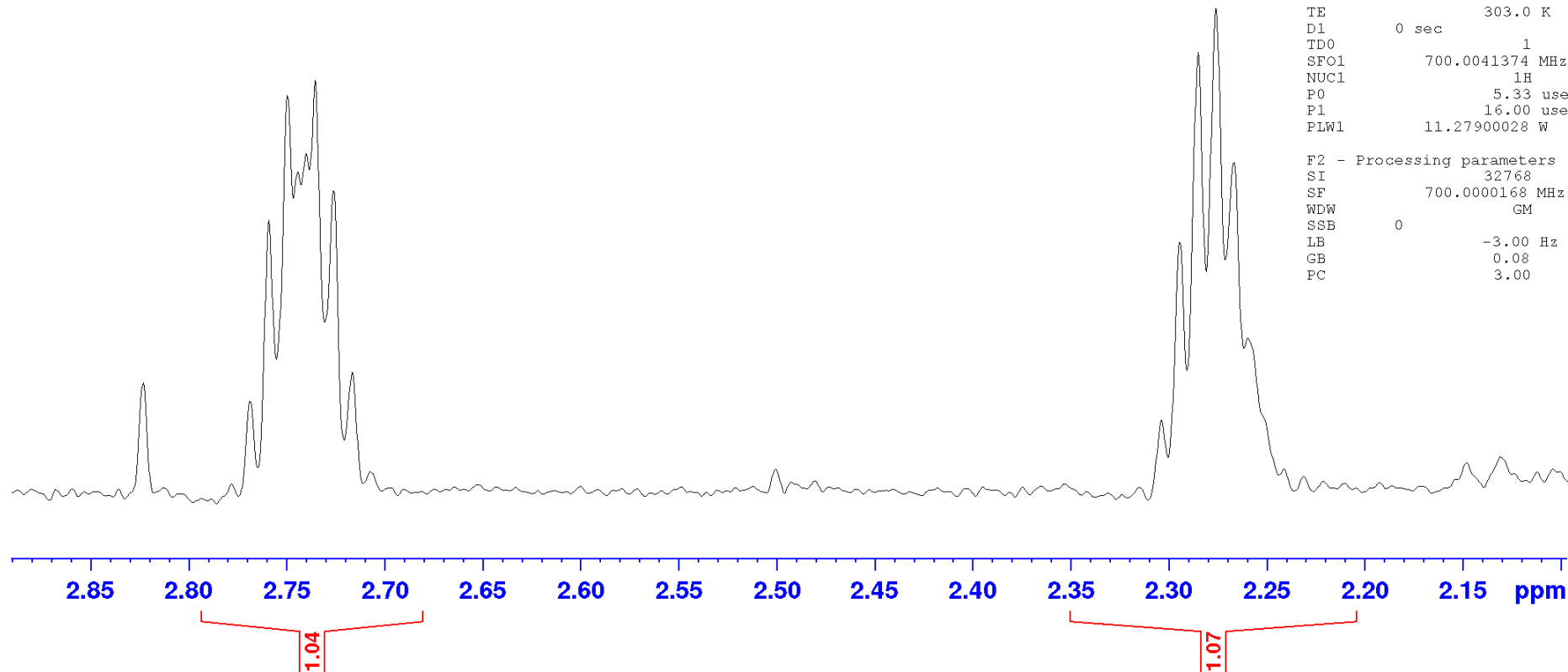
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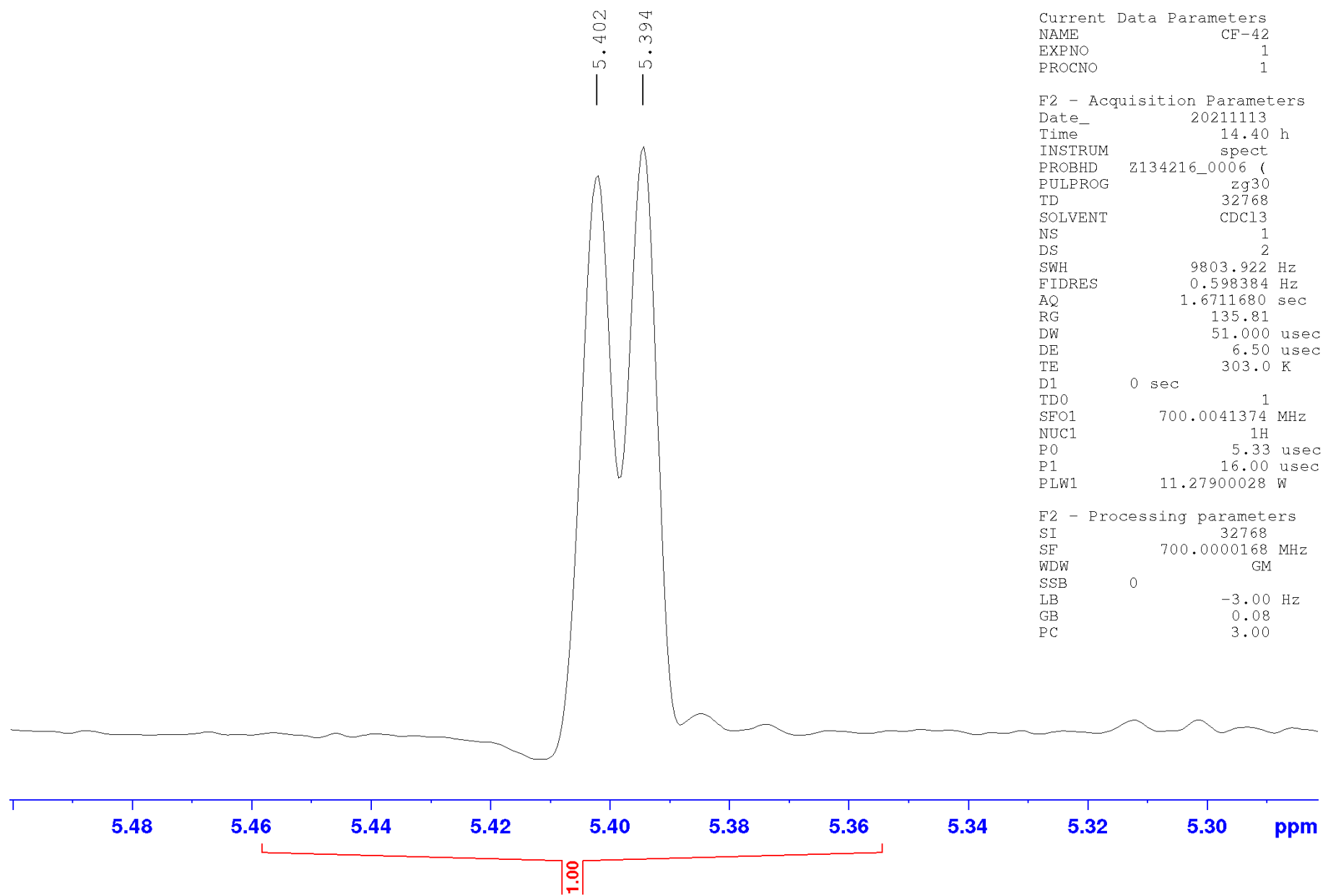
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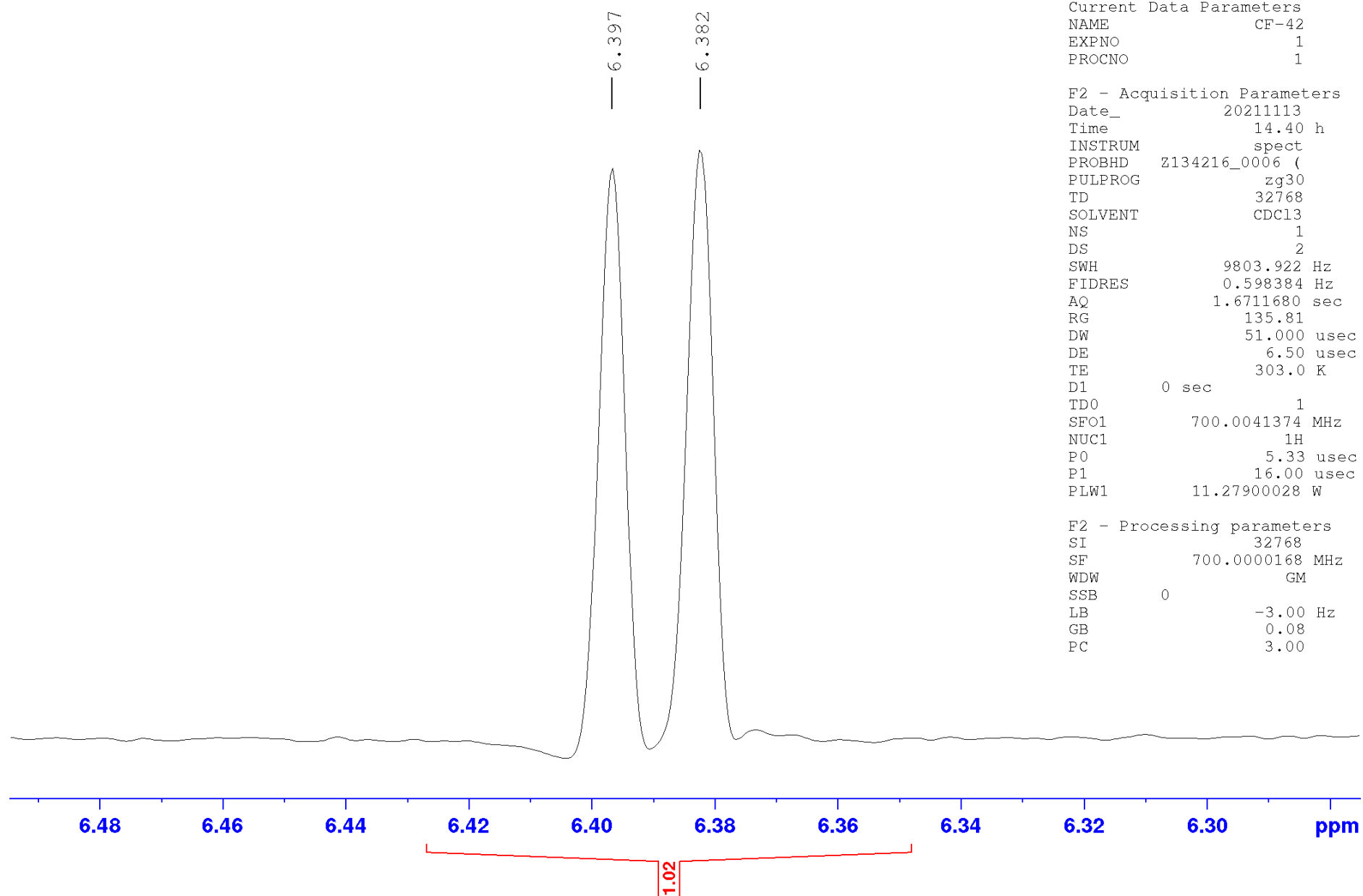
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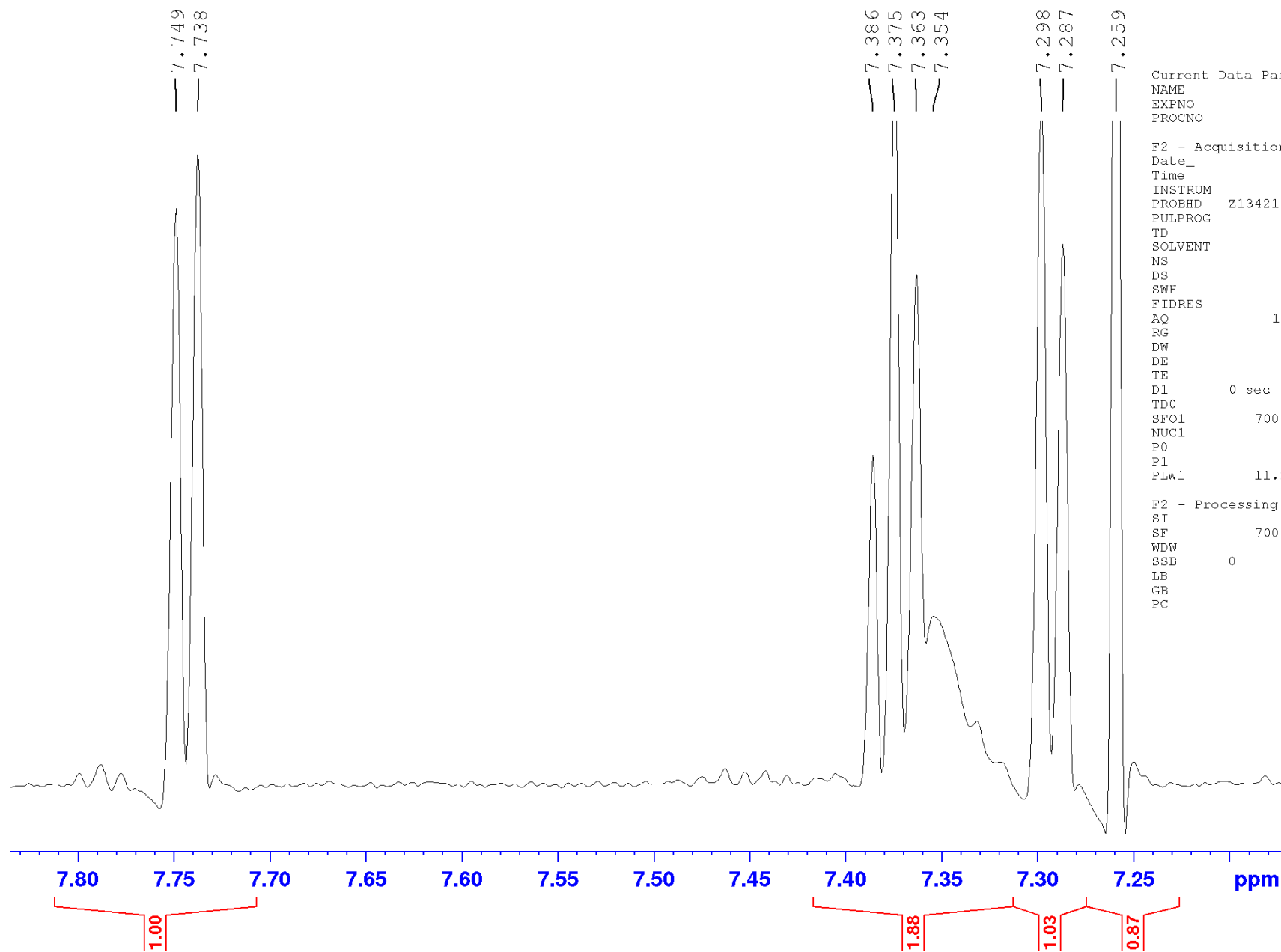
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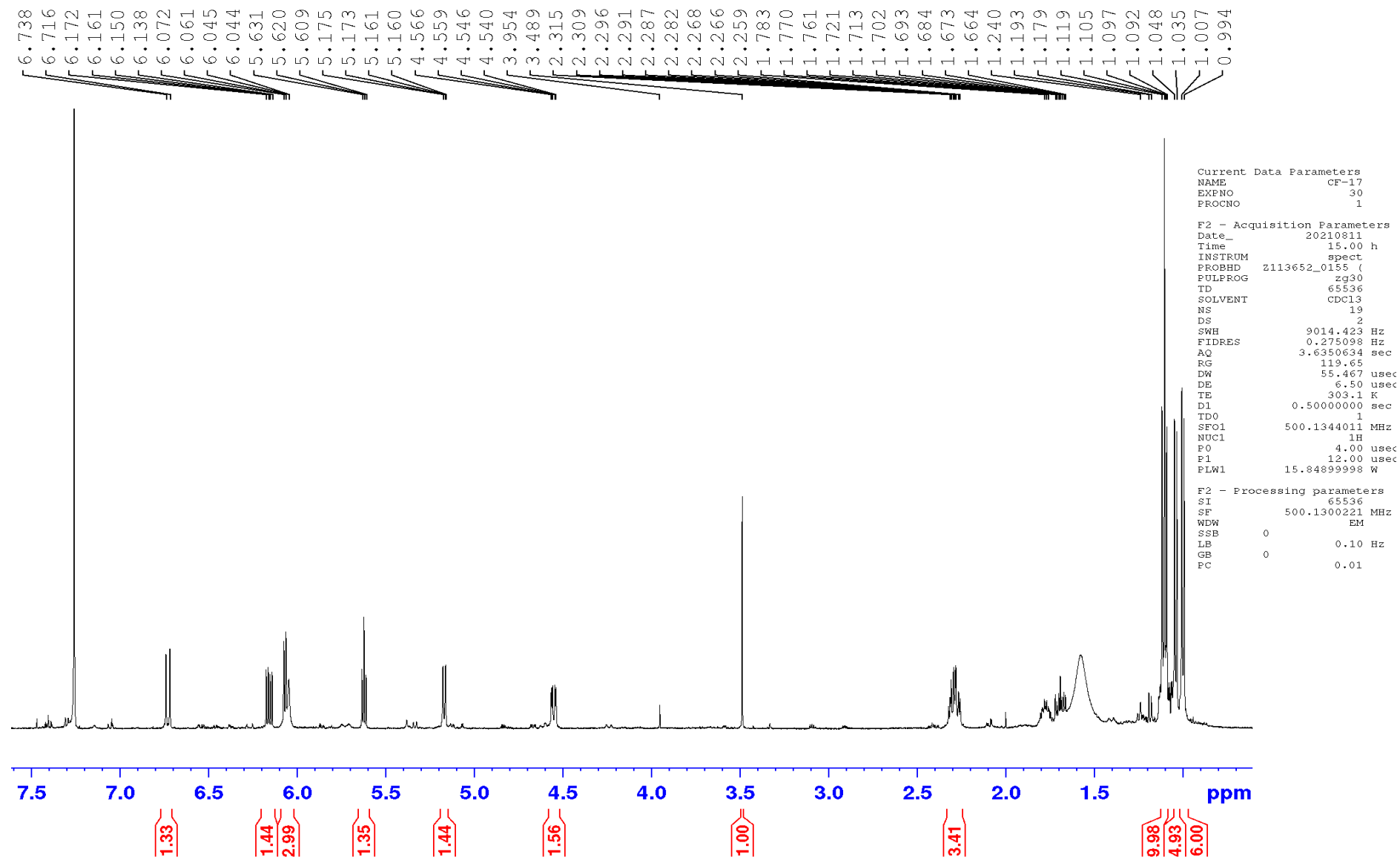


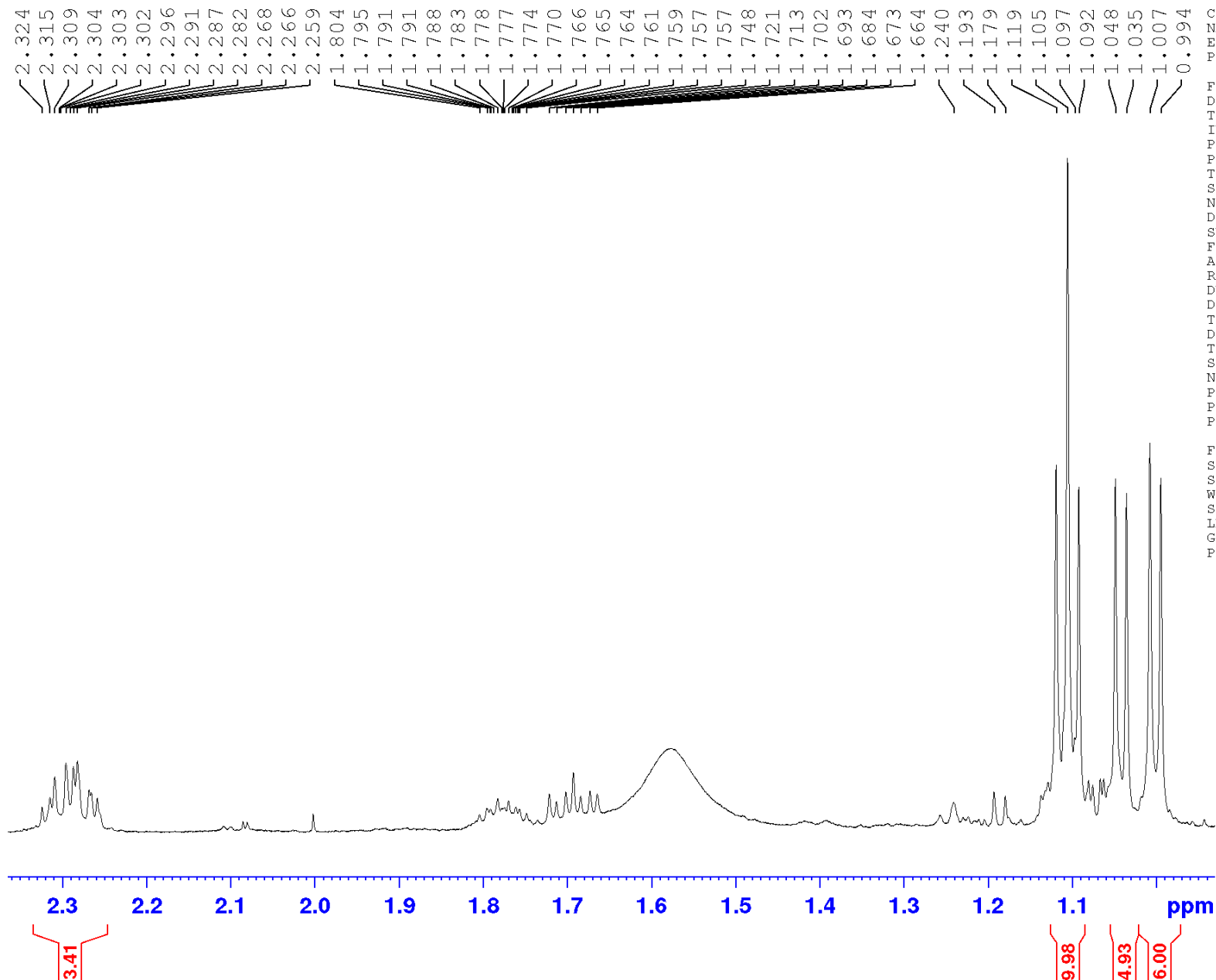
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SWH 9803.922 Hz
FIDRES 0.598384 Hz
AQ 1.6711680 sec
RG 135.81
DW 51.000 usec
DE 6.50 usec
TE 303.0 K
D1 0 sec
TD0 1
SFO1 700.0041374 MHz
NUC1 1H
P0 5.33 usec
P1 16.00 usec
PLW1 11.27900028 W

F2 - Processing parameters
SI 32768
SF 700.0000168 MHz
WDW GM
SSB 0
LB -3.00 Hz
GB 0.08
PC 3.00

Figure S16. ^1H NMR spectrum of felicarnezoline E (5)

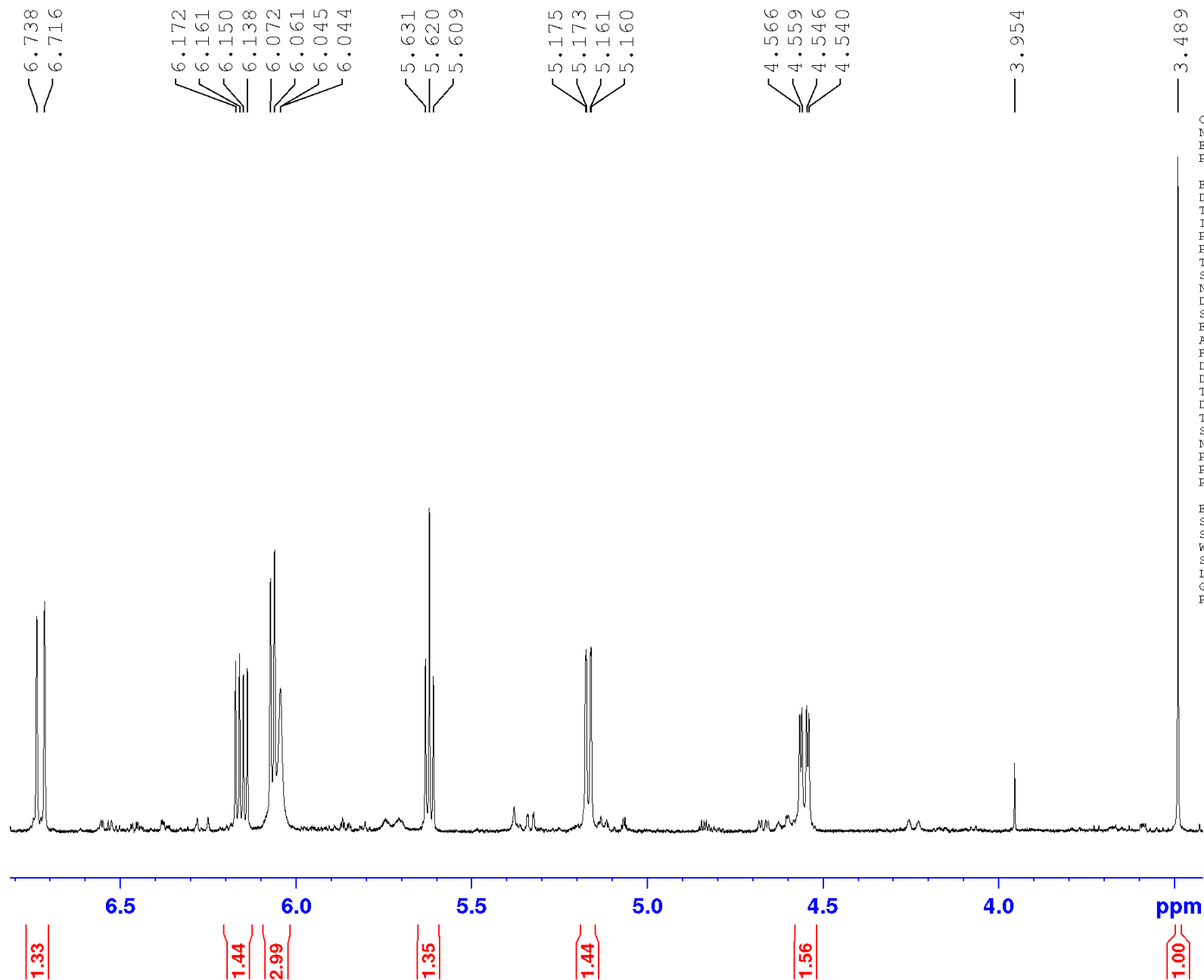




Current Data Parameters
NAME CF-17
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210811
Time 15.00 h
INSTRUM spect
PROBHD Z113652_0155 (zg30)
PULPROG zg30
TD 65536
SOLVENT CDC13
NS 19
DS 2
SWH 9014.423 Hz
FIDRES 0.275098 Hz
AQ 3.6350634 sec
RG 119.65
DW 55.467 usec
DE 6.50 usec
TE 303.1 K
D1 0.50000000 sec
TD0 1
SFO1 500.1344011 MHz
NUC1 1H
P0 4.00 usec
P1 12.00 usec
PLW1 15.84899998 W

F2 - Processing parameters
SI 65536
SF 500.1300221 MHz
WDW EM
SSB 0
LB 0.10 Hz
GB 0
PC 0.01

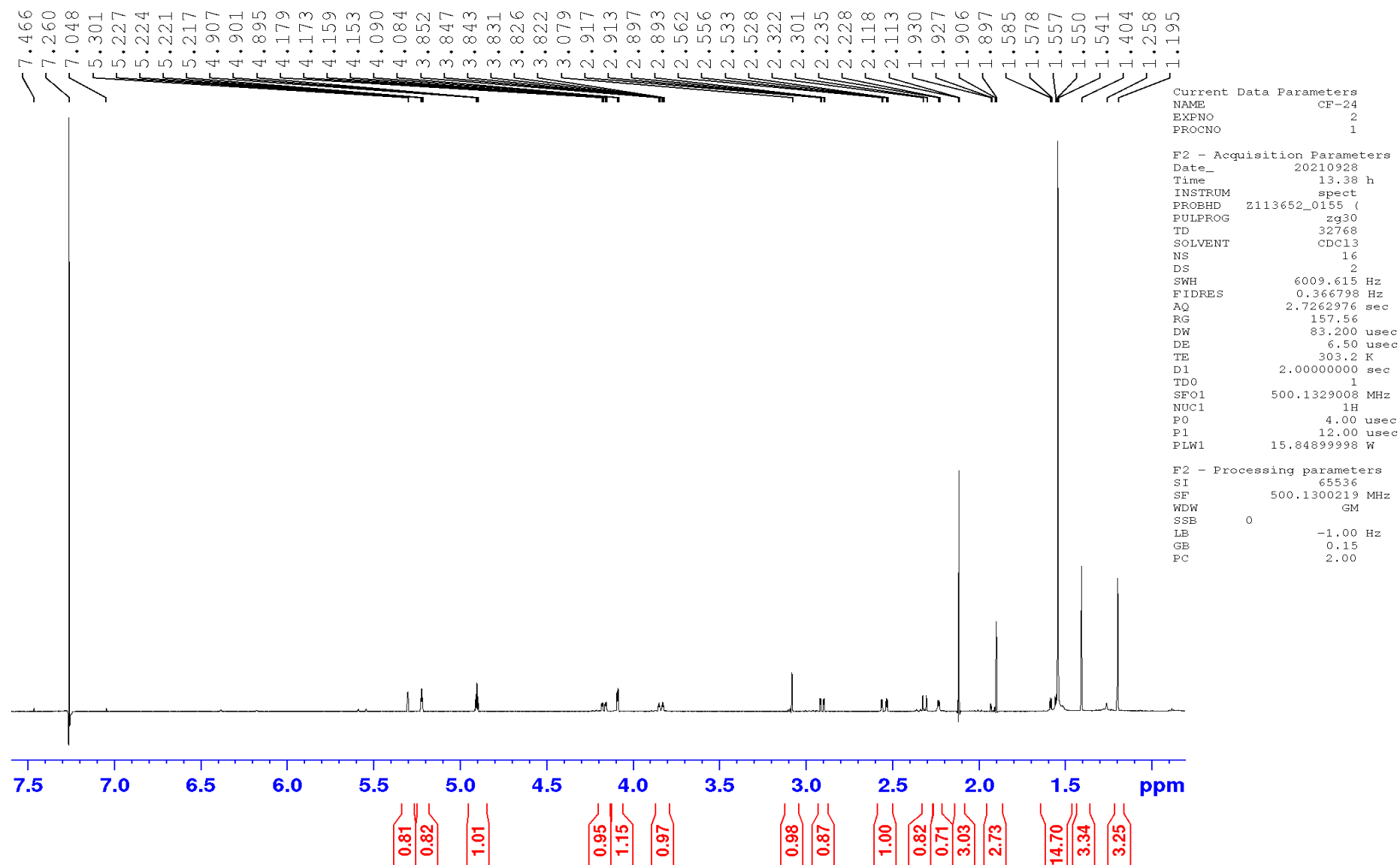


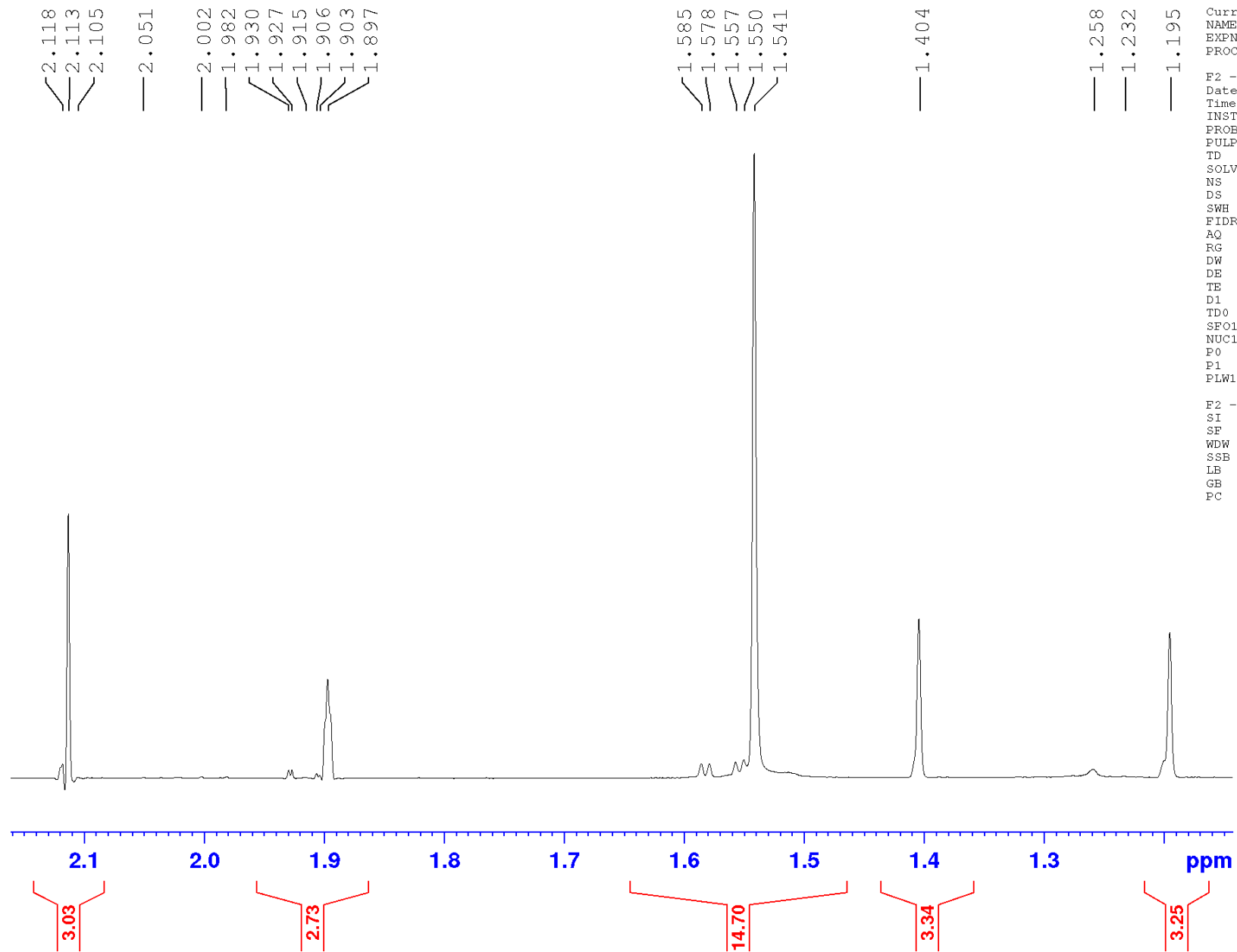
Current Data Parameters
NAME CF-17
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210811
Time 15.00 h
INSTRUM spect
PROBHD Z113652_0155 (
PULPROG zg30
TD 65536
SOLVENT CDC13
NS 19
DS 2
SWH 9014.423 Hz
FIDRES 0.275098 Hz
AQ 3.6350634 sec
RG 119.65
DW 55.467 usec
DE 6.50 usec
TE 303.1 K
D1 0.50000000 sec
TD0 1
SFO1 500.1344011 MHz
NUC1 1H
P0 4.00 usec
P1 12.00 usec
PLW1 15.84899998 W

F2 - Processing parameters
SI 65536
SF 500.1300221 MHz
WDW EM
SSB 0
LB 0.10 Hz
GB 0
PC 0.01

Figure S17. ¹H NMR spectrum of oxyrapentin M (6)

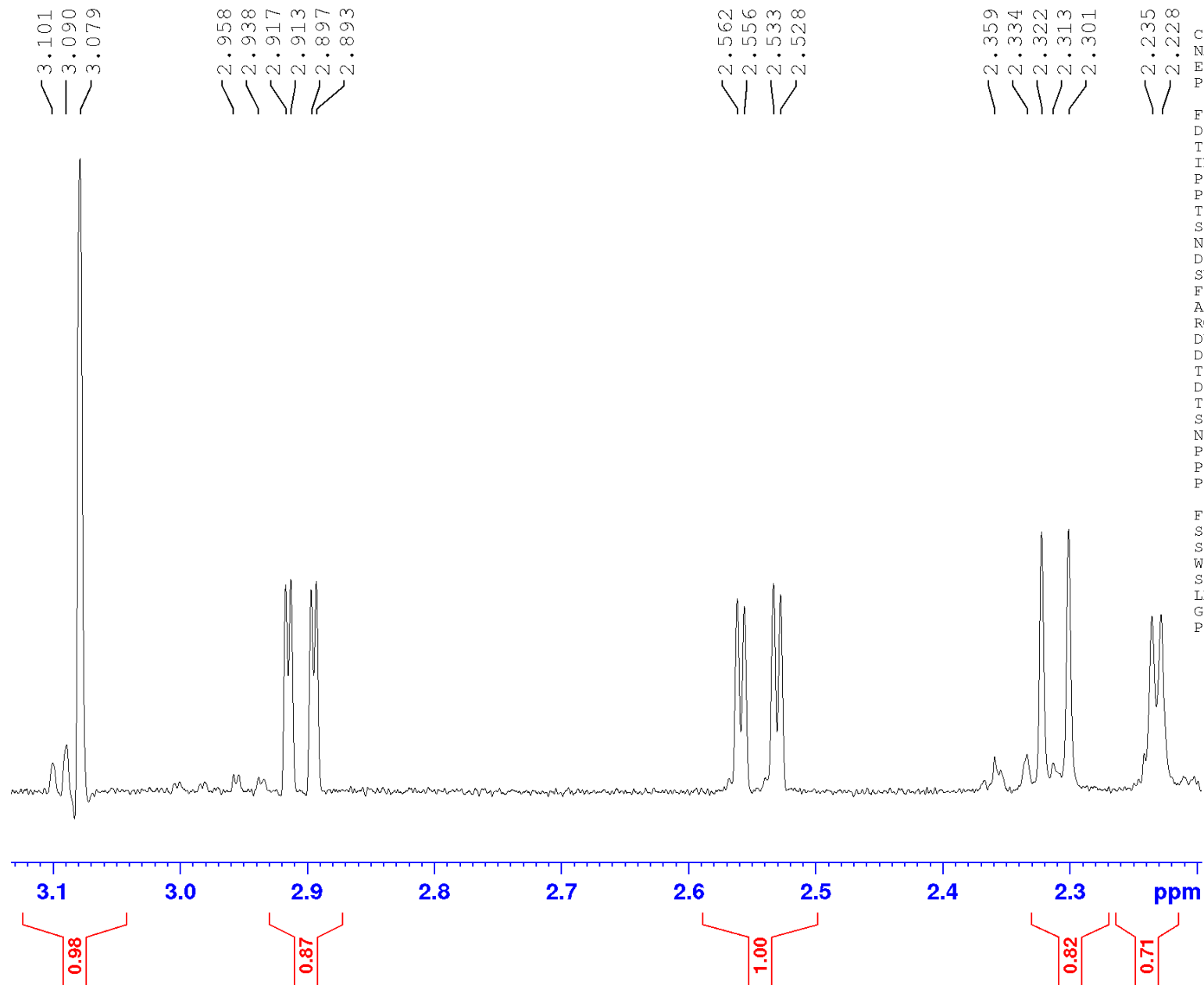




Current Data Parameters
NAME CF-24
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210928
Time 13.38 h
INSTRUM spect
PROBHD Z113652_0155 (
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 16
DS 2
SWH 6009.615 Hz
FIDRES 0.366798 Hz
AQ 2.7262976 sec
RG 157.56
DW 83.200 usec
DE 6.50 usec
TE 303.2 K
D1 2.00000000 sec
TD0 1
SFO1 500.1329008 MHz
NUC1 1H
P0 4.00 usec
P1 12.00 usec
PLW1 15.84899998 W

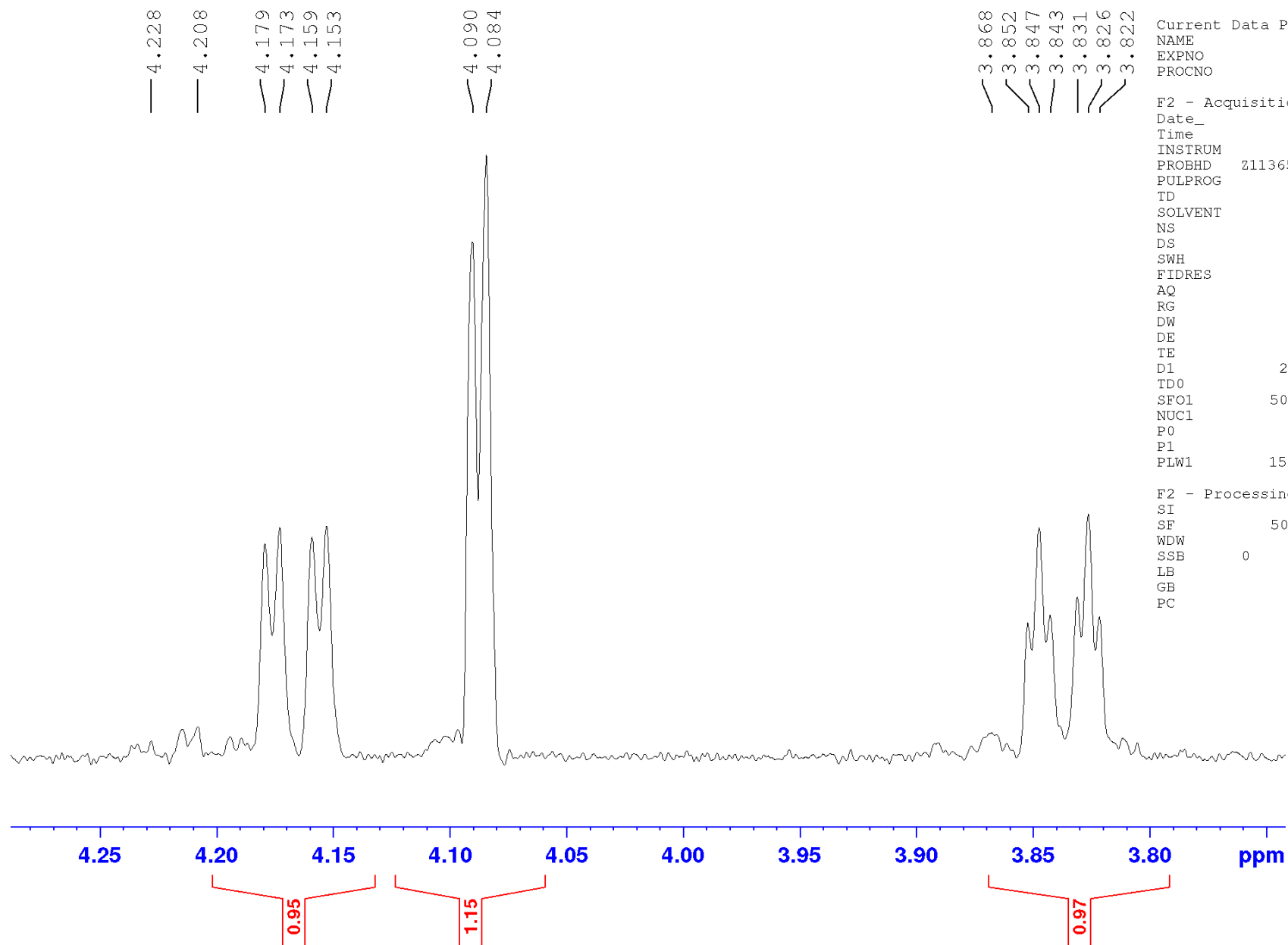
F2 - Processing parameters
SI 65536
SF 500.1300219 MHz
WDW GM
SSE 0
LB -1.00 Hz
GB 0.15
PC 2.00

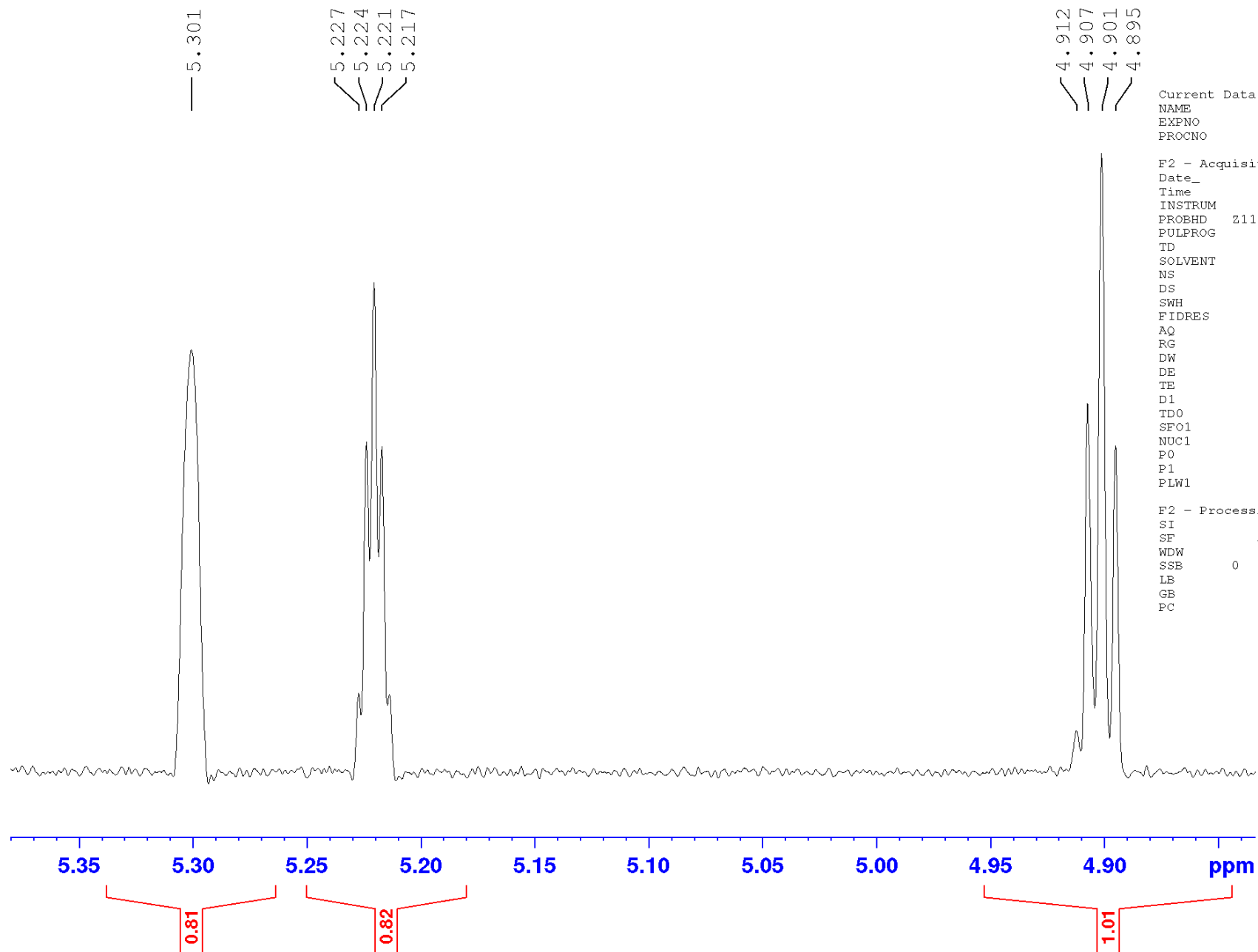


Current Data Parameters
NAME CF-24
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210928
Time 13.38 h
INSTRUM spect
PROBHD z113652_0155 (
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 16
DS 2
SWH 6009.615 Hz
FIDRES 0.366798 Hz
AQ 2.7262976 sec
RG 157.56
DW 83.200 usec
DE 6.50 usec
TE 303.2 K
D1 2.00000000 sec
TD0 1
SFO1 500.1329008 MHz
NUC1 1H
P0 4.00 usec
P1 12.00 usec
PLW1 15.84899998 W

F2 - Processing parameters
SI 65536
SF 500.1300219 MHz
WDW GM
SSB 0
LB -1.00 Hz
GB 0.15
PC 2.00





Current Data Parameters
NAME CF-24
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210928
Time 13.38 h
INSTRUM spect
PROBHD Z113652_0155 (
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 16
DS 2
SWH 6009.615 Hz
FIDRES 0.366798 Hz
AQ 2.7262976 sec
RG 157.56
DW 83.200 usec
DE 6.50 usec
TE 303.2 K
D1 2.00000000 sec
TD0 1
SF01 500.1329008 MHz
NUC1 1H
P0 4.00 usec
P1 12.00 usec
PLW1 15.84899998 W

F2 - Processing parameters
SI 65536
SF 500.1300219 MHz
WDW GM
SSB 0
LB -1.00 Hz
GB 0.15
PC 2.00

Figure S18. ^{13}C NMR spectrum of oxypentini M (6)

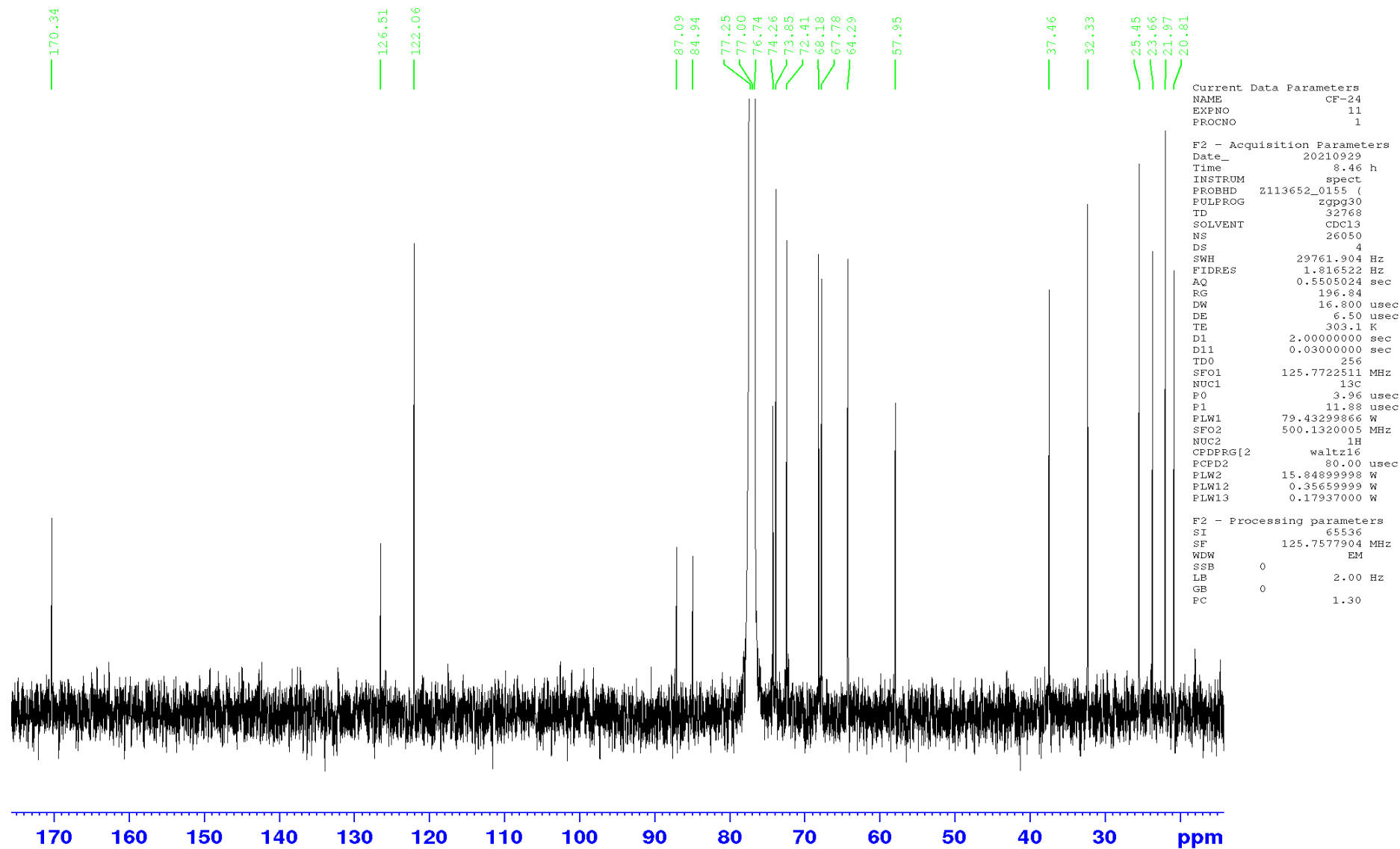


Figure S19. DEPT-135 spectrum of oxyrapentin M (6)

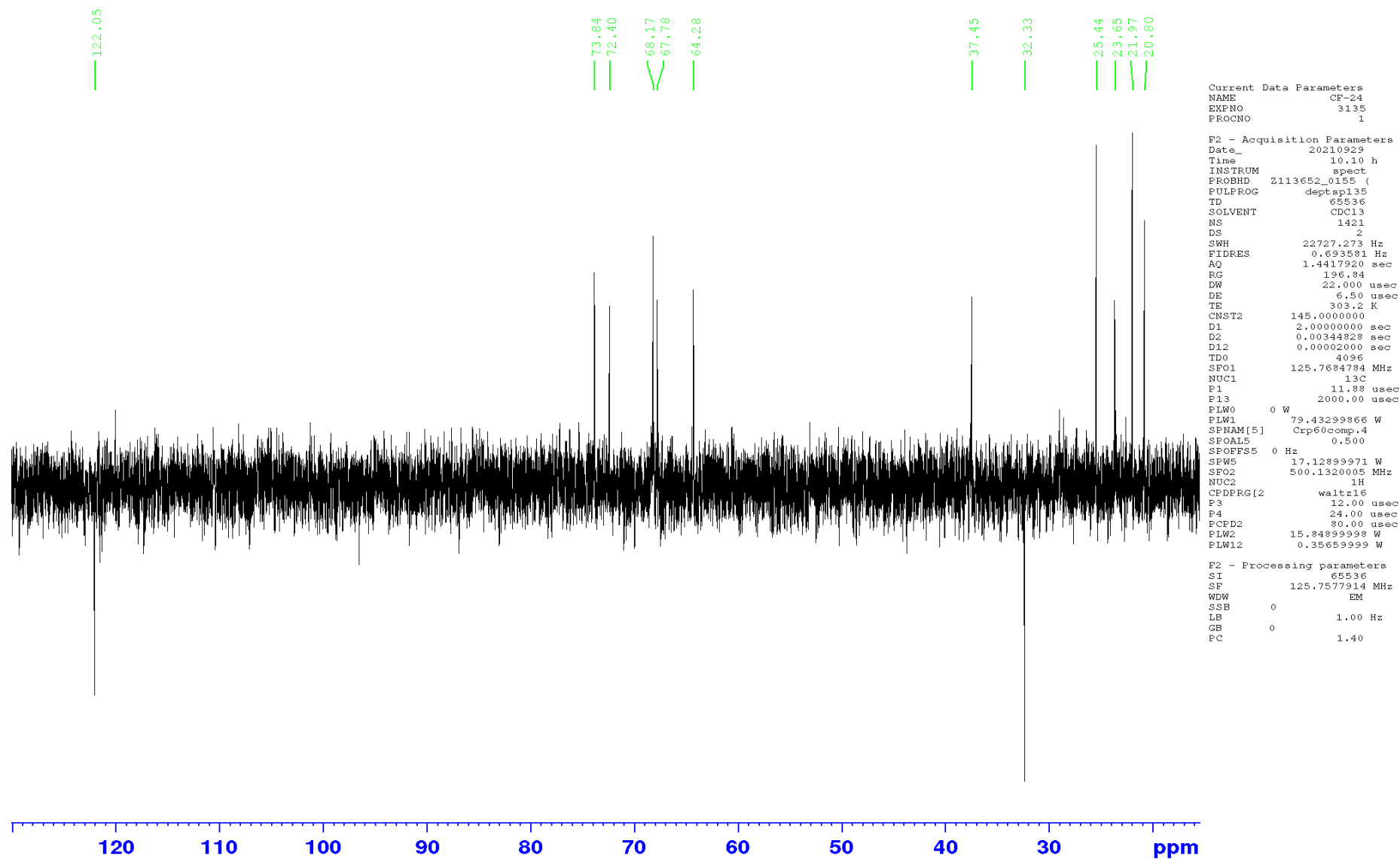


Figure S20. ^1H - ^1H COSY spectrum of oxyrapentin M (6)

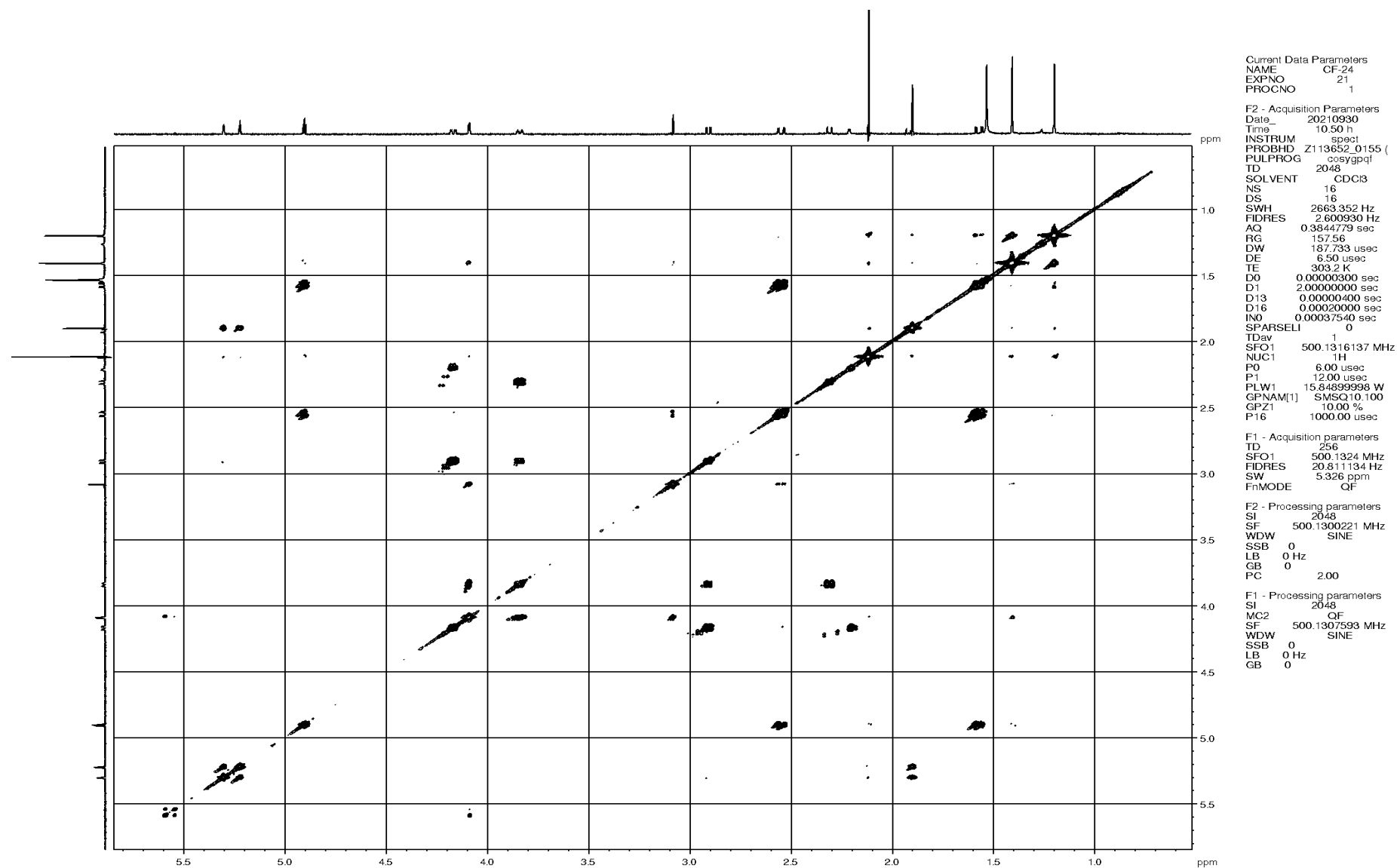


Figure S21. HSQC spectrum of oxypentatin M (6)

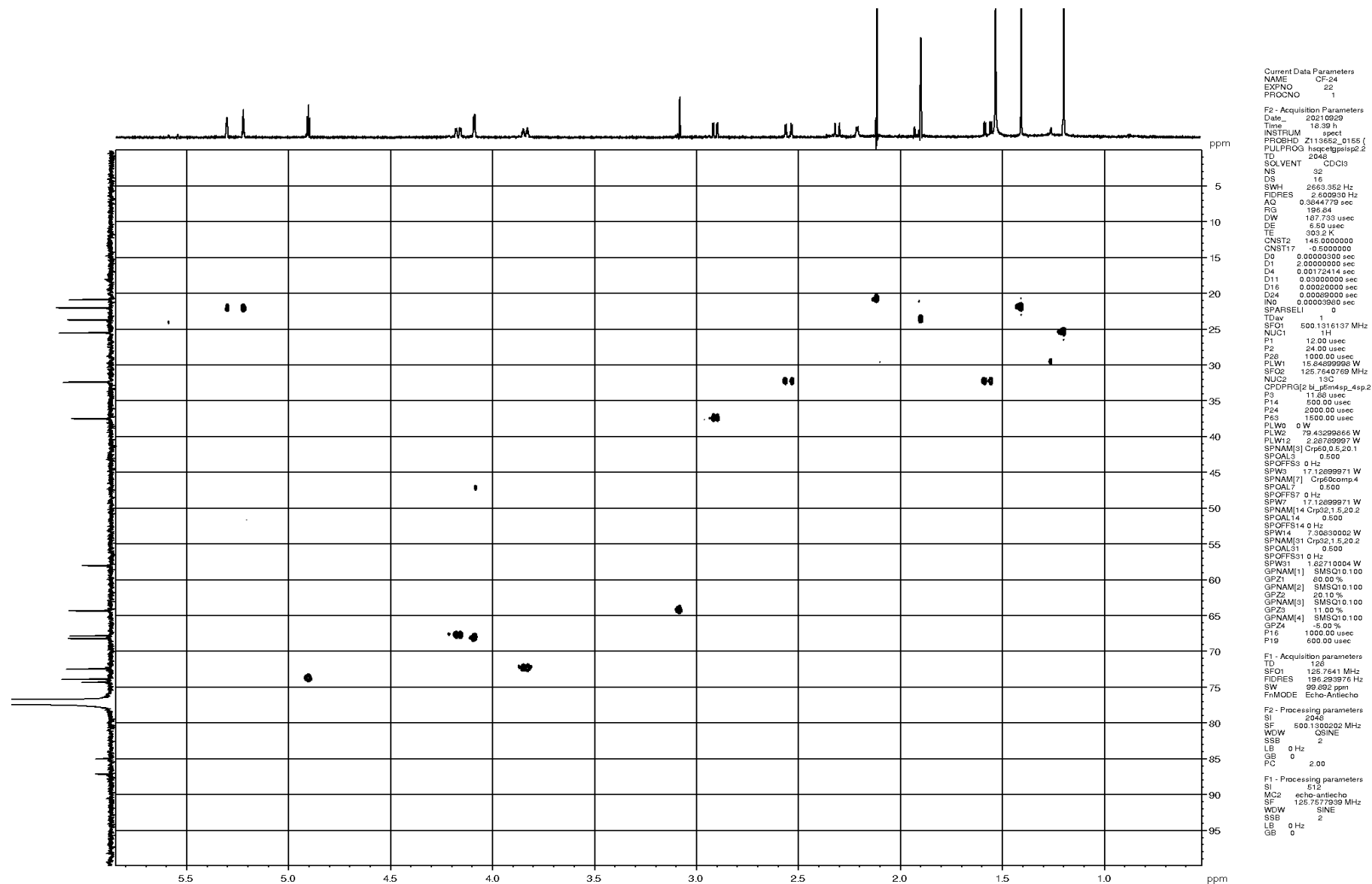


Figure S22. HMBC spectrum of oxyrapentin M (6)

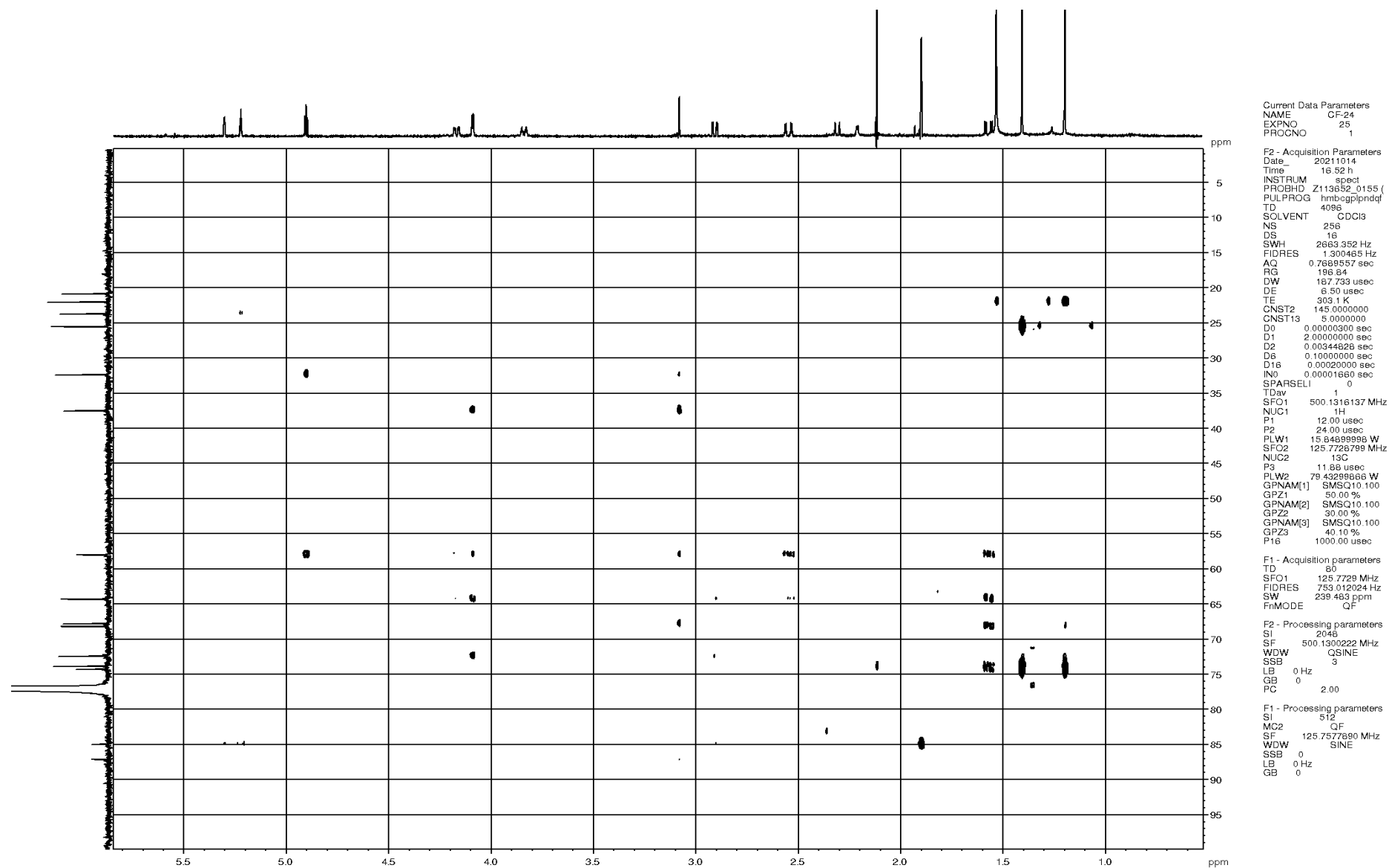


Figure S23. ROESY spectrum of oxyrapentin M (6)

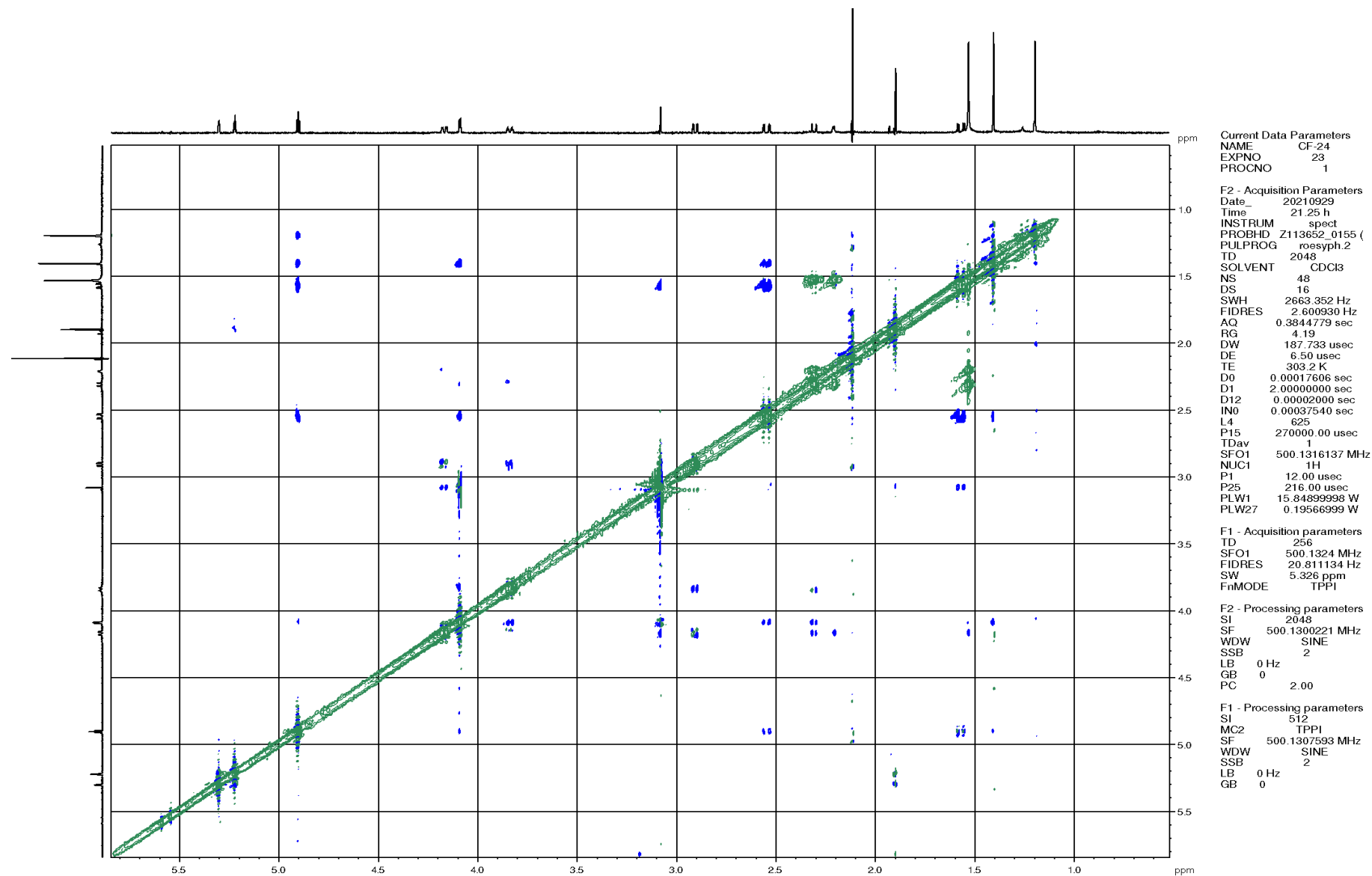
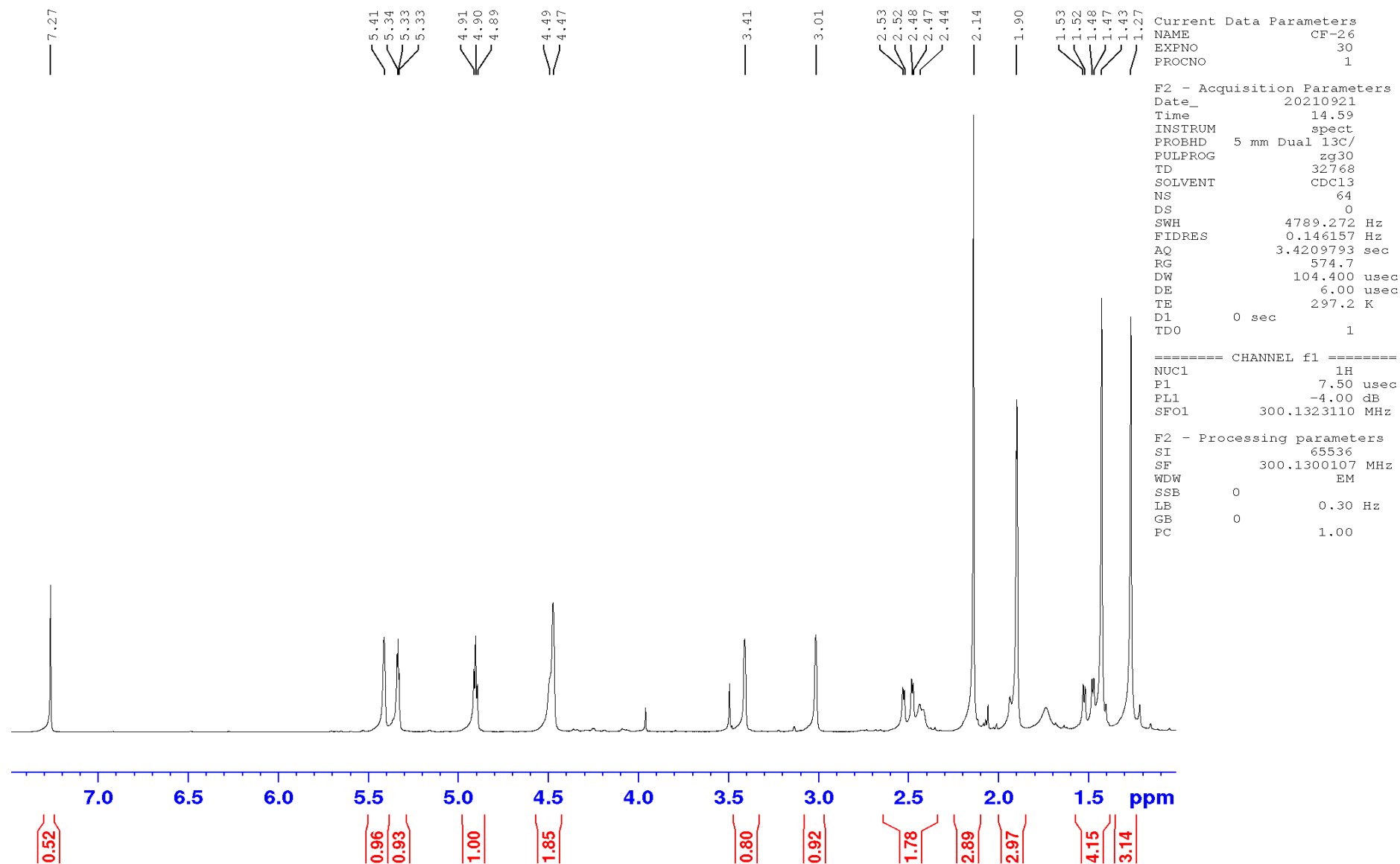
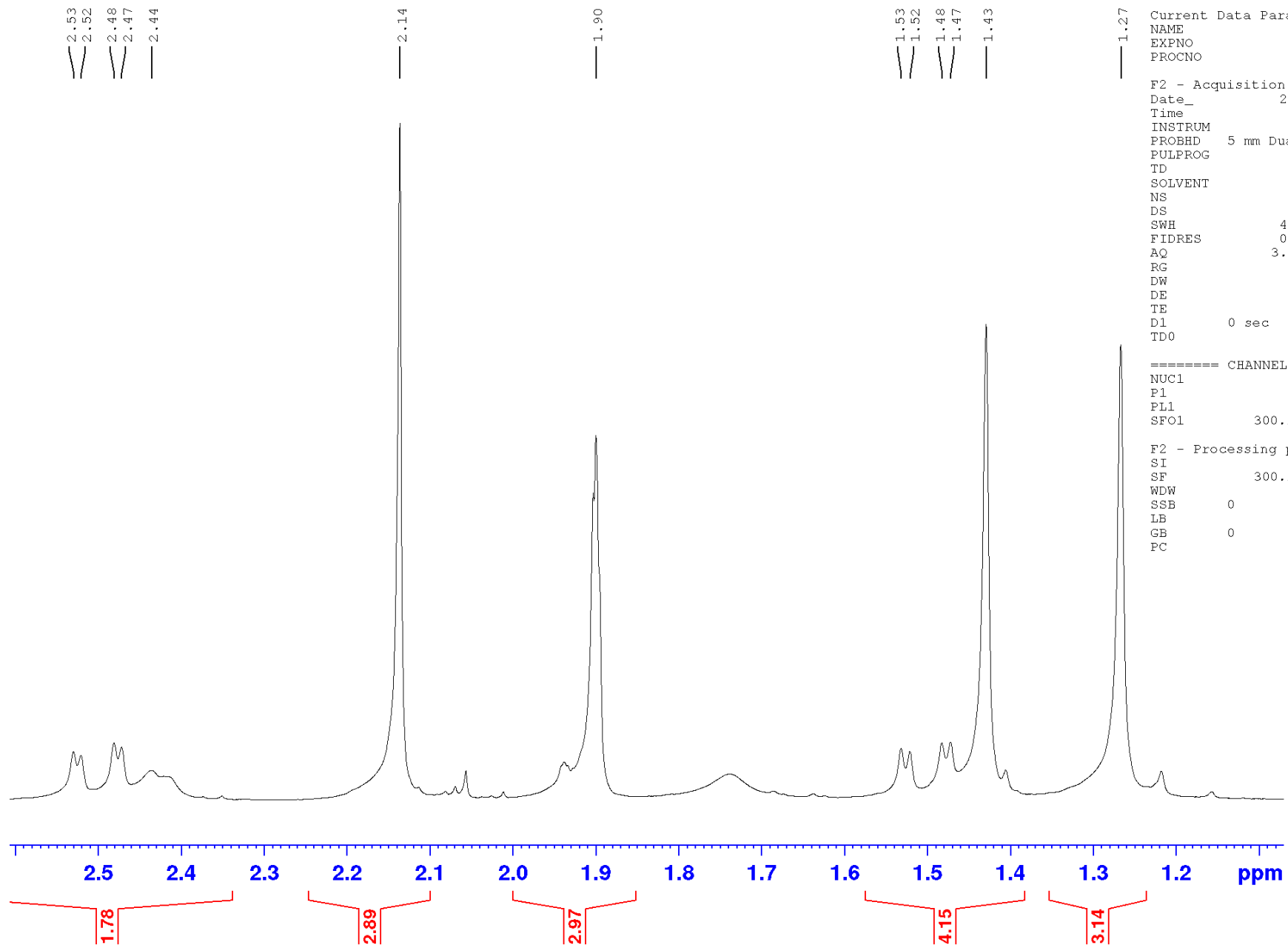


Figure S24. ¹H NMR spectrum of oxyrapentin B (7)



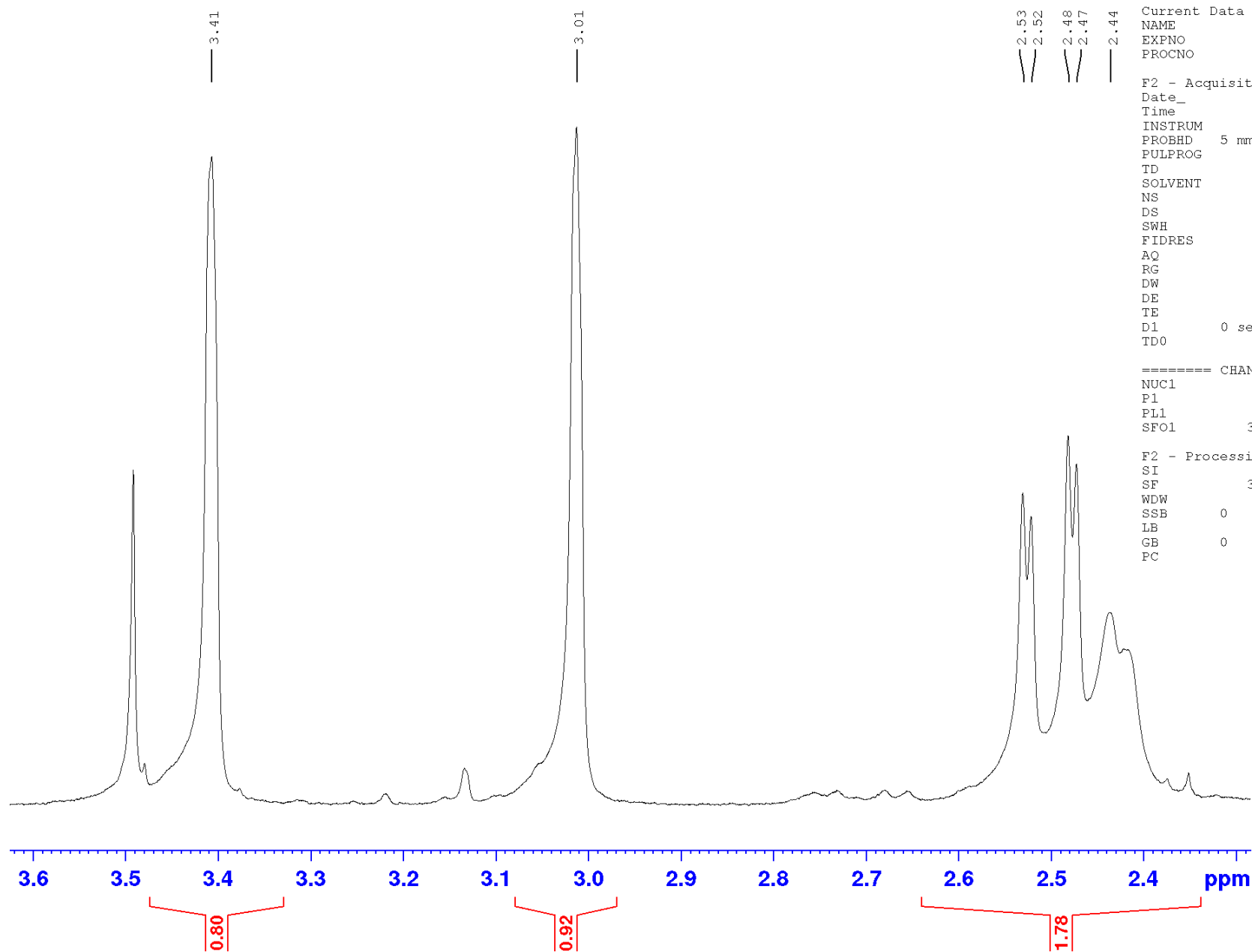


Current Data Parameters
NAME CF-26
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210921
Time 14.59
INSTRUM spect
PROBHD 5 mm Dual 13C/
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 64
DS 0
SWH 4789.272 Hz
FIDRES 0.146157 Hz
AQ 3.4209793 sec
RG 574.7
DW 104.400 usec
DE 6.00 usec
TE 297.2 K
D1 0 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 7.50 usec
PL1 -4.00 dB
SFO1 300.1323110 MHz

F2 - Processing parameters
SI 65536
SF 300.1300107 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



```

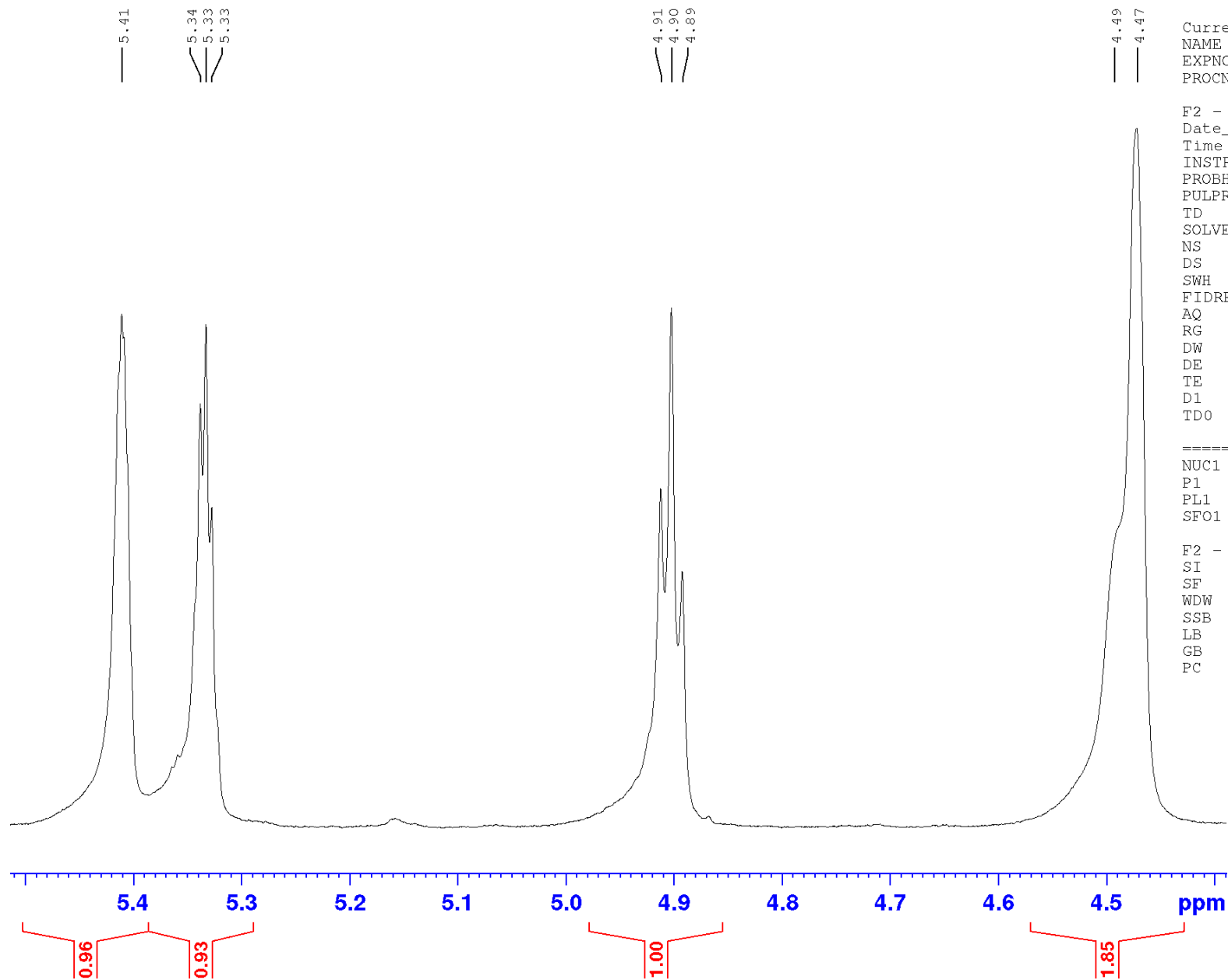
Current Data Parameters
NAME           CF-26
EXPNO           30
PROCNO          1

F2 - Acquisition Parameters
Date_          20210921
Time            14.59
INSTRUM         spect
PROBHD          5 mm Dual 13C/
PULPROG         zg30
TD             32768
SOLVENT         CDCl3
NS              64
DS              0
SWH            4789.272 Hz
FIDRES         0.146157 Hz
AQ            3.4209793 sec
RG             574.7
DW            104.400 usec
DE              6.00 usec
TE             297.2 K
D1             0 sec
TD0            1

===== CHANNEL f1 =====
NUC1            1H
P1              7.50 usec
PL1            -4.00 dB
SFO1          300.1323110 MHz

F2 - Processing parameters
SI             65536
SF            300.1300107 MHz
WDW            EM
SSB            0
LB             0.30 Hz
GB            0
PC             1.00

```



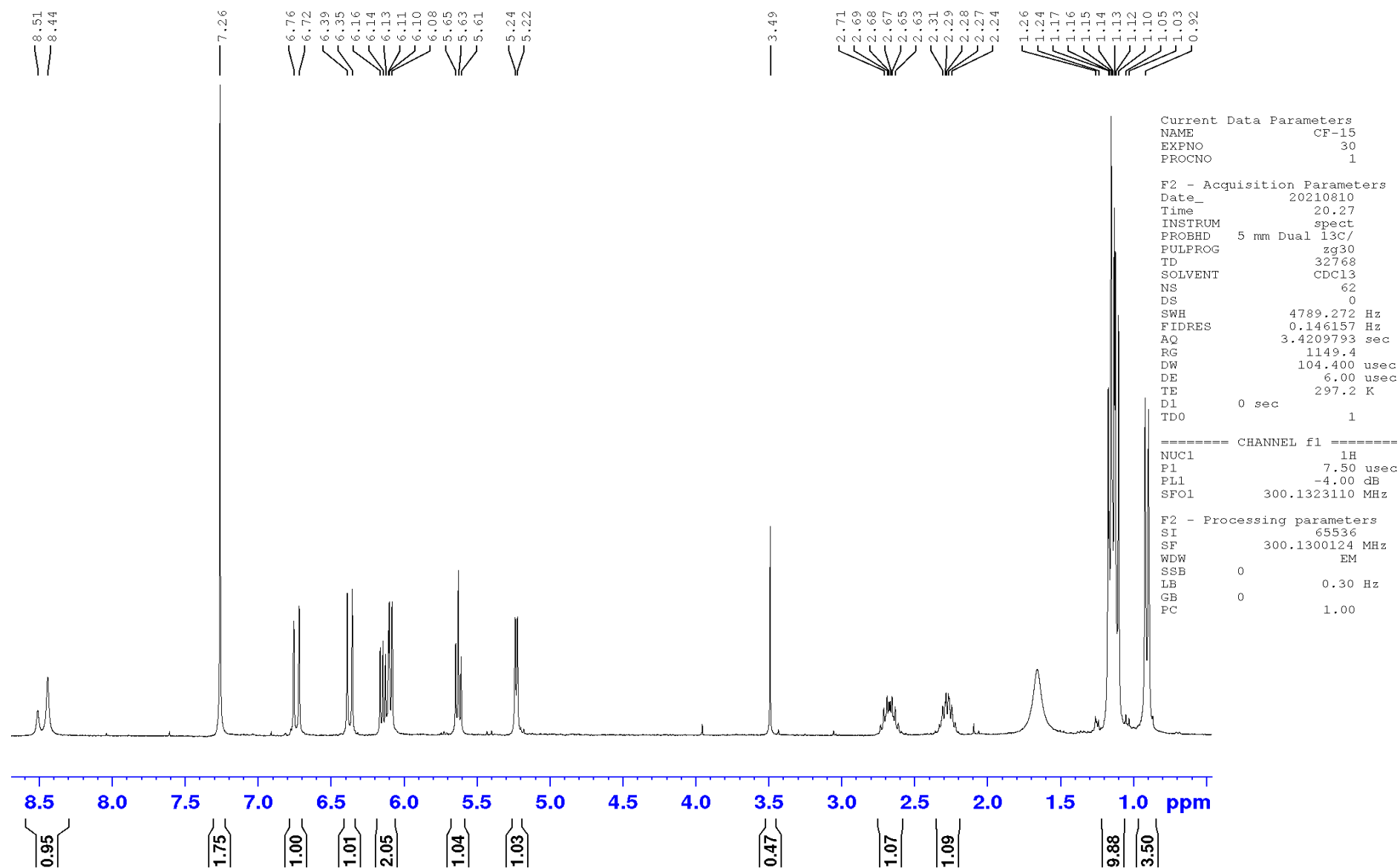
Current Data Parameters
NAME CF-26
EXPNO 30
PROCNO 1

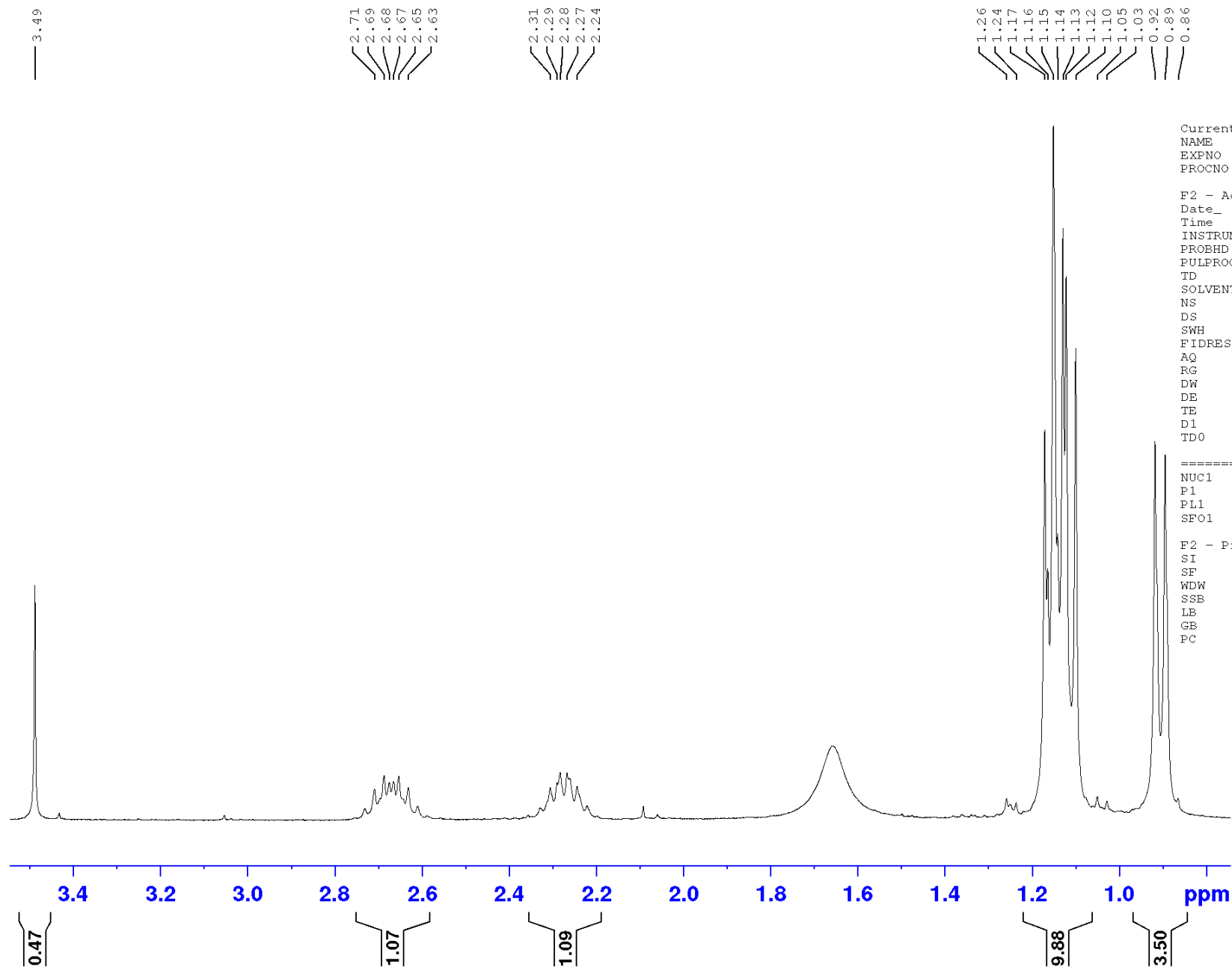
F2 - Acquisition Parameters
Date_ 20210921
Time 14.59
INSTRUM spect
PROBHD 5 mm Dual 13C/
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 64
DS 0
SWH 4789.272 Hz
FIDRES 0.146157 Hz
AQ 3.4209793 sec
RG 574.7
DW 104.400 usec
DE 6.00 usec
TE 297.2 K
D1 0 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 7.50 usec
PL1 -4.00 dB
SFO1 300.1323110 MHz

F2 - Processing parameters
SI 65536
SF 300.1300107 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

Figure S25. ^1H NMR spectrum of cinereain (8)





```

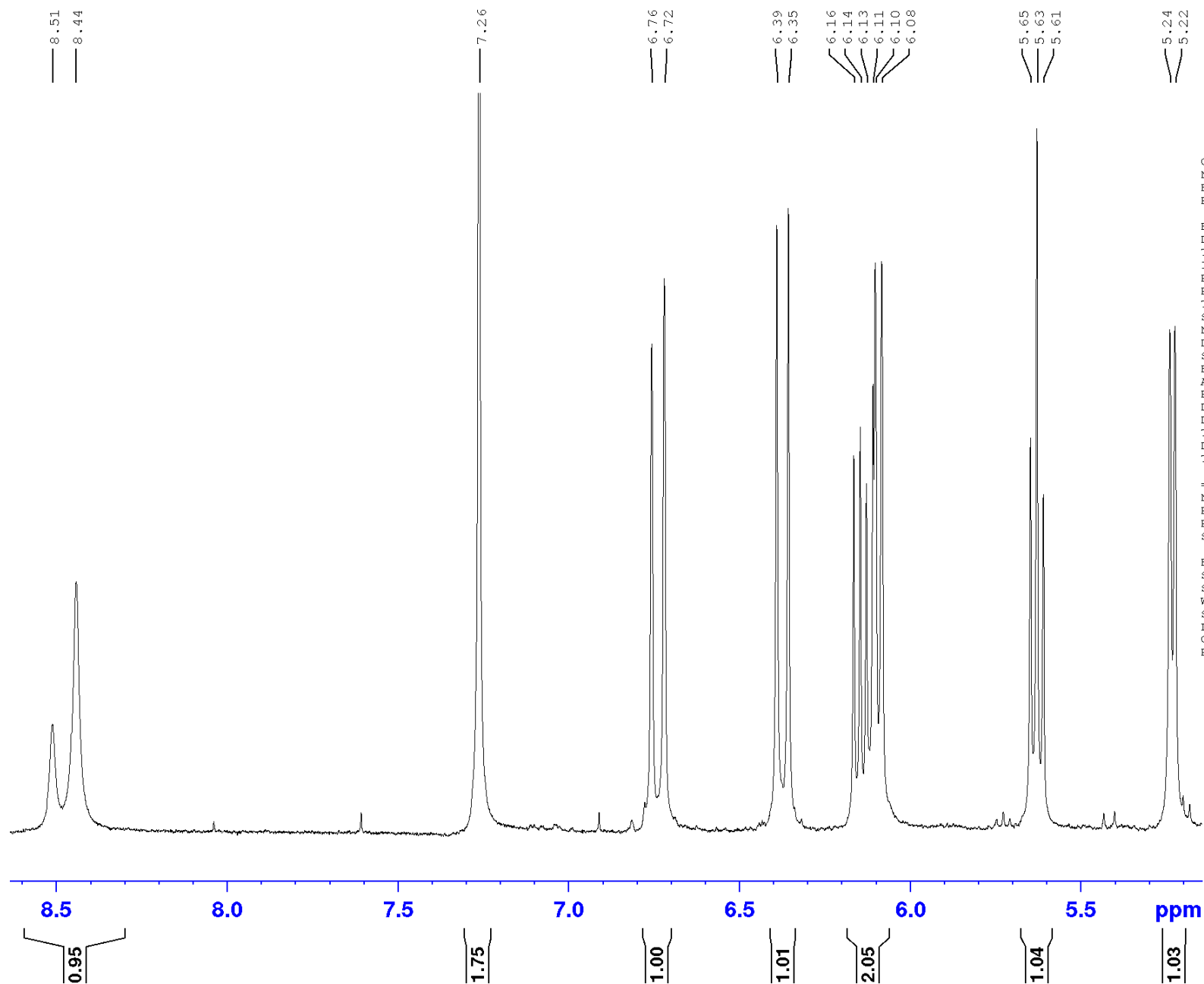
Current Data Parameters
NAME          CF-15
EXPNO         30
PROCNO        1

F2 - Acquisition Parameters
Date_         20210810
Time          20.27
INSTRUM       spect
PROBHD        5 mm Dual 13C/
PULPROG       zg30
TD            32768
SOLVENT       CDCl3
NS            62
DS            0
SWH           4789.272 Hz
FIDRES        0.146157 Hz
AQ            3.4209793 sec
RG            1149.4
DW            104.400 usec
DE            6.00 usec
TE            297.2 K
D1            0 sec
TD0           1

===== CHANNEL f1 =====
NUC1          1H
P1            7.50 usec
PL1           -4.00 dB
SFO1          300.1323110 MHz

F2 - Processing parameters
SI            65536
SF            300.1300124 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            1.00

```



```

Current Data Parameters
NAME             CF-15
EXPNO            30
PROCNO           1

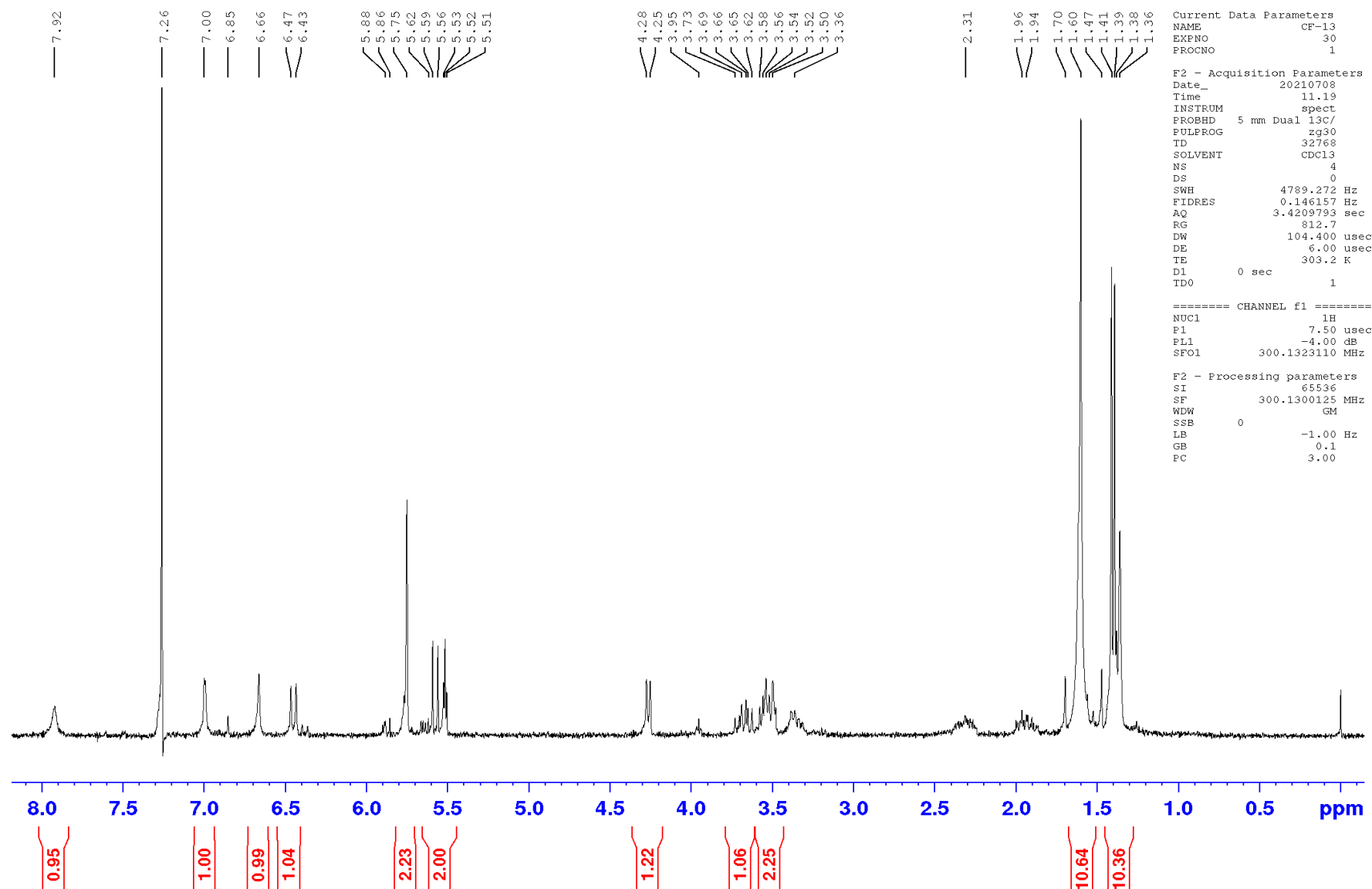
F2 - Acquisition Parameters
Date_            20210810
Time             20.27
INSTRUM          spect
PROBHD           5 mm Dual 13C/
PULPROG          zg30
TD               32768
SOLVENT          CDCl3
NS                62
DS                0
SWH              4789.272 Hz
FIDRES           0.146157 Hz
AQ               3.4209793 sec
RG               1149.4
DW               104.400 usec
DE               6.00 usec
TE               297.2 K
D1               0 sec
TD0              1

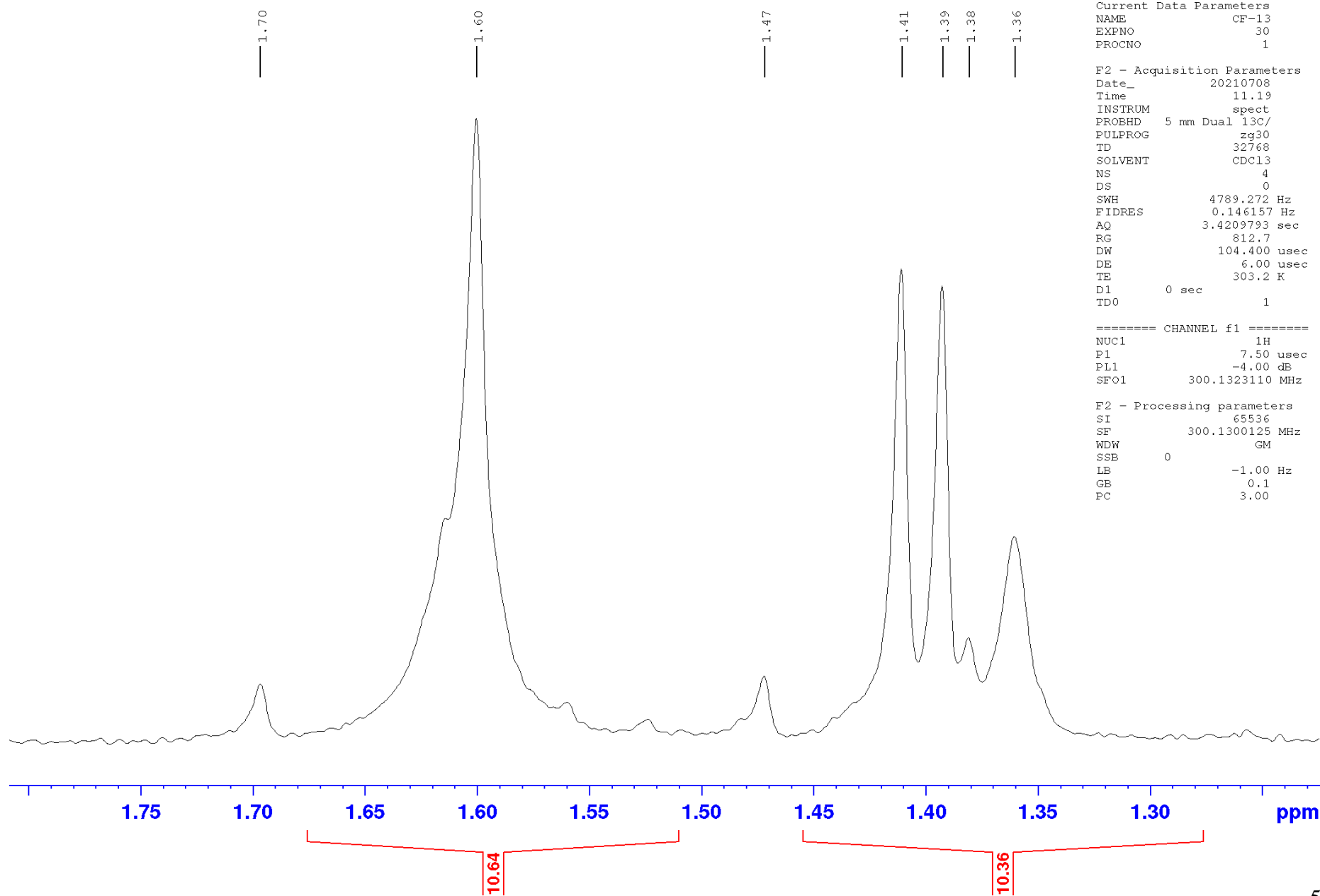
===== CHANNEL f1 =====
NUC1              1H
P1                7.50 usec
PL1               -4.00 dB
SFO1              300.1323110 MHz

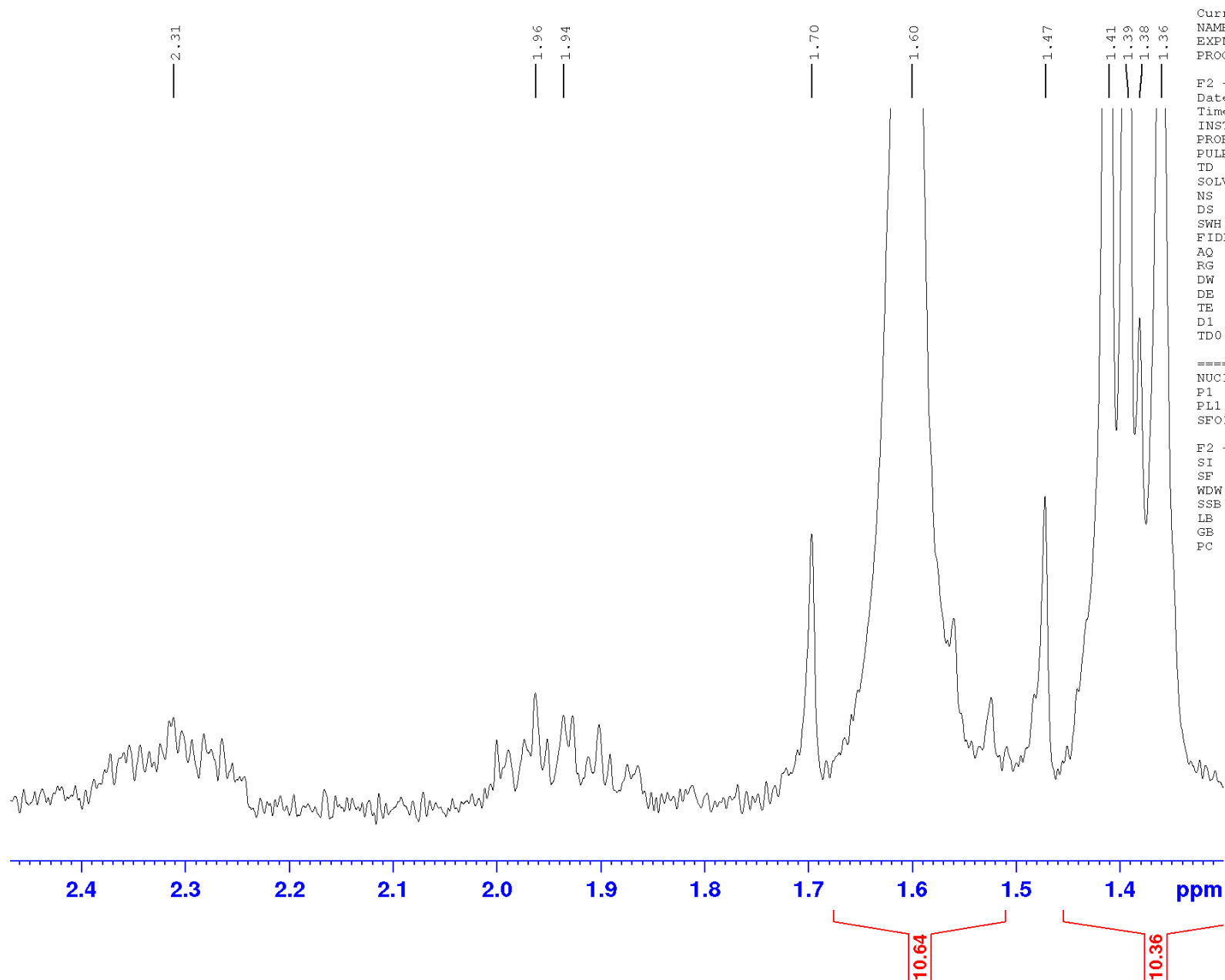
F2 - Processing parameters
SI                65536
SF                300.1300124 MHz
WDW               EM
SSB               0
LB                0.30 Hz
GB                0
PC                1.00

```

Figure S26. ¹H NMR spectrum of carneamide A (9)





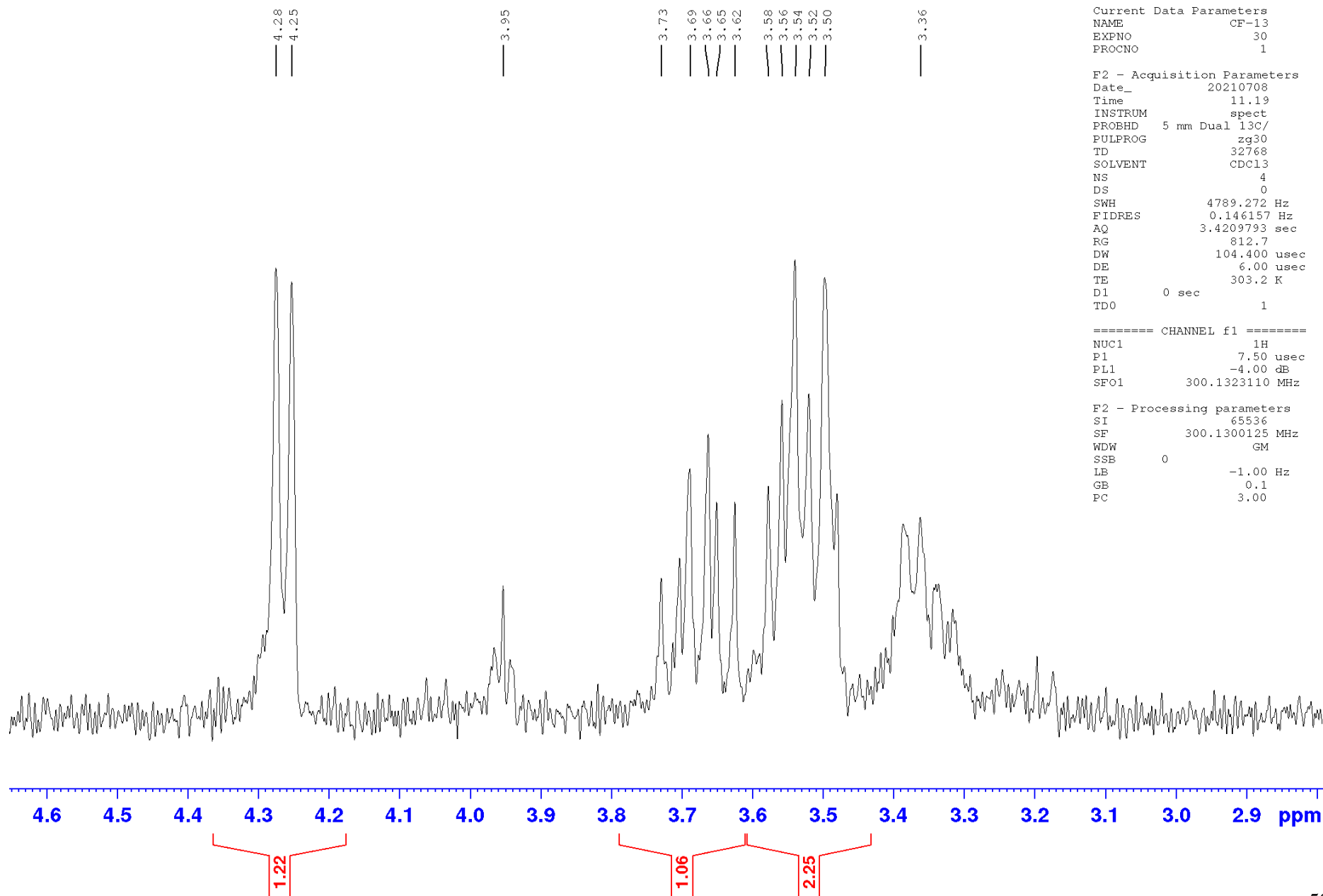


Current Data Parameters
NAME CF-13
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210708
Time 11.19
INSTRUM spect
PROBHD 5 mm Dual 13C/
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 4
DS 0
SWH 4789.272 Hz
FIDRES 0.146157 Hz
AQ 3.4209793 sec
RG 812.7
DW 104.400 usec
DE 6.00 usec
TE 303.2 K
D1 0 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 7.50 usec
PL1 -4.00 dB
SFO1 300.1323110 MHz

F2 - Processing parameters
SI 65536
SF 300.1300125 MHz
WDW GM
SSB 0
LB -1.00 Hz
GB 0.1
PC 3.00

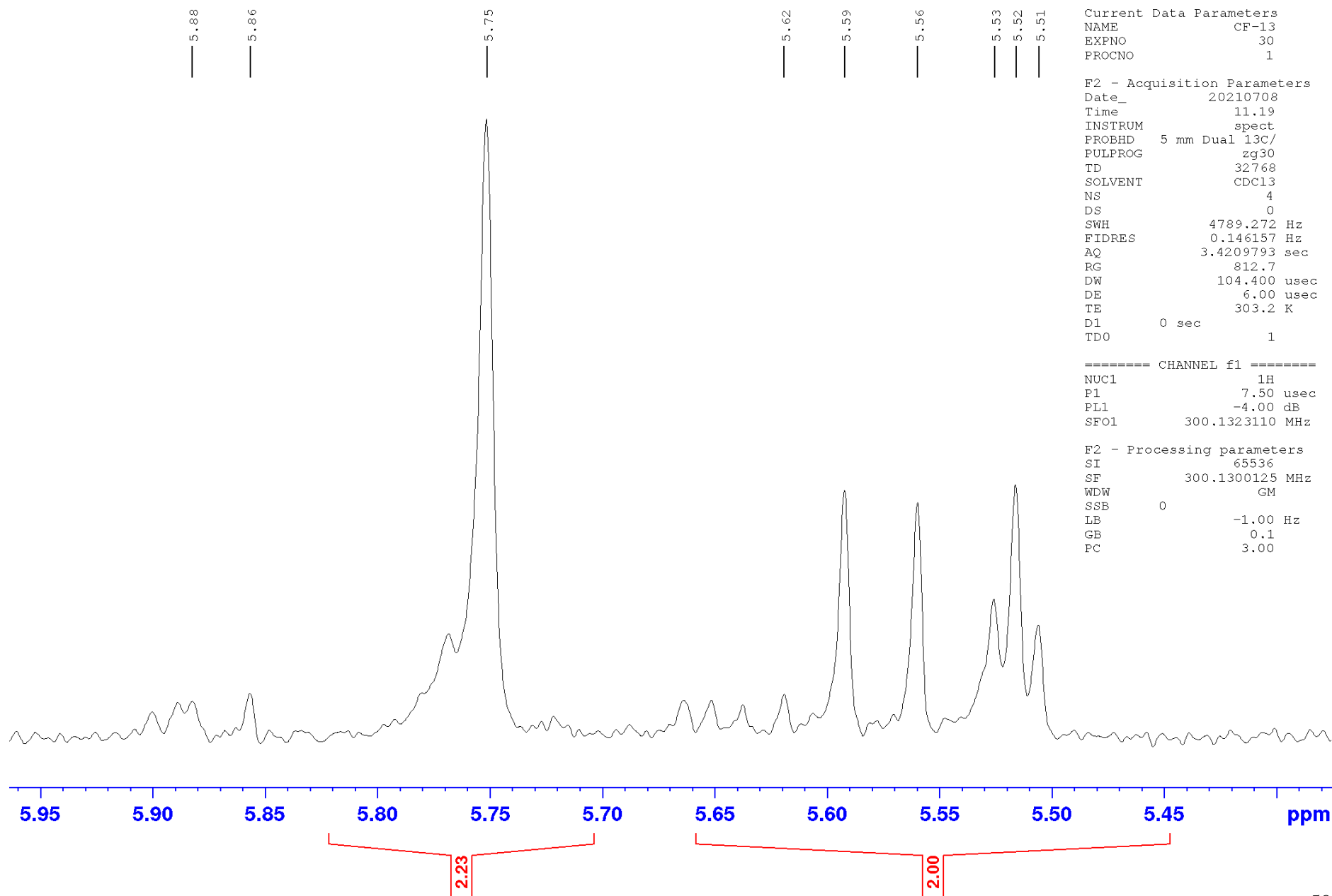


Current Data Parameters
NAME CF-13
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210708
Time 11.19
INSTRUM spect
PROBHD 5 mm Dual 13C/
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 4
DS 0
SWH 4789.272 Hz
FIDRES 0.146157 Hz
AQ 3.4209793 sec
RG 812.7
DW 104.400 usec
DE 6.00 usec
TE 303.2 K
D1 0 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 7.50 usec
PL1 -4.00 dB
SFO1 300.1323110 MHz

F2 - Processing parameters
SI 65536
SF 300.1300125 MHz
WDW GM
SSB 0
LB -1.00 Hz
GB 0.1
PC 3.00



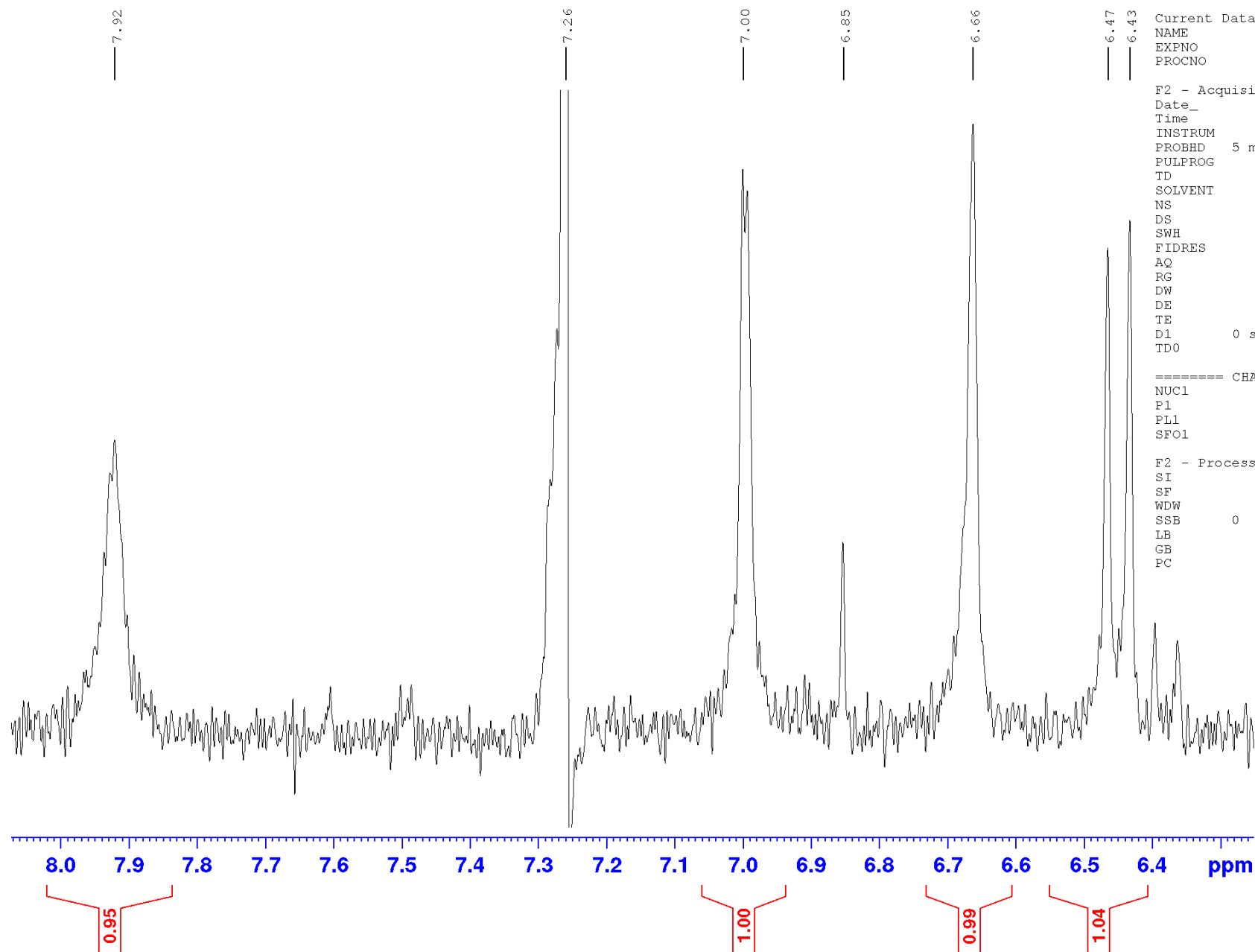
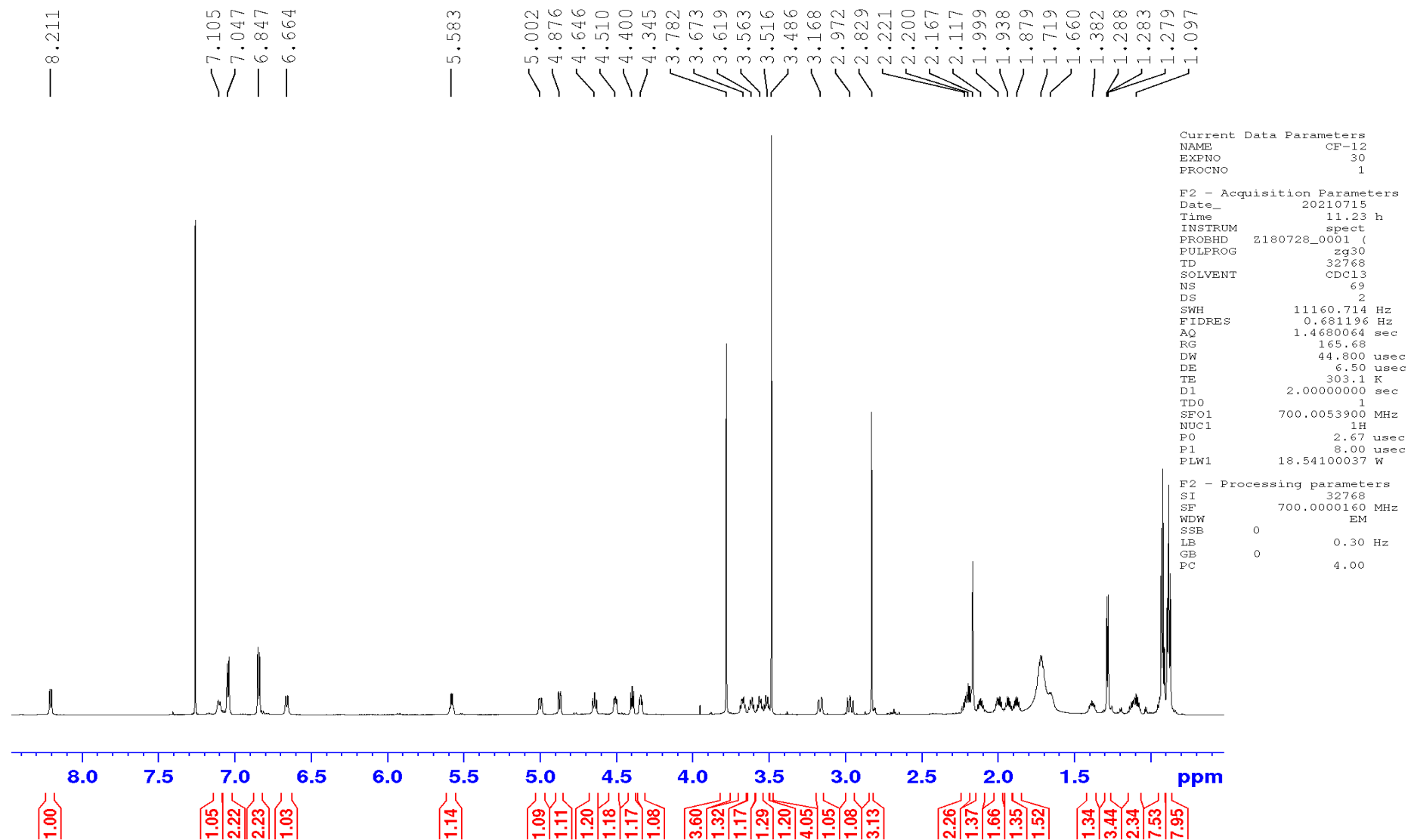
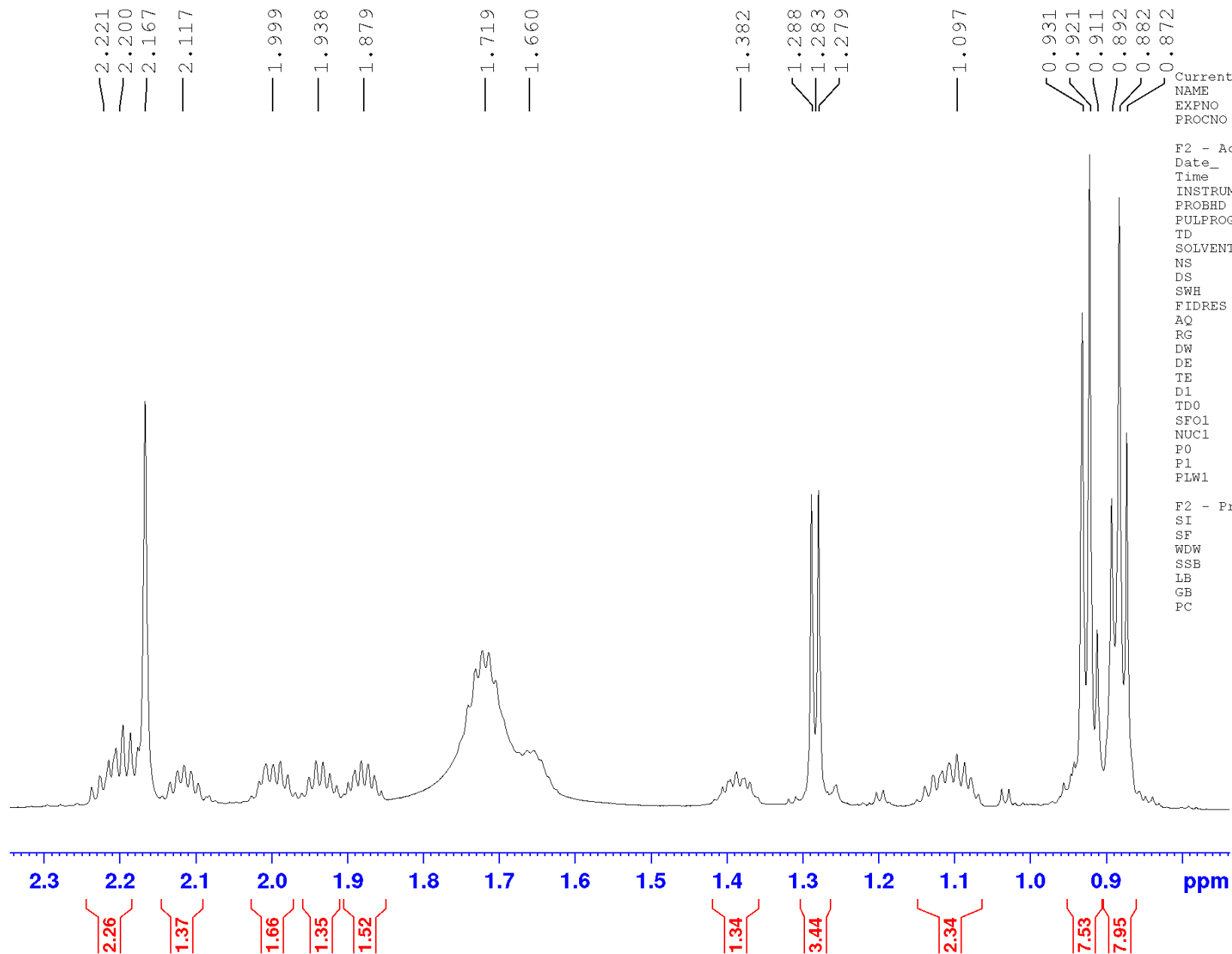


Figure S27. ¹H NMR spectrum of aspergillicine A (10)

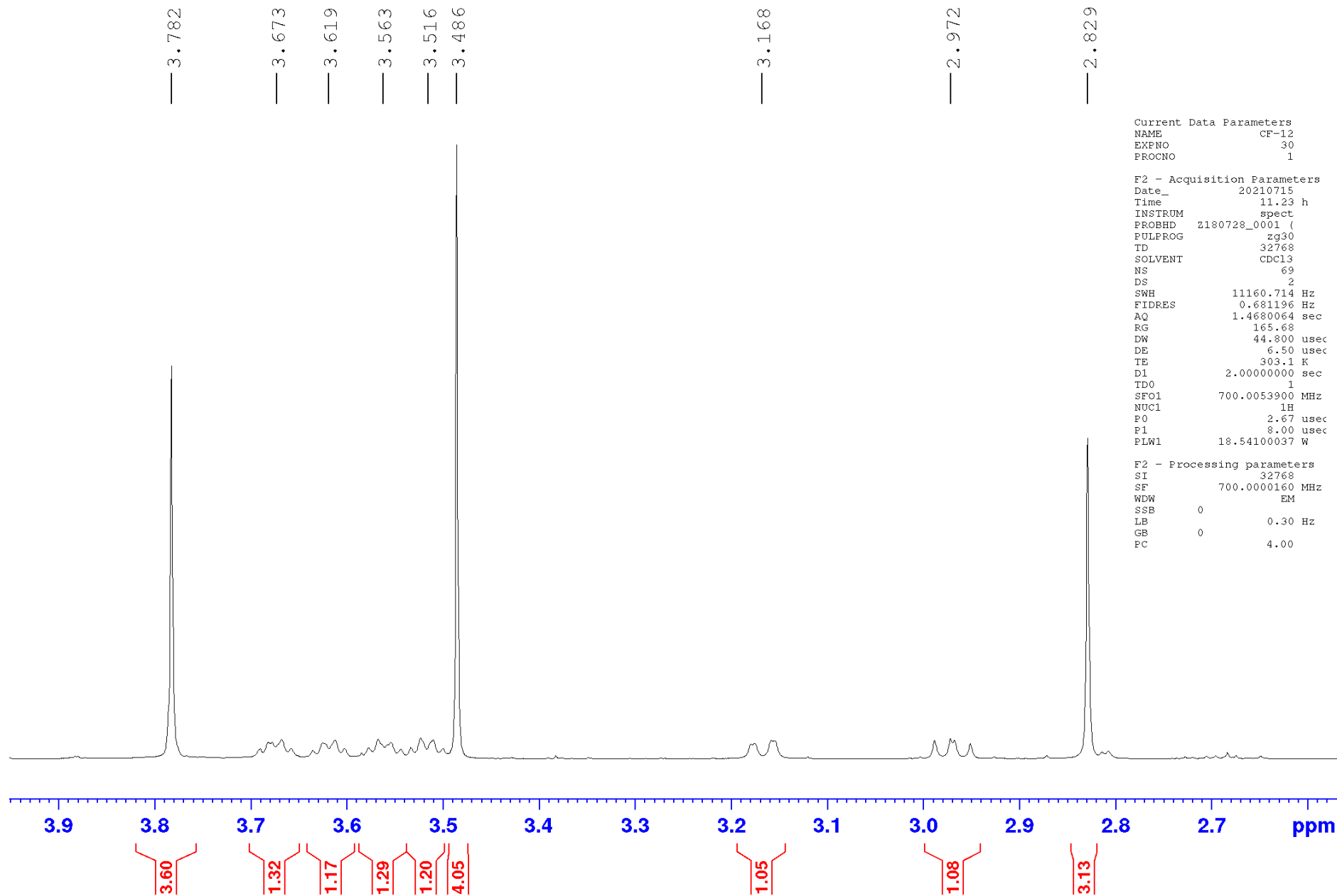


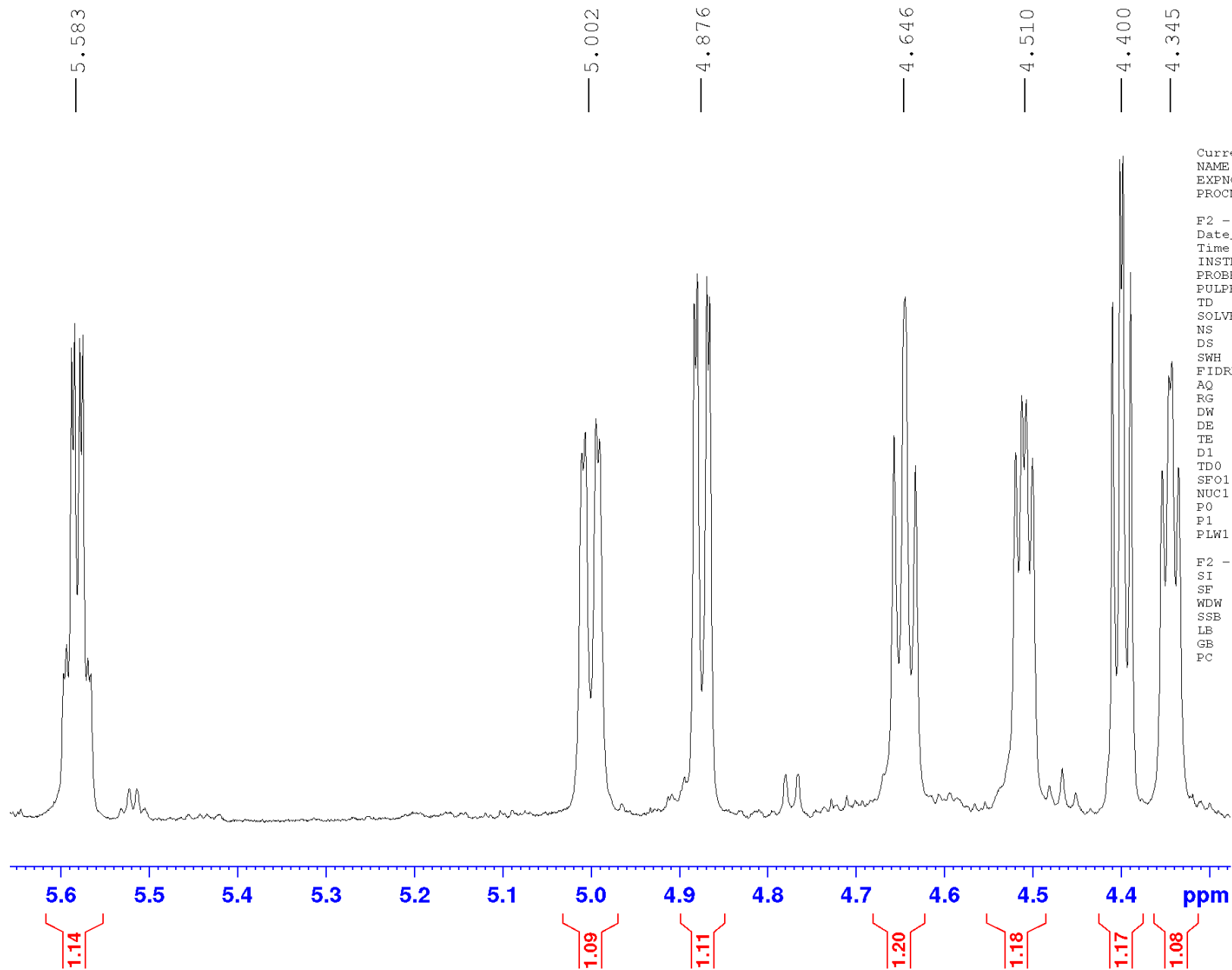


Current Data Parameters
NAME CF-12
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210715
Time 11.23 h
INSTRUM spect
PROBHD Z180728_0001 (
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 69
DS 2
SWH 11160.714 Hz
FIDRES 0.681196 Hz
AQ 1.4680064 sec
RG 165.68
DW 44.800 usec
DE 6.50 usec
TE 303.1 K
D1 2.00000000 sec
TD0 1
SFO1 700.0053900 MHz
NUC1 1H
P0 2.67 usec
P1 8.00 usec
PLW1 18.54100037 W

F2 - Processing parameters
SI 32768
SF 700.0000160 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 4.00





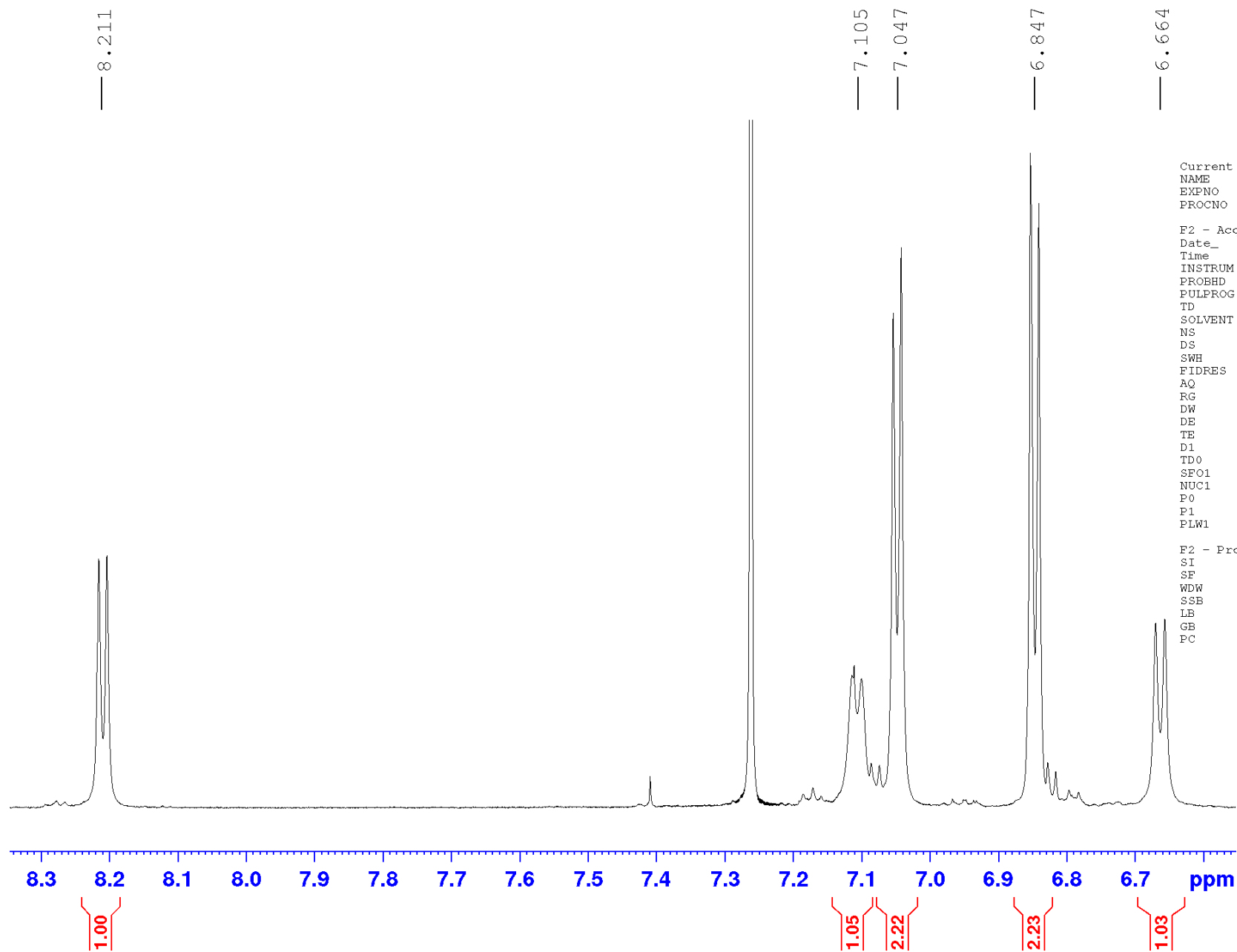
```

Current Data Parameters
NAME           CF-12
EXPNO          30
PROCNO         1

F2 - Acquisition Parameters
Date_          20210715
Time           11.23 h
INSTRUM        spect
PROBHD         Z180728_0001 (
PULPROG        zg30
TD             32768
SOLVENT        CDCl3
NS             69
DS             2
SWH            11160.714 Hz
FIDRES         0.681196 Hz
AQ            1.4680064 sec
RG            165.68
DW            44.800 usec
DE            6.50 usec
TE            303.1 K
D1            2.00000000 sec
TD0           1
SFO1          700.0053900 MHz
NUC1          1H
P0            2.67 usec
P1            8.00 usec
PLW1          18.54100037 W

F2 - Processing parameters
SI            32768
SF            700.0000160 MHz
WDW           EM
SSB           0
LB            0.30 Hz
GB            0
PC            4.00

```

Current Data Parameters
NAME CF-12
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210715
Time 11.23 h
INSTRUM spect
PROBHD Z180728_0001 (
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 69
DS 2
SWH 11160.714 Hz
FIDRES 0.681196 Hz
AQ 1.4680064 sec
RG 165.68
DW 44.800 usec
DE 6.50 usec
TE 303.1 K
D1 2.00000000 sec
TD0 1
SFO1 700.0053900 MHz
NUC1 1H
P0 2.67 usec
P1 8.00 usec
PLW1 18.54100037 W

F2 - Processing parameters
SI 32768
SF 700.0000160 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 4.00

Figure S28. ^1H - ^1H COSY spectrum of aspergillicine A (10)

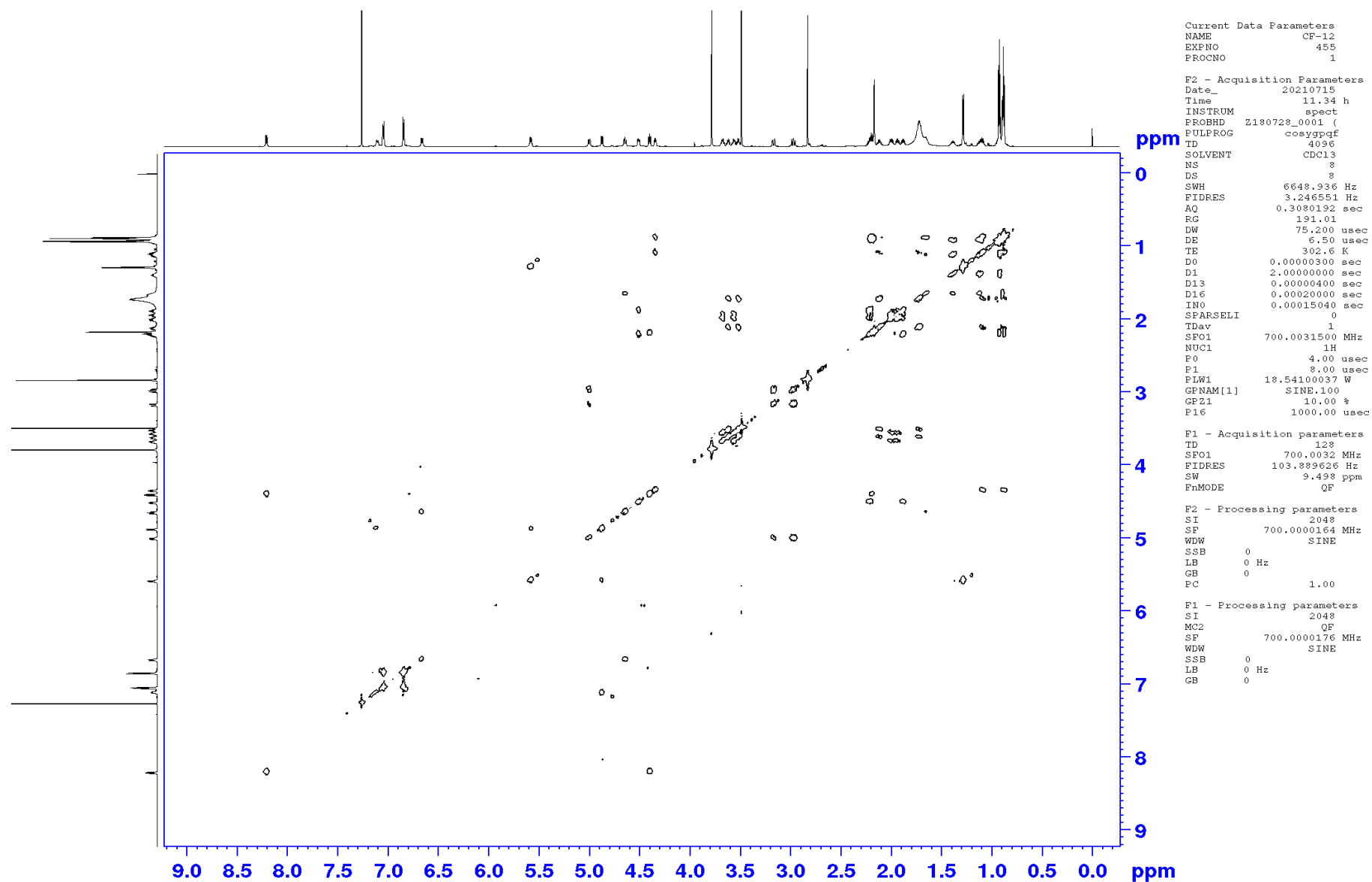


Figure S29. HSQC spectrum of aspergillicine A (10)

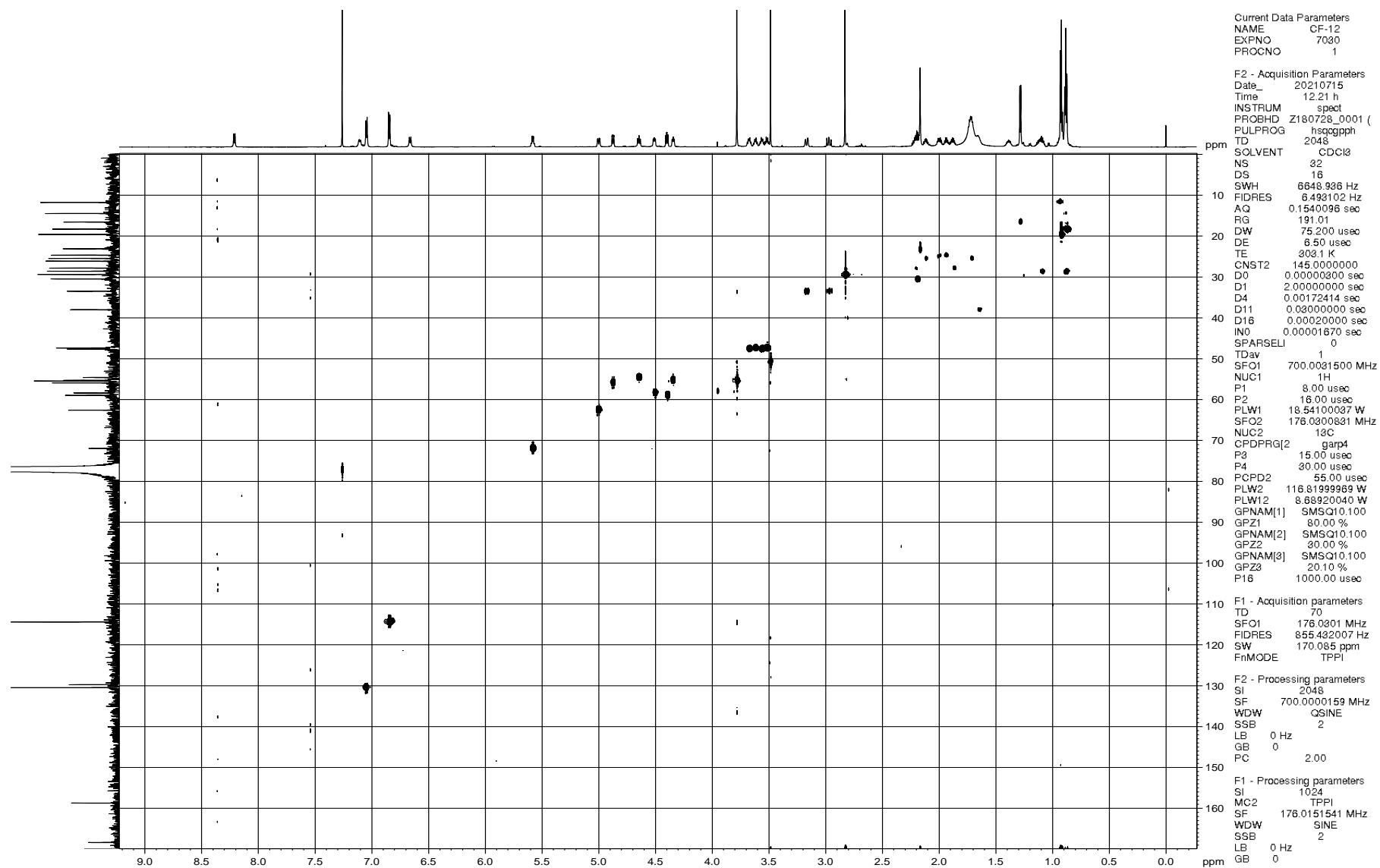


Figure S30. HMBC spectrum of aspergillicine A (10)

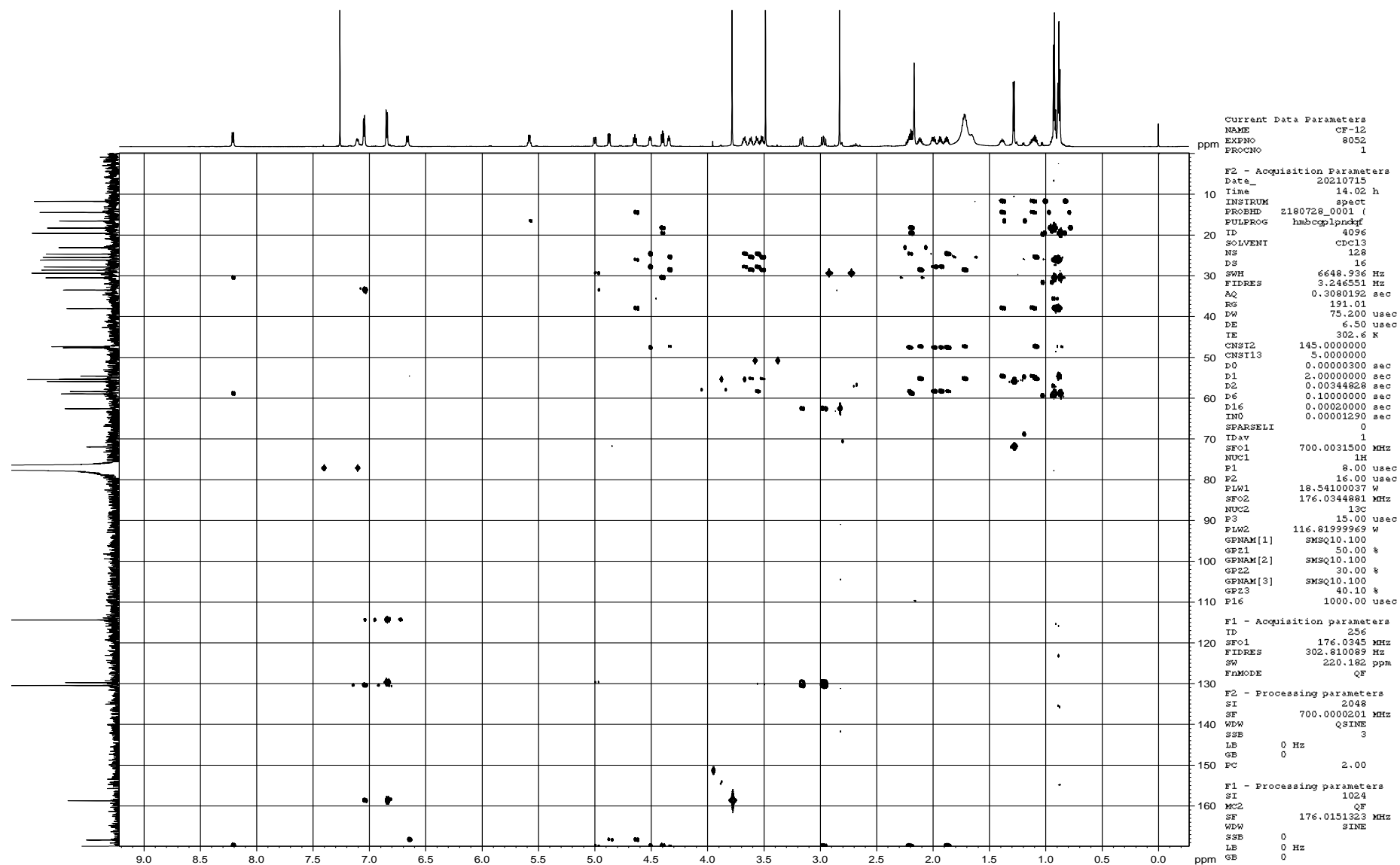
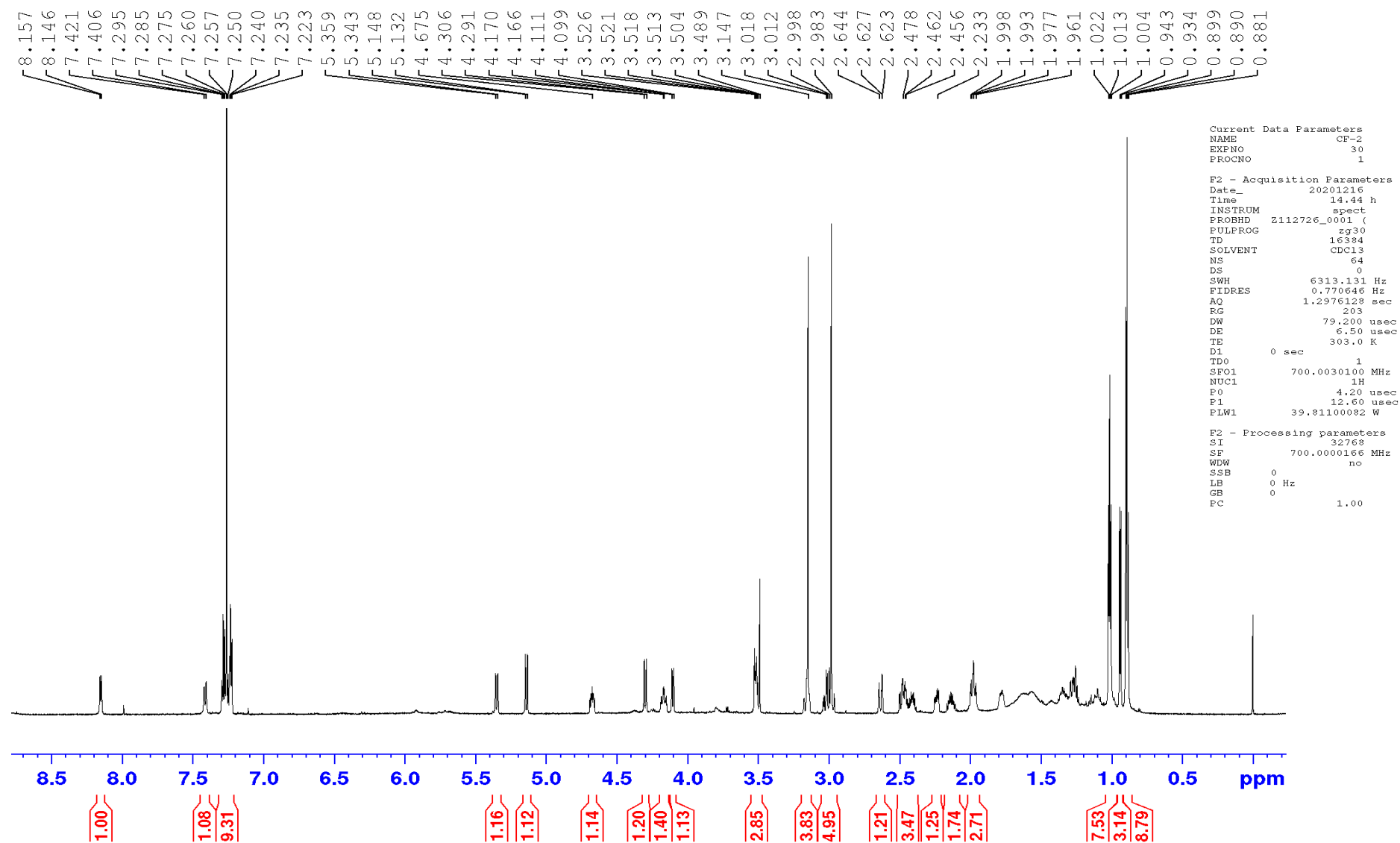
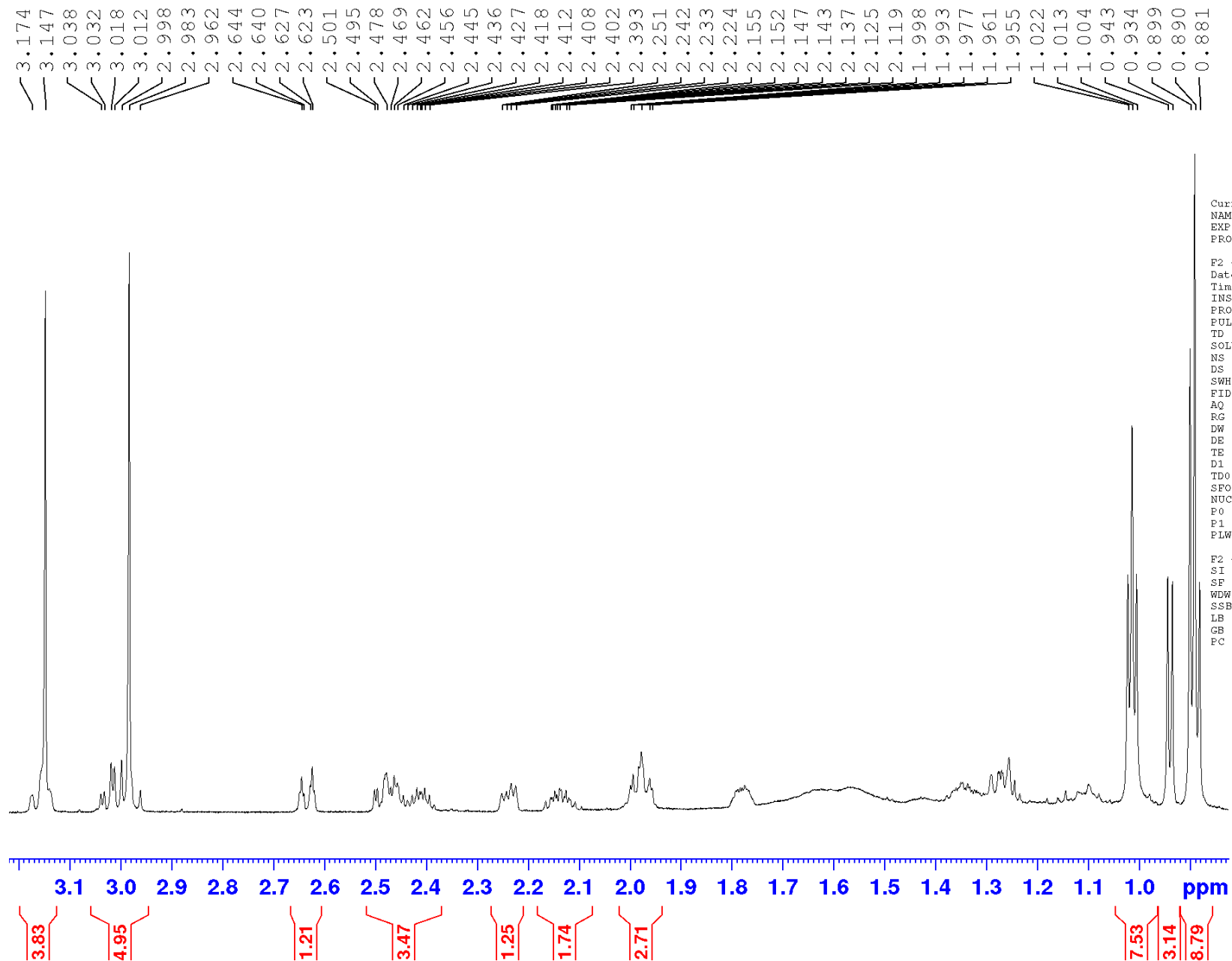
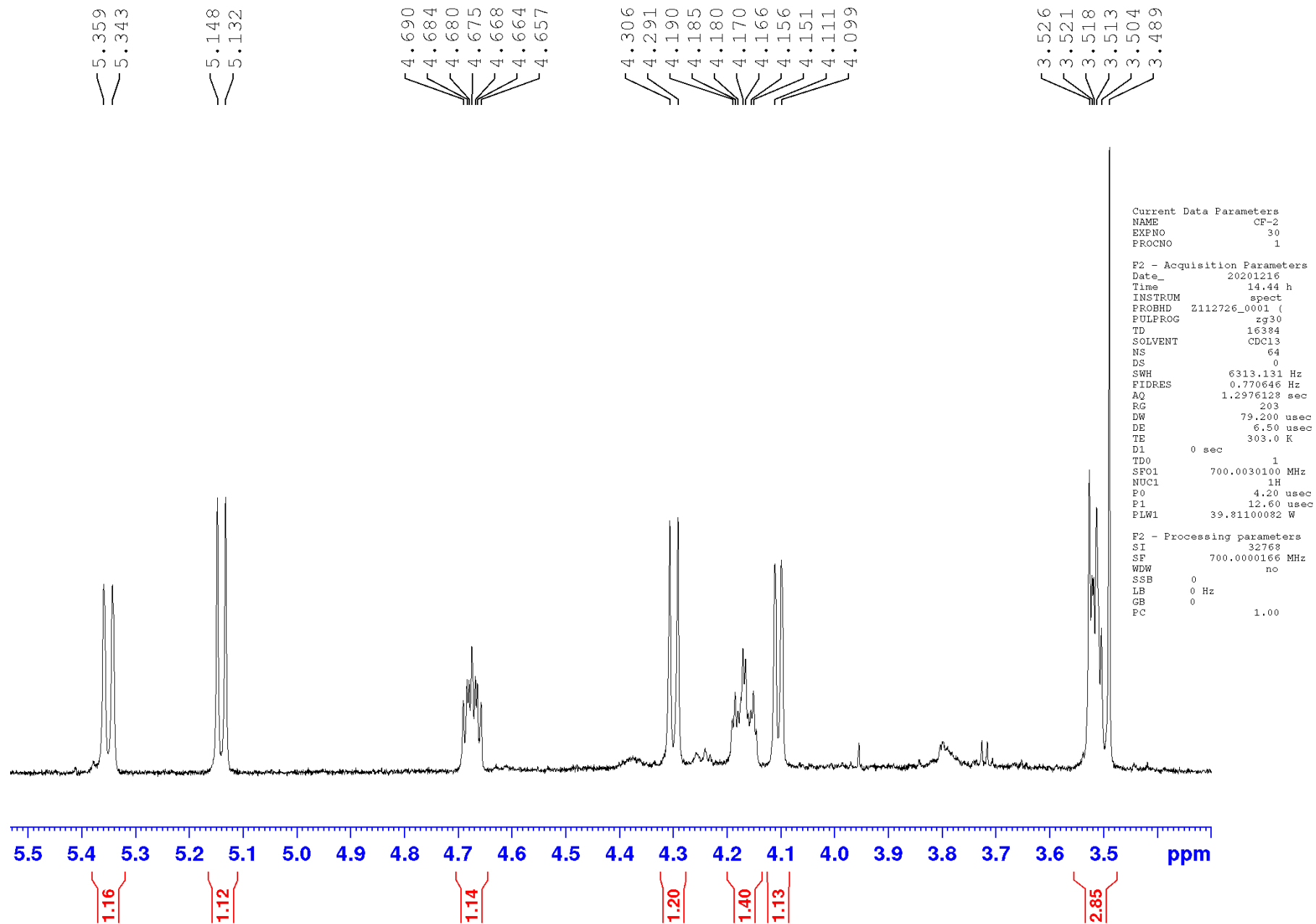


Figure S31. ^1H NMR spectrum of isaridine E (11)







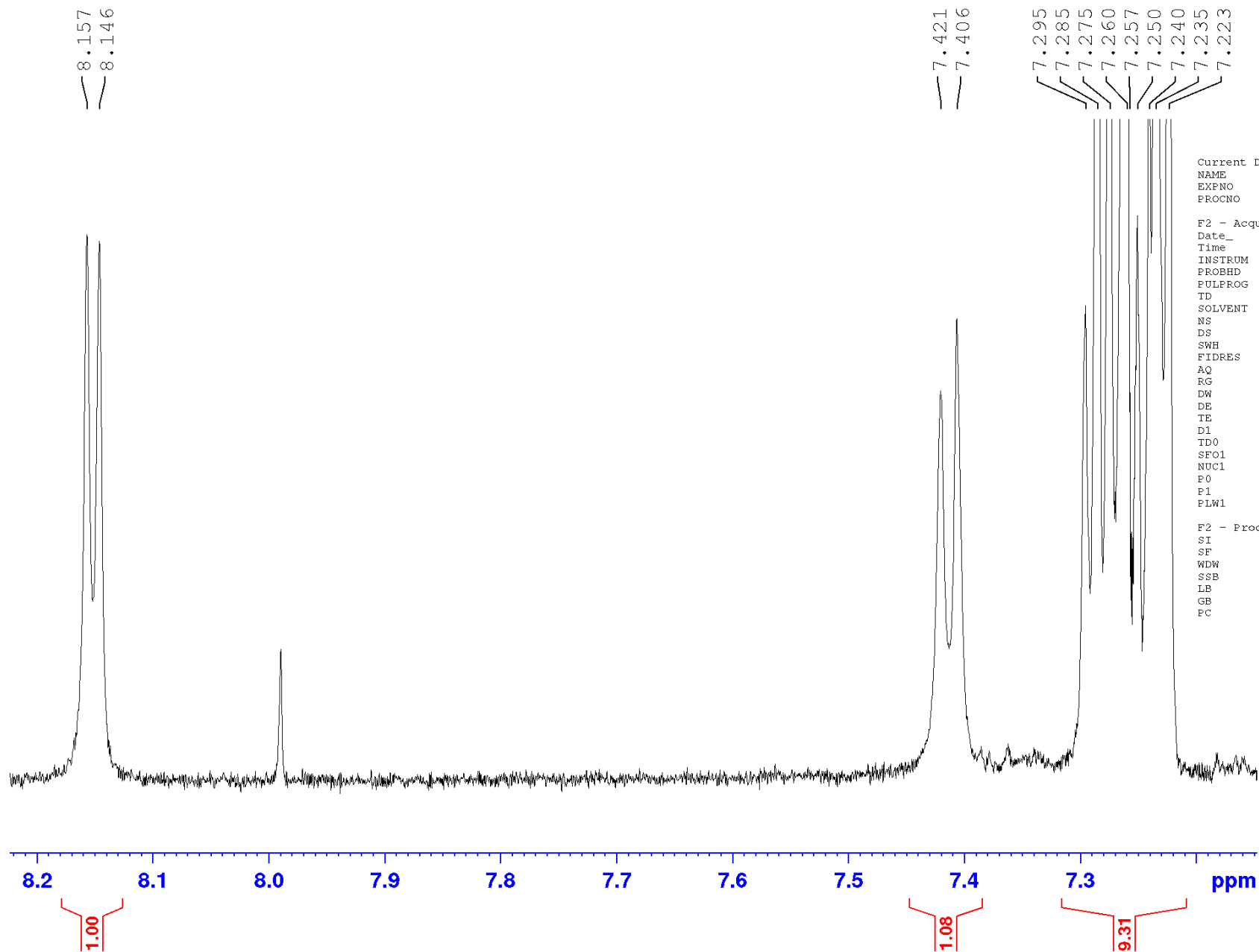


Figure S32. ^{13}C NMR spectrum of isaridine E (11)

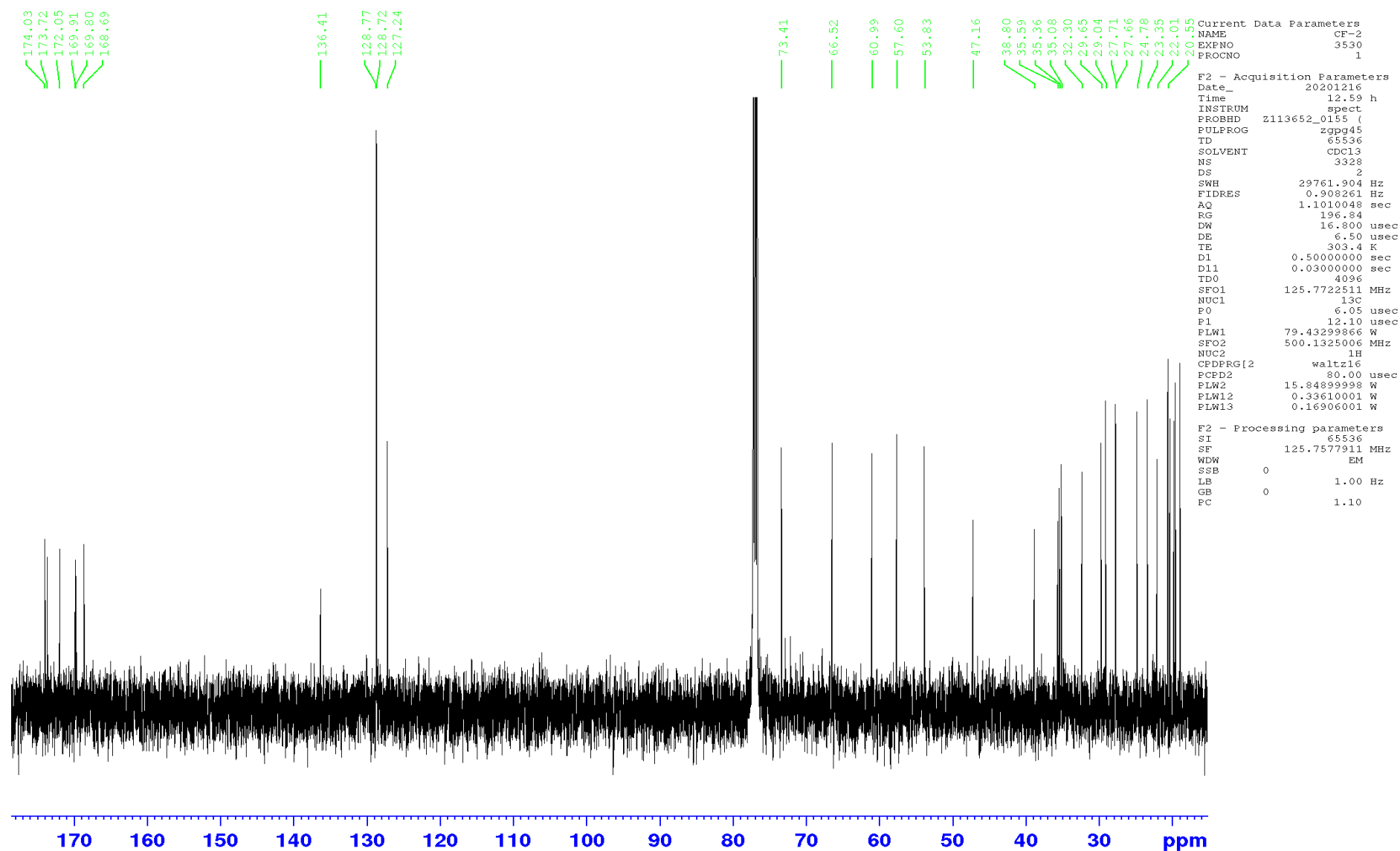


Figure S33. DEPT-135 spectrum of isaridine E (11)

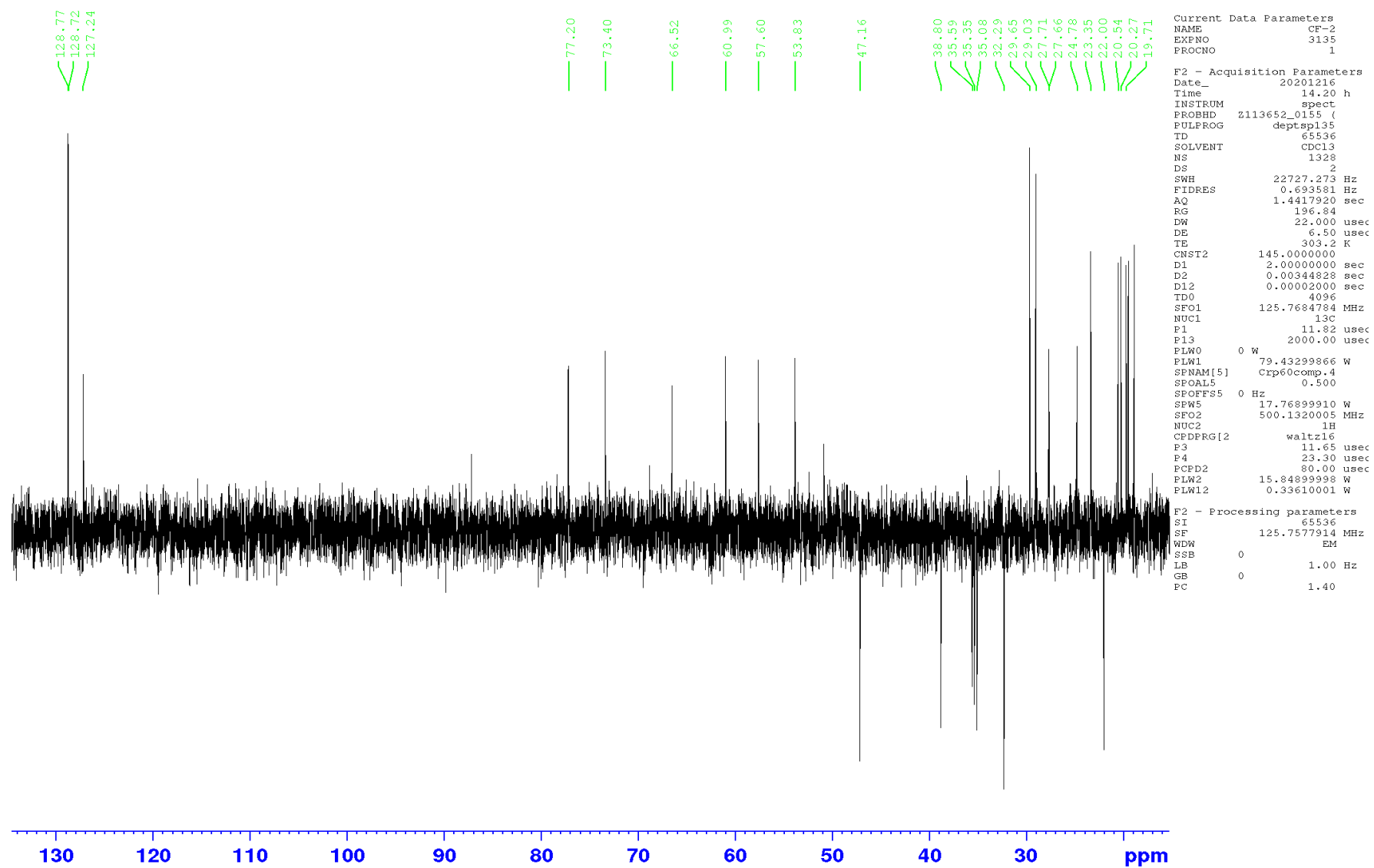


Figure S34. ^1H - ^1H COSY spectrum of isaridine E (11)

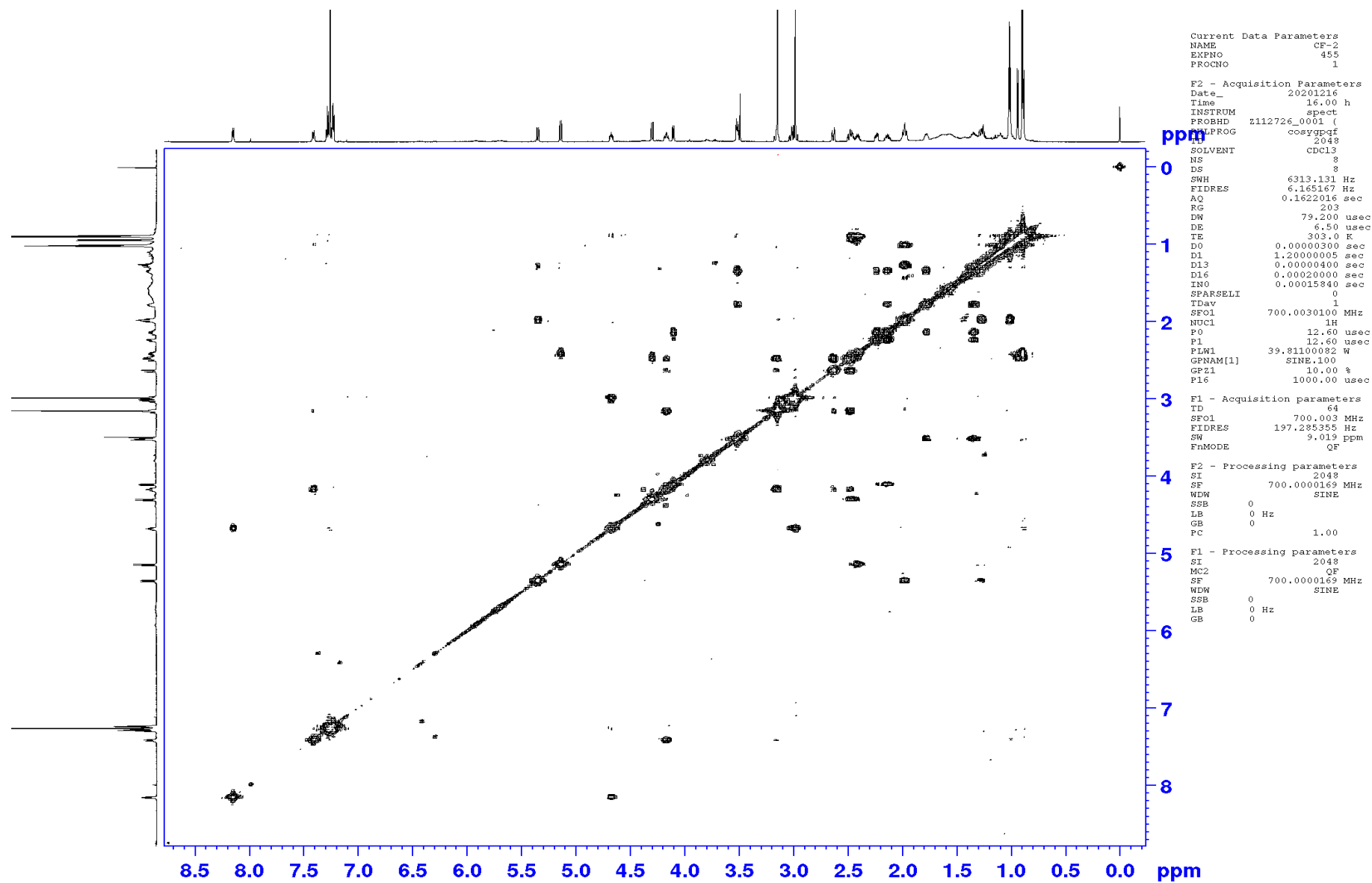


Figure S35. HSQC spectrum of isaridine E (11)

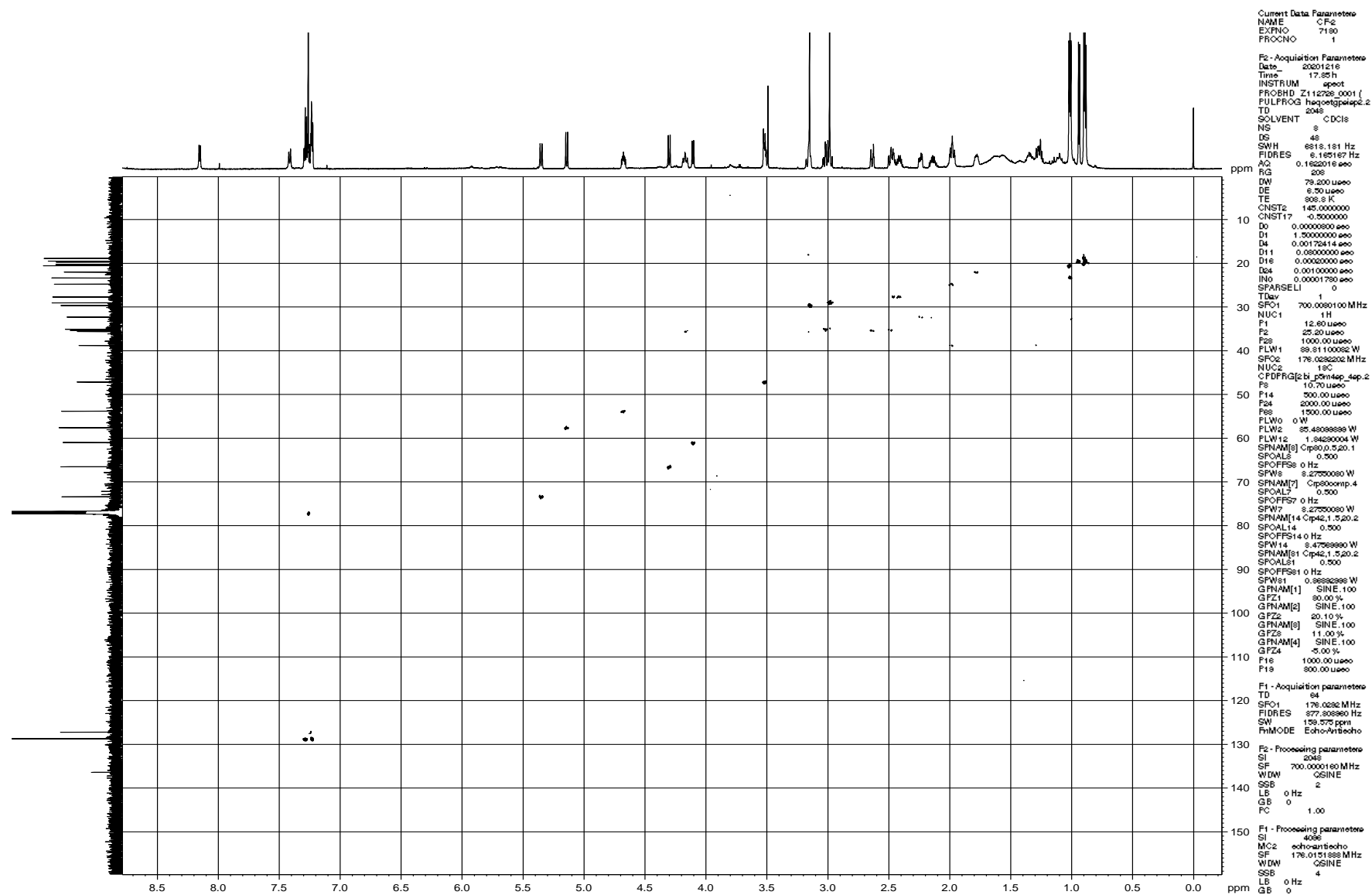


Figure S36. HMBC spectrum of isaridine E (11)

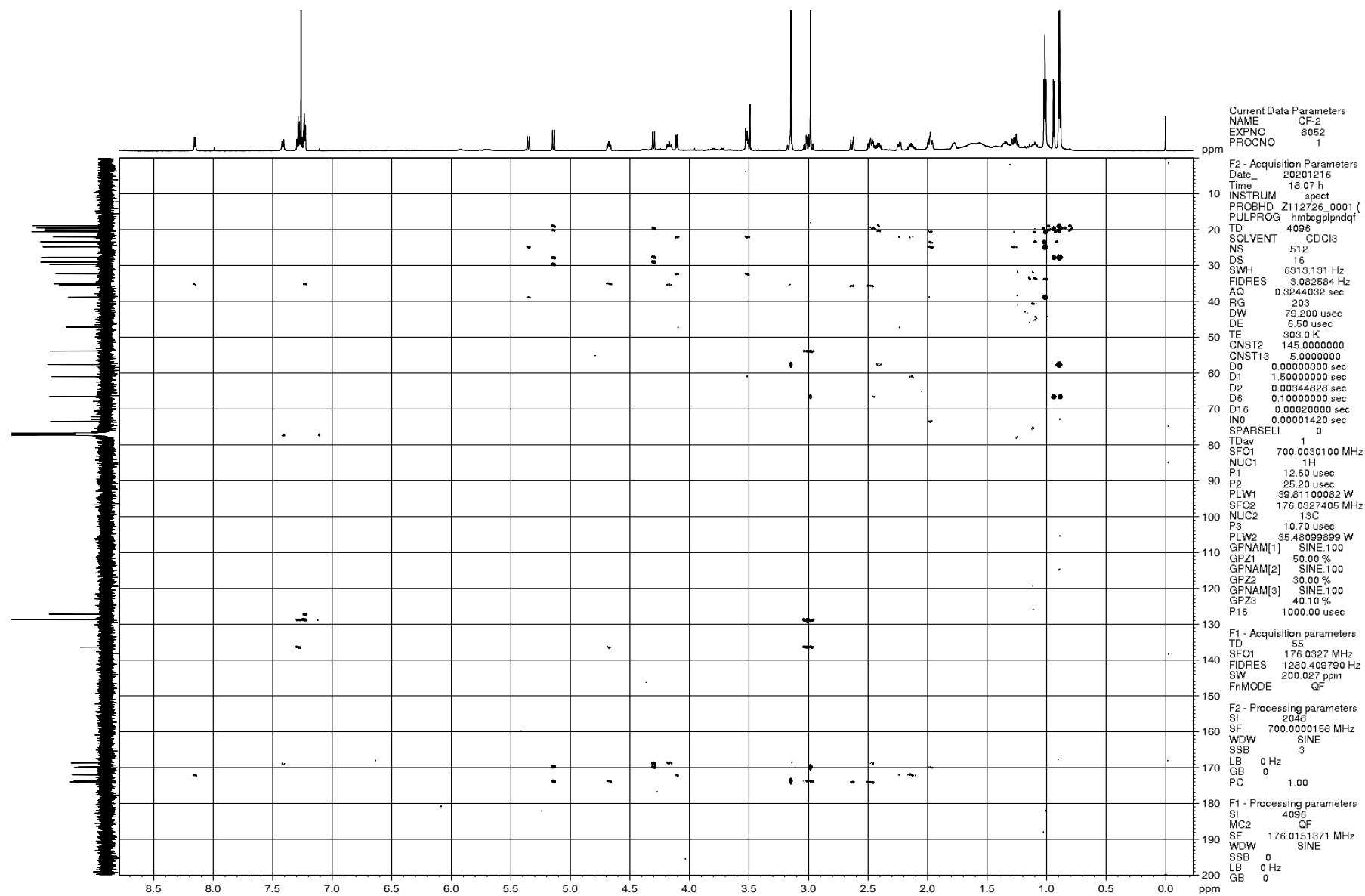


Figure S37. NOESY spectrum of isaridine E (11)

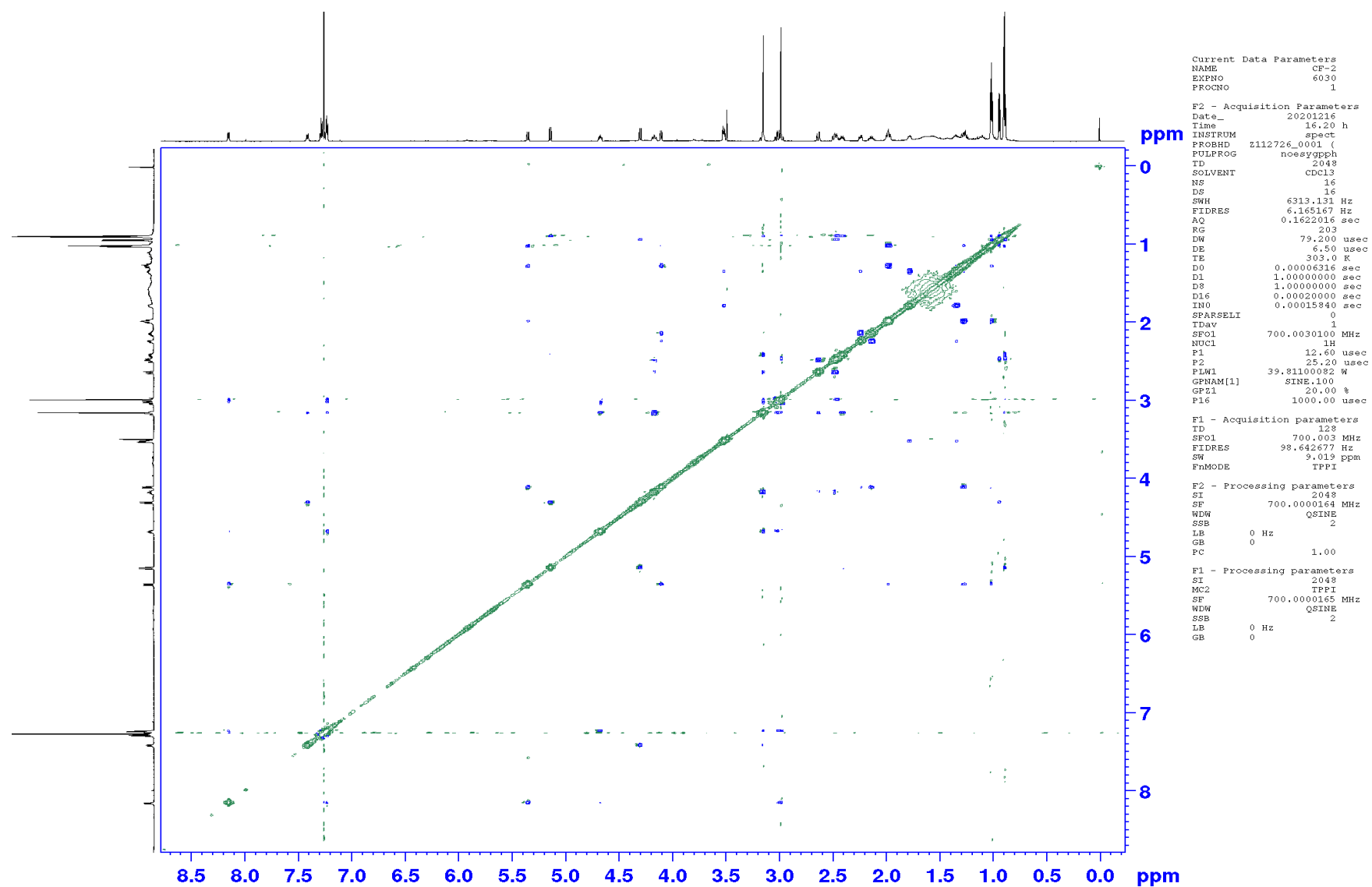


Figure S38. HPLC profile of *L*-FDAA -derivatives of felicarnezoline A (1) hydrolysate

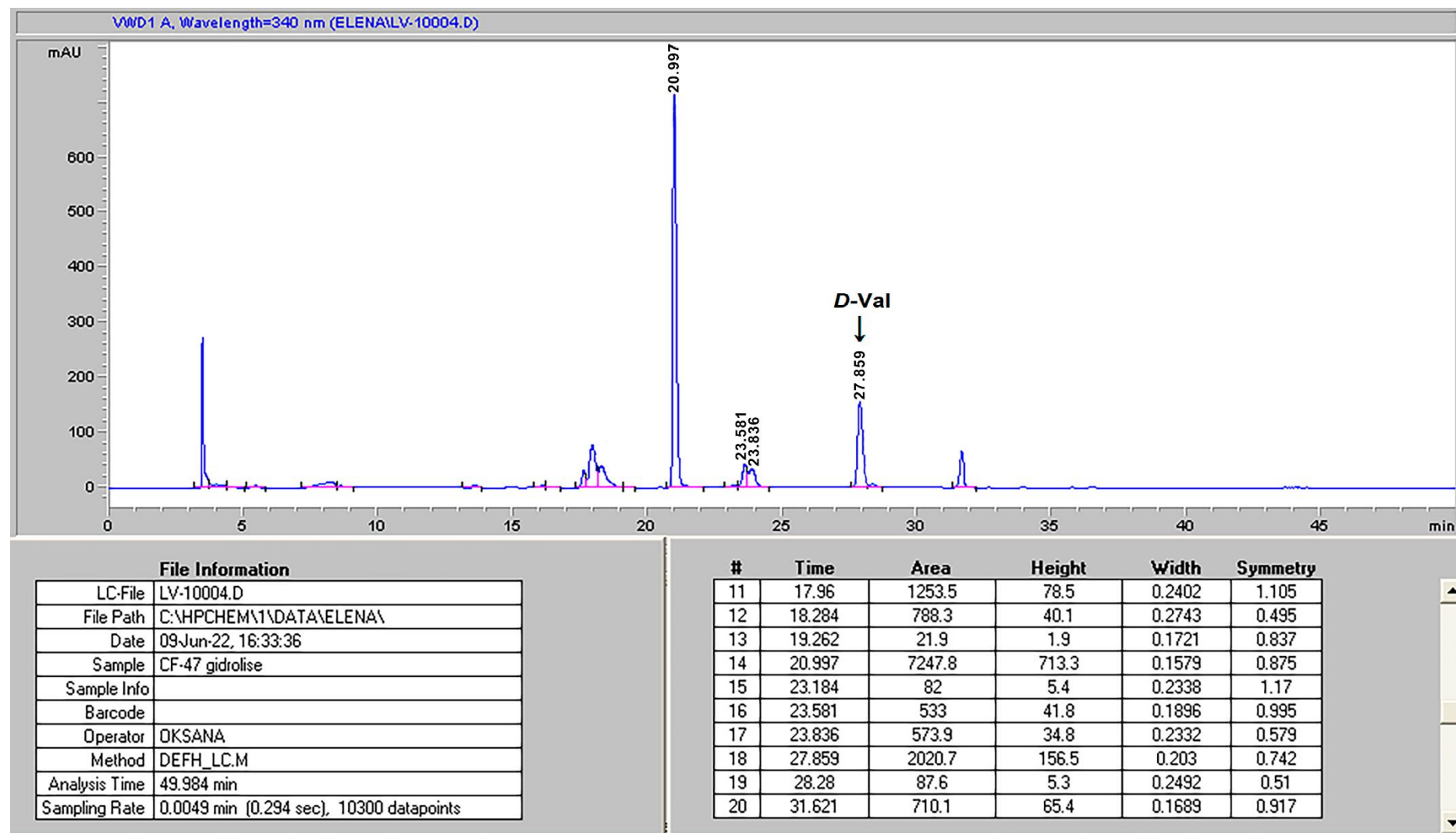


Figure S39. HPLC profile of *L*-FDAA -derivatives of felicarnezoline A (1) HP+*L*-Val

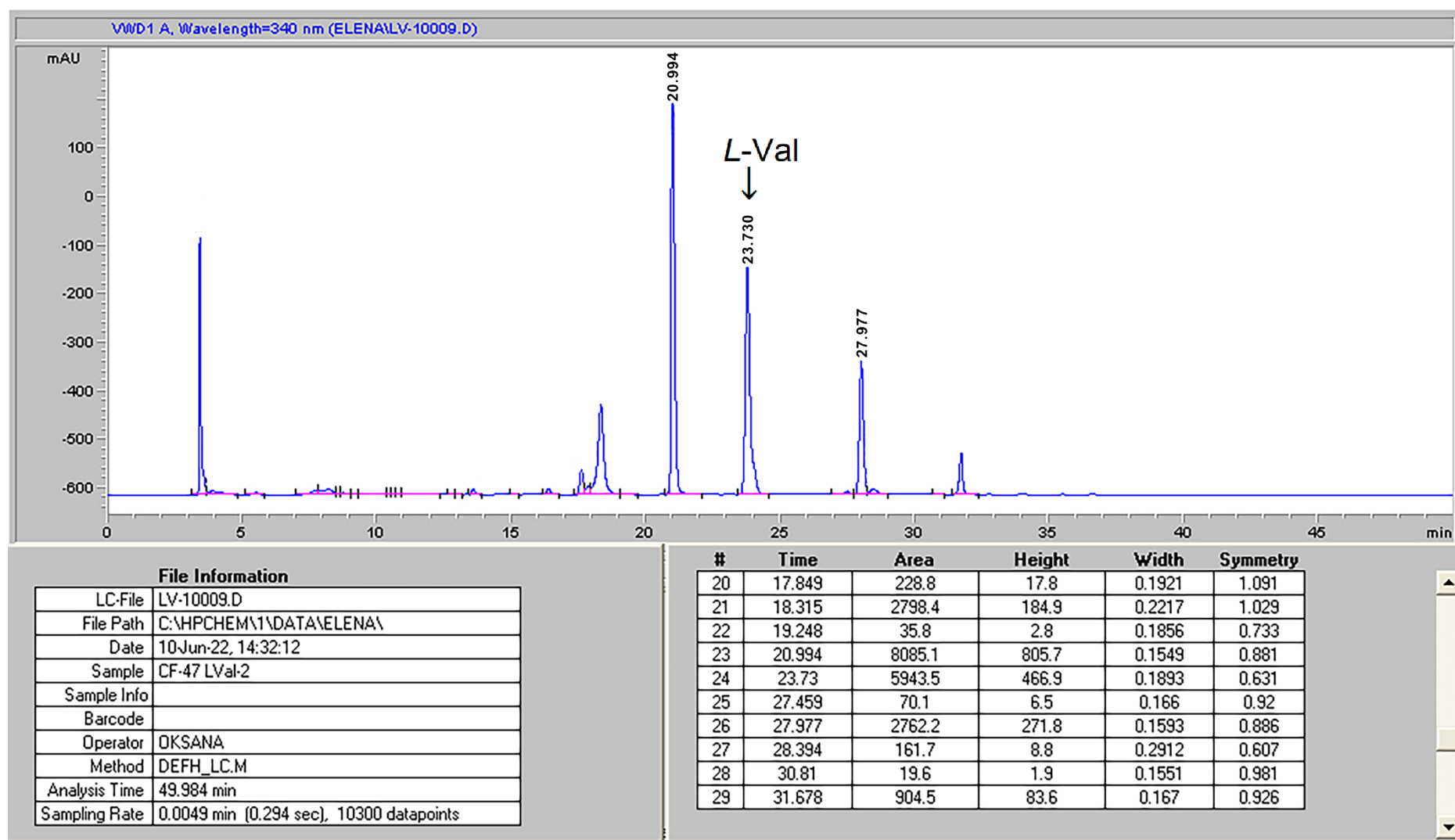


Figure S40. HPLC profile of *L*-FDAA -derivatives of felicarnezoline A (1) HP+*D,L*-Val

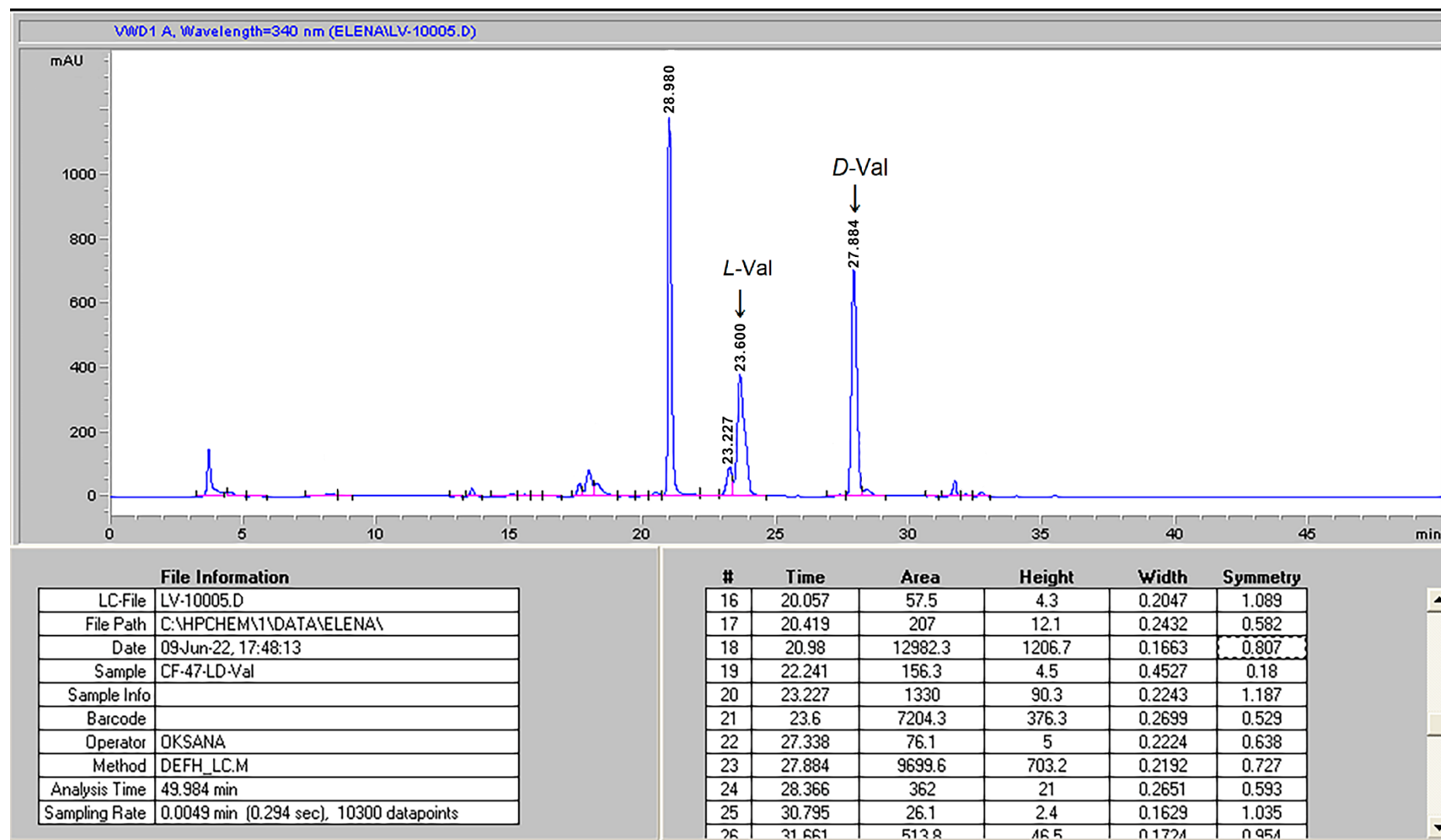


Figure S41. HPLC profiles of *L*-FDAA -derivatives of *L*-Val (a), *L*-FDAA -derivatives of *D,L*-Val (b), *L*-FDAA -derivatives of felicarnezoline A (1) HP (c), felicarnezoline A (1) HP+*D,L*-Val (d) and felicarnezoline A (1) HP+*L*-Val (f)

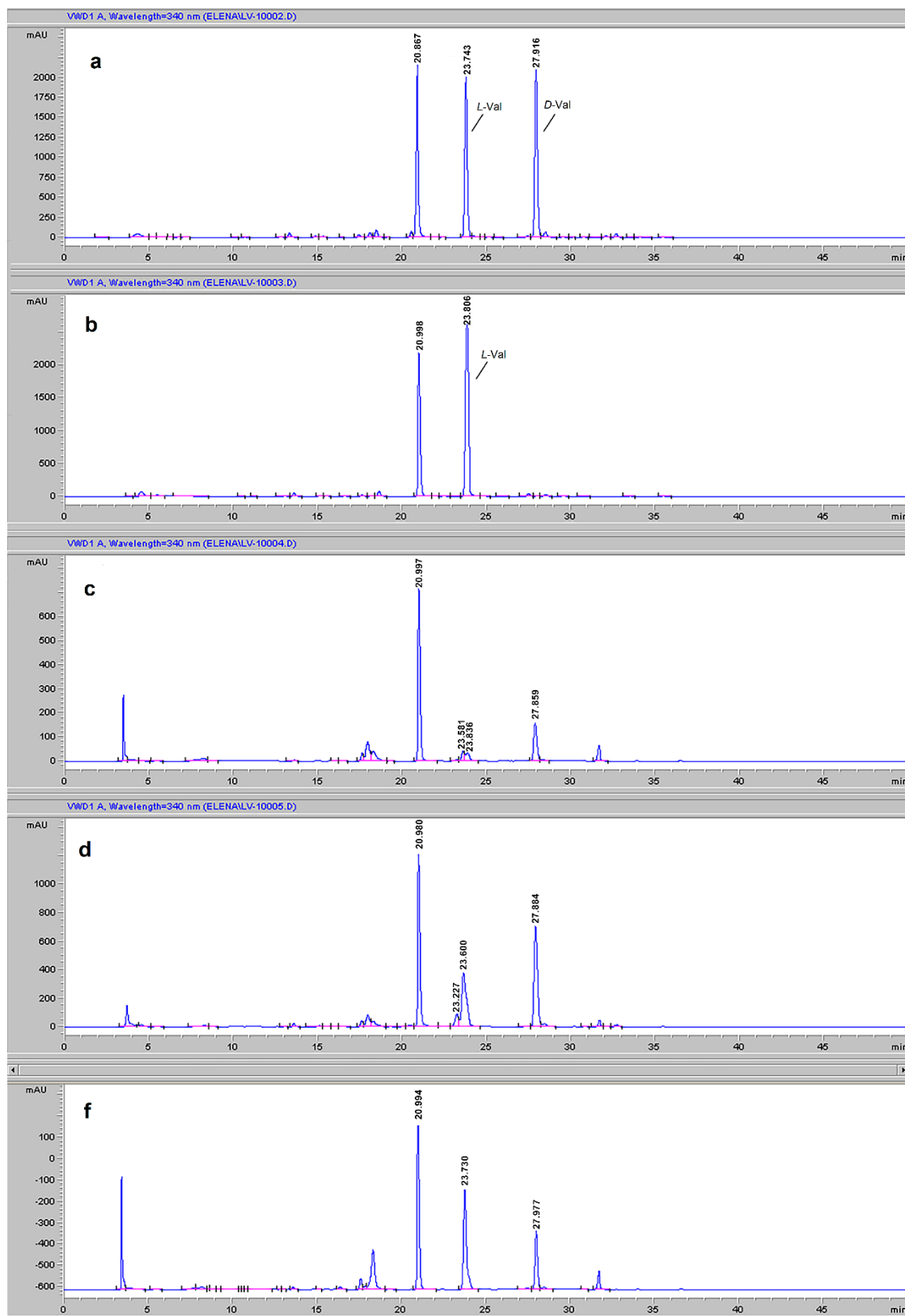


Figure S42. HPLC profile of *L*-FDAA-derivatives of felicitanezoline B (2) HP

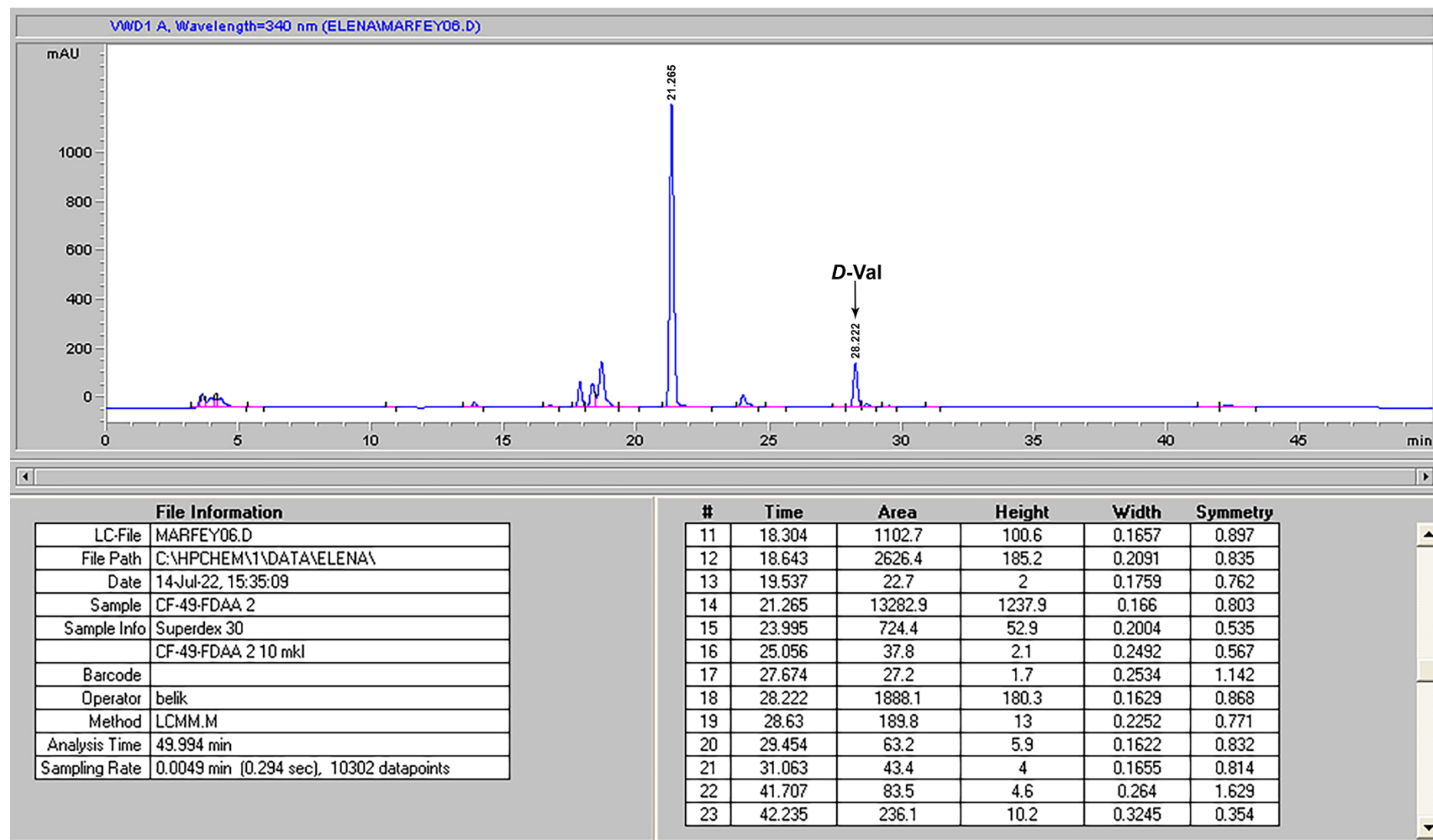


Figure S43. HPLC profile of *L*-FDAA -derivatives of felicarnezoline B (2) HP+*L*-Val

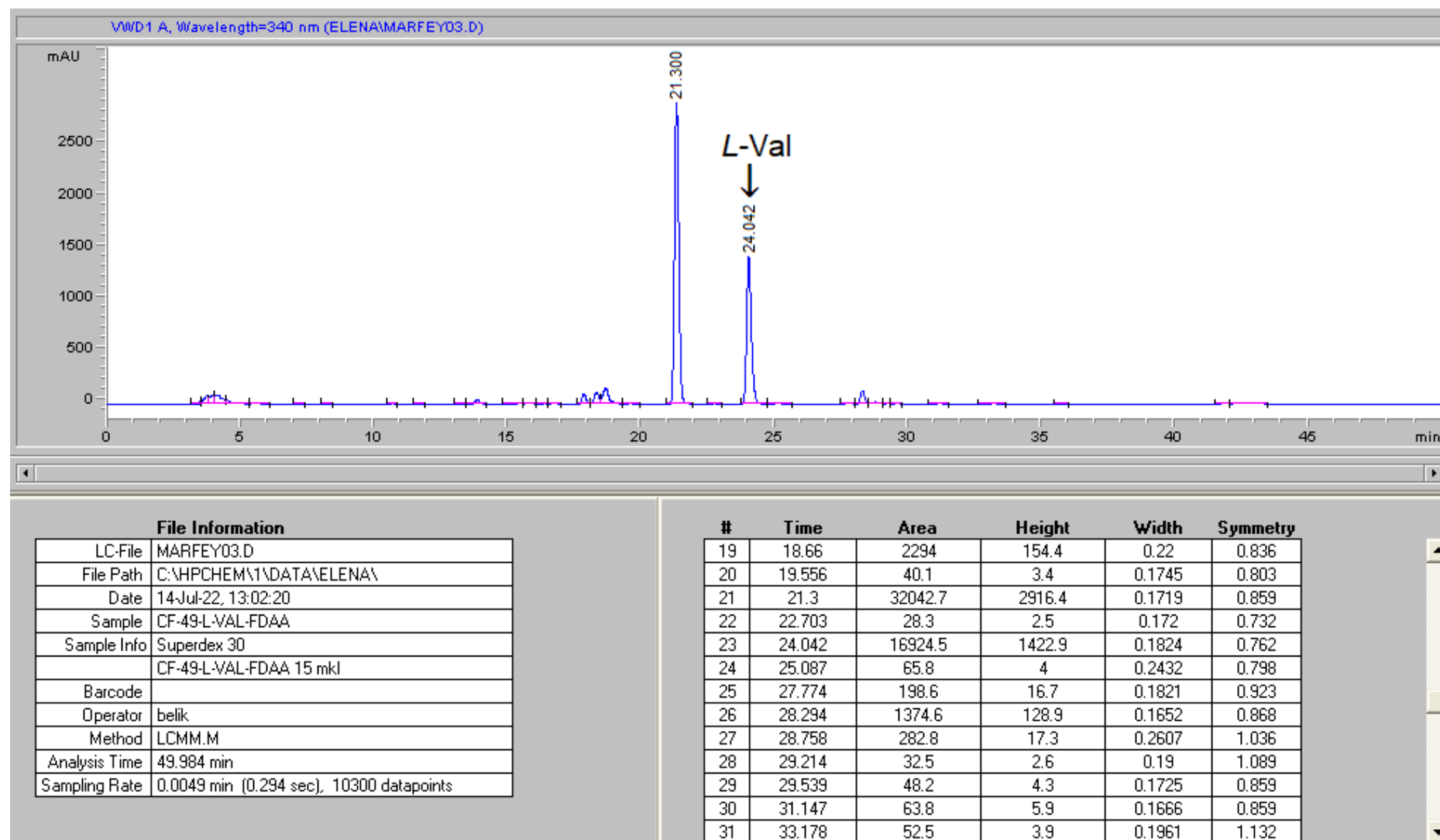


Figure S44. HPLC profile of *L*-FDAA -derivatives of felicarnezoline B (2) HP+*D,L*-Val

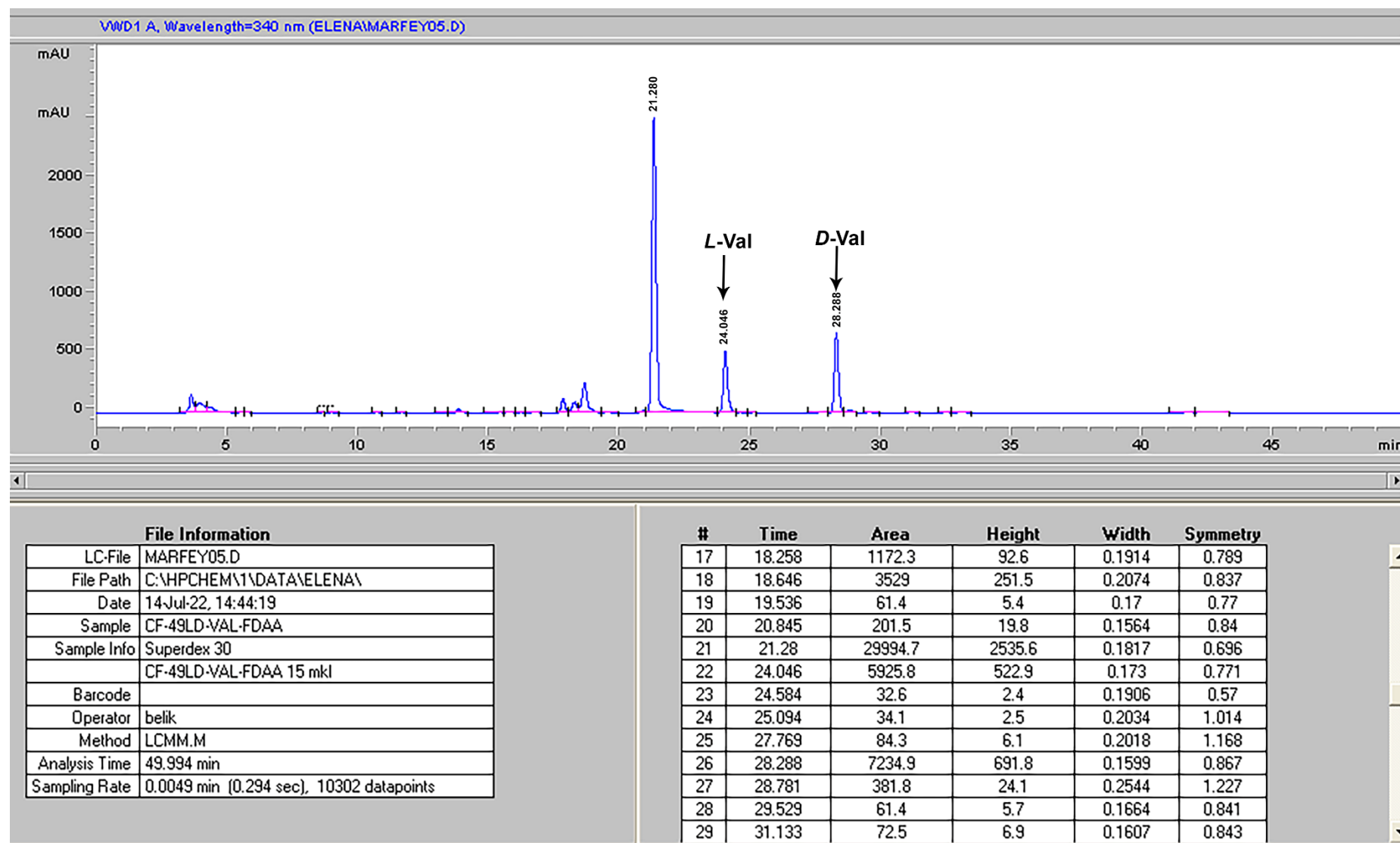


Figure S45. HPLC profiles of *L*-FDAA -derivatives of *L*-Val (a), *L*-FDAA -derivatives of *D,L*-Val (b), *L*-FDAA -derivatives of felicarnezoline B (2) HP (c), felicarnezoline B (2) HP+*D,L*-Val (d) and felicarnezoline B HP+*L*-Val (f)

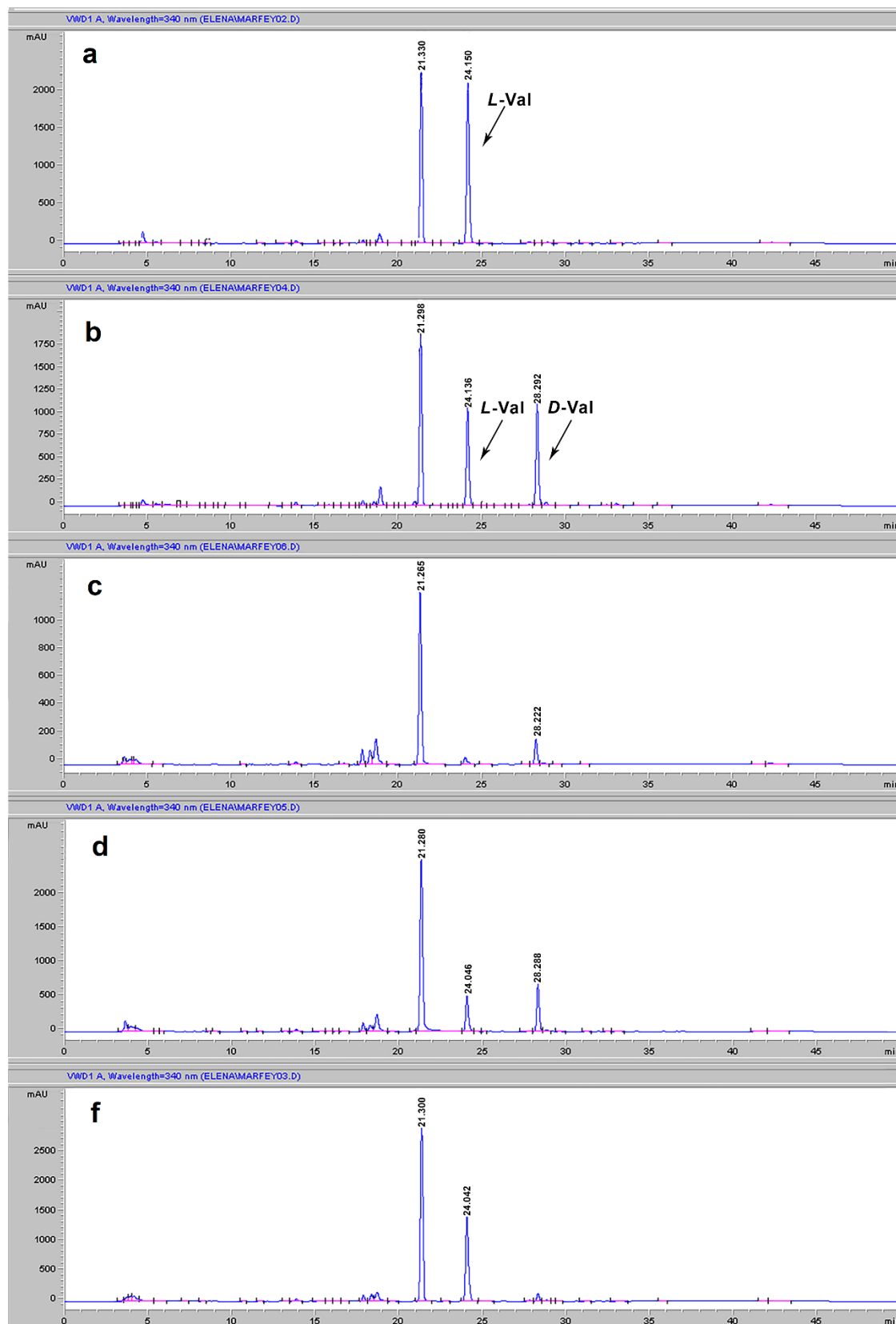


Figure S46. HPLC profile of *L*-FDAA -derivatives of felicarnezoline C (3) HP

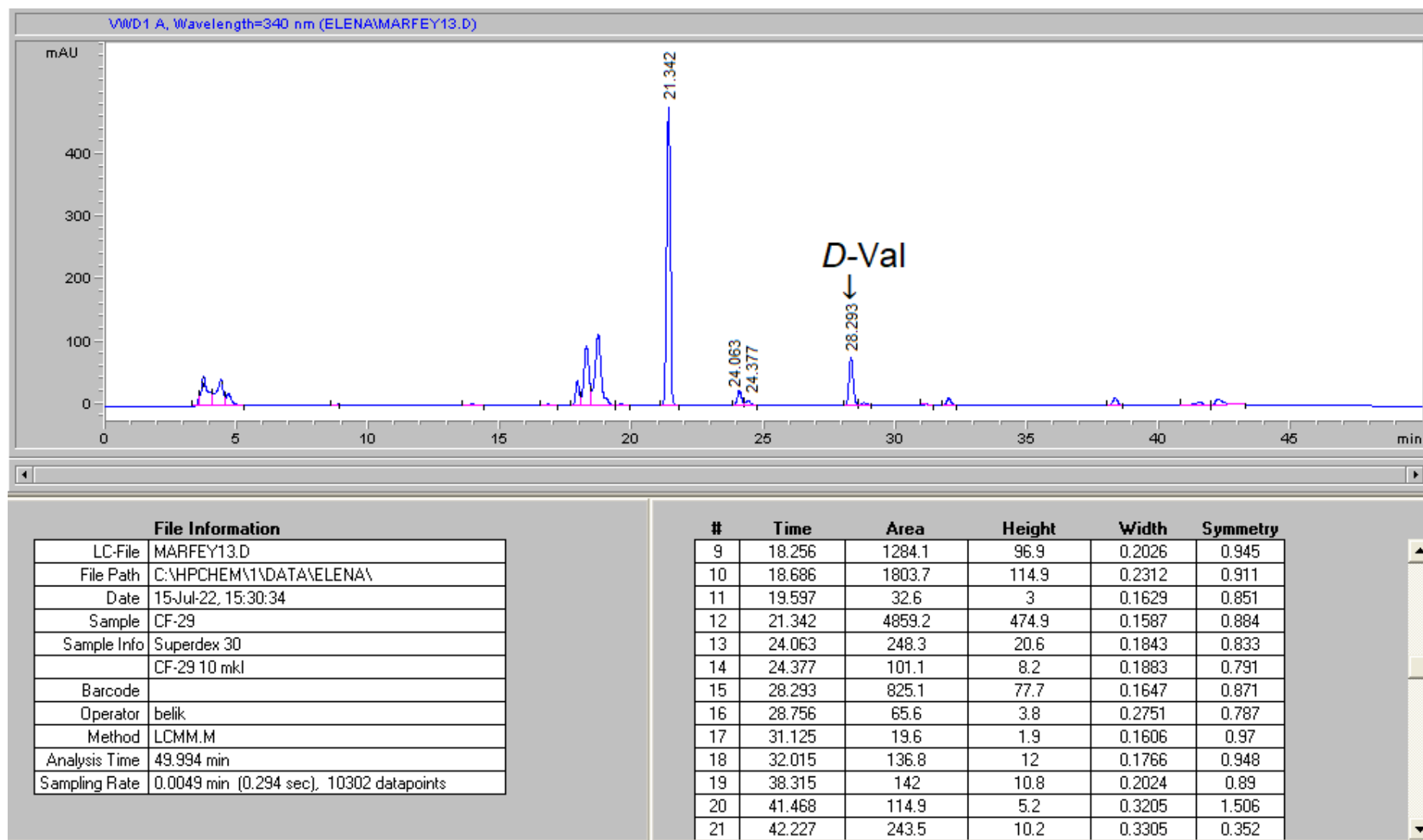


Figure S47. HPLC profile of *L*-FDAA -derivatives of felicarnezoline C (3) HP +*L*-Val

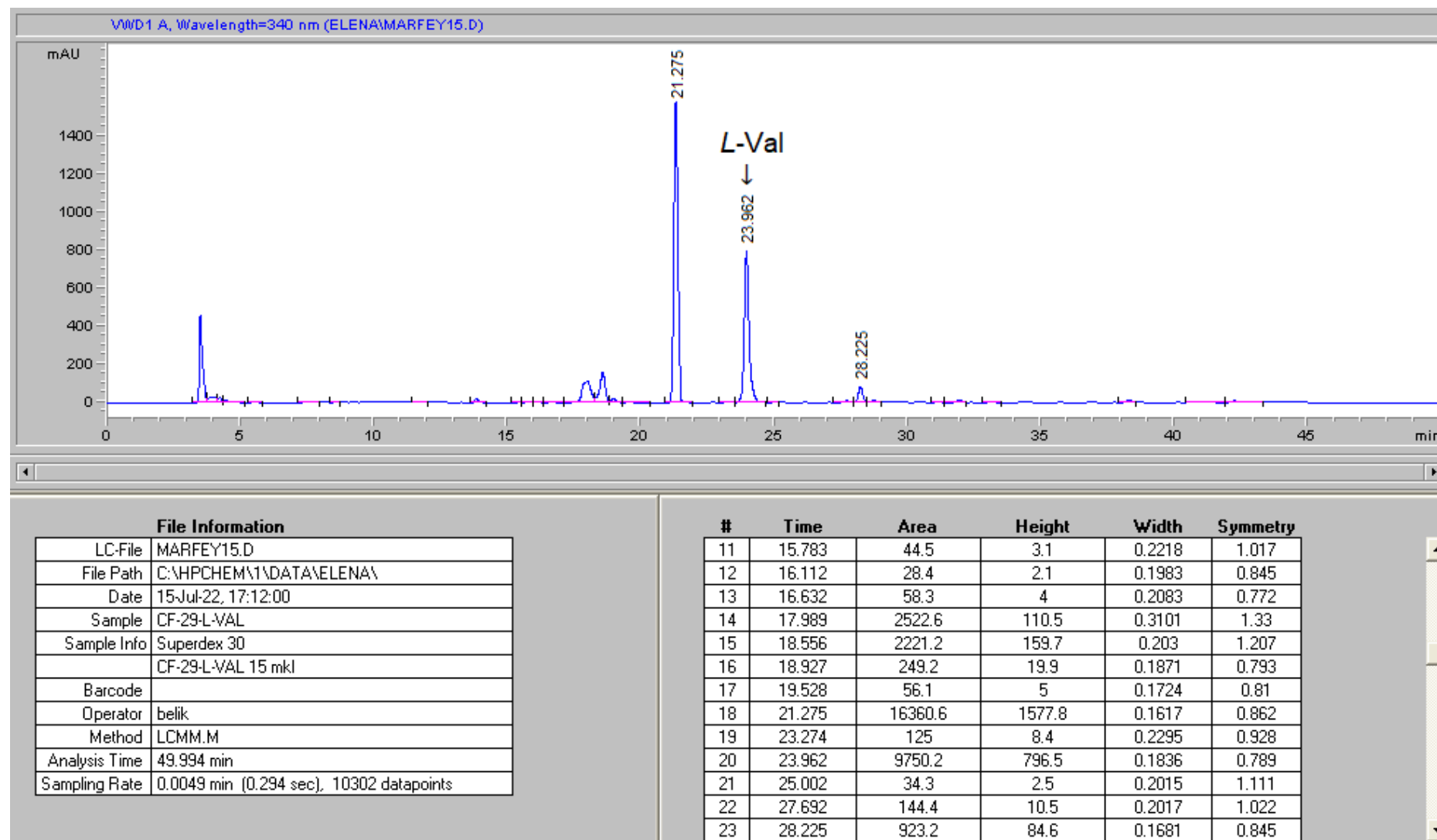
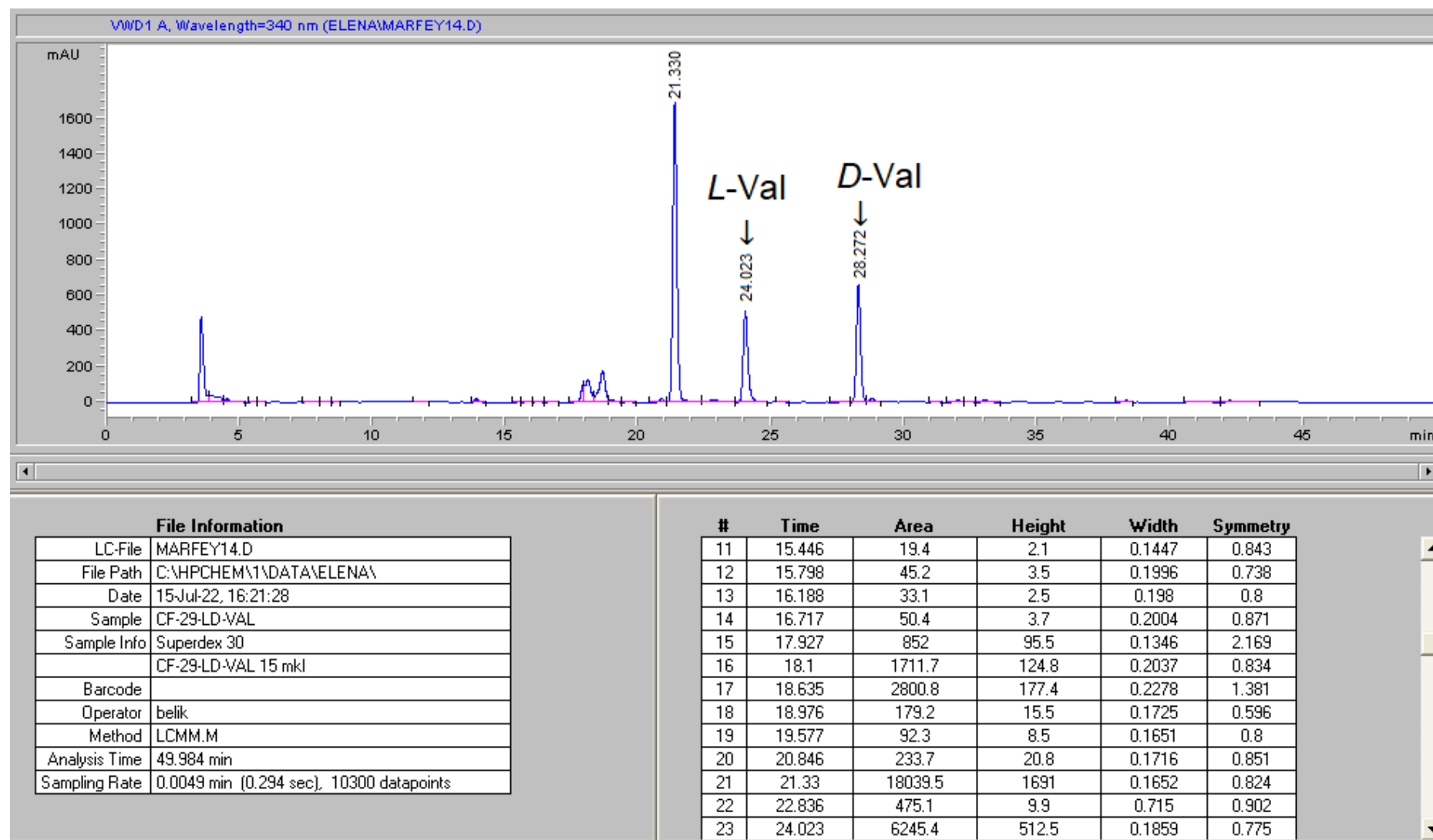


Figure S48. HPLC profile of *L*-FDAA -derivatives of felicarnezoline C (3) HP *D,L*-Val



F

Figure S49. HPLC profiles of *L*-FDAA -derivatives of *L*-Val (a), *L*-FDAA -derivatives of *D,L*-Val (b), *L*-FDAA -derivatives of felicarnezoline C (3) HP (c), felicarnezoline C (3) HP+*D,L*-Val (d) and felicarnezoline C (3) HP+*L*-Val (f)

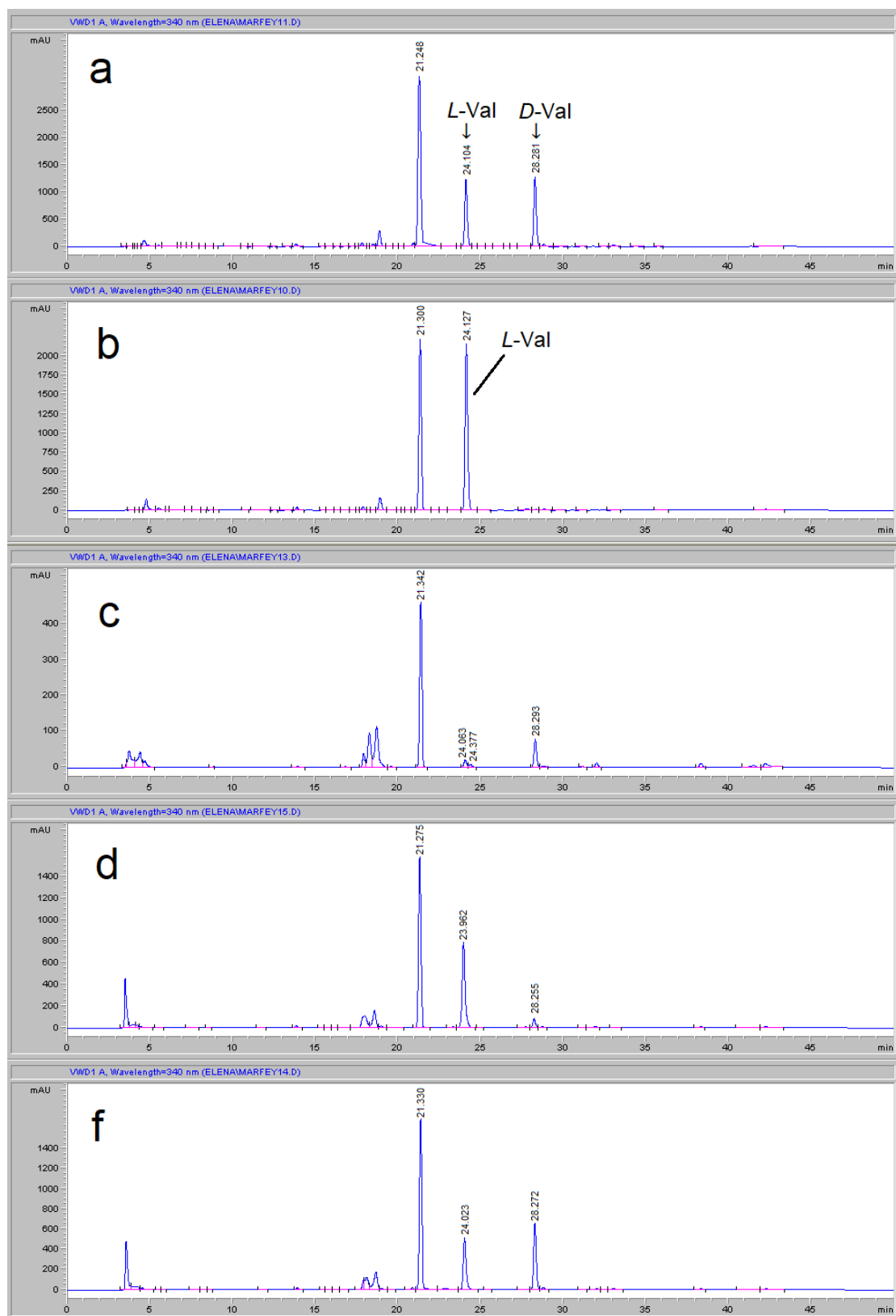


Figure S50. HPLC profile of *L*-FDAA -derivatives of felicarnezoline D (4) HP

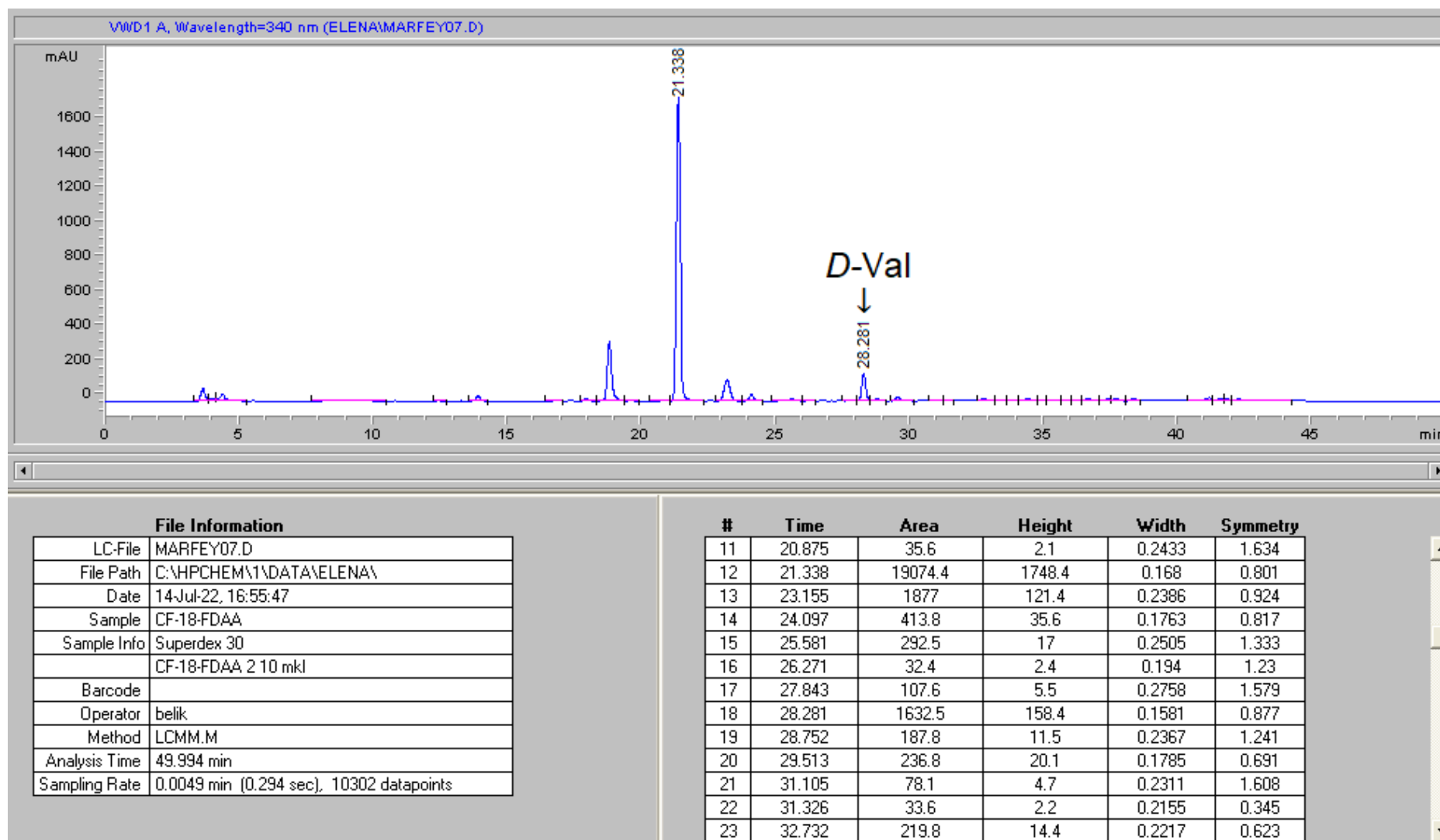


Figure S51. HPLC profile of *L*-FDAA -derivatives of felicarnezoline D (4) HP +*L*-Val

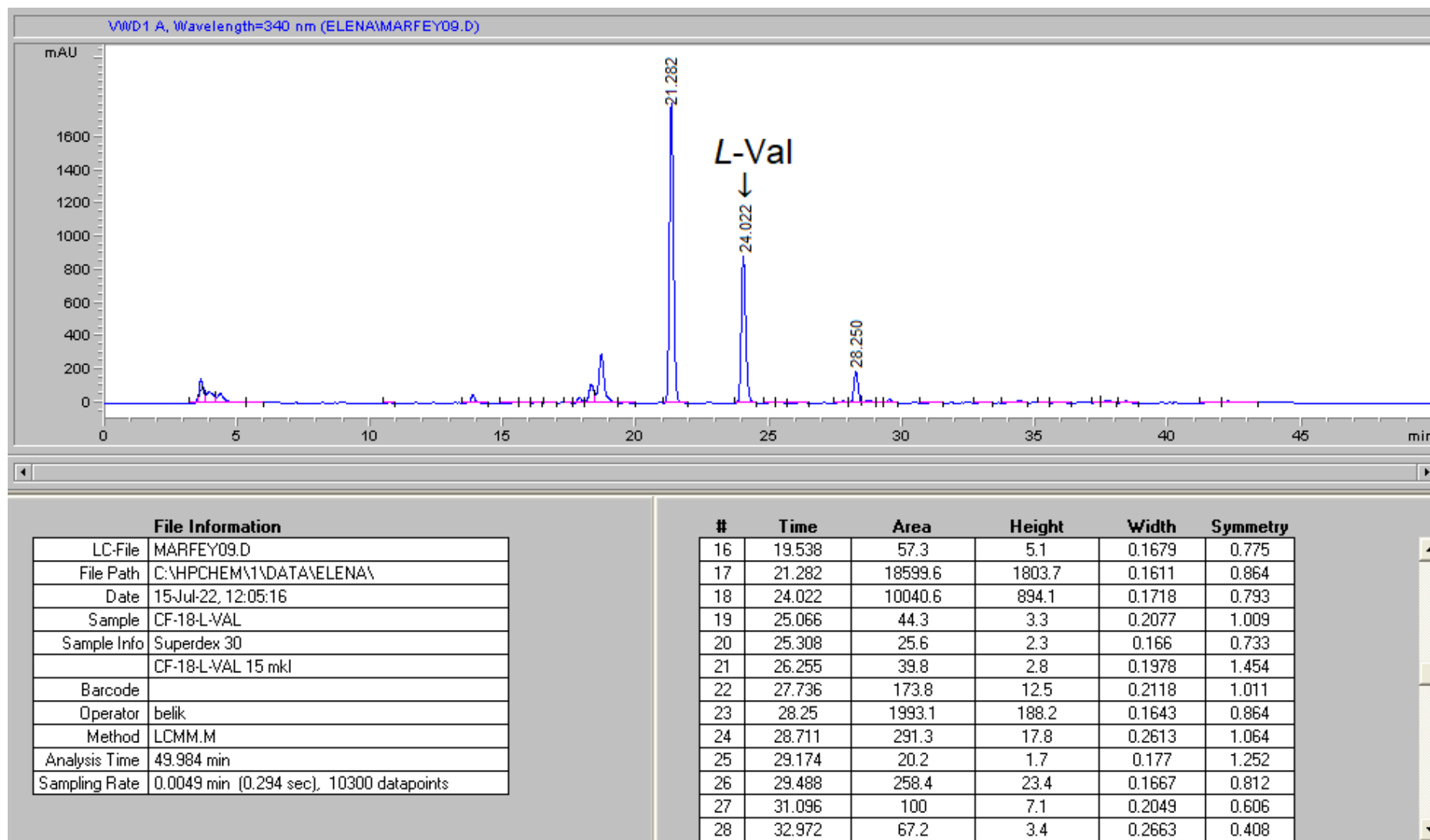


Figure S52. HPLC profile of *L*-FDAA -derivatives of felicarnezoline D (4) HP *D,L*-Val

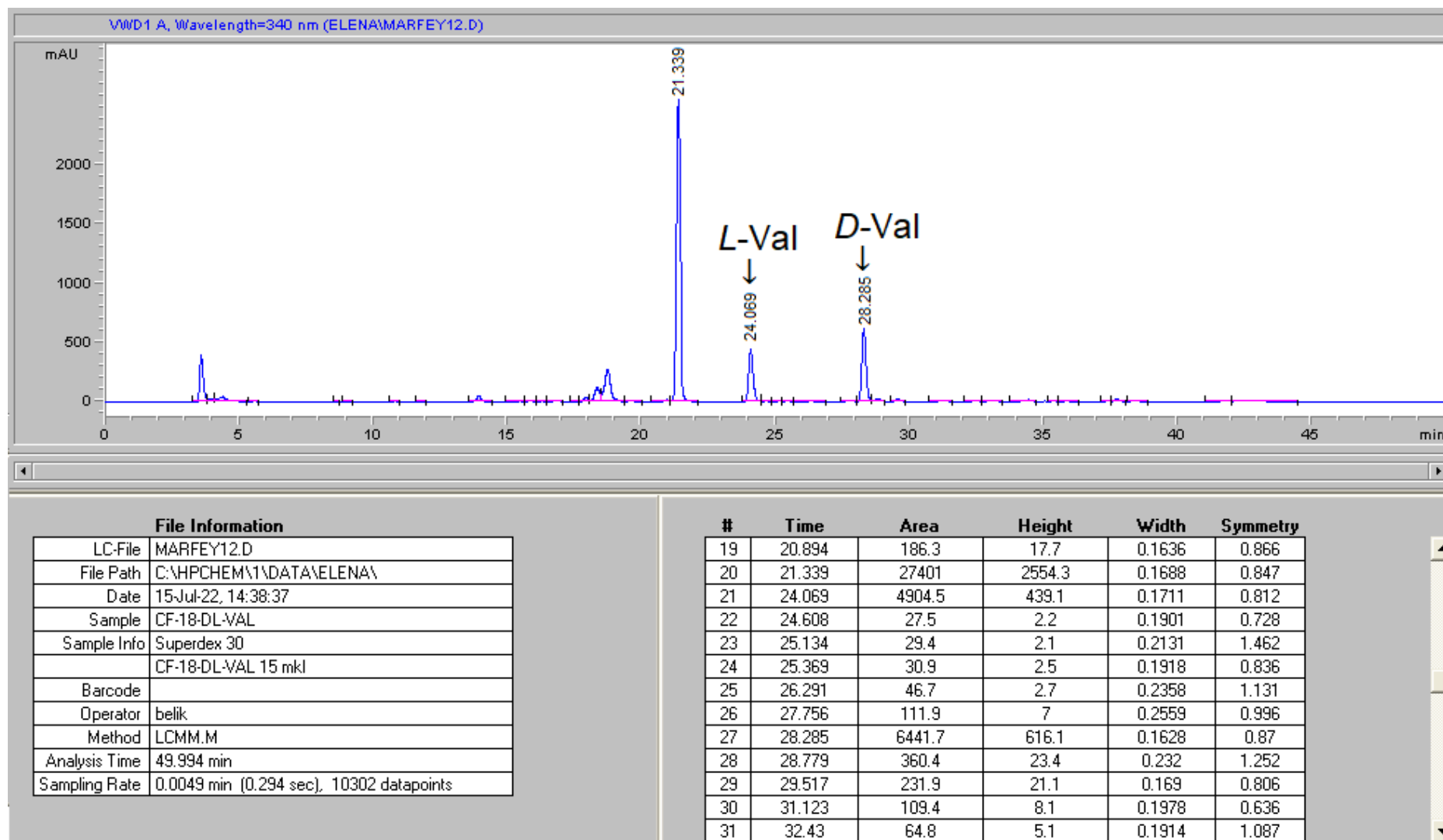


Figure S53. HPLC profiles of *L*-FDAA -derivatives of *L*-Val (a), *L*-FDAA -derivatives of *D,L*-Val (b), *L*-FDAA -derivatives of felicarnezoline D (4) HP (c), felicarnezoline D (4) HP+*D,L*-Val (d) and felicarnezoline D (4) HP+*L*-Val (f)

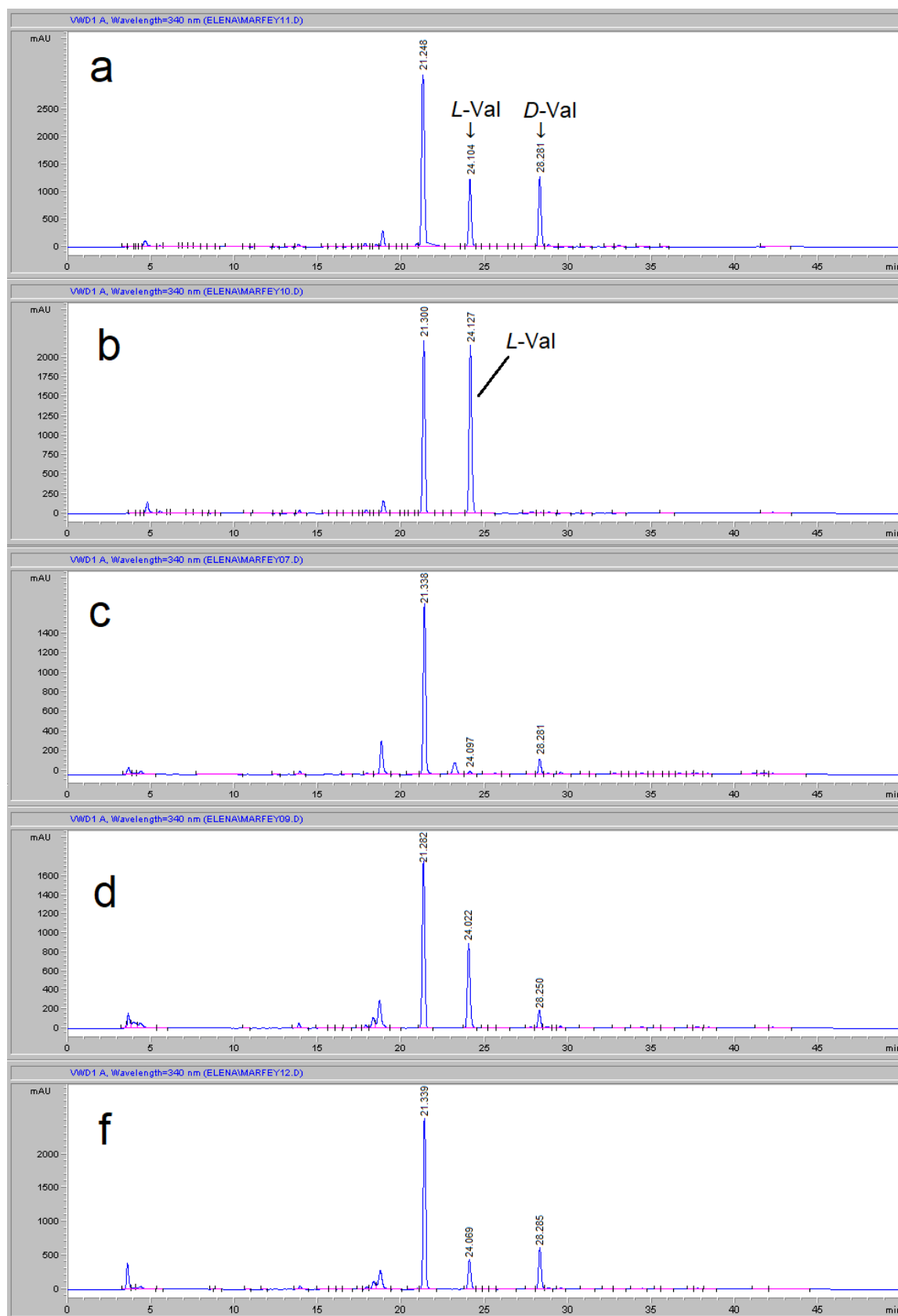


Figure S54. HPLC profile of *L*-FDAA -derivatives of felicarnezoline E (5) HP

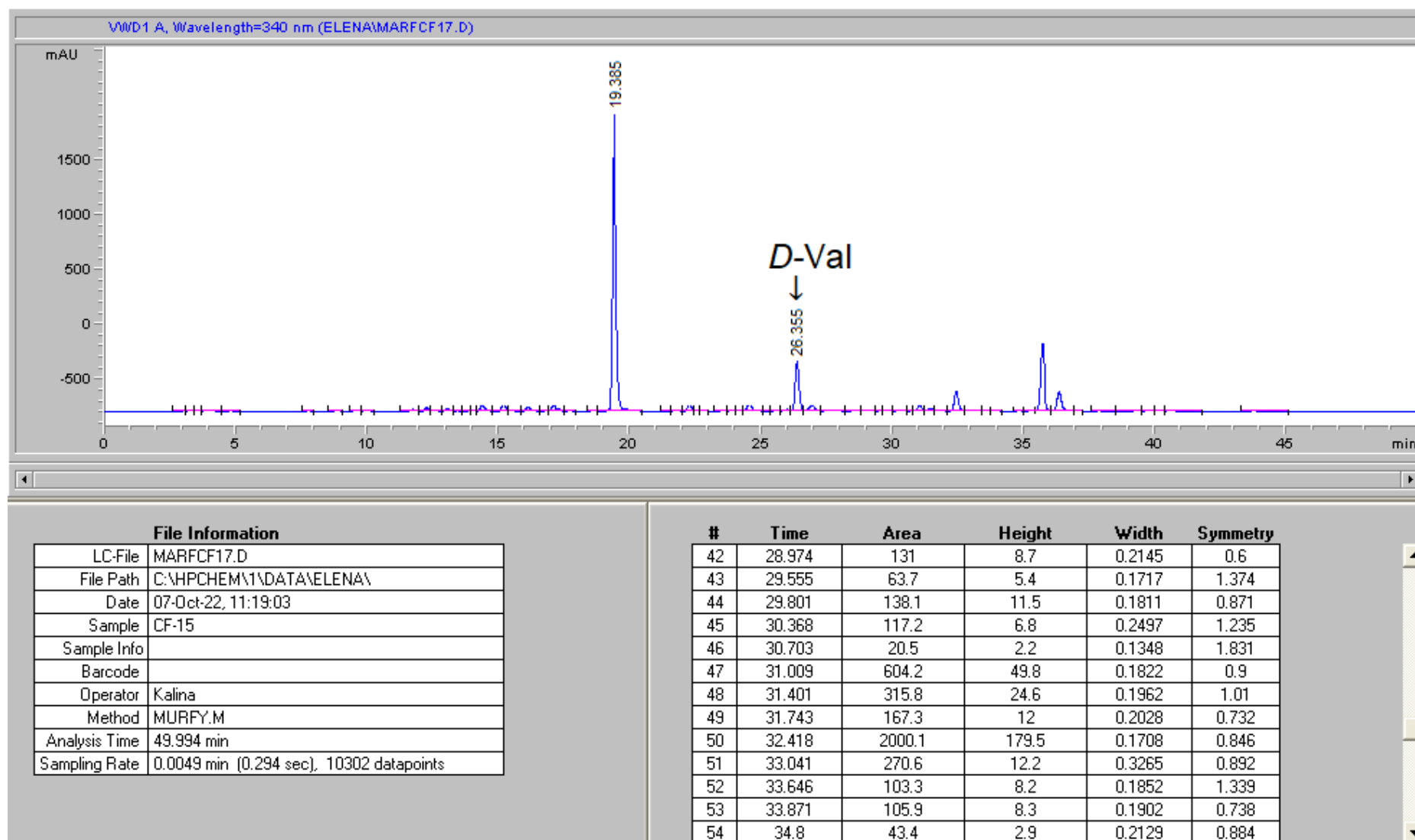


Figure S55. HPLC profile of *L*-FDAA -derivatives of felicarnezoline E (5) HP +*L*-Val

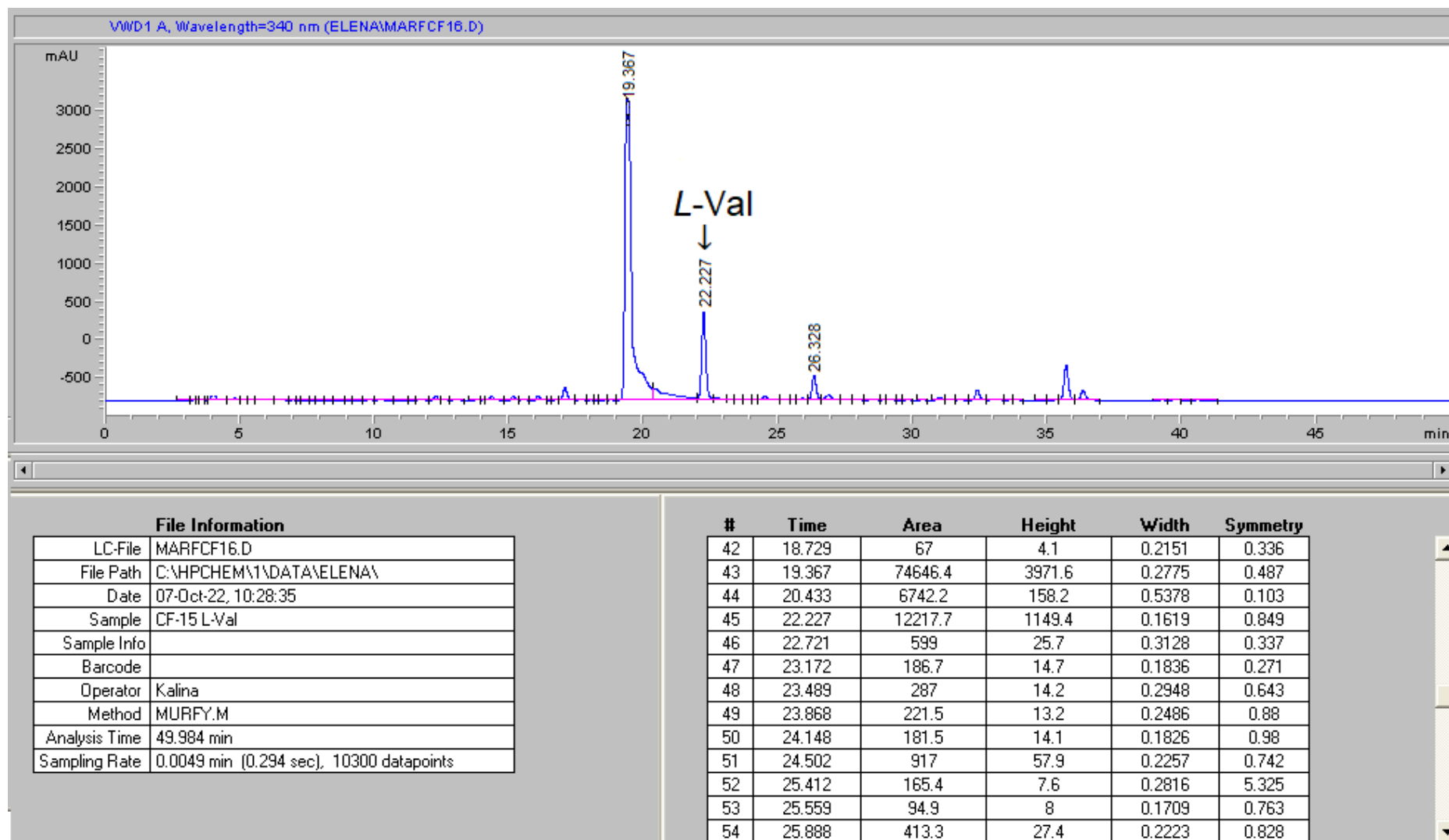


Figure S56. HPLC profile of *L*-FDAA -derivatives of felicarnezoline E (5) HP *D,L*-Val

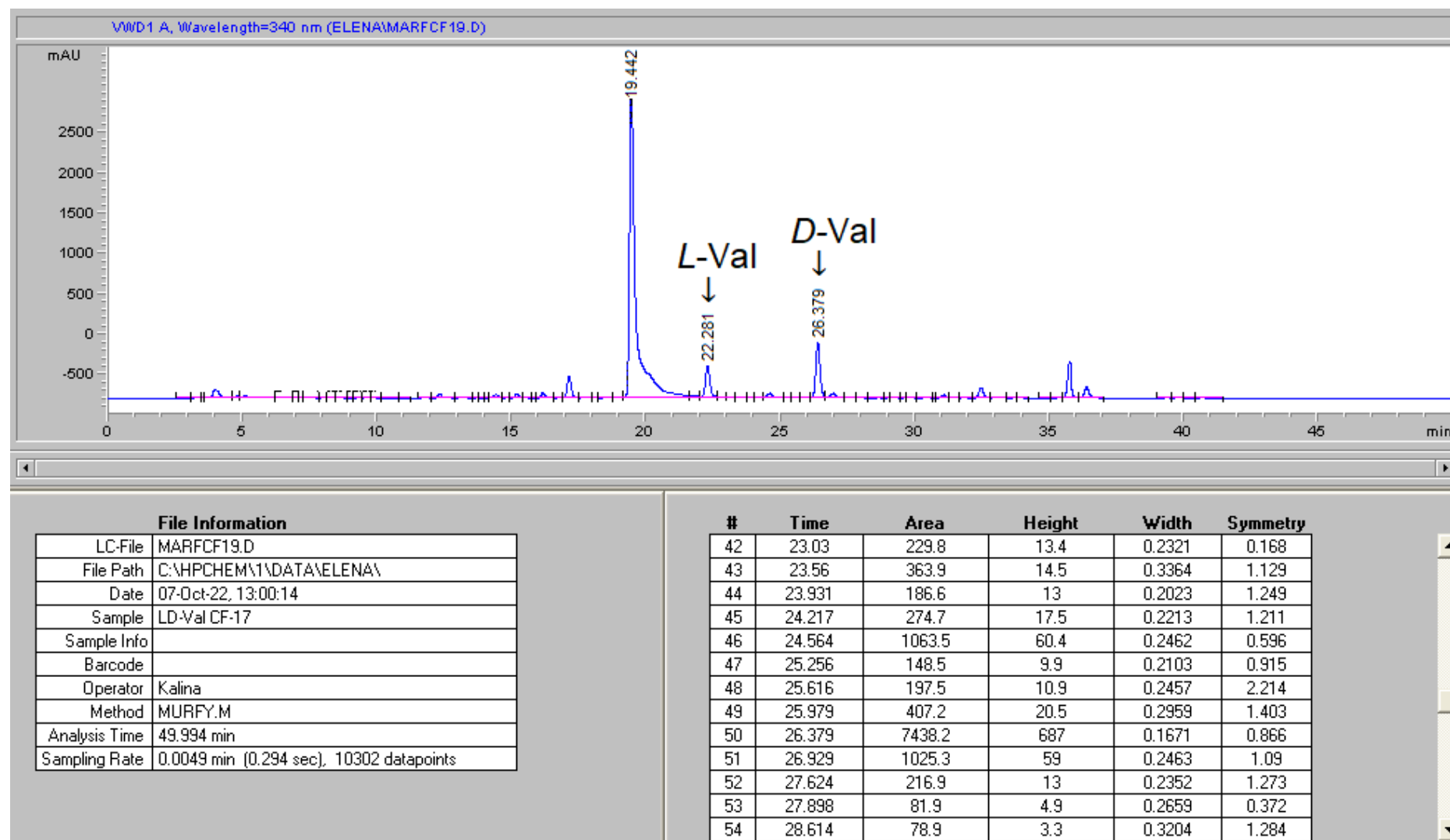


Figure S57. HPLC profiles of *L*-FDAA -derivatives of *L*-Val (a), *L*-FDAA -derivatives of *D,L*-Val (b), *L*-FDAA -derivatives of felicarnezoline E (5) HP (c), felicarnezoline E (5) HP +*D,L*-Val (d) and felicarnezoline E (5) HP+*L*-Val (f)

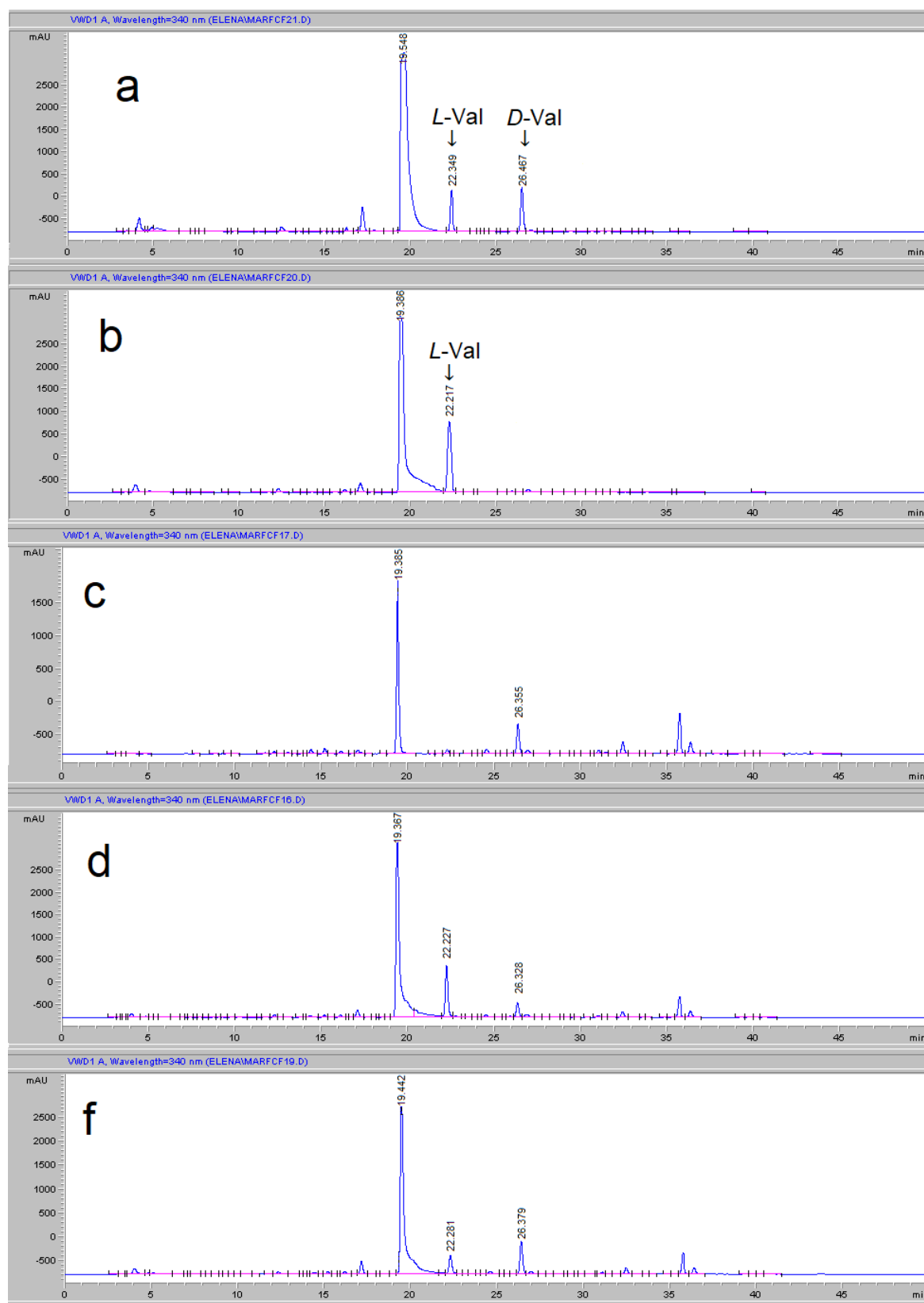
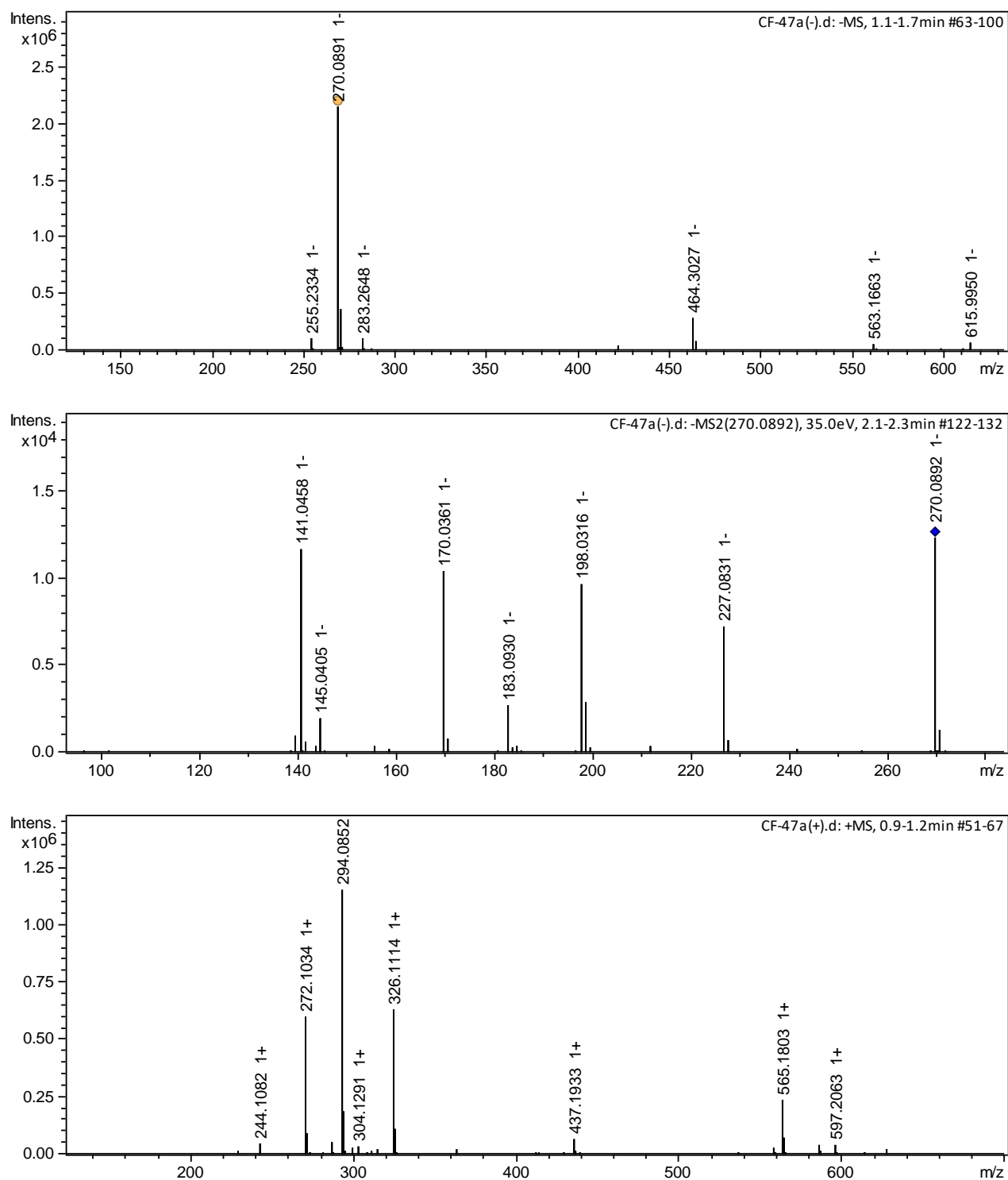


Figure S58. MS spectrum of felicarnezoline A (1)



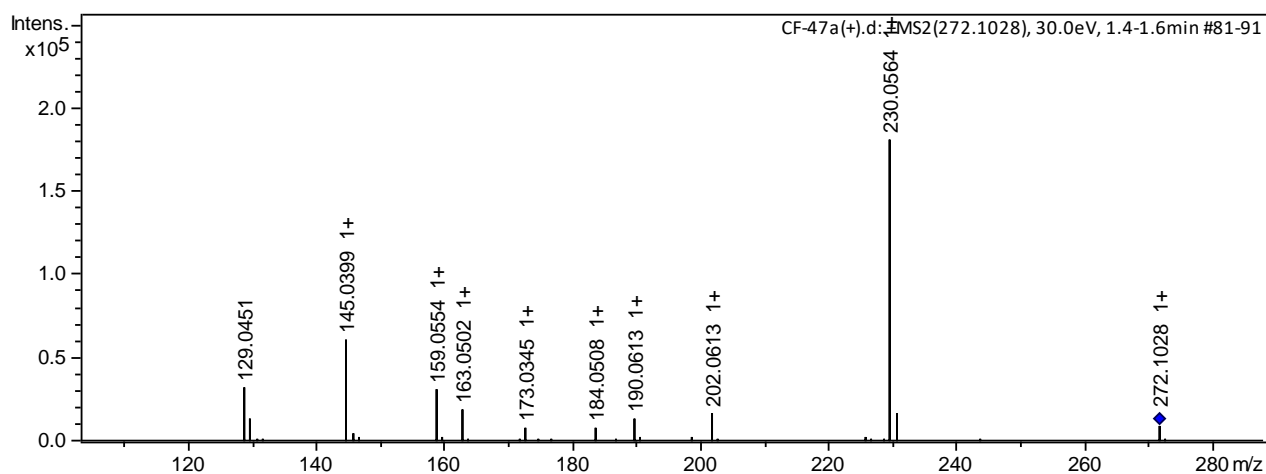
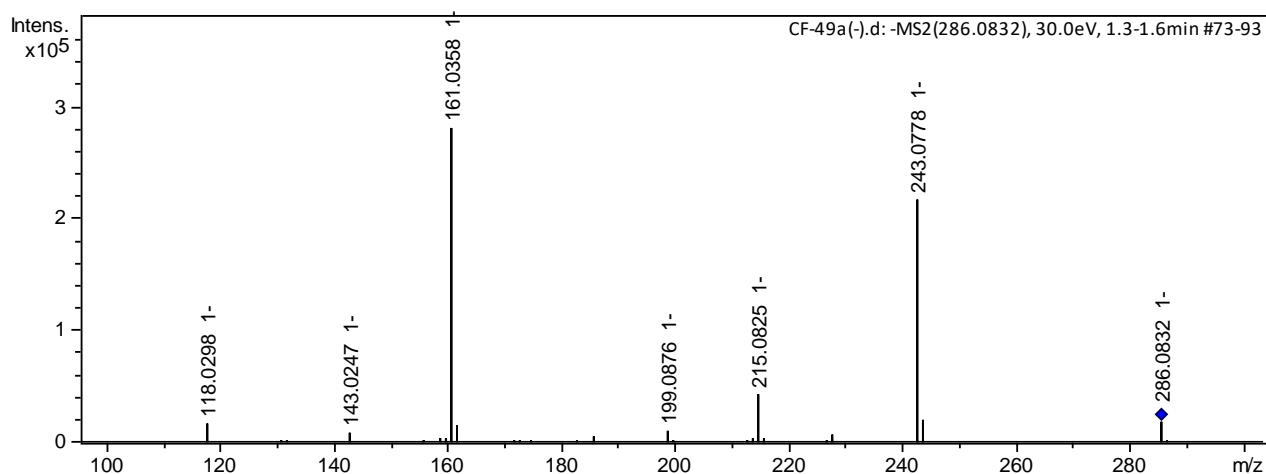
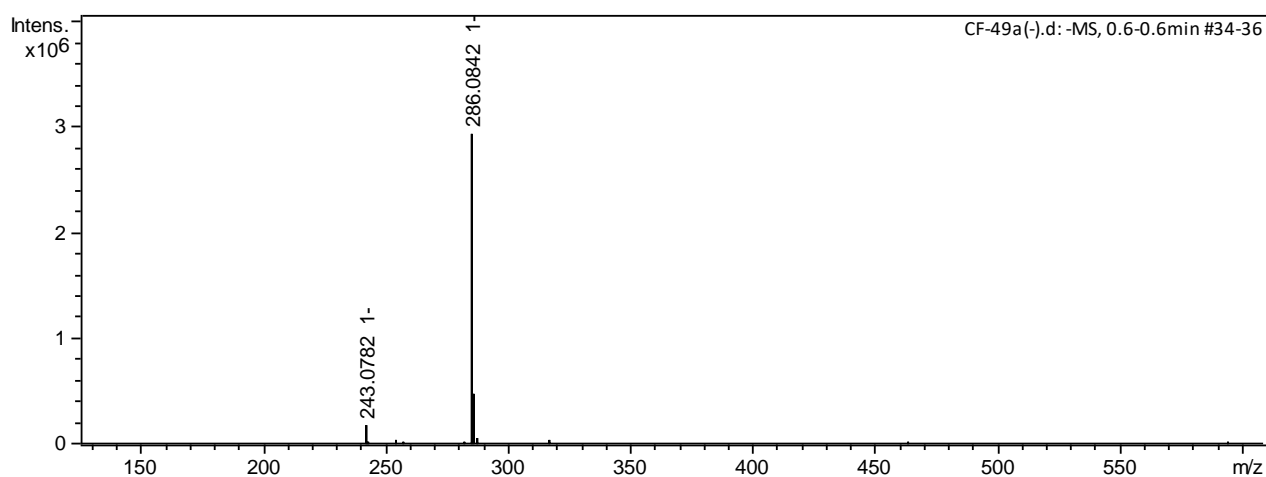


Figure S59. MS spectrum of felicarnezoline B (2)



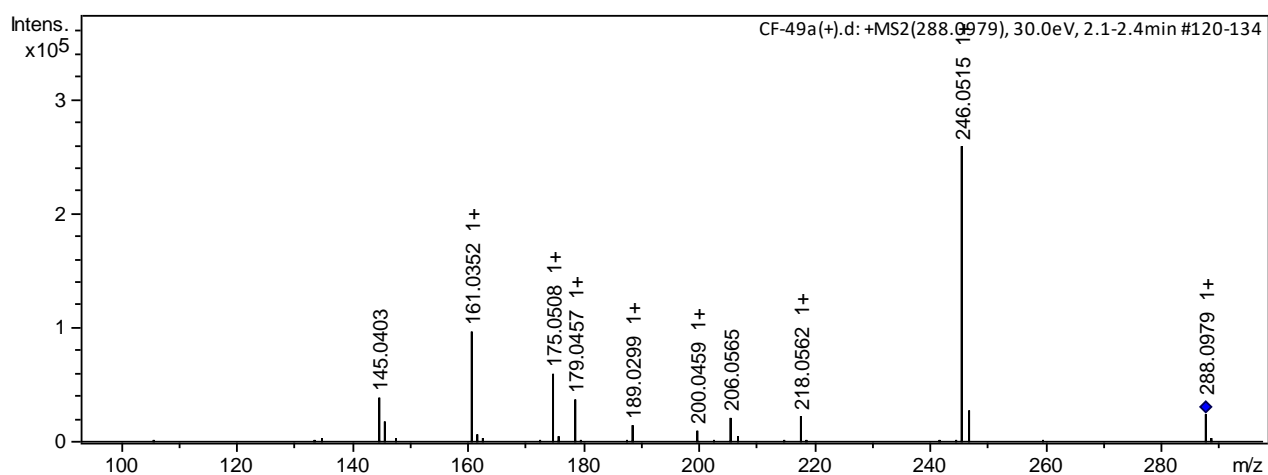
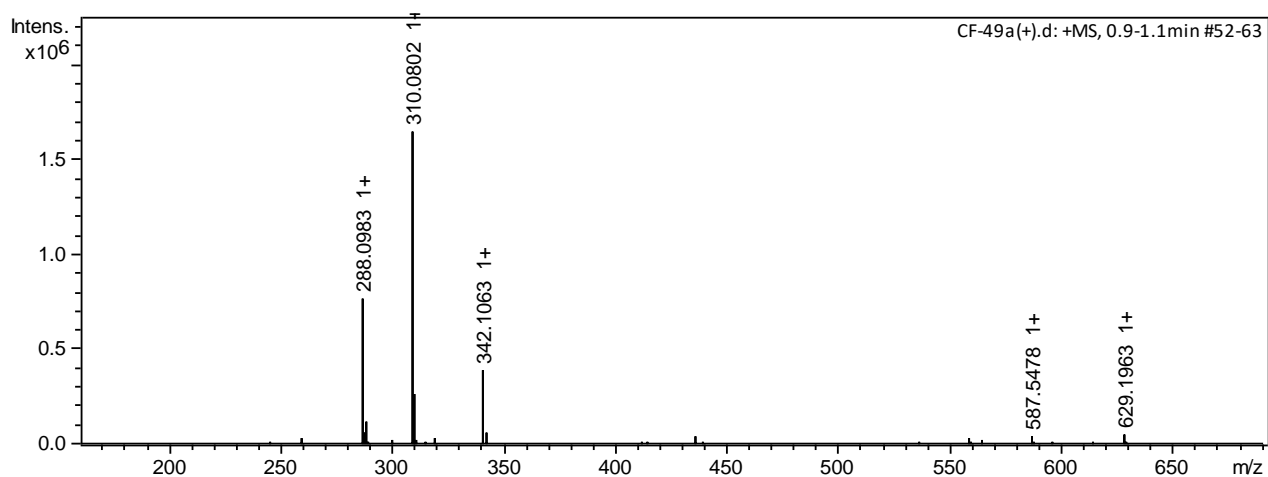
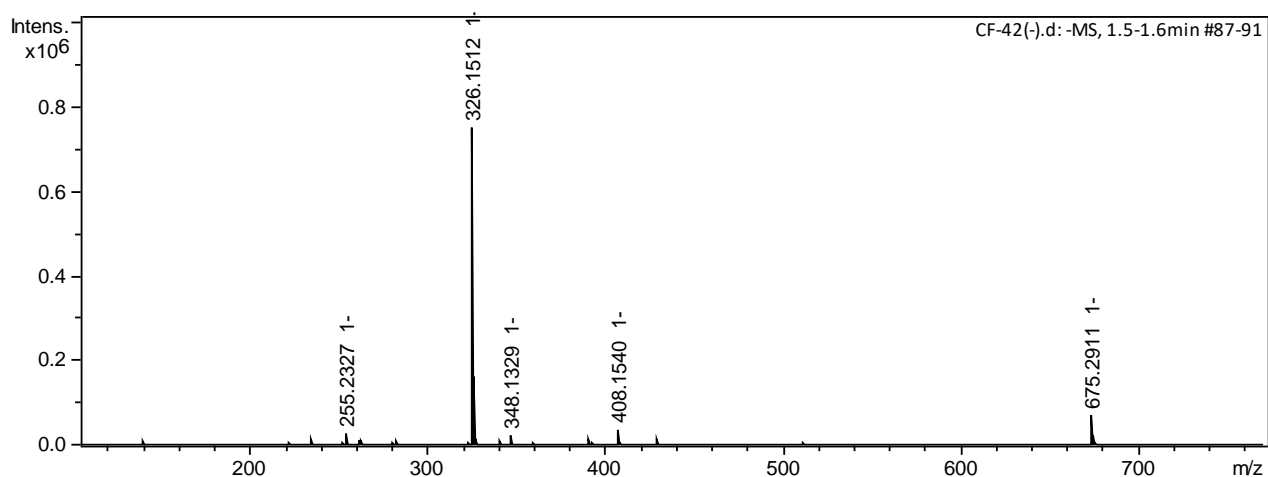


Figure S60. MS spectrum of felicarnezoline D (4)



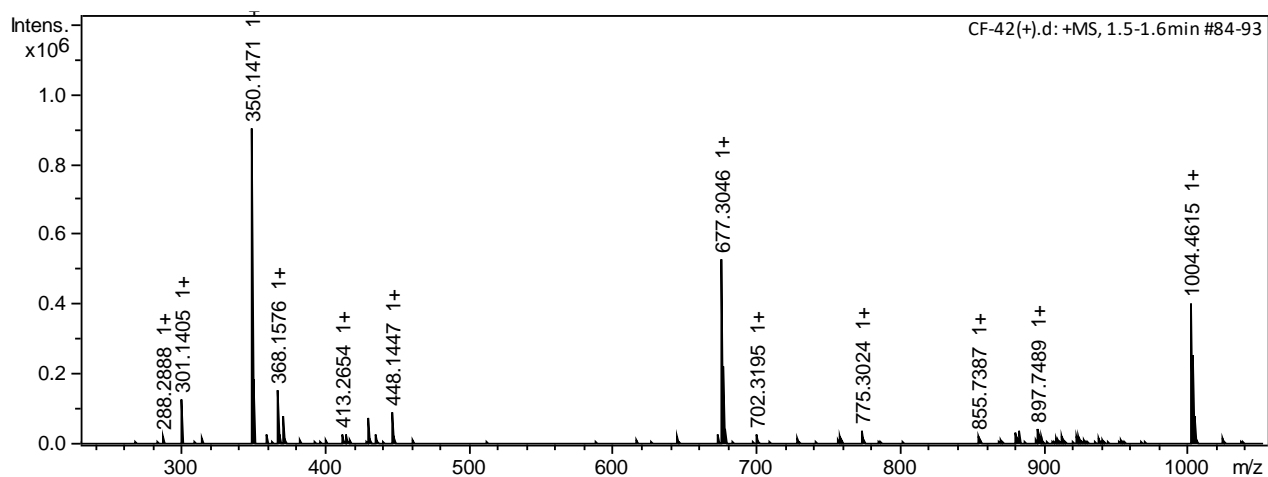
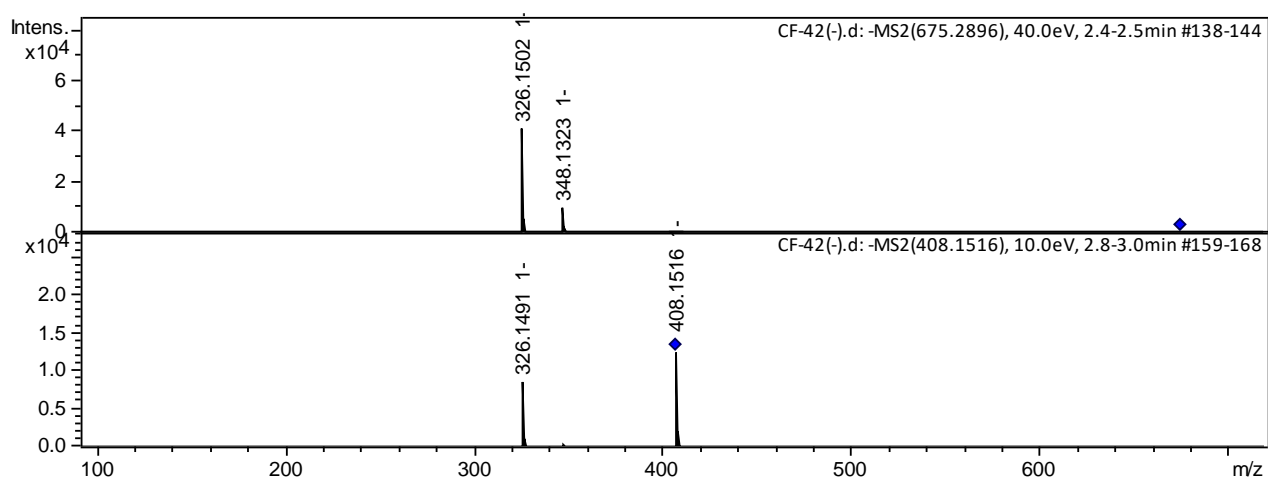
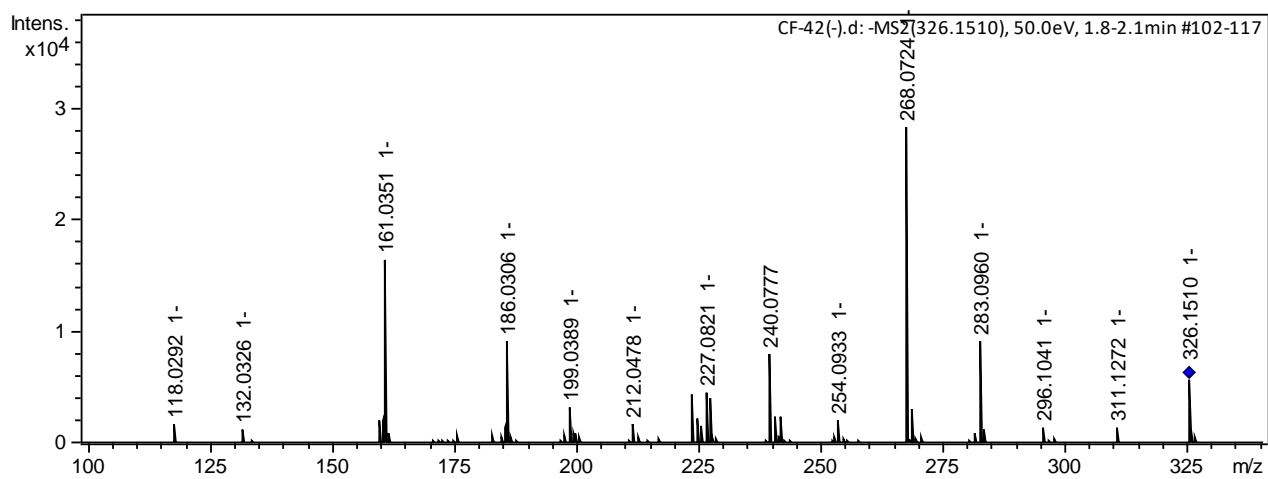
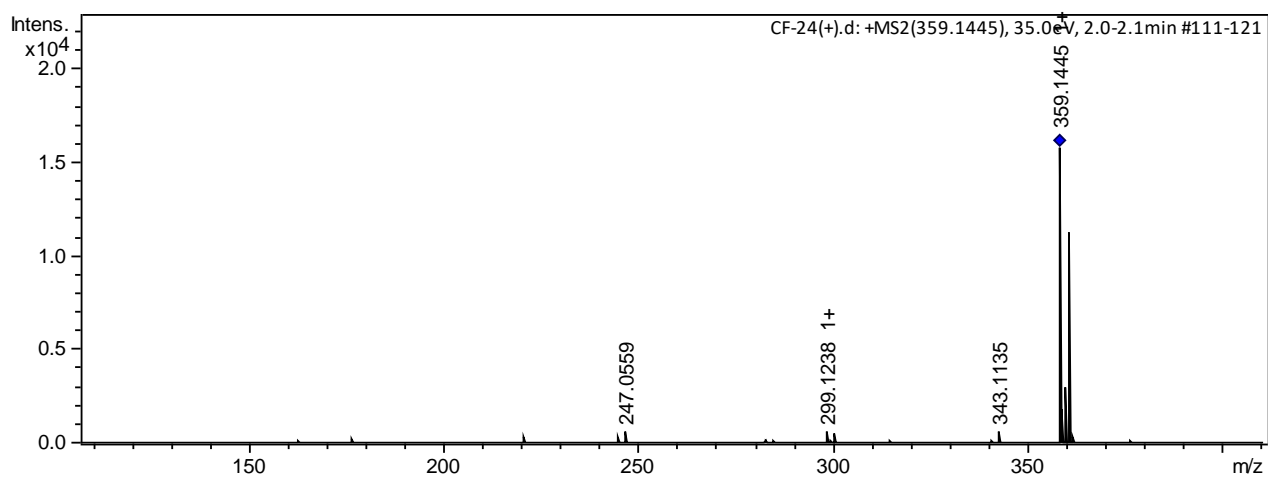
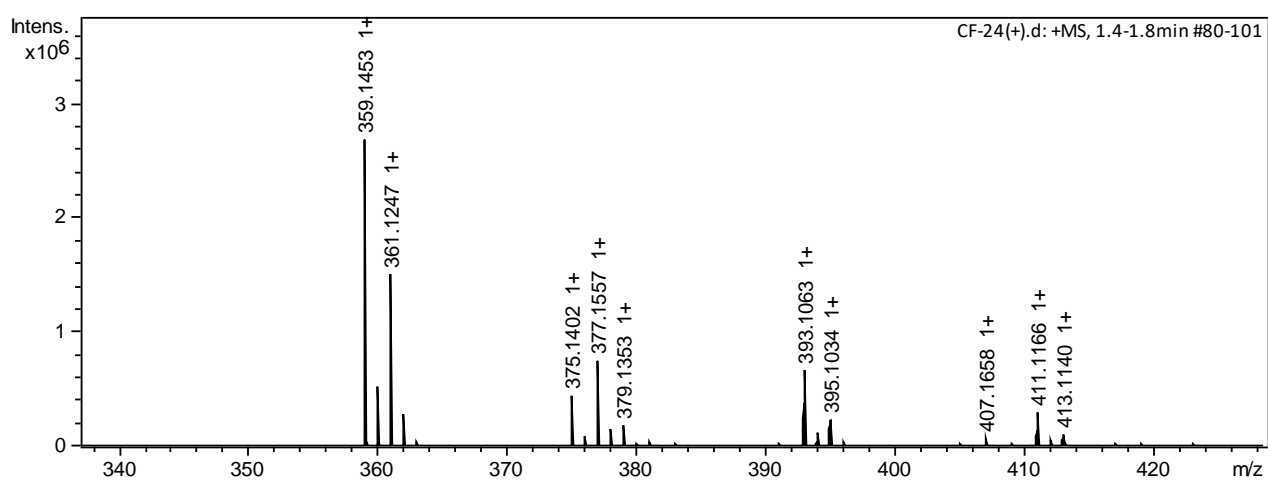
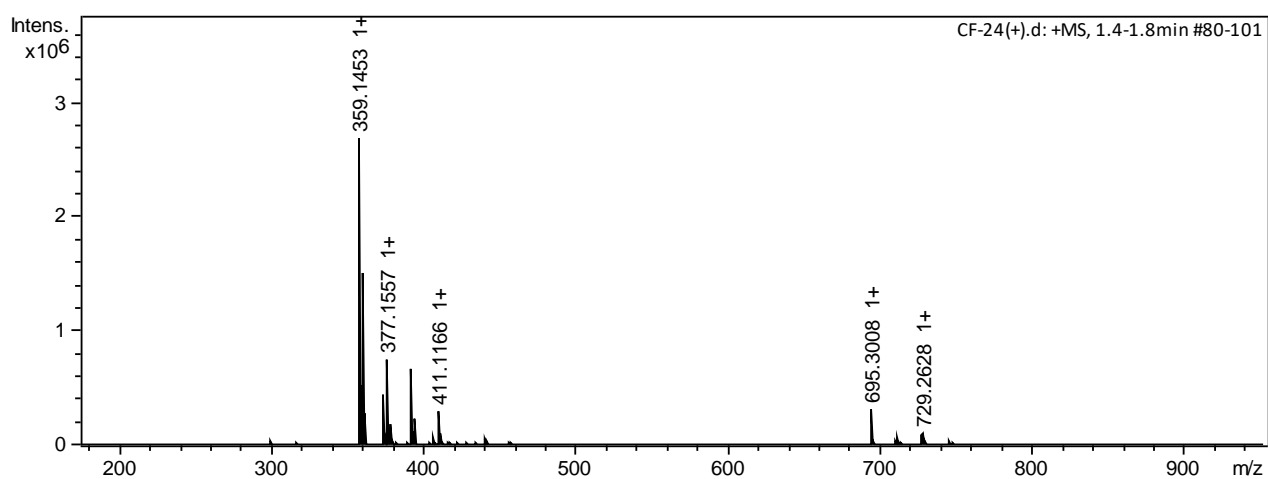


Figure S61. MS spectrum of oxyrapentin M (6)



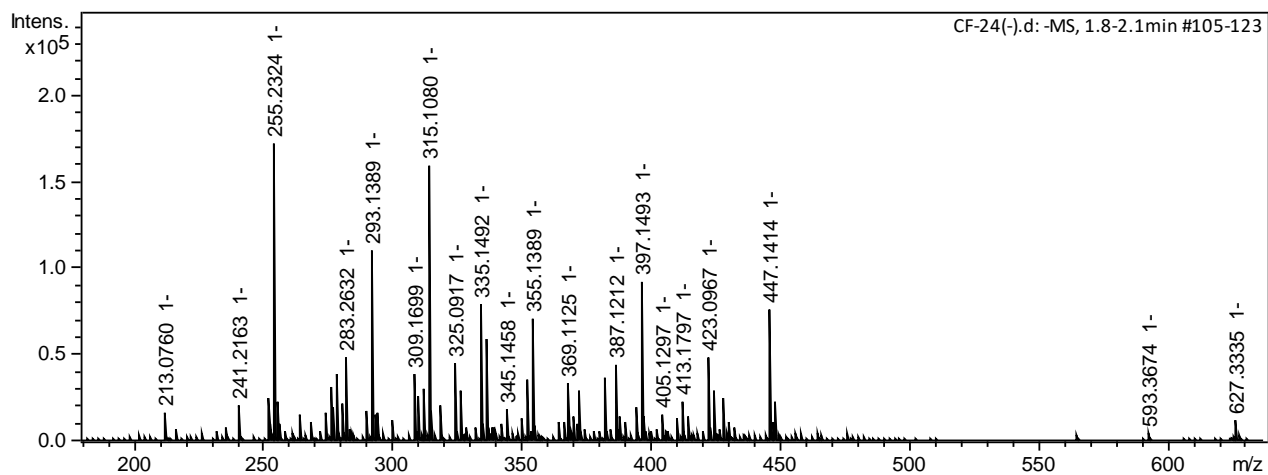


Figure S62. CD spectrum of felicarnezoline A (1)

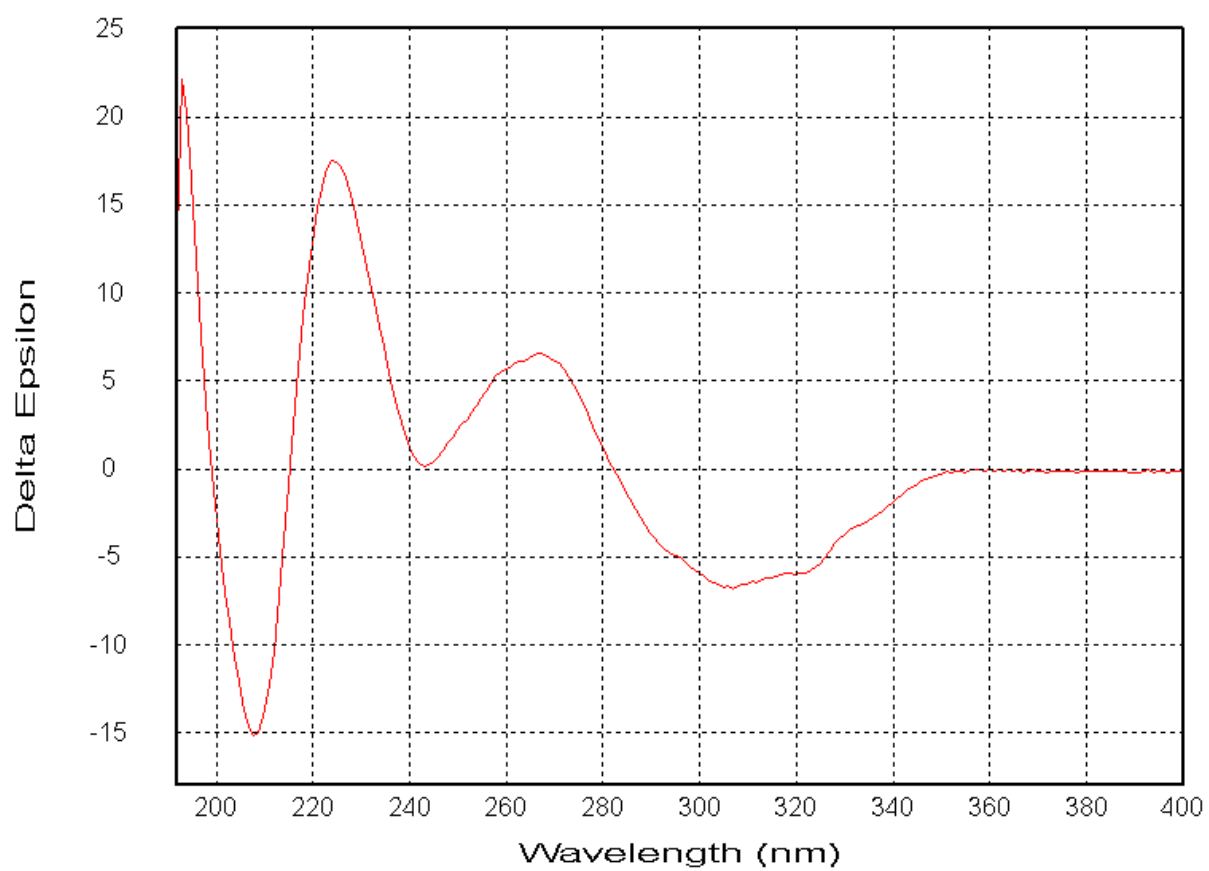


Figure S63. UV spectrum of felicarnezoline A (1)

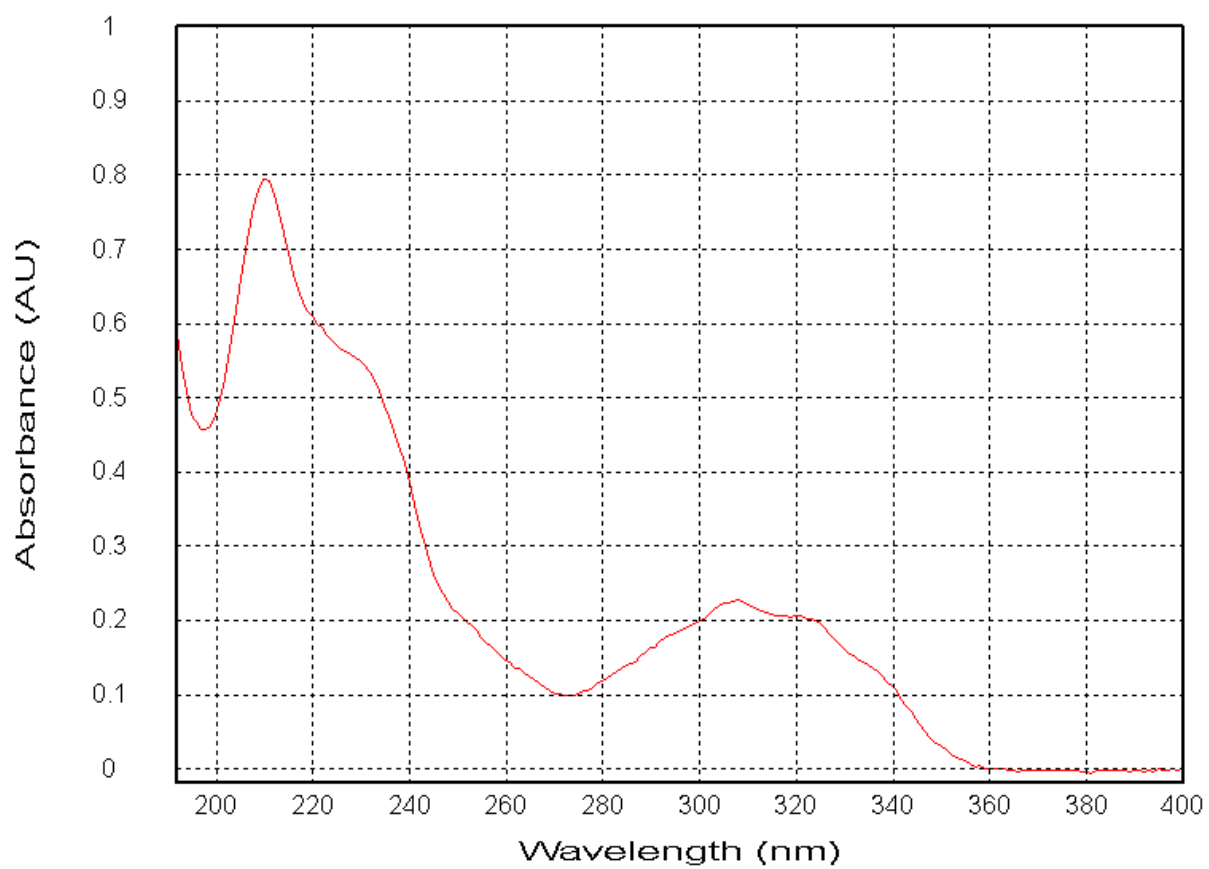


Figure S64. CD spectrum of felicarnezoline B (2)

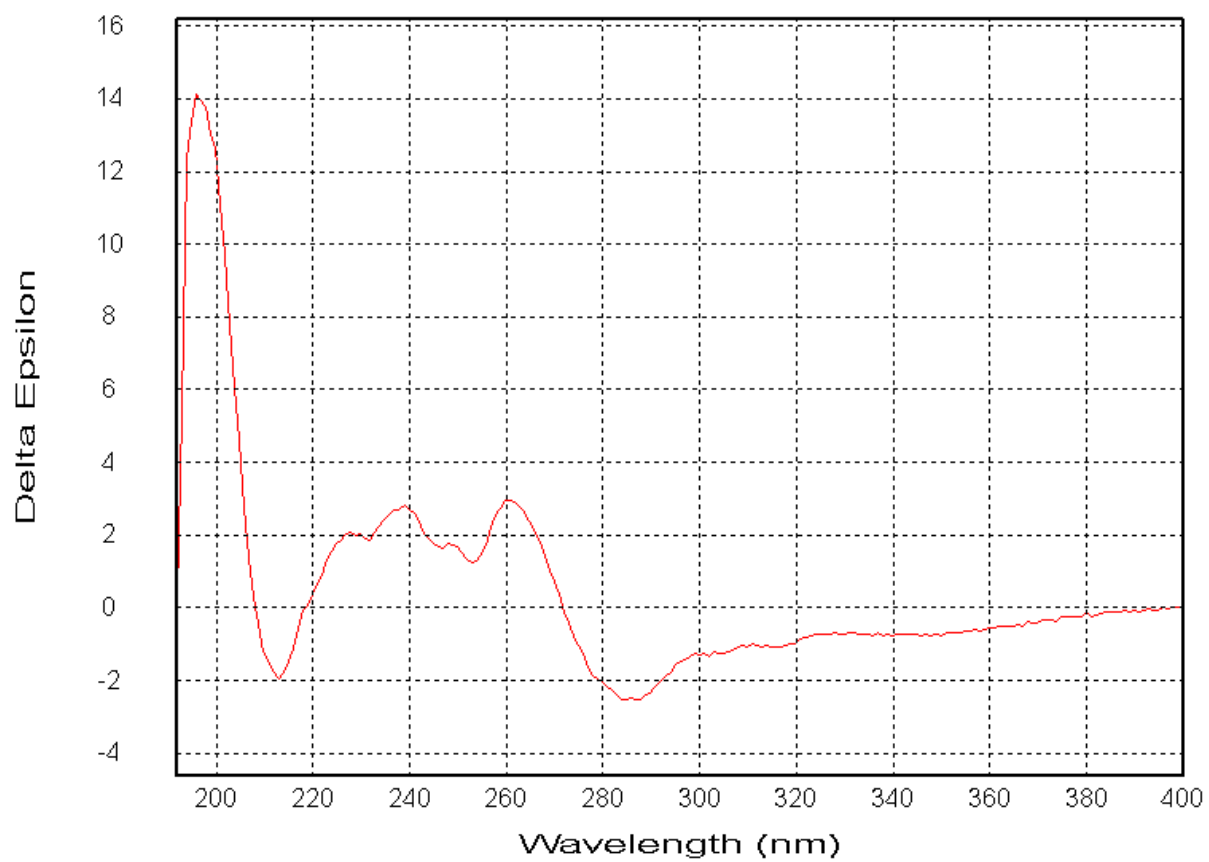


Figure S65. UV spectrum of felicarnezoline B (2)

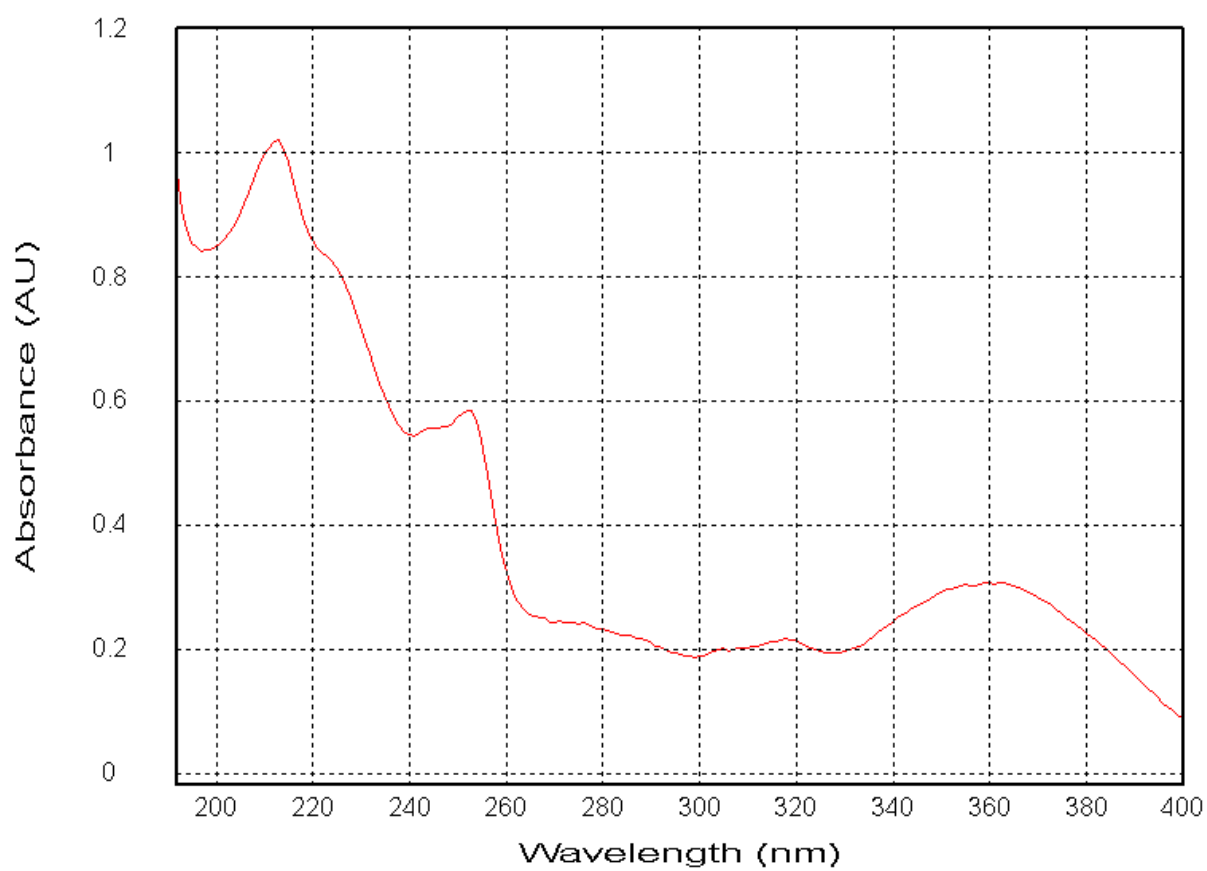


Figure S66. CD spectrum of felicarnezoline D (4)

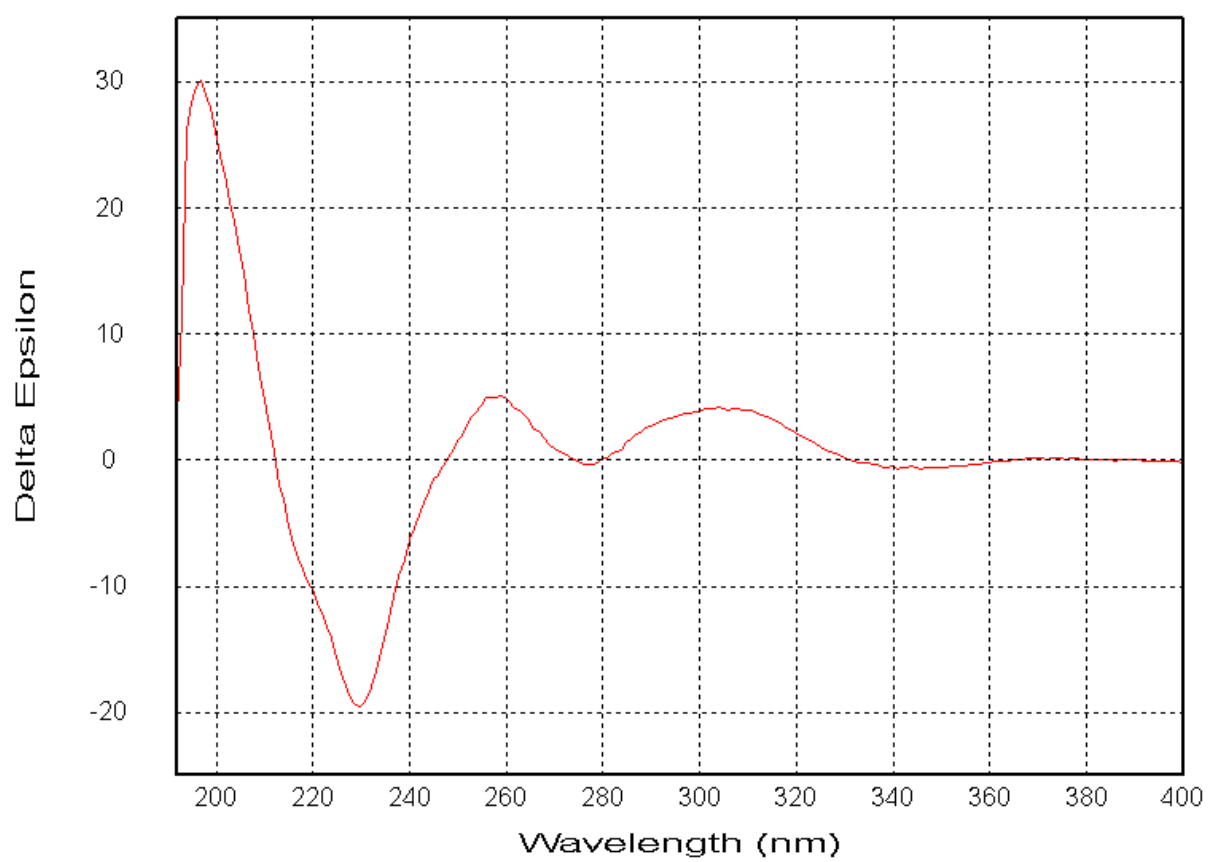


Figure S67. UV spectrum of felicarnezoline D (4)

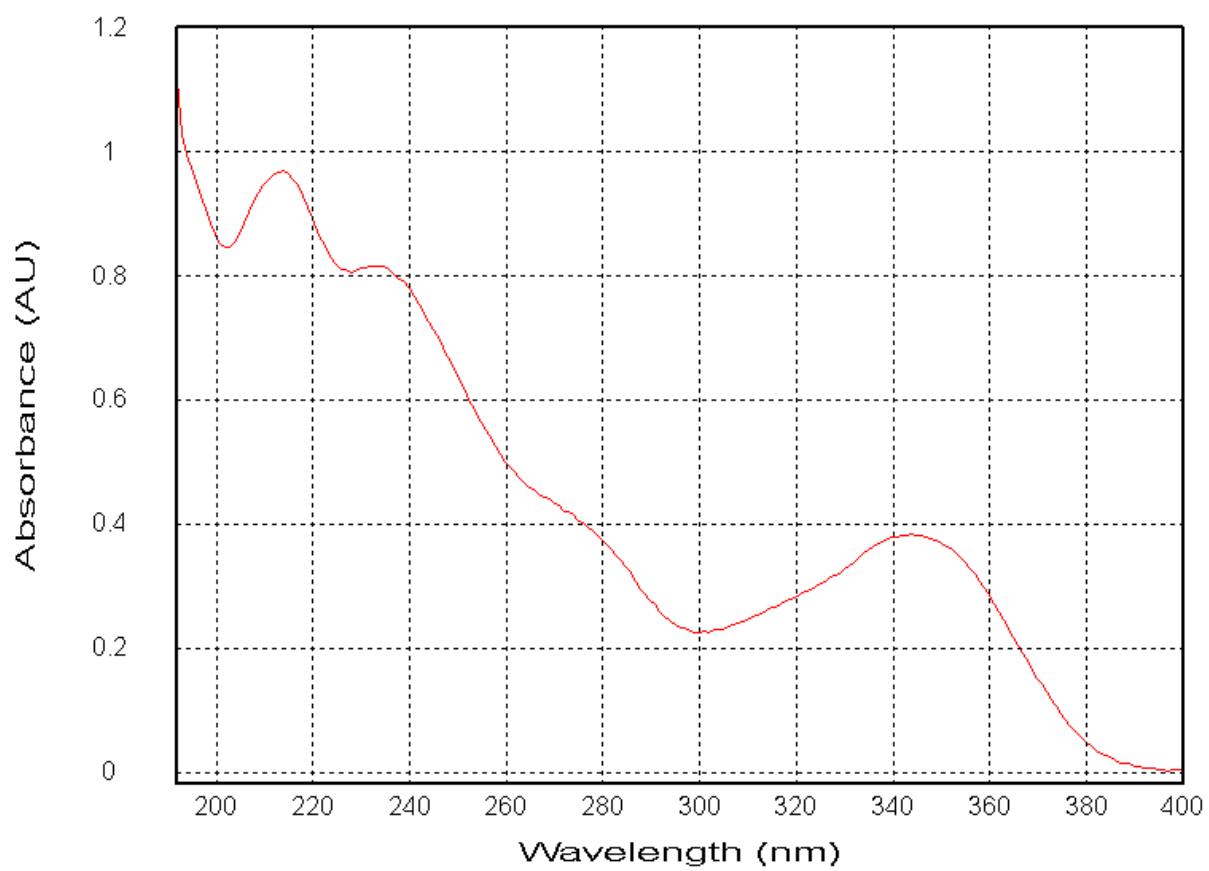


Figure S68. CD spectrum of oxyrapentin M (6)

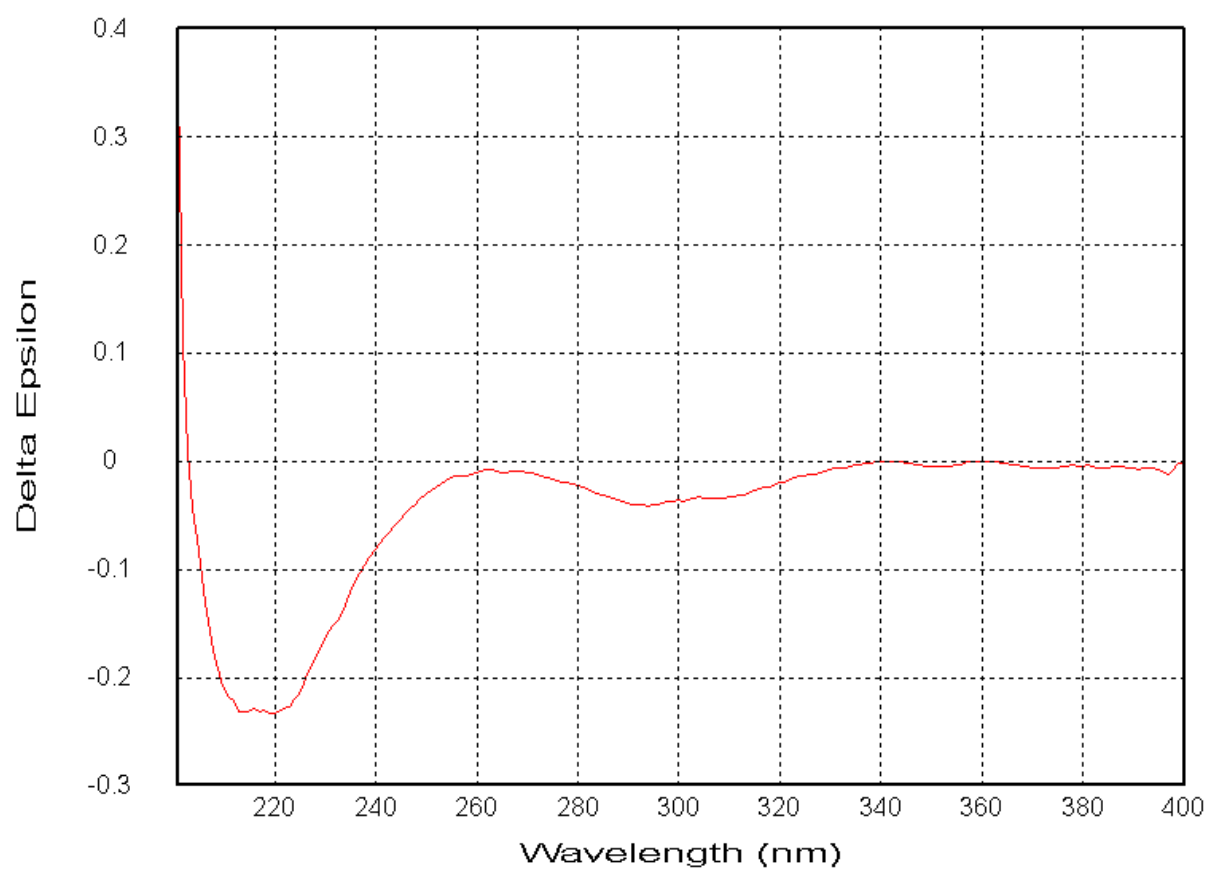


Figure S69. UV spectrum of oxyrapentin M (6)

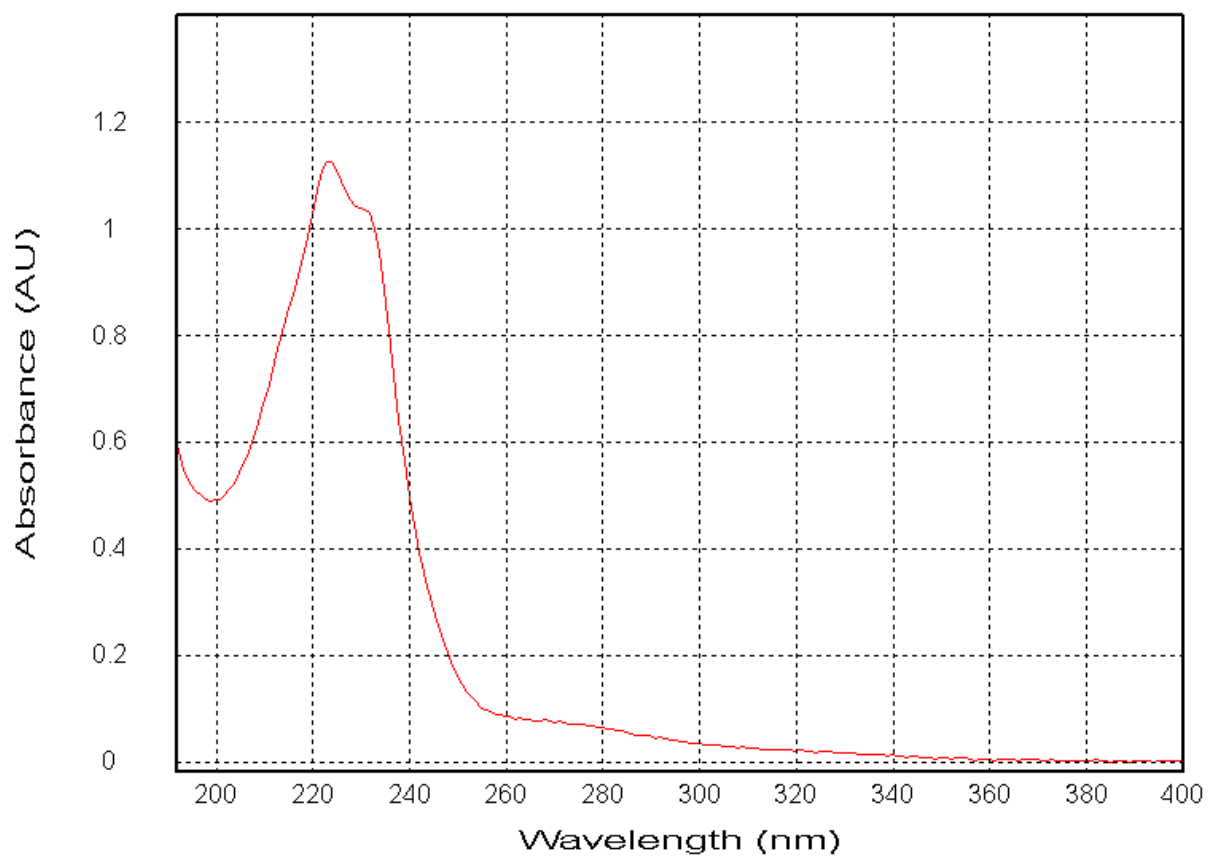
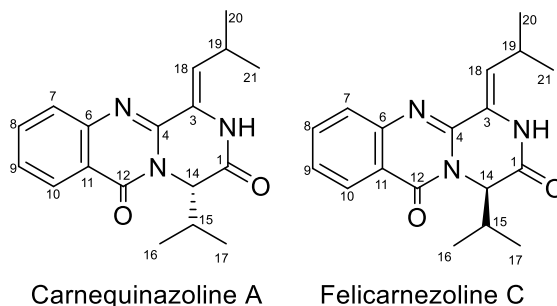


Table S1. ¹H NMR data for carnequinazoline A [1] and felicarnezoline C (3).

Position	Carnequinazoline A ^a δ_{H} , mult, <i>J</i> in Hz	Felicarnezoline C (3) ^b δ_{H} , mult, <i>J</i> in Hz
1	-	-
2 (NH)	7.55, s	8.00, brs
3	-	-
4	-	-
5	-	-
6	-	-
7	7.70, d (8.12)	7.70, brs
8	7.77, t (7.7)	7.82, t (7.6)
9	7.48, t (7.5)	7.54, t (7.5)
10	8.28, dd (8.0, 1.0)	8.29, dd (7.9, 1.2)
11	-	-
12	-	-
13	-	-
14	5.46, d (5.4)	5.42, d (5.5)
15	2.28, m	2.28, m
16	0.97, d (6.7)	0.98, d (6.8)
17	1.14, d (6.7)	1.14, d (6.8)
18	6.44, d (10.0)	6.75, d (9.5)
19	2.61, m	2.66, m
20	1.20, d (6.7)	1.25, d (6.5)
21	1.17, d (6.7)	1.18, d (6.6)

^a chemical shifts were measured in CDCl₃ at 700.13 MHz.

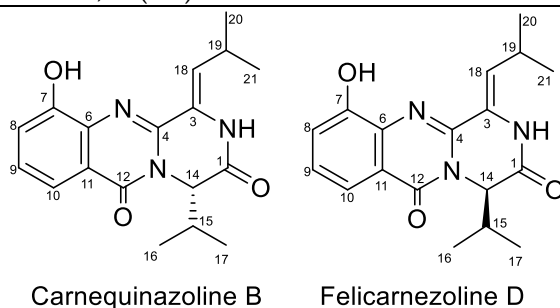
^b chemical shifts were measured in CDCl₃ at 300.13 MHz.



1. Zhuravleva, O.I.; Afiyatullo, S.S.; Denisenko, V.A.; Ermakova, S.P.; Slinkina, N.N.; Dmitrenok, P.S.; Kim, N.Y. Secondary metabolites from a marine-derived fungus *Aspergillus carneus* Blochwitz. *Phytochemistry* **2012**, *80*, 123-131.

Table S2. ^1H and ^{13}C NMR data (CDCl_3 , 700 MHz) for carnequinazoline B [1] and felicarnezoline D (4).

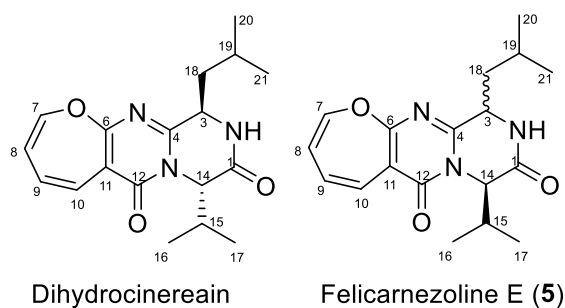
Position	carnequinazoline B δ_{H} , mult, J in Hz	felicarnezoline D (4) δ_{H} , mult, J in Hz
1	-	-
2 (NH)	8.29 s	8.48, brs
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	7.29, dd (7.9, 1.3)	7.29, d (7.8)
9	7.37, t (7.9)	7.37, t (7.9)
10	7.75, dd (7.9, 1.2)	7.74, brd (8.0)
11	-	-
12	-	-
13	-	-
14	5.41, d (5.4)	5.40, brd (5.4)
15	2.28, m	2.28, m
16	0.97, d (7.0)	0.97, d (6.5)
17	1.14, d (7.0)	1.13, d (6.6)
18	6.37, d (10.0)	6.39, d (10.0)
19	2.70, m	2.74, m
20	1.21, d (6.7)	1.21, d (6.7)
21	1.17, d (6.7)	1.16, d (6.6)



1. Zhuravleva, O.I.; Afiyatullo, S.S.; Denisenko, V.A.; Ermakova, S.P.; Slinkina, N.N.; Dmitrenok, P.S.; Kim, N.Y. Secondary metabolites from a marine-derived fungus *Aspergillus carneus* Blochwitz. *Phytochemistry* **2012**, *80*, 123-131.

Table S3. ^1H and ^{13}C NMR data (CDCl_3 , 500 MHz) for dihydrocinereain [1] and compound felicarnezoline E (5).

Position	Dihydrocinereain δ_{H} , mult, J in Hz	Felicarnezoline E (5) δ_{H} , mult, J in Hz
1	-	-
2 (NH)	4.55, dd (9.9, 3.3)	4.55, dd (10.0, 3.3)
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	6.06, d (5.6)	6.07, d (5.6)
9	5.62, t (5.6)	5.62, t (5.6)
10	6.15, dd (11.1, 5.6)	6.16, dd (11.1, 5.7)
11	6.73, d (11.1)	6.73, d (11.1)
12	-	-
13	-	-
14	-	-
15	5.17, d (6.4)	5.17, d (7.0)
16	2.28, m	2.27, m
17	1.09, d (7.0)	1.10, d (6.7)
18	1.11, d (7.0)	1.11, d (6.8)
19	1.69, m	1.69, dd (14.3, 9.9, 4.1)
	2.29, m	2.30, m
20	1.76, m	1.78, m
21	1.04, d (6.5)	1.04, d (6.5)
22	1.00, d (6.5)	1.00, d (6.6)



1. Zhuravleva, O.I.; Afiyatullo, S.S.; Yurchenko, E.A.; Denisenko, V.A.; Kirichuk, N.N.; Dmitrenok, P.S. New Metabolites from the Algal Associated Marine-derived Fungus *Aspergillus carneus*. *Natural Product Communications* **2013**, *8*, 1071-1074.