

Supplementary

Figure S1. UV spectrum of compound 1 in CH₃OH.

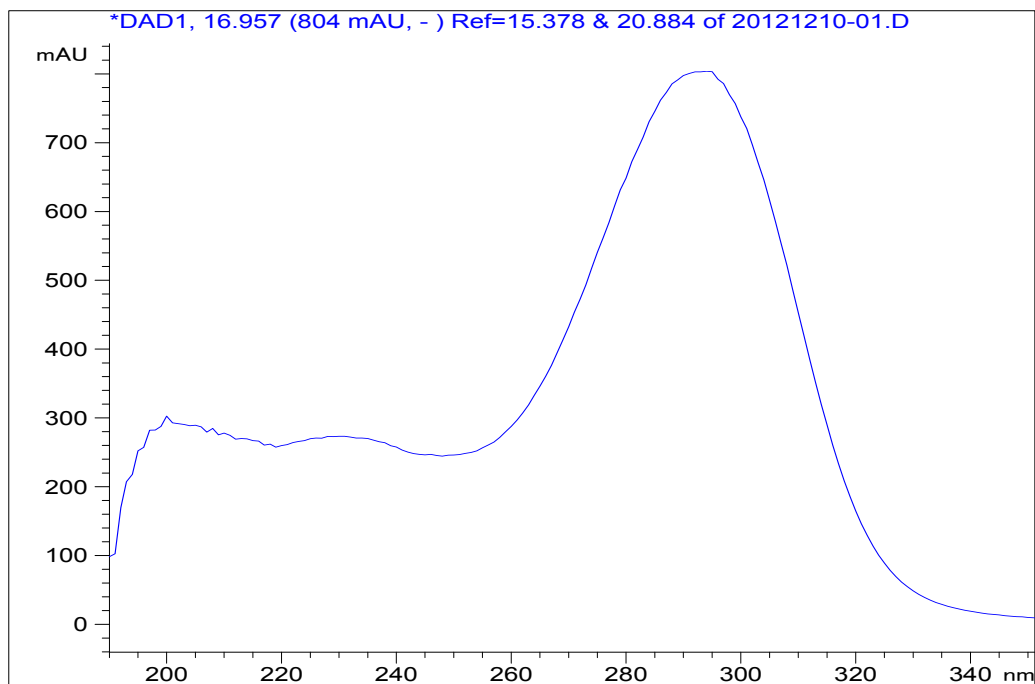


Figure S2. IR spectrum of compound 1.

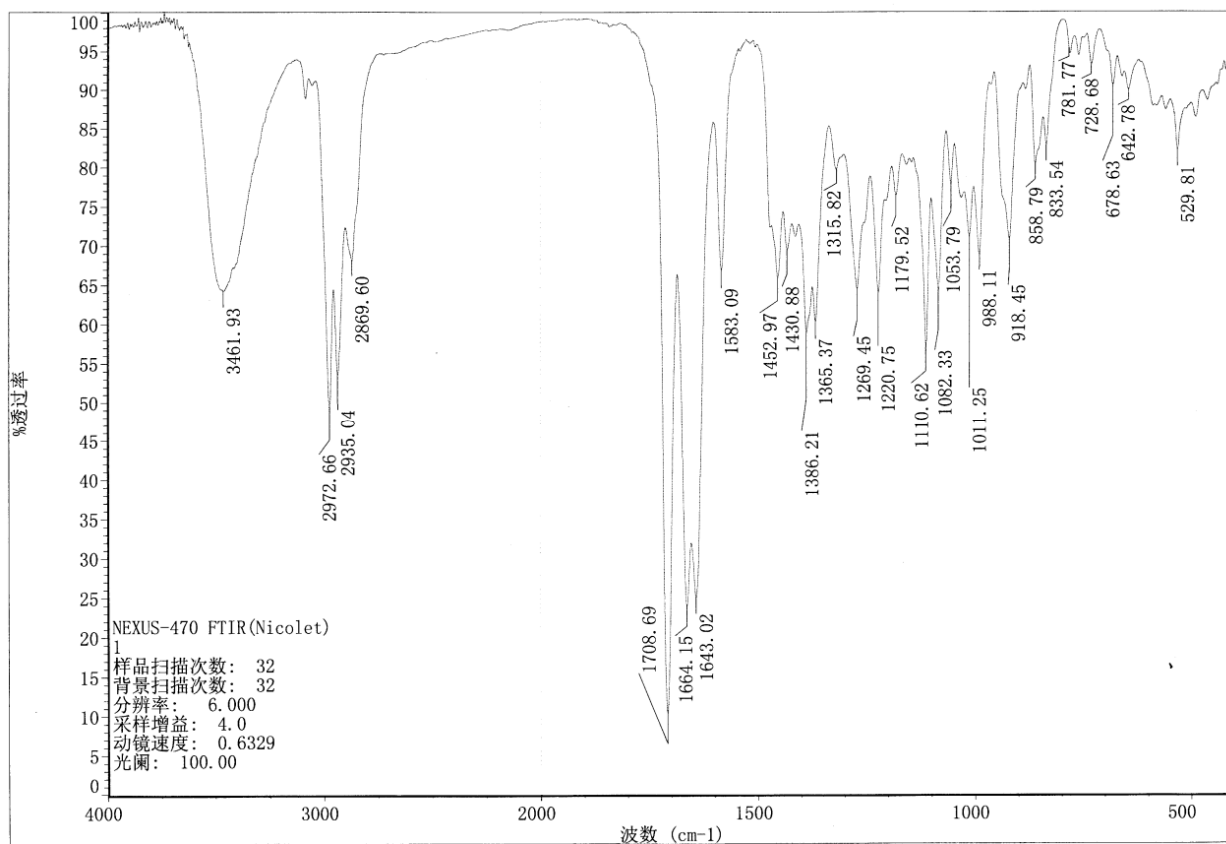


Figure S3. HR-ESI-TOF-MS spectrum of compound 1.

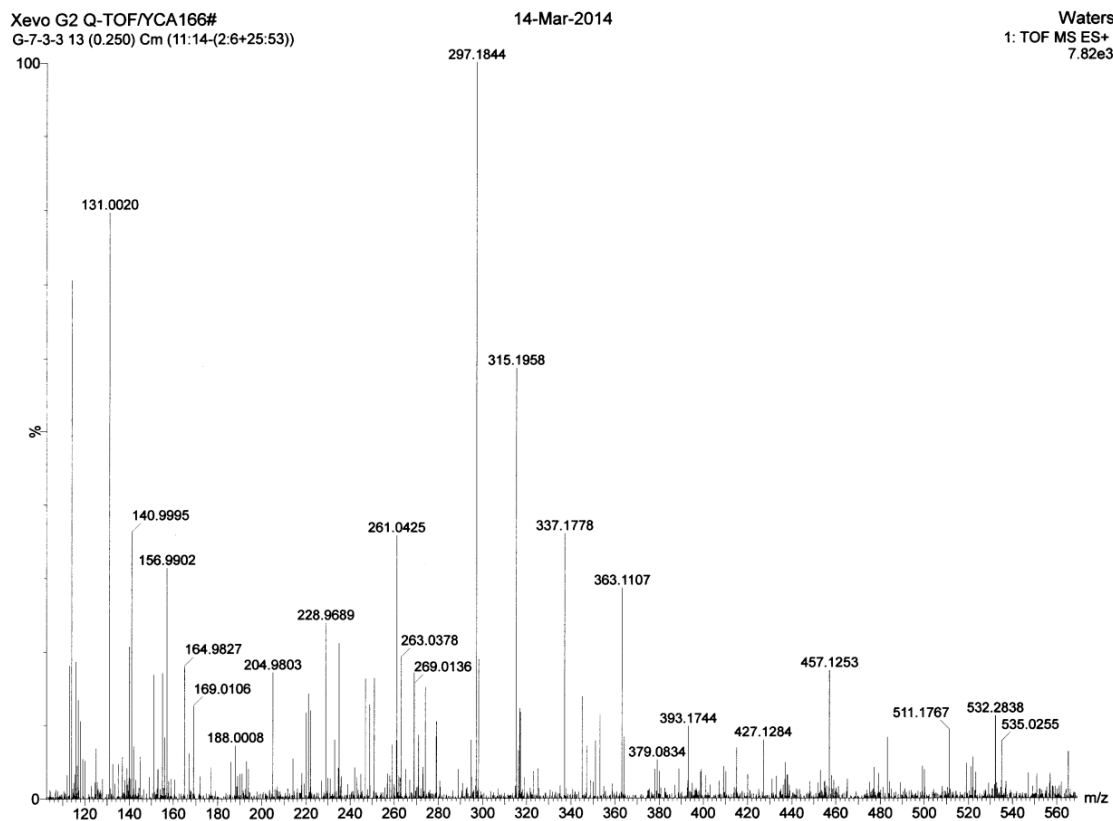
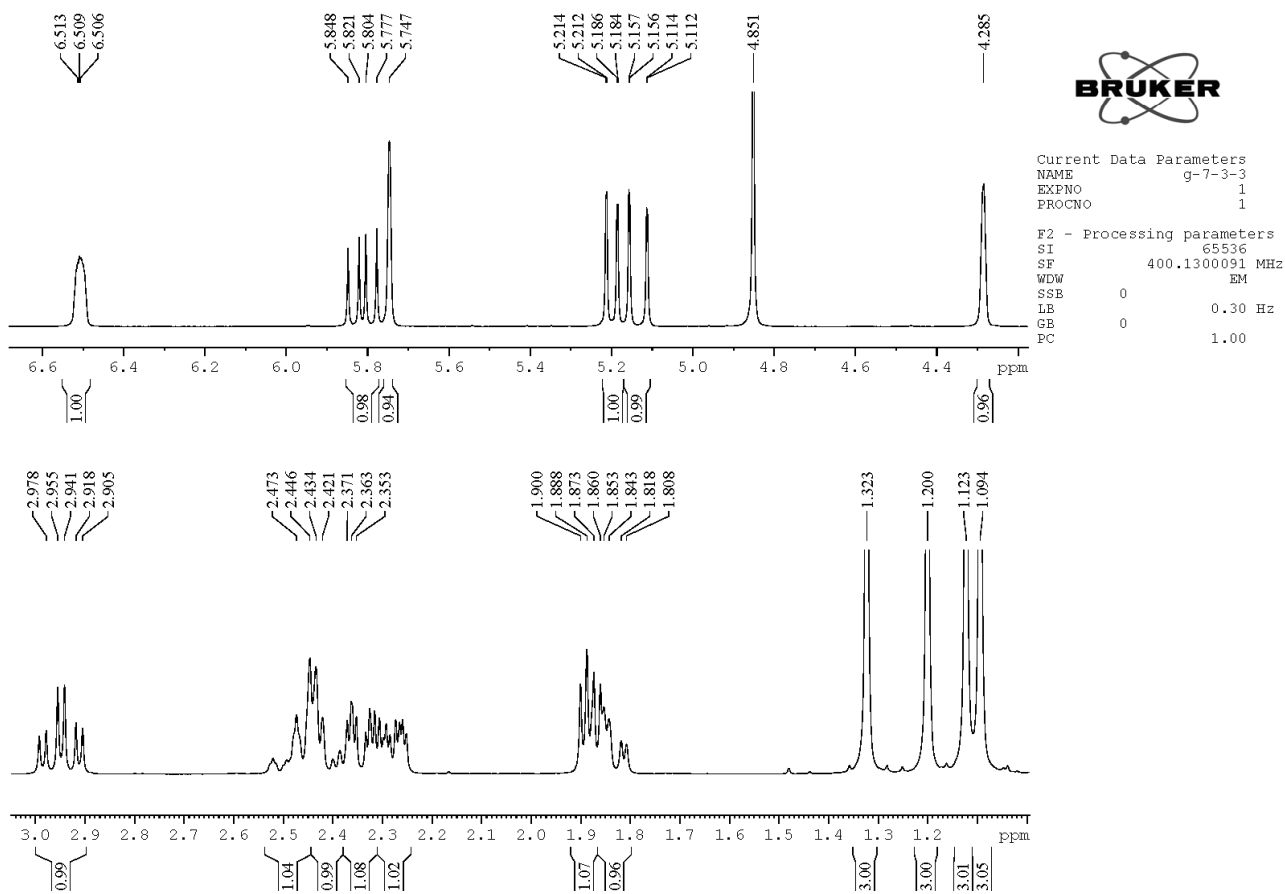
Figure S4. $^1\text{H-NMR}$ spectrum of compound 1 in CD_3OD .

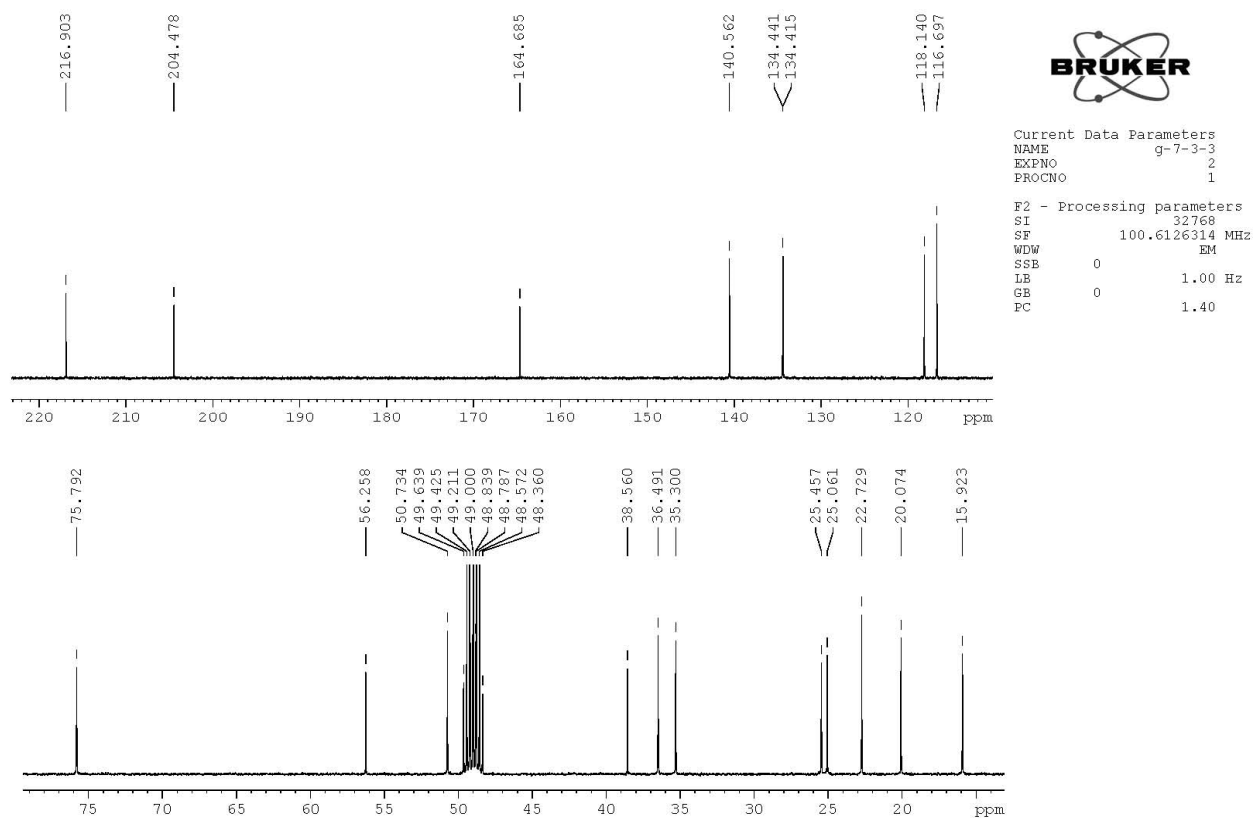
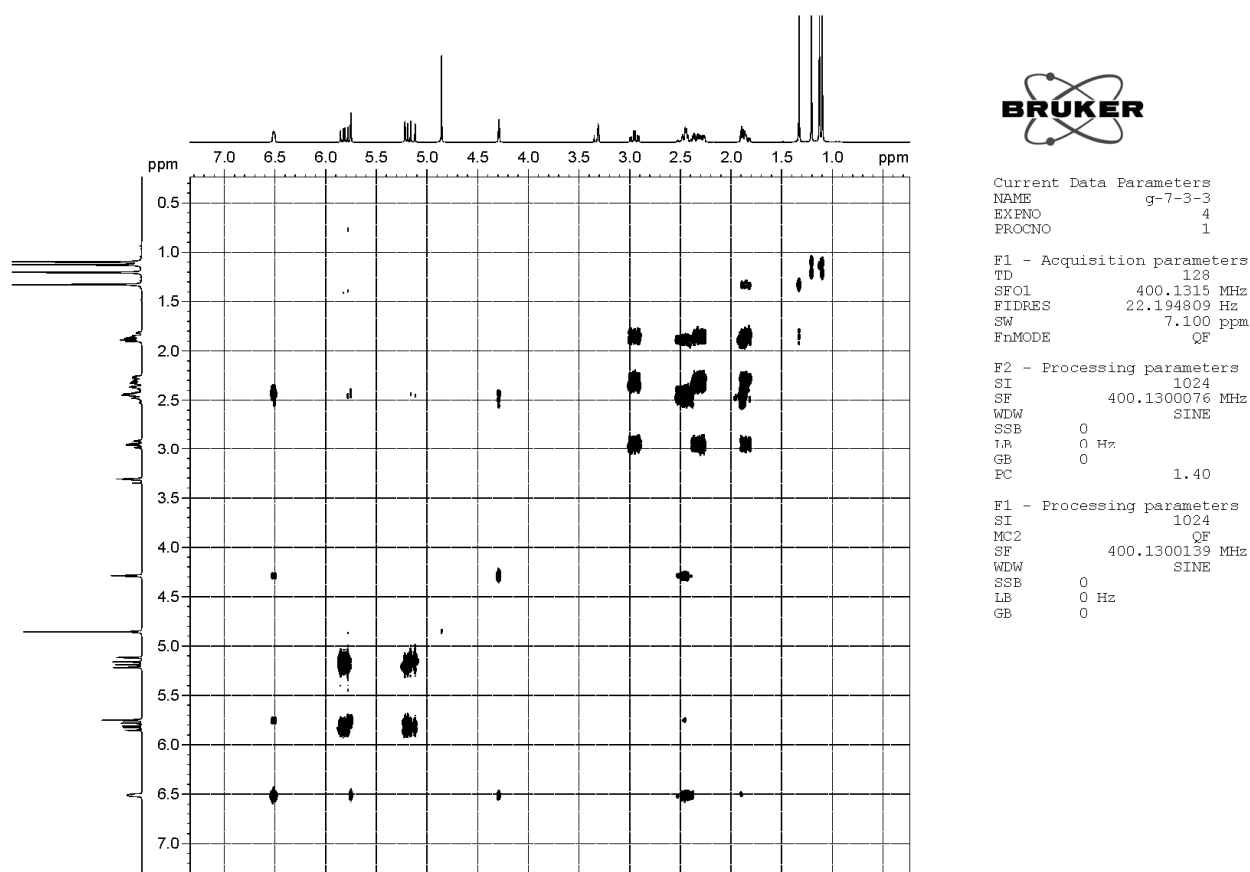
Figure S5. ^{13}C -NMR spectrum of compound 1 in CD_3OD .Figure S6. ^1H - ^1H COSY spectrum of compound 1 in CD_3OD .

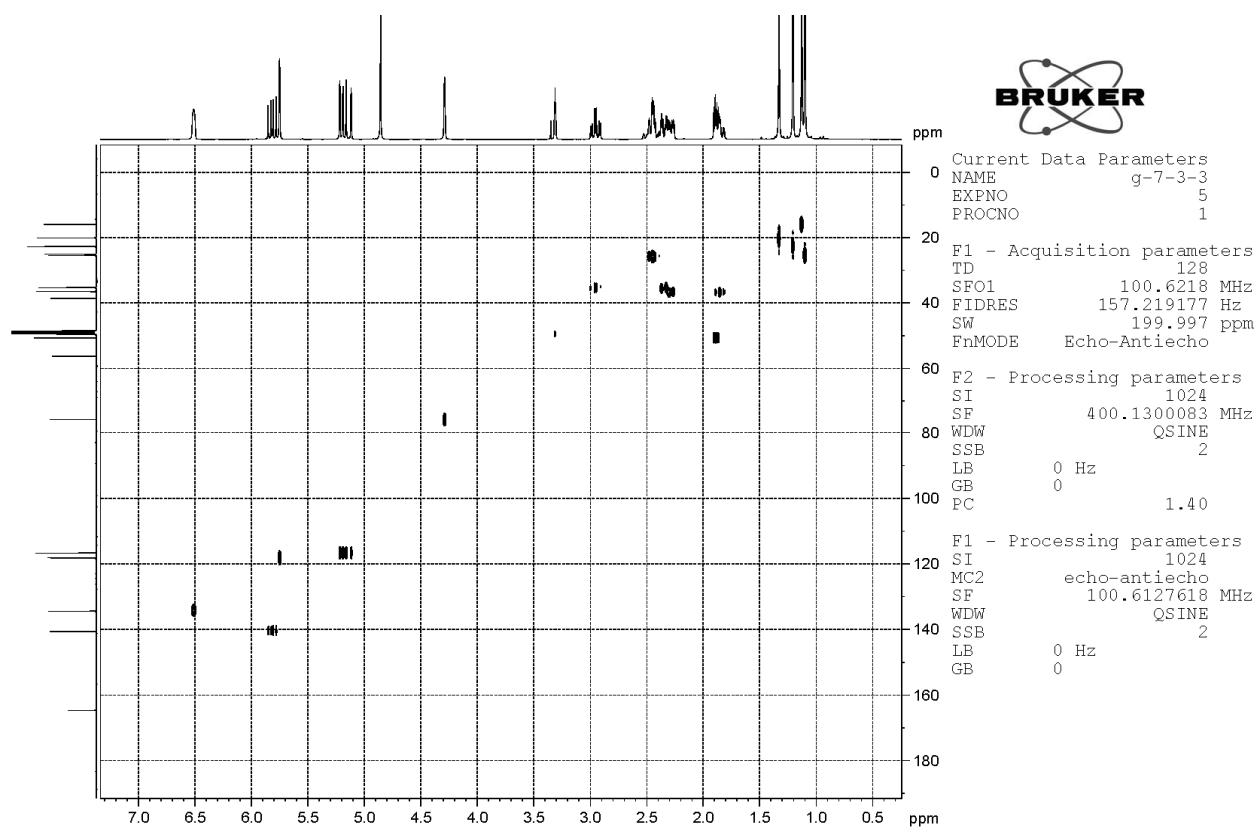
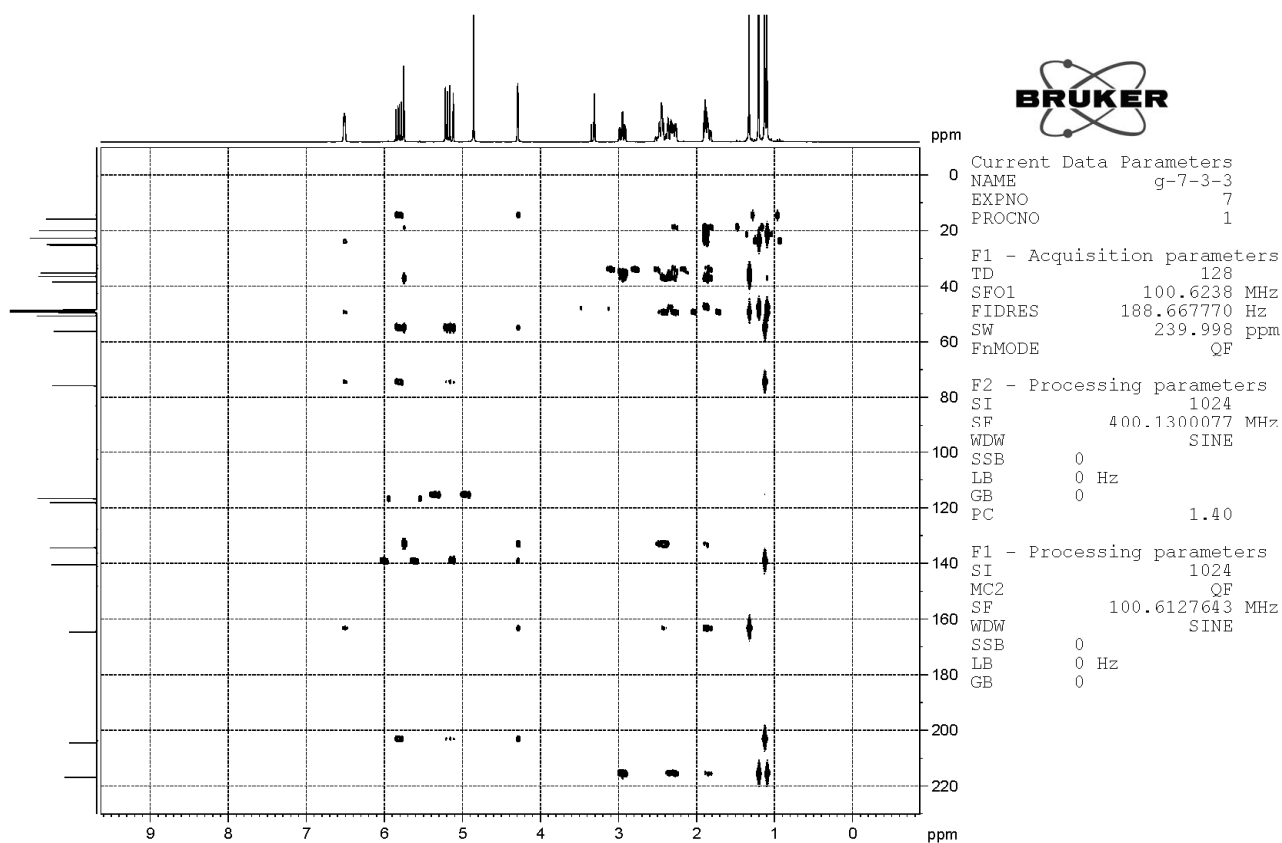
Figure S7. HSQC spectrum of compound 1 in CD₃OD.Figure S8. HMBC spectrum of compound 1 in CD₃OD.

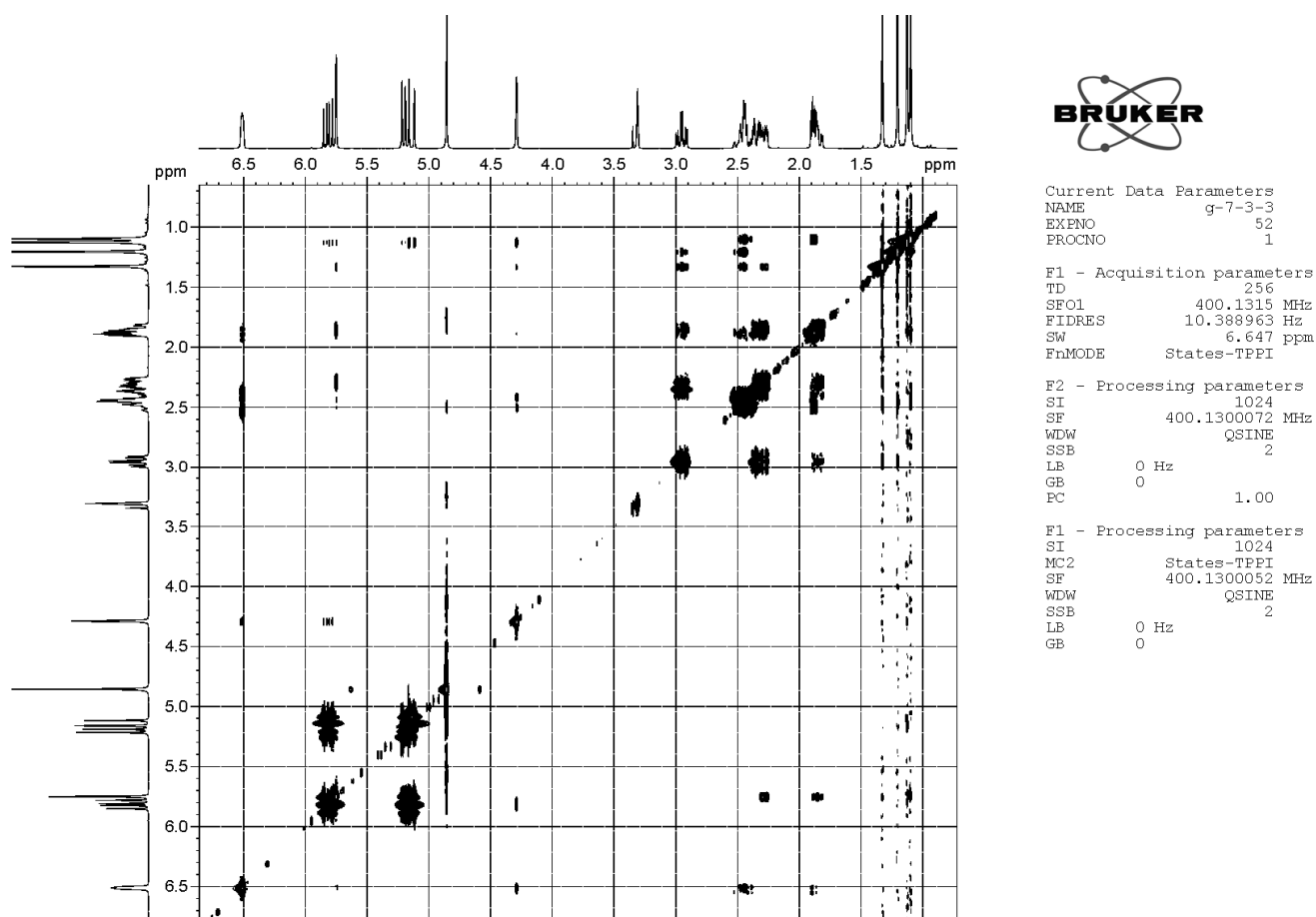
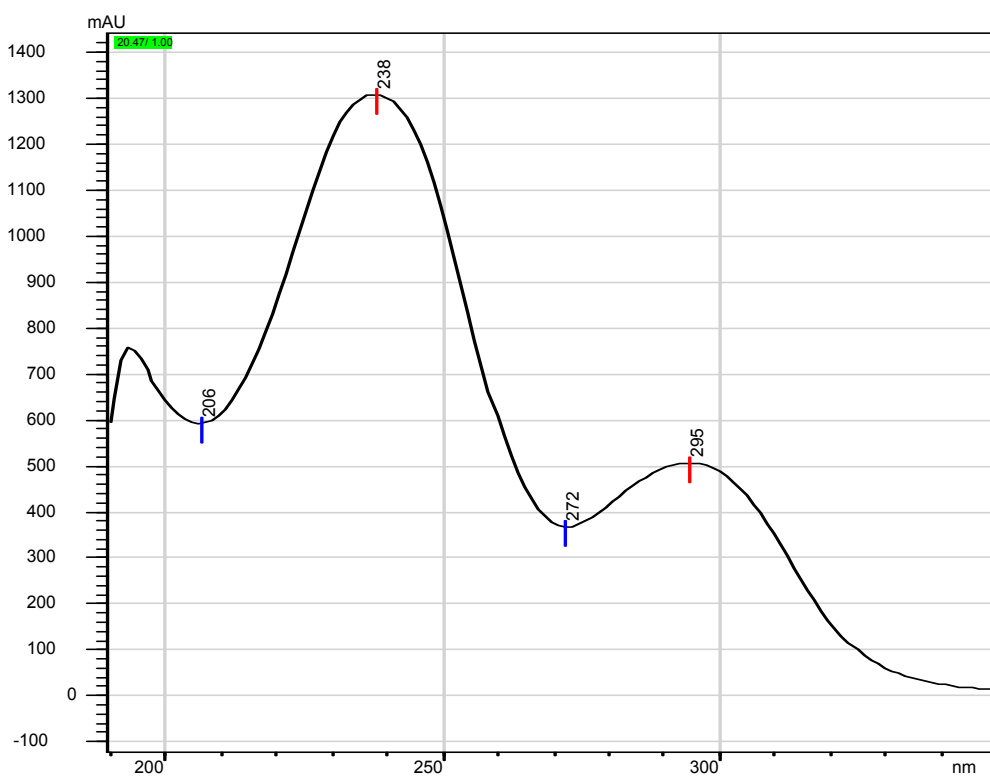
Figure S9. NOESY spectrum of compound 1 in CD₃OD.Figure S10. UV spectrum of compound 2 in CH₃OH.

Figure S11. IR spectrum of compound 2.

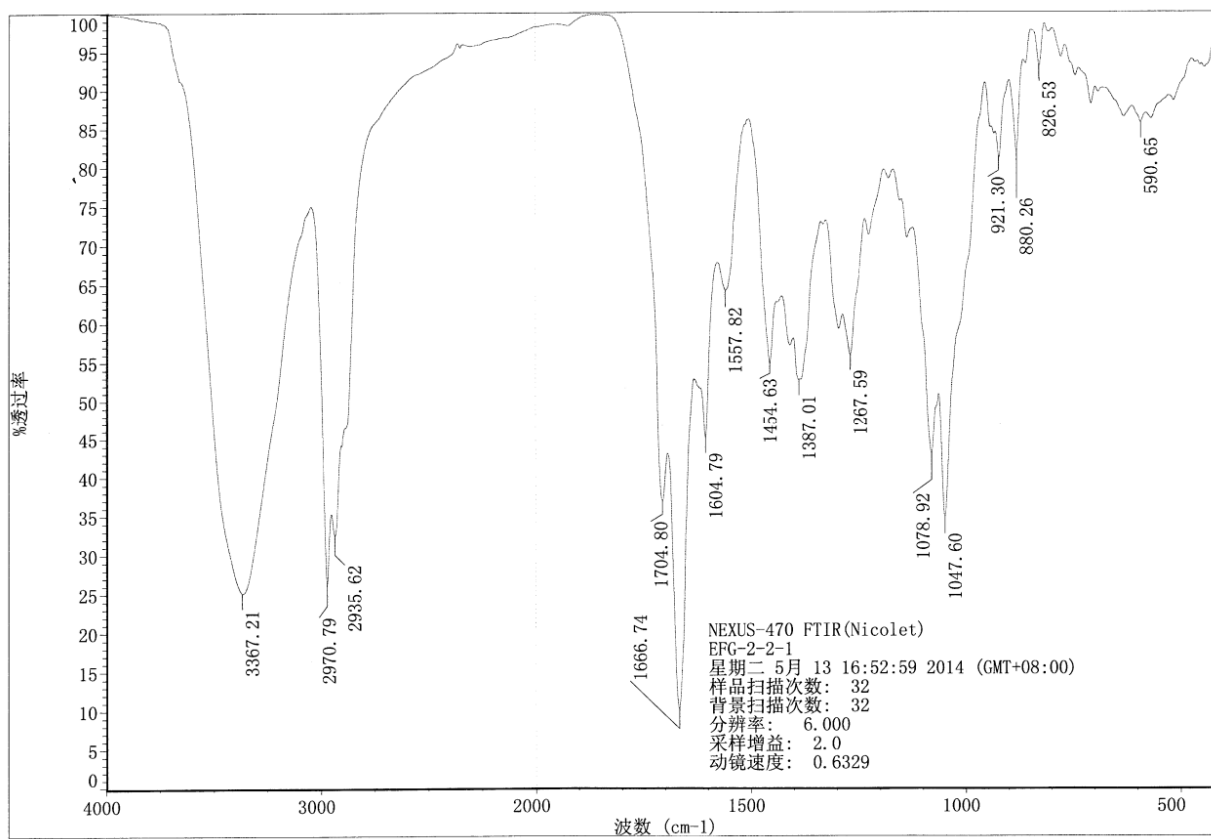


Figure S12. HR-ESI-TOF-MS spectrum of compound 2.

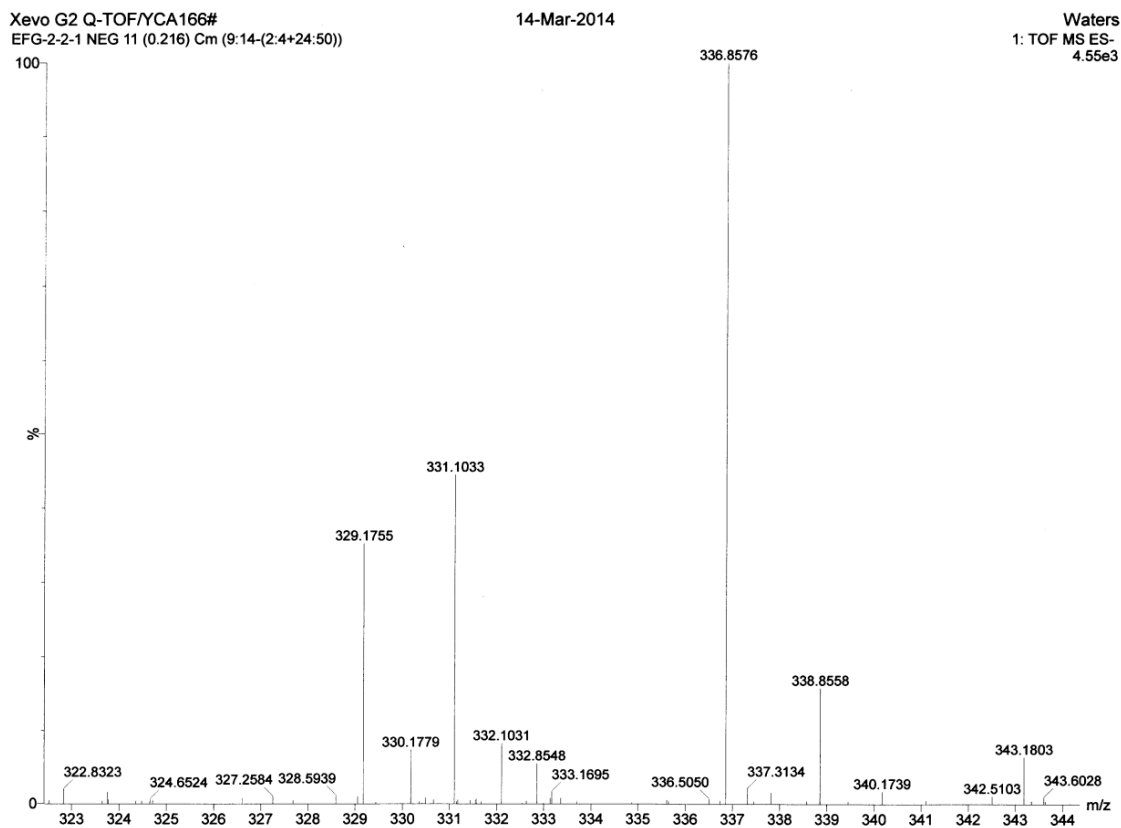


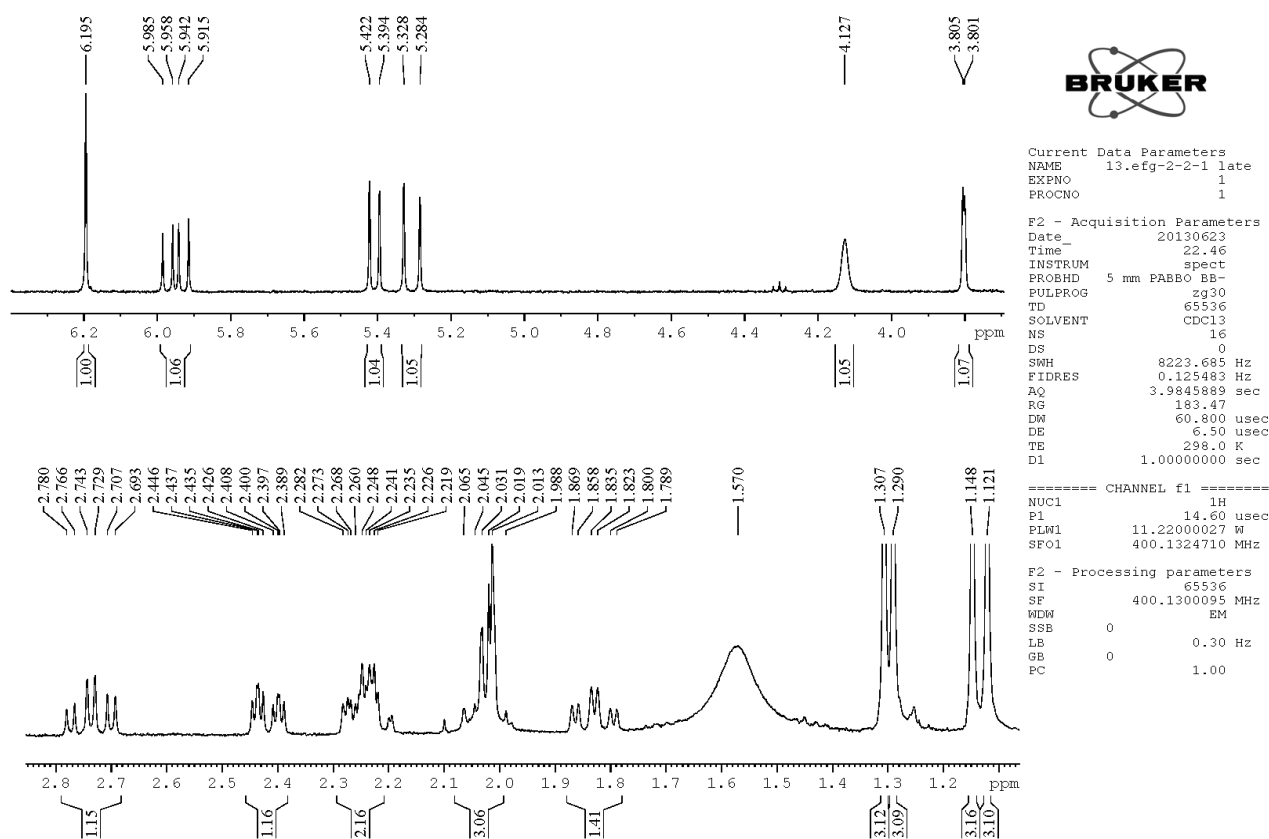
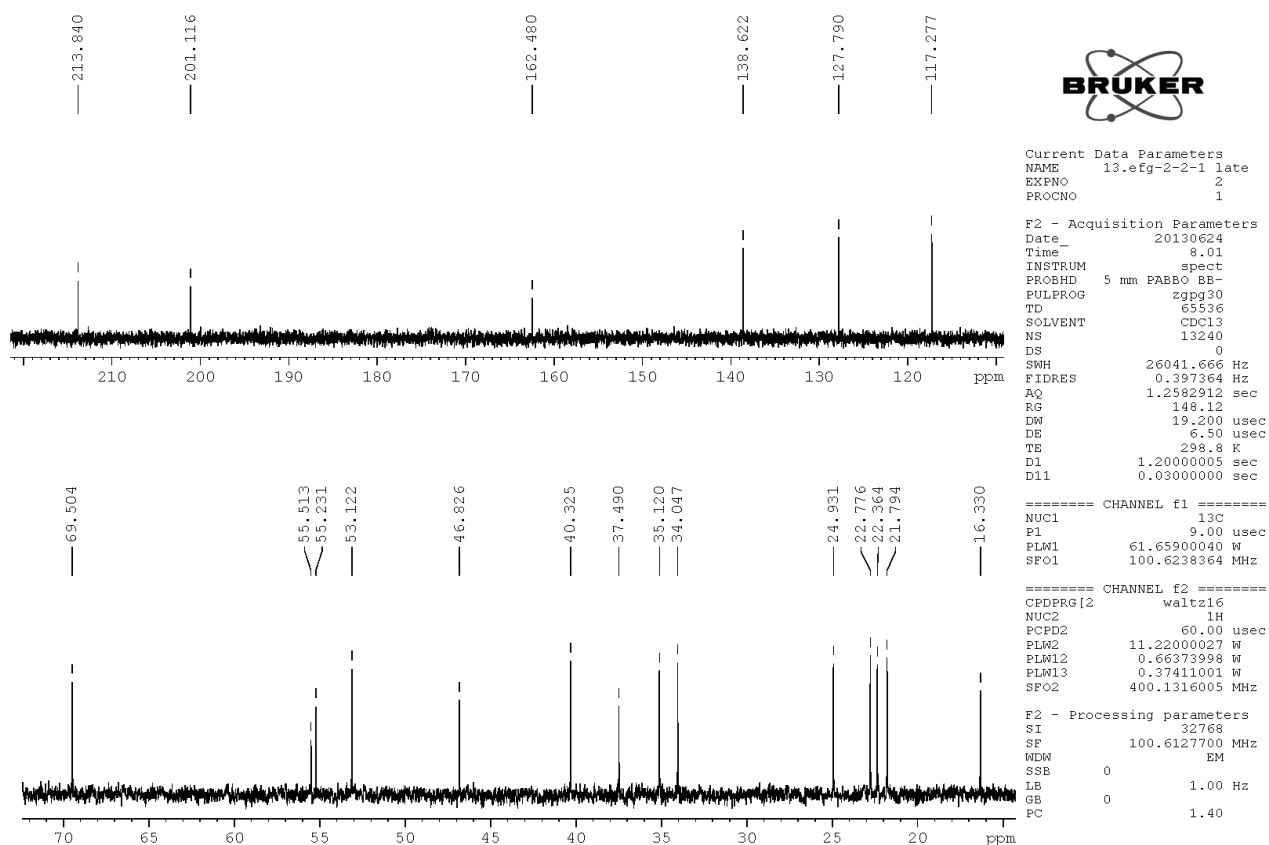
Figure S13. $^1\text{H-NMR}$ spectrum of compound **2** in CDCl_3 .Figure S14. $^{13}\text{C-NMR}$ spectrum of compound **2** in CDCl_3 .

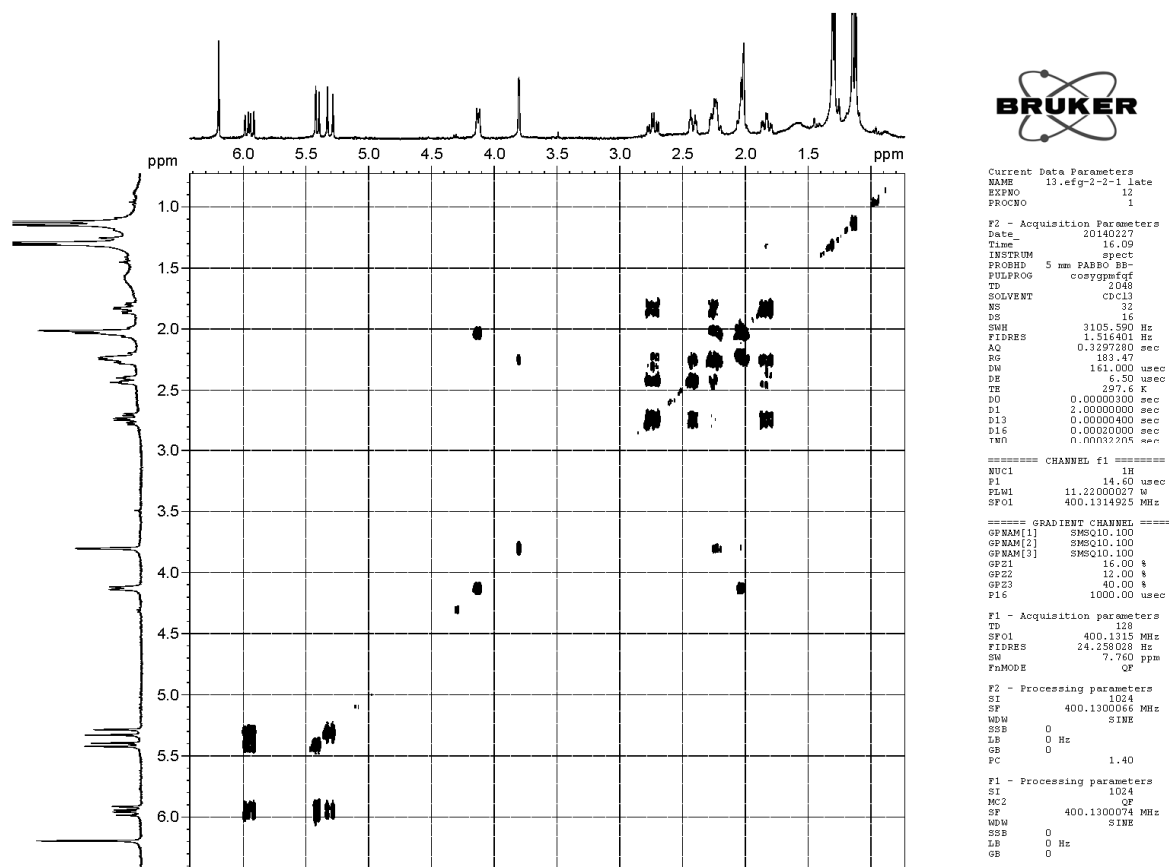
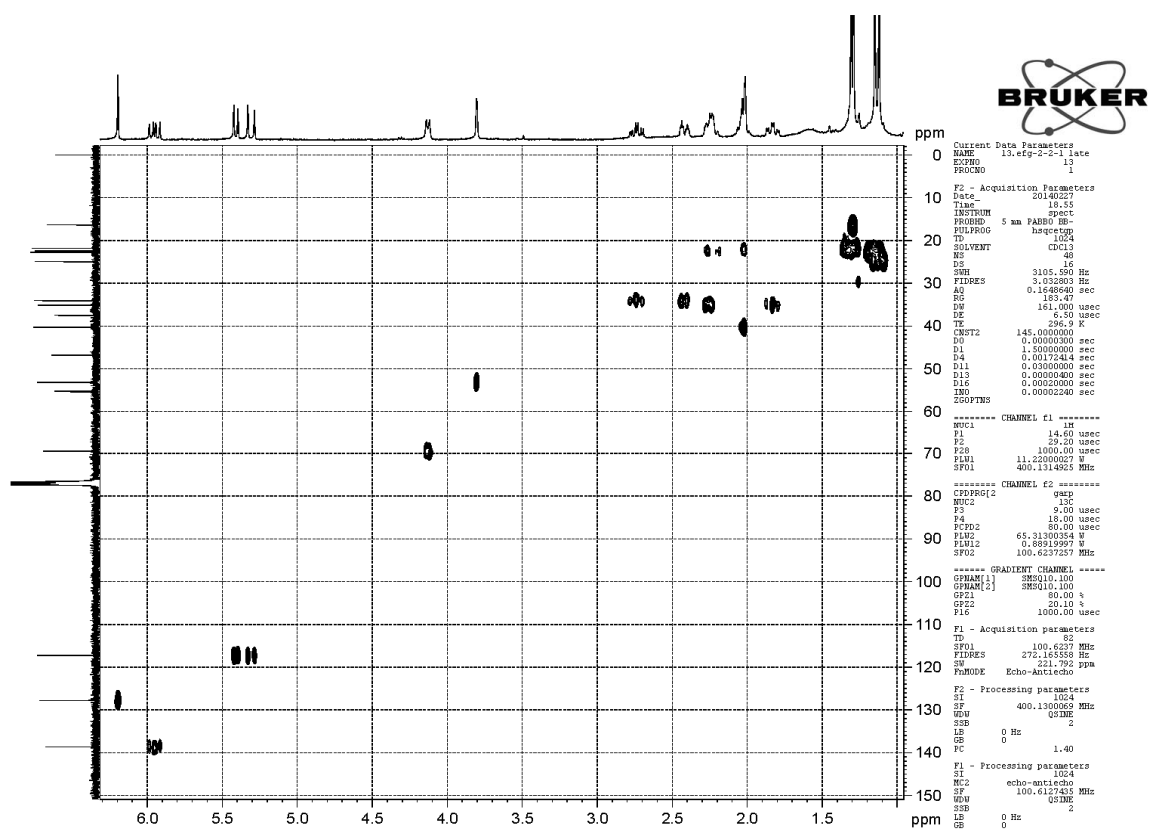
Figure S15. ^1H - ^1H COSY spectrum of compound **2** in CDCl_3 .Figure S16. HSQC spectrum of compound **2** in CDCl_3 .

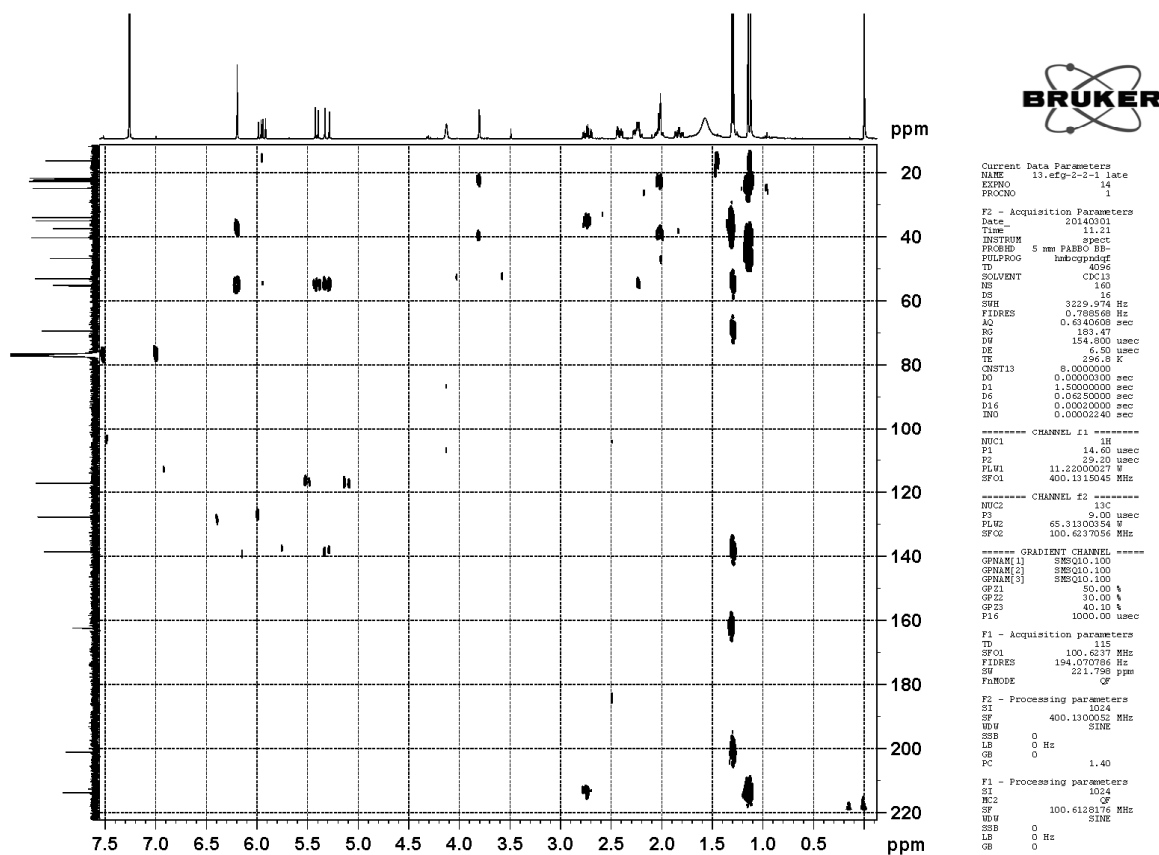
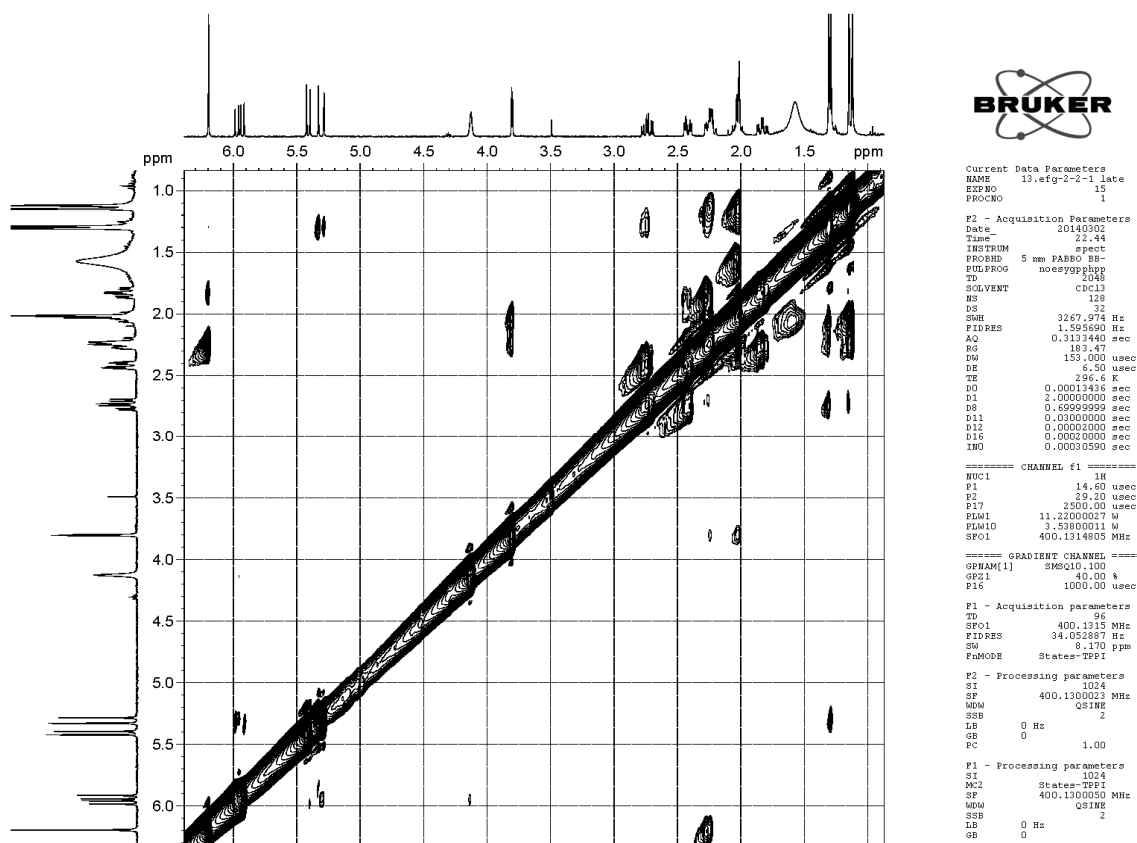
Figure S17. HMBC spectrum of compound 2 in CDCl₃.Figure S18. NOESY spectrum of compound 2 in CDCl₃.

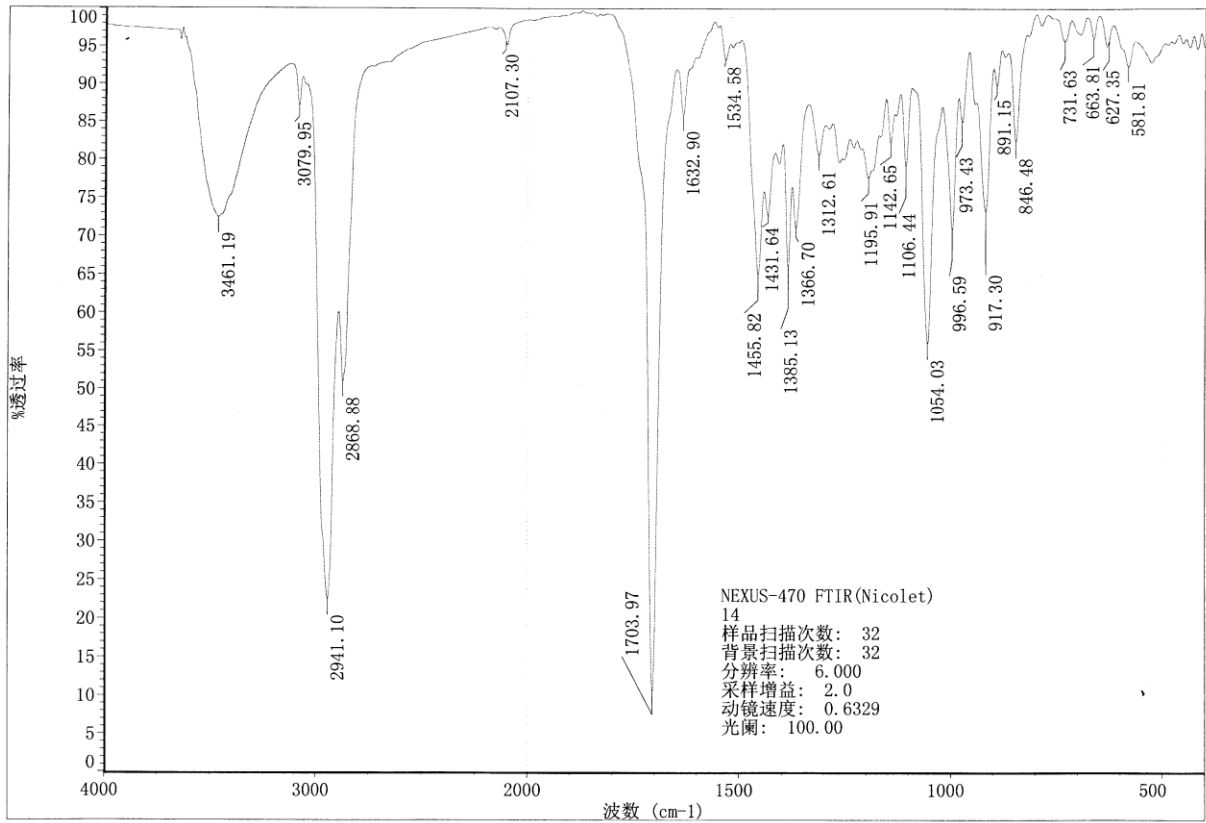
Figure S19. UV spectrum of compound 3 in CH₃OH.

Figure S20. IR spectrum of compound 3.

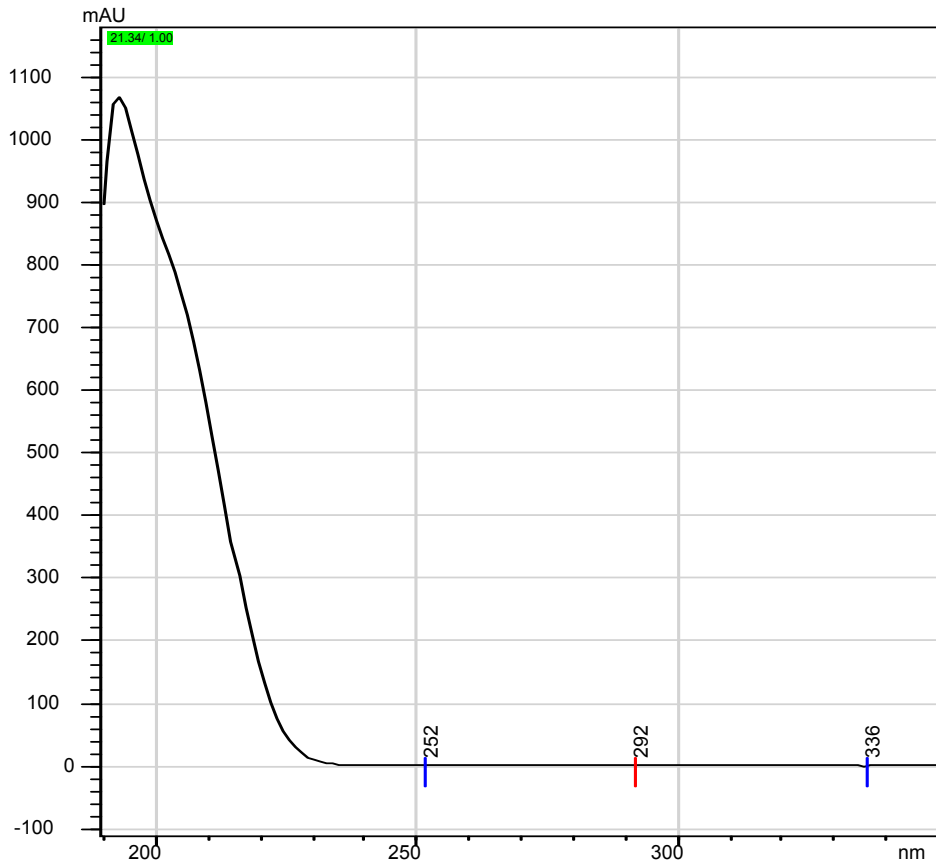


Figure S21. HR-ESI-TOF-MS spectrum of compound 3.

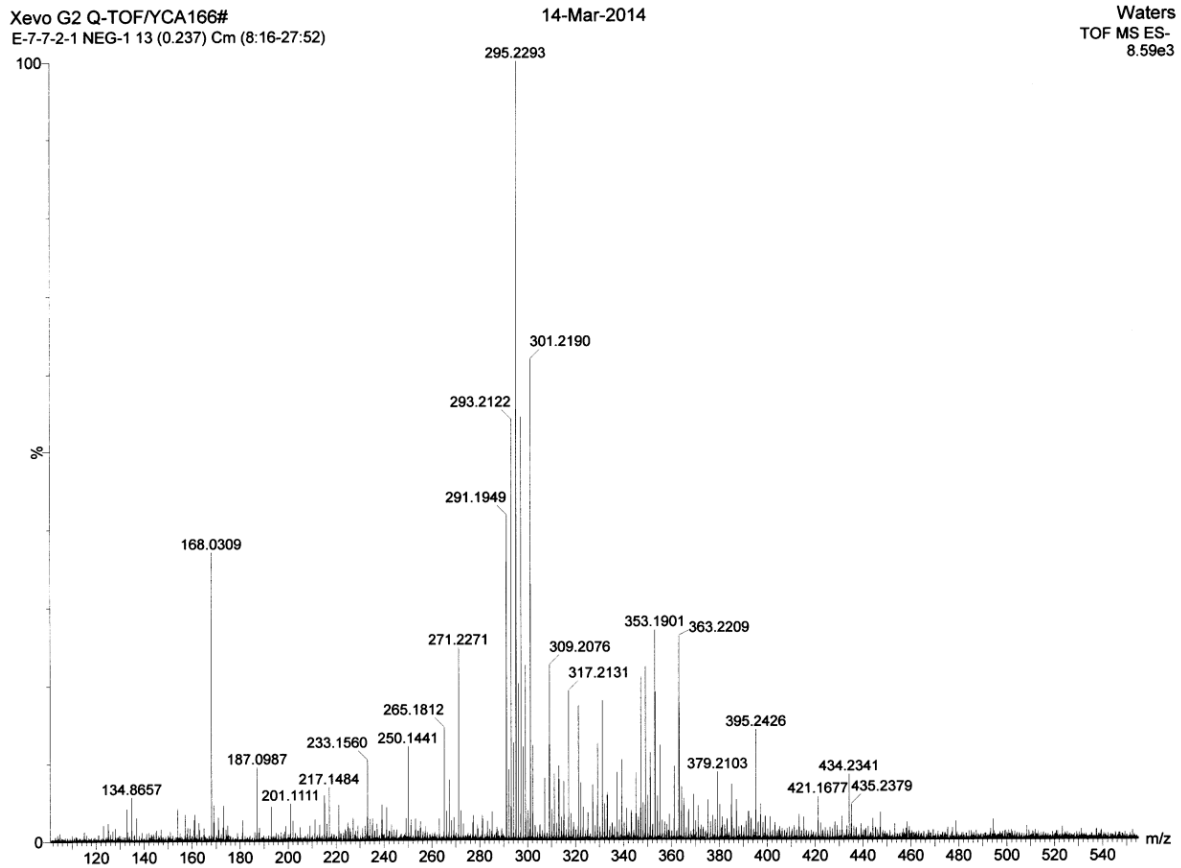
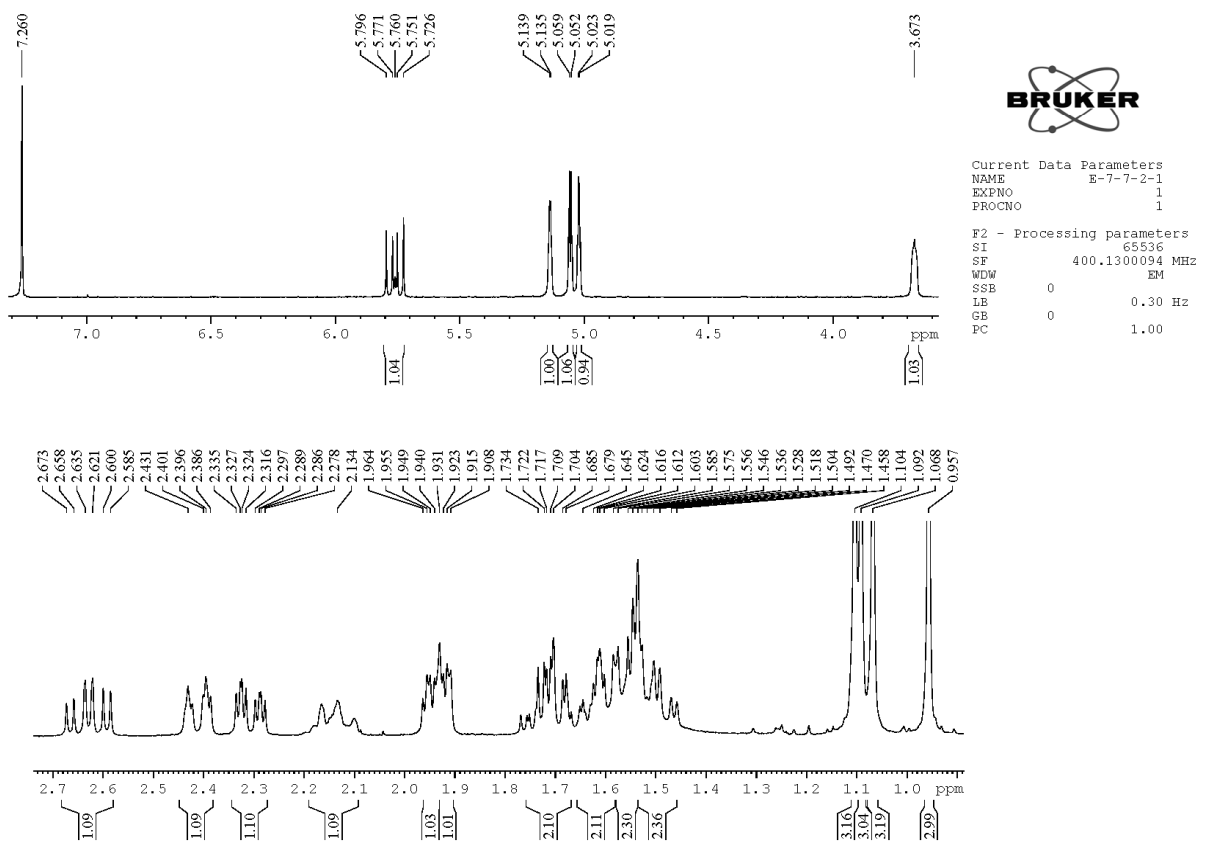
Figure S22. $^1\text{H-NMR}$ spectrum of compound 3 in CDCl_3 .

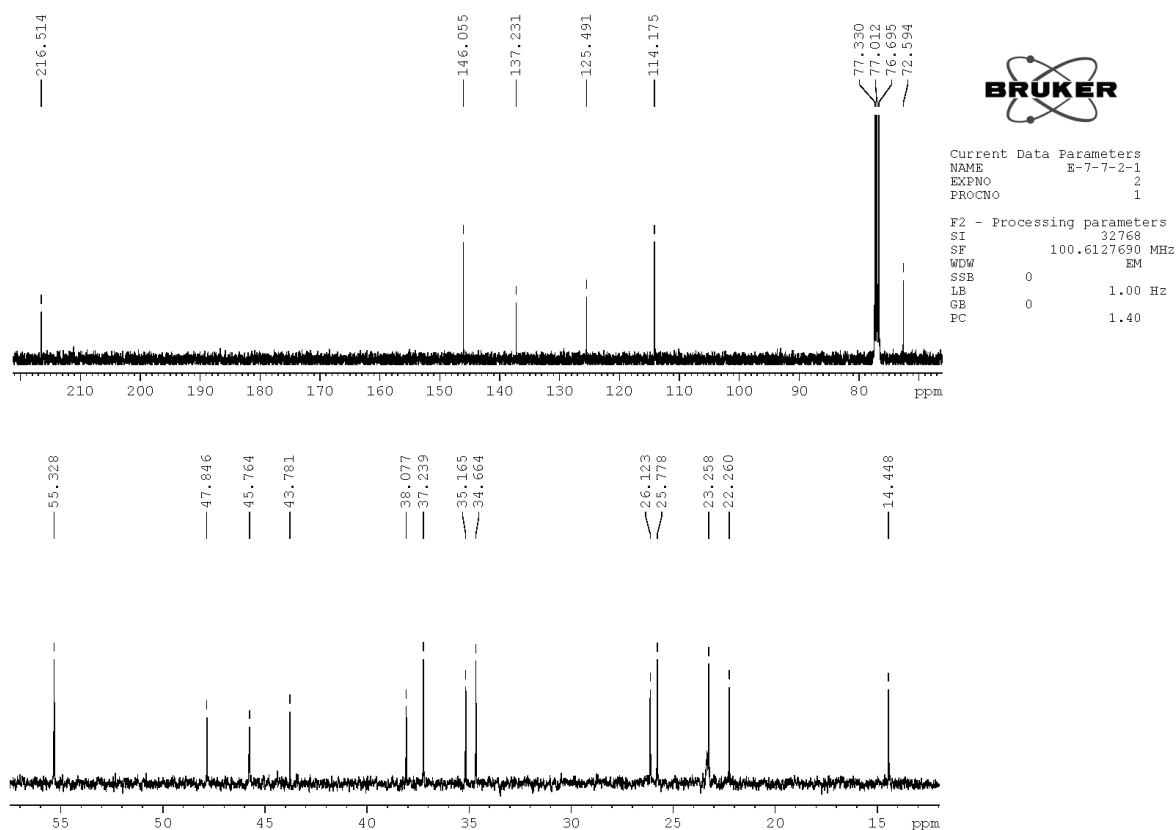
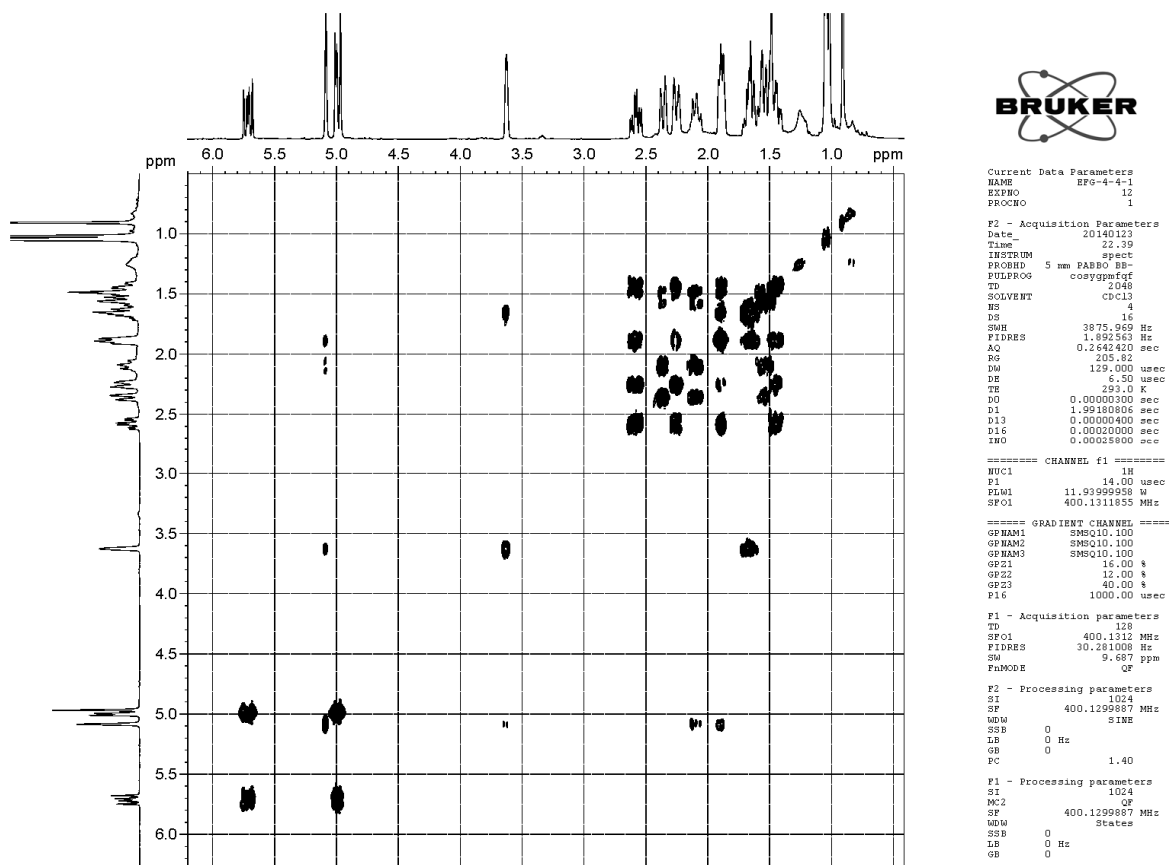
Figure S23. ^{13}C -NMR spectrum of compound 3 in CDCl_3 .Figure S24. ^1H - ^1H COSY spectrum of compound 3 in CDCl_3 .

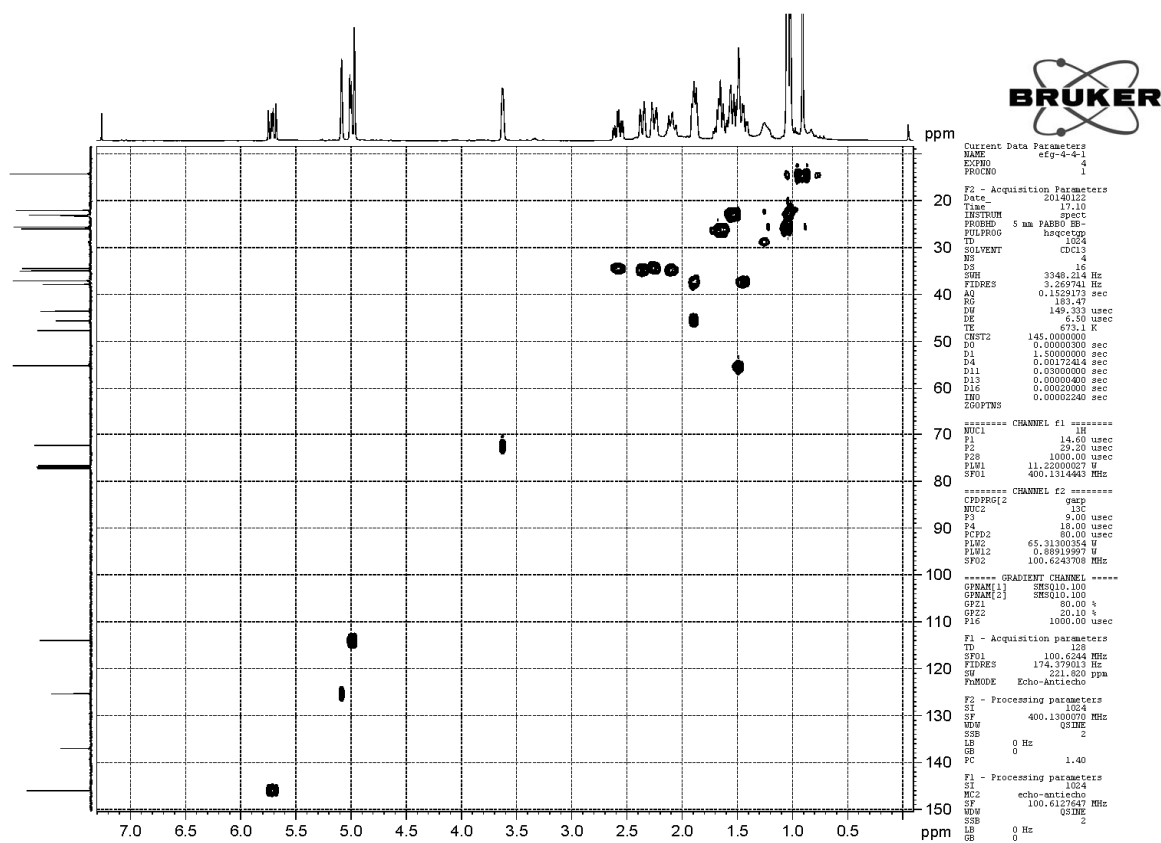
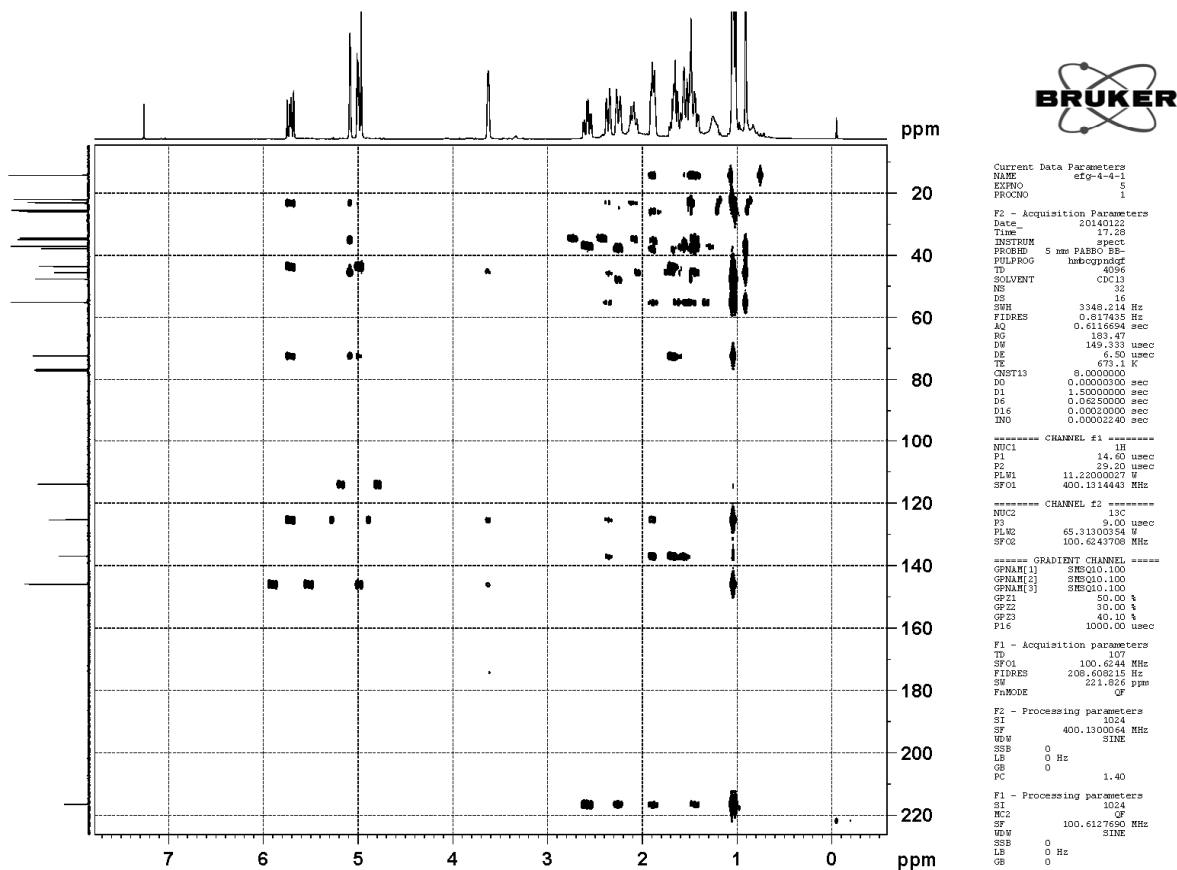
Figure S25. HSQC spectrum of compound 3 in CDCl₃.Figure S26. HMBC spectrum of compound 3 in CDCl₃.

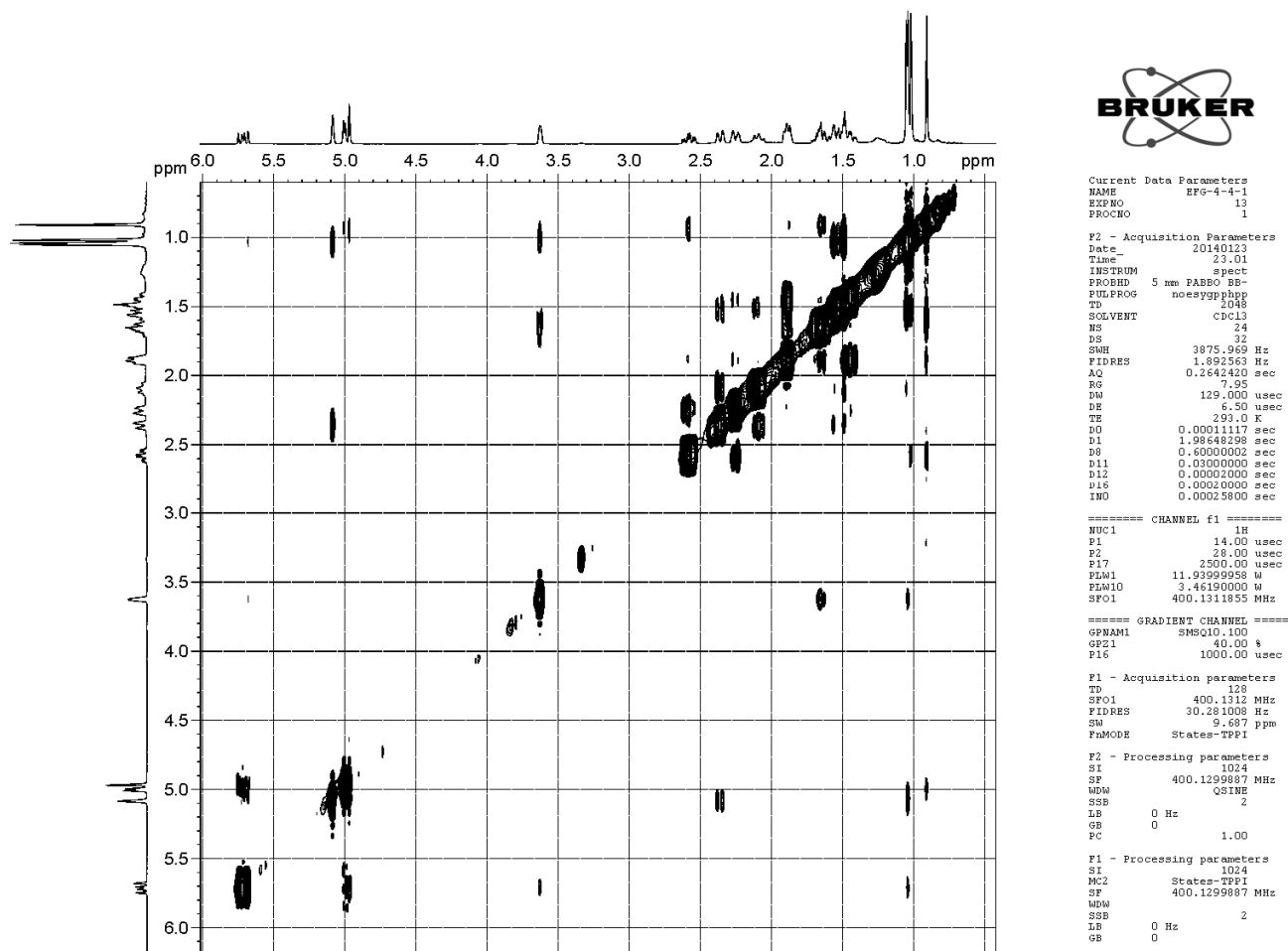
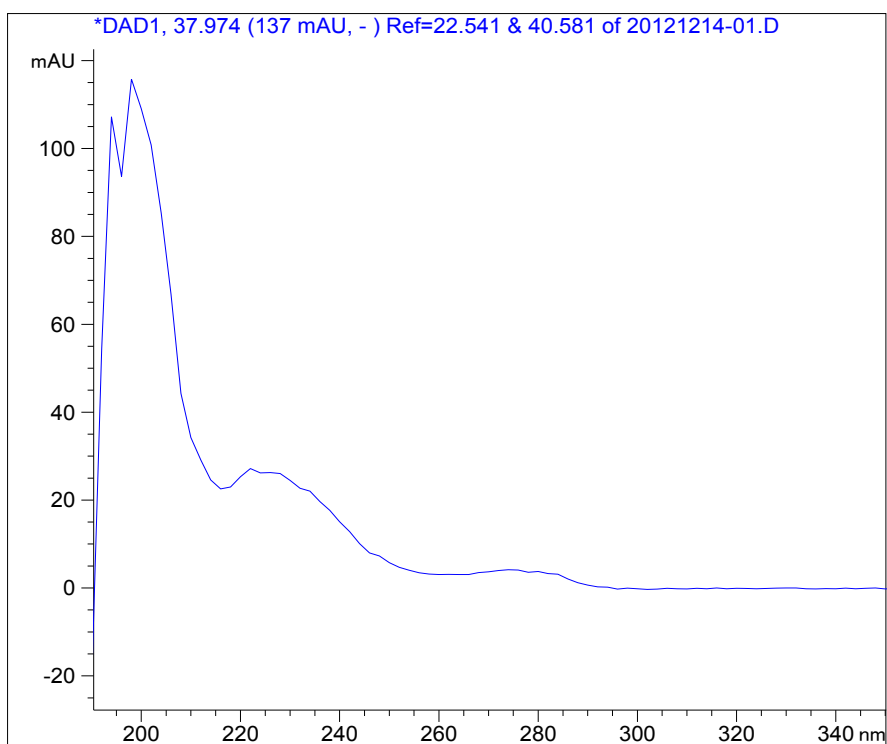
Figure S27. NOESY spectrum of compound 3 in CDCl₃.Figure S28. UV spectrum of compound 4 in CH₃OH.

Figure S29. IR spectrum of compound 4.

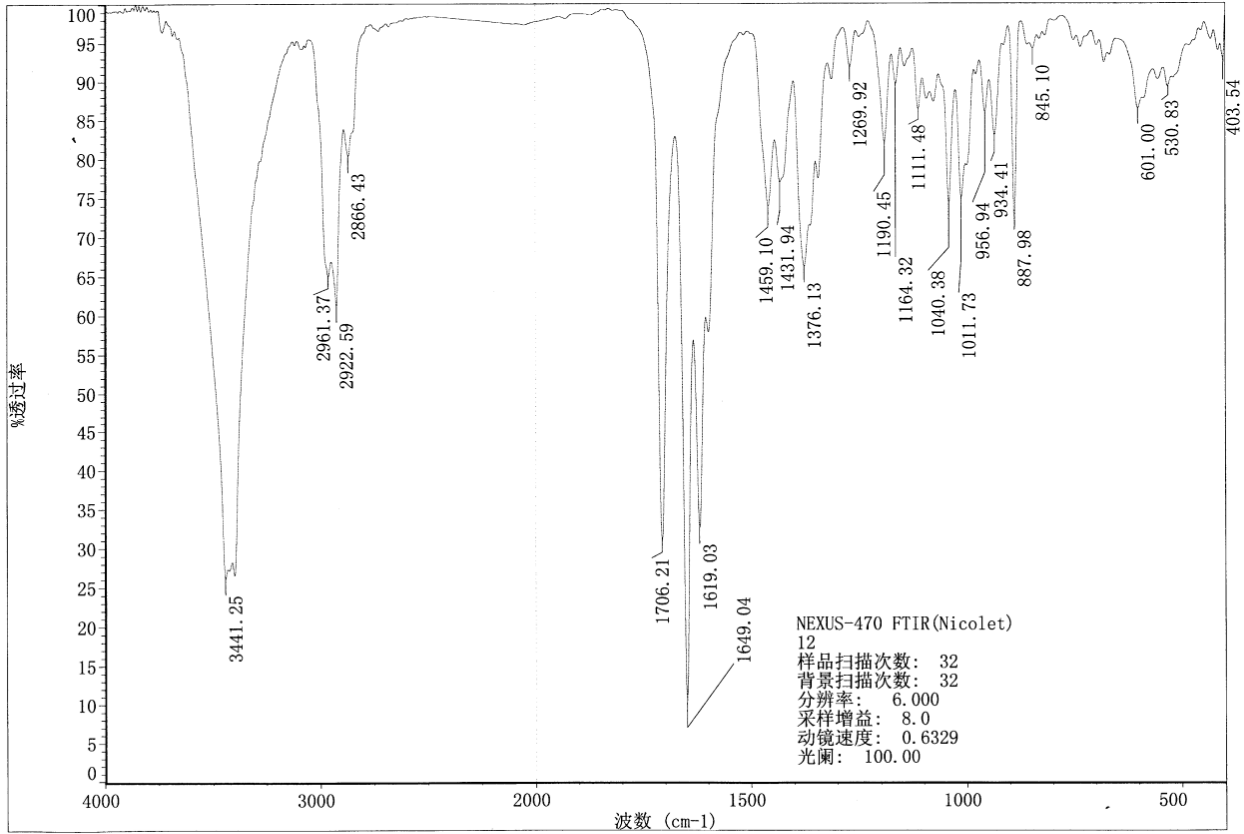


Figure S30. HR-ESI-TOF-MS spectrum of compound 4.

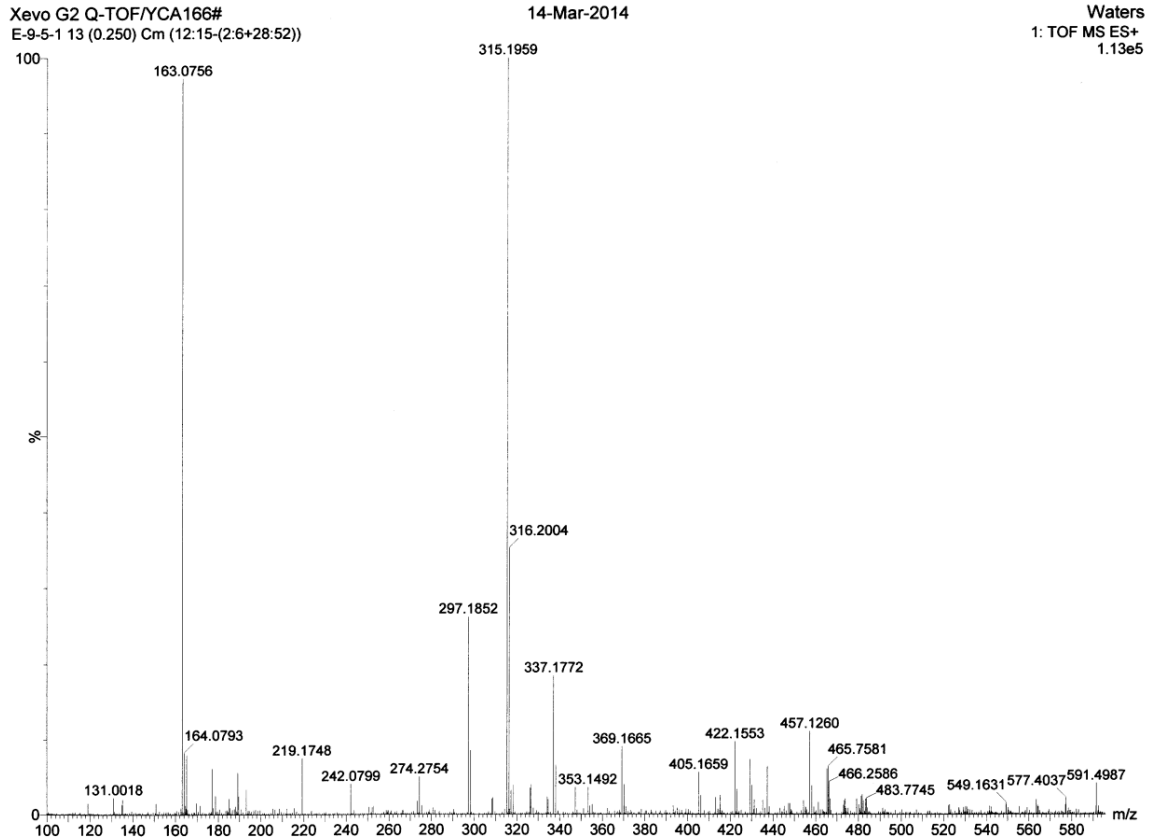


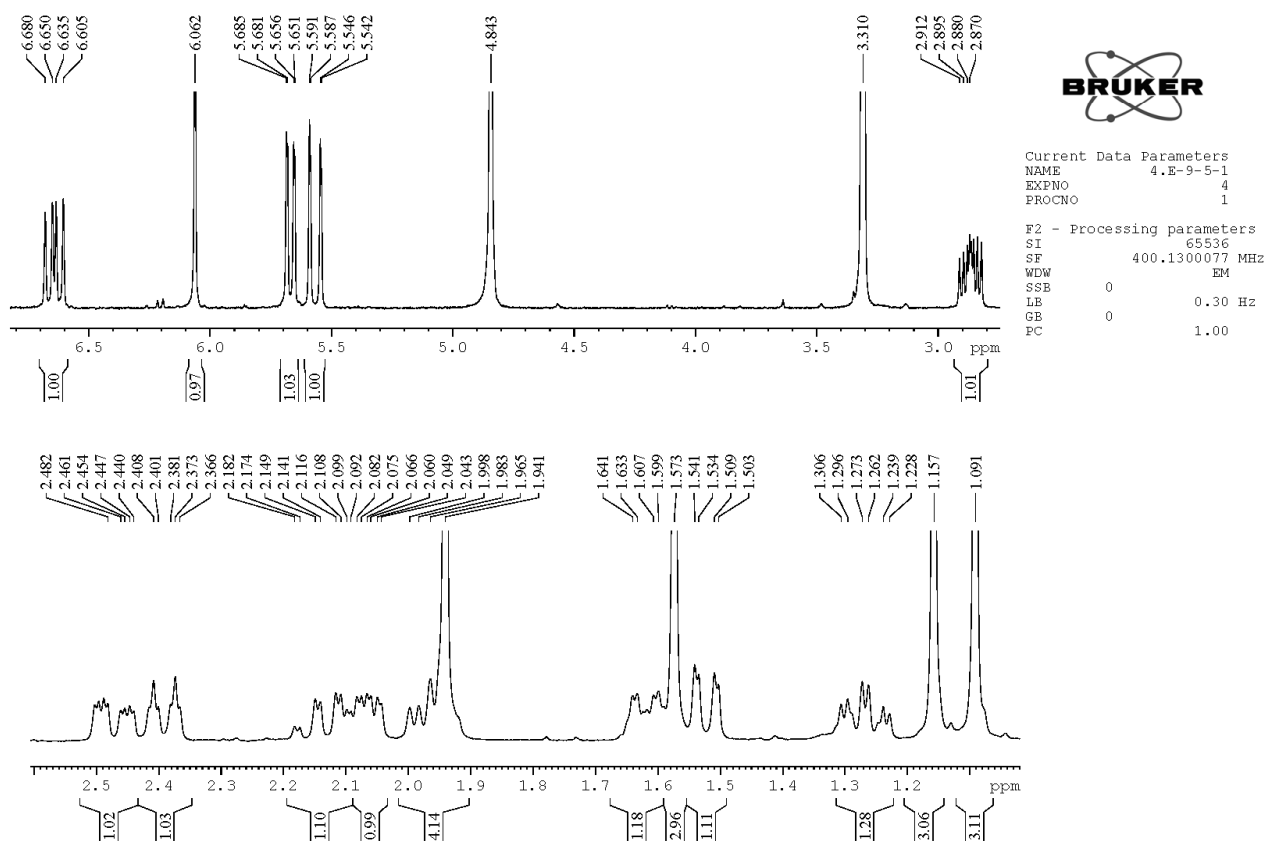
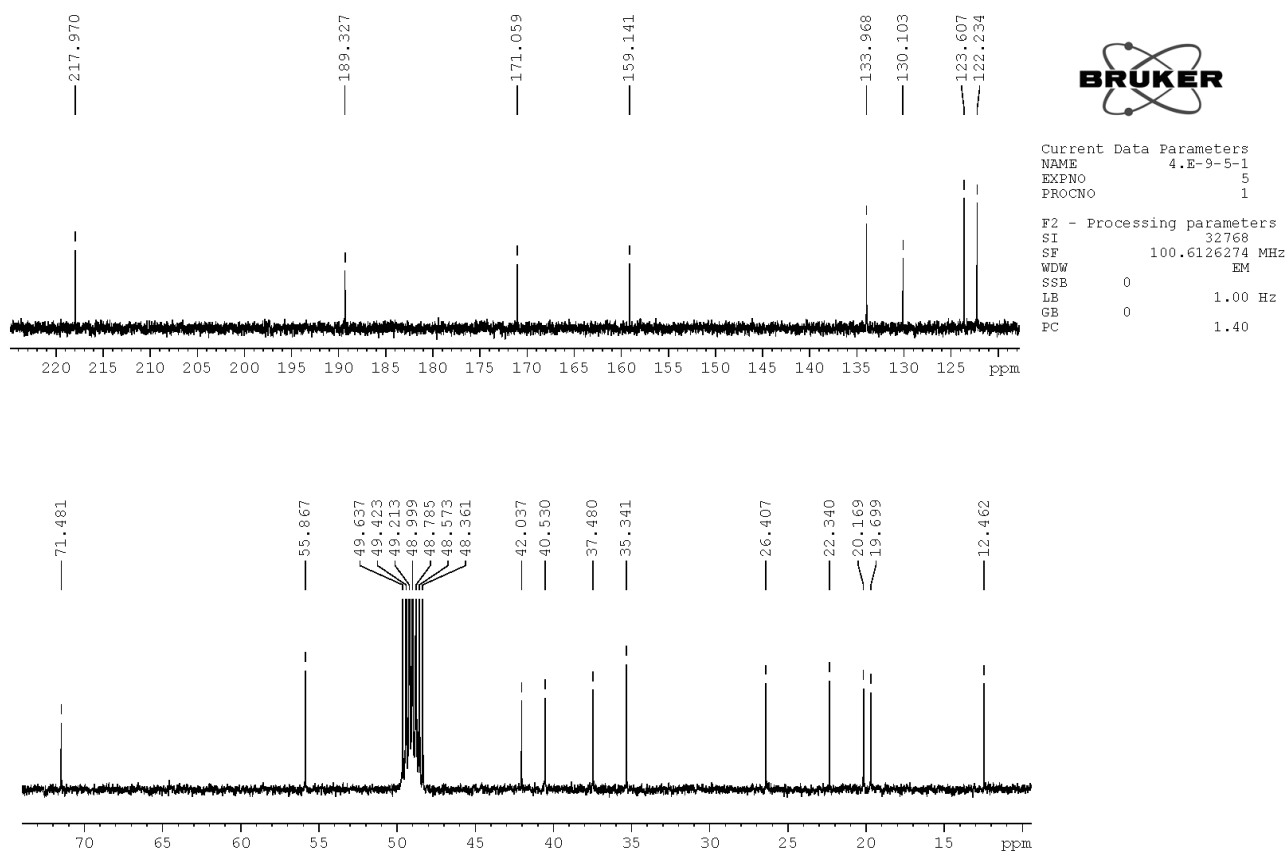
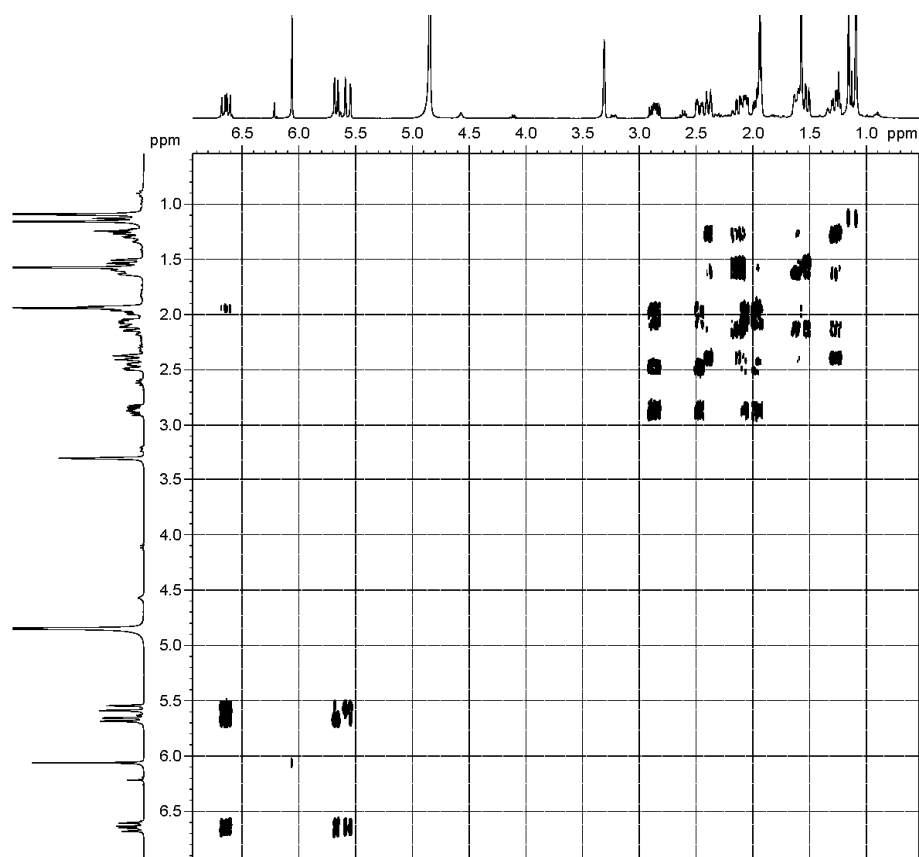
Figure S31. ¹H-NMR spectrum of compound 4 in CD₃OD.Figure S32. ¹³C-NMR spectrum of compound 4 in CD₃OD.

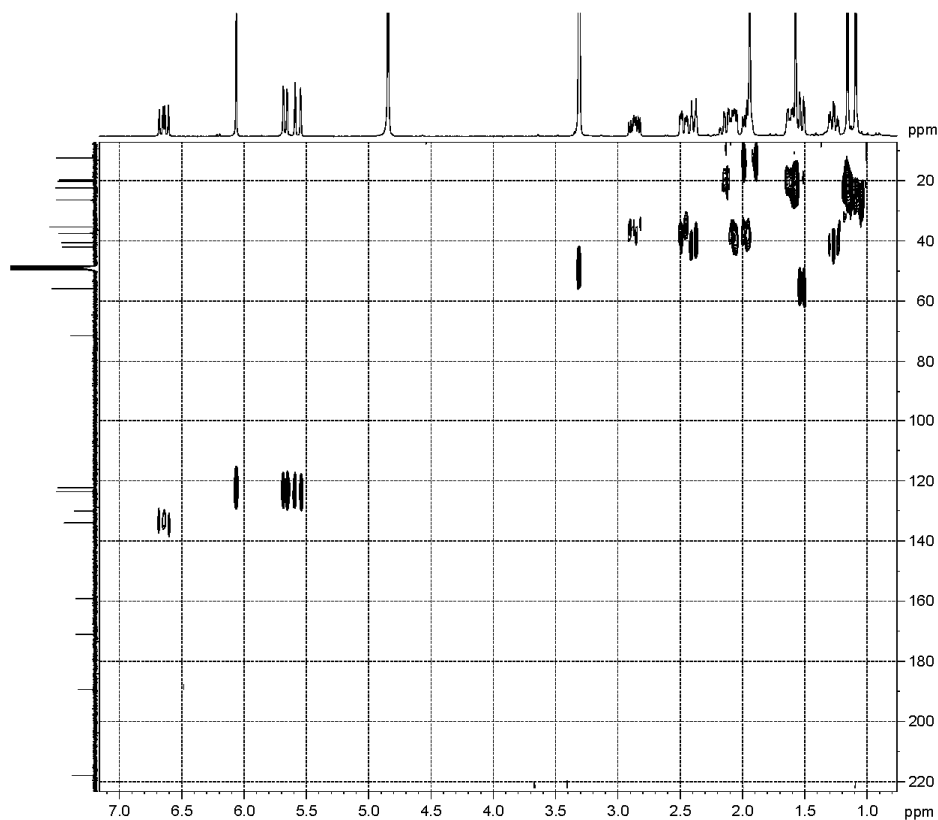
Figure S33. $^1\text{H}^1\text{H}$ COSY spectrum of compound 4 in CD_3OD .

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 PROCNO 1

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 SW 6.400 ppm
 FMODE QF

F2 - Processing parameters
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 SF 400.130060 MHz
 WDW SINE
 SSB 0
 LB 0 Hz
 GB 0
 PC 1.40

F1 - Processing parameters
 SI 1024
 MC2 QF
 SF 400.130055 MHz
 WDW SINE
 SSB 0
 LB 0 Hz
 GB 0

Figure S34. HSQC spectrum of compound 4 in CD_3OD .

Current Data Parameters
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 EXPNO 7
 PROCNO 1

F1 - Acquisition parameters
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 FIDRES 169.877945 Hz
 SW 216.095 ppm
 FMODE Echo-Antiecho

F2 - Processing parameters
 SI 1024
 SF 400.130062 MHz
 WDW QSINE
 SSB 2
 LB 0 Hz
 GB 0
 PC 1.40

F1 - Processing parameters
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 MC2 echo-antiecho
 SF 100.6125894 MHz
 WDW QSINE
 SSB 2
 LB 0 Hz
 GB 0

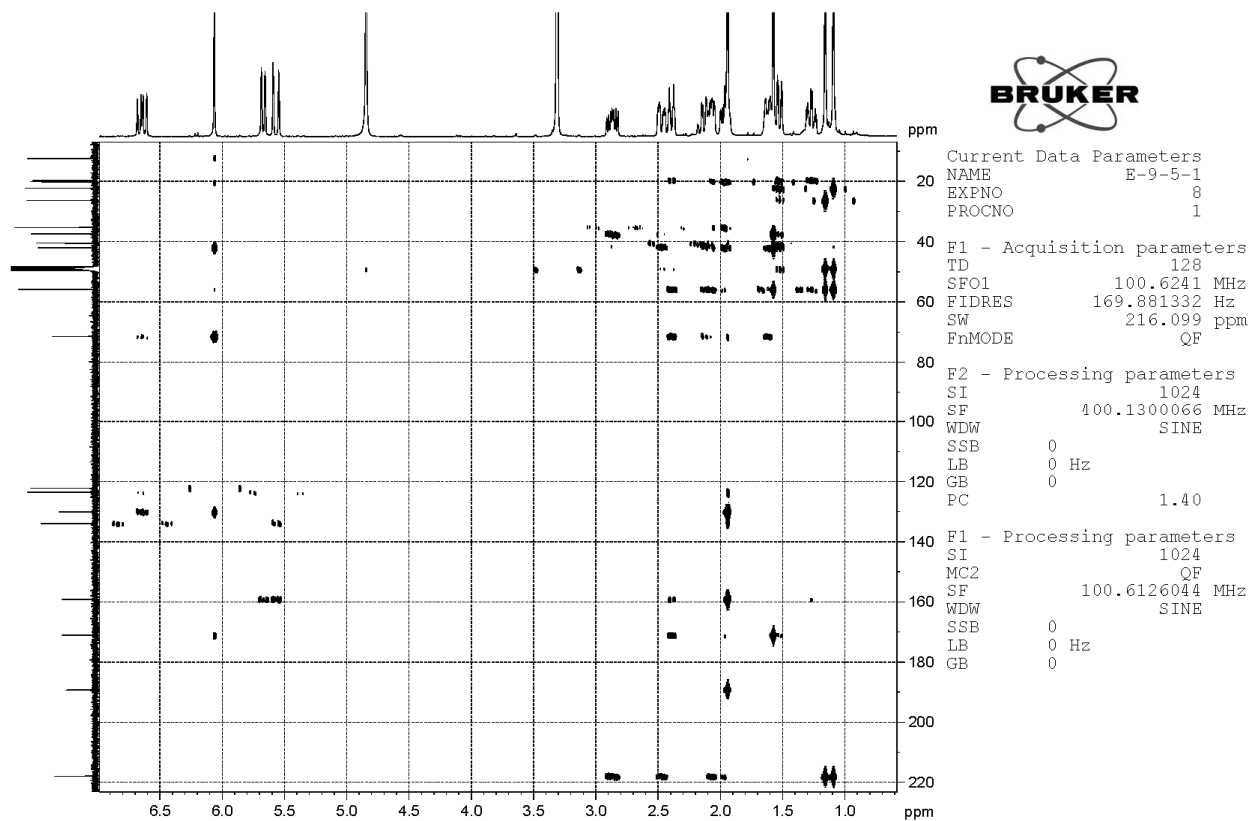
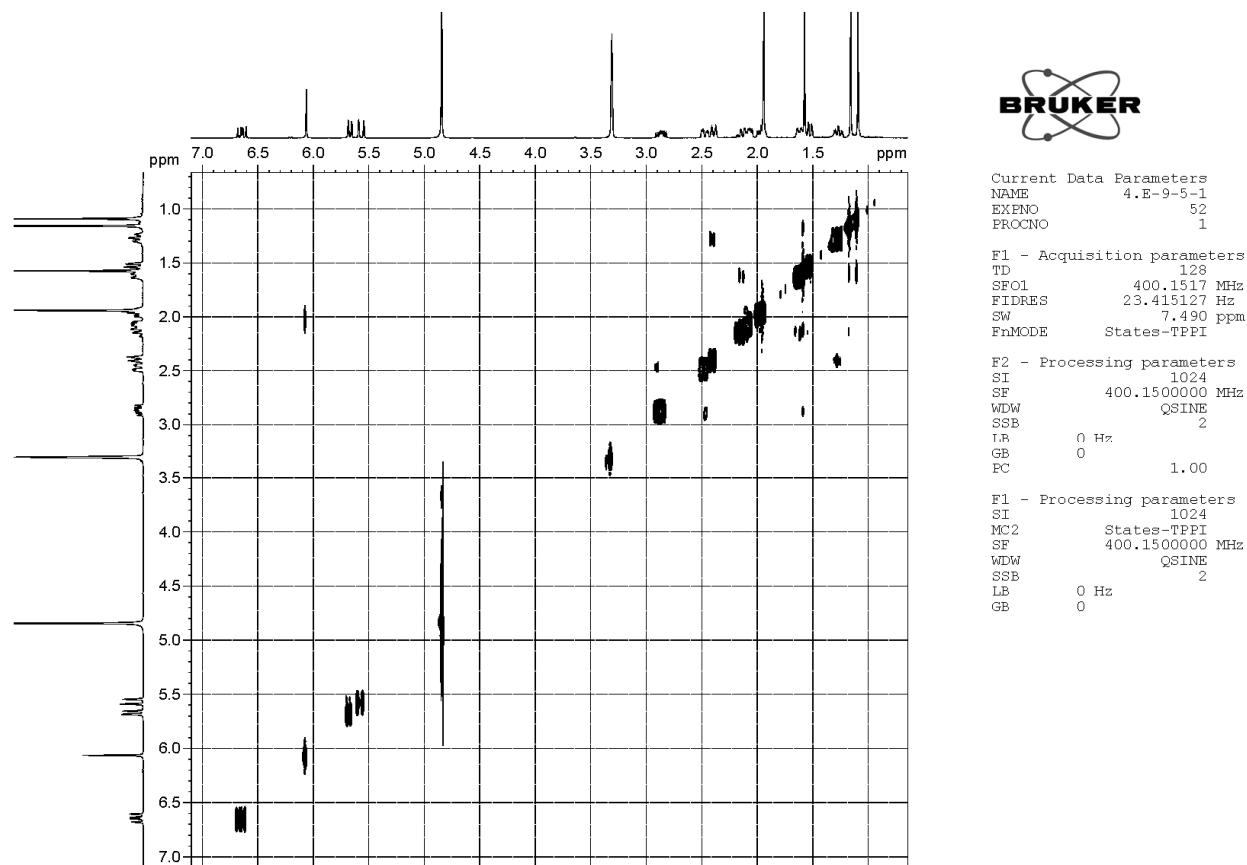
Figure S35. HMBC spectrum of compound 4 in CD₃OD.Figure S36. NOESY spectrum of compound 4 in CD₃OD.

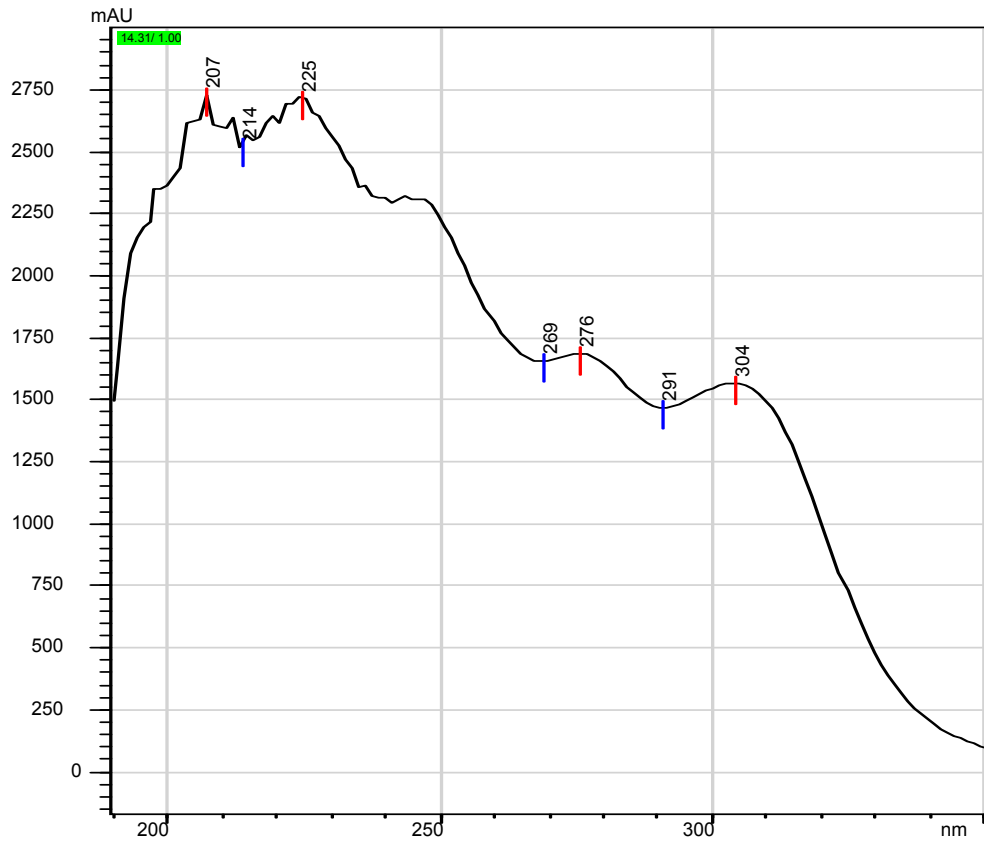
Figure S37. UV spectrum of compound 5 in CH₃OH.

Figure S38. IR spectrum of compound 5.

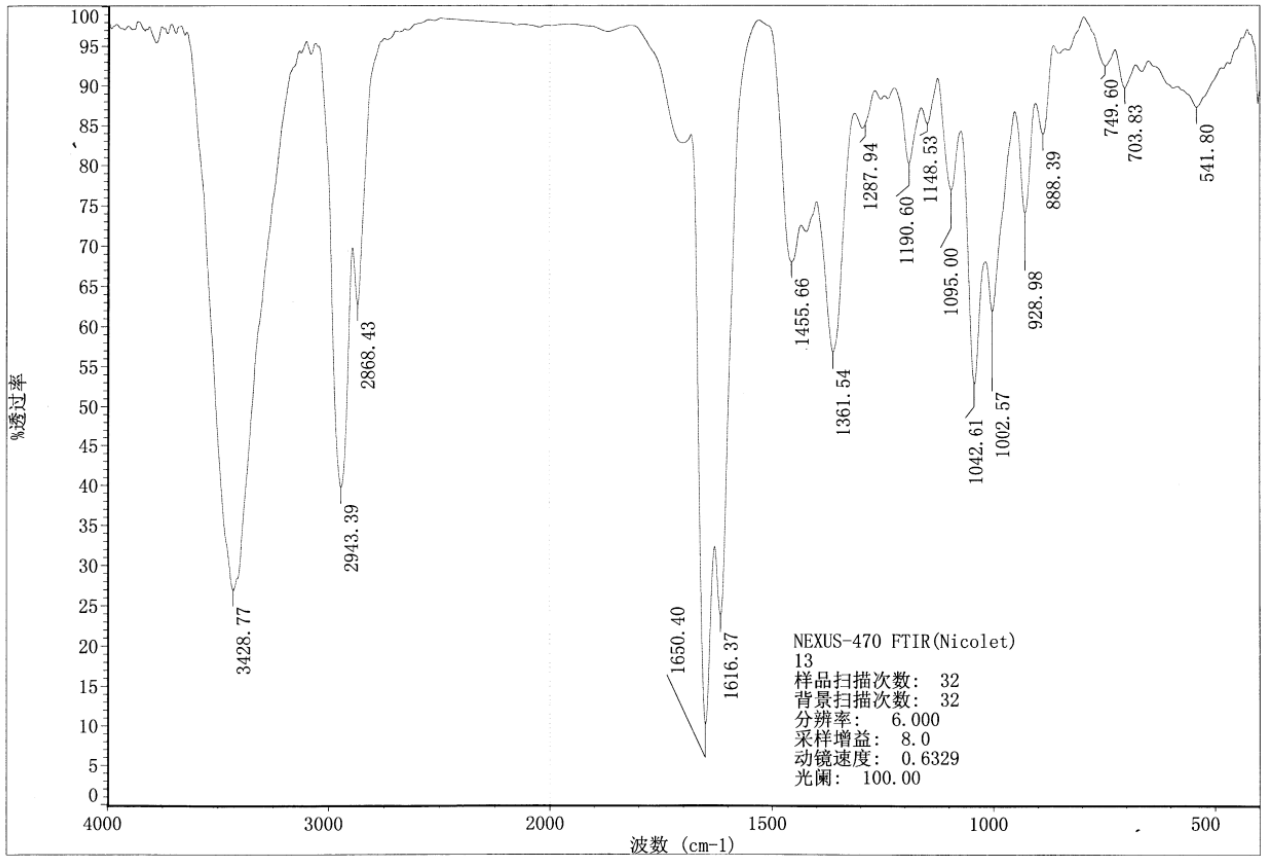


Figure S39. HR-ESI-TOF-MS spectrum of compound 5.

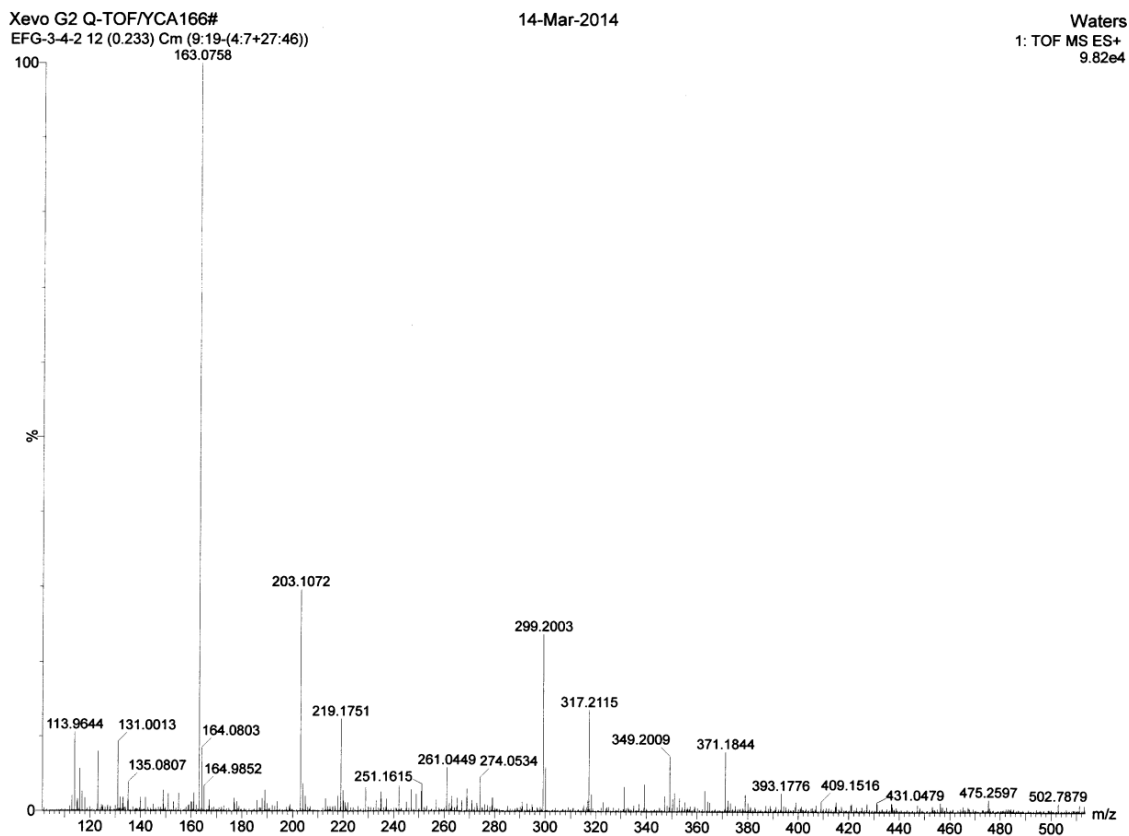
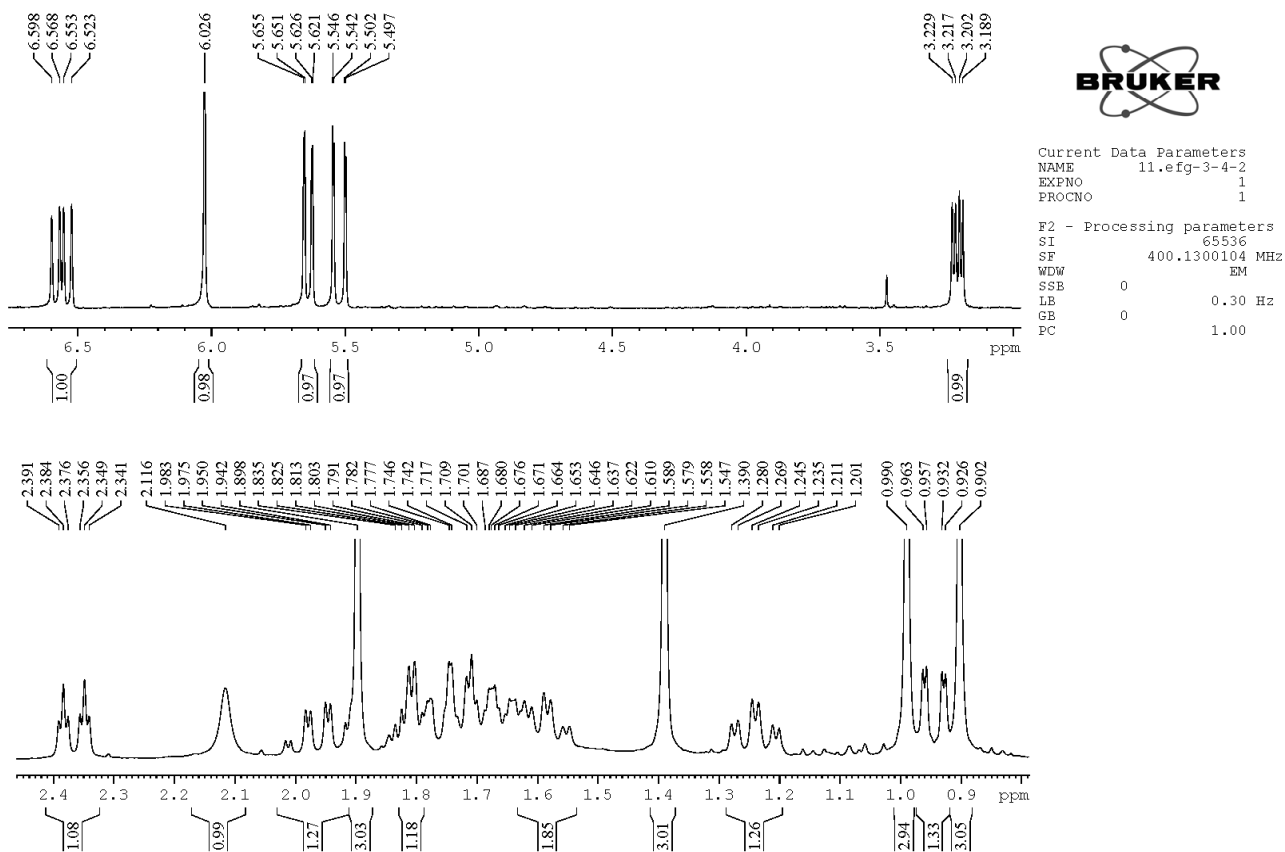
Figure S40. $^1\text{H-NMR}$ spectrum of compound 5 in CDCl_3 .

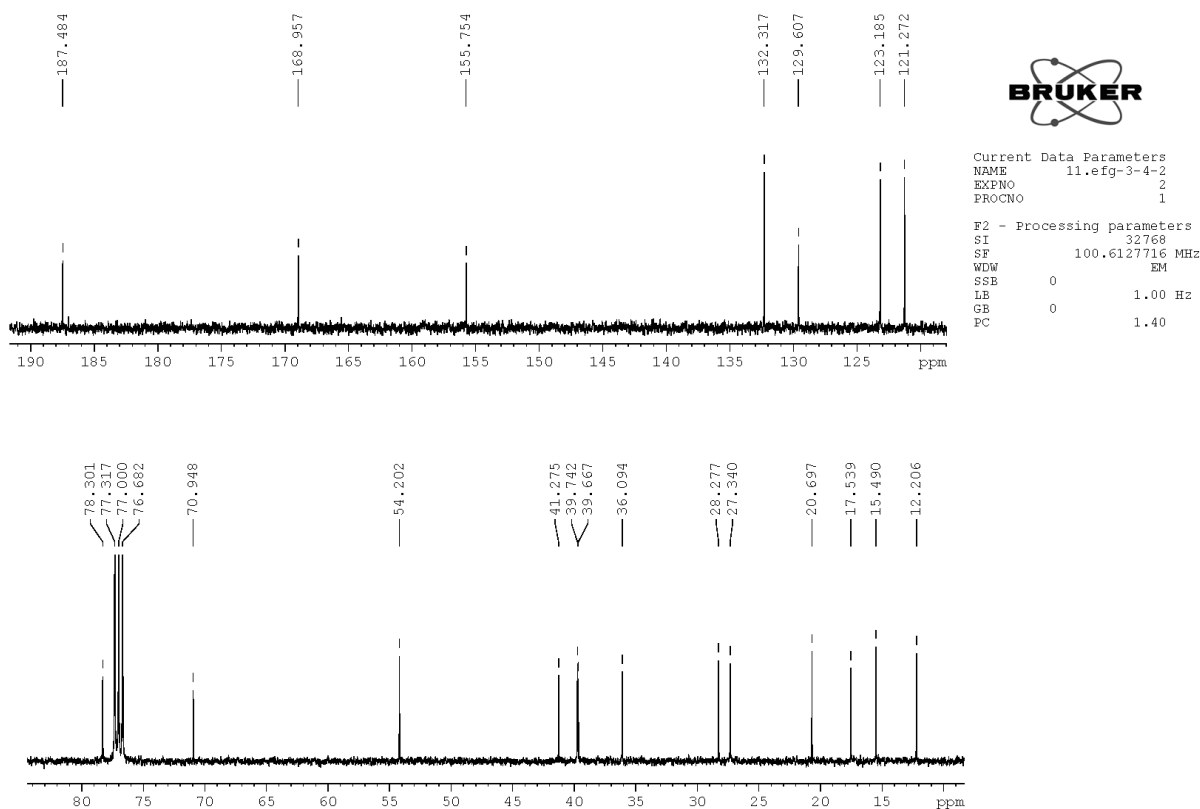
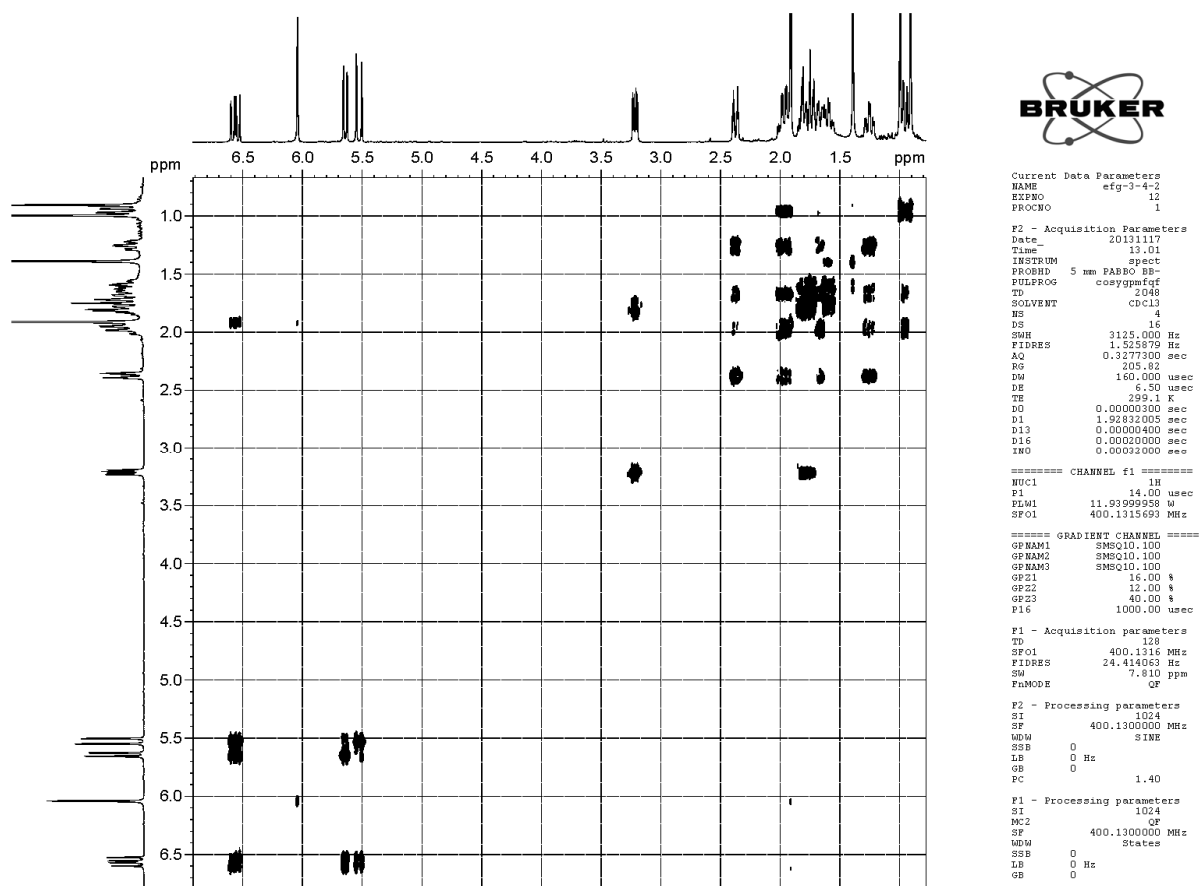
Figure S41. ^{13}C -NMR spectrum of compound **5** in CDCl_3 .Figure S42. ^1H - ^1H COSY spectrum of compound **5** in CDCl_3 .

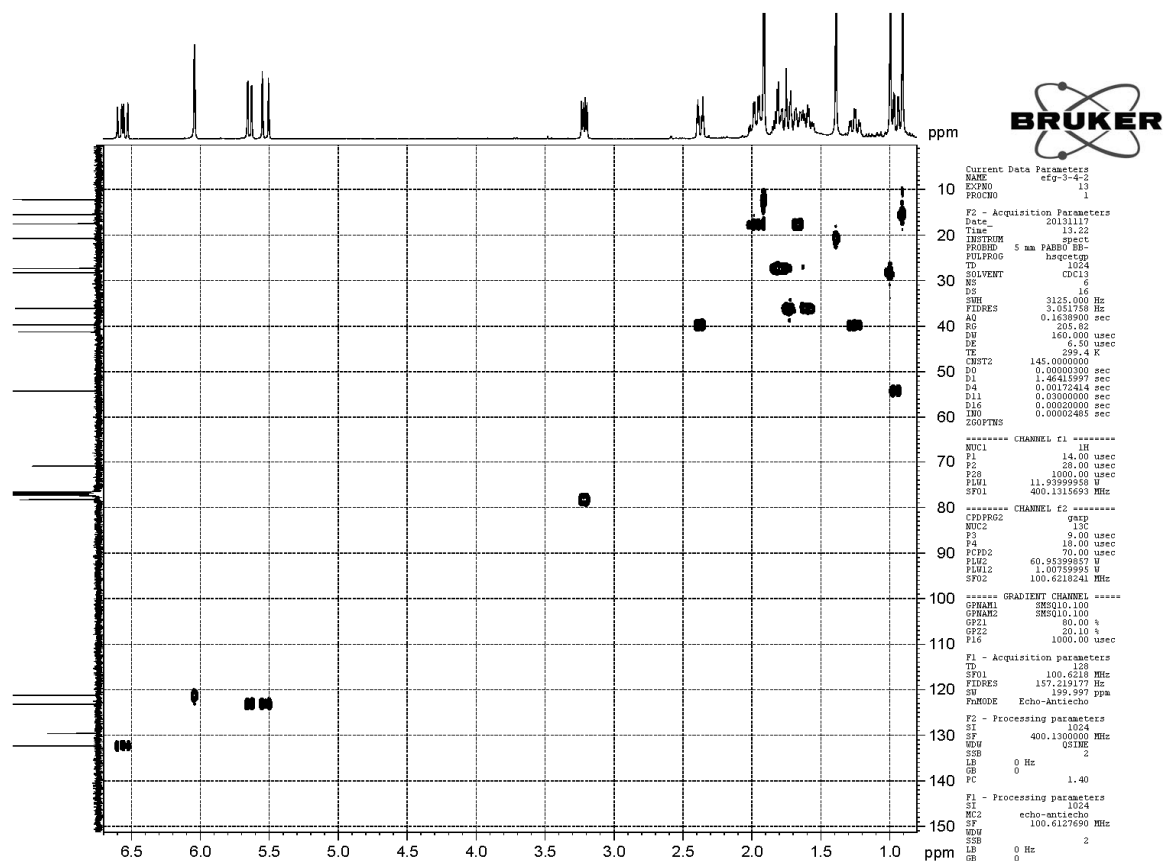
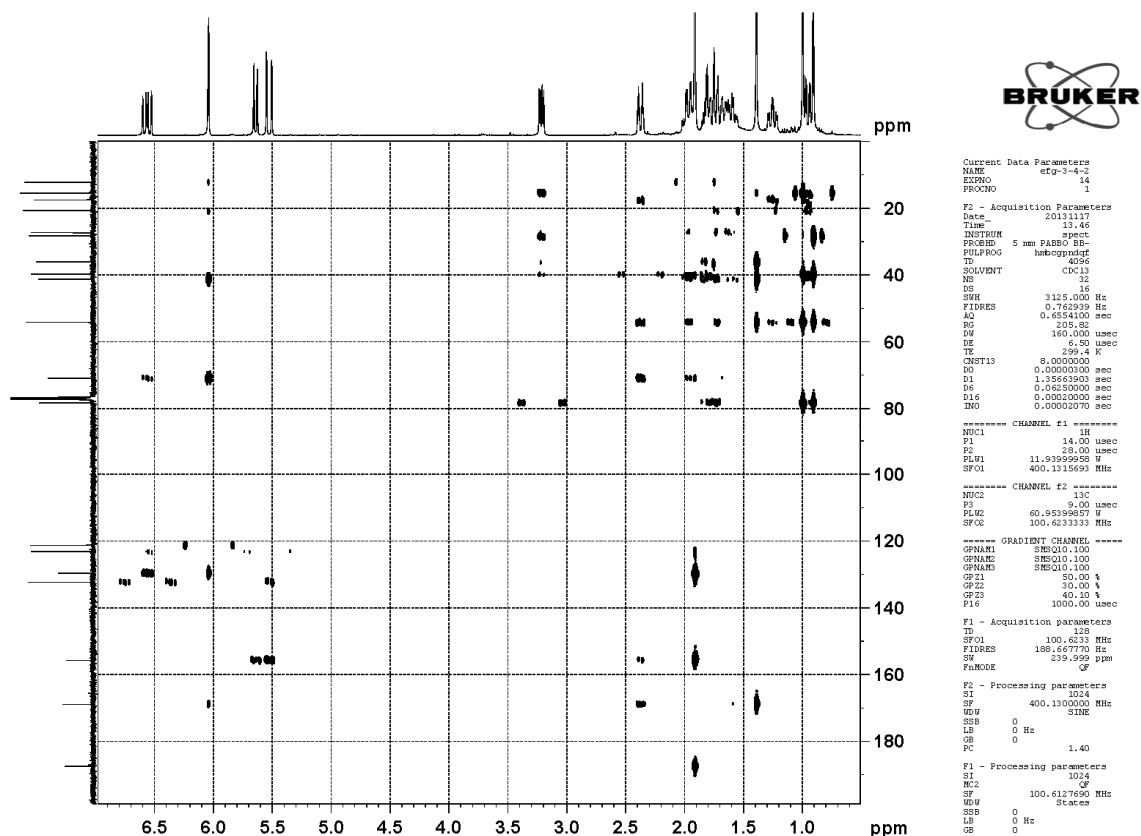
Figure S43. HSQC spectrum of compound 5 in CDCl₃.Figure S44. HMBC spectrum of compound 5 in CDCl₃.

Figure S45. NOESY spectrum of compound 5 in CDCl₃.

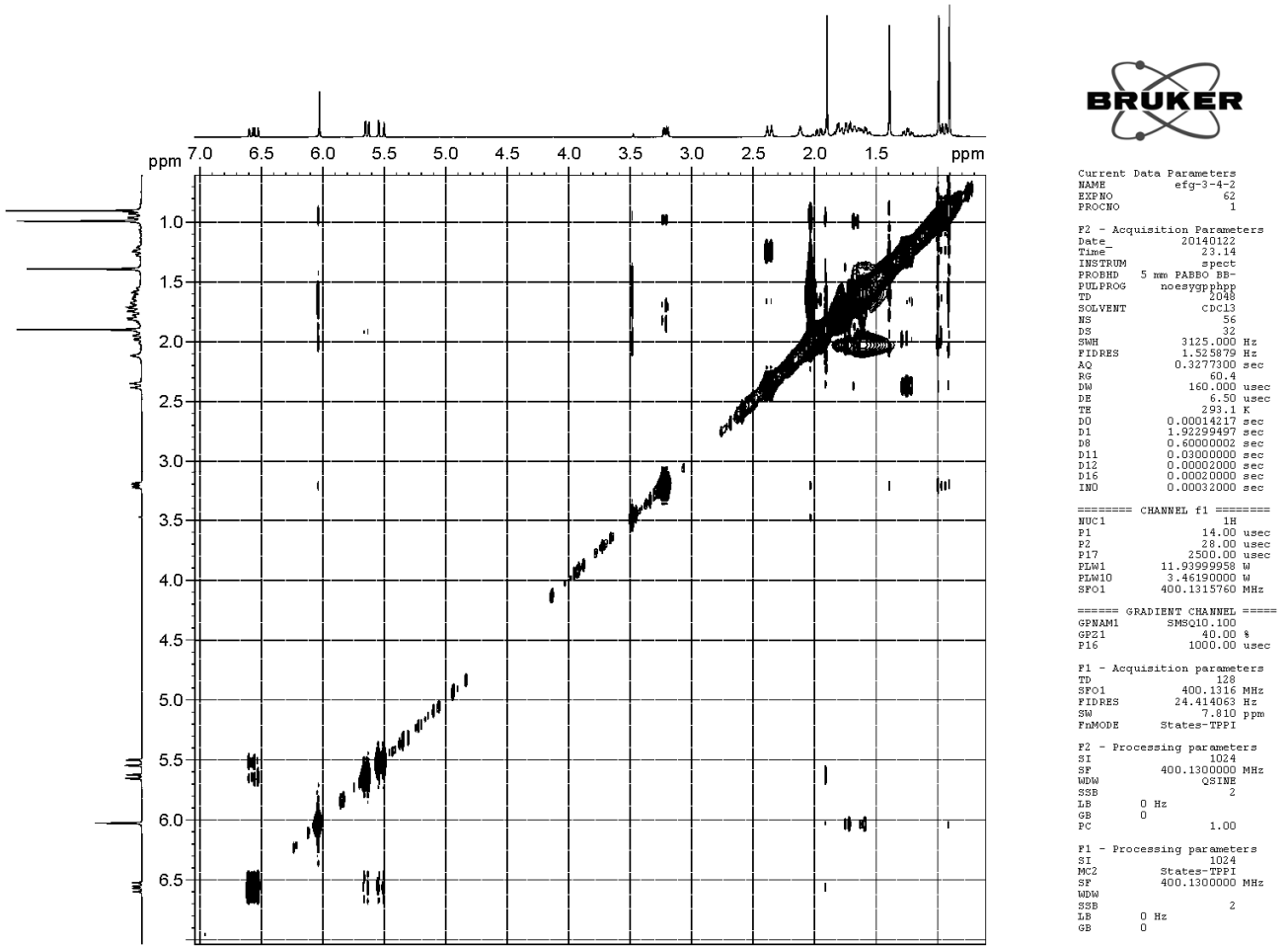


Figure S46. UV spectrum of compound 6 in CH₃OH.

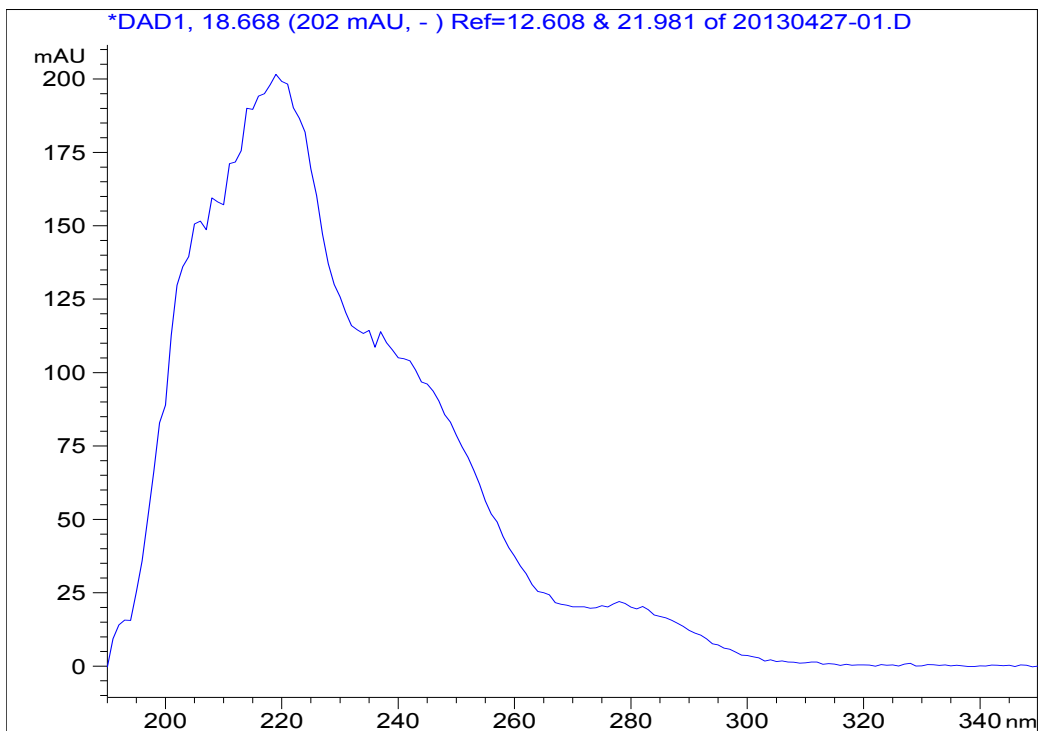


Figure S47. IR spectrum of compound 6.

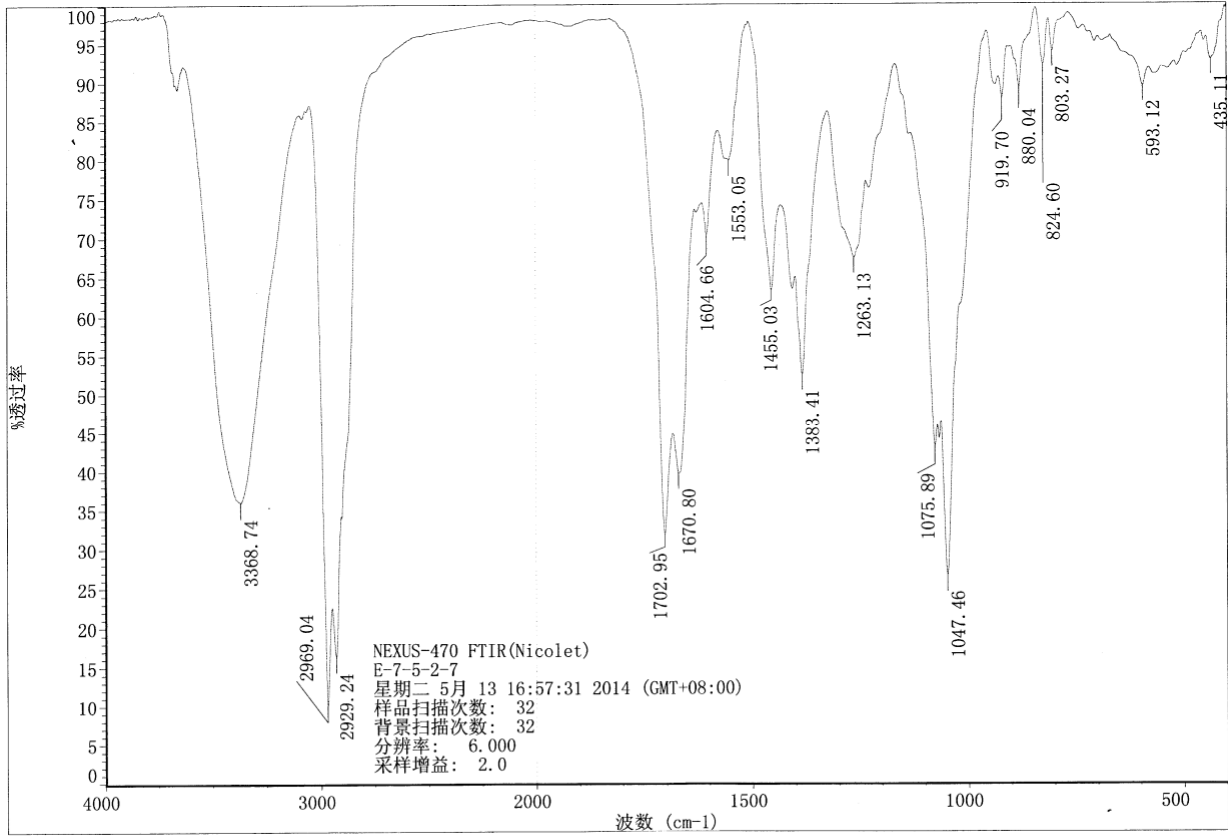


Figure S48. HR-ESI-TOF-MS spectrum of compound 6.

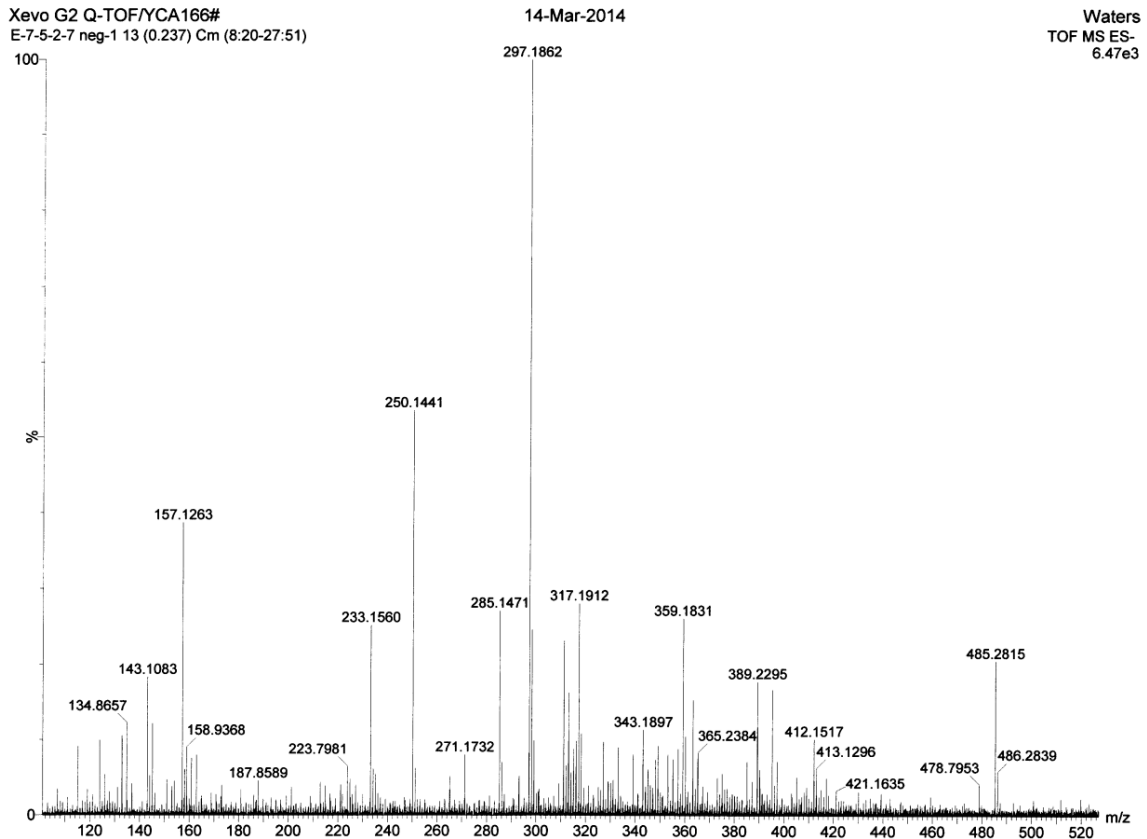


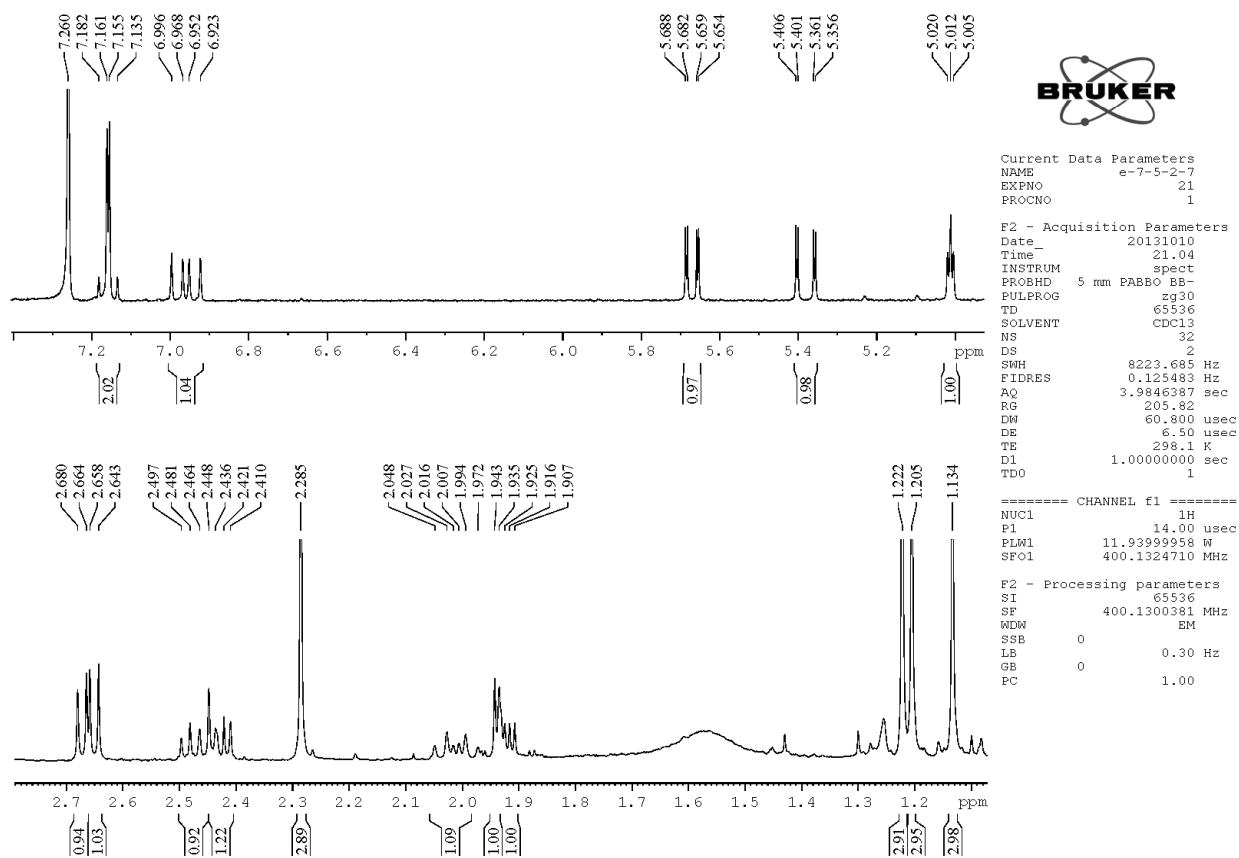
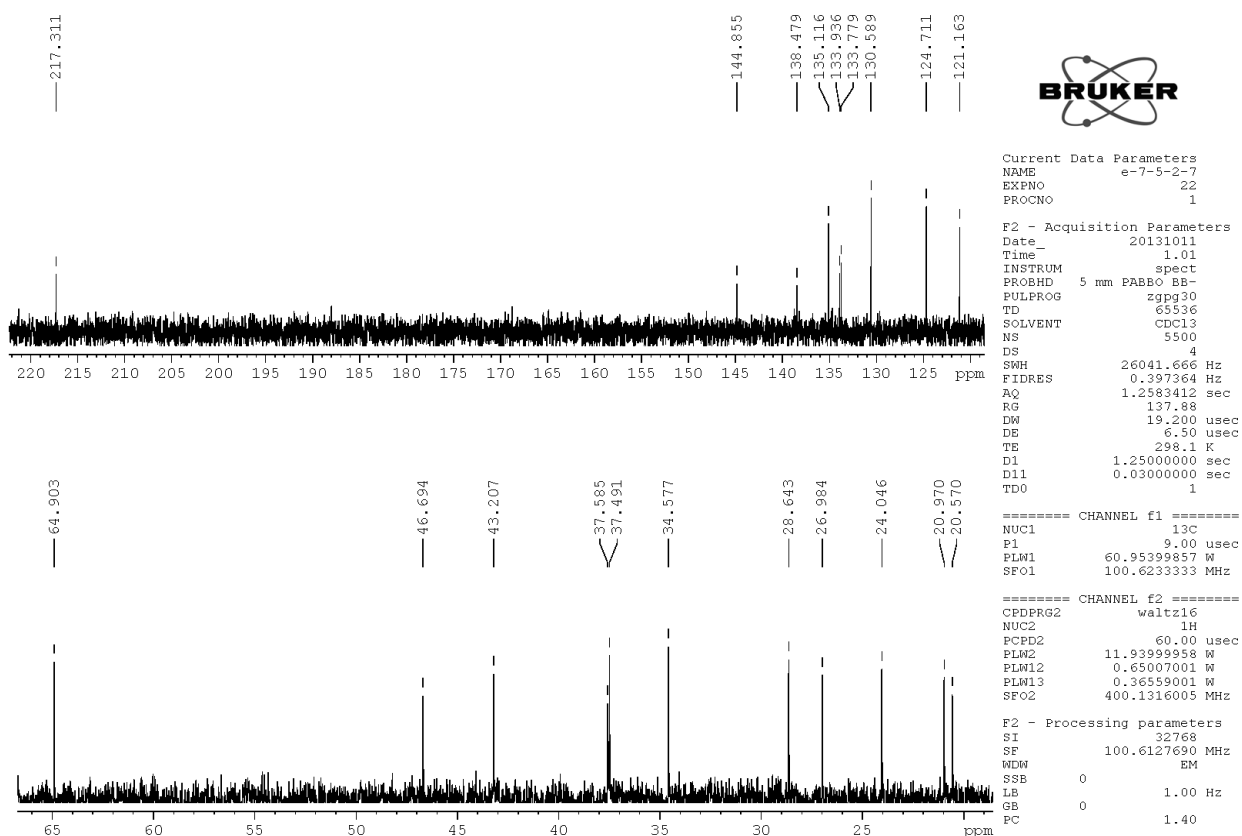
Figure S49. ¹H-NMR spectrum of compound 6 in CDCl₃.Figure S50. ¹³C-NMR spectrum of compound 6 in CDCl₃.

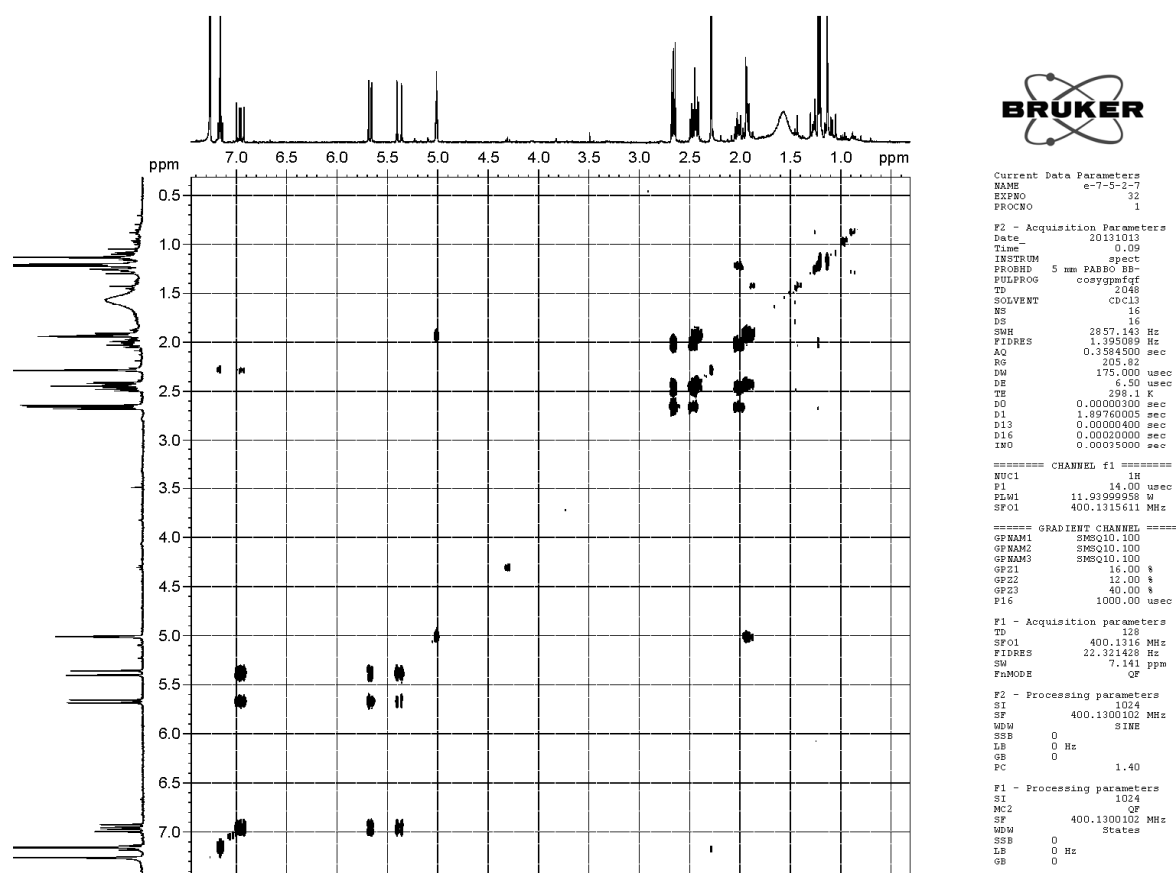
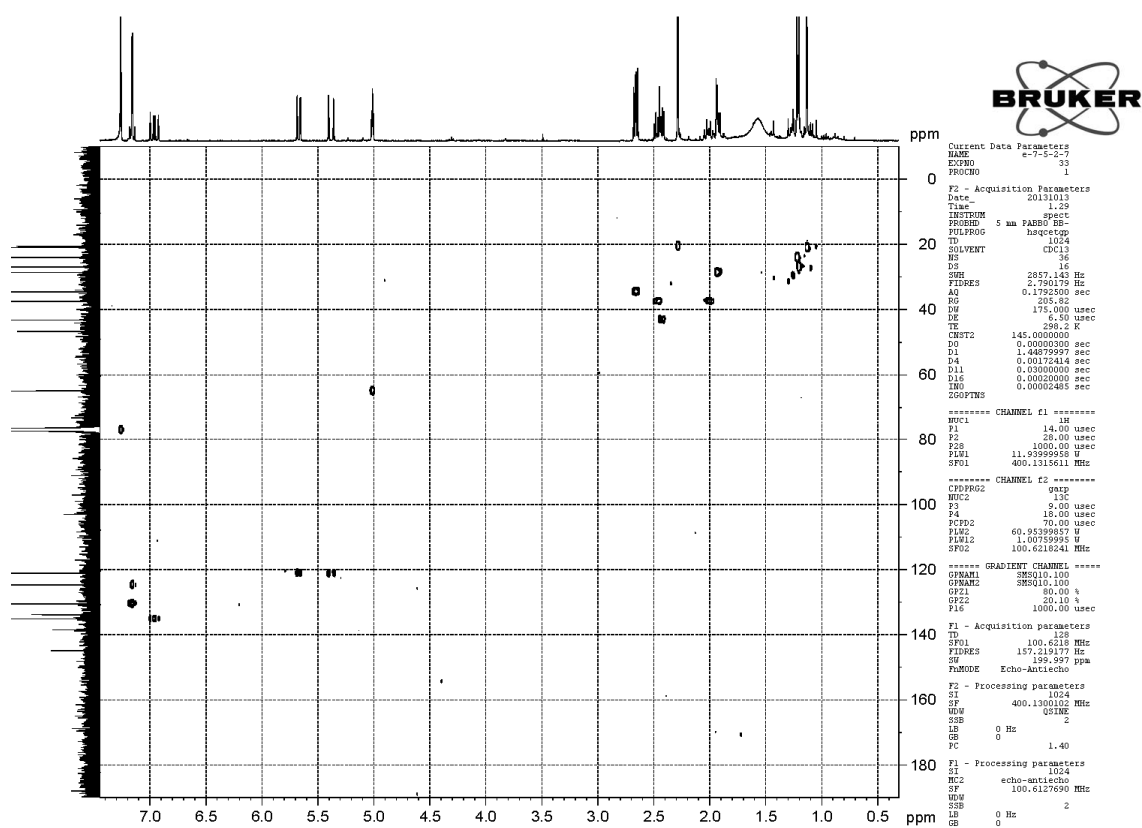
Figure S51. $^1\text{H}^1\text{H}$ COSY spectrum of compound 6 in CDCl_3 .Figure S52. HSQC spectrum of compound 6 in CDCl_3 .

Figure S53. HMBC spectrum of compound 6 in CDCl₃.

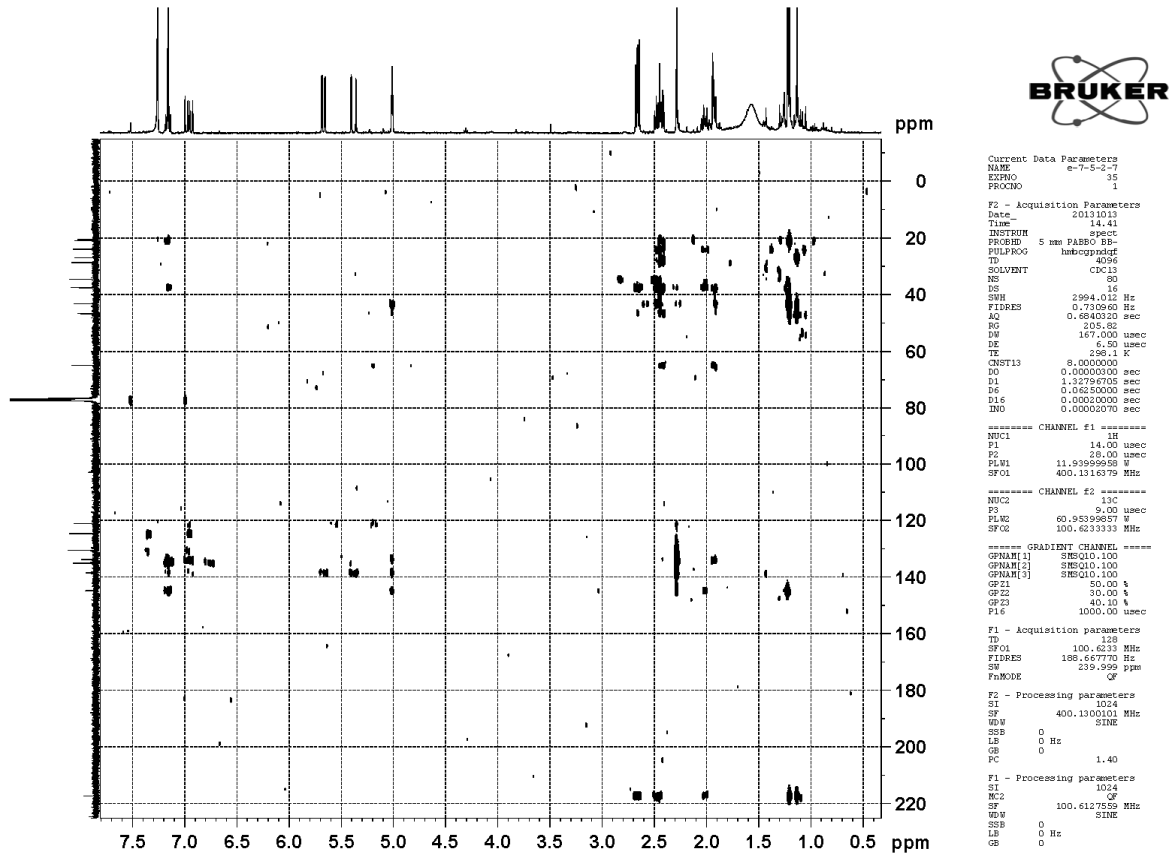


Figure S54. NOESY spectrum of compound 6 in CDCl₃.

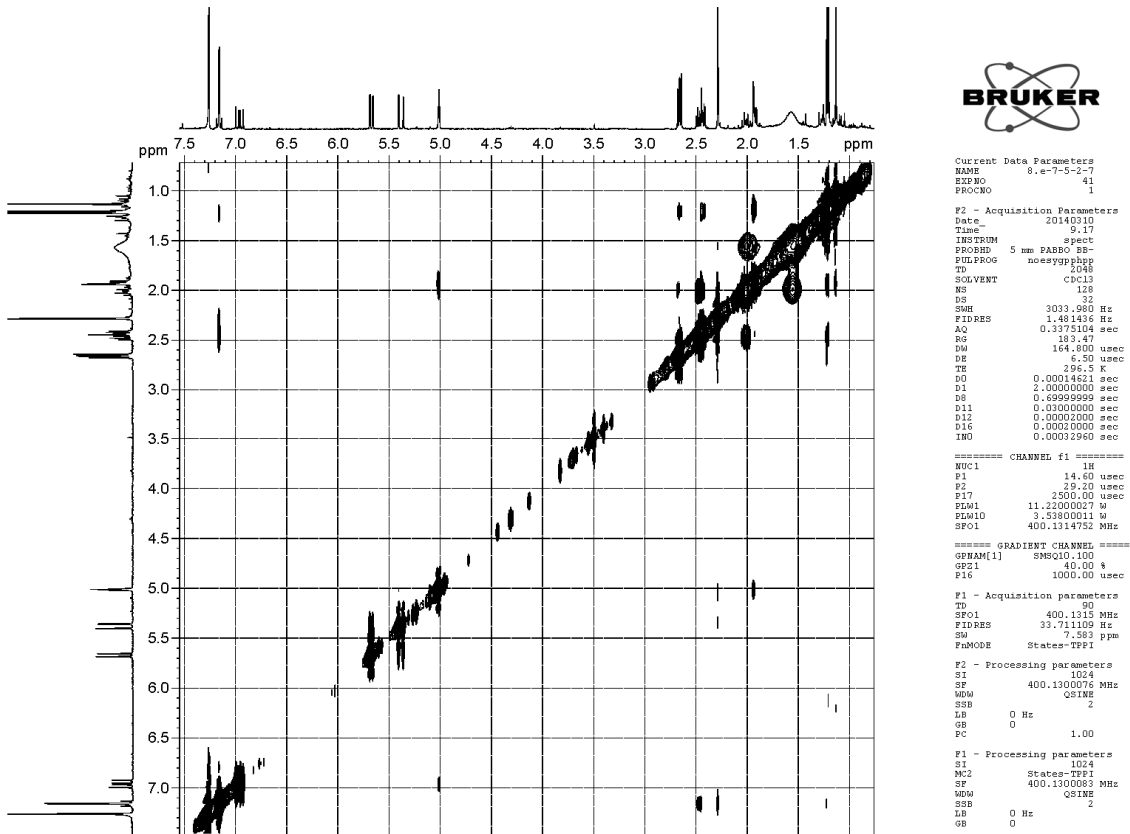


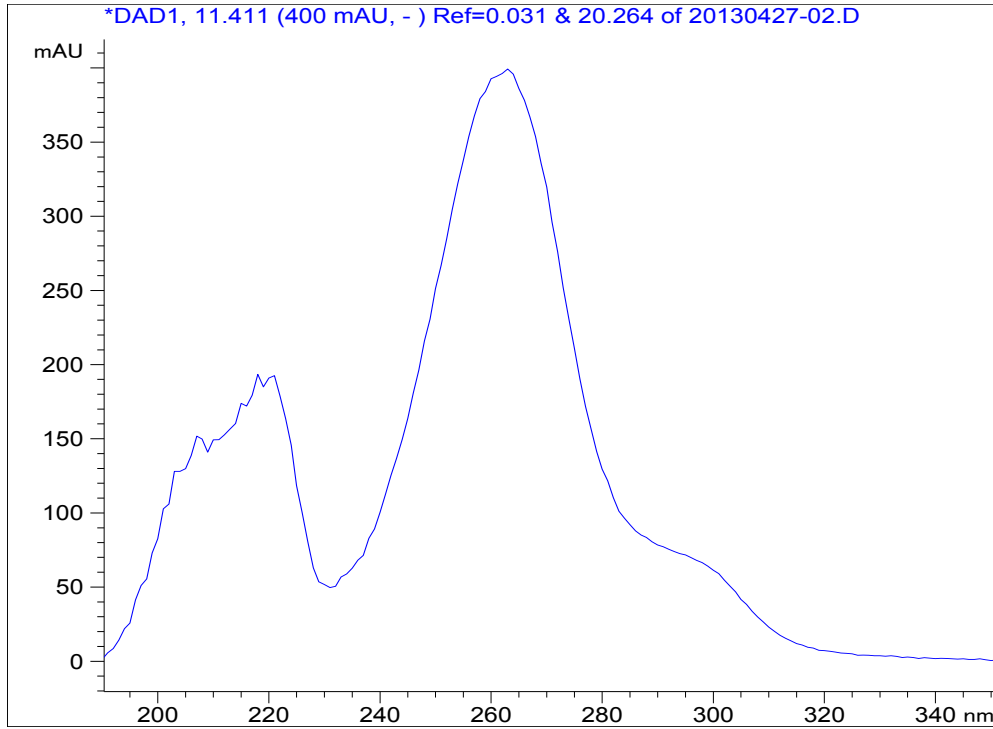
Figure S55. UV spectrum of compound 7 in CH₃OH.

Figure S56. IR spectrum of compound 7.

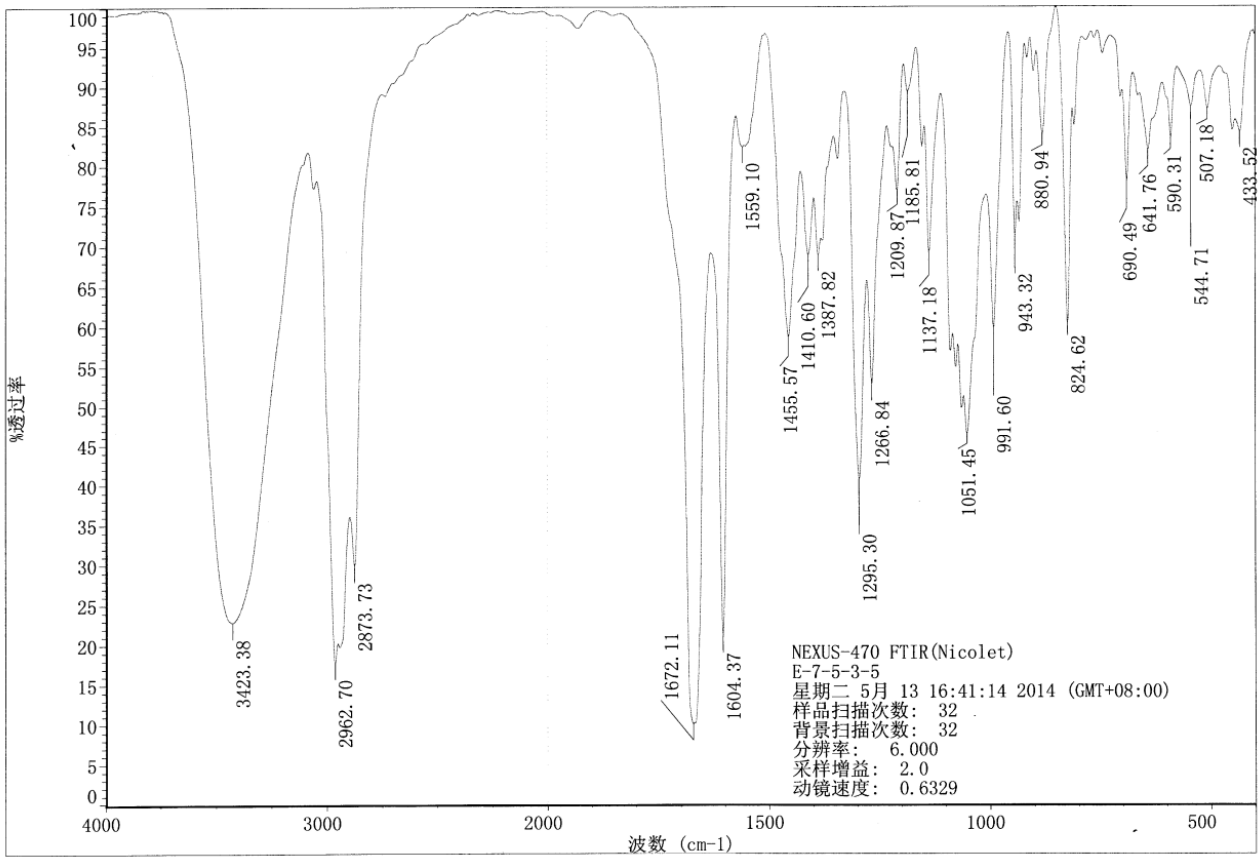
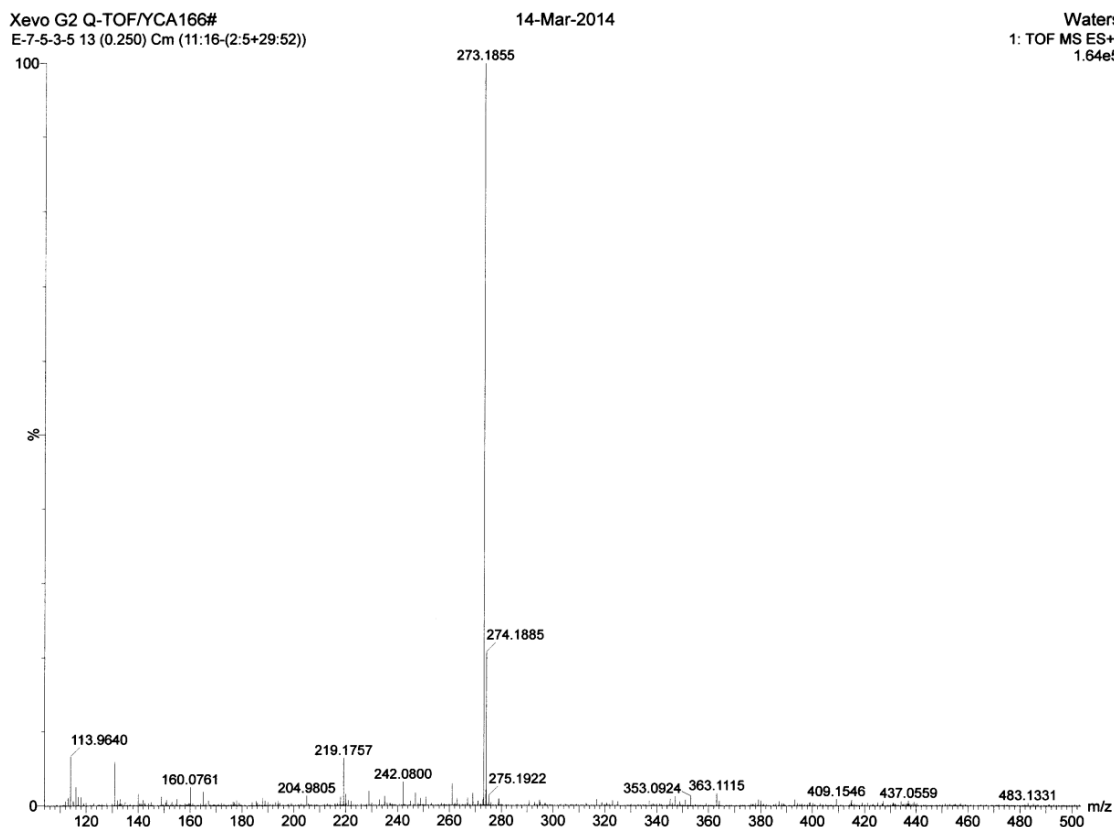
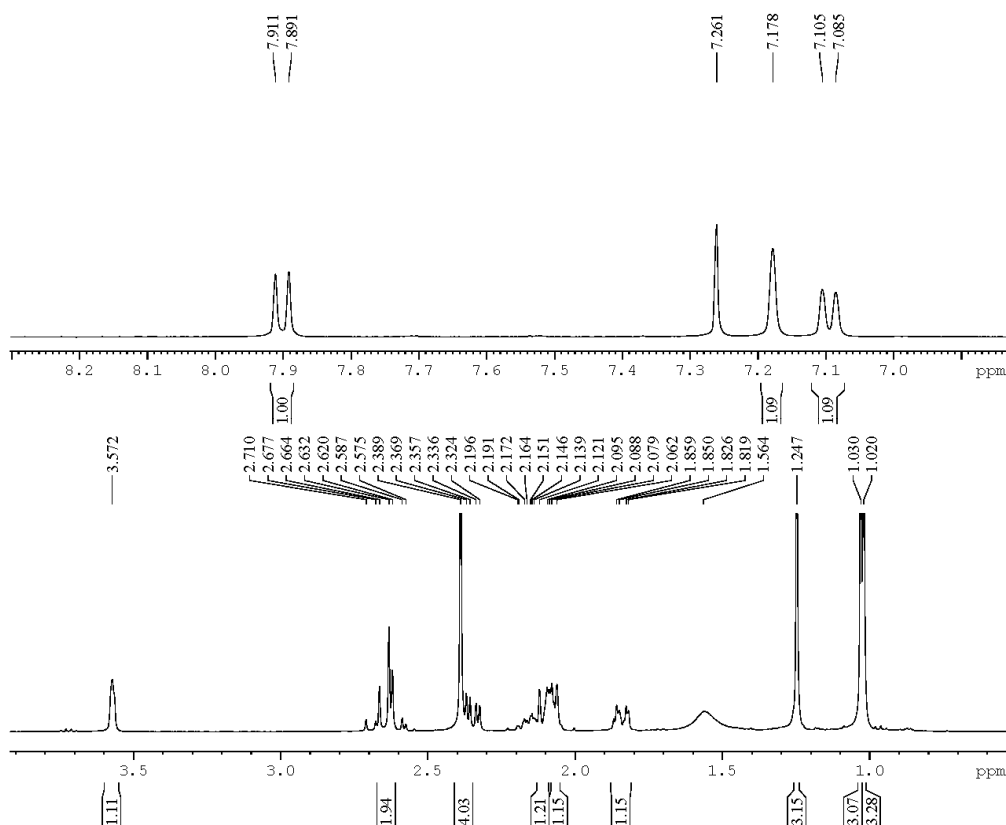


Figure S57. HR-ESI-TOF-MS spectrum of compound 7.

Figure S58. ¹H-NMR spectrum of compound 7 in CDCl₃.

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PROCNO 1

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PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9845889 sec
RG 205.82
DM 60.800 usec
DE 6.50 usec
TE 300.3 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
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P1 14.00 usec
PLW1 11.93999958 W
SF01 400.1324710 MHz

F2 - Processing parameters
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SF 400.1300098 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

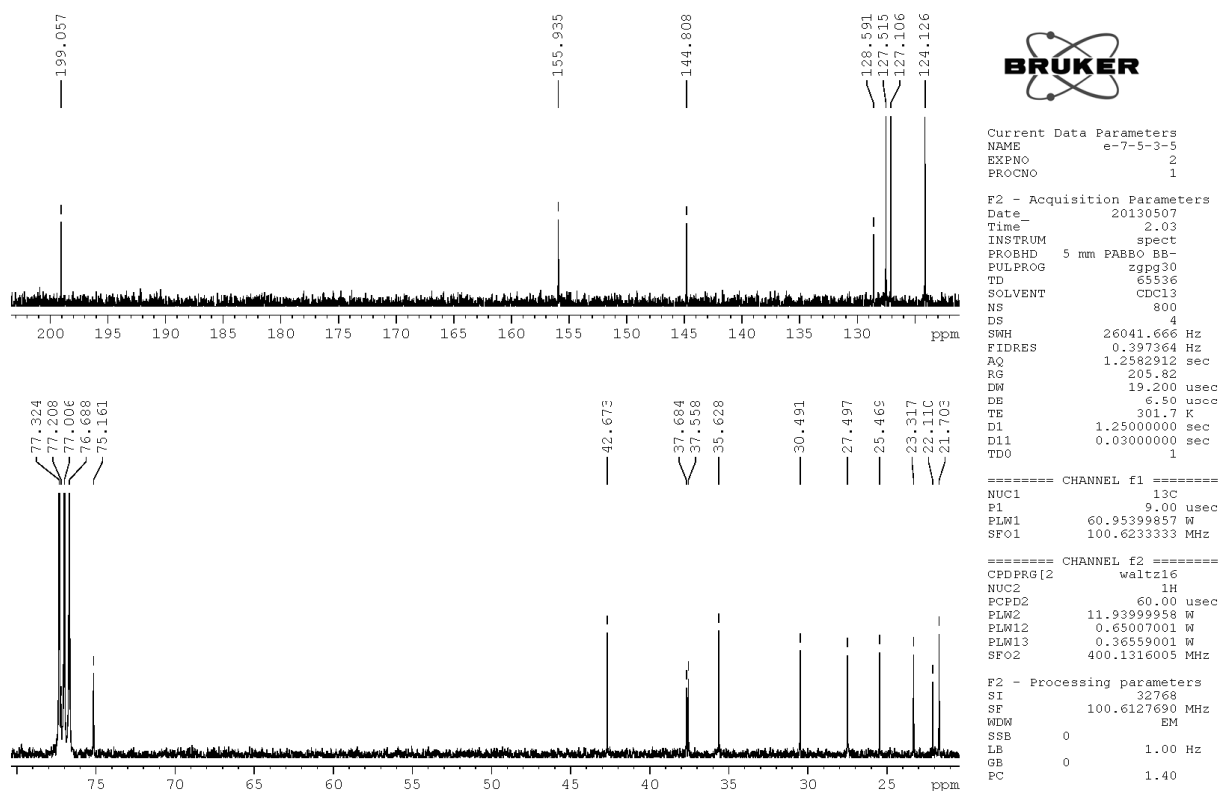
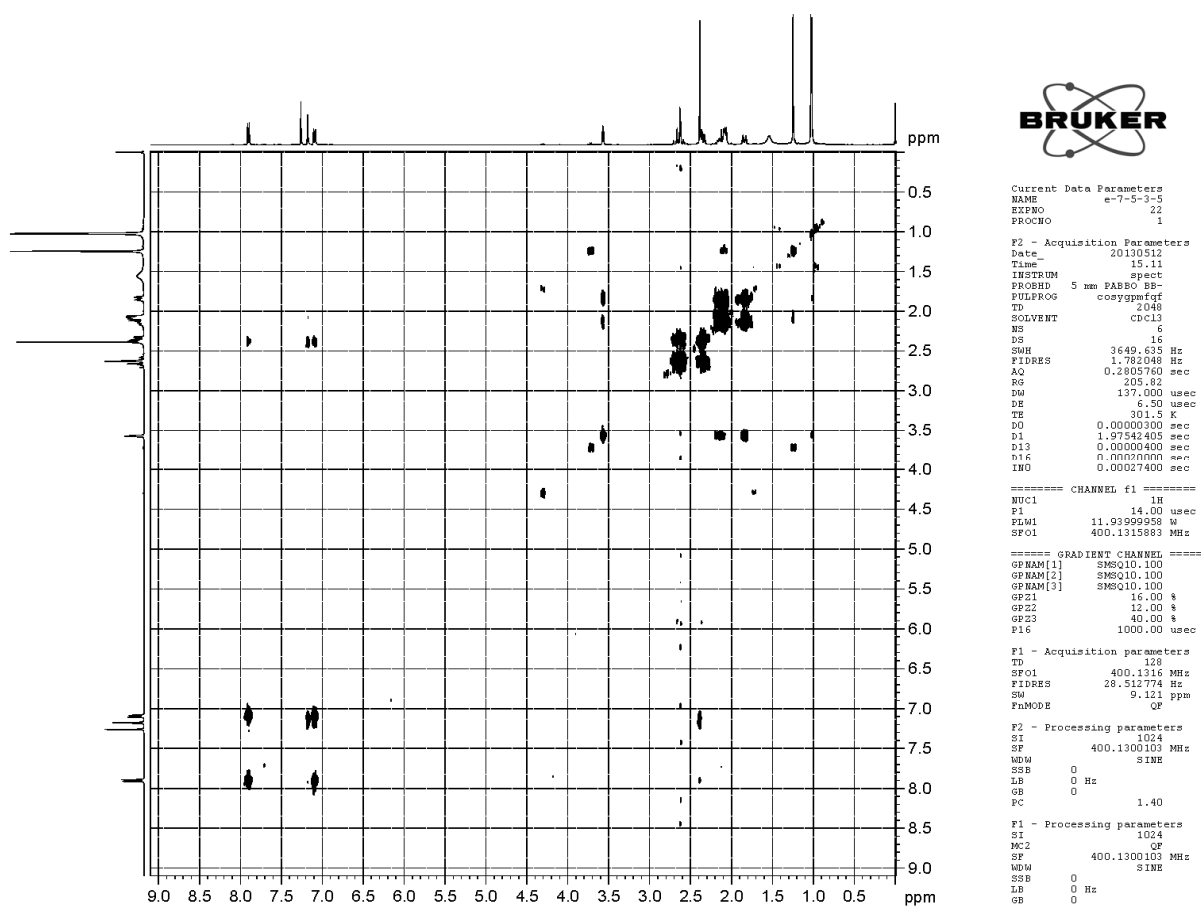
Figure S59. ^{13}C -NMR spectrum of compound 7 in CDCl_3 .Figure S60. ^1H - ^1H COSY spectrum of compound 7 in CDCl_3 .

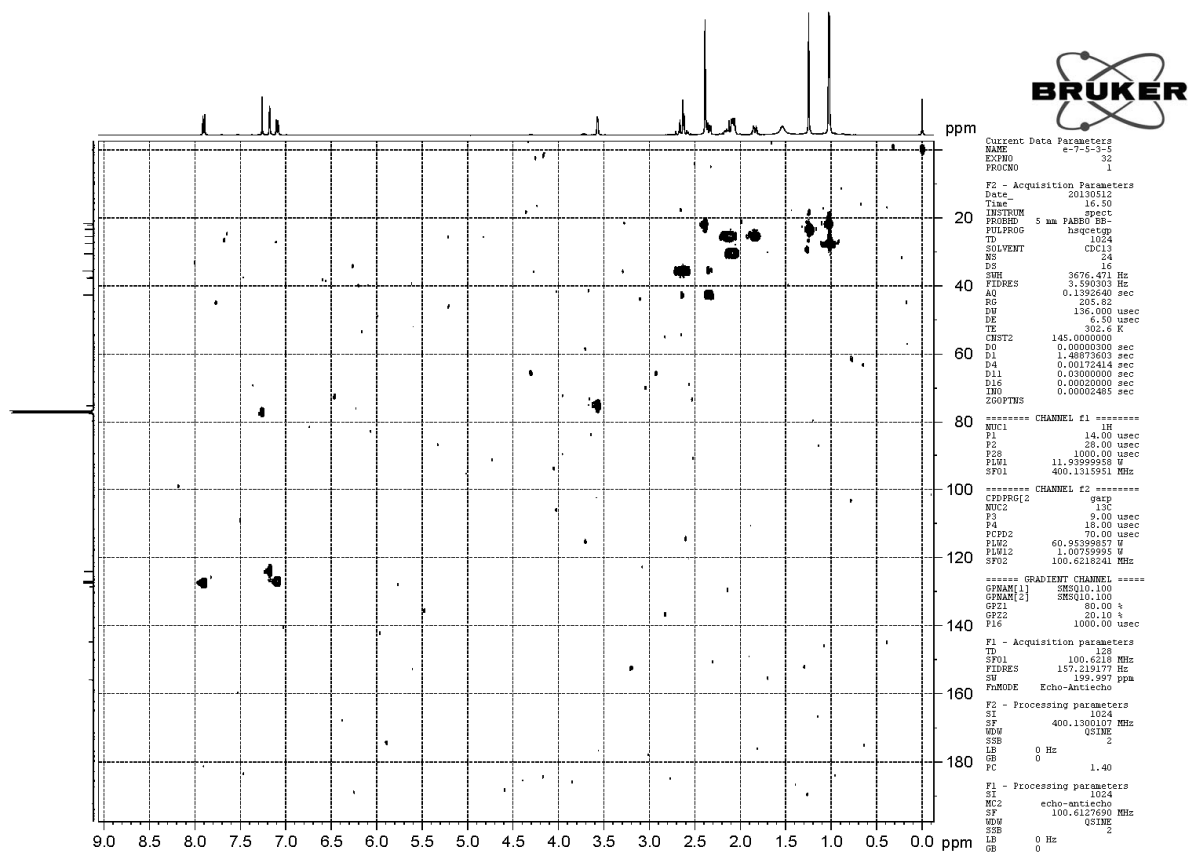
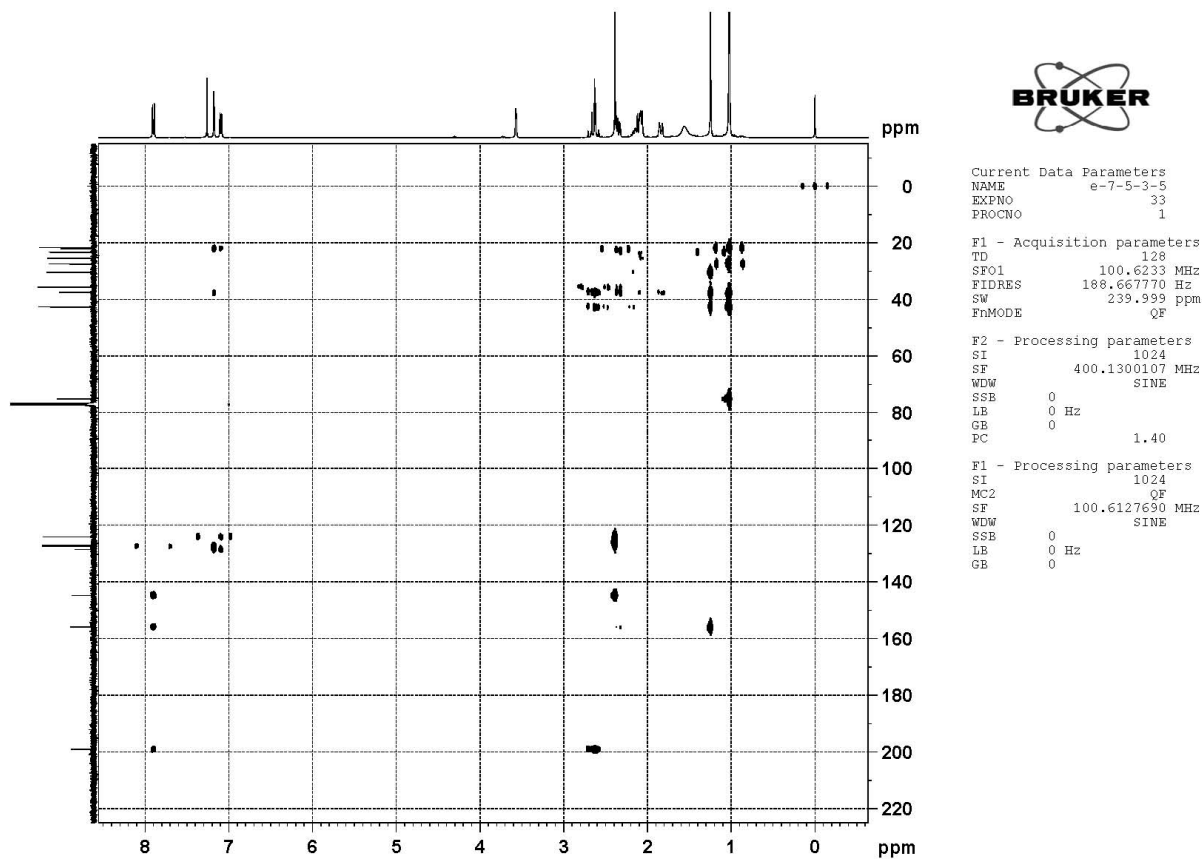
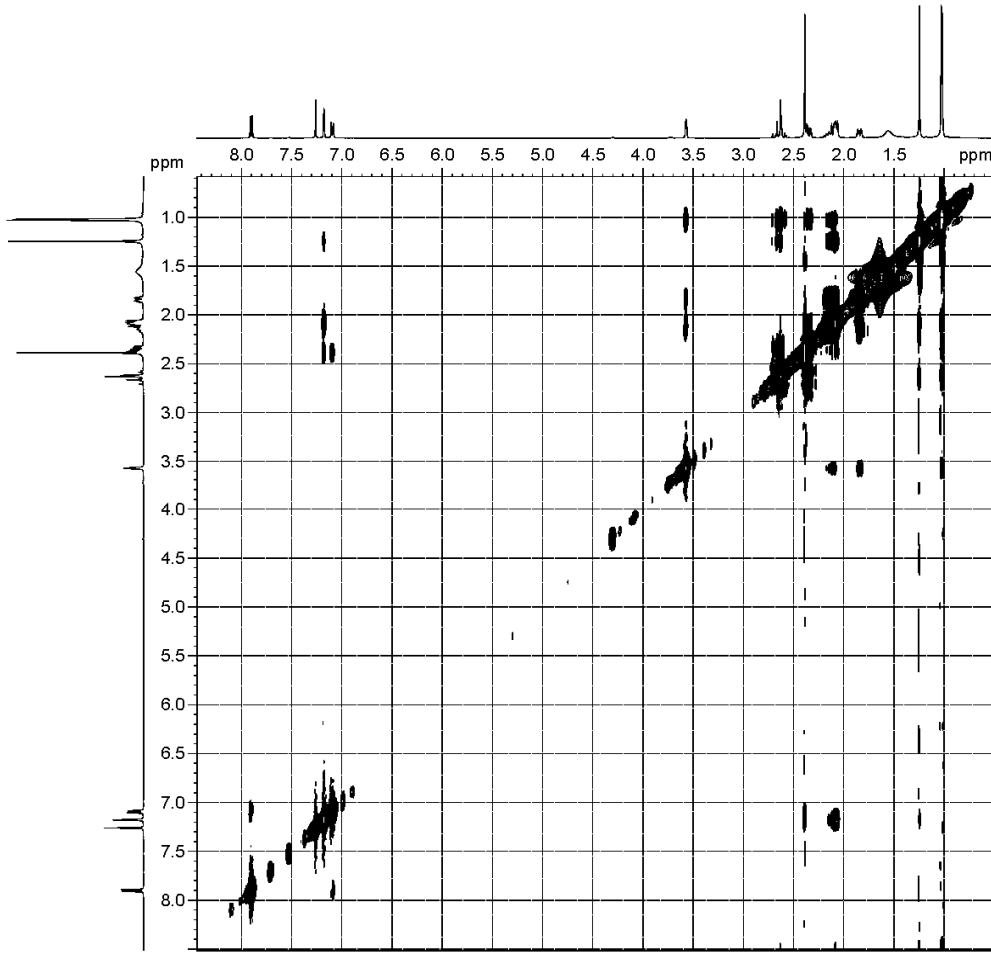
Figure S61. HSQC spectrum of compound 7 in CDCl₃.Figure S62. HMBC spectrum of compound 7 in CDCl₃.

Figure S63. NOESY spectrum of compound 7 in CDCl₃.



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PROCNO   1

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PULPROG  noesypphpg
TD       2048
SOLVENT  CDCl3
NS       95
DS       32
SWH      3649.635 Hz
FIDRES   1.782048 Hz
AQ       0.280420 sec
RG       112.54
DW       137.000 usec
DE       6.50 usec
TE       293.9 K
DO       0.00011917 sec
D1       1.97009897 sec
D8       0.60000002 sec
D11      0.03000000 sec
D12      0.00002000 sec
D16      0.00020000 sec
IN0      0.00027400 sec

===== CHANNEL f1 =====
NUC1     1H
P1       14.00 usec
P2       28.00 usec
P17      2500.00 usec
ELW1     11.93999958 W
FLM10    3.46190000 W
SFO1     400.1315914 MHz

===== GRADIENT CHANNEL =====
GPM1     SMSQ10.100
GPZ1     40.00 %
P16      1000.00 usec

F1 - Acquisition parameters
TD       128
SFO1     400.1316 MHz
FIDRES   28.512774 Hz
SW       9.121 ppm
FhMODE   States-TPFI

F2 - Processing parameters
SI       1024
SF       400.1300995 MHz
WDW      QSINE
SSB      2
LB       0 Hz
GB       0
PC       1.00

F1 - Processing parameters
SI       1024
MC2      States-TPFI
SF       400.1300995 MHz
WDW      QSINE
SSB      2
LB       0 Hz
GB       0
    
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