Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supplementary Information

Discovery of new indole-based 1,2,4-triazole derivatives as potent tubulin polymerization inhibitors with anticancer activity

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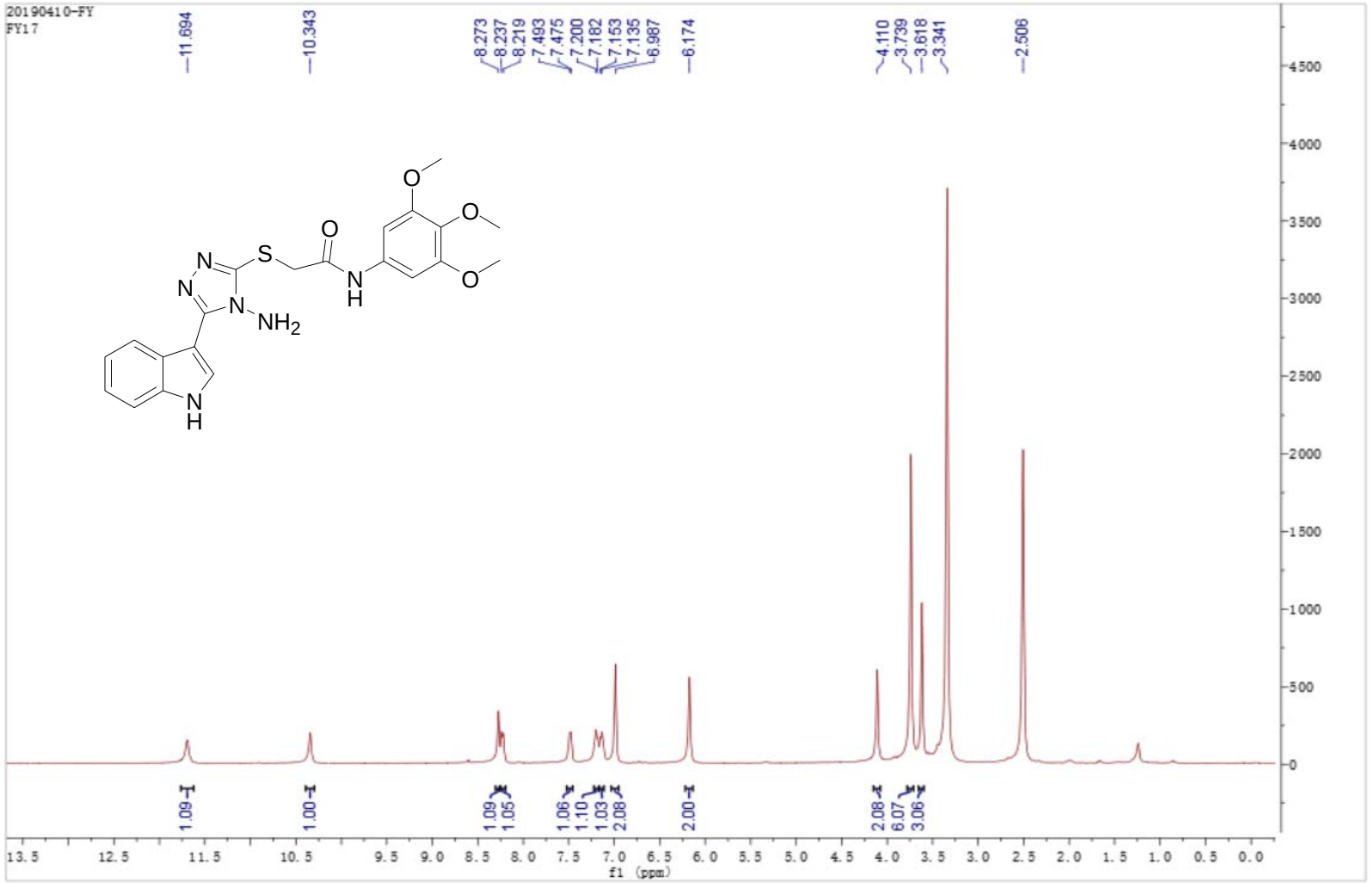

Figure 1. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9a.**

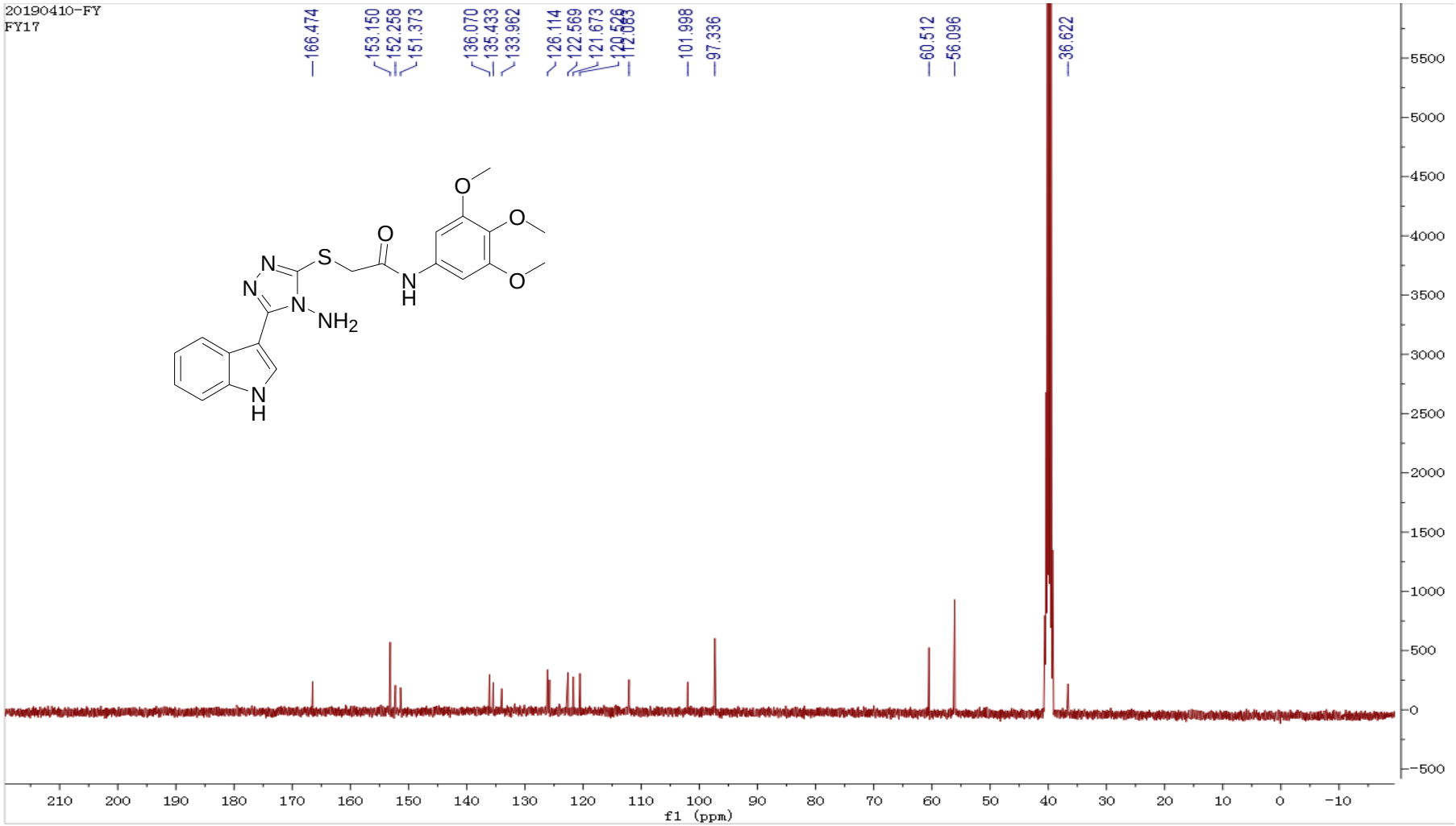

Figure 2. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9a.**

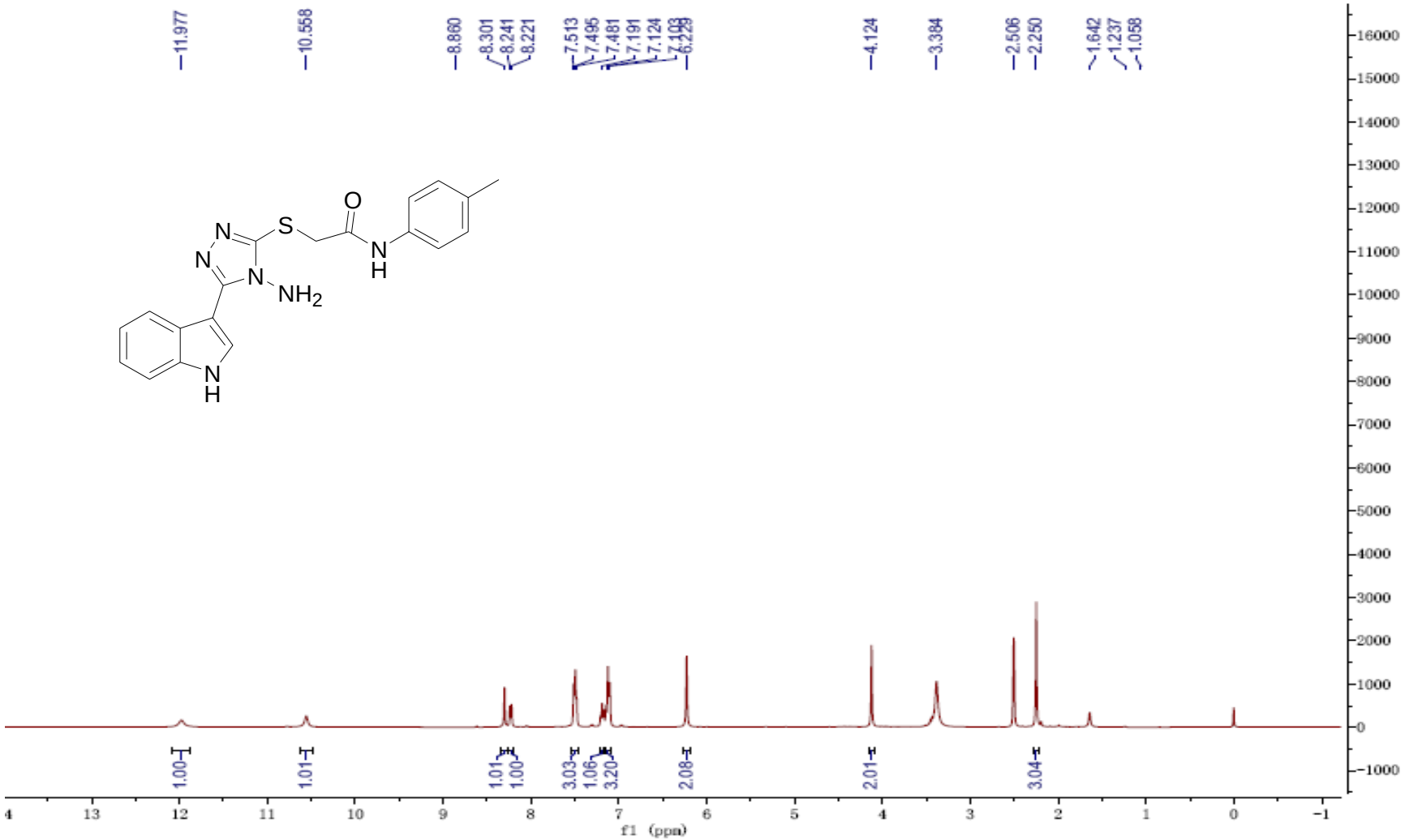

Figure 3. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9b.**

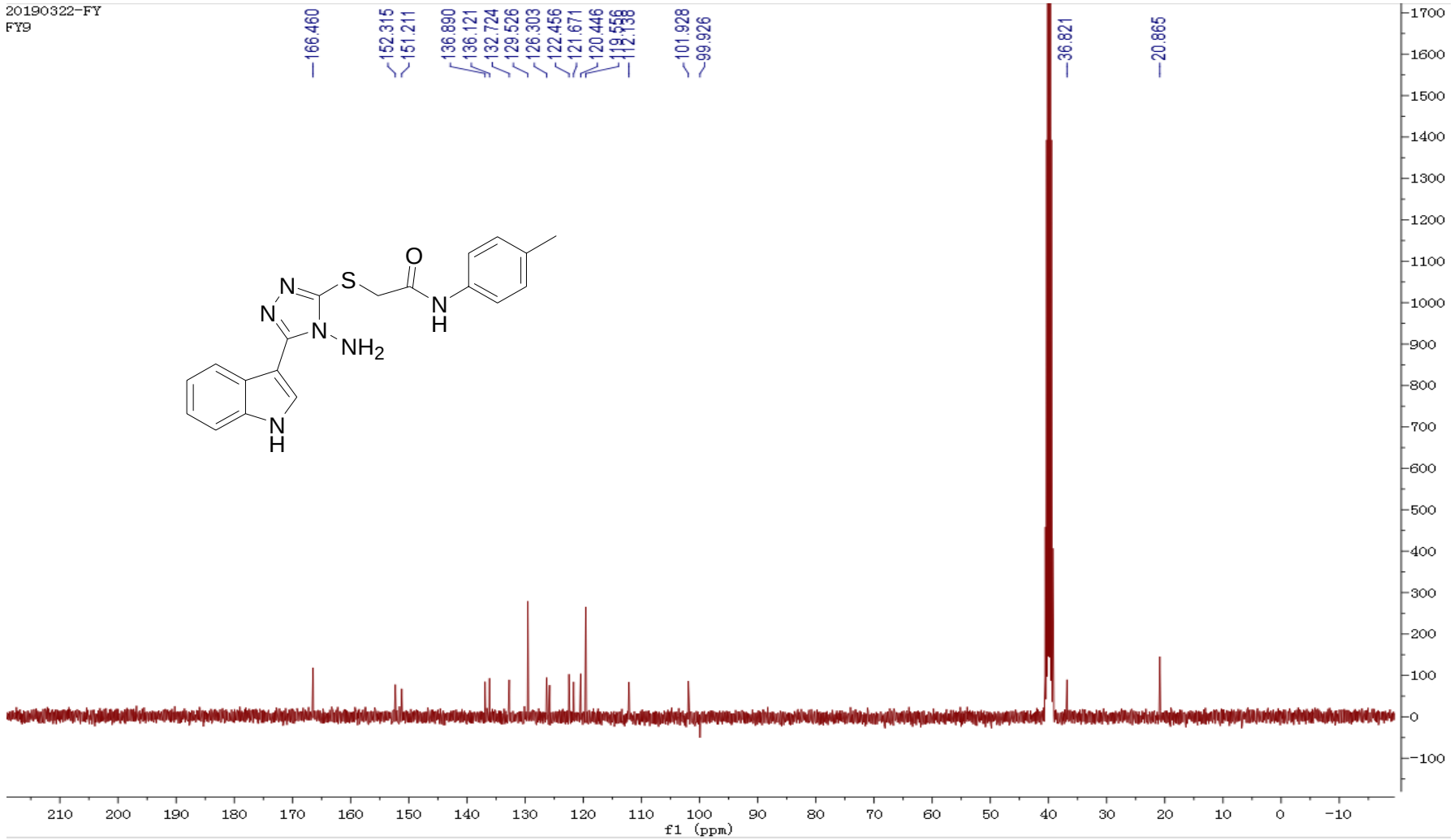

Figure 4. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9b.**

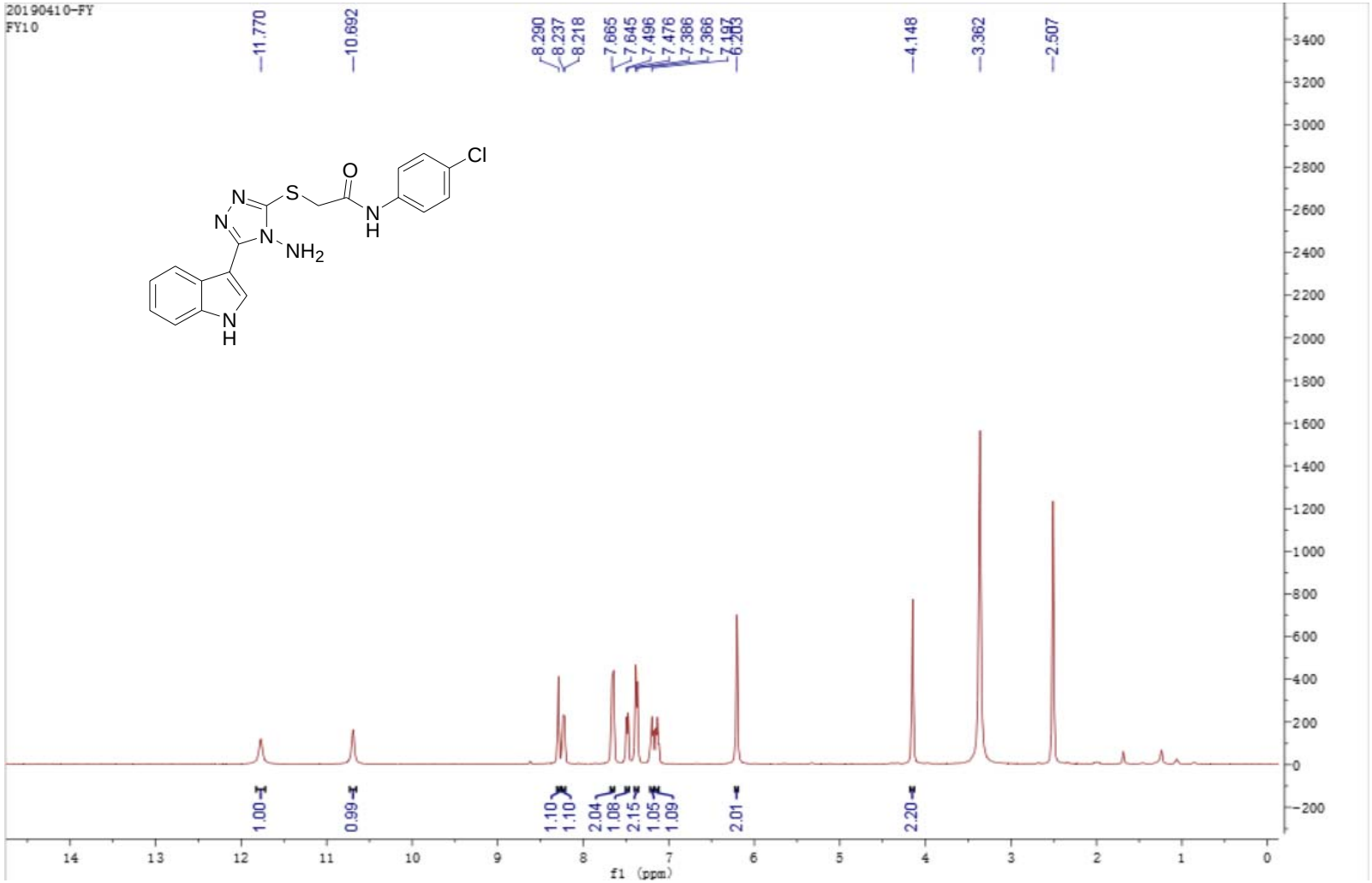

Figure 5. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9c.**

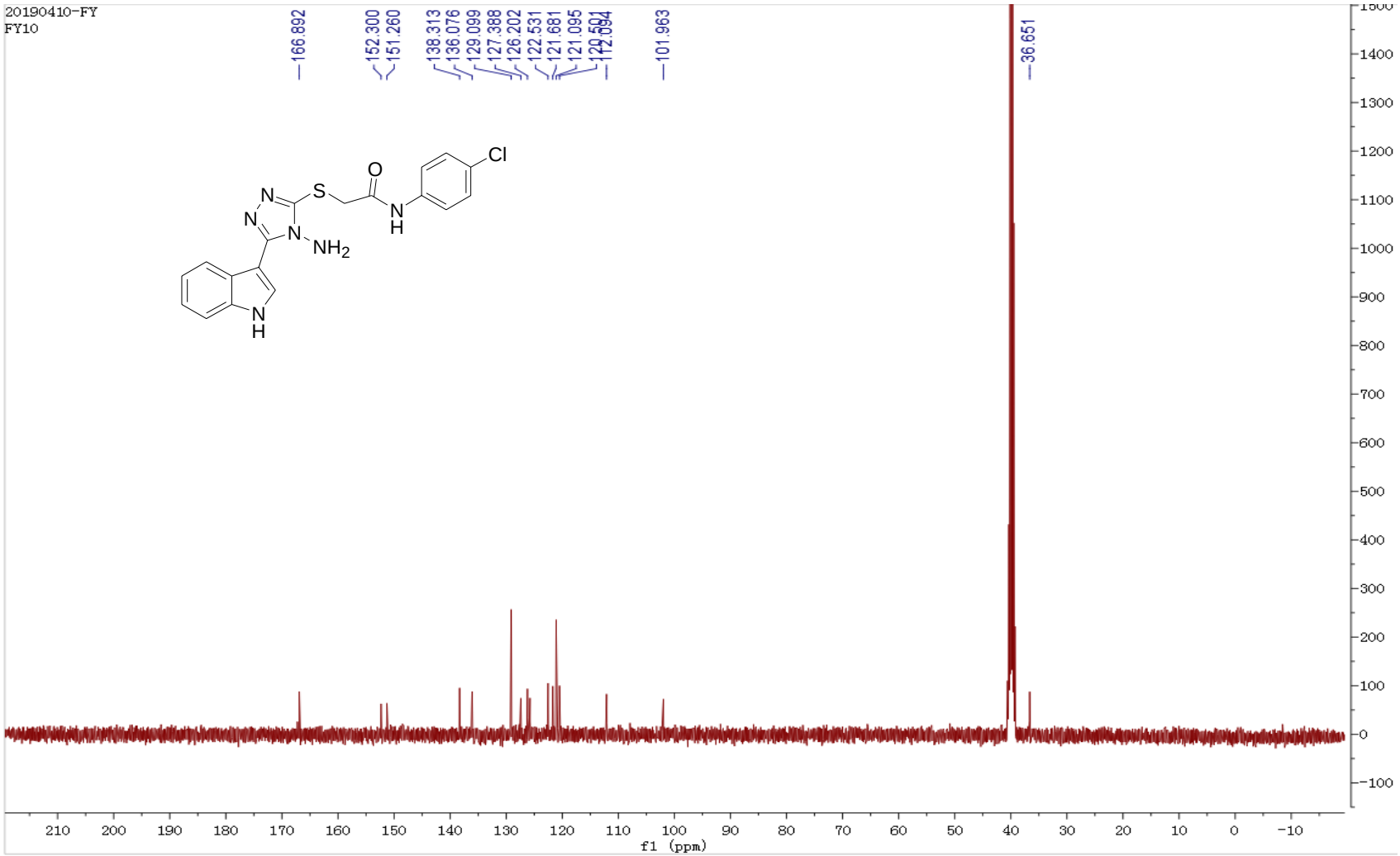

Figure 6. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9c.**

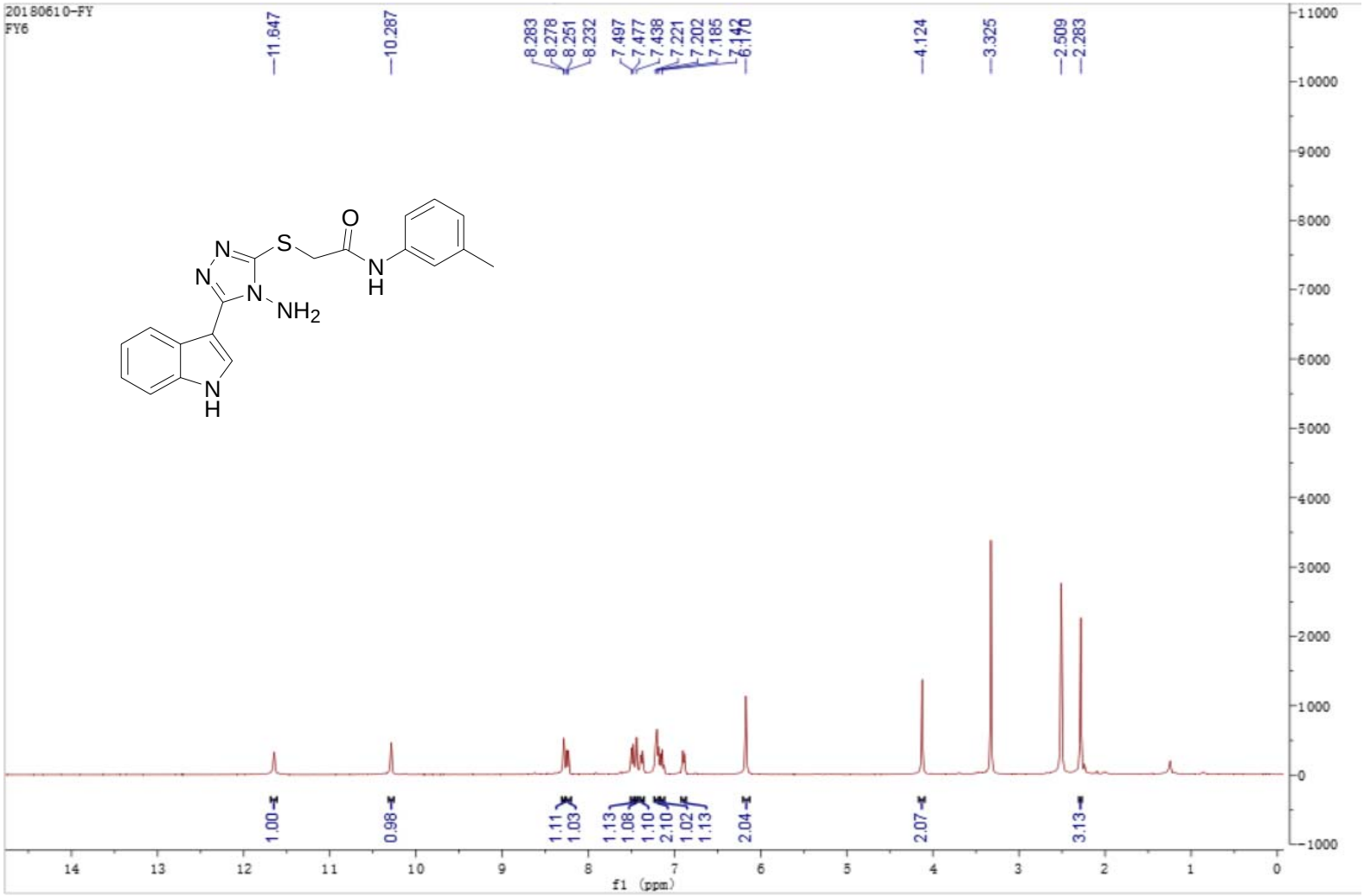

Figure 7. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9d.**

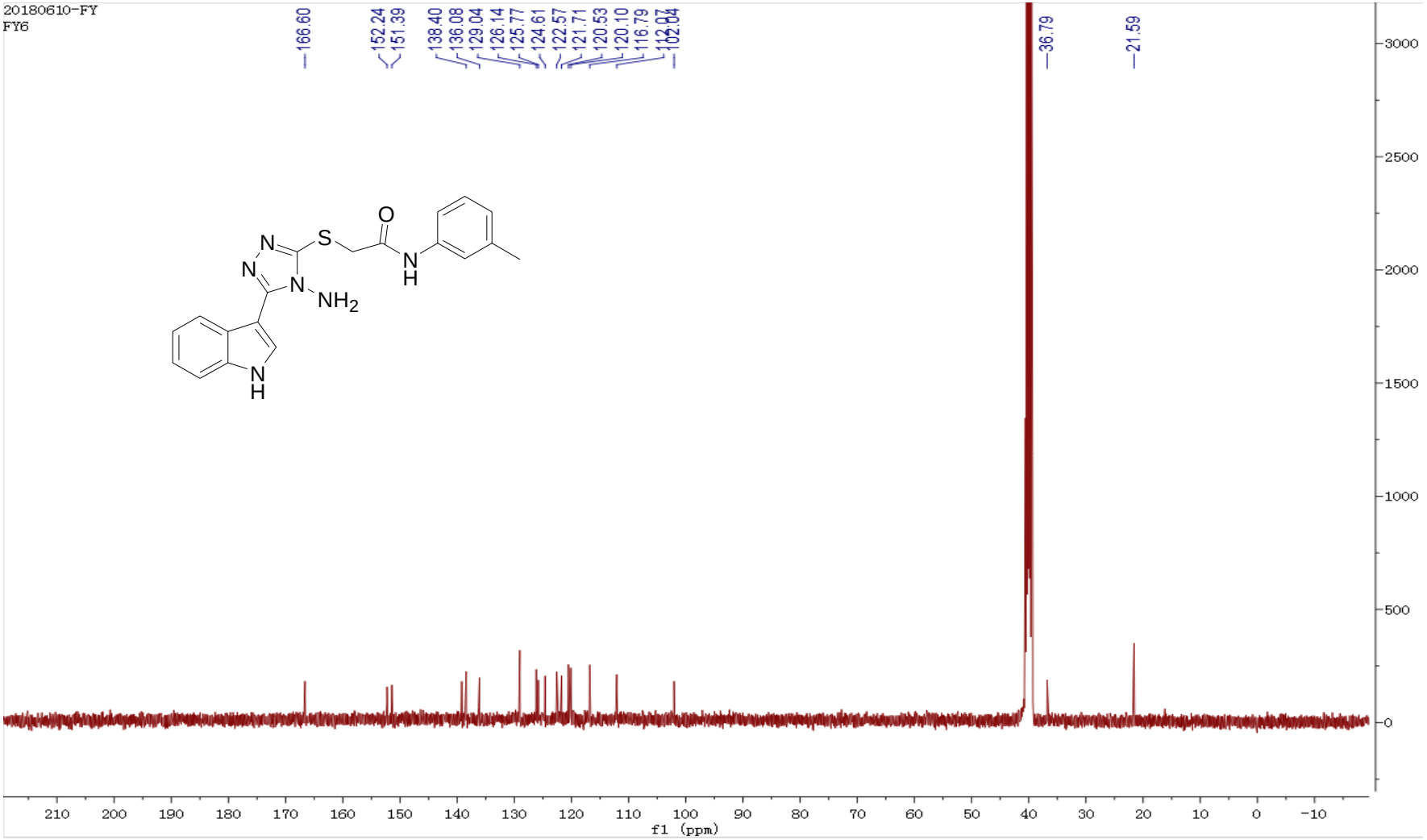

Figure 8. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9d.**

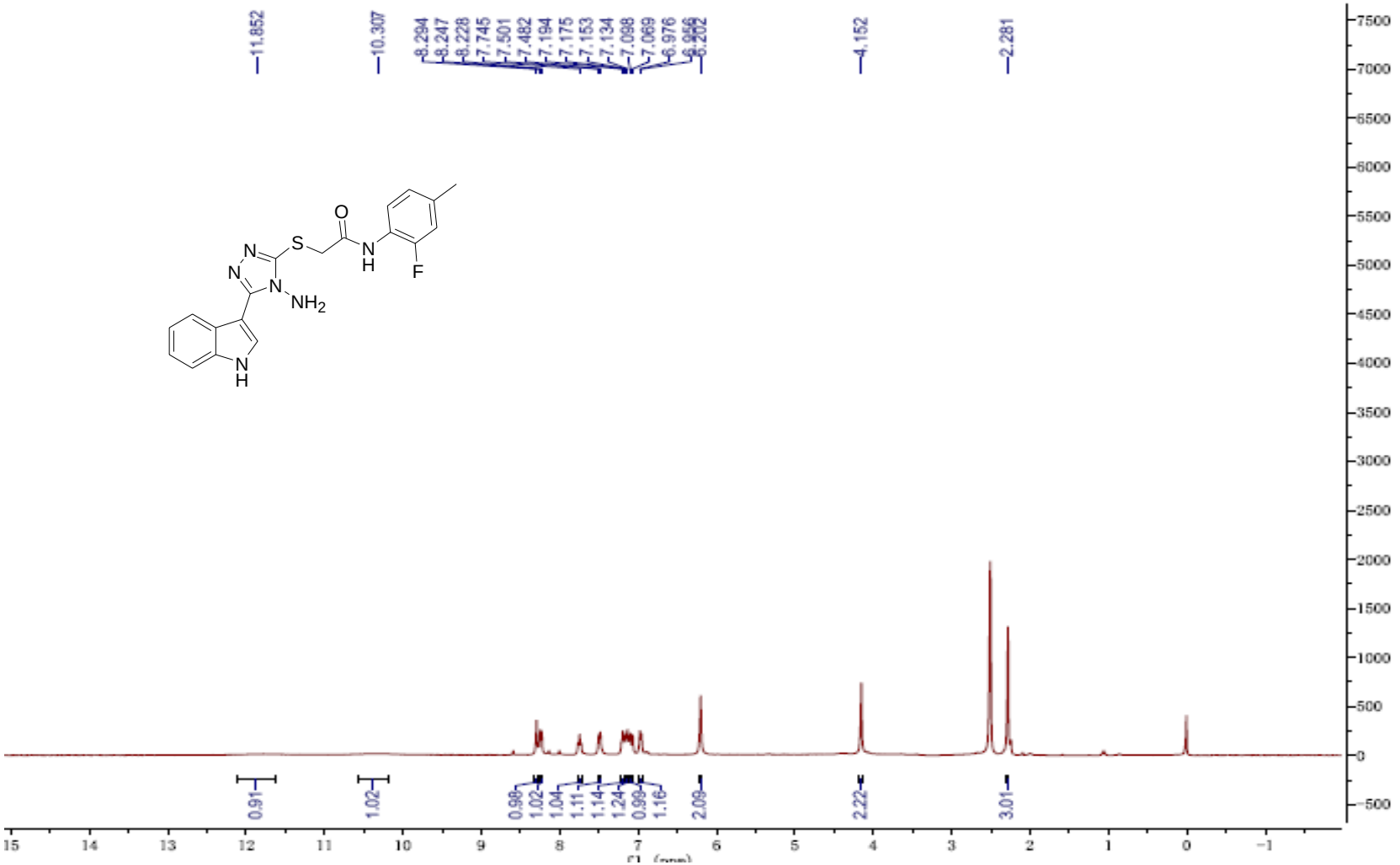

Figure 9. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9e.**

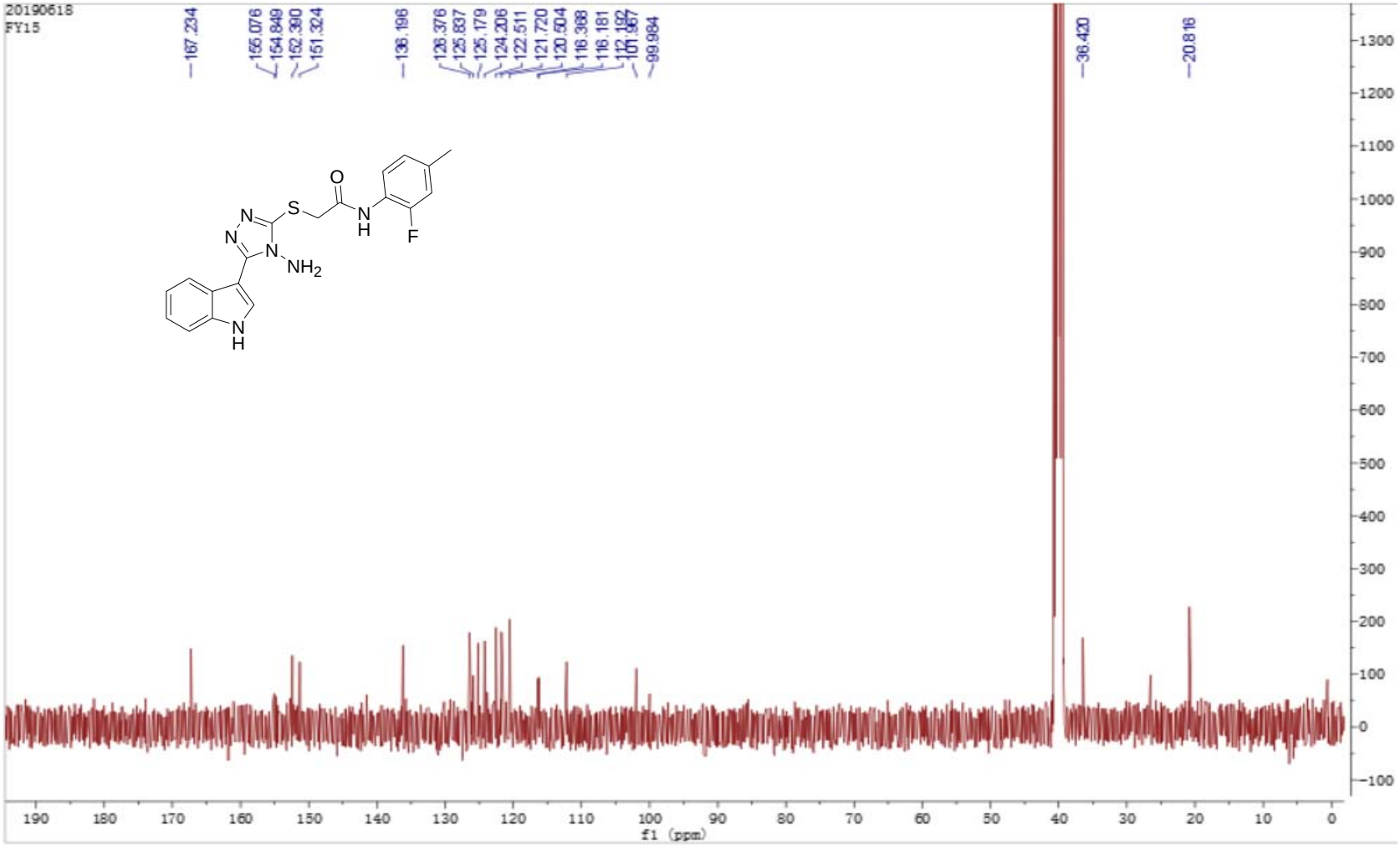

Figure 10. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9e.**

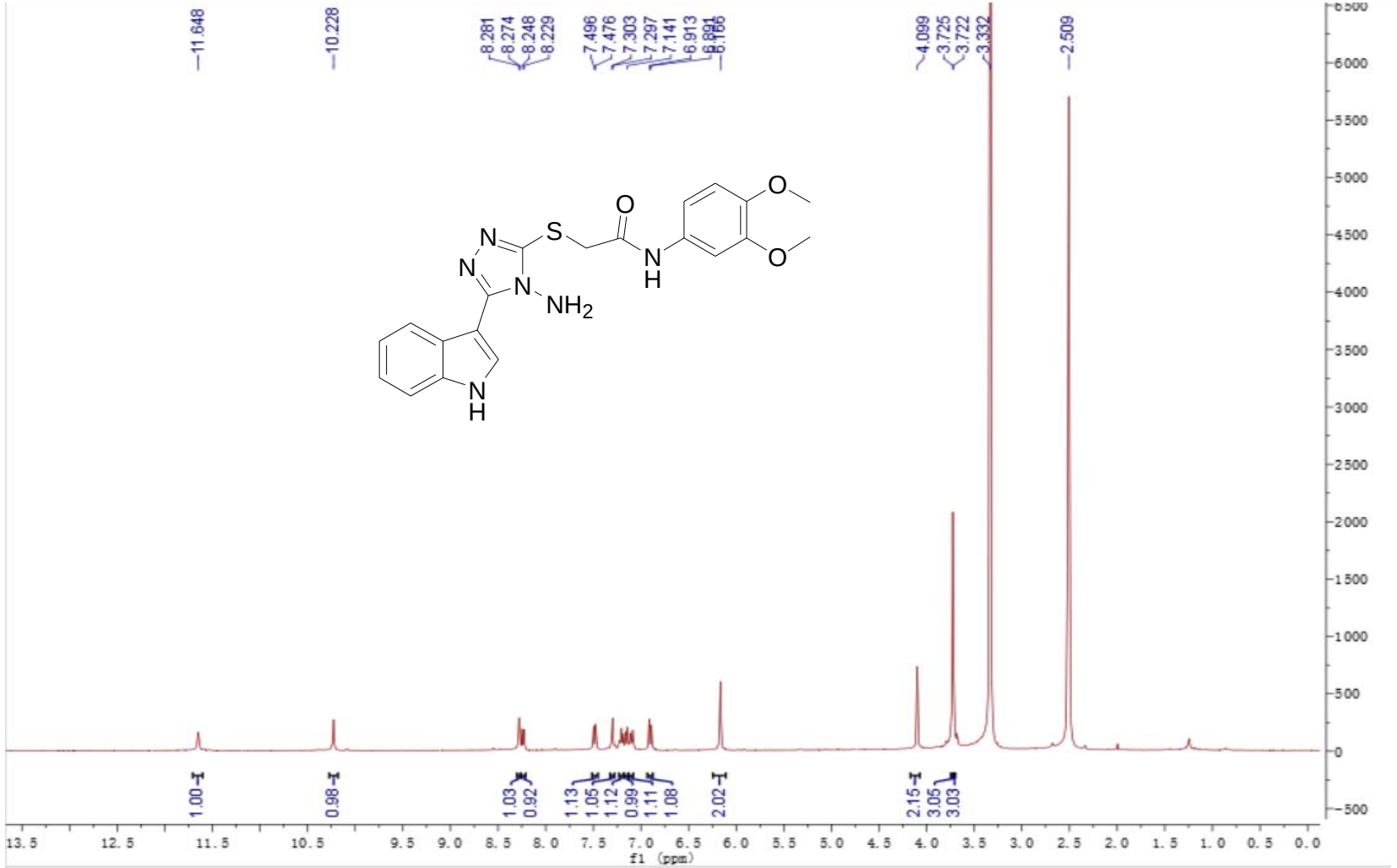

Figure 11. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9f.**

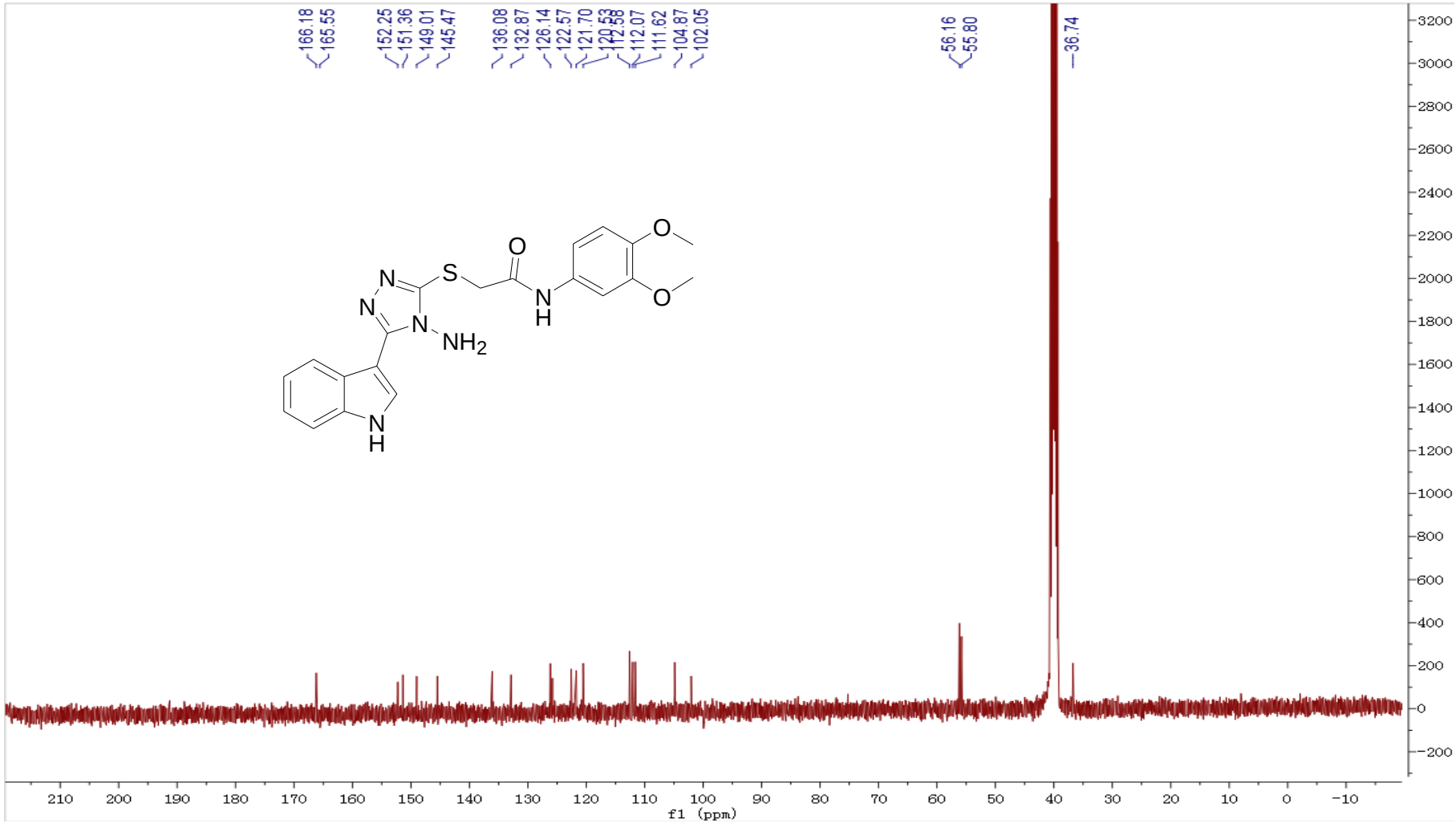

Figure 12. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9f.**

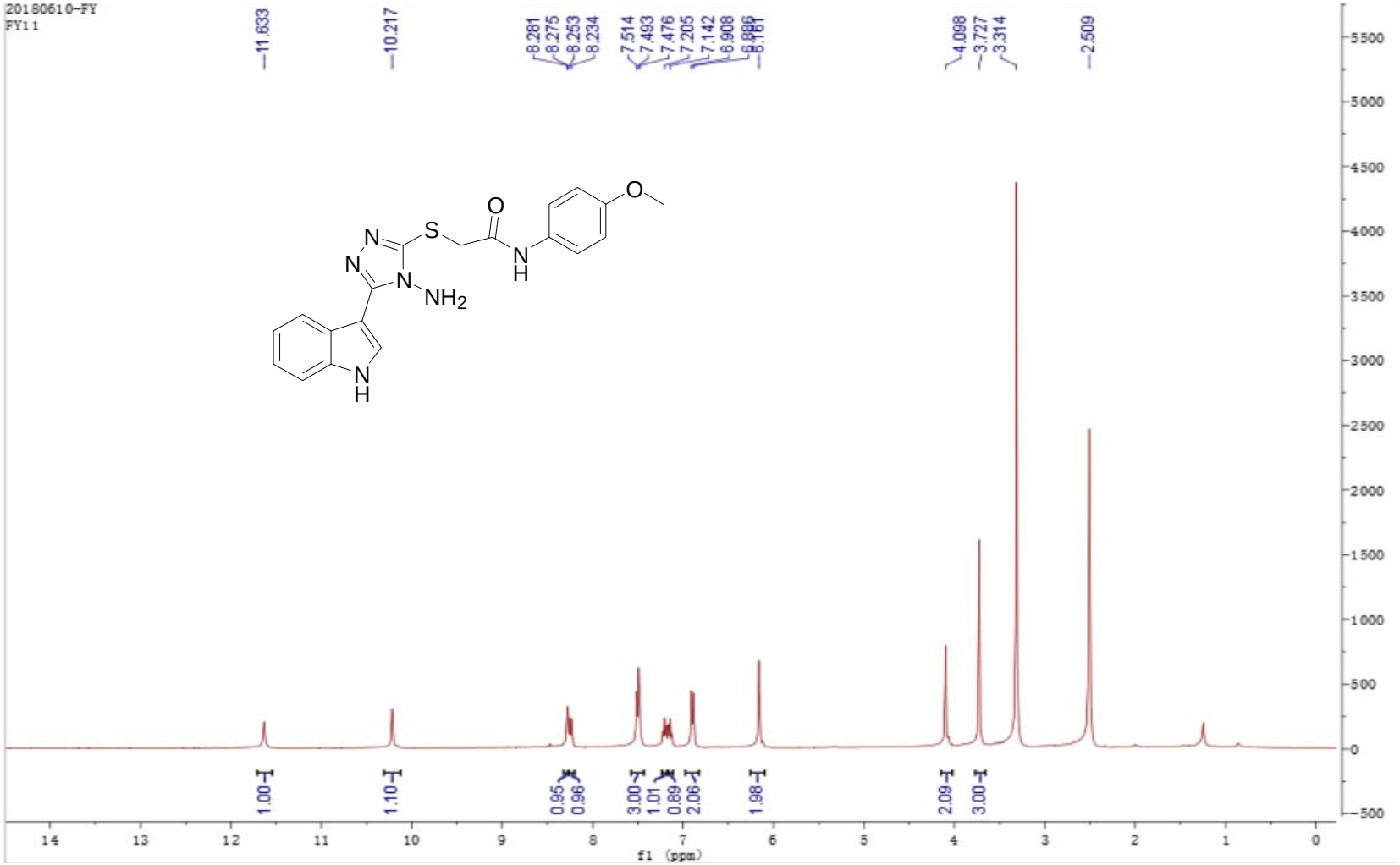

Figure 13. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9g.**

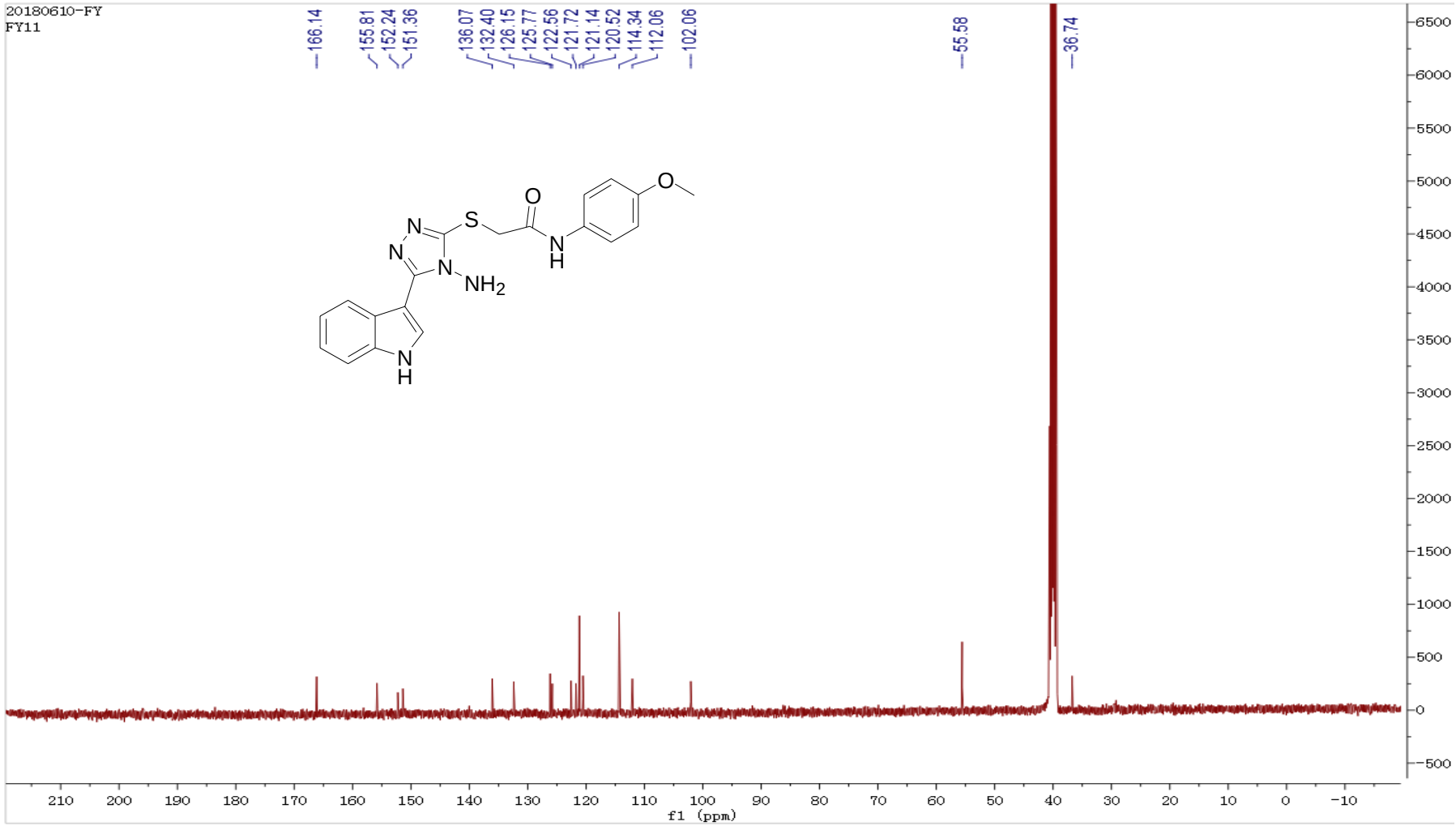

Figure 14. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9g.**

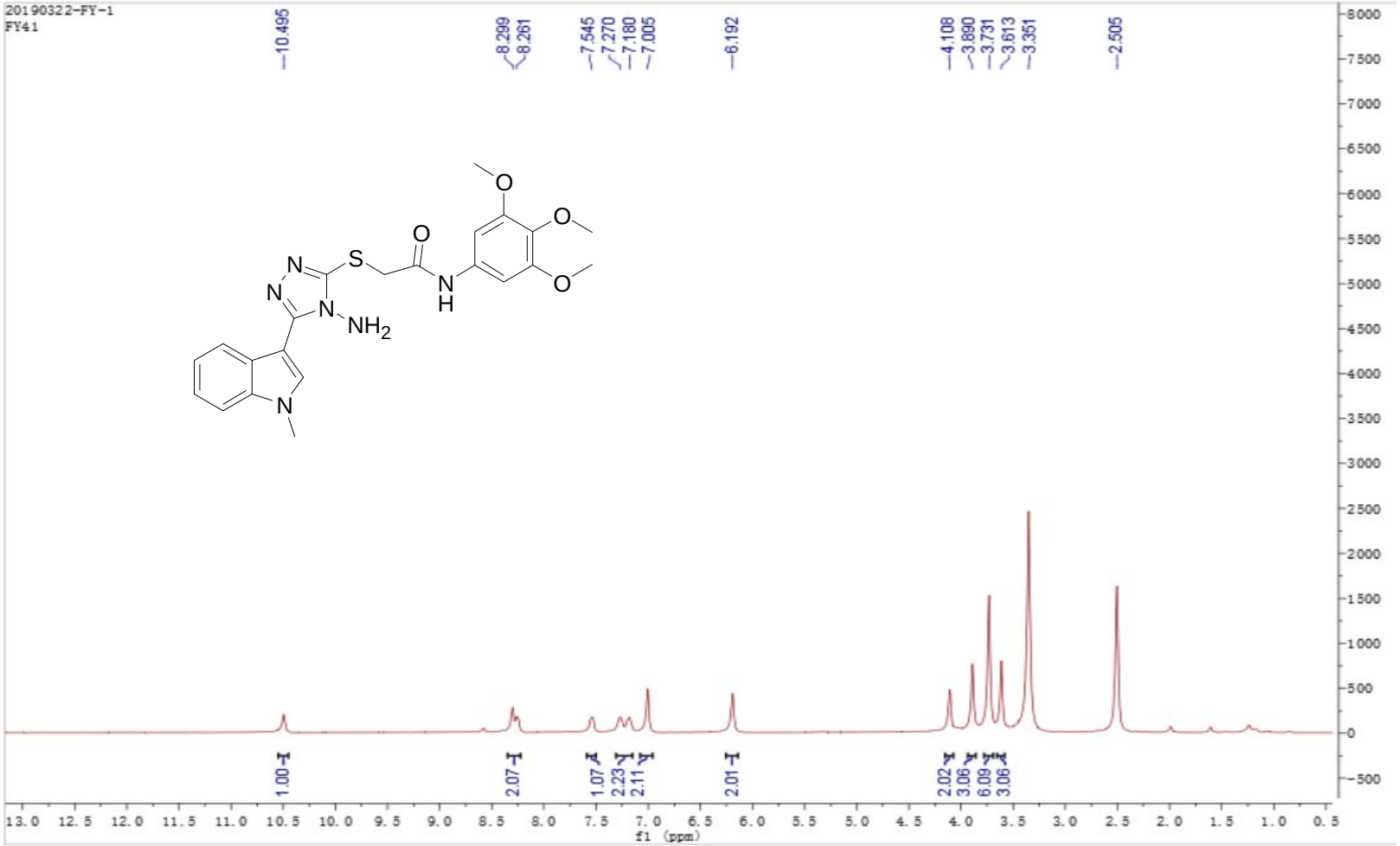

Figure 15. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9h.**

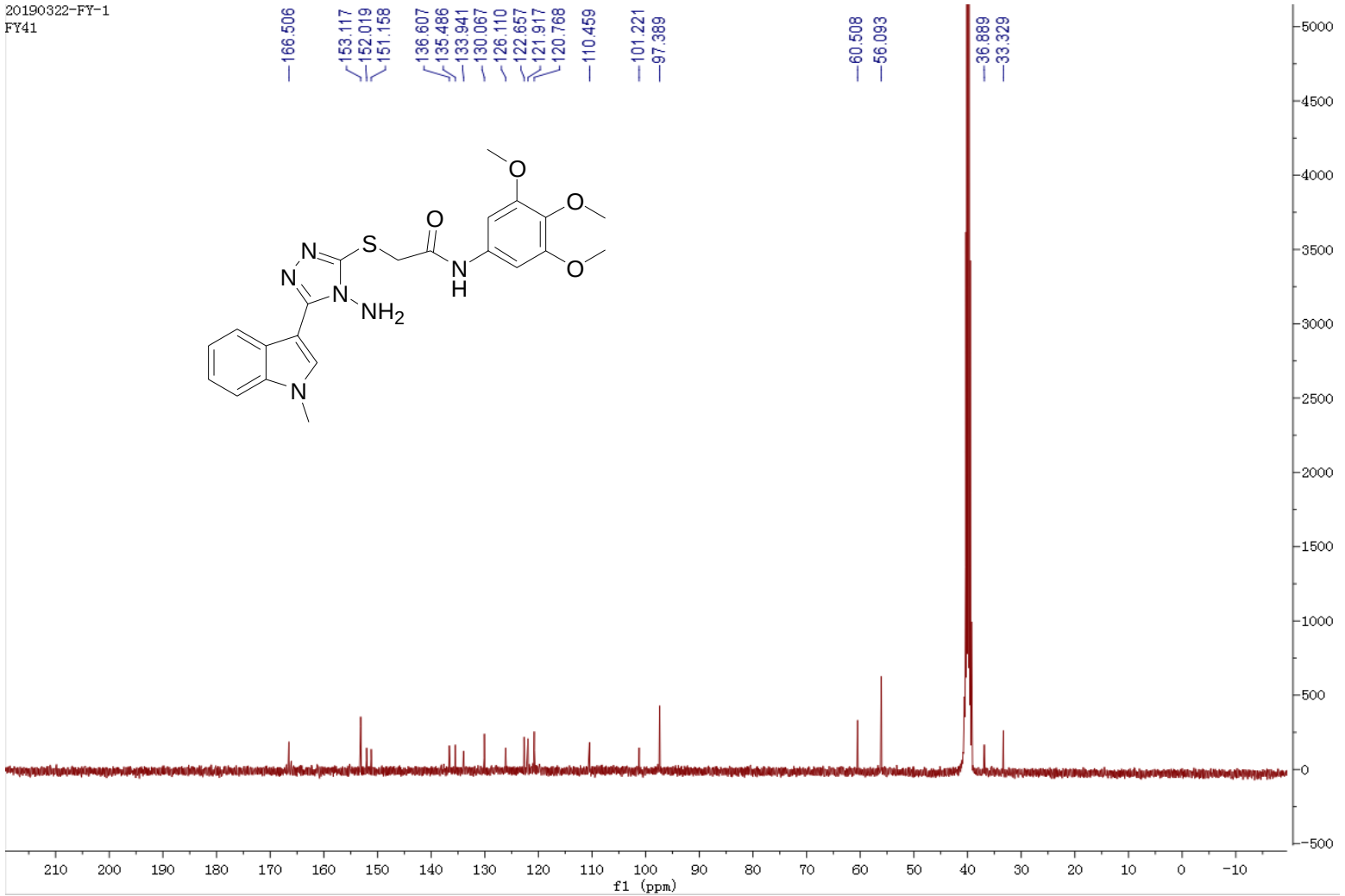

Figure 16. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9h.**

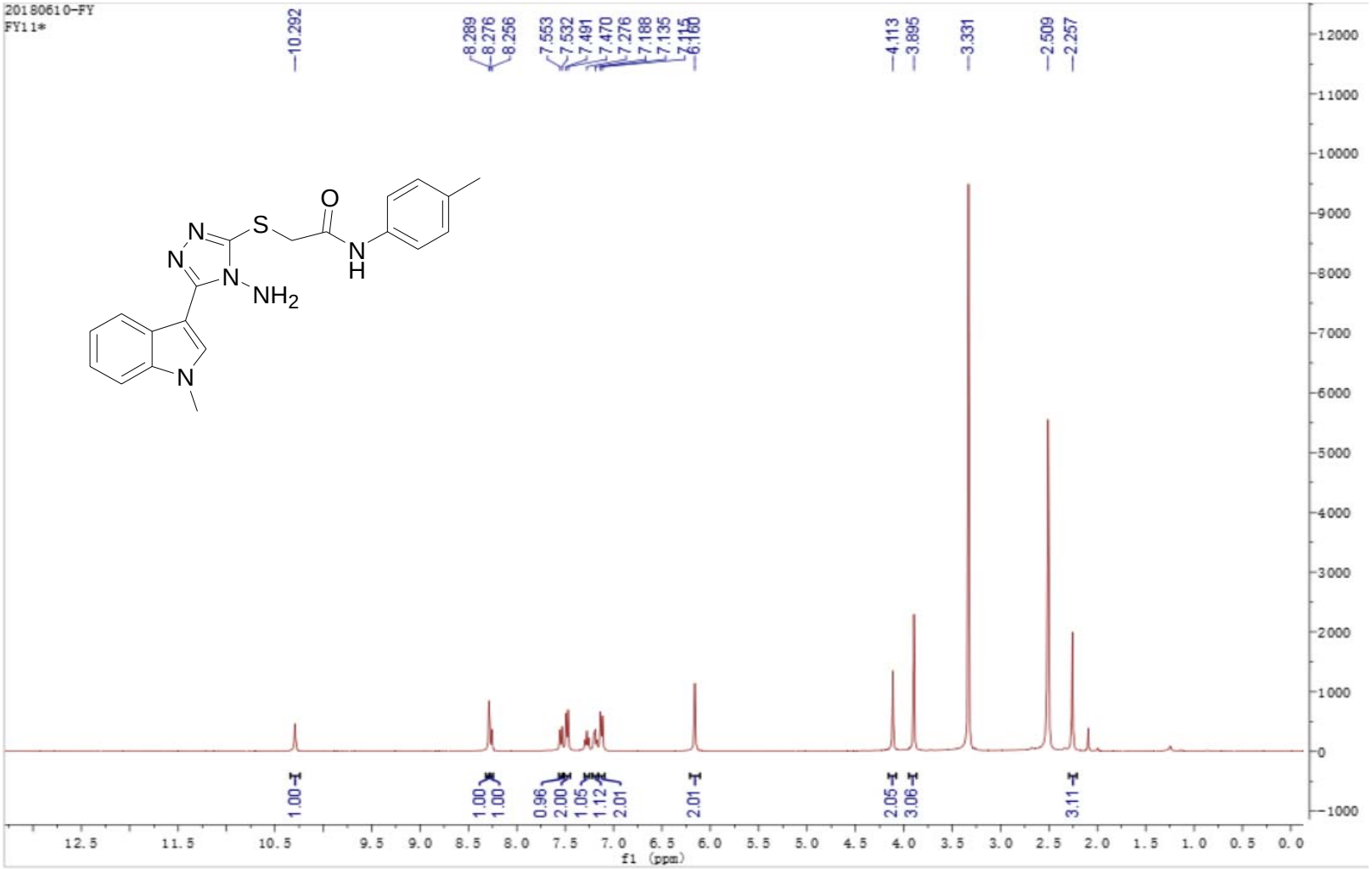

Figure 17. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9i.**

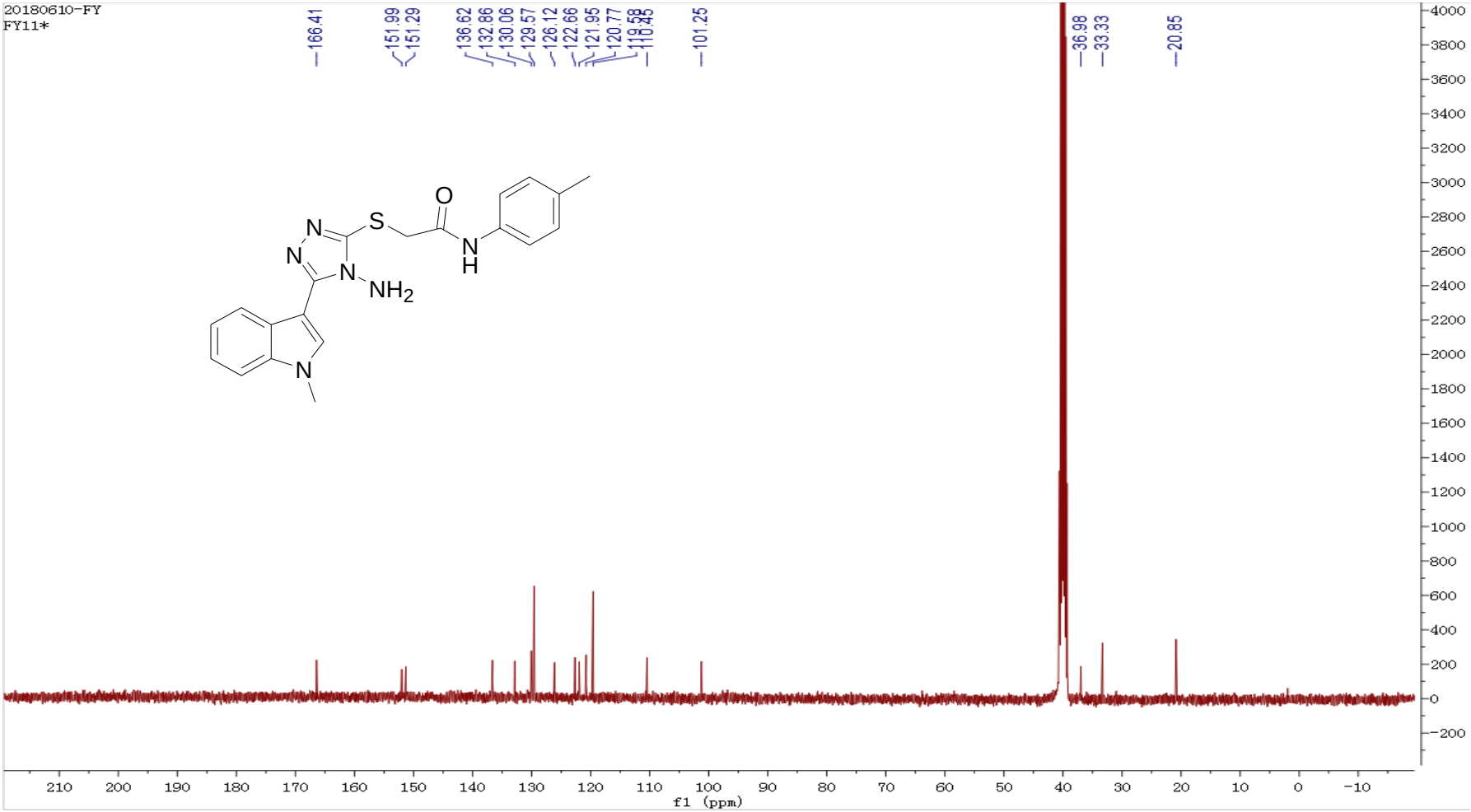

Figure 18. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9i.**

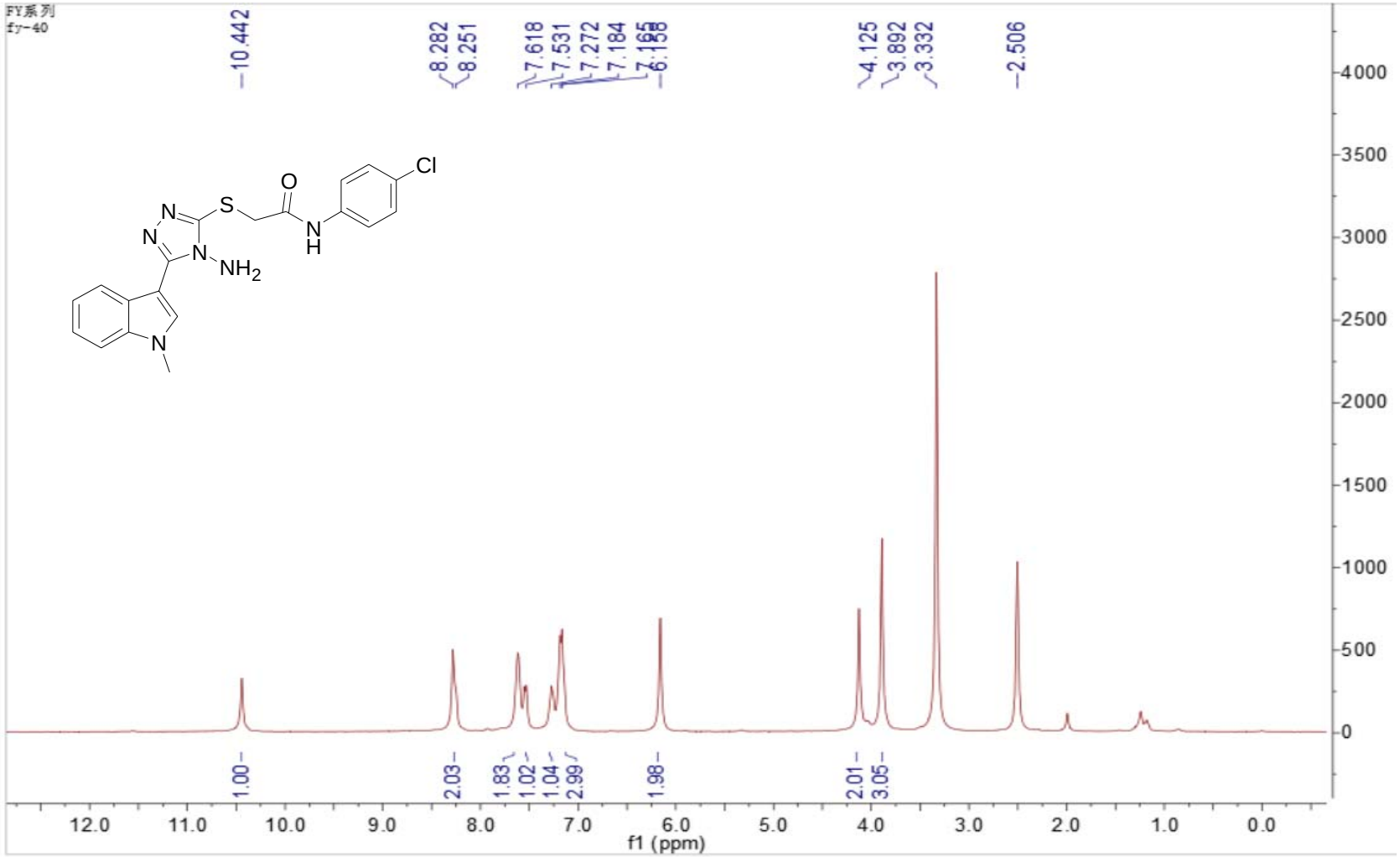

Figure 19. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9j.**

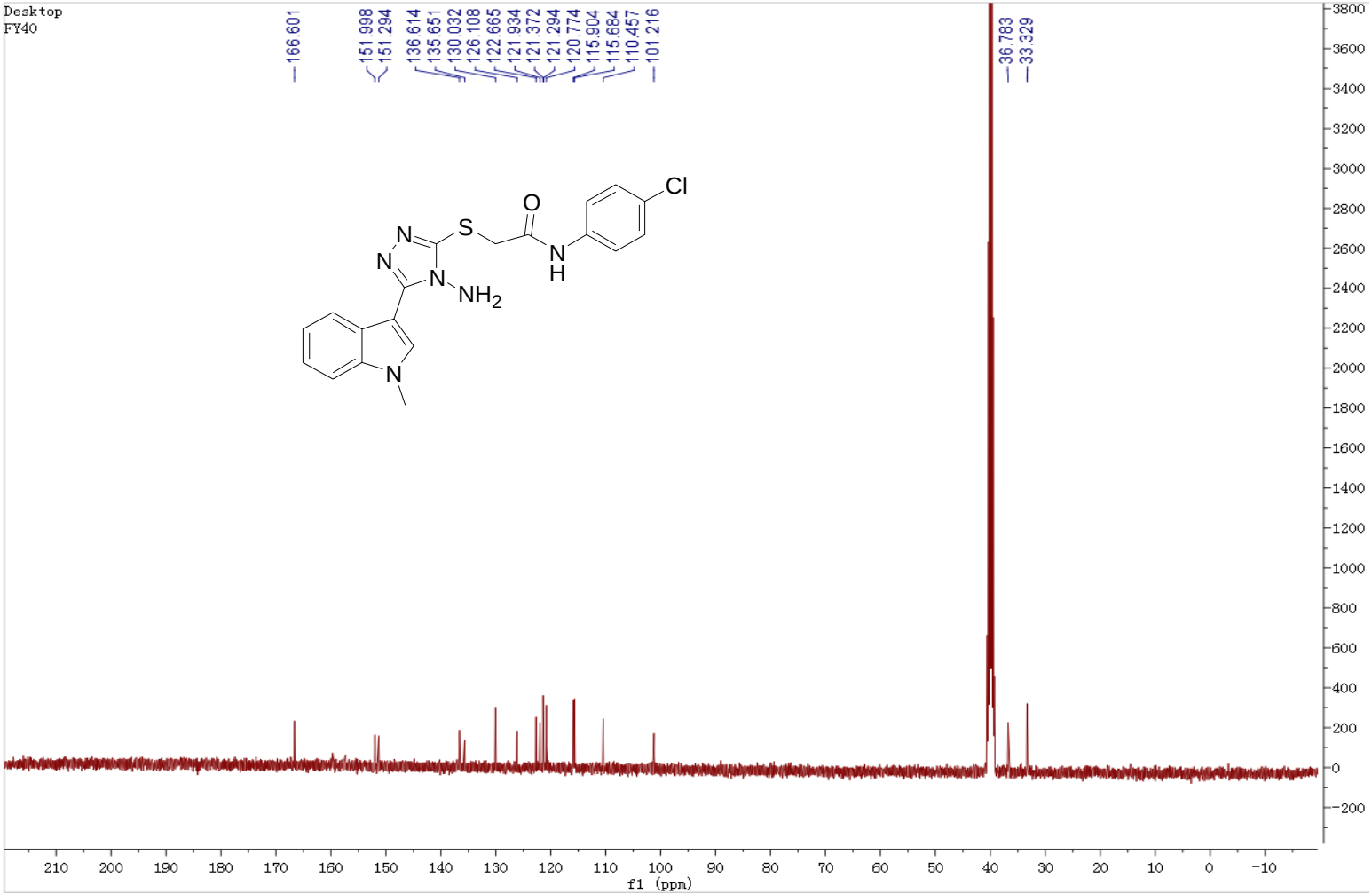

Figure 20. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9j.**

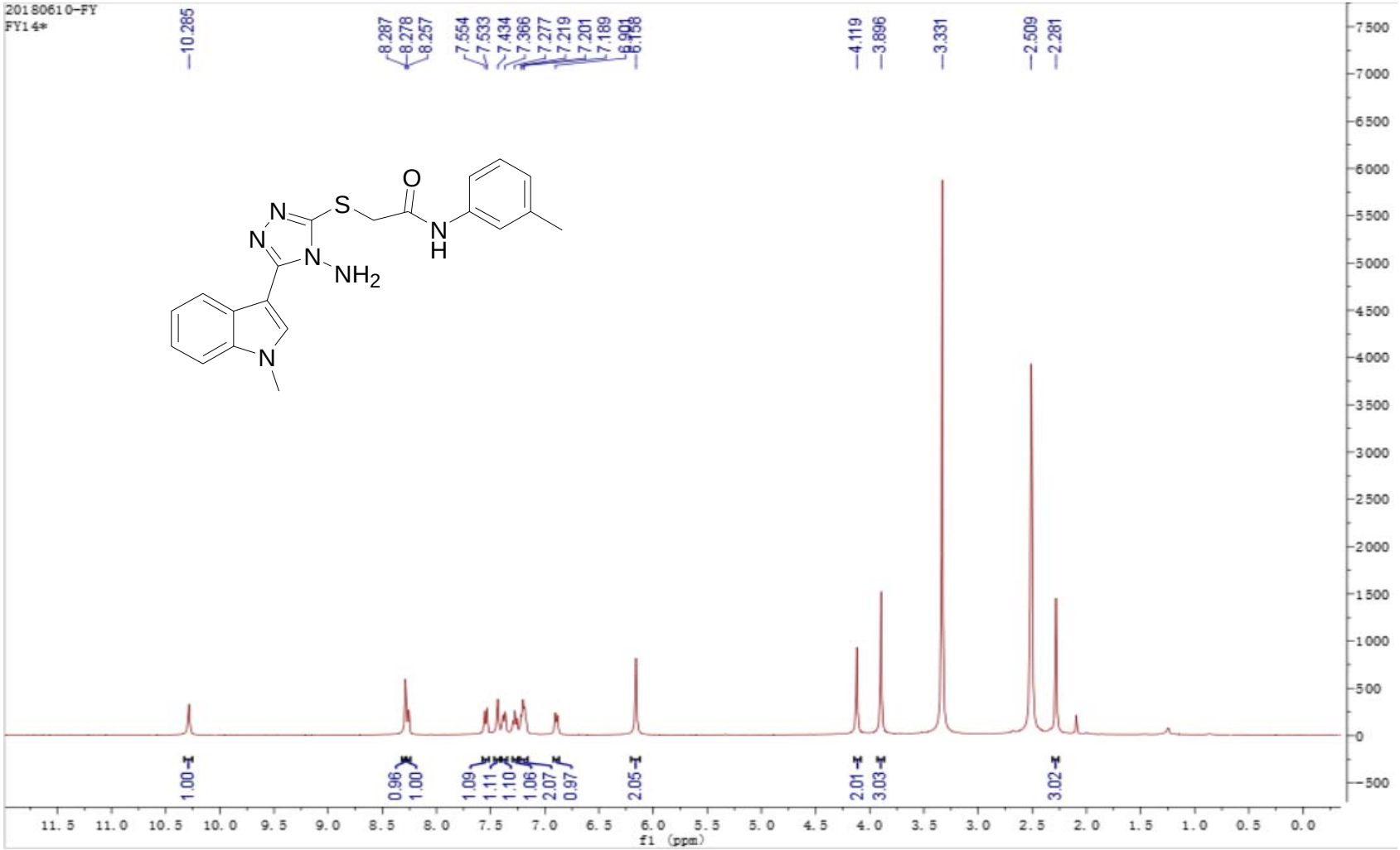

Figure 21. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9k.**

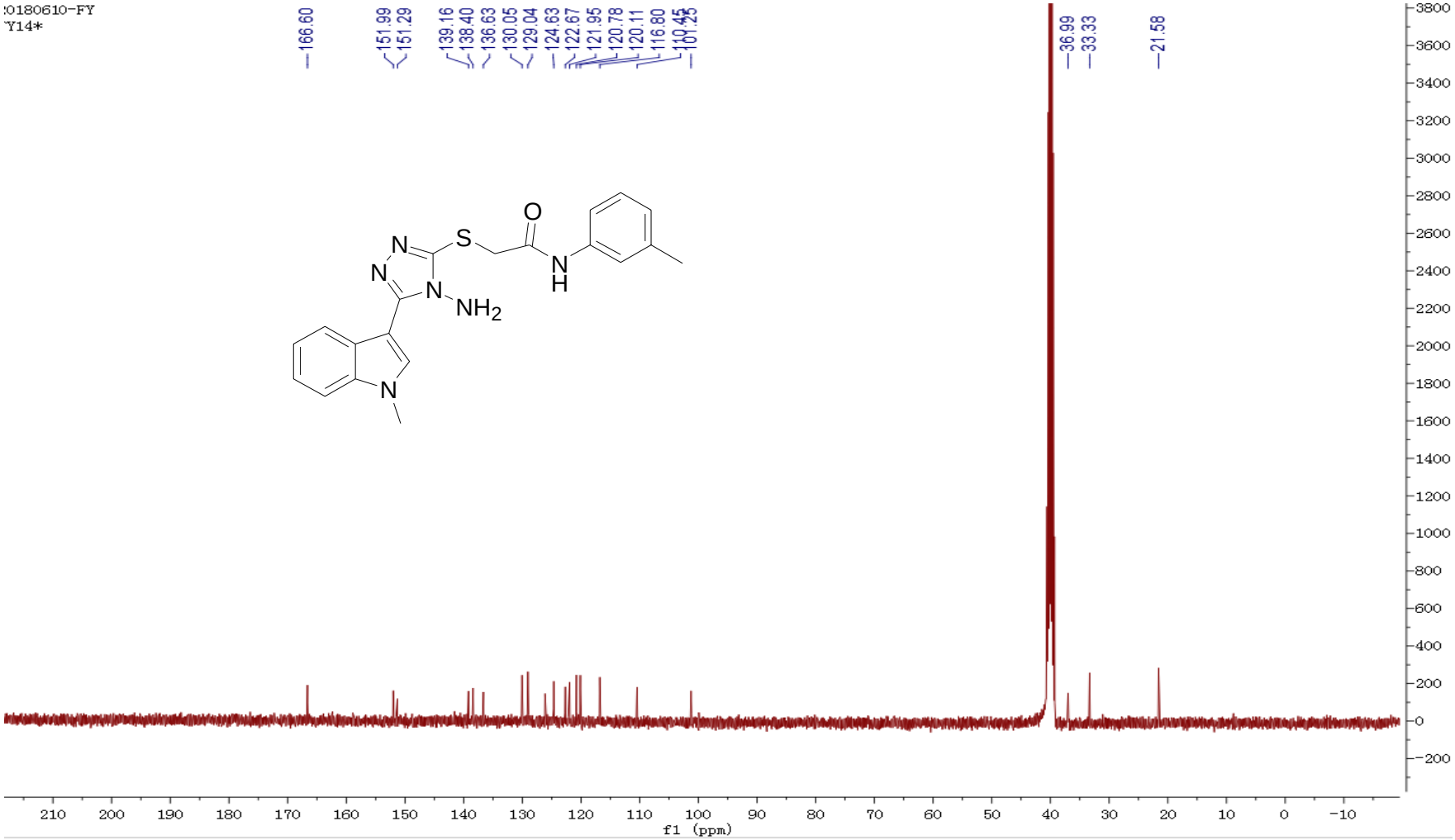

Figure 22. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9k.**

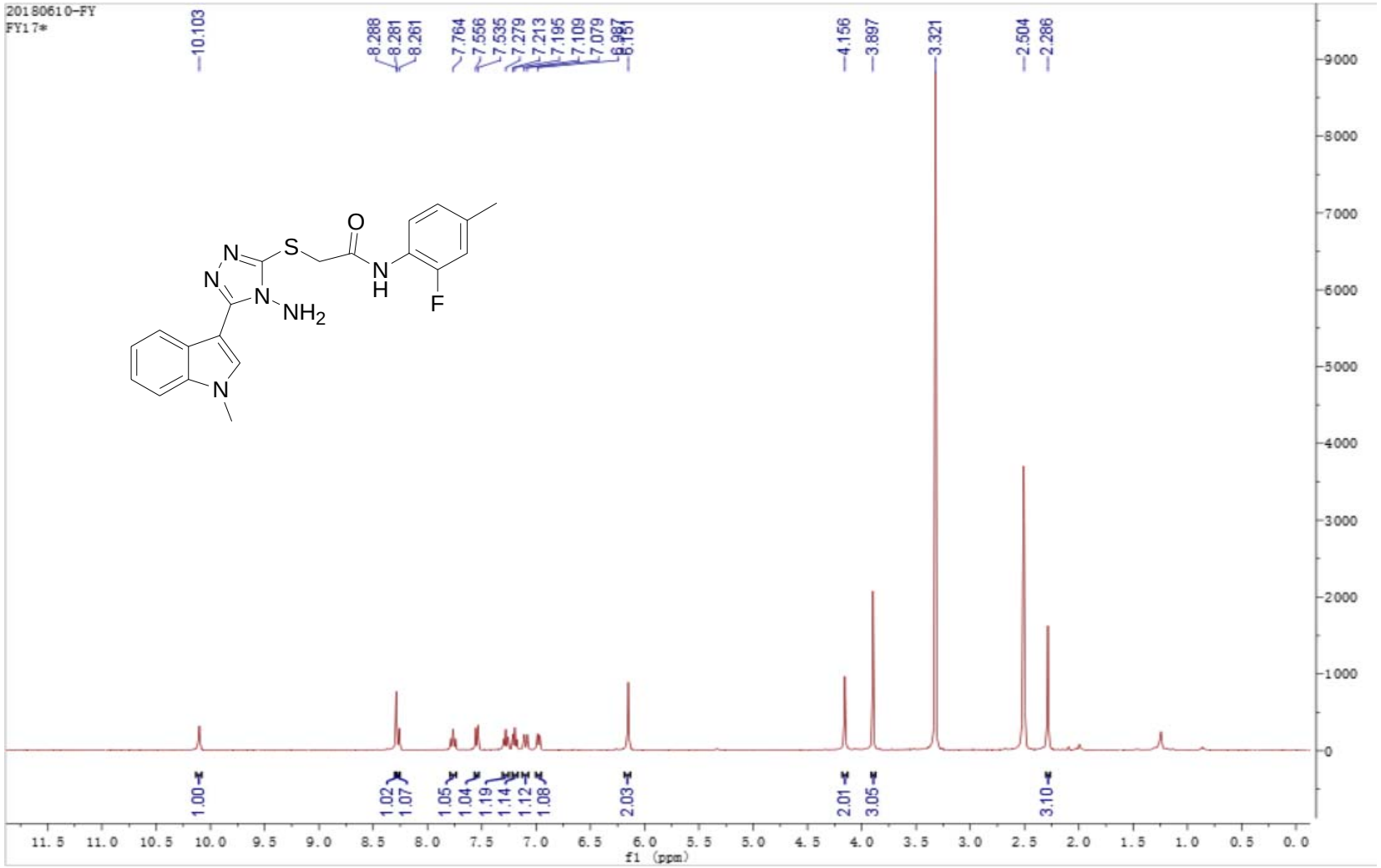

Figure 23. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9l.**

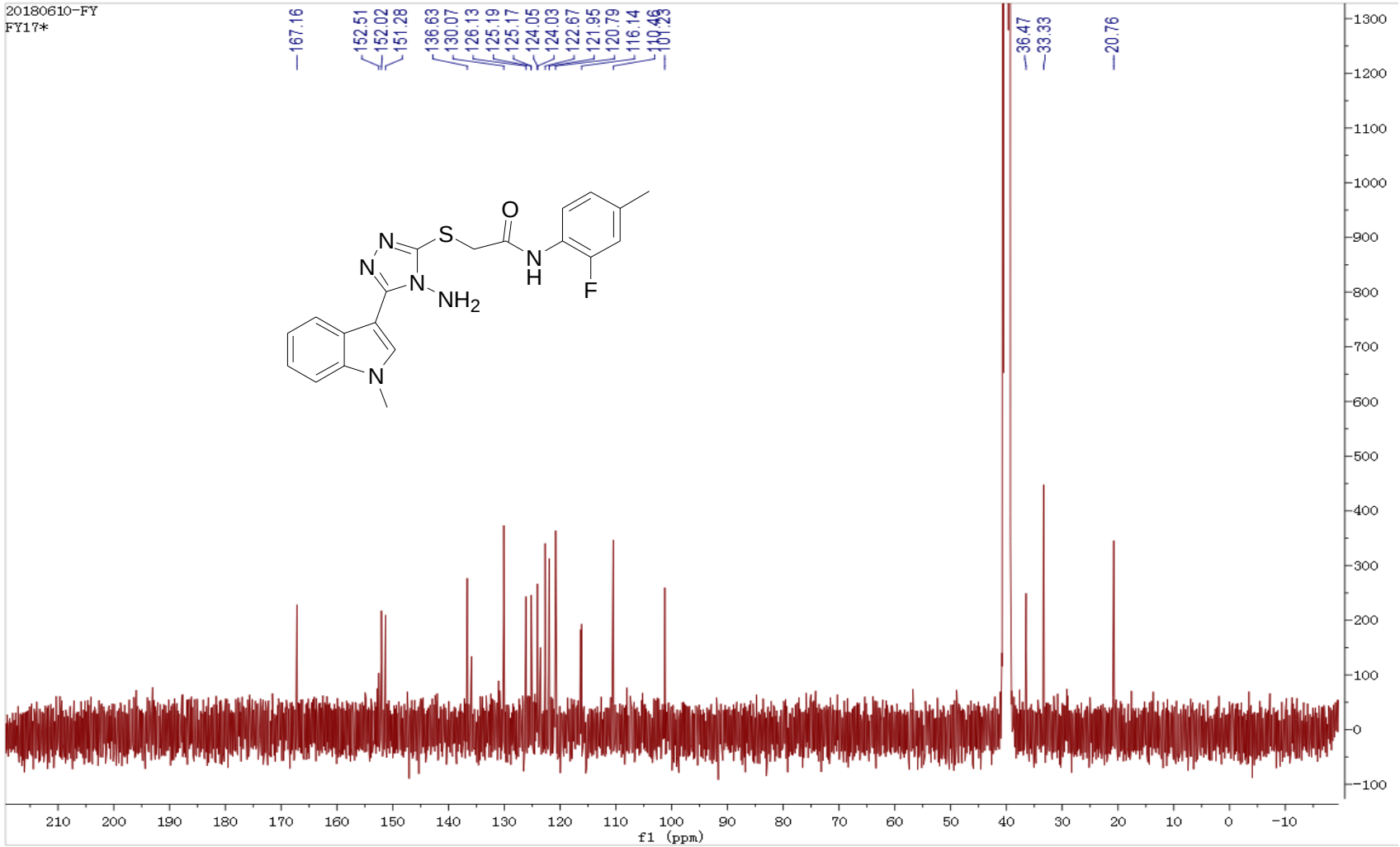

Figure 24. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9l.**

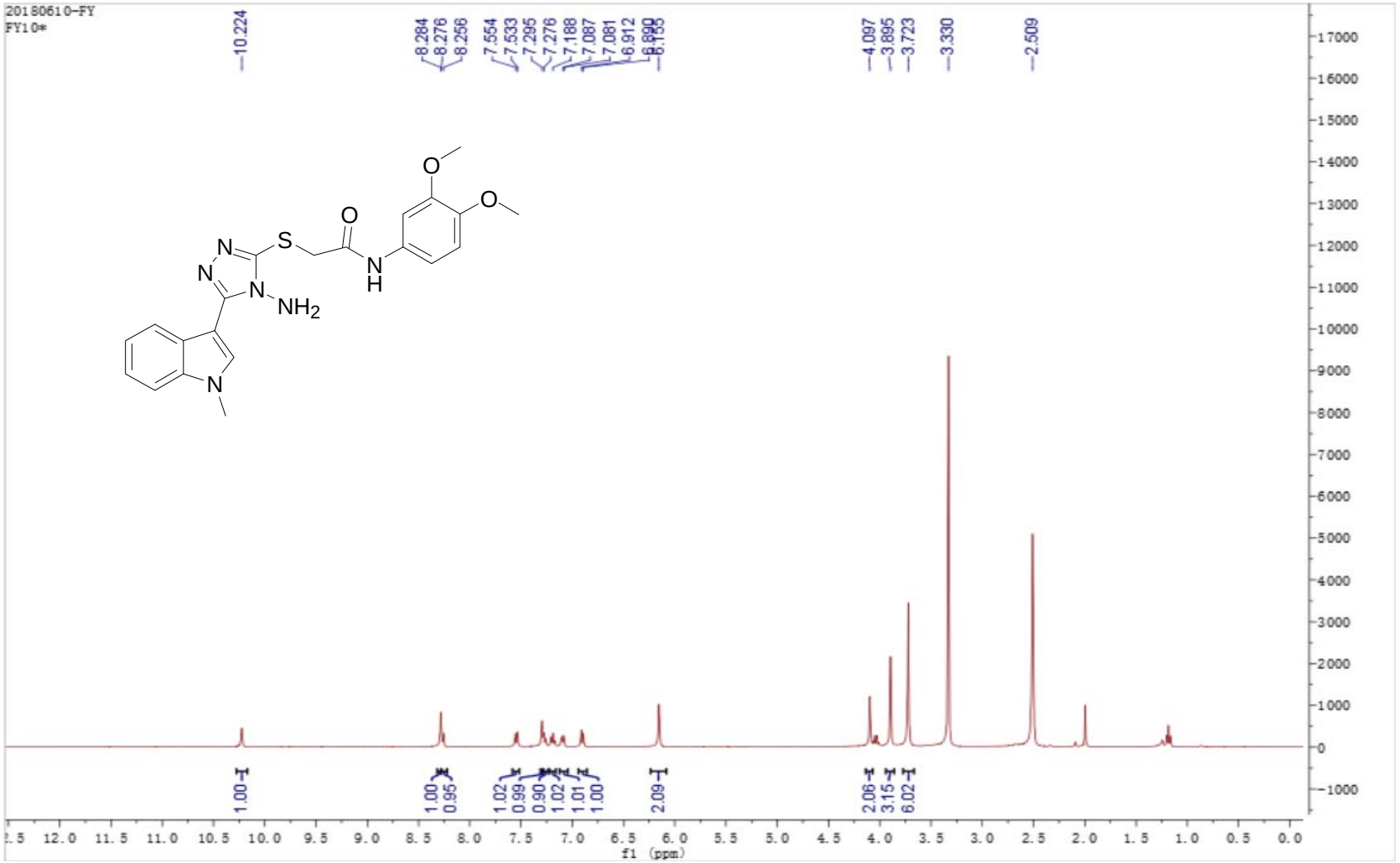

Figure 25. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9m.**

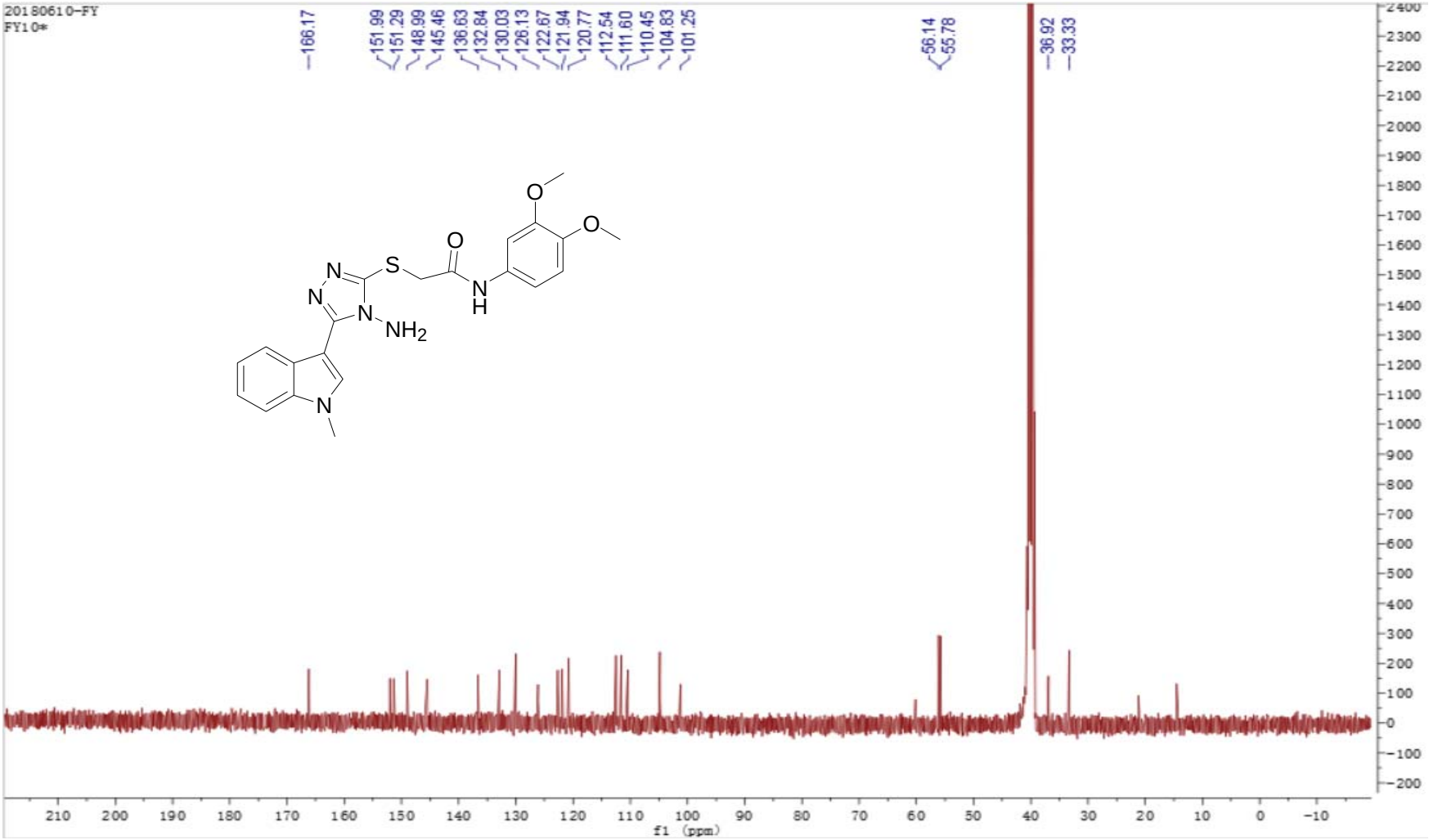

Figure 26. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9m.**

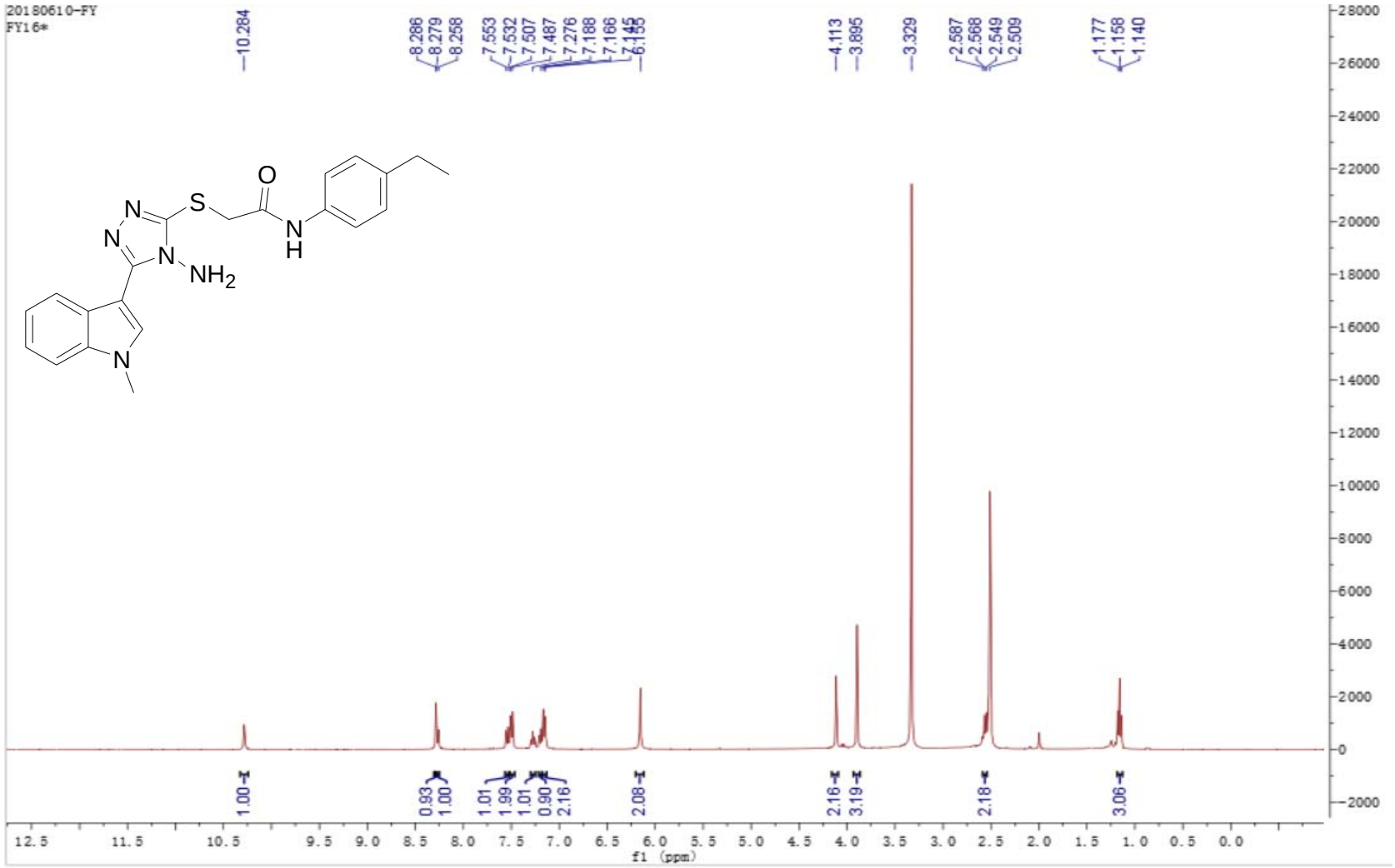

Figure 27. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9n.**

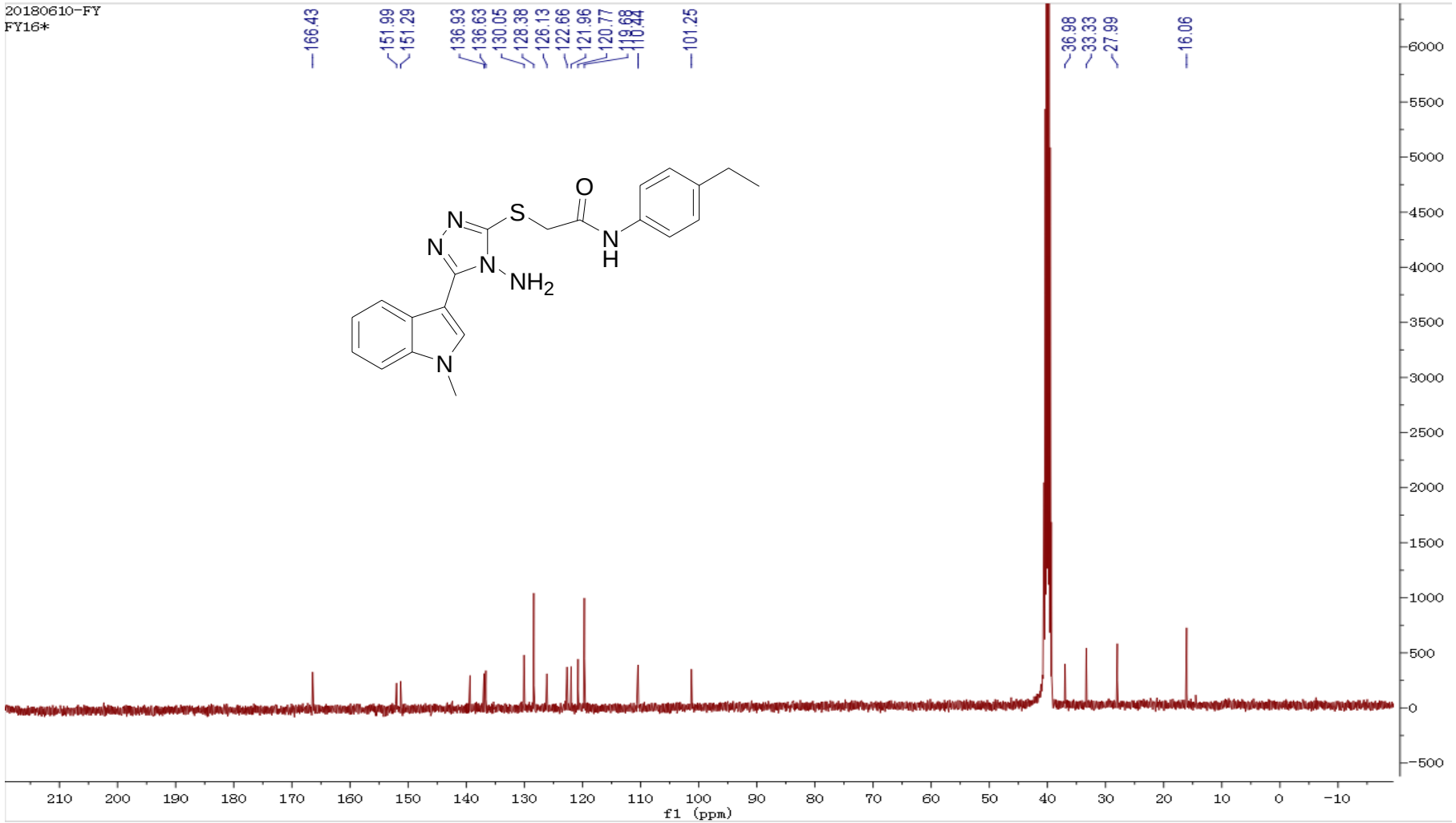

Figure 28. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9n.**

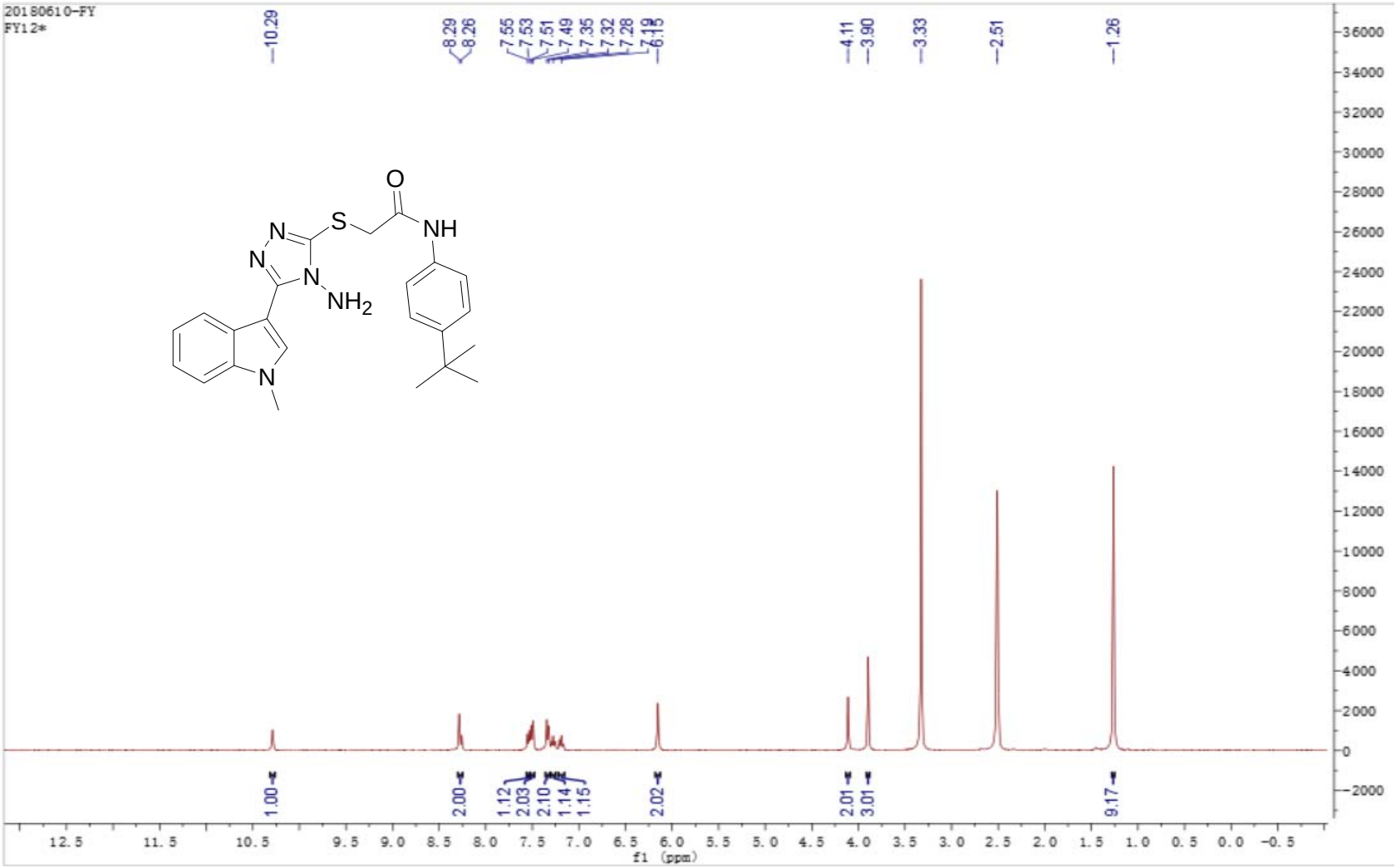

Figure 29. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9o.**

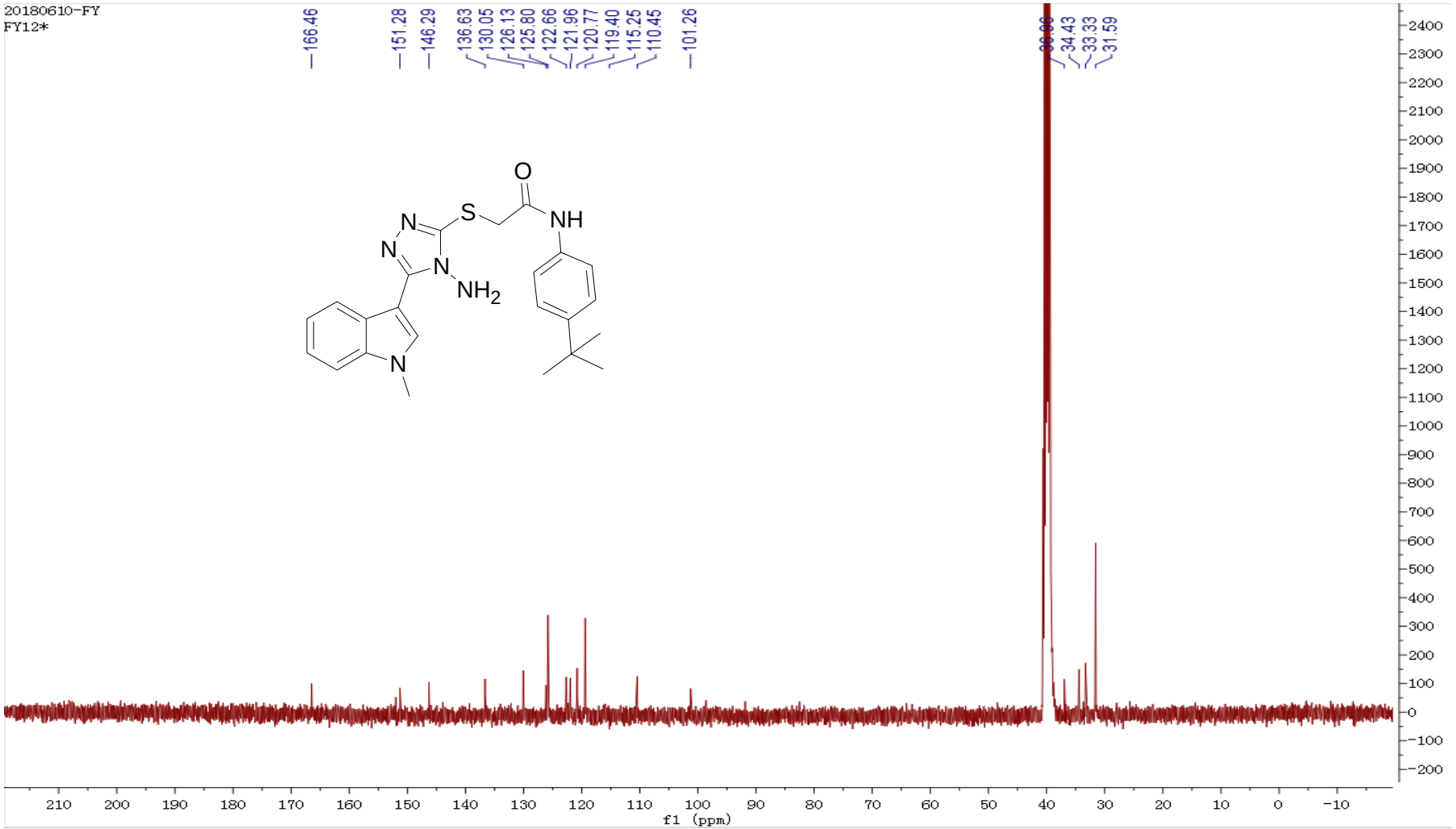

Figure 30. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9o.**

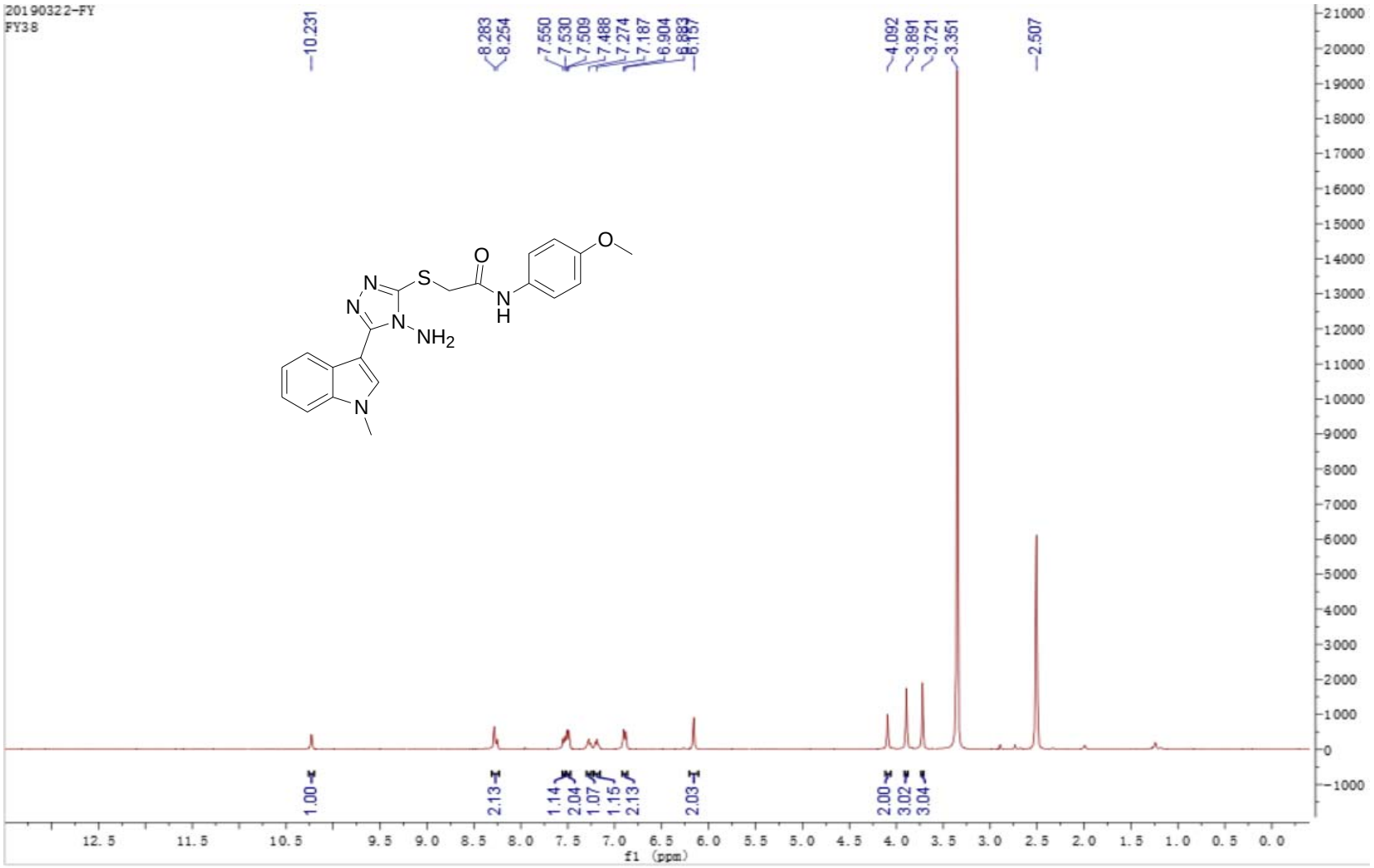

Figure 31. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9p.**

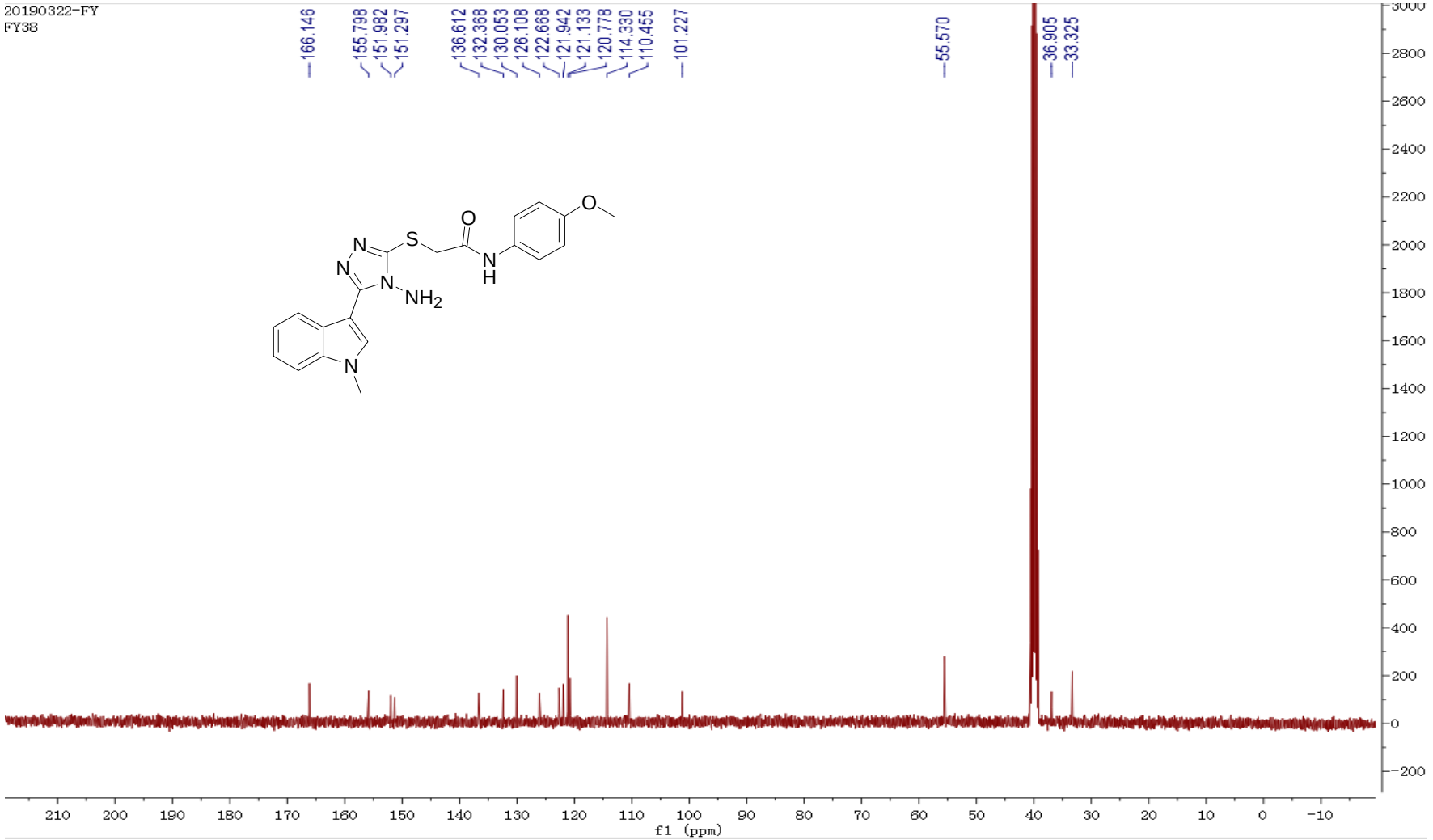

Figure 32. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9p.**

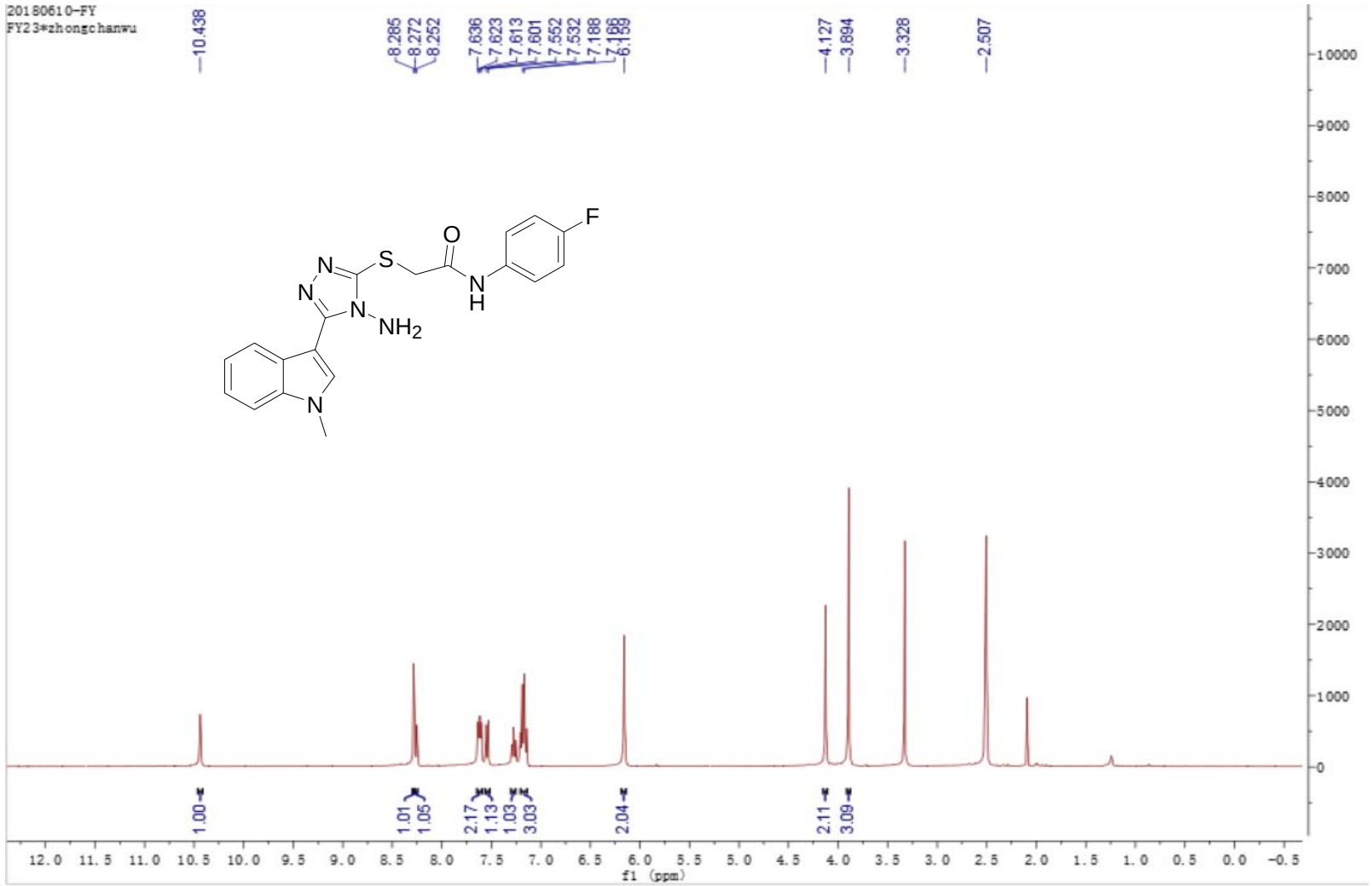

Figure 33. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9q.**

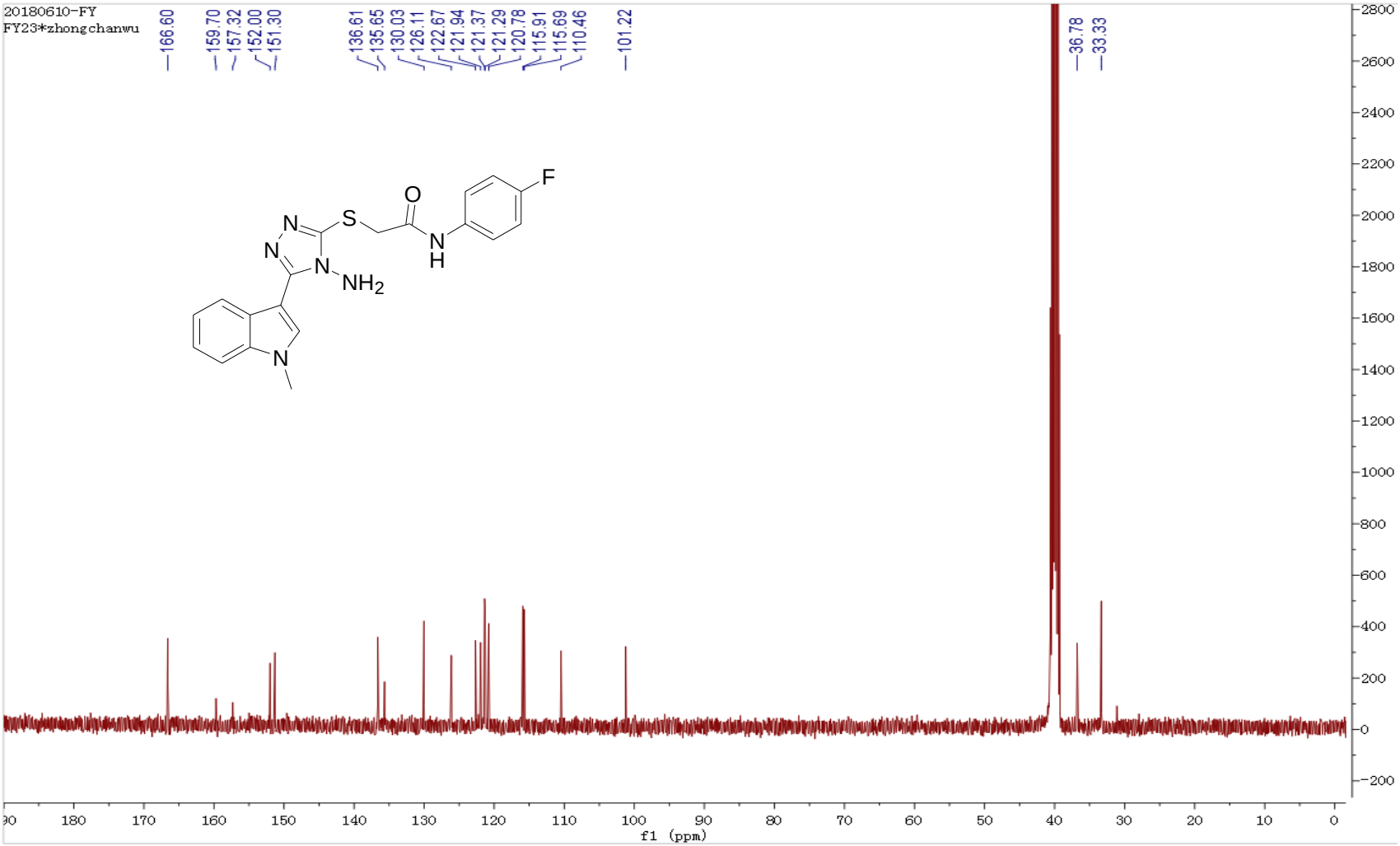

Figure 34. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9q.**

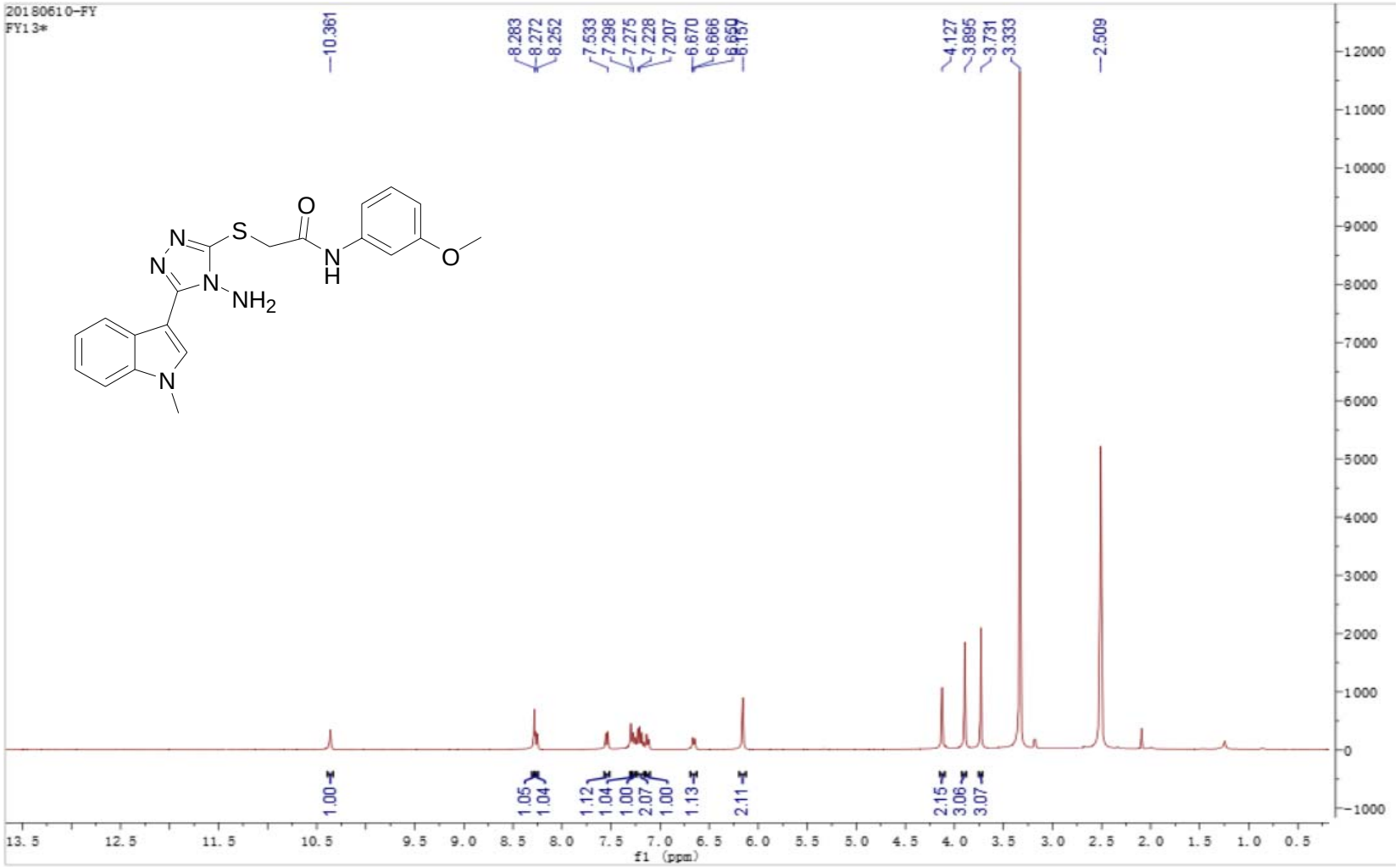

Figure 35. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9r.**

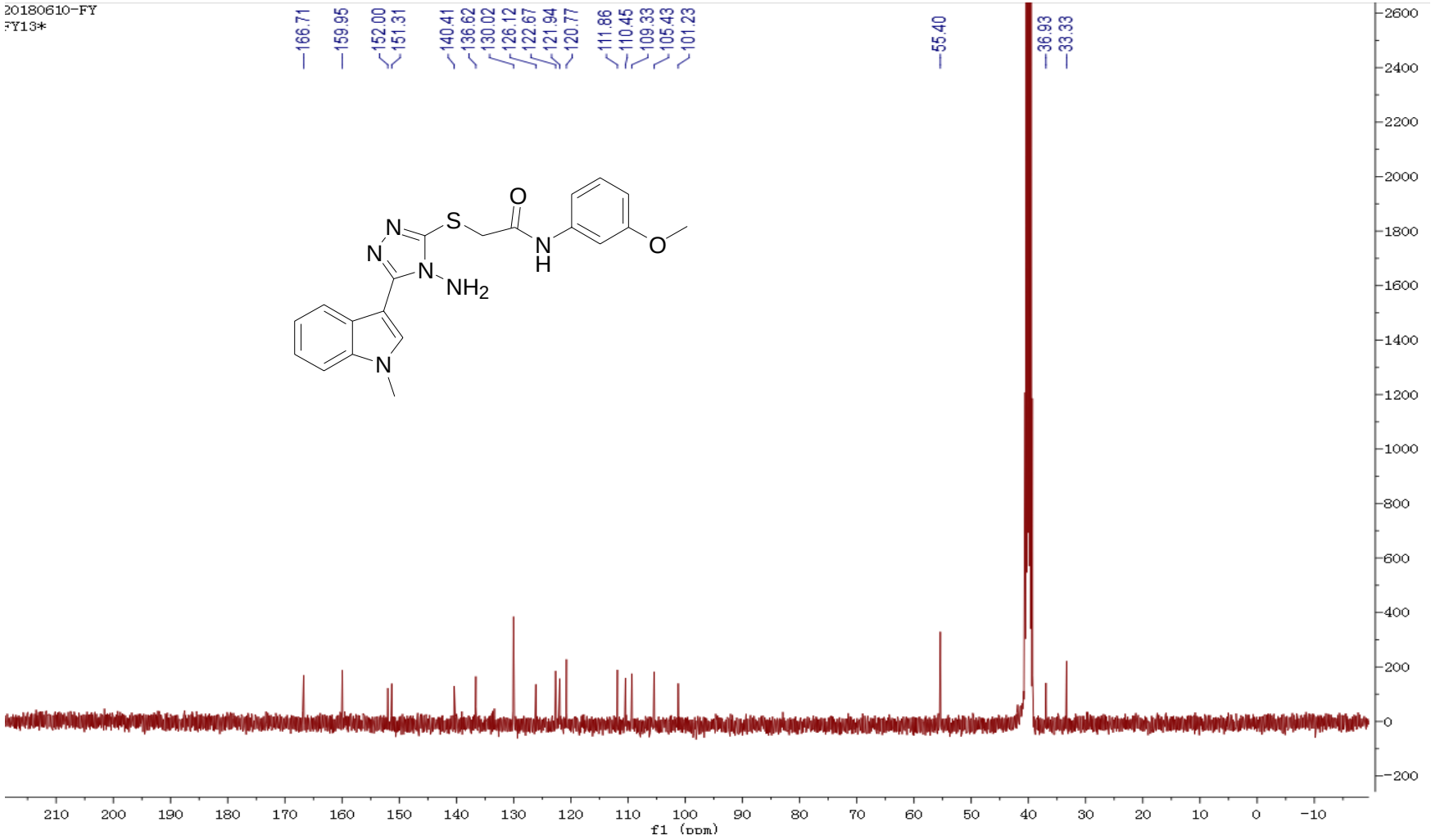

Figure 36. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9r.**

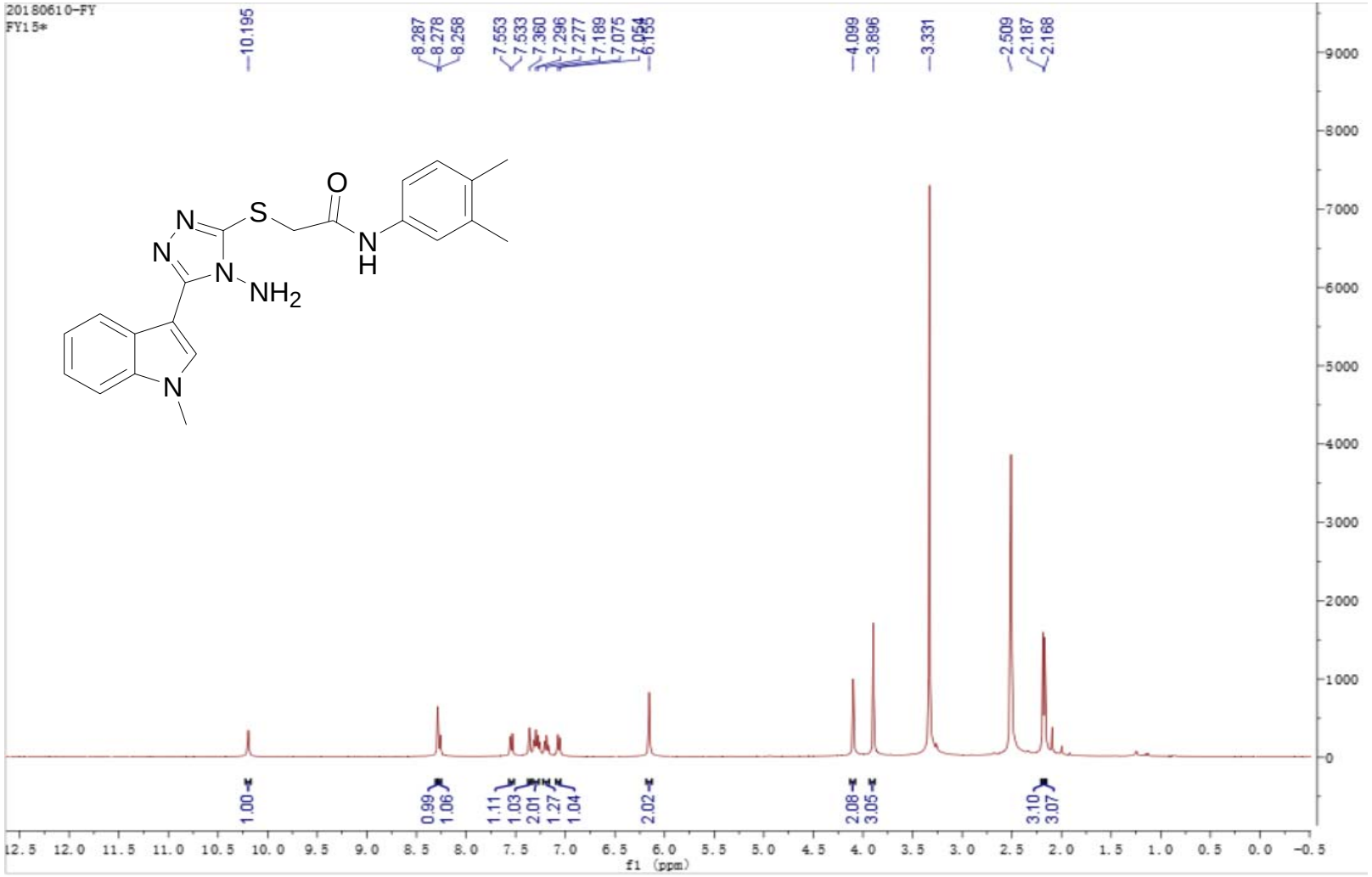

Figure 37. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **9s.**

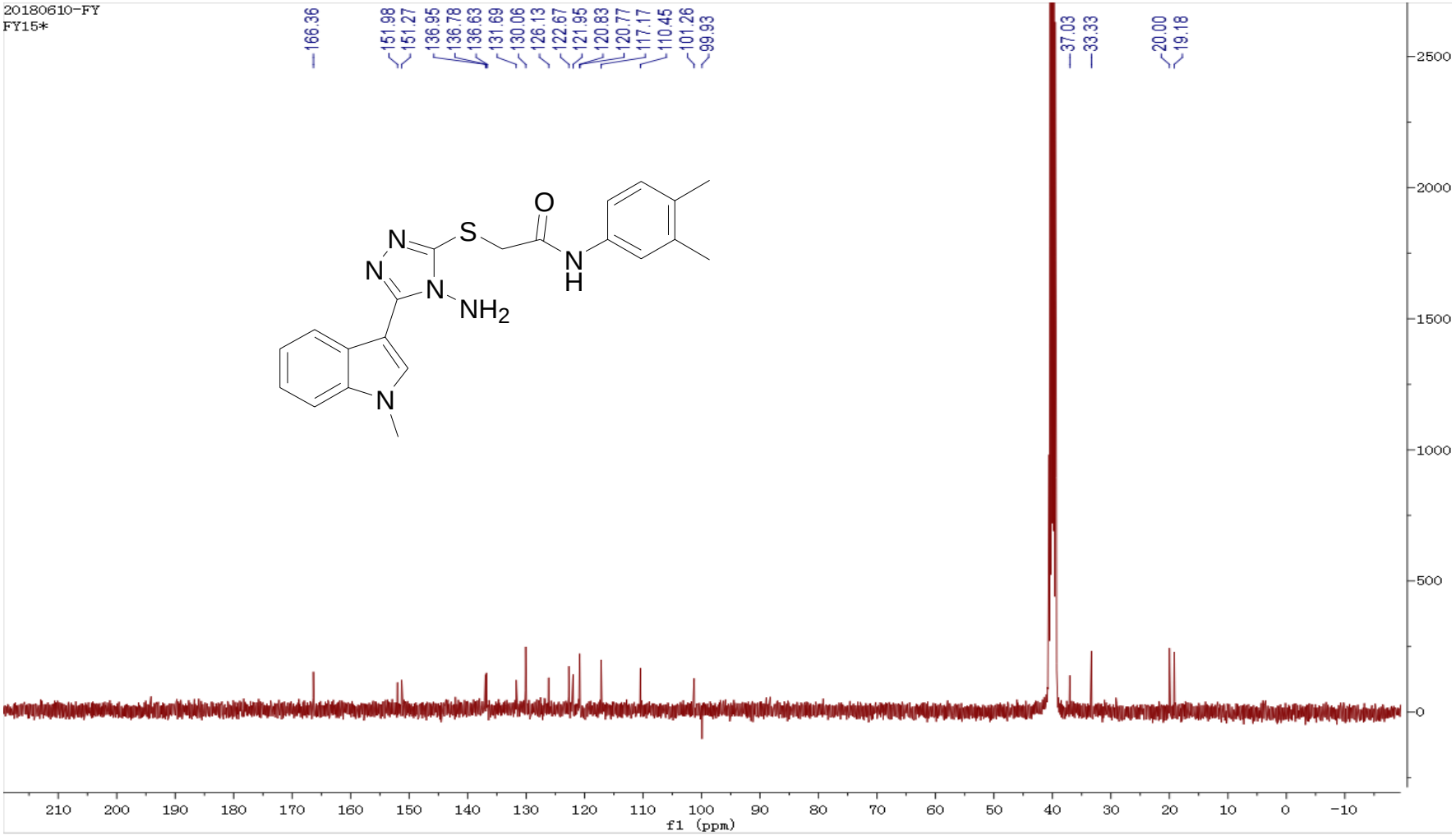

Figure 38. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **9s.**

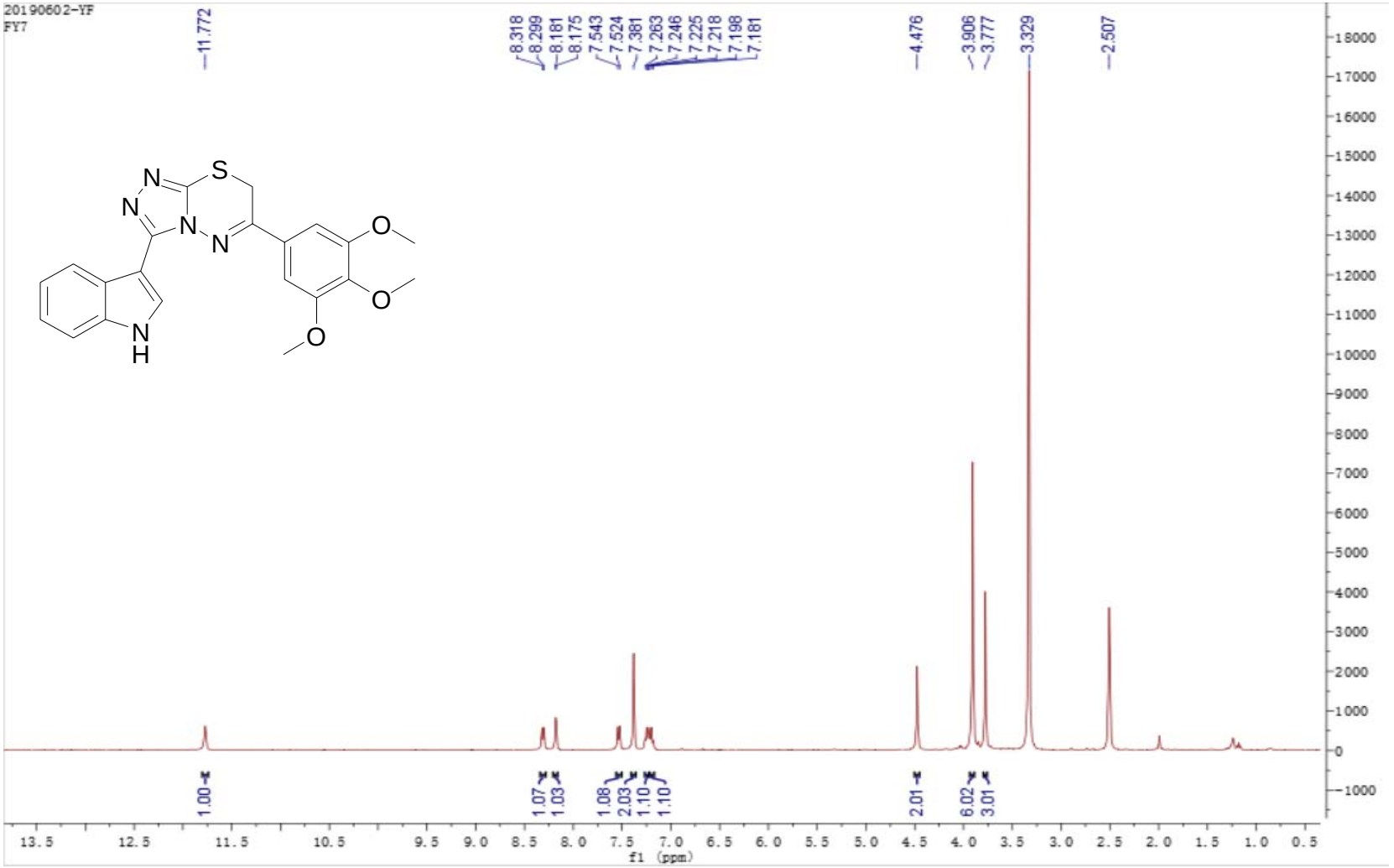

Figure 39. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **10a.**

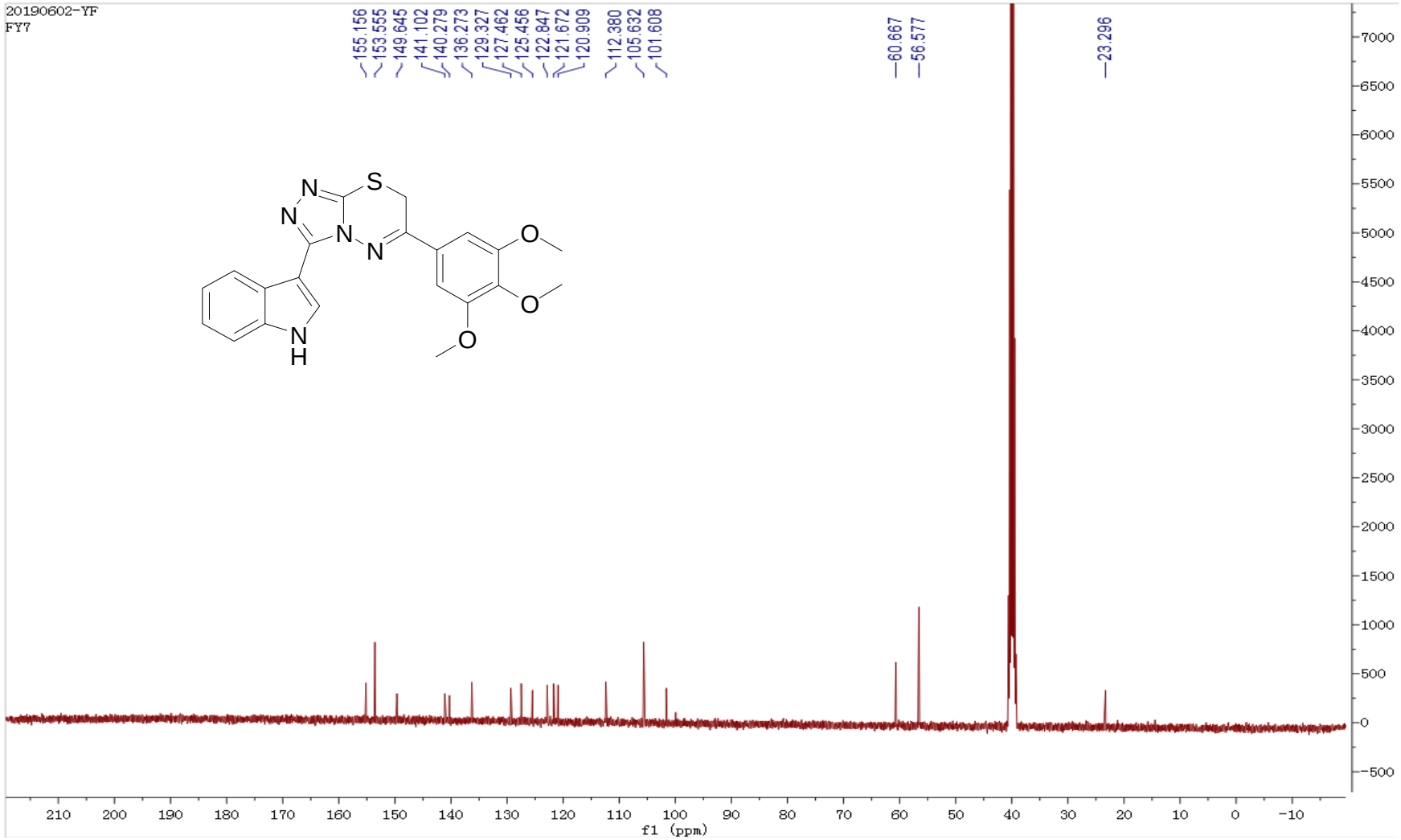

Figure 40. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **10a.**

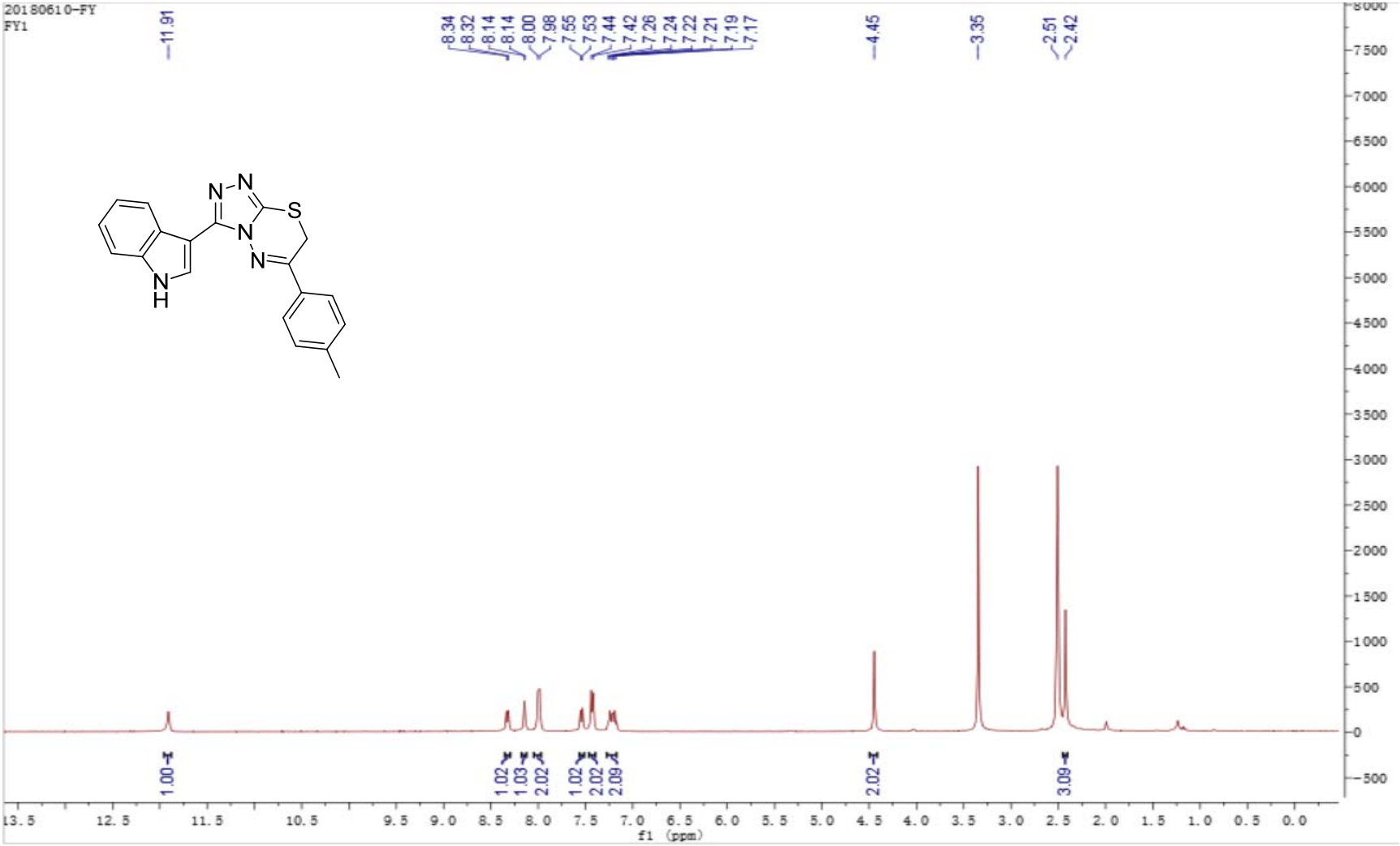

Figure 41. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **10b**.

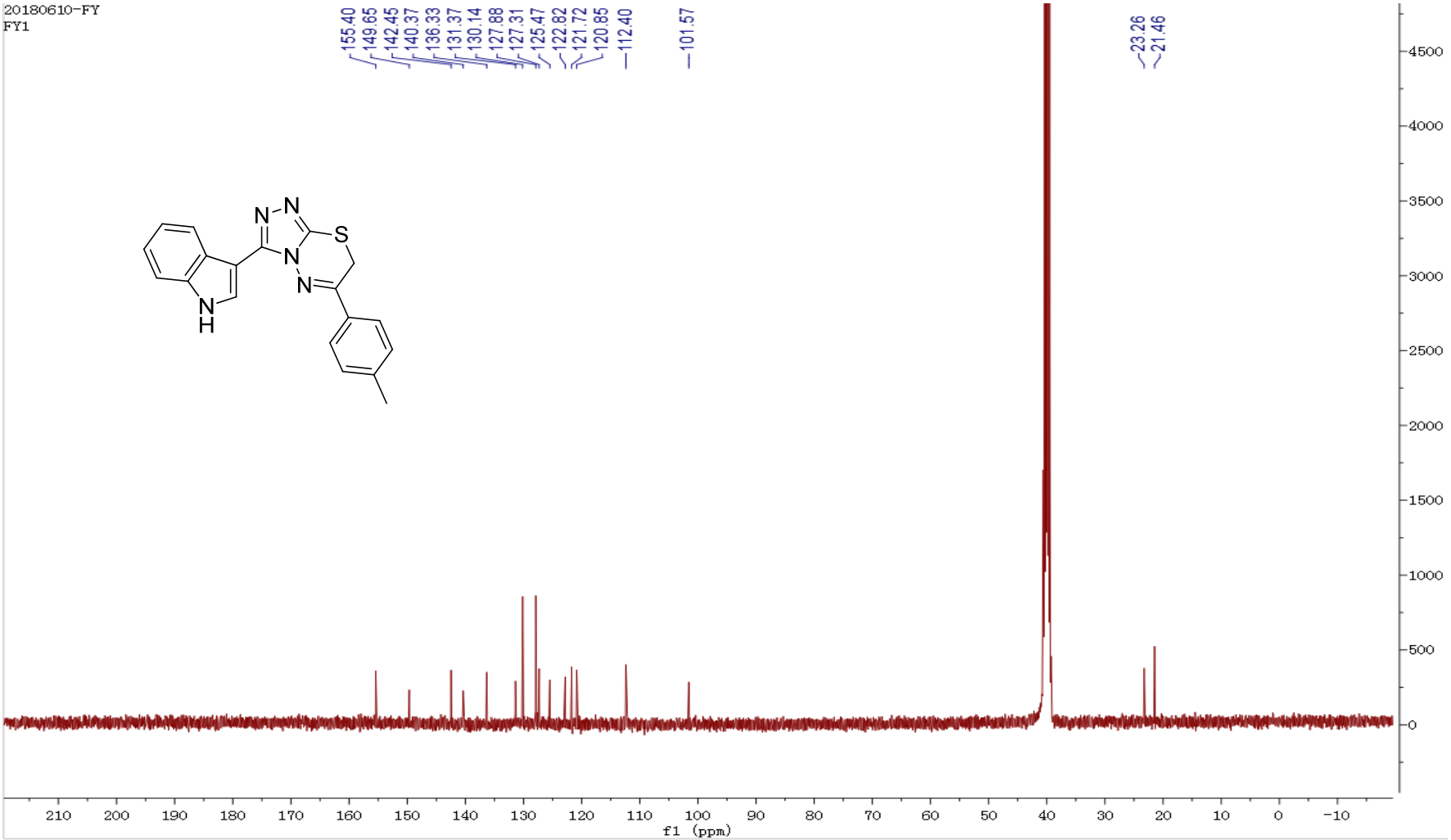

Figure 42. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **10b**.

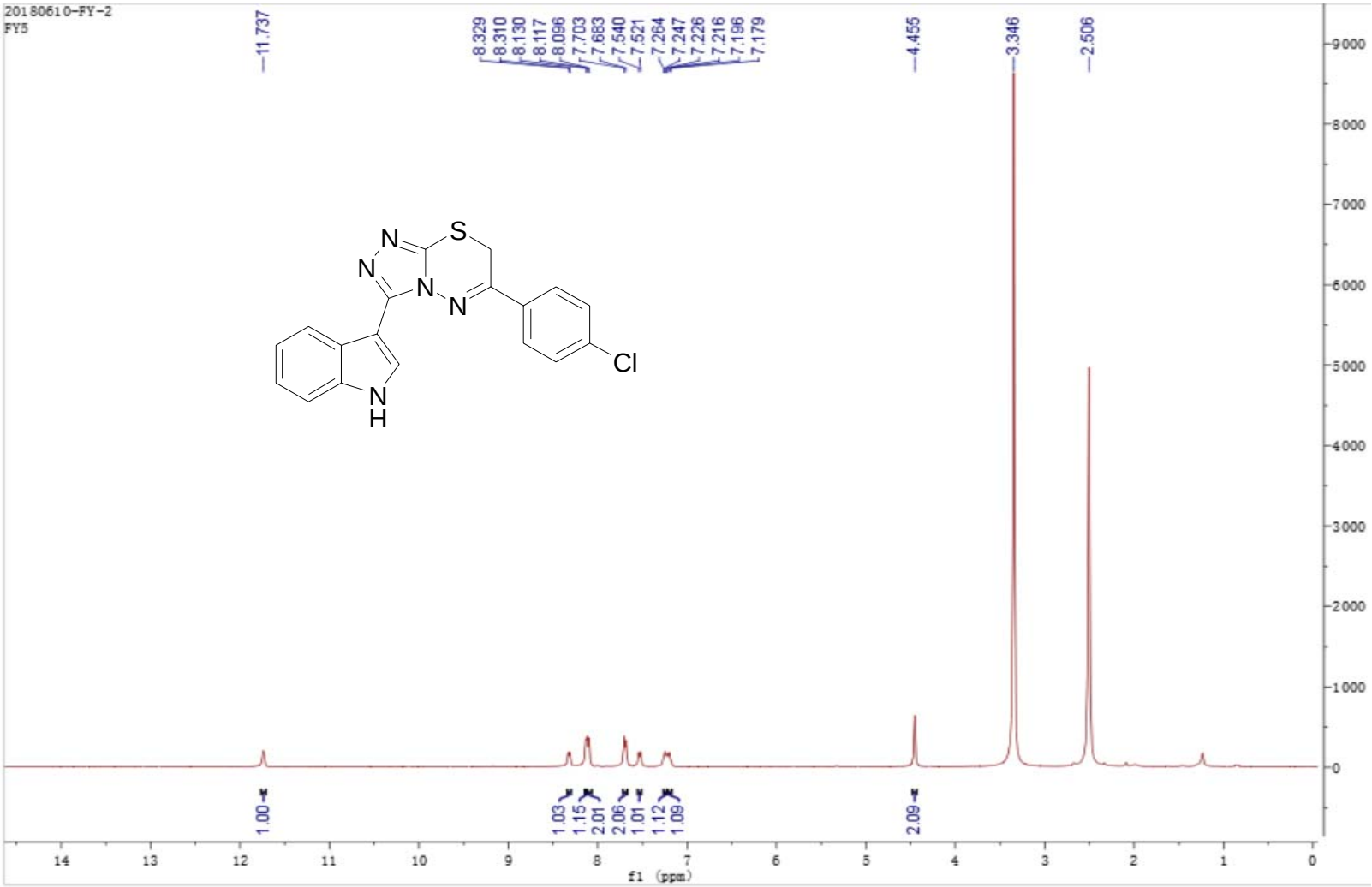

Figure 43. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **10c**.

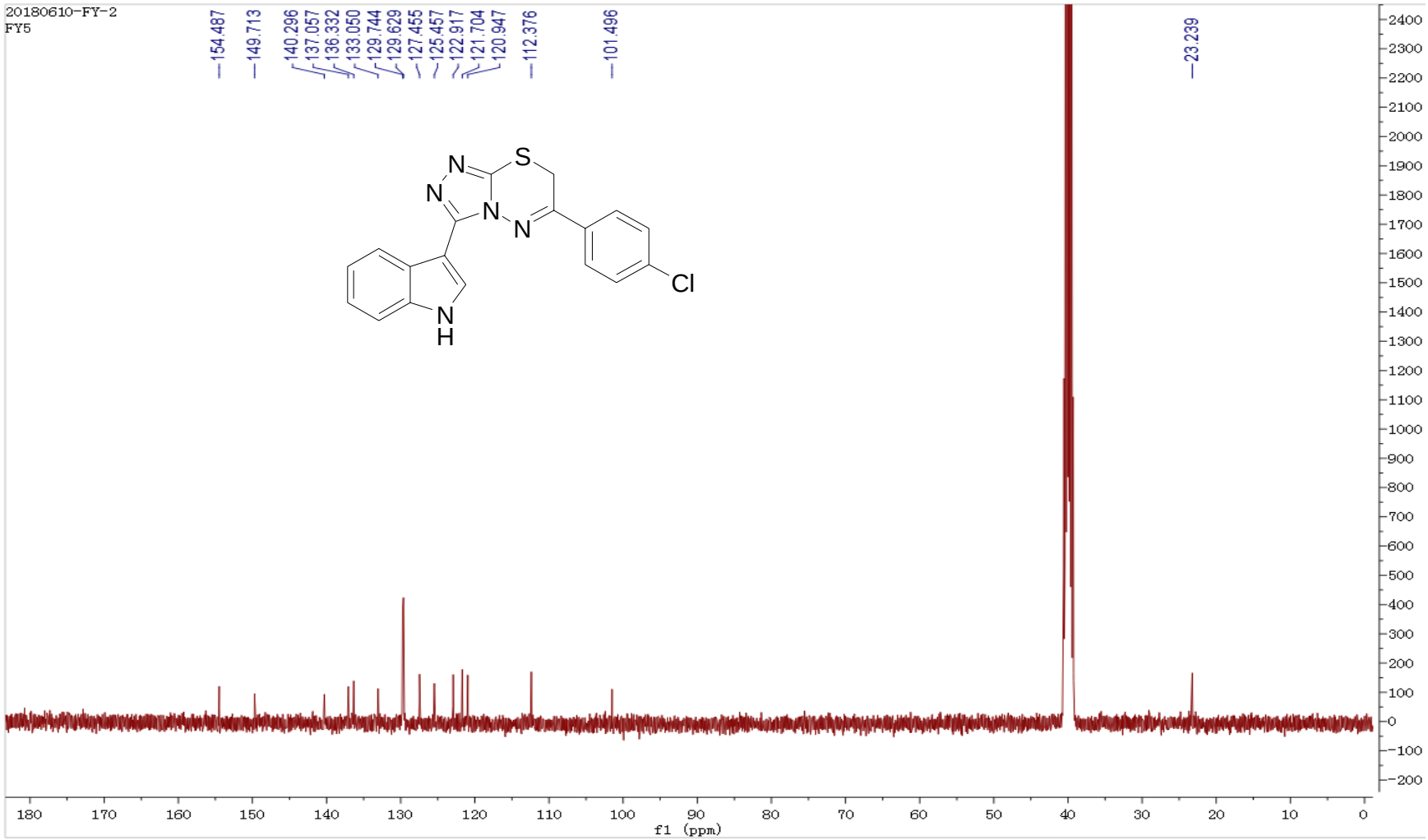

Figure 44. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **10c.**

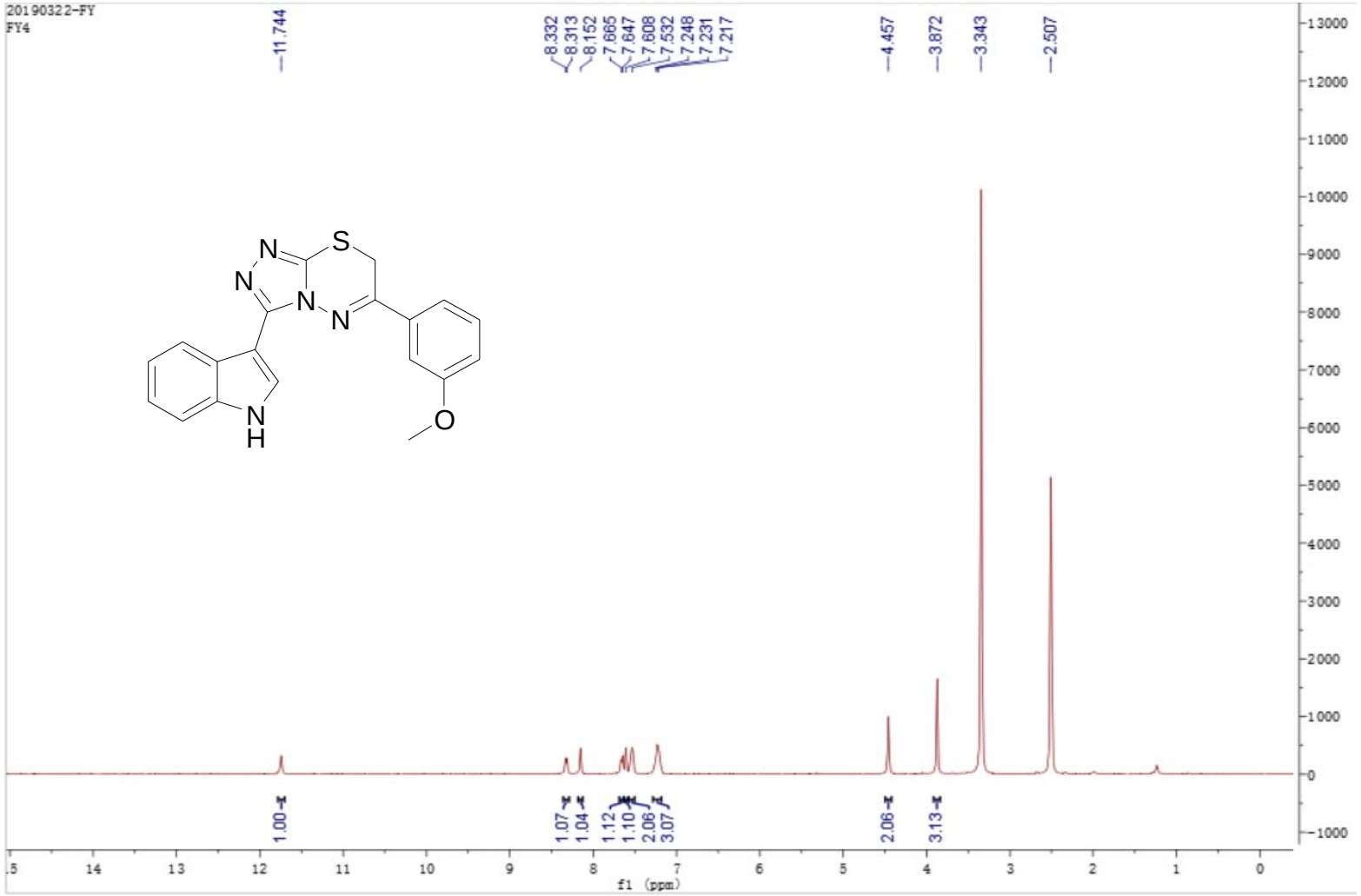

Figure 45. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **10d.**

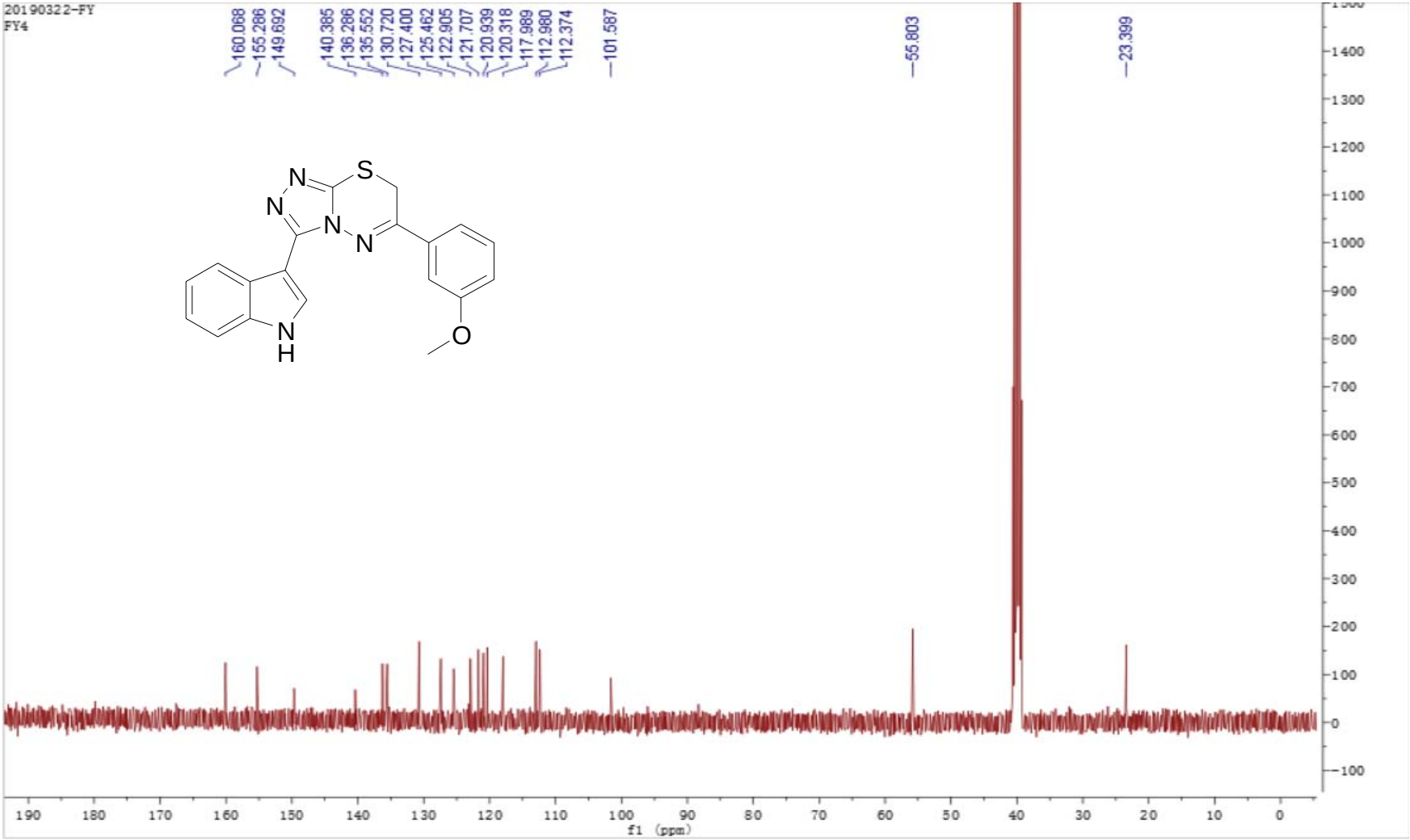

Figure 46. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **10d.**

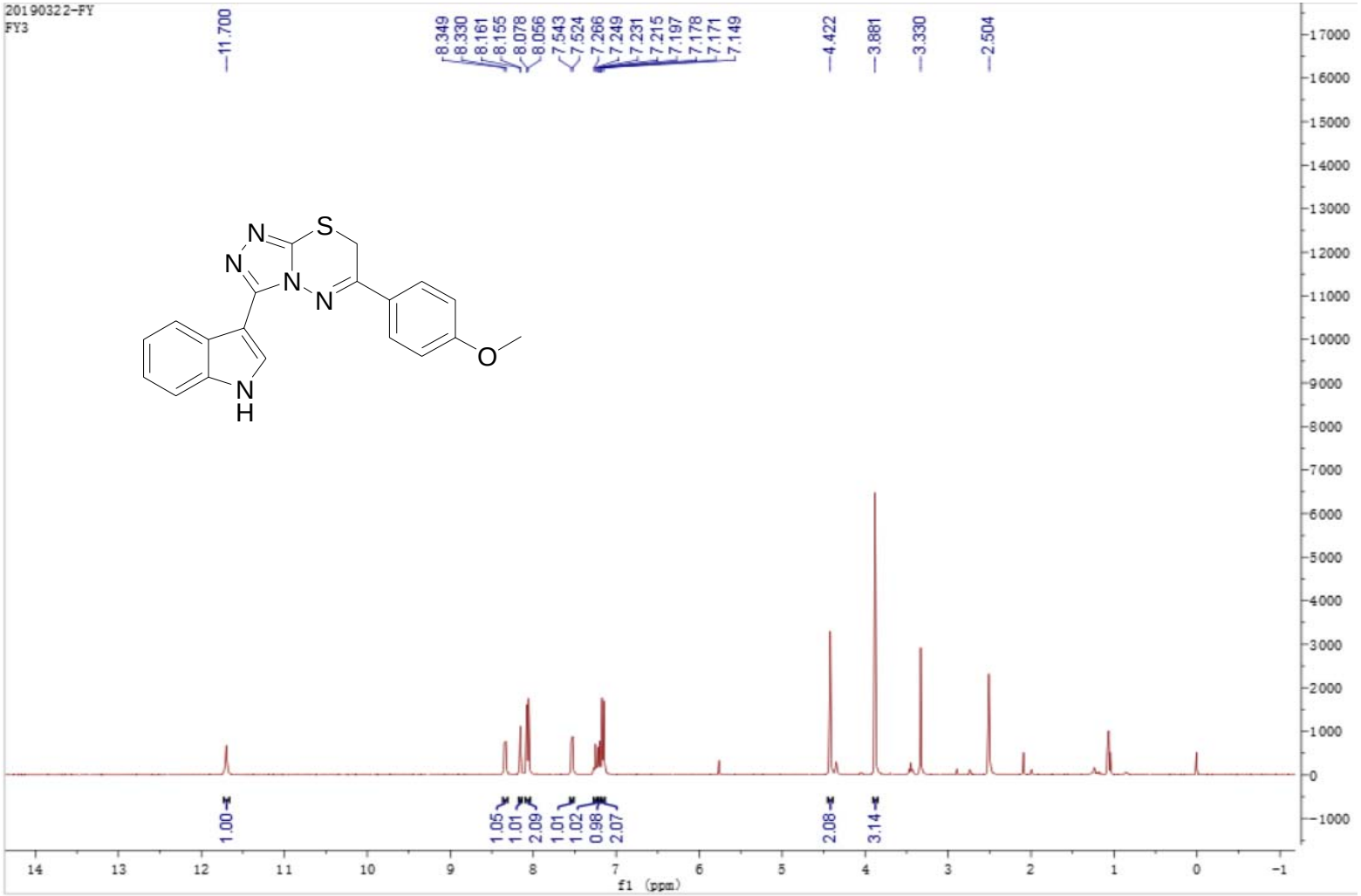

Figure 47. ^{1}H NMR spectrum (400 MHz, DMSO- d_6) of compound **10e.**

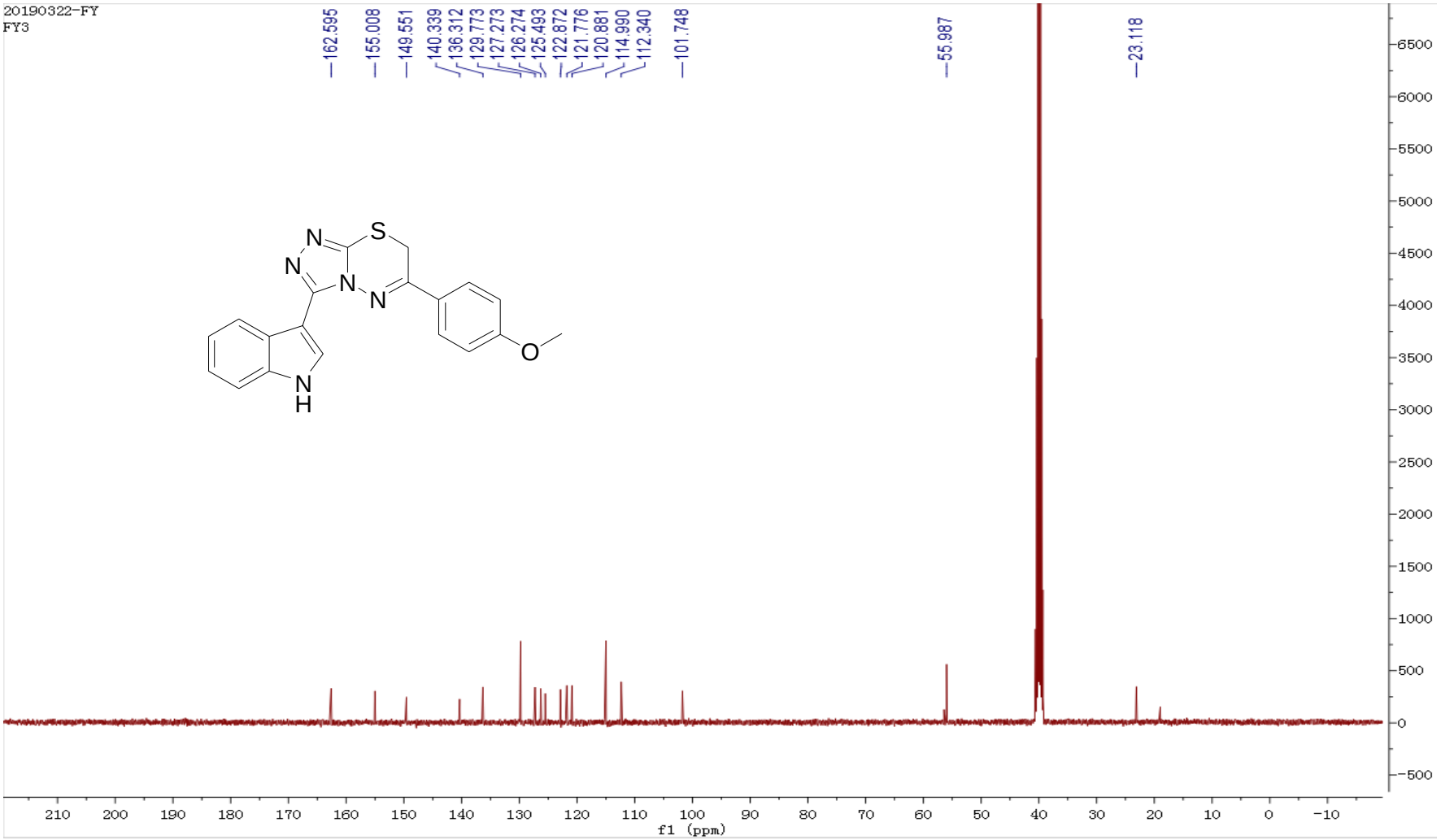

Figure 48. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **10e.**

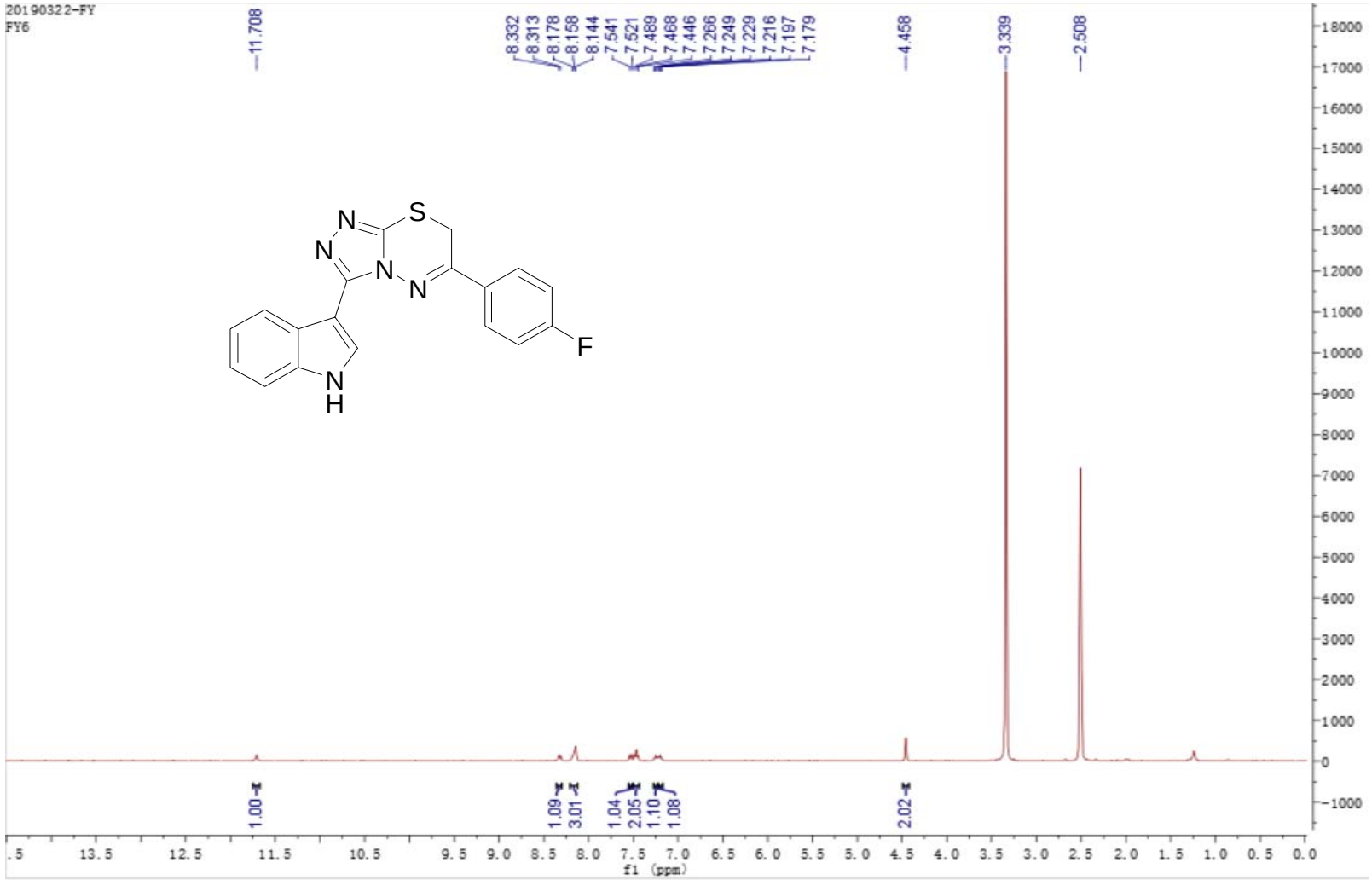

Figure 49. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **10f.**

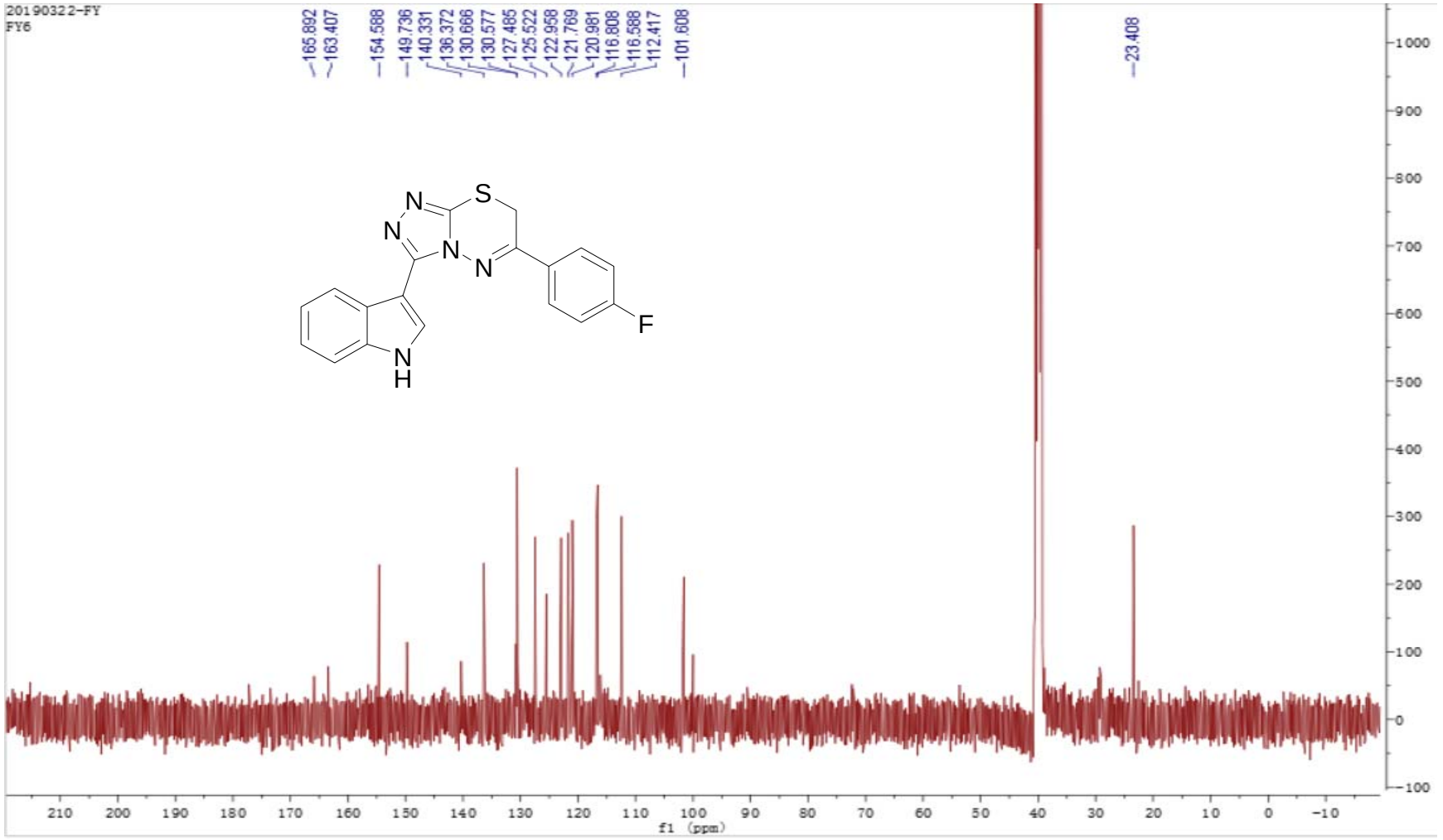

Figure 50. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **10f.**

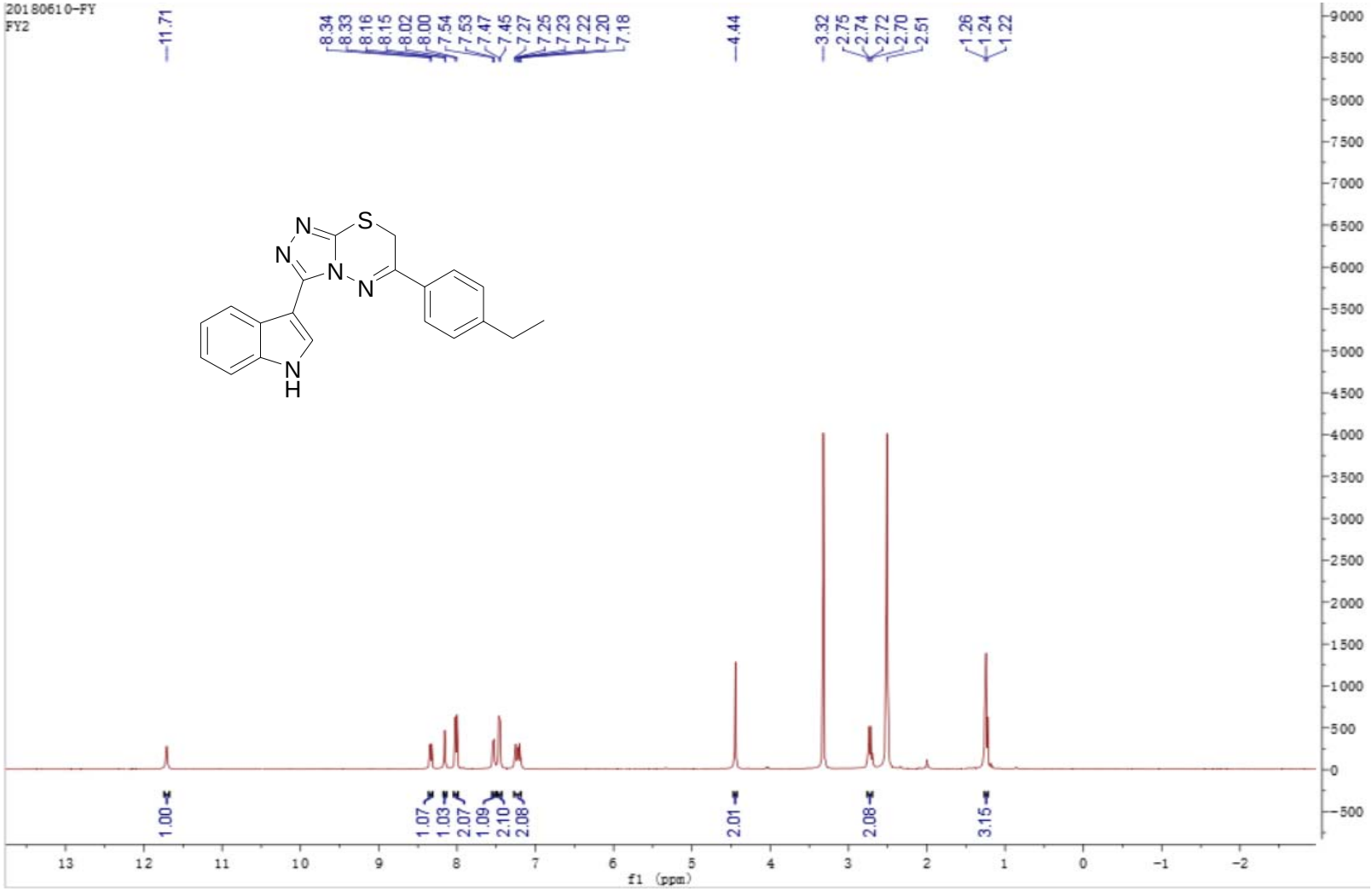

Figure 51. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **10g.**

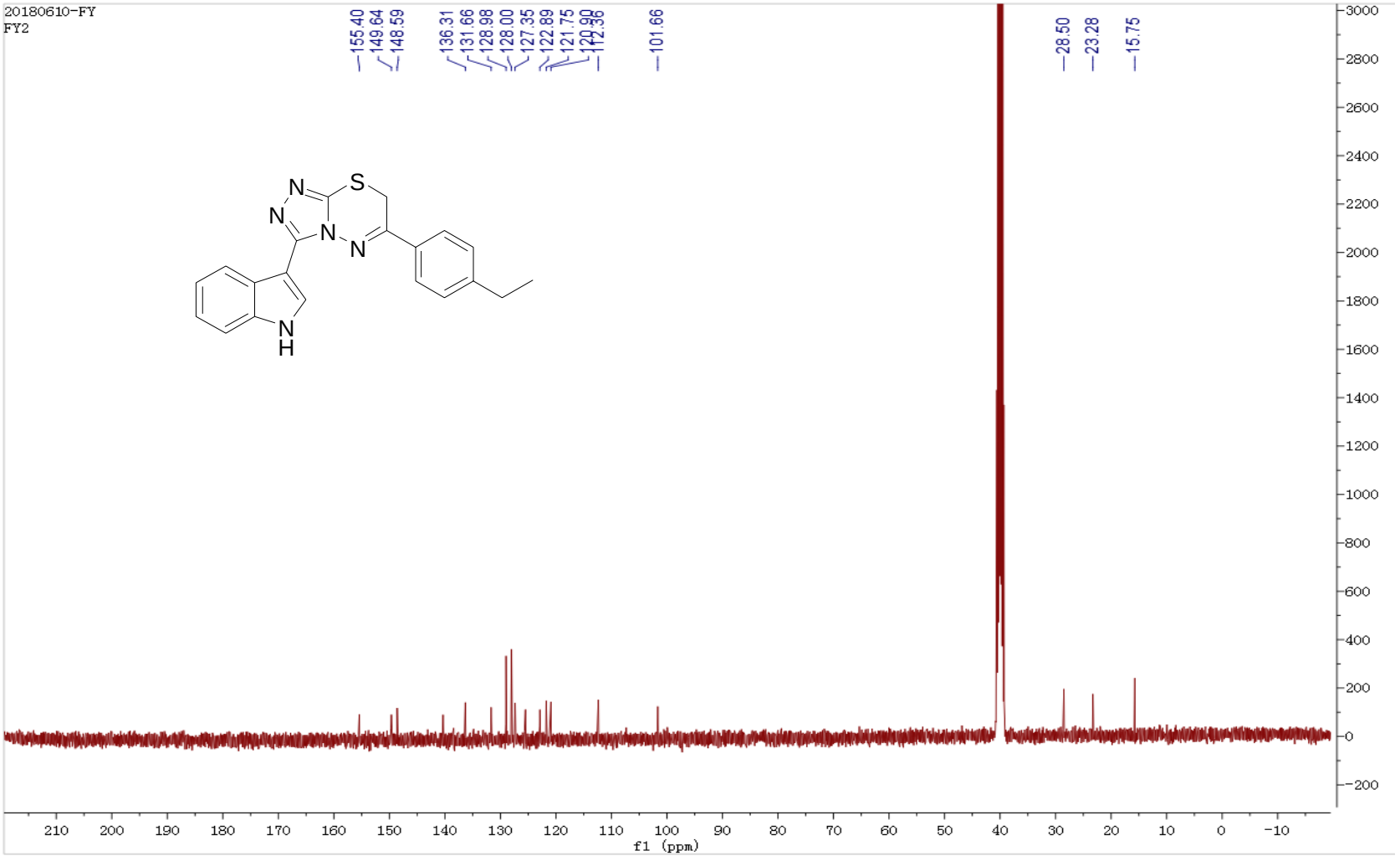

Figure 52. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **10g.**

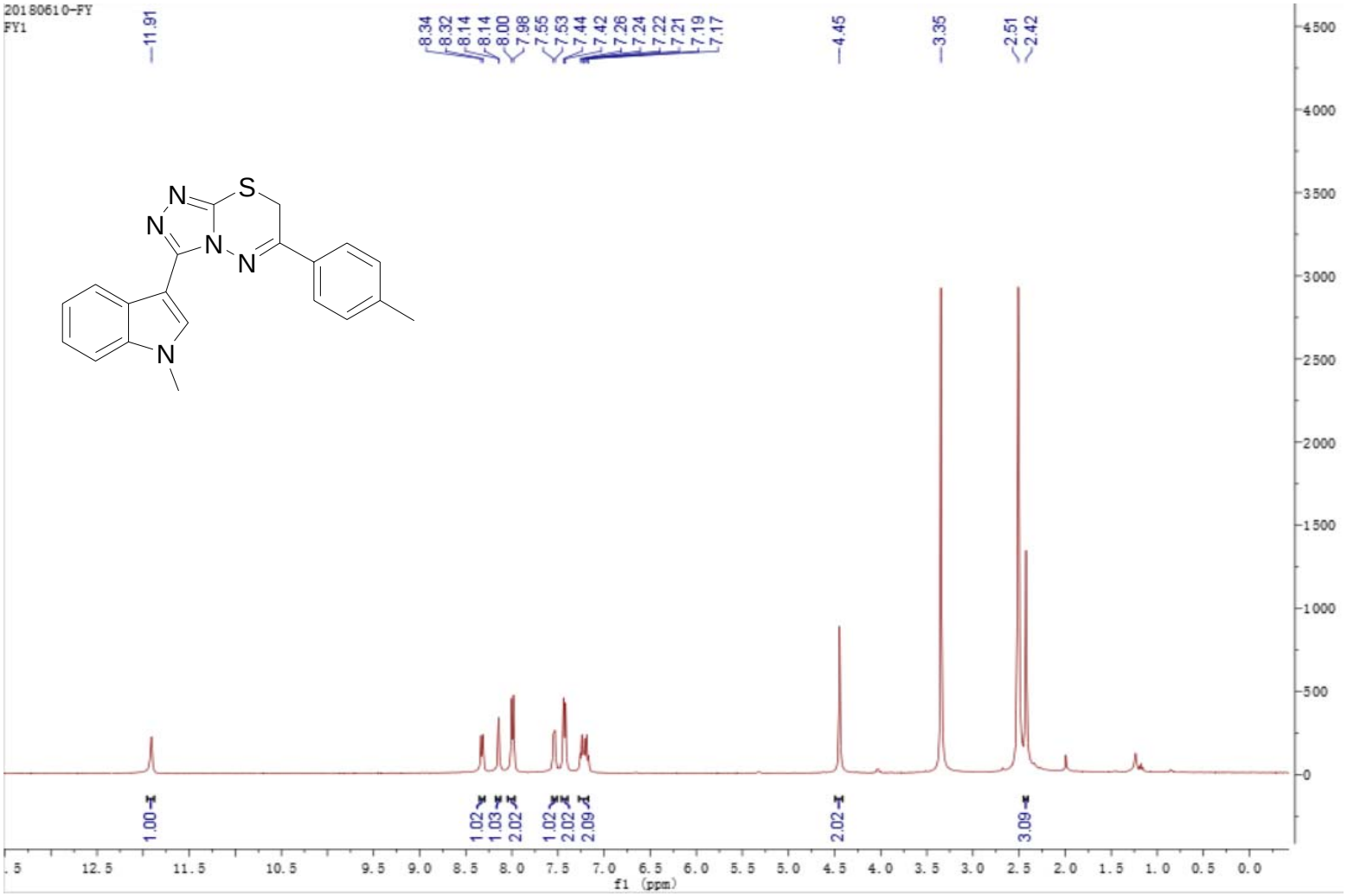

Figure 53. ^{1}H NMR spectrum (400 MHz,$CDCl_3$) of compound **10h.**

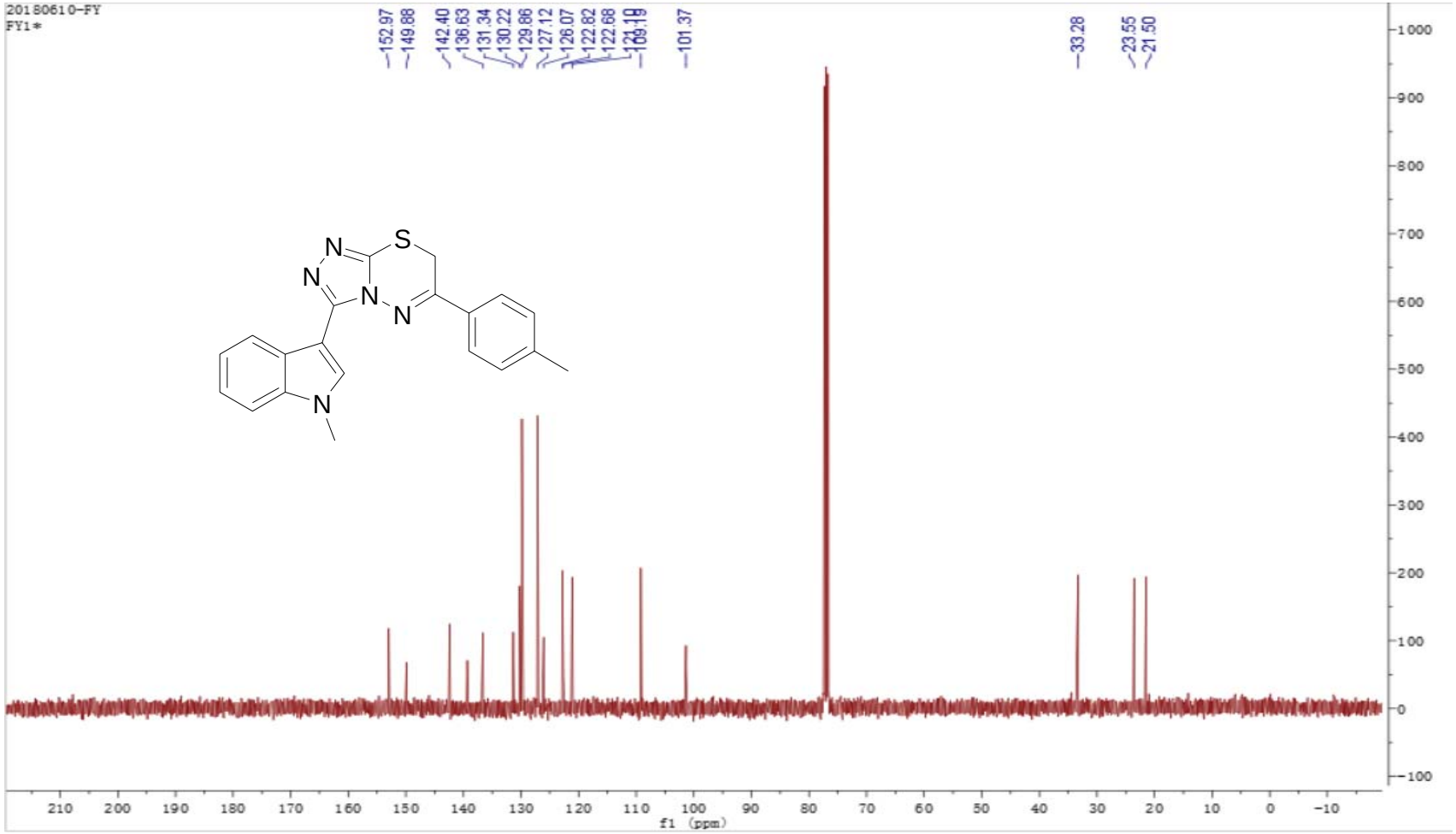

Figure 54. ^{13}C NMR spectrum (100 MHz,$CDCl_3$) of compound **10h.**

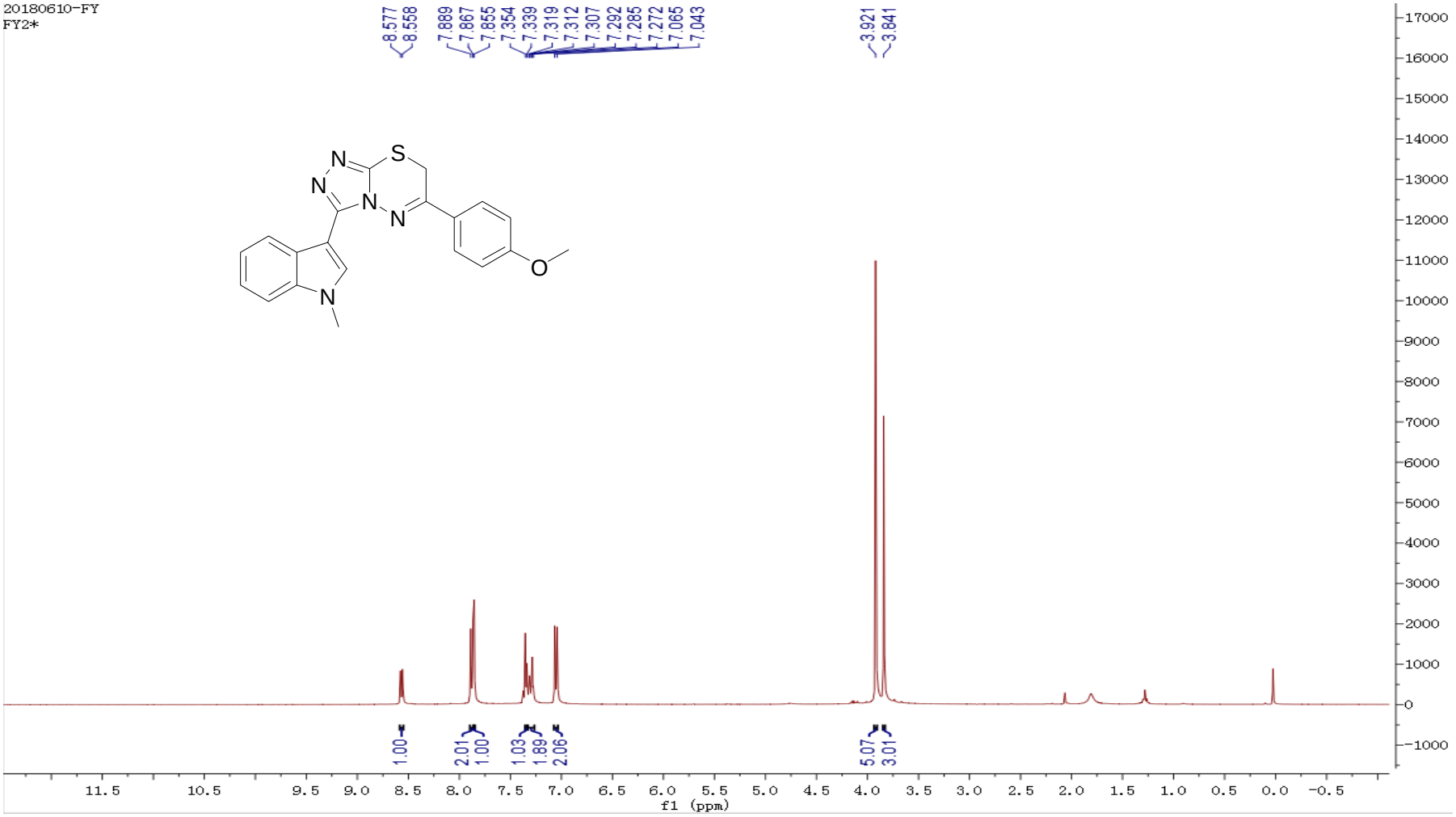

Figure 55. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of compound **10i.**

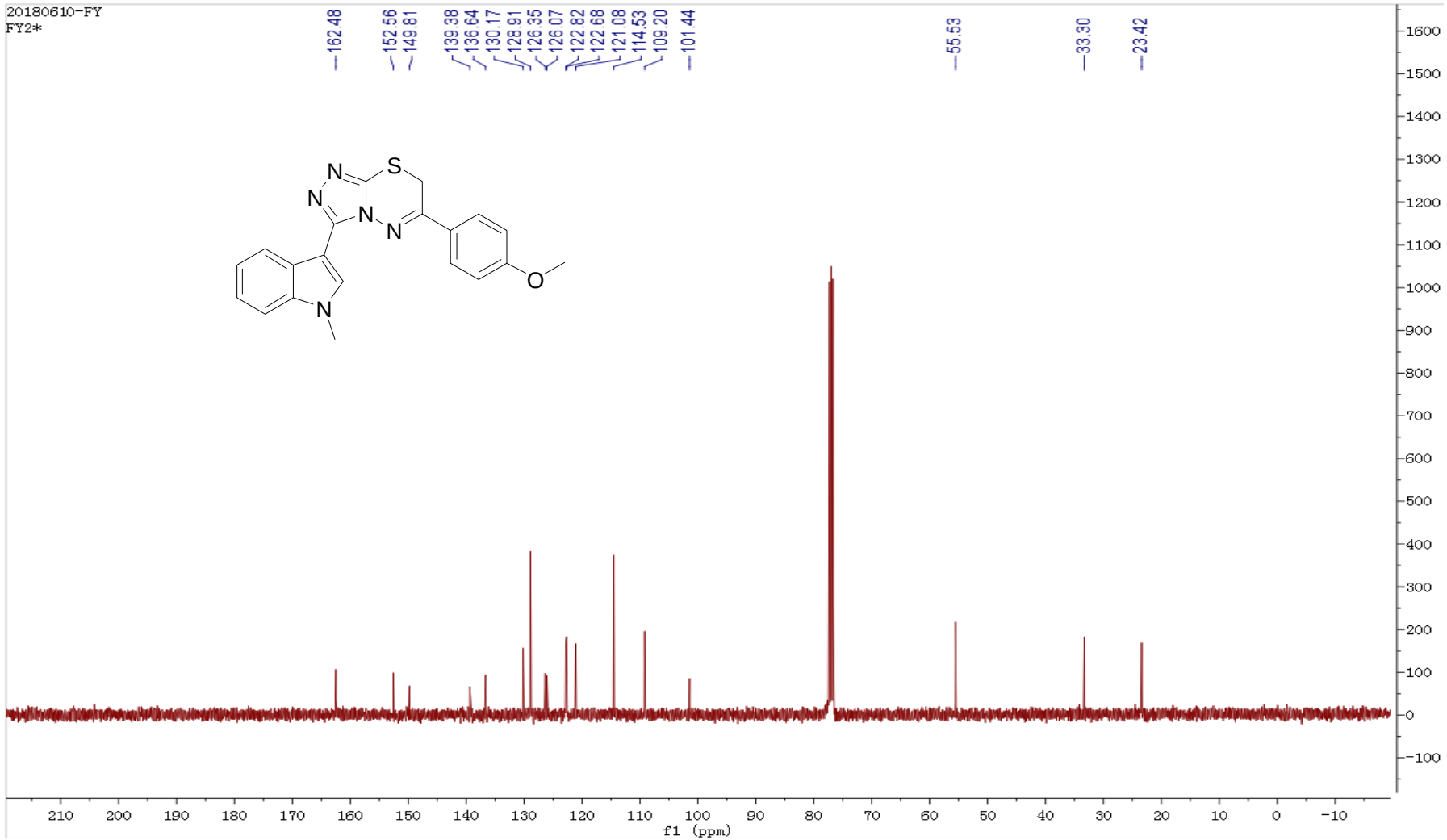

Figure 56. ^{13}C NMR spectrum (100 MHz,$CDCl_3$) of compound **10i.**

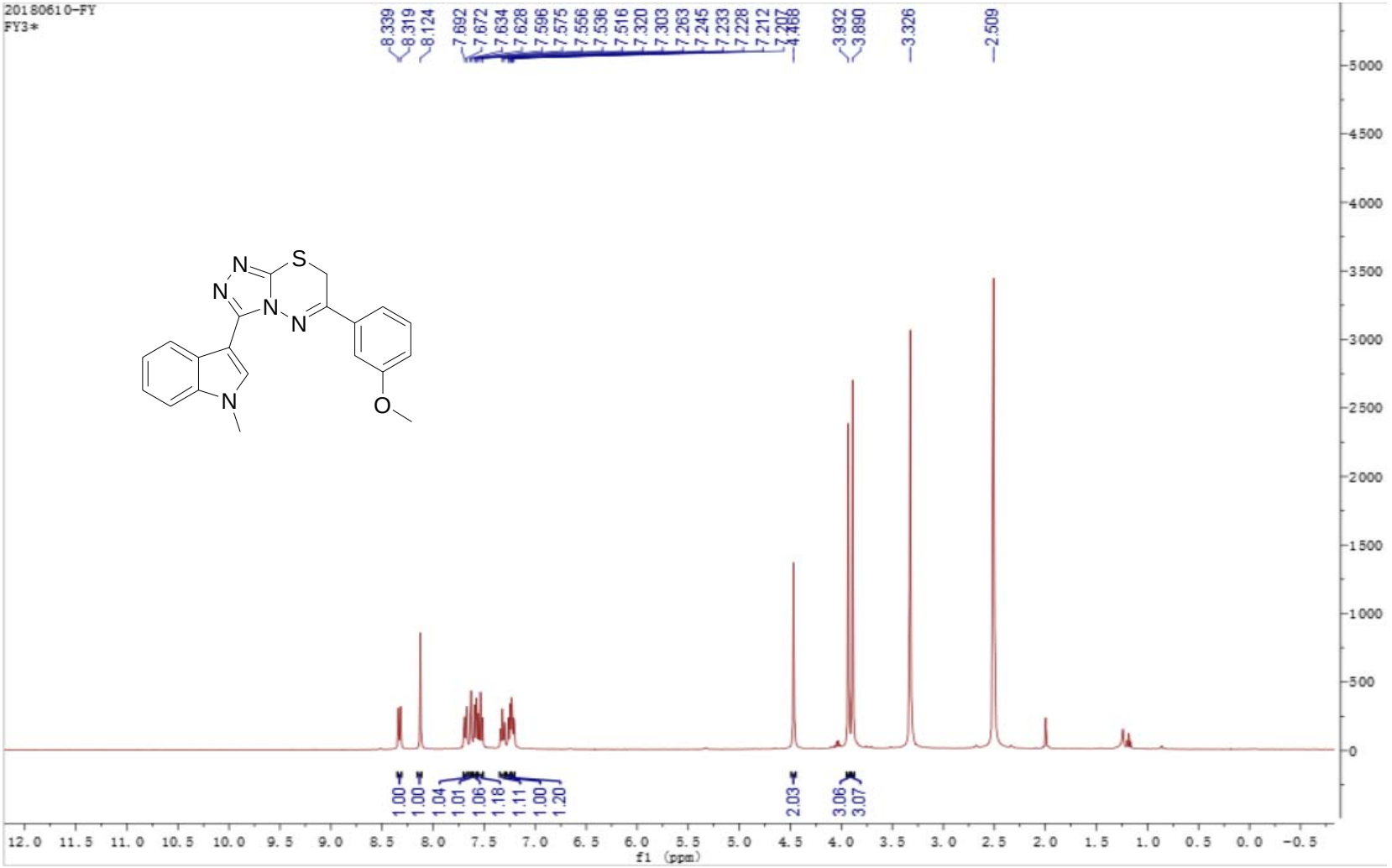

Figure 57. ^{1}H NMR spectrum (400 MHz,$CDCl_3$) of compound **10j.**

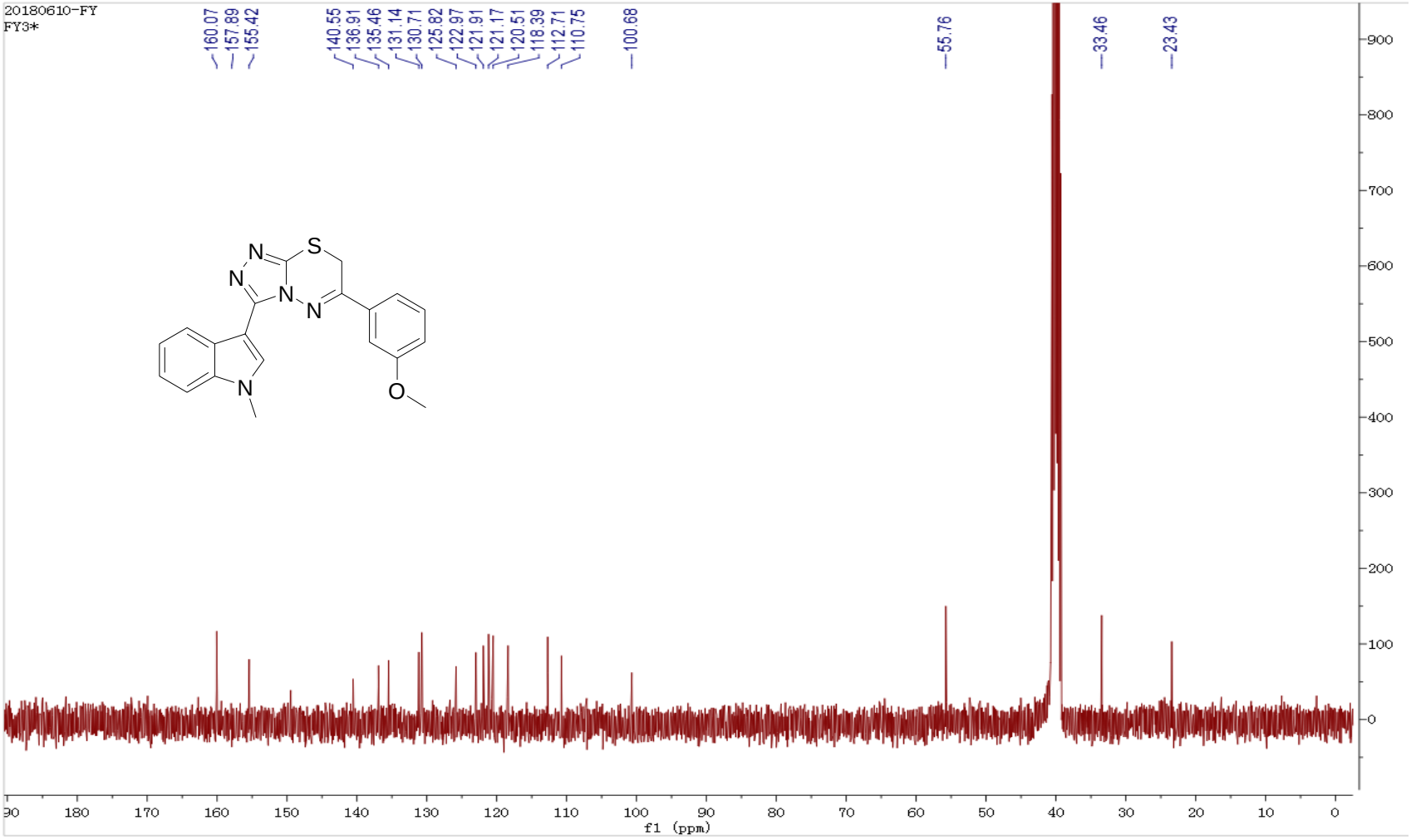

Figure 58. ^{13}C NMR spectrum (100 MHz,$CDCl_3$) of compound **10j.**

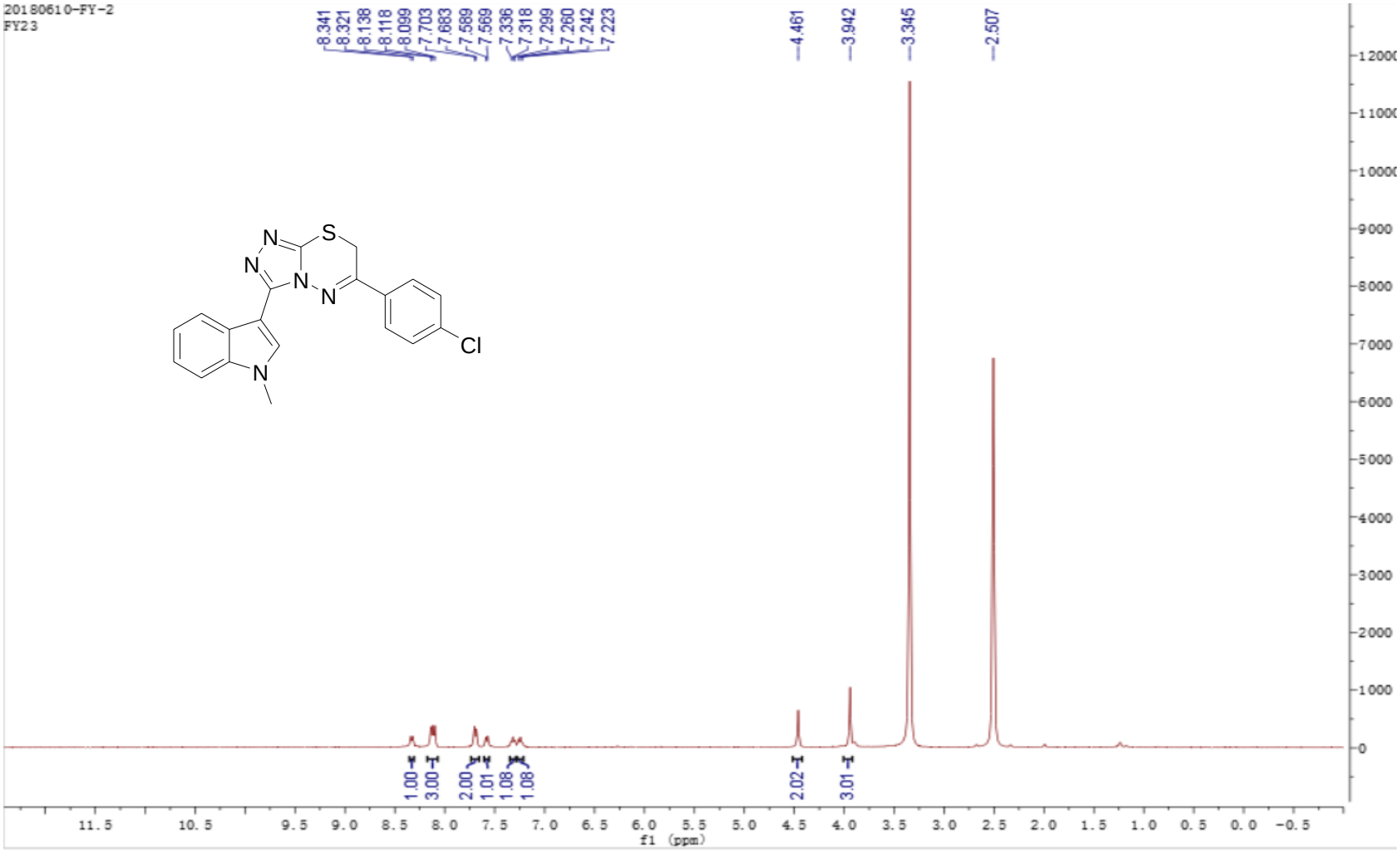

Figure 59. ^{1}H NMR spectrum (400 MHz,$CDCl_3$) of compound **10k.**

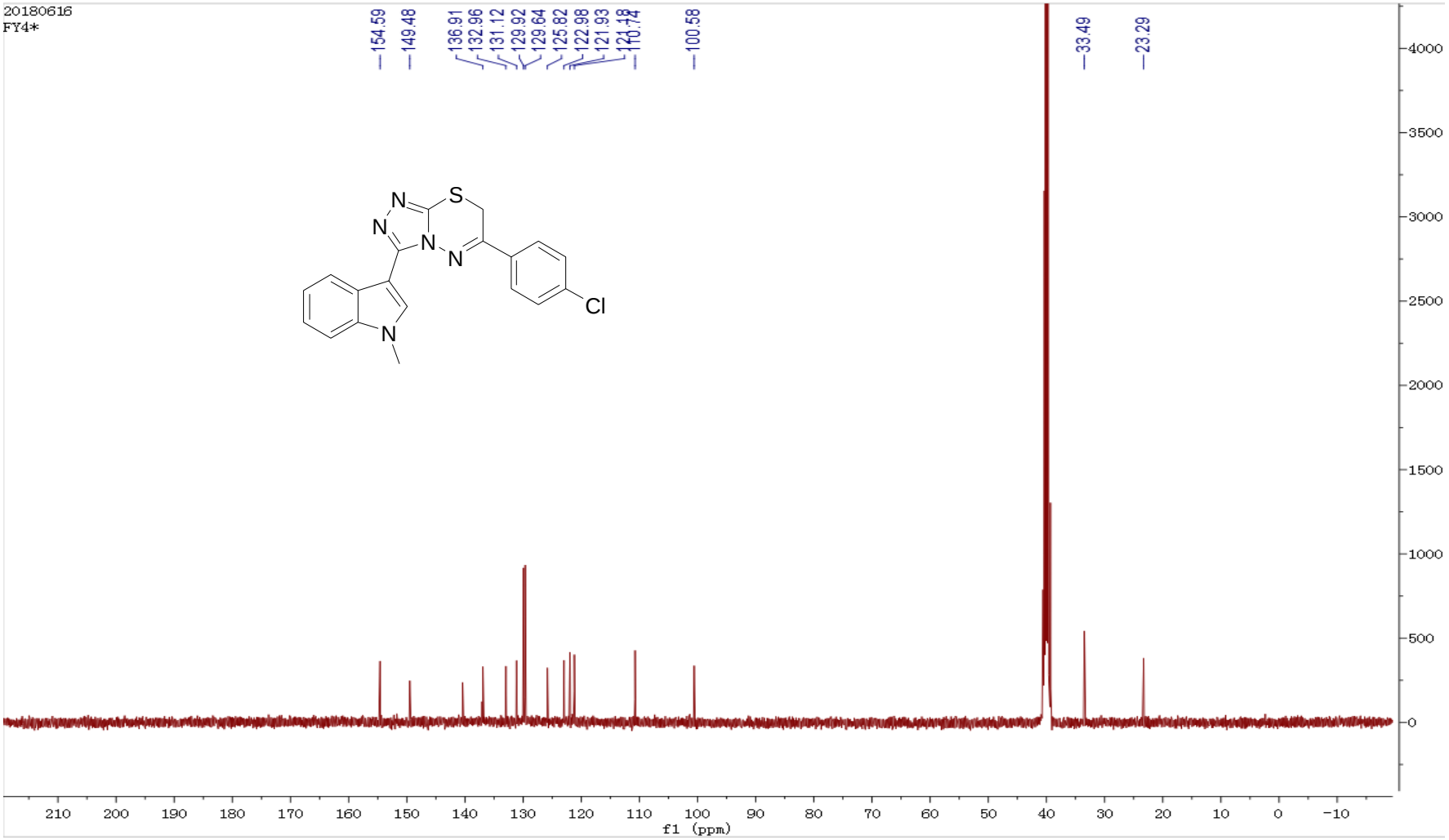

Figure 60. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **10k.**

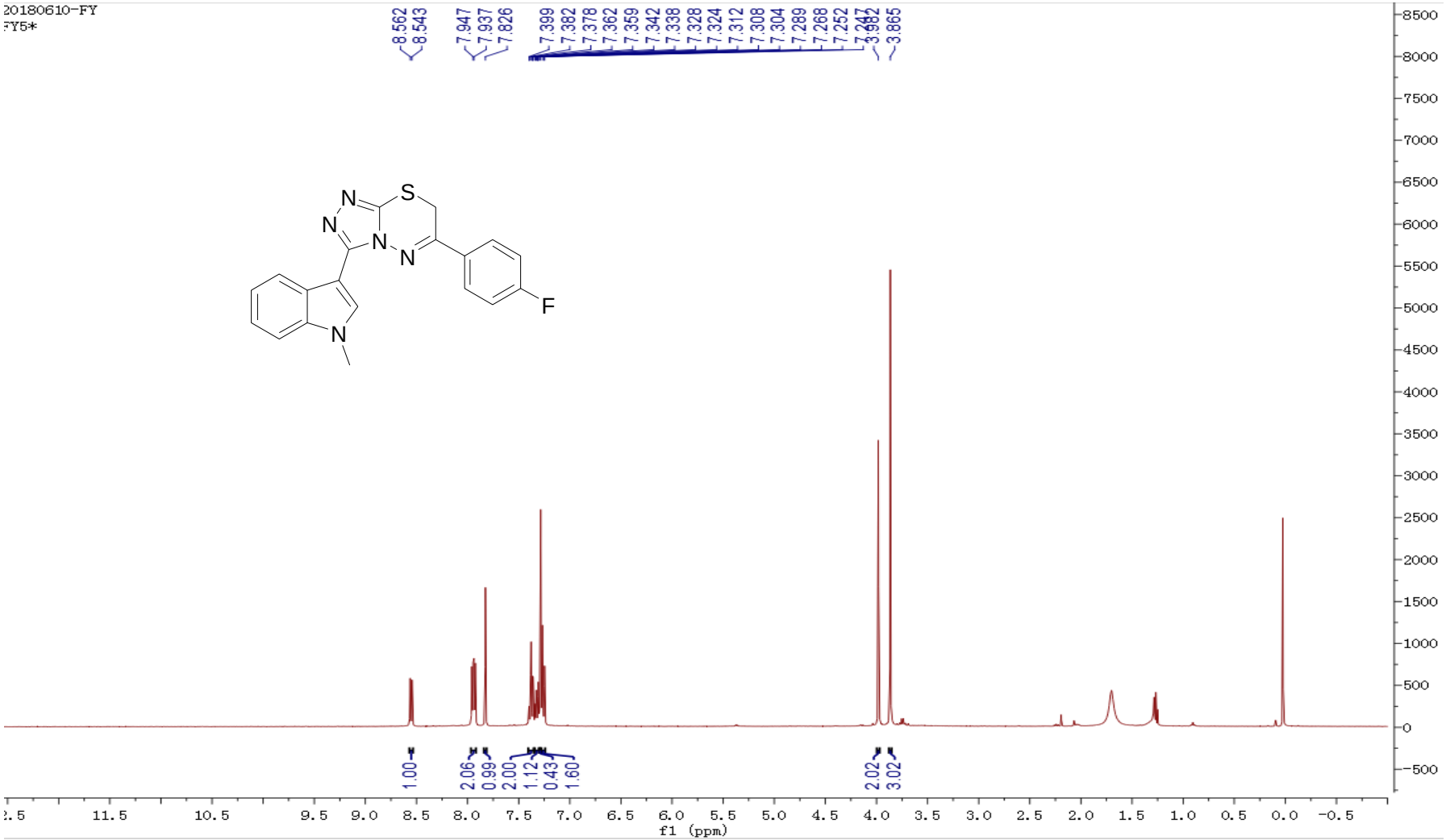

Figure 61. ^{1}H NMR spectrum (400 MHz,$CDCl_3$) of compound **10l.**

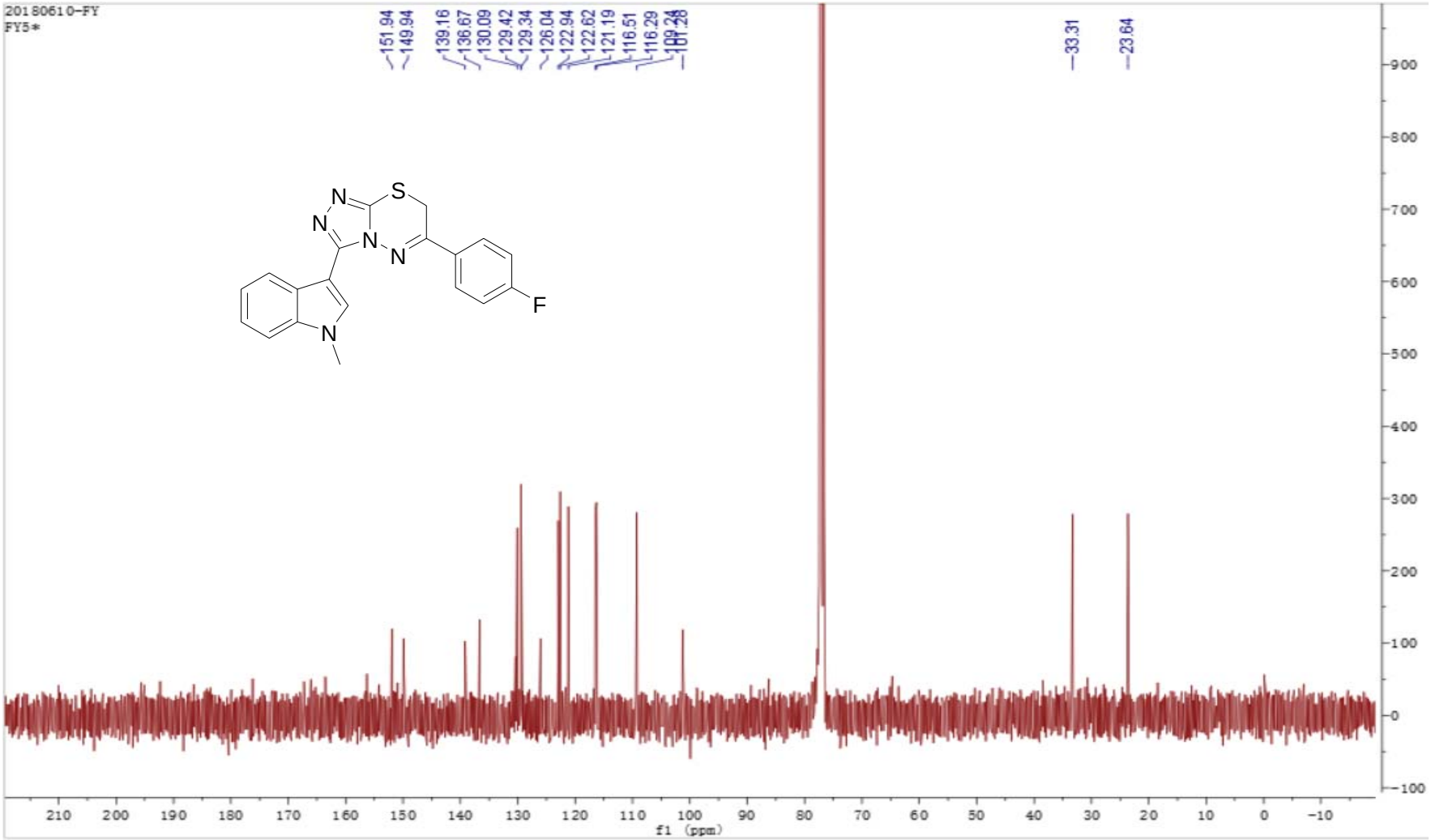

Figure 62. ^{13}C NMR spectrum (100 MHz,$CDCl_3$) of compound **10l.**

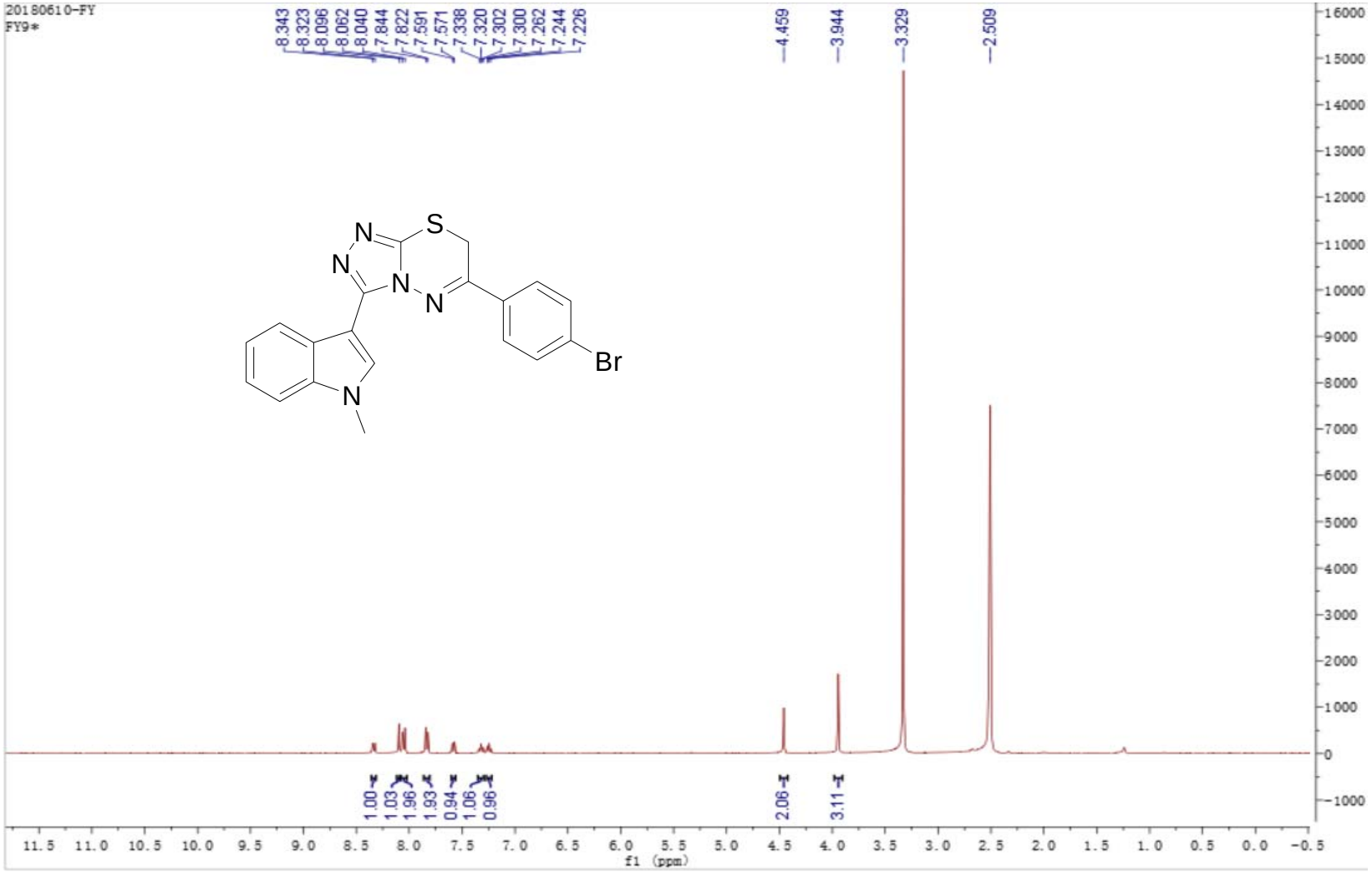

Figure 63. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **10m.**

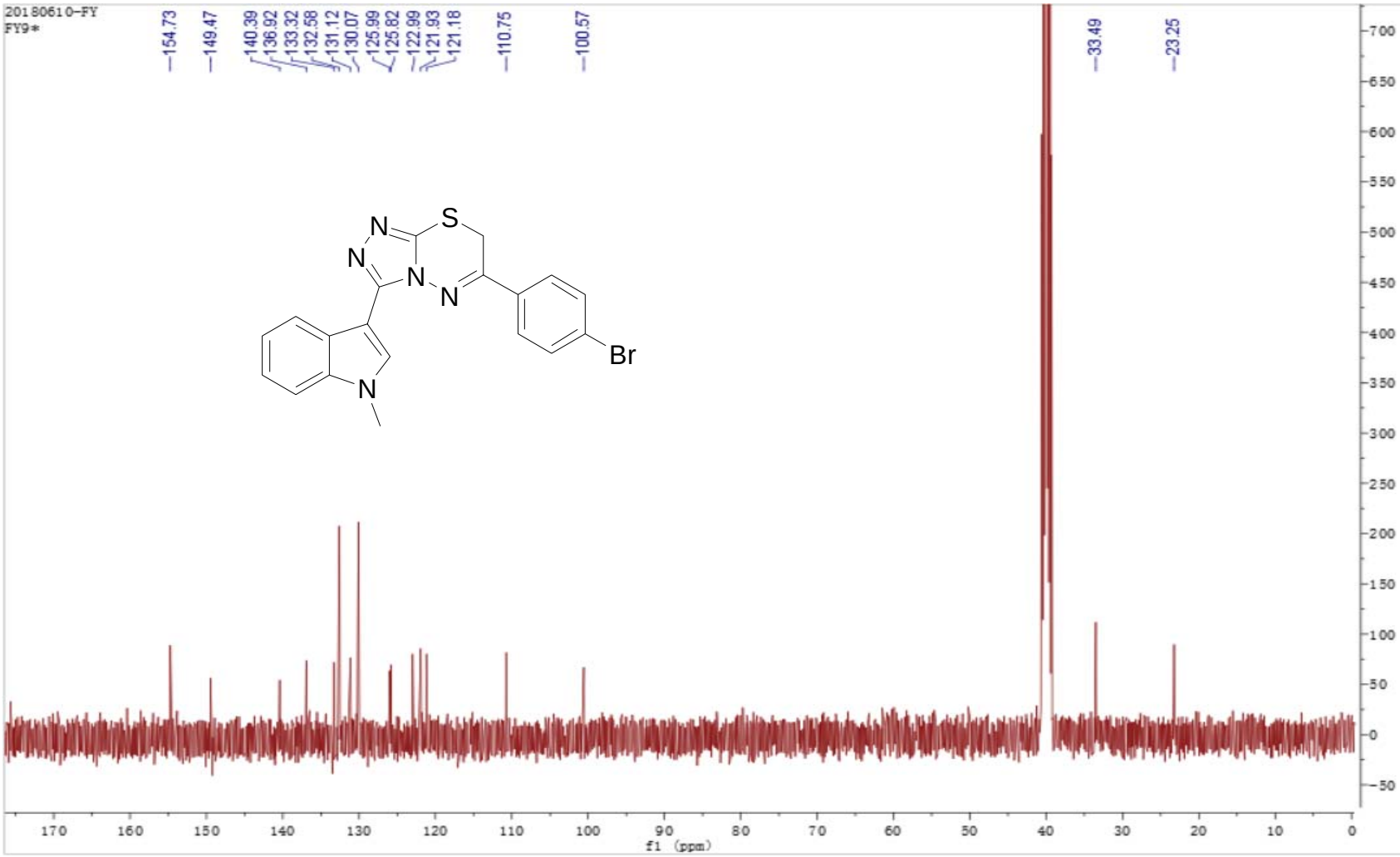

Figure 64. ^{13}C NMR spectrum (100 MHz,$CDCl_3$) of compound **10m.**

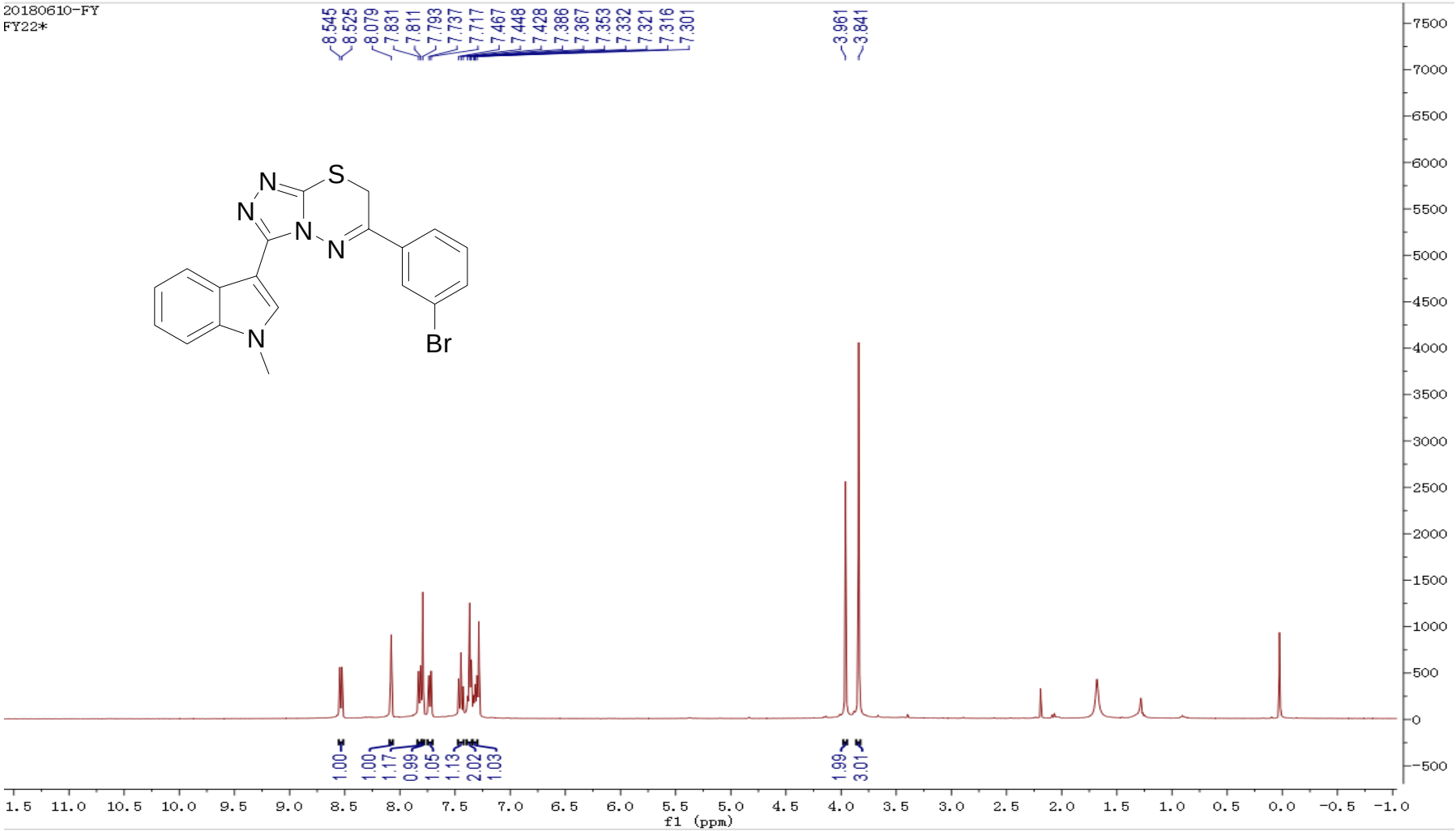

Figure 65. ^{1}H NMR spectrum (400 MHz,$CDCl_3$) of compound **10n.**

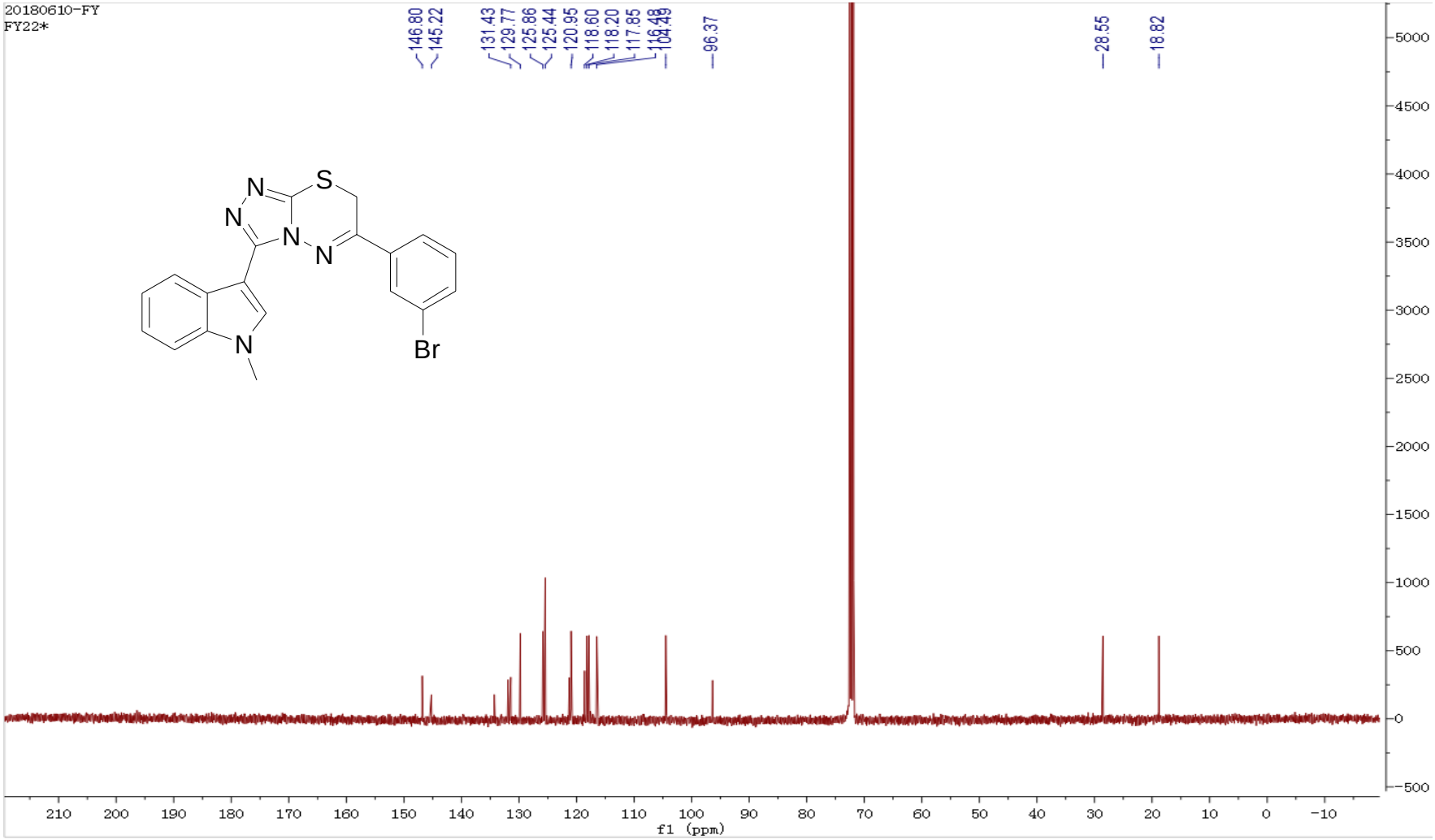

Figure 66. ^{13}C NMR spectrum (100 MHz,$CDCl_3$) of compound **10n.**

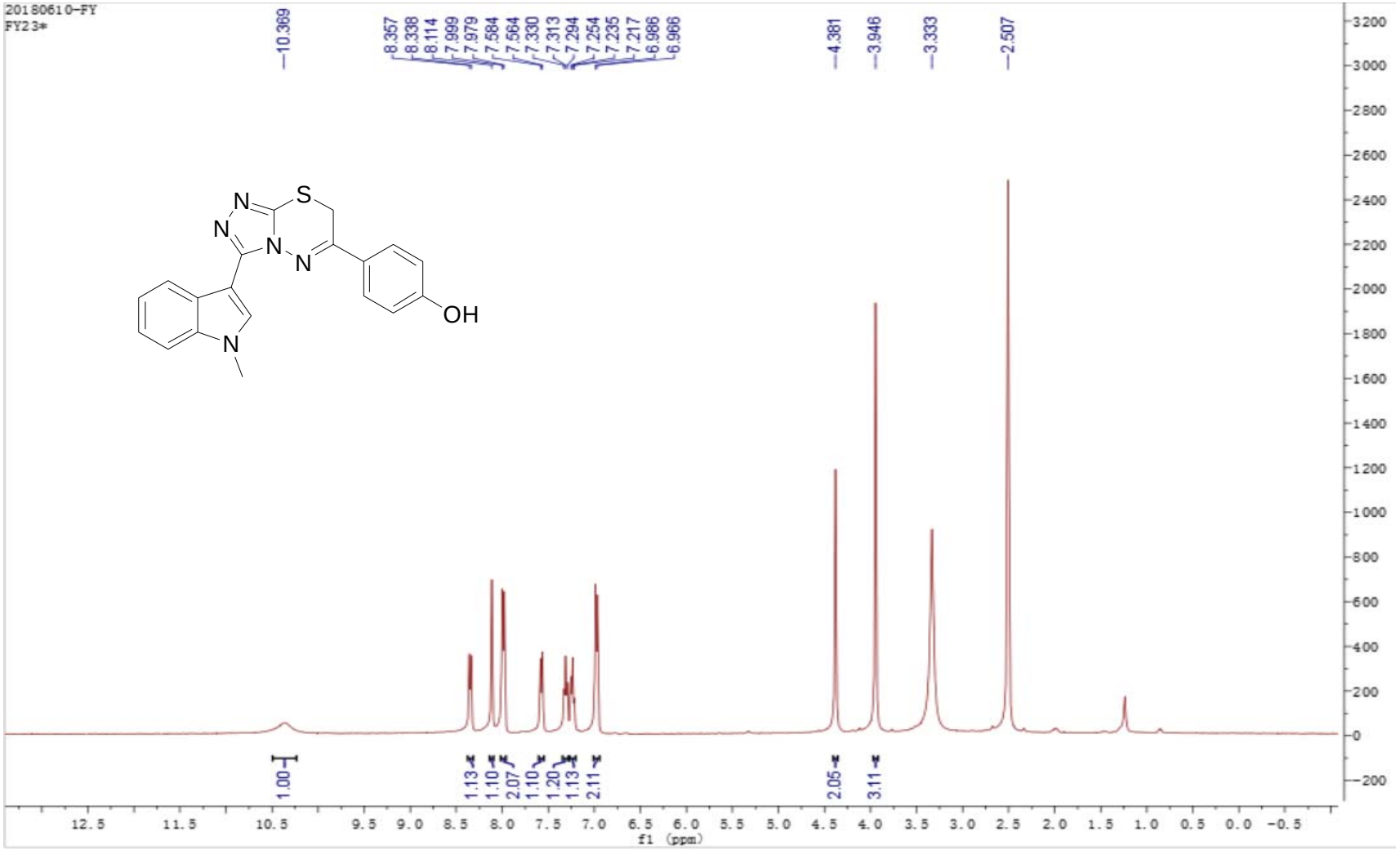

Figure 67. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **10o.**

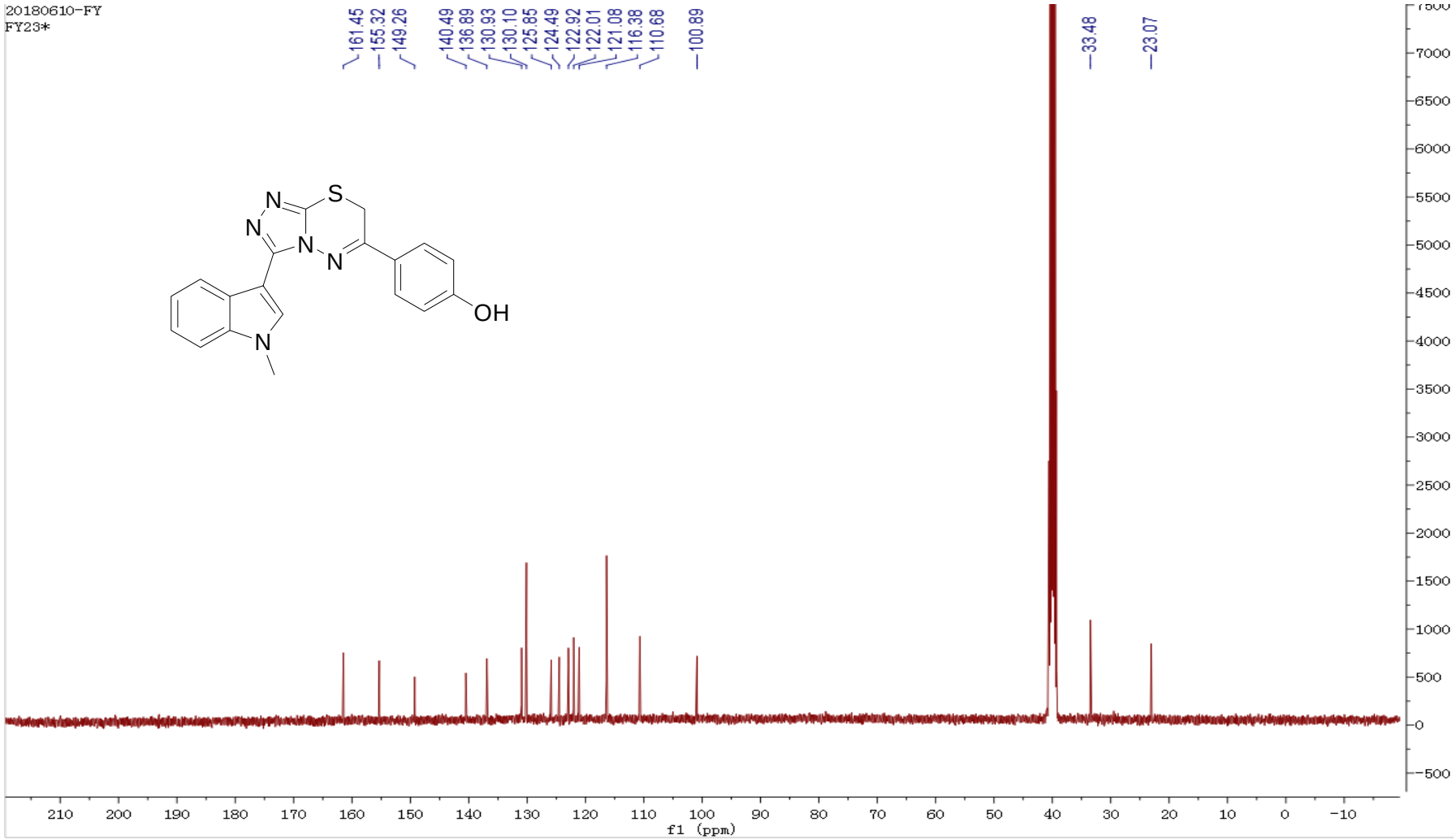

Figure 68. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **10o.**

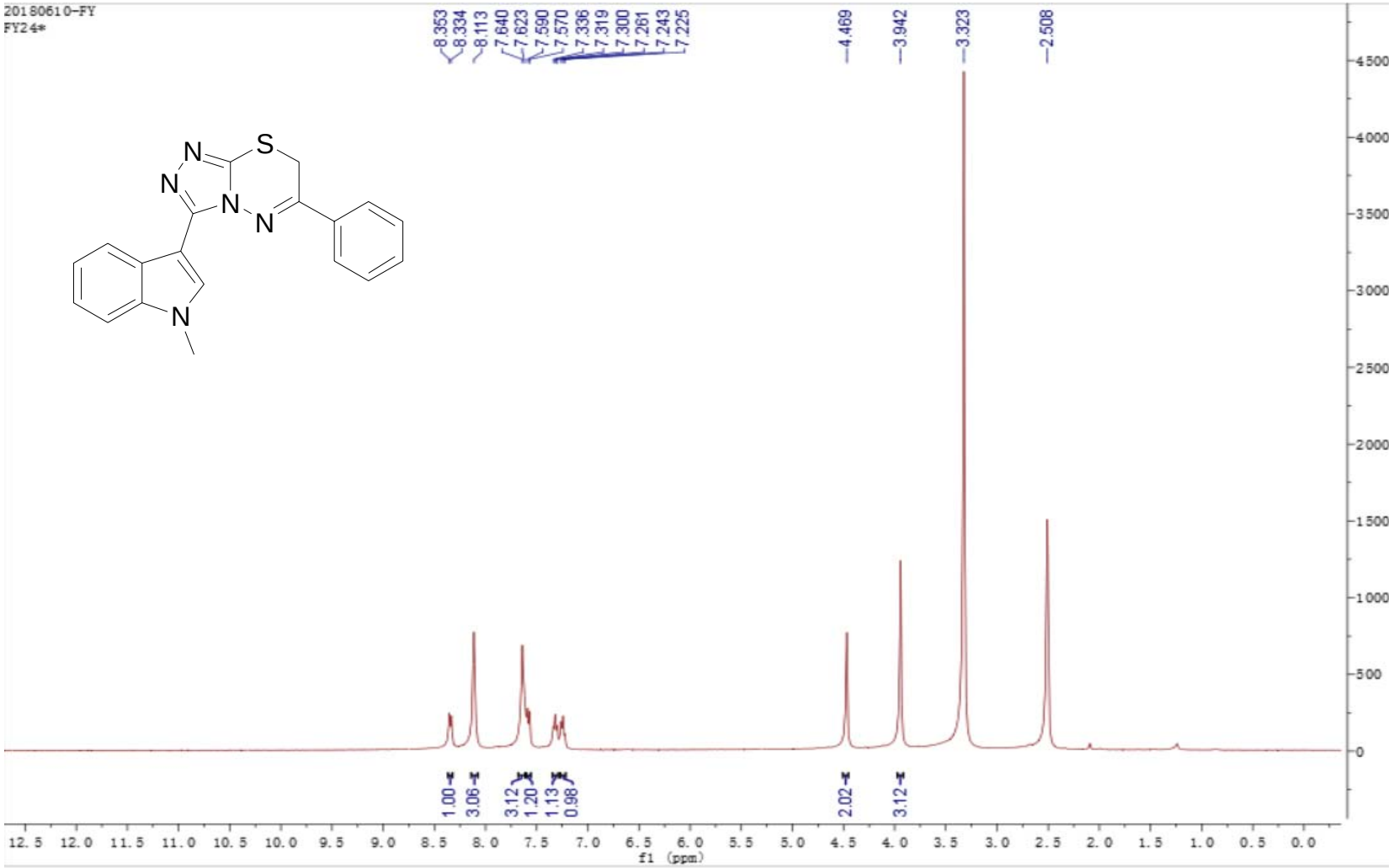

Figure 69. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **10p.**

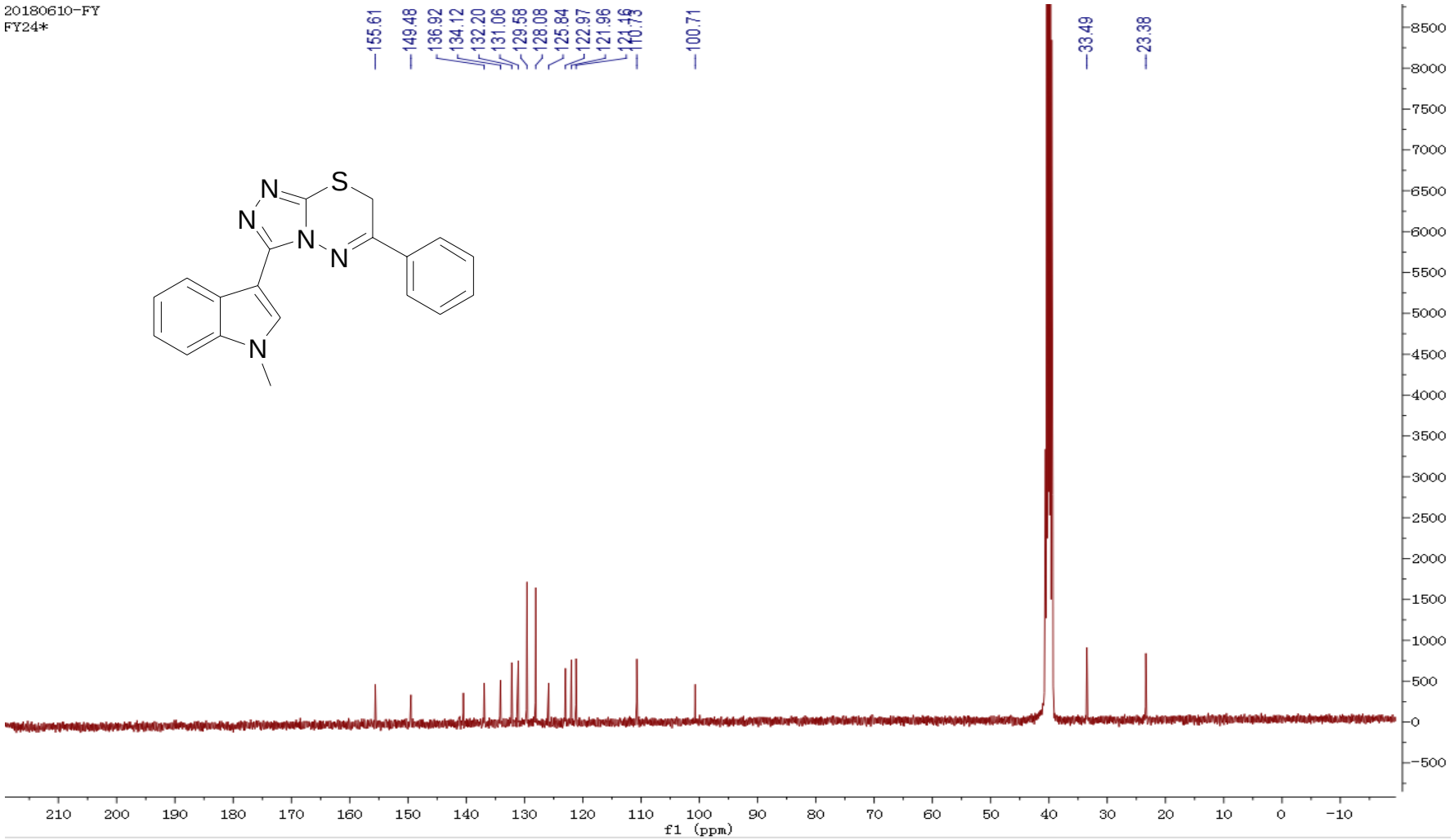

Figure 70. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **10p.**

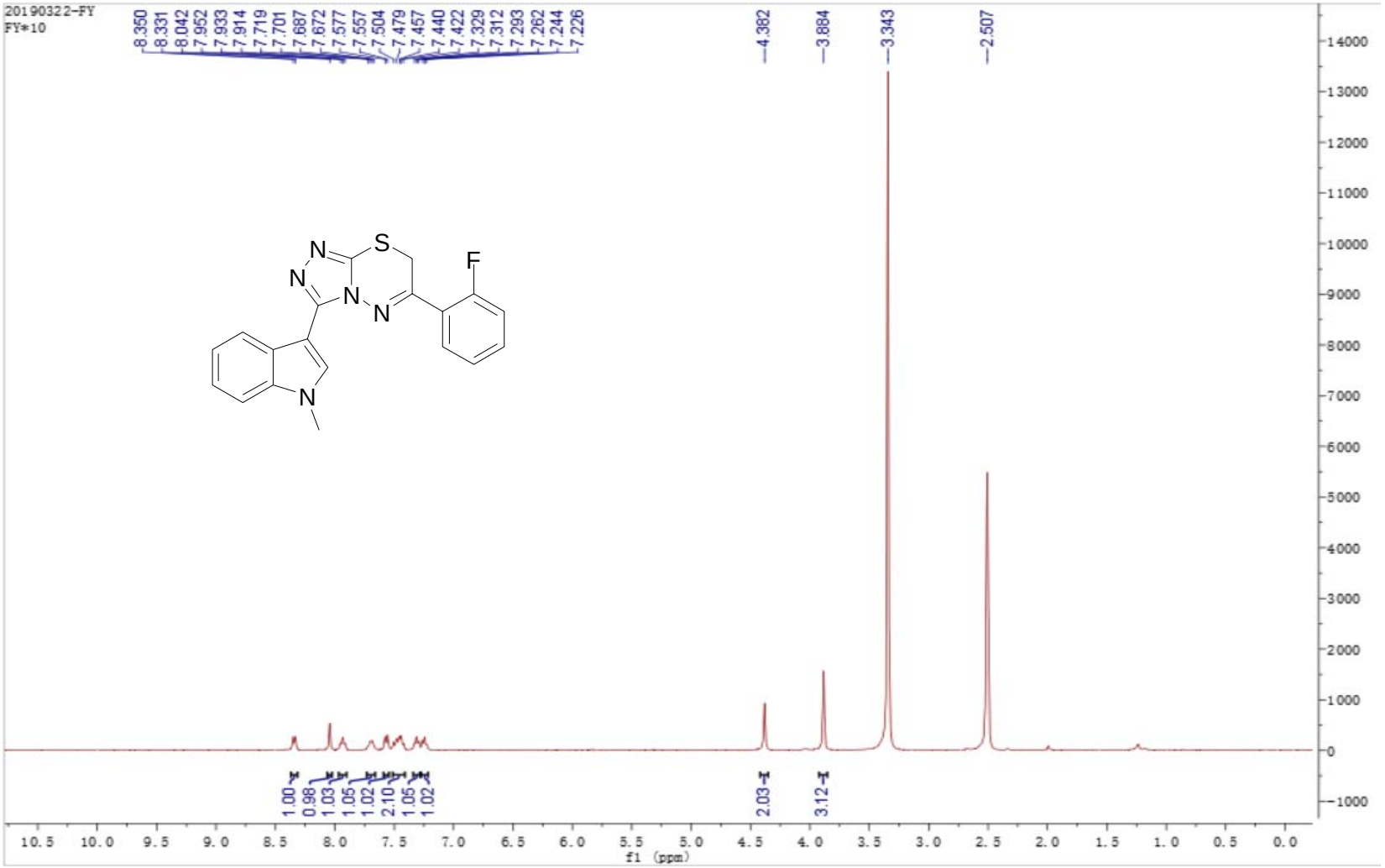

Figure 71. ^{1}H NMR spectrum (400 MHz, DMSO-d_6) of compound **10q.**

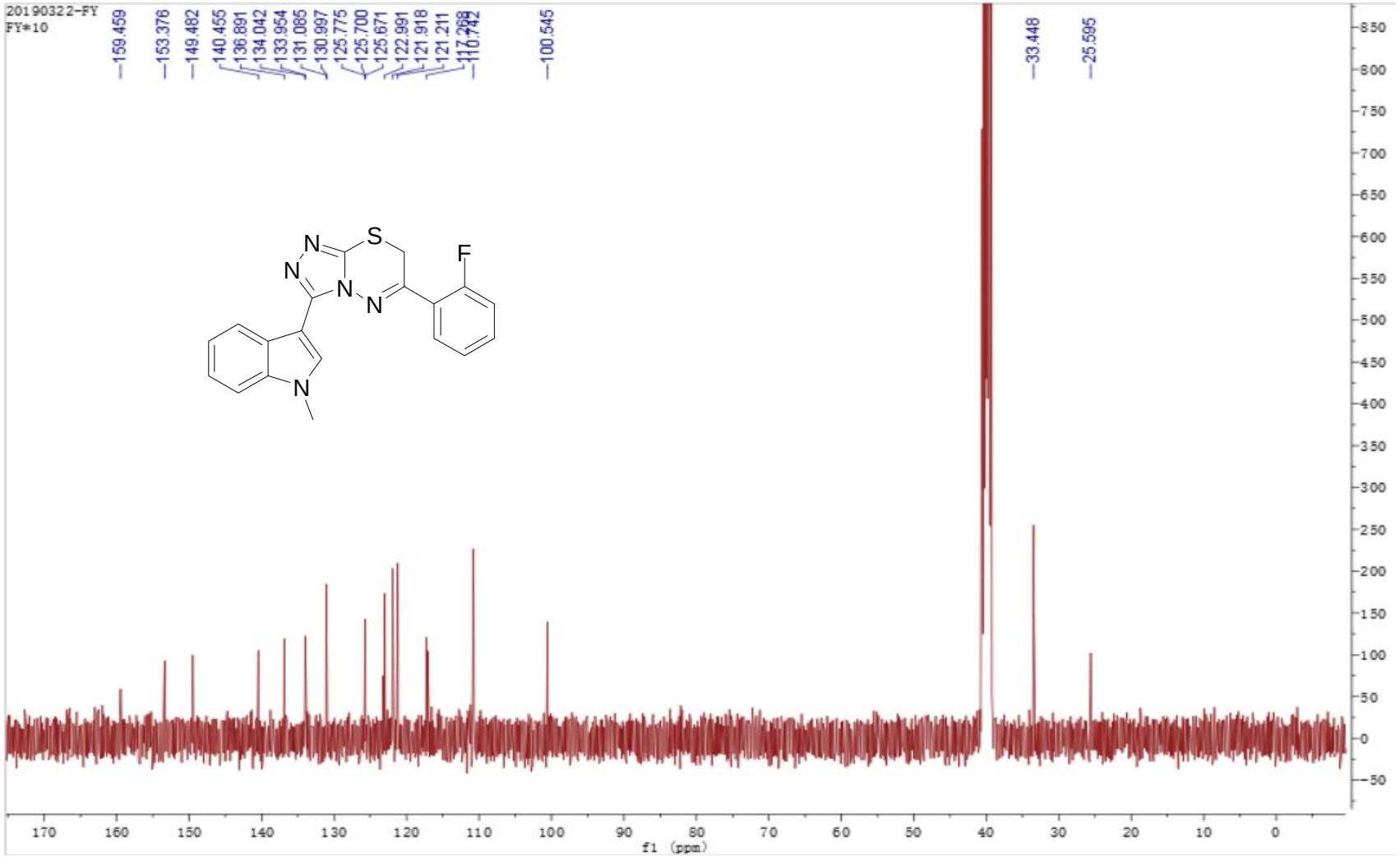

Figure 72. ^{13}C NMR spectrum (100 MHz, DMSO-d_6) of compound **10q.**

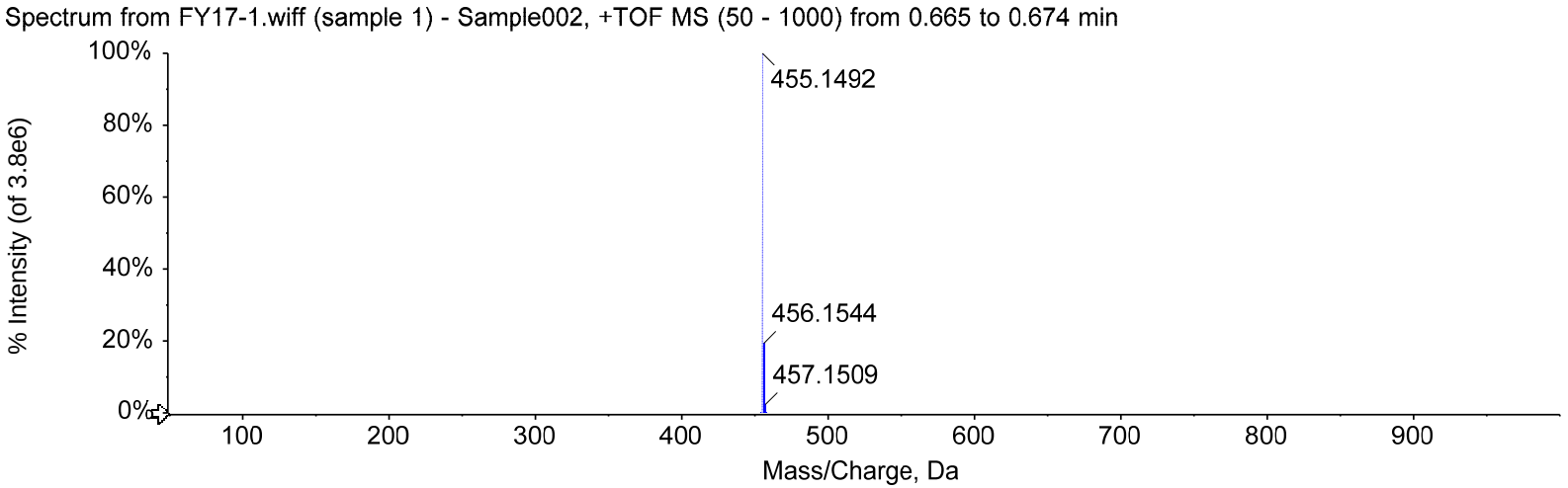

Figure 73. HRMS spectrum of compound **9a.**

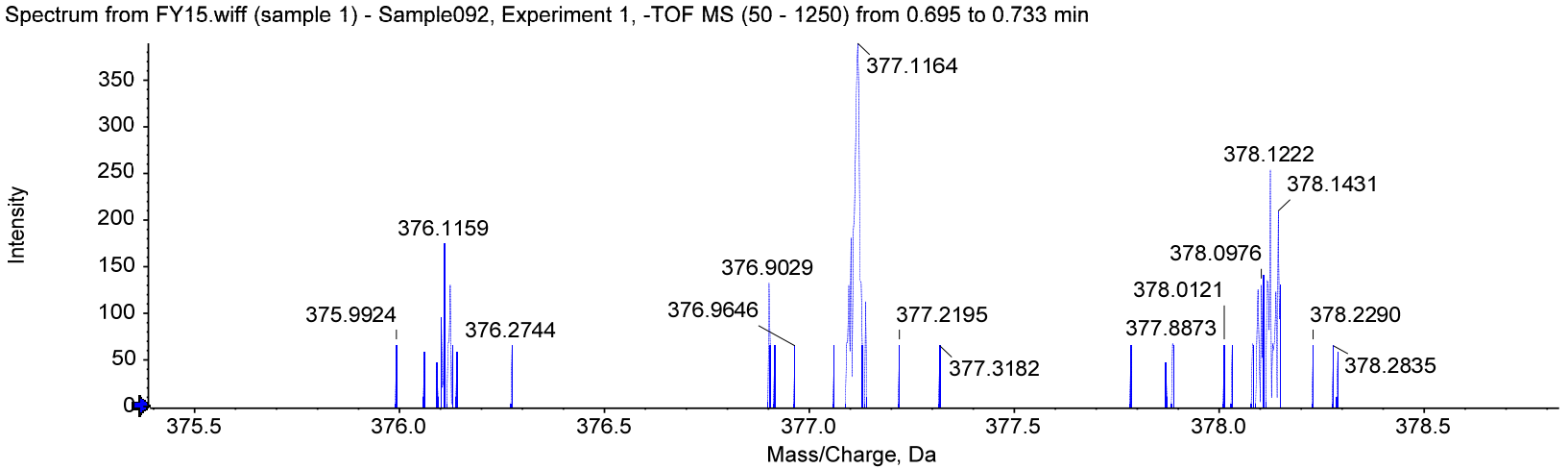

Figure 74. HRMS spectrum of compound **9b.**

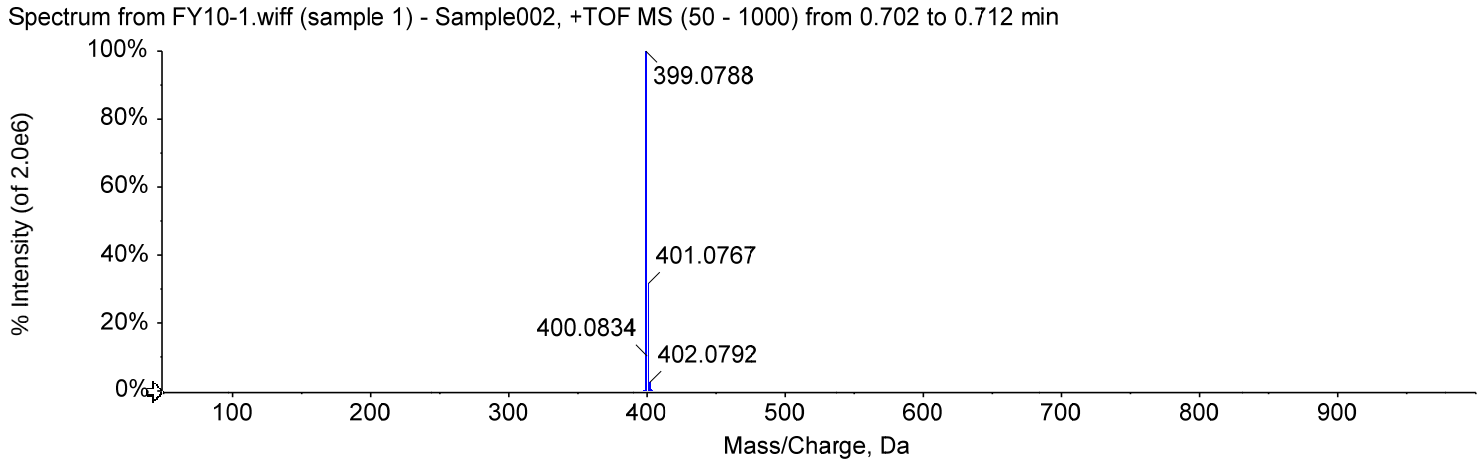

Figure 75. HRMS spectrum of compound **9c.**

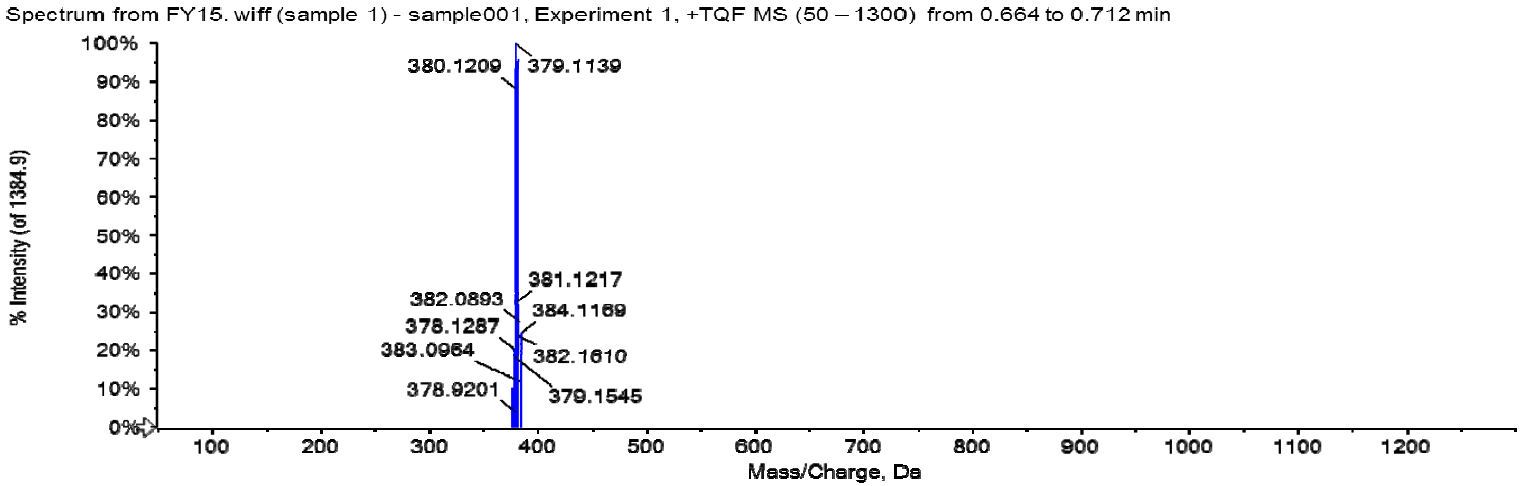

Figure 76. HRMS spectrum of compound **9d.**

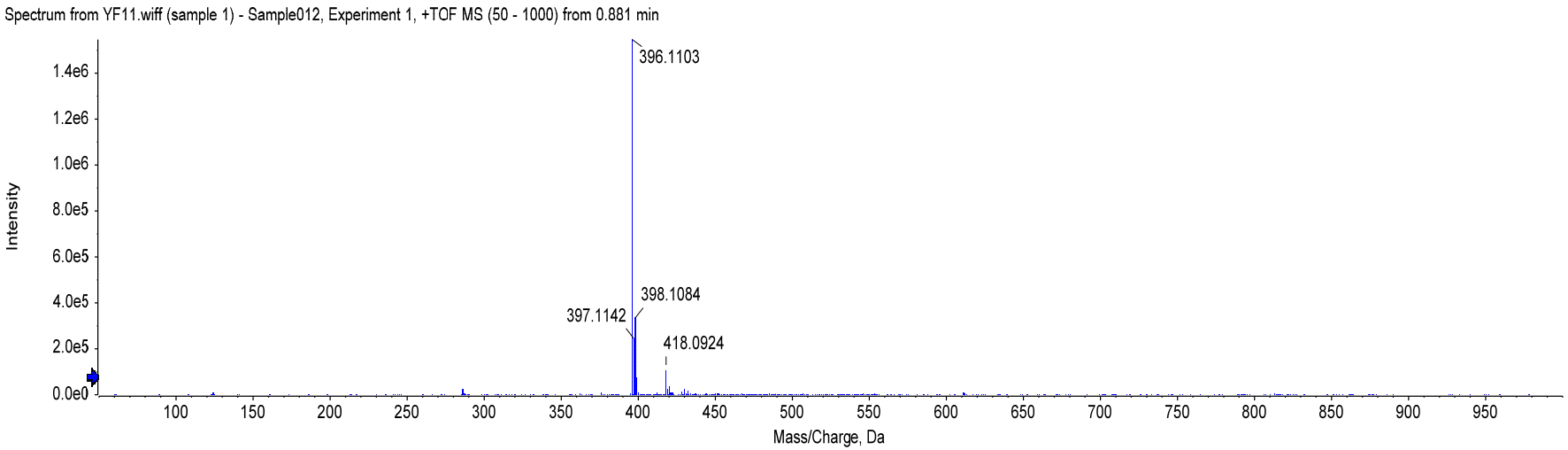

Figure 77. HRMS spectrum of compound **9e.**

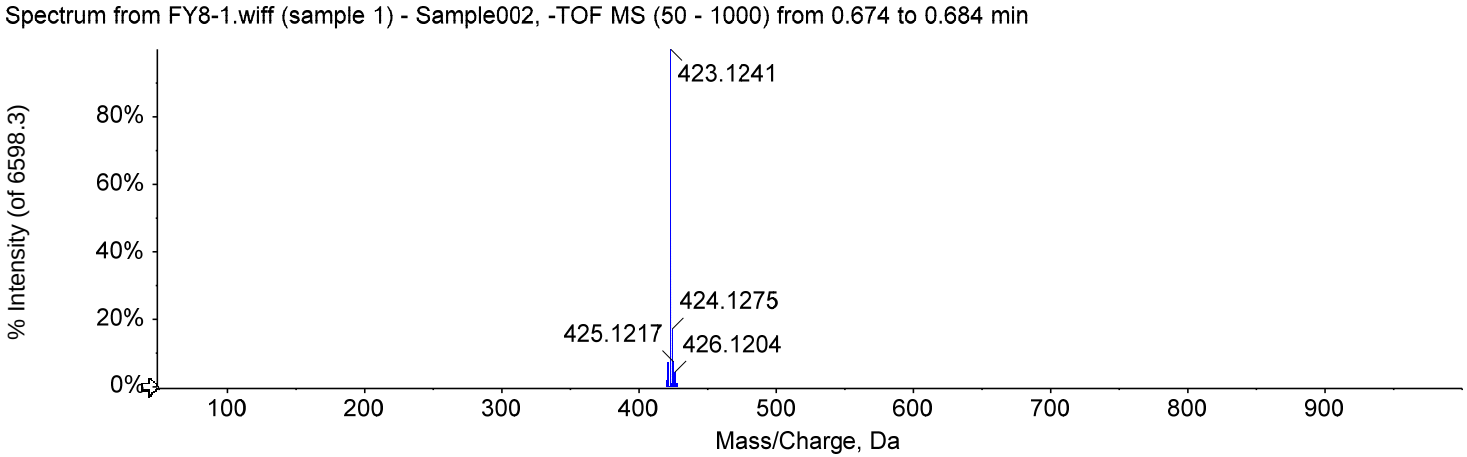

Figure 78. HRMS spectrum of compound **9f.**

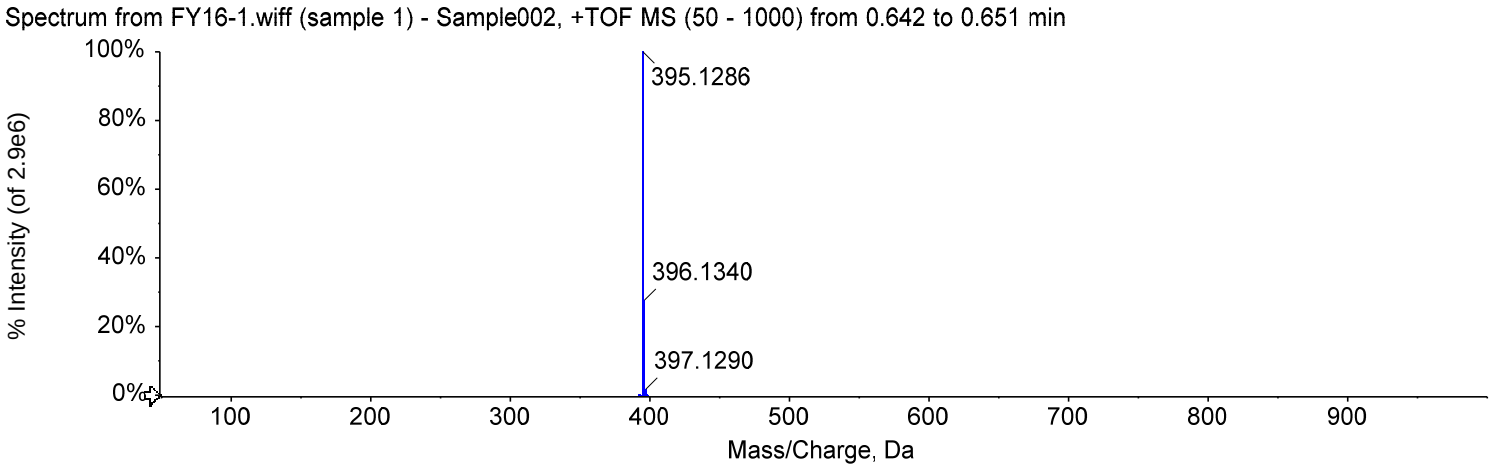

Figure 79. HRMS spectrum of compound **9g.**

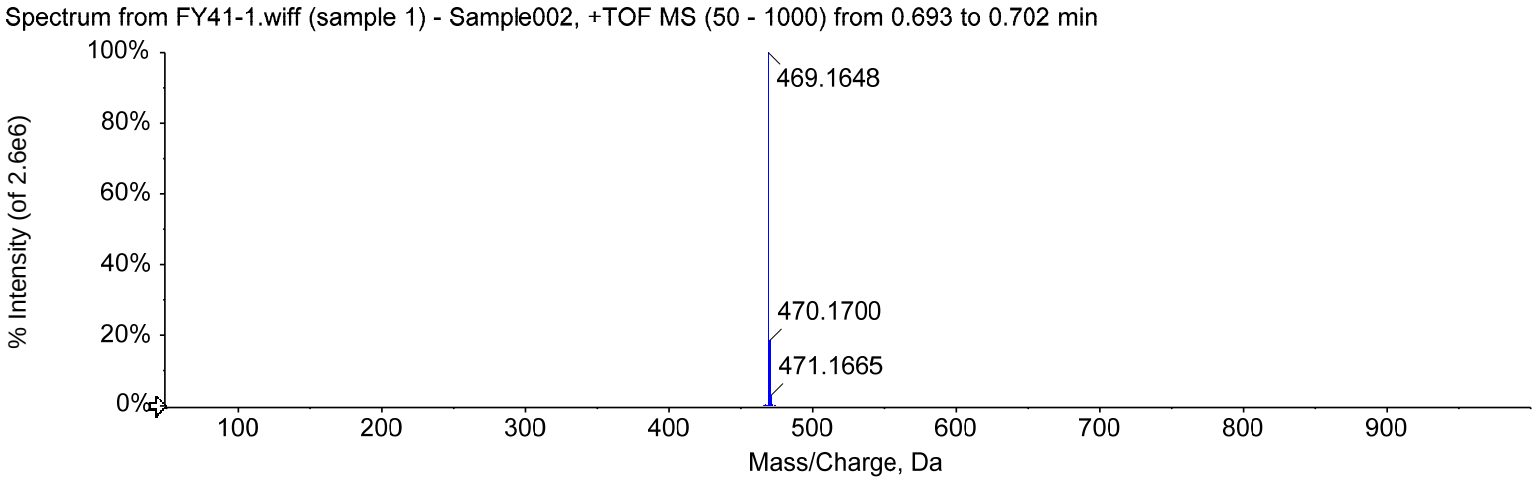

Figure 80. HRMS spectrum of compound **9h.**

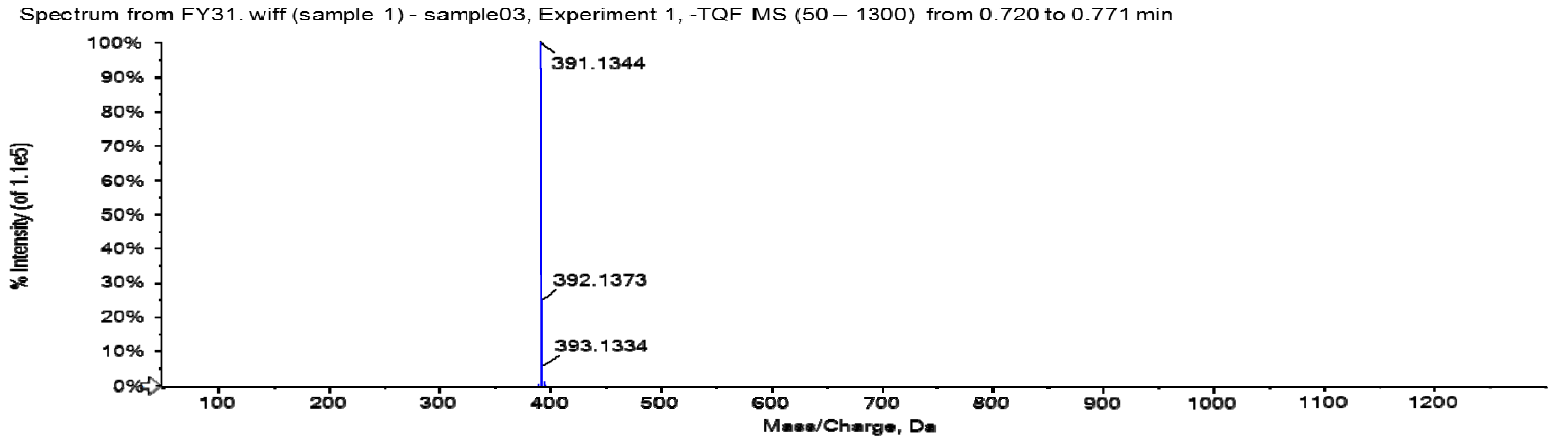

Figure 81. HRMS spectrum of compound **9i.**

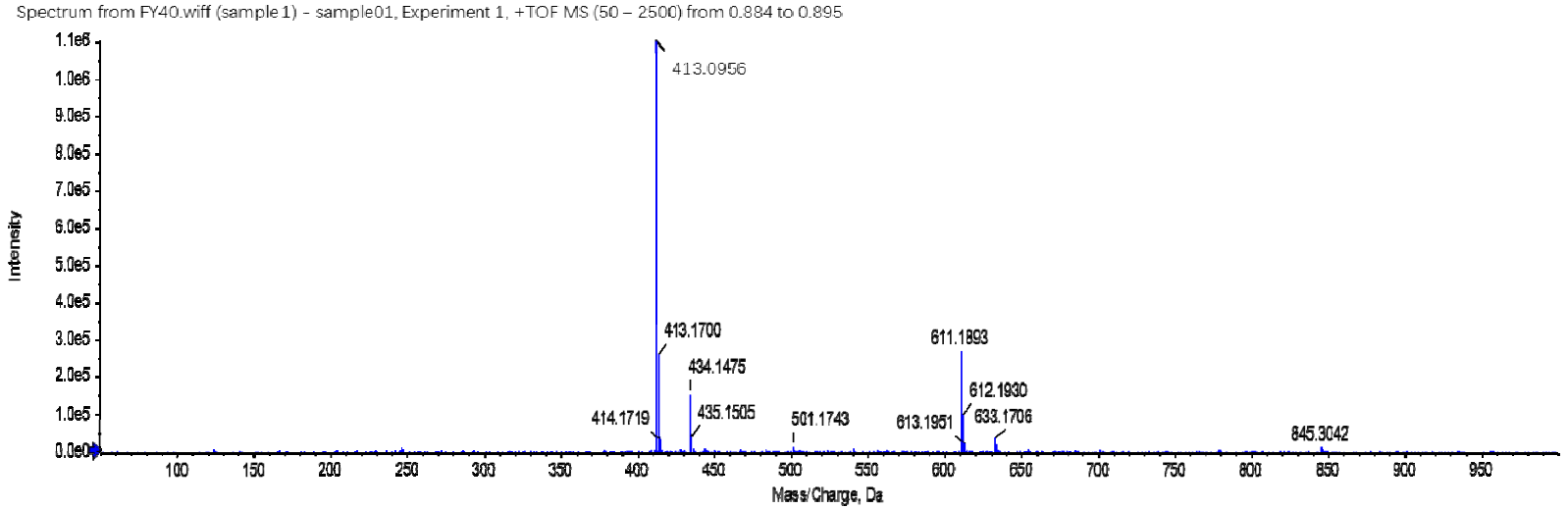

Figure 82. HRMS spectrum of compound **9j.**

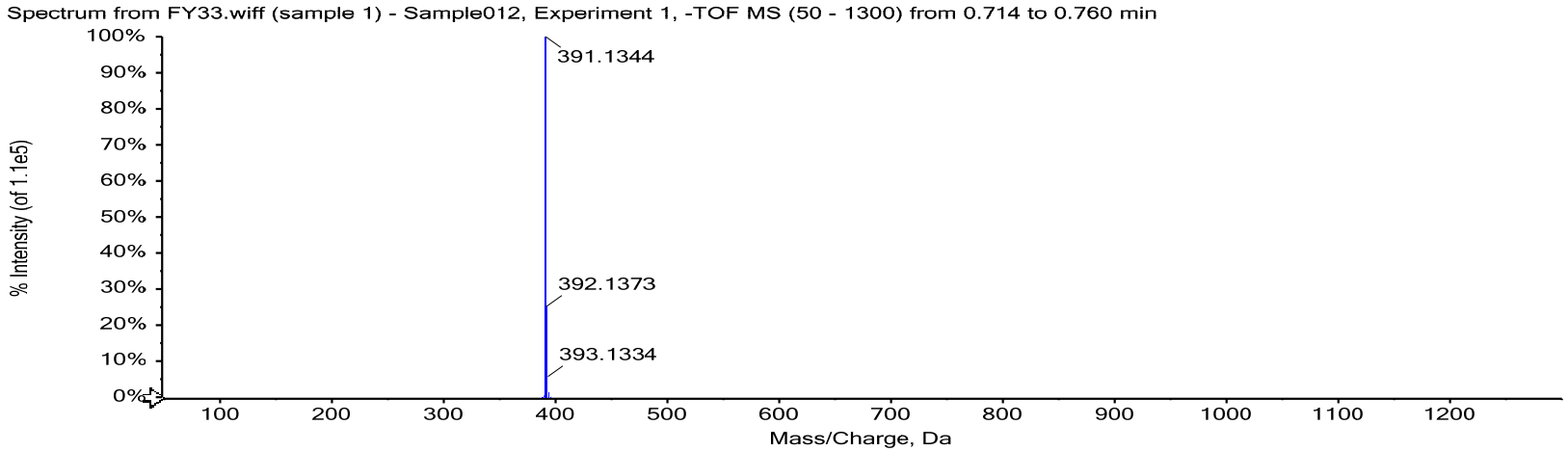

Figure 83. HRMS spectrum of compound **9k.**

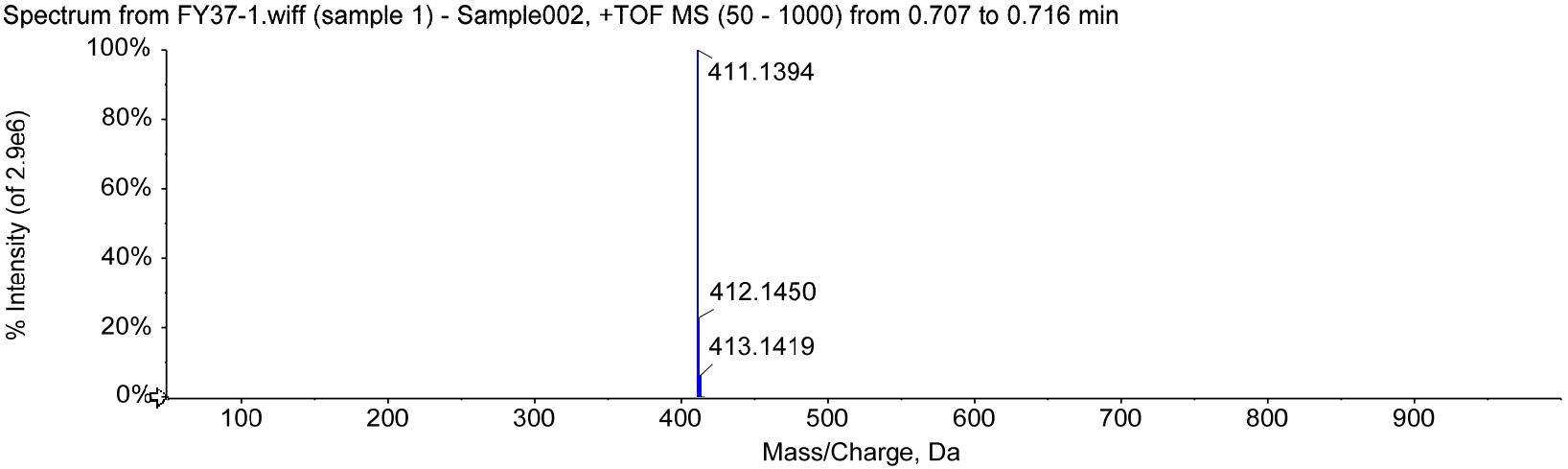

Figure 84. HRMS spectrum of compound **9l.**

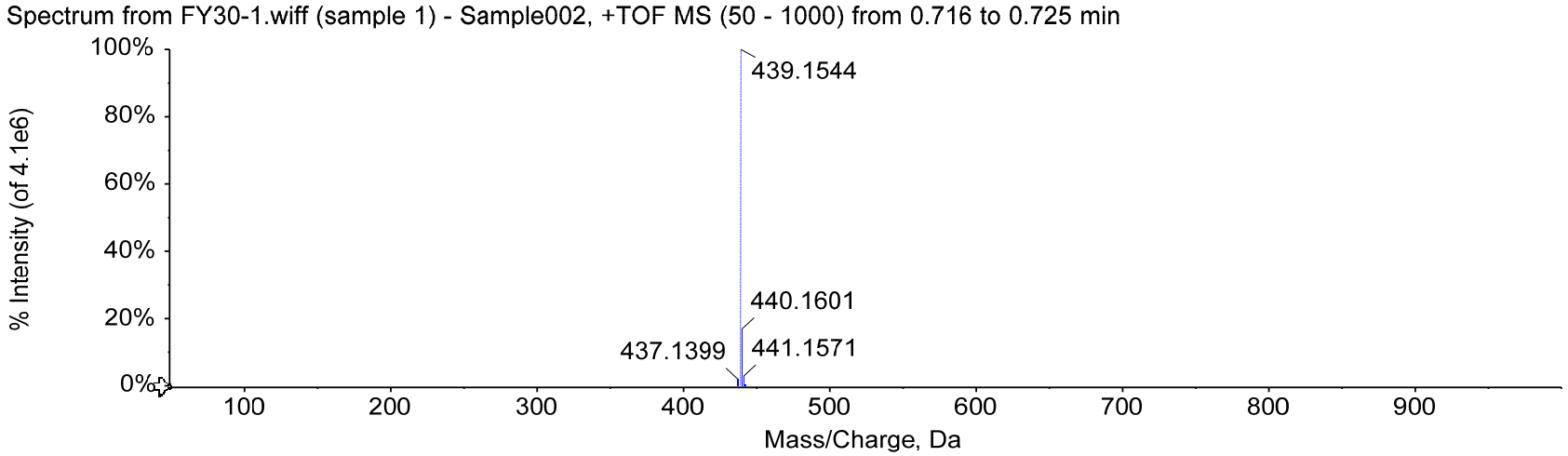

Figure 85. HRMS spectrum of compound **9m.**

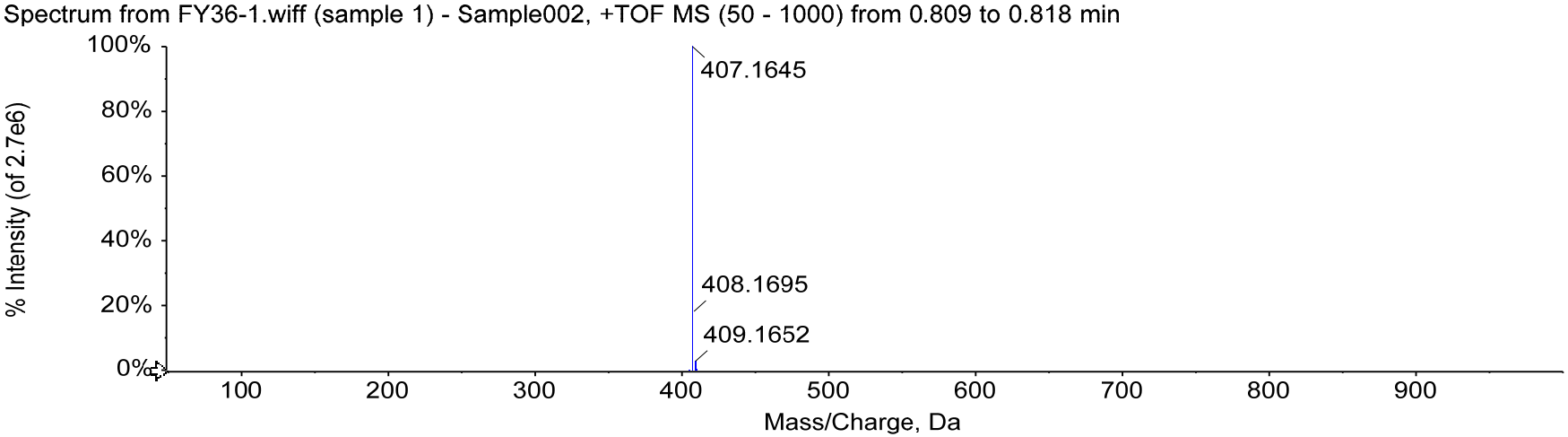

Figure 86. HRMS spectrum of compound **9n.**

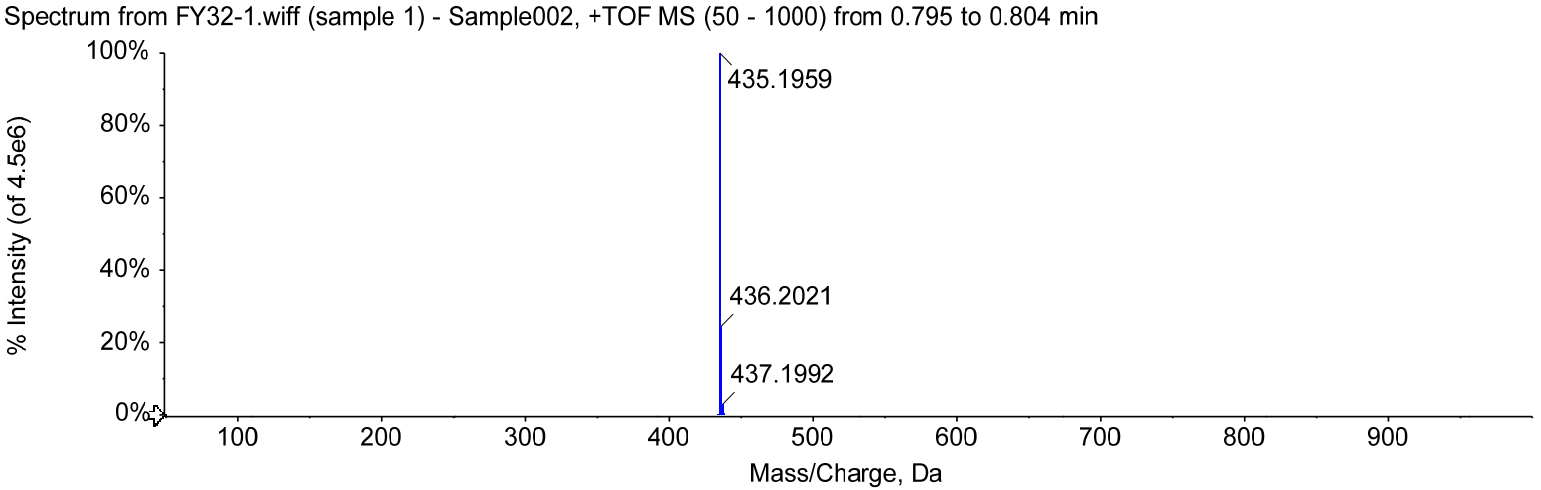

Figure 87. HRMS spectrum of compound **9o.**

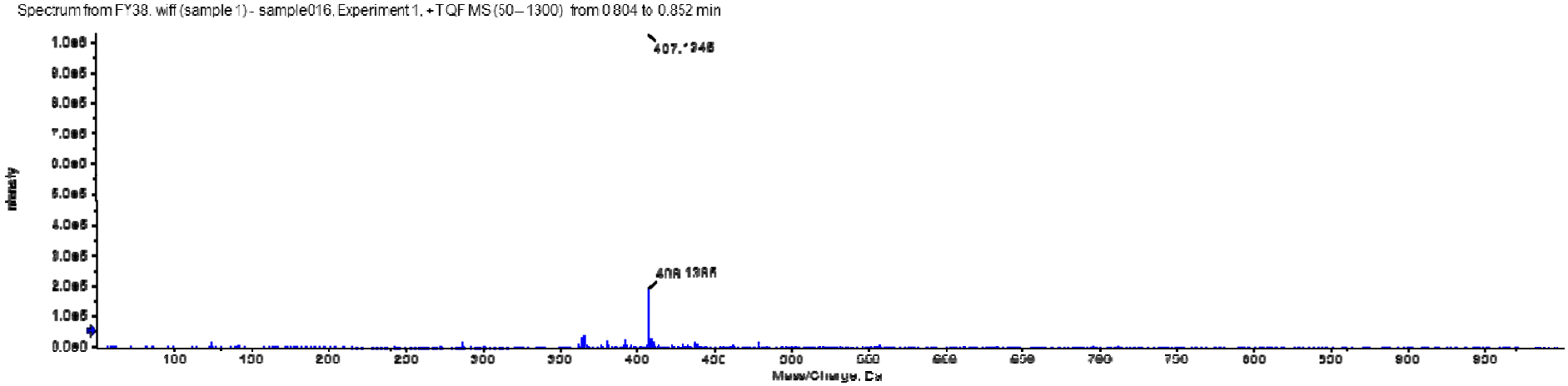

Figure 88. HRMS spectrum of compound **9p.**

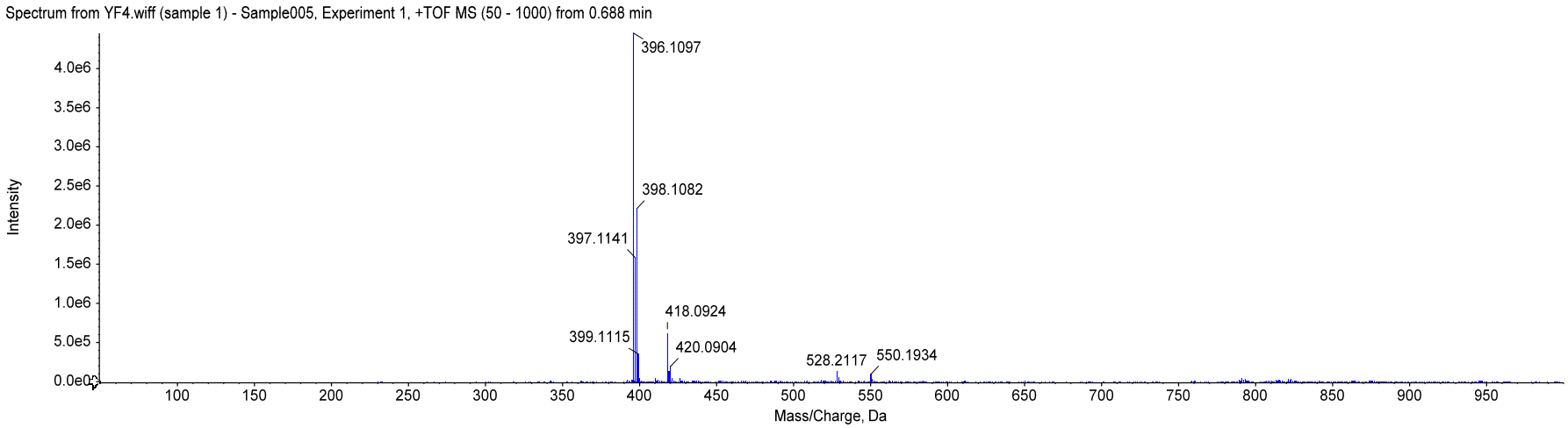

Figure 89. HRMS spectrum of compound **9q.**

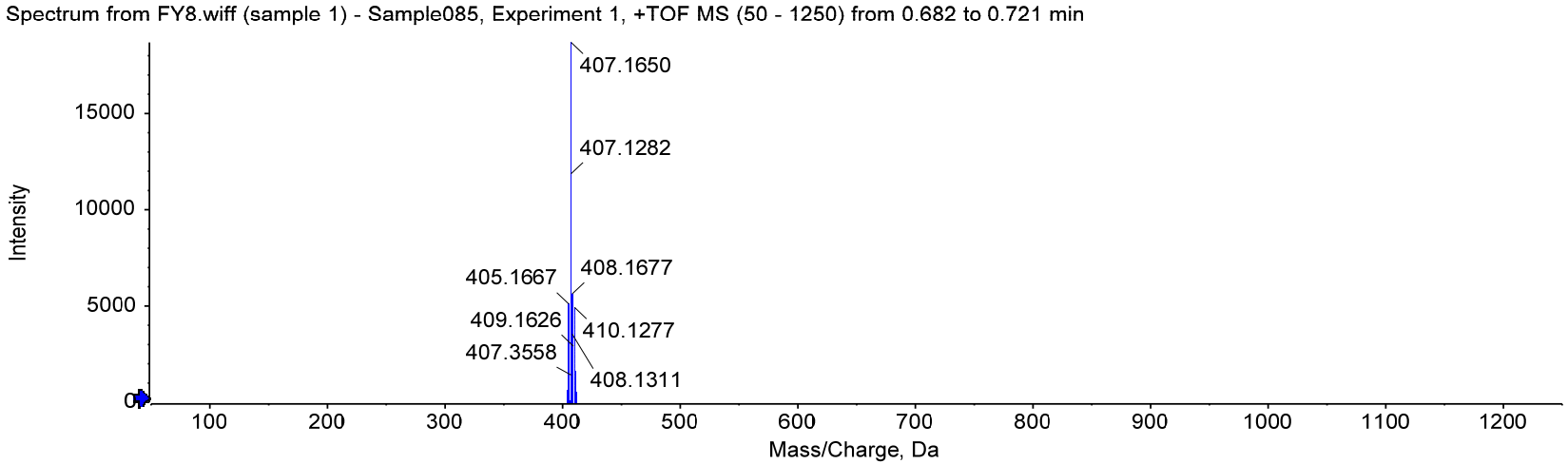

Figure 90. HRMS spectrum of compound **9r.**

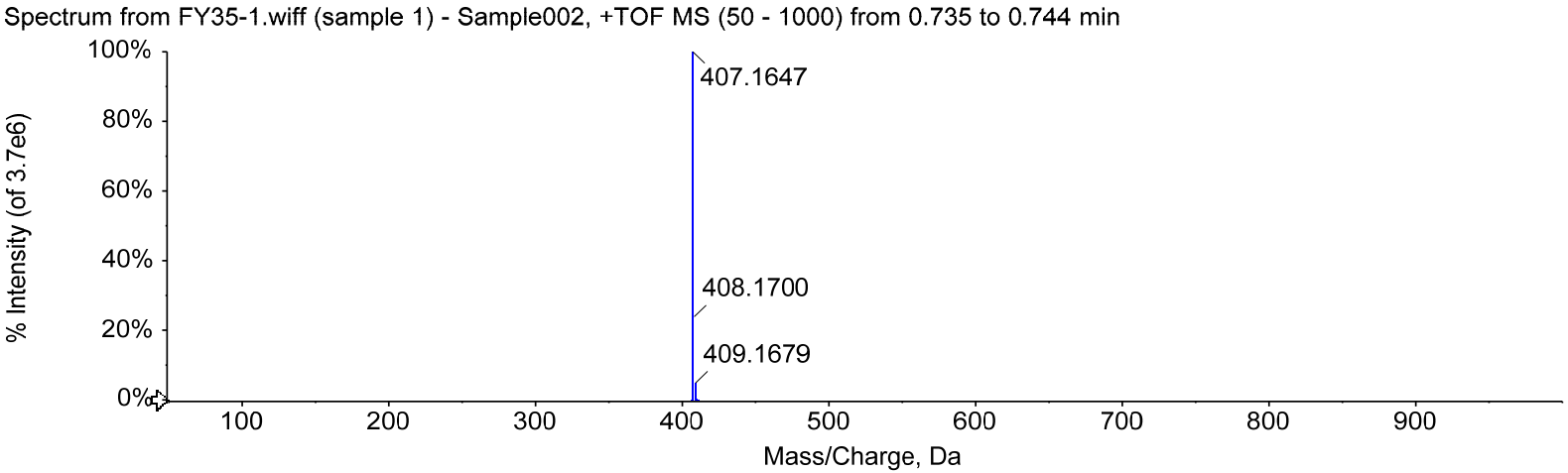

Figure 91. HRMS spectrum of compound **9s.**

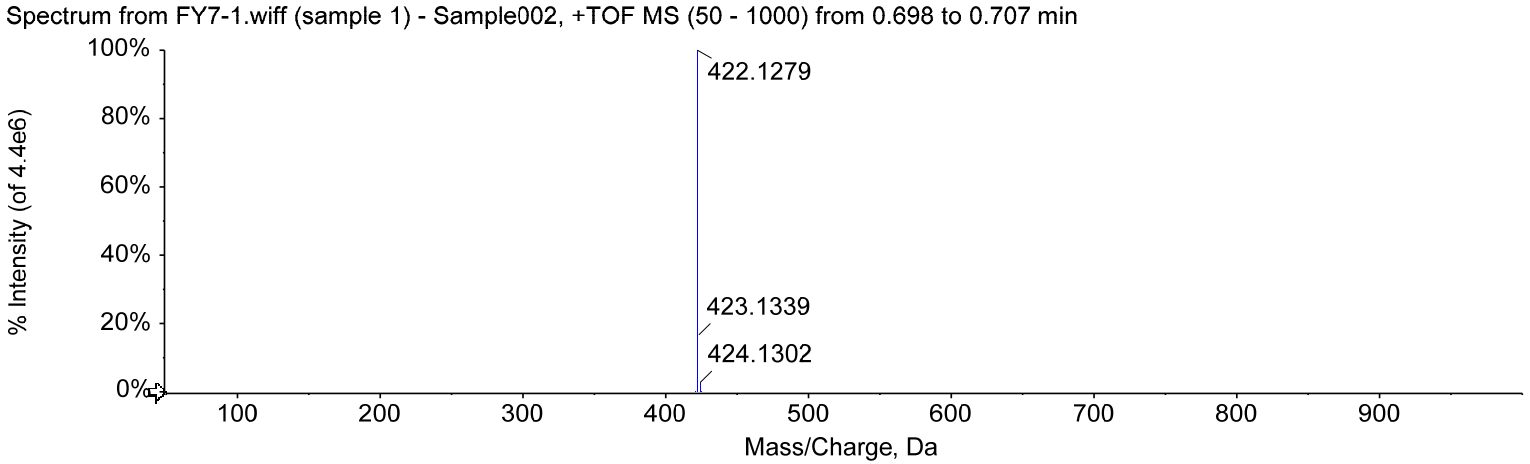

Figure 92. HRMS spectrum of compound **10a.**

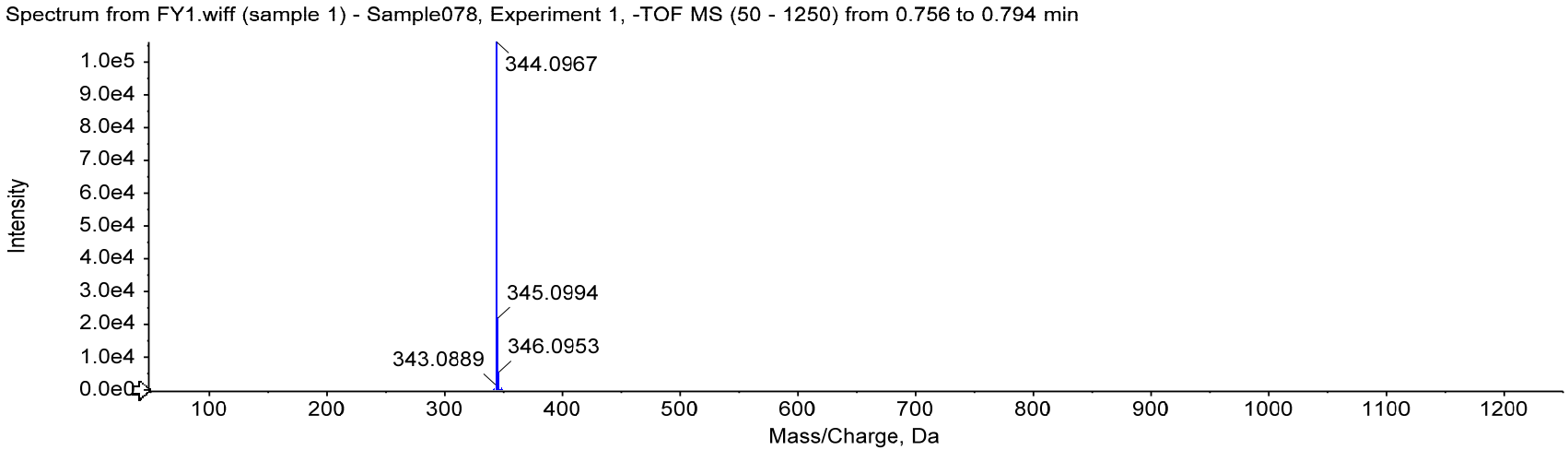

Figure 93. HRMS spectrum of compound **10b.**

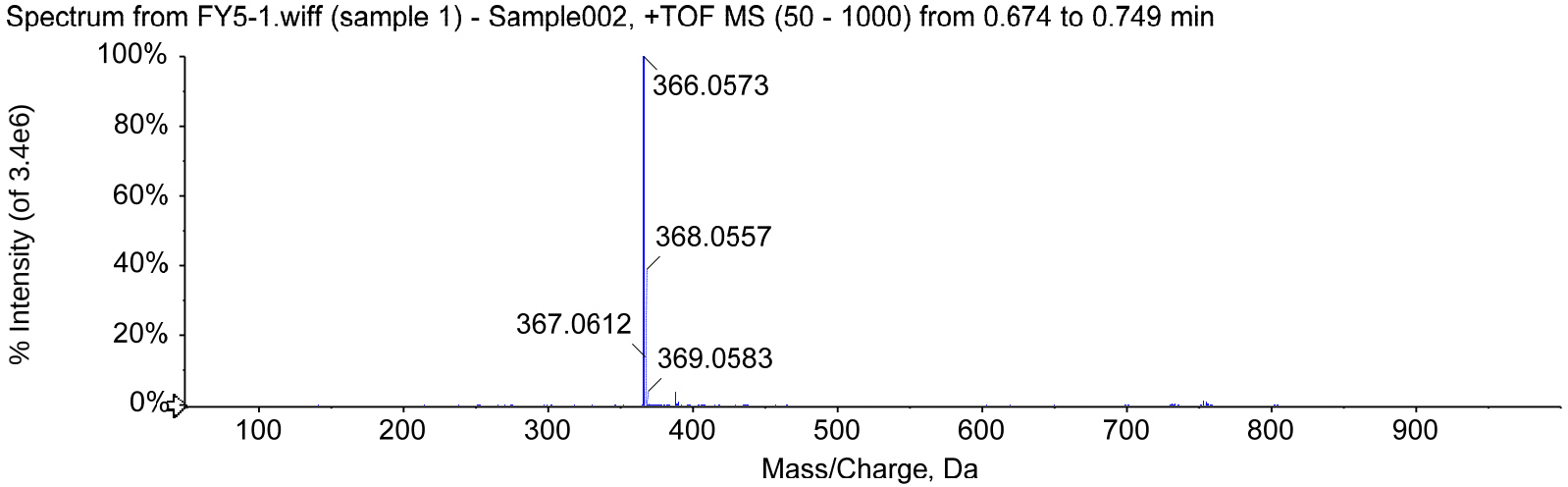

Figure 94. HRMS spectrum of compound **10c.**

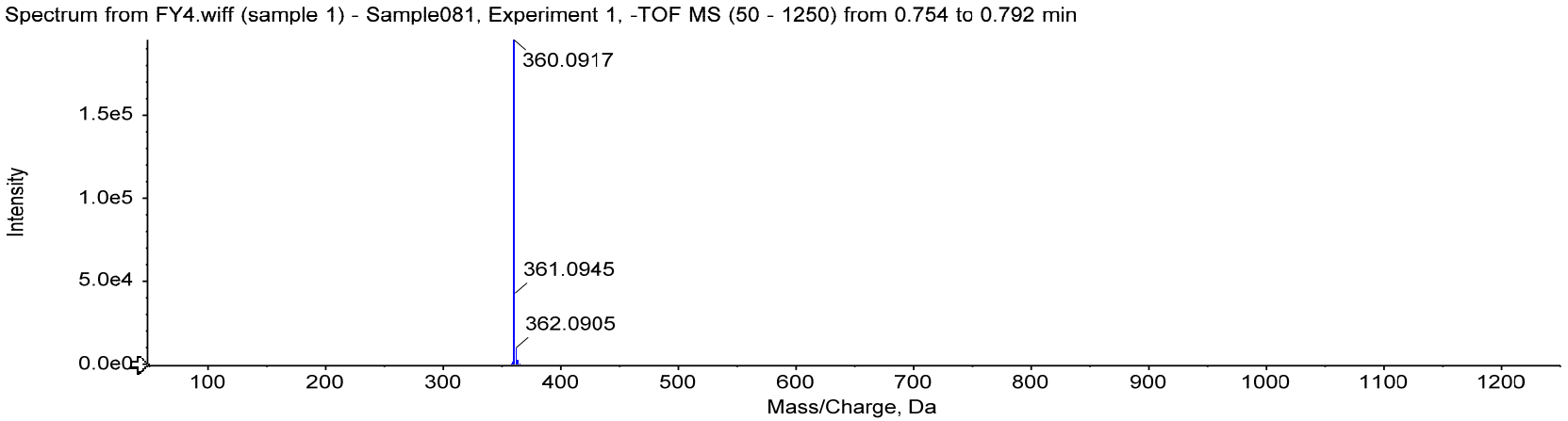

Figure 95. HRMS spectrum of compound **10d.**

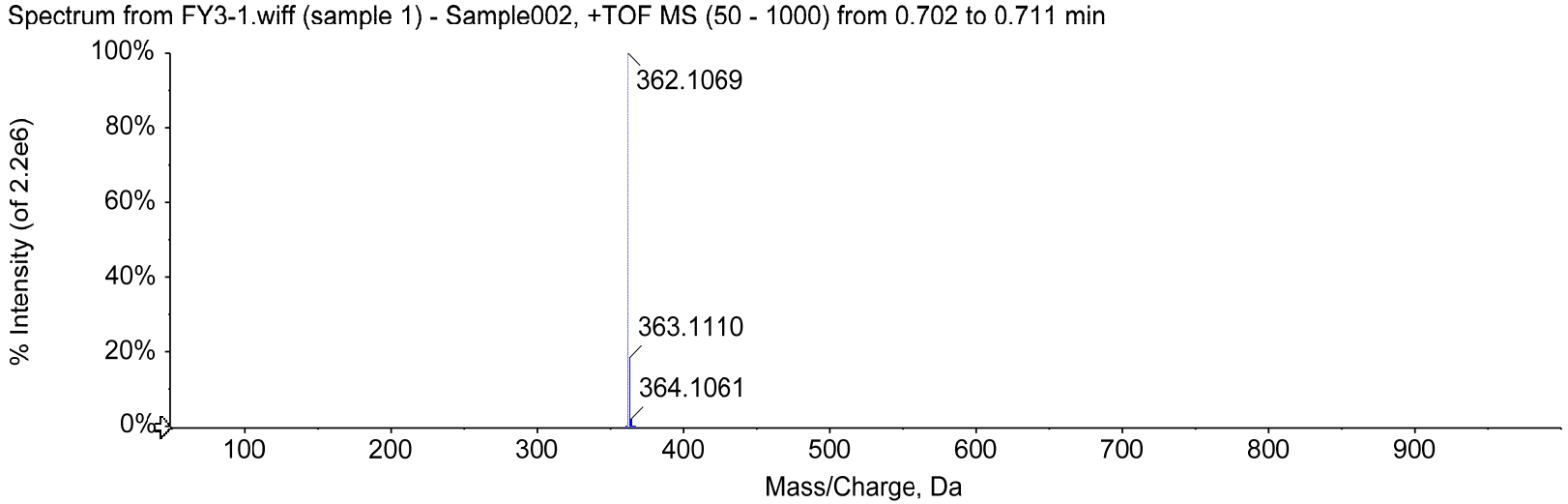

Figure 96. HRMS spectrum of compound **10e.**

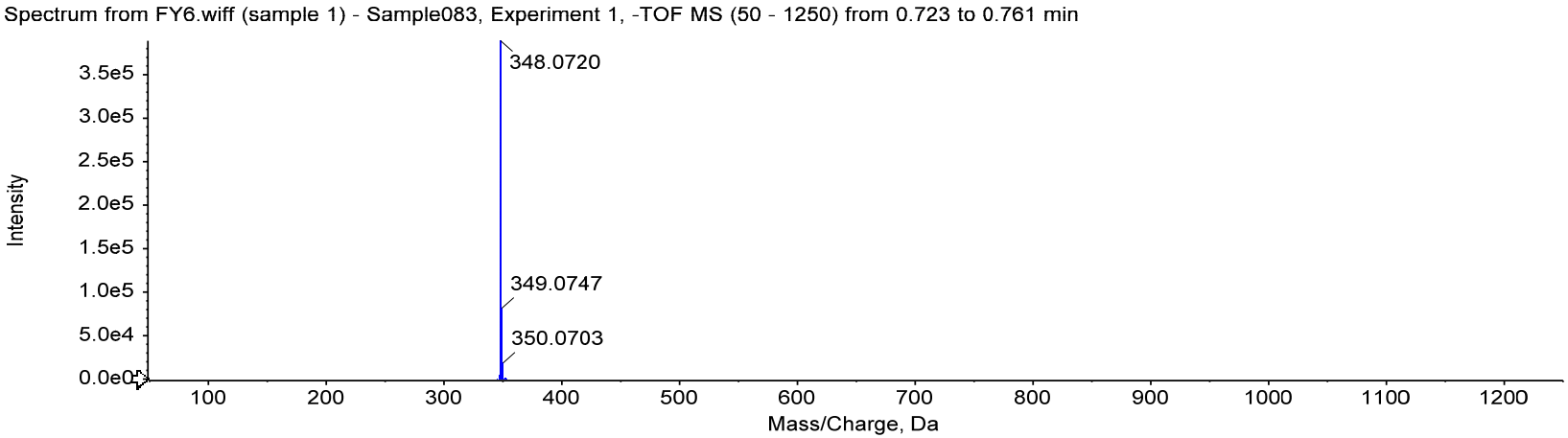

Figure 97. HRMS spectrum of compound **10f.**

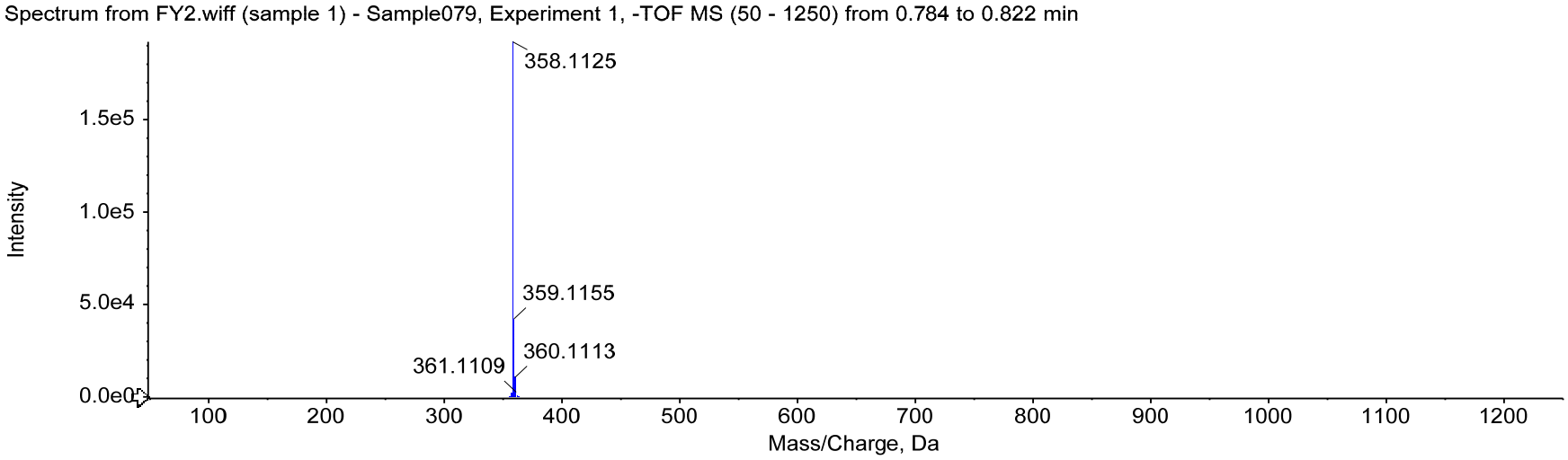

Figure 98. HRMS spectrum of compound **9g.**

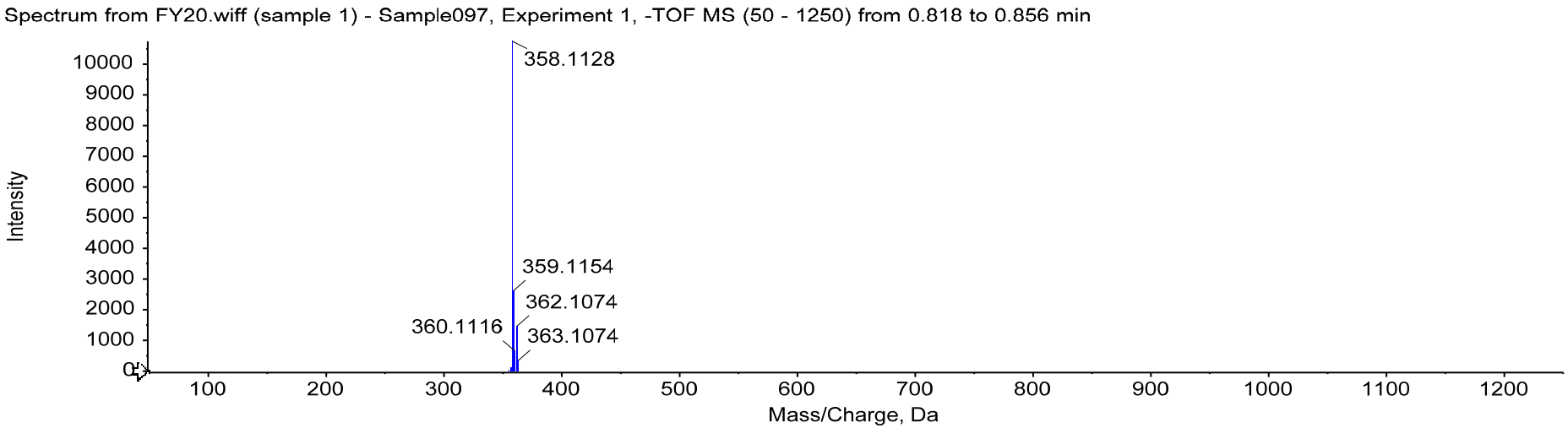

Figure 99. HRMS spectrum of compound **10h.**

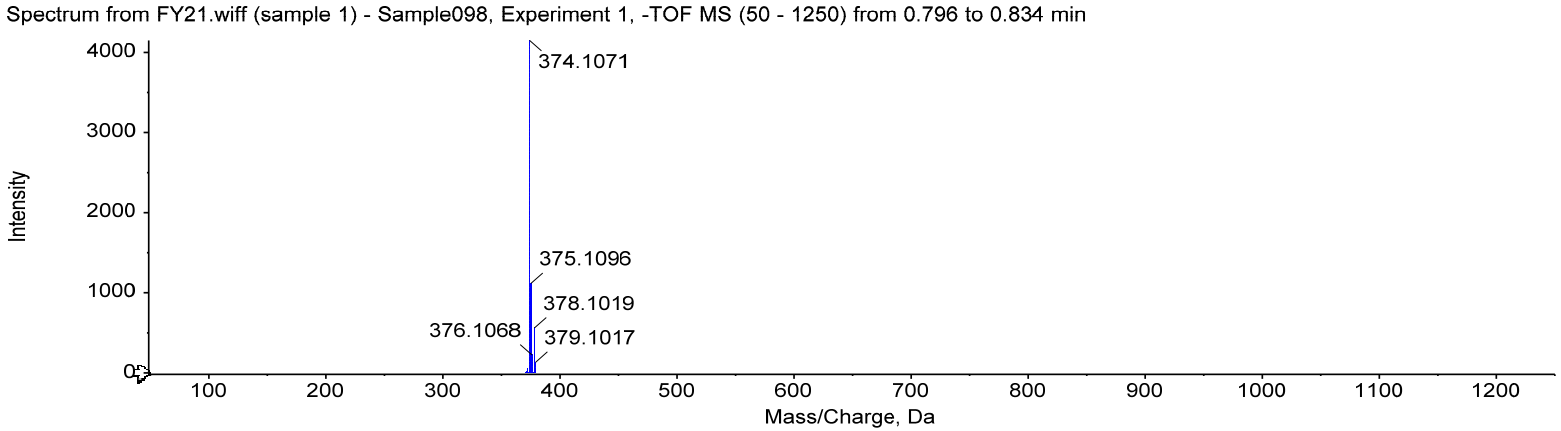

Figure 100. HRMS spectrum of compound **10i.**

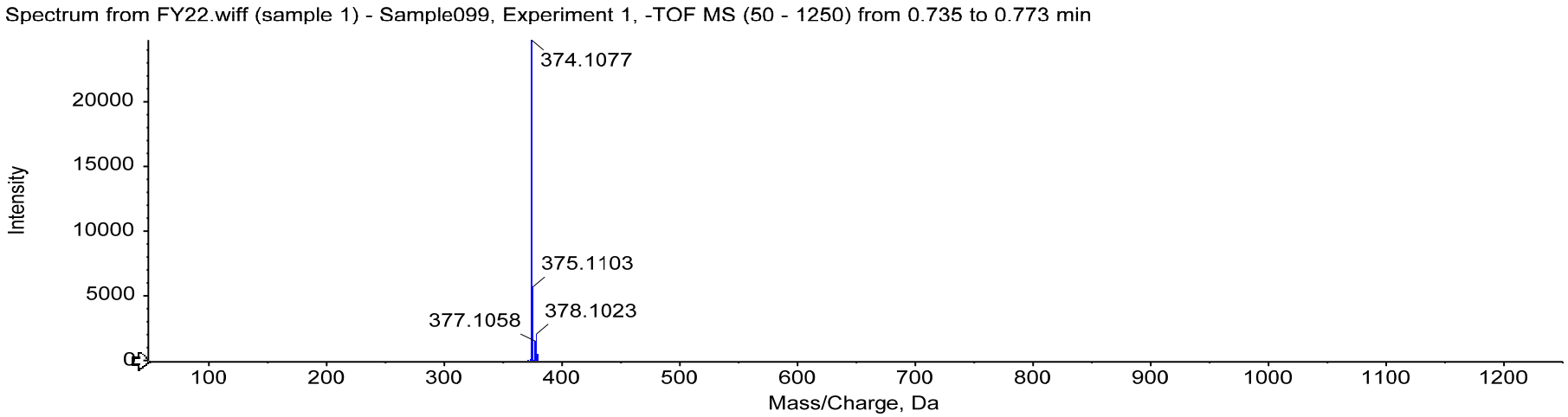

Figure 101. HRMS spectrum of compound **10j.**

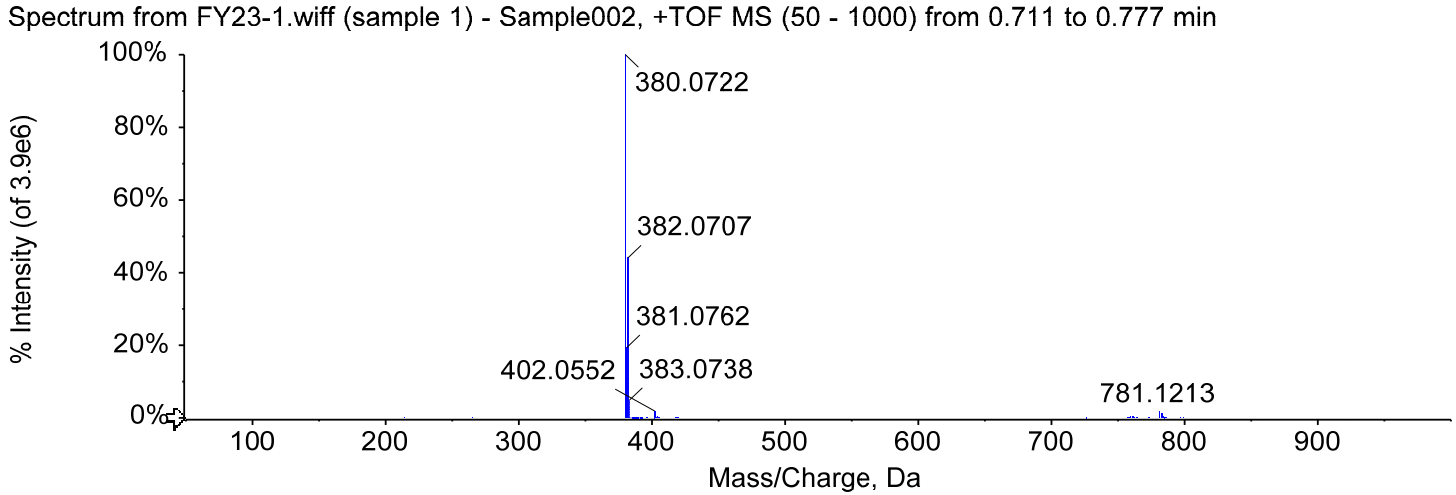

Figure 102. HRMS spectrum of compound **10k.**

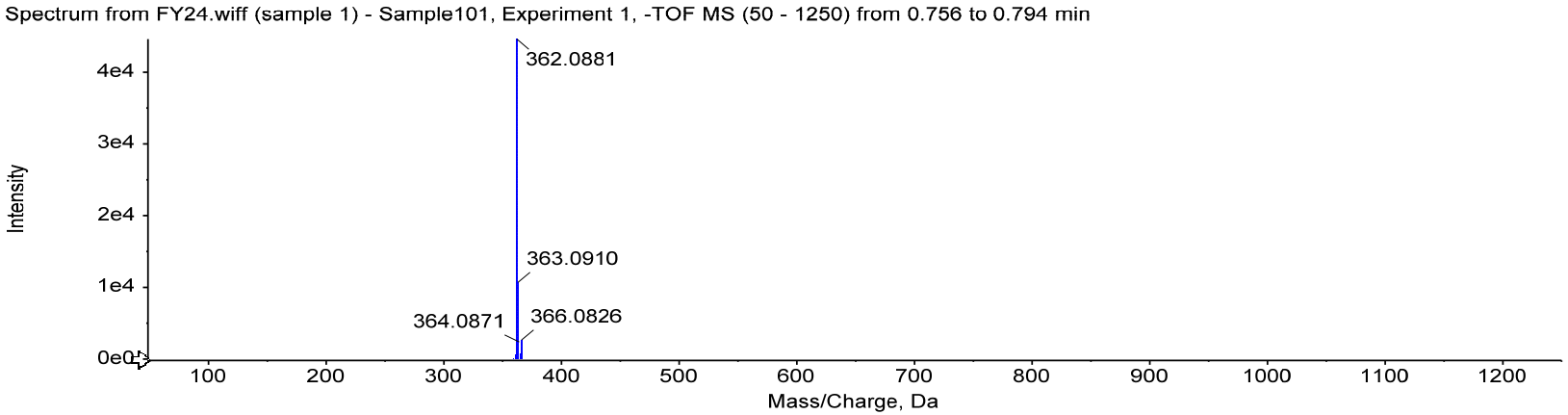

Figure 103. HRMS spectrum of compound **10l.**

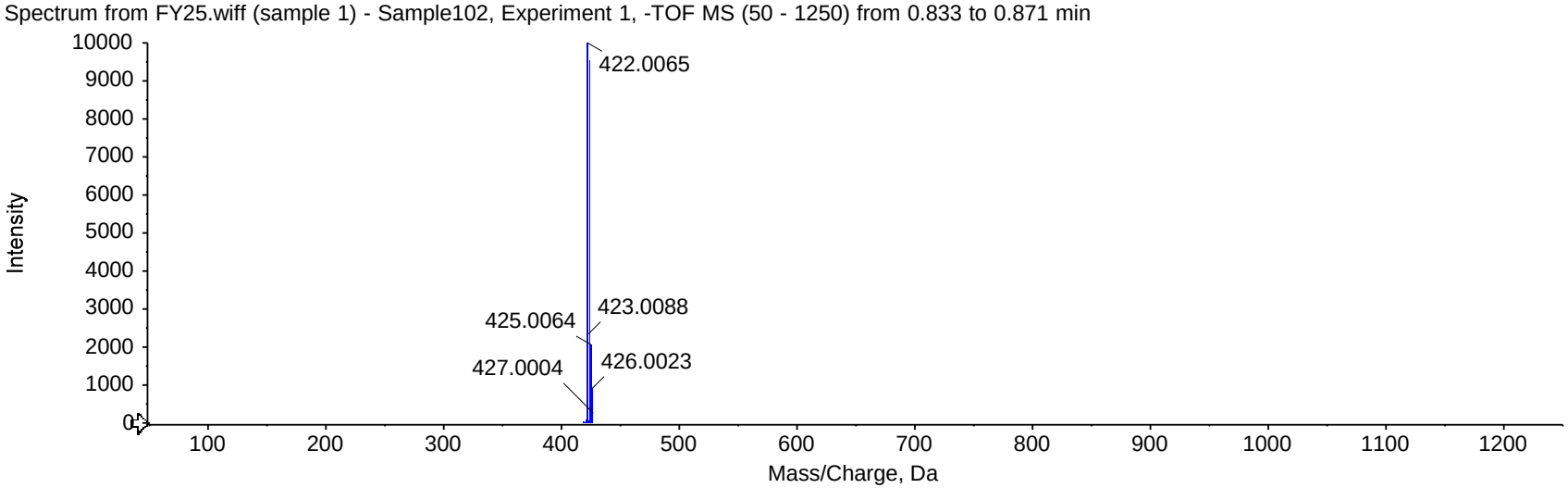

Figure 104. HRMS spectrum of compound **10m.**

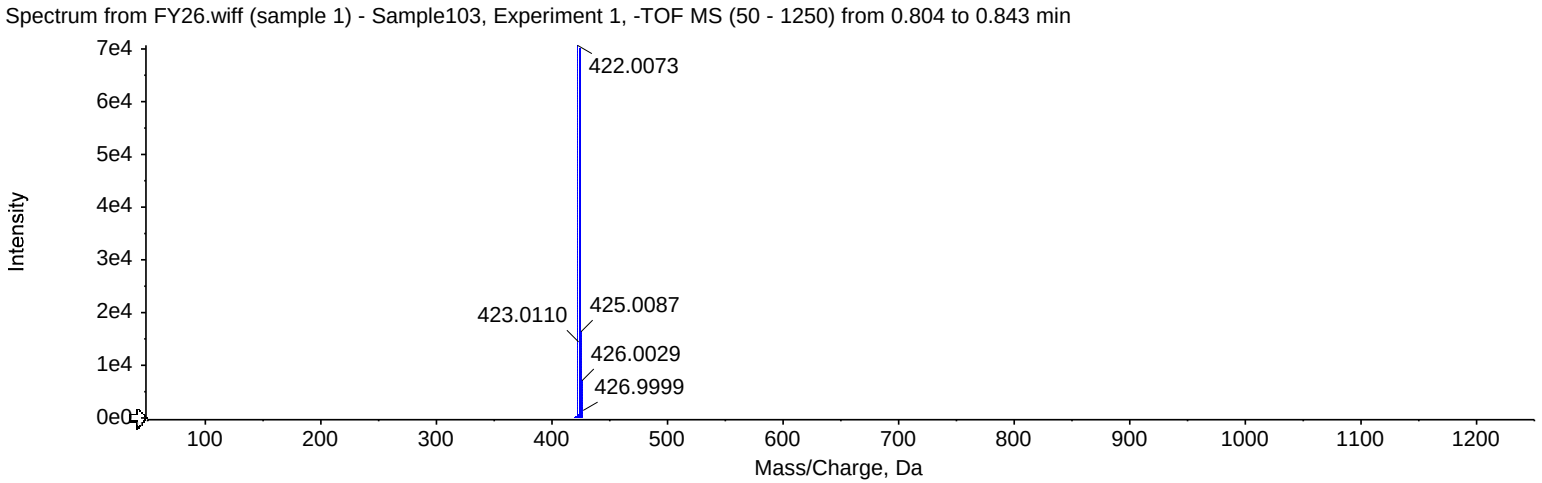

Figure 105. HRMS spectrum of compound **10n.**

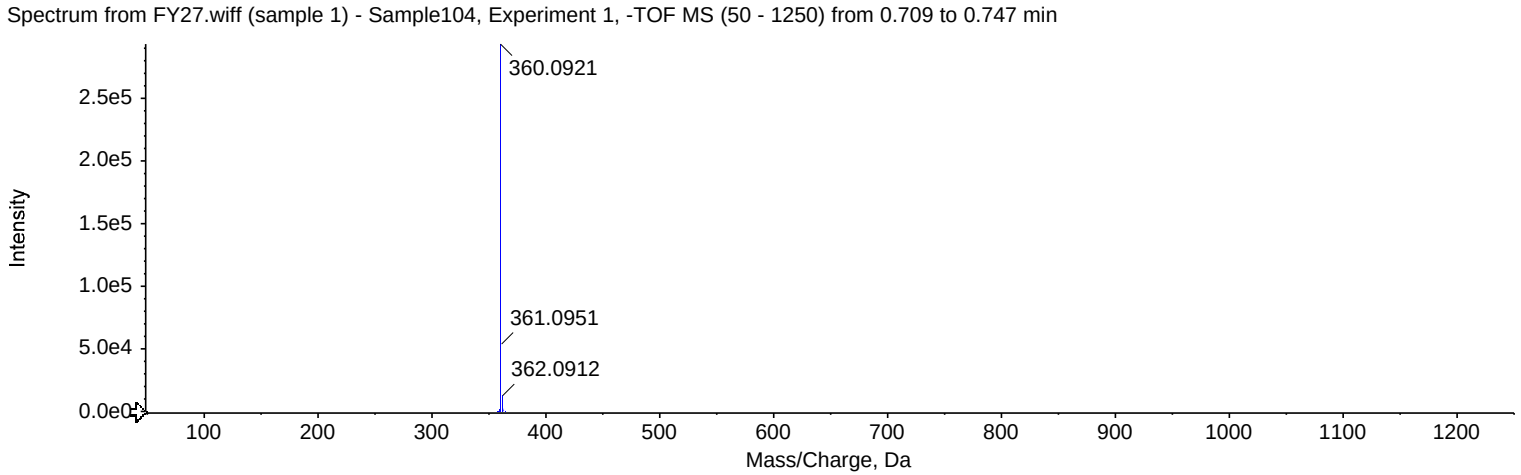

Figure 106. HRMS spectrum of compound **10o.**

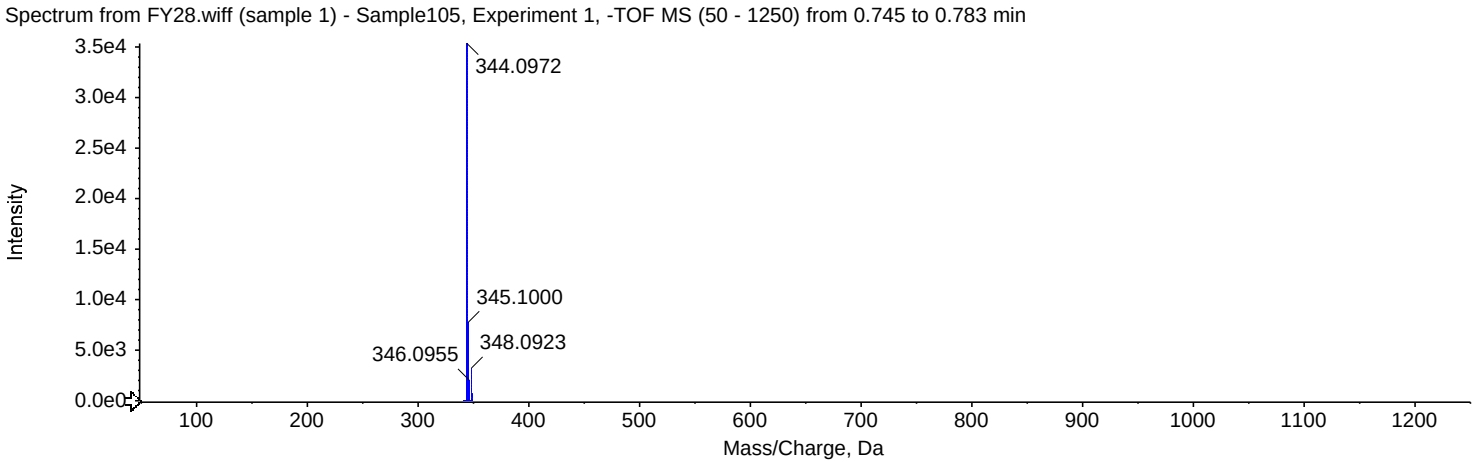

Figure 107. HRMS spectrum of compound **10p.**

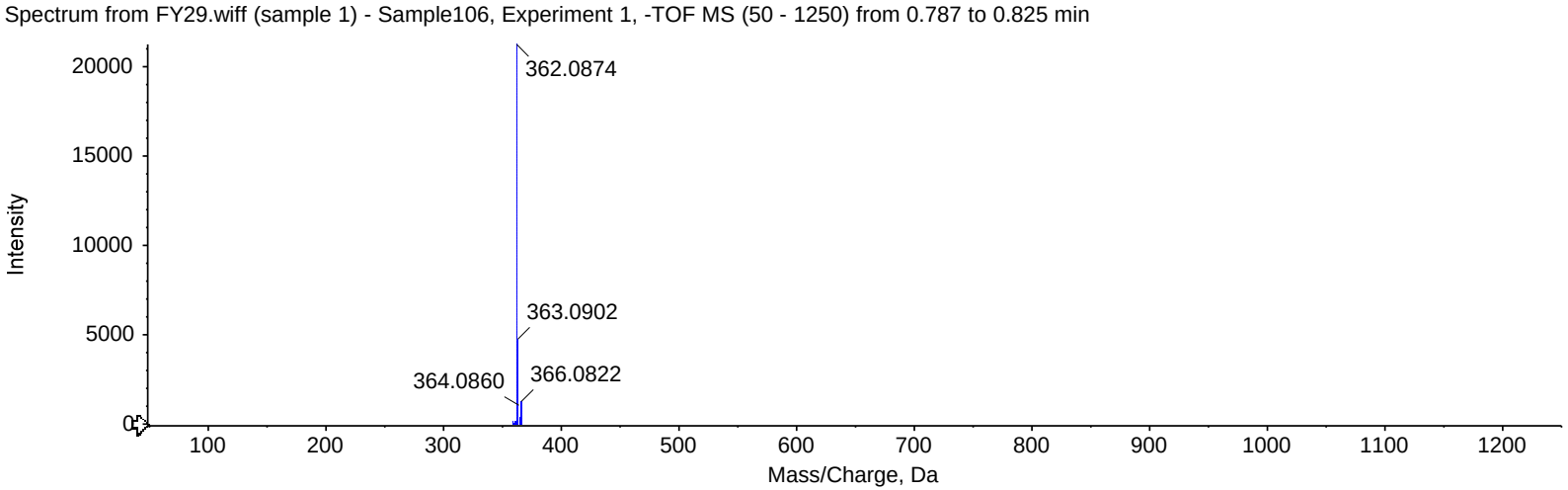

Figure 108. HRMS spectrum of compound **10q.**