SUPPLEMENTARY INFORMATION

Rational design and multicomponent synthesis of lipid peptoid nanocomposites towards a customized drug delivery system assembly

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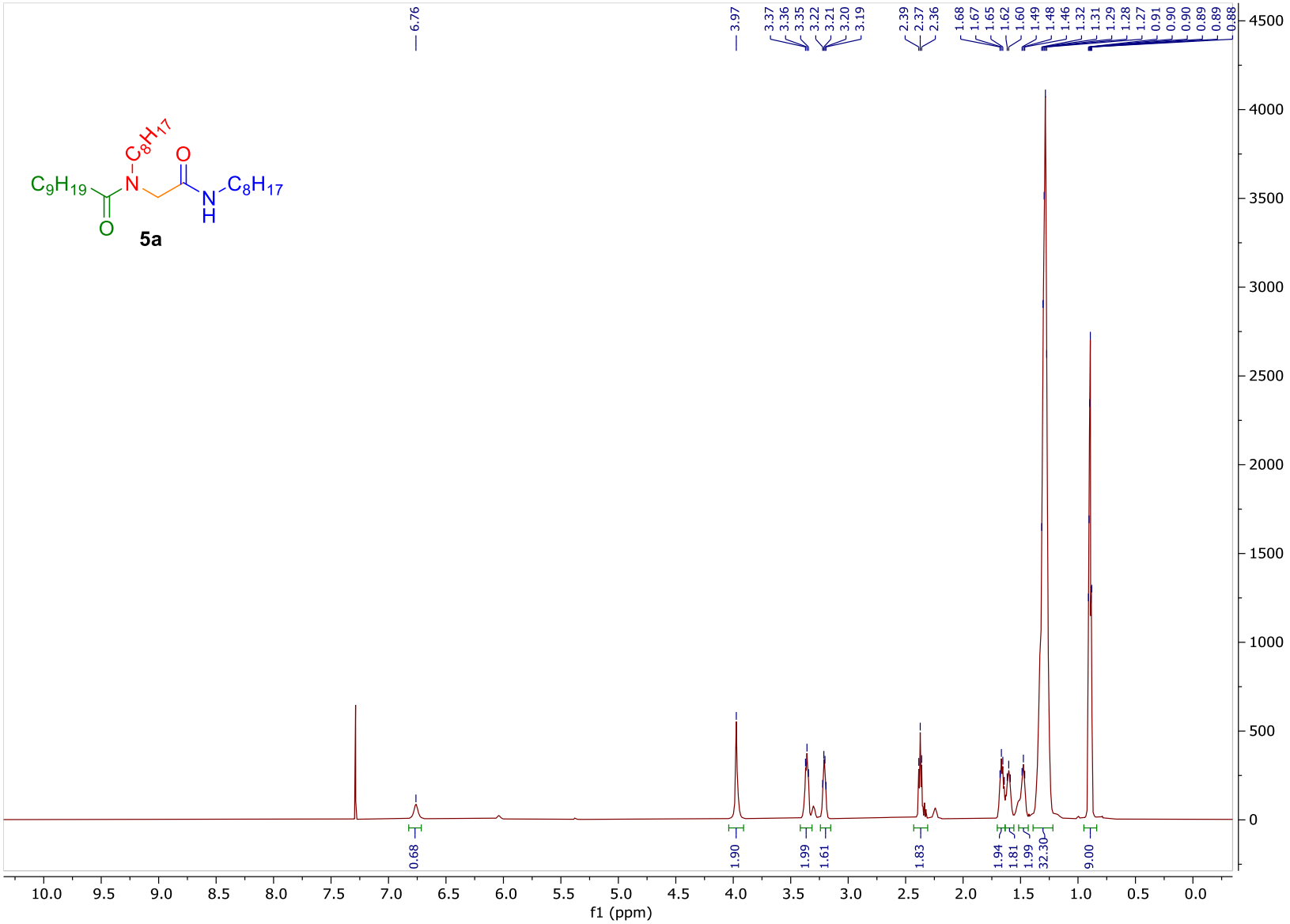


Figure S1. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **5a**.

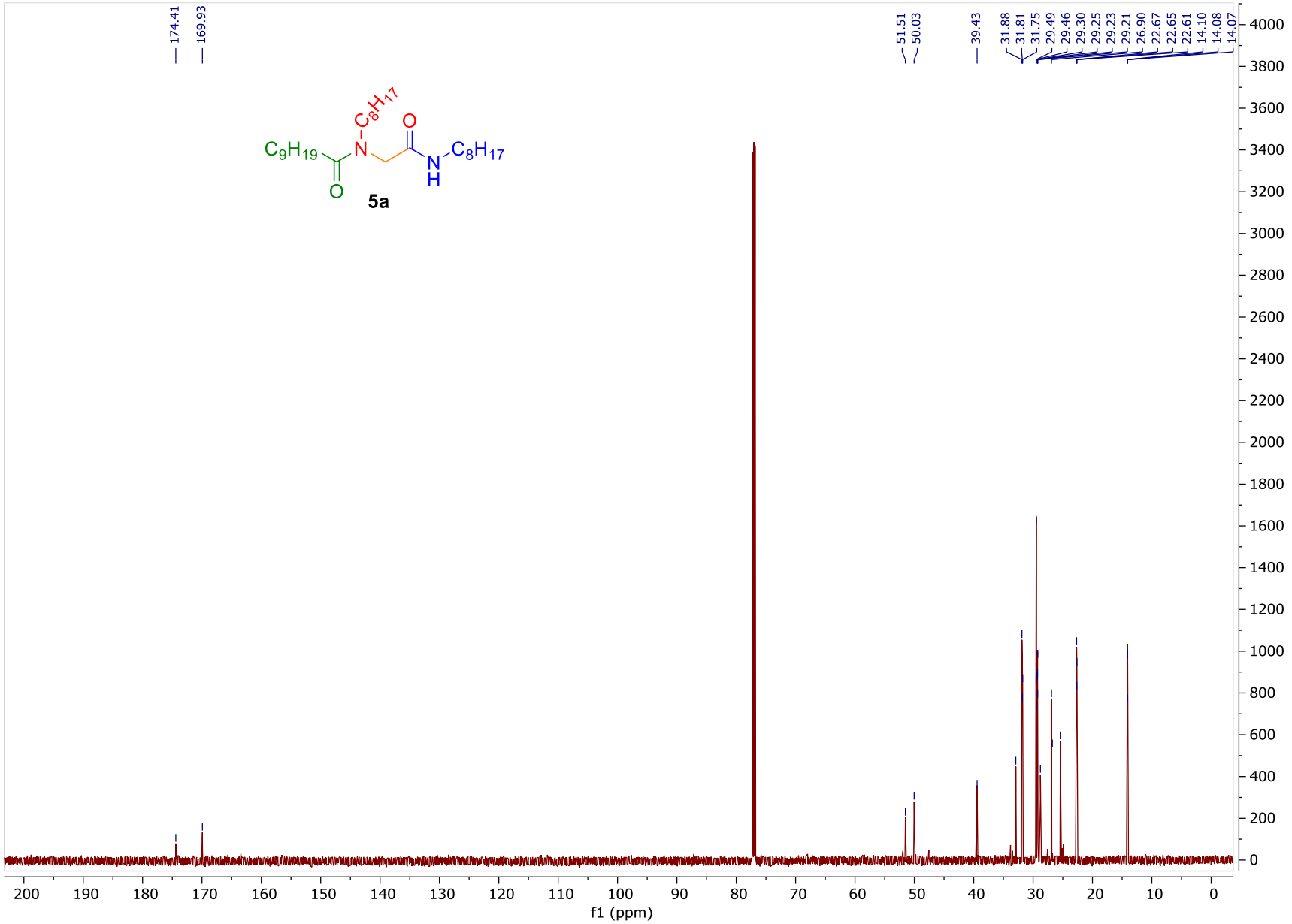


Figure S2. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **5a**.

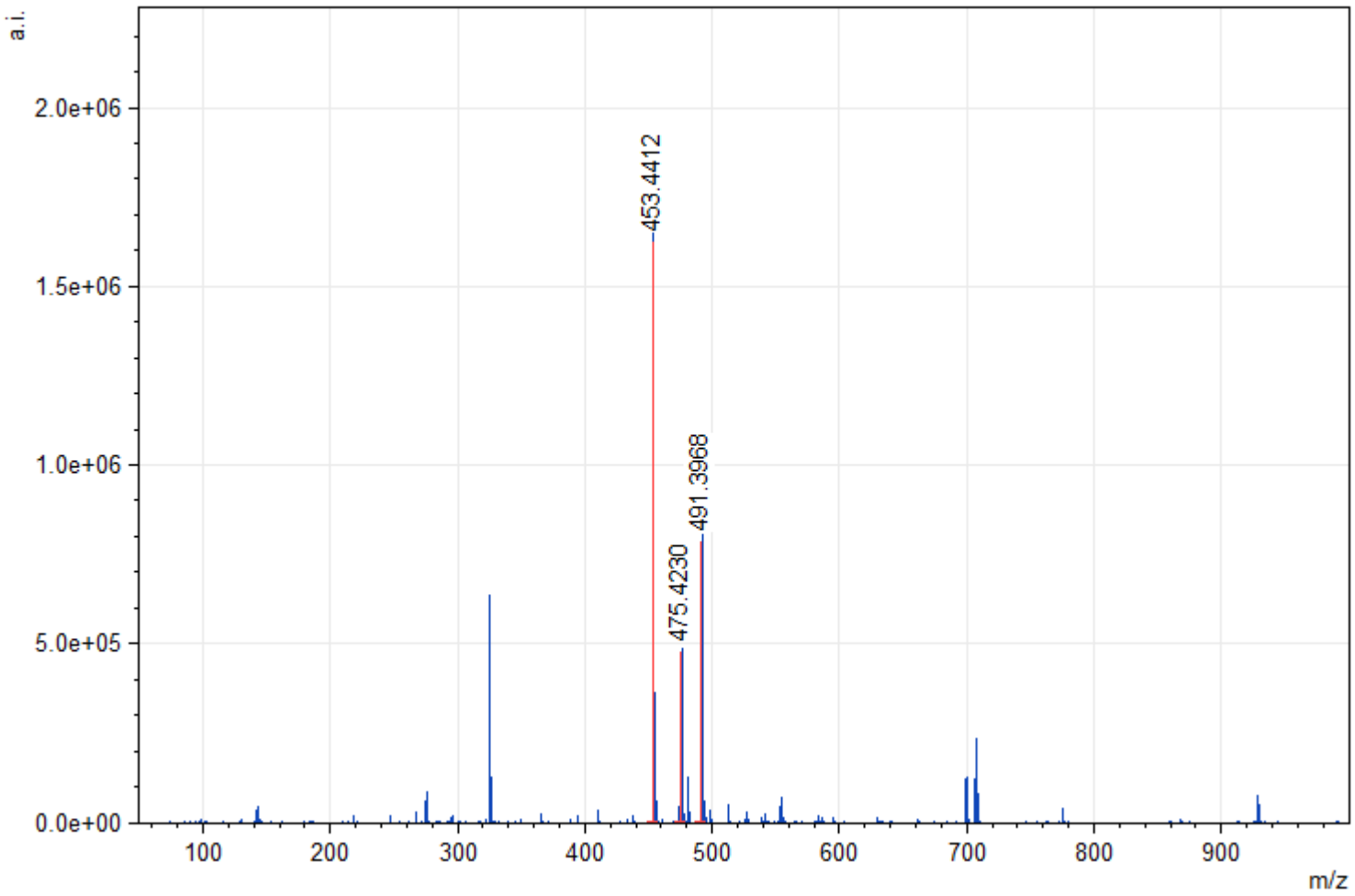


Figure S3. HRMS of compound **5a**.

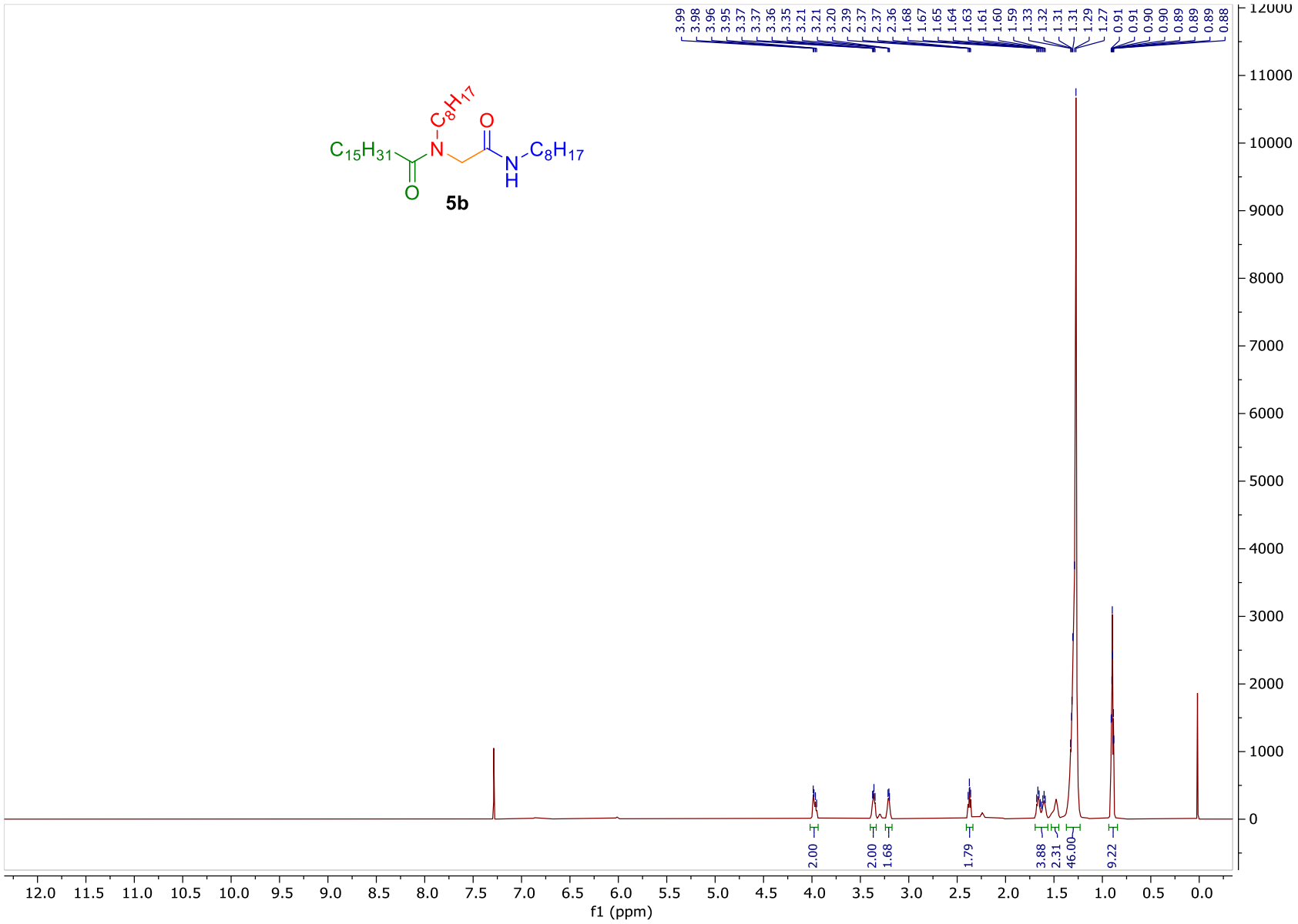


Figure S4. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **5b**.

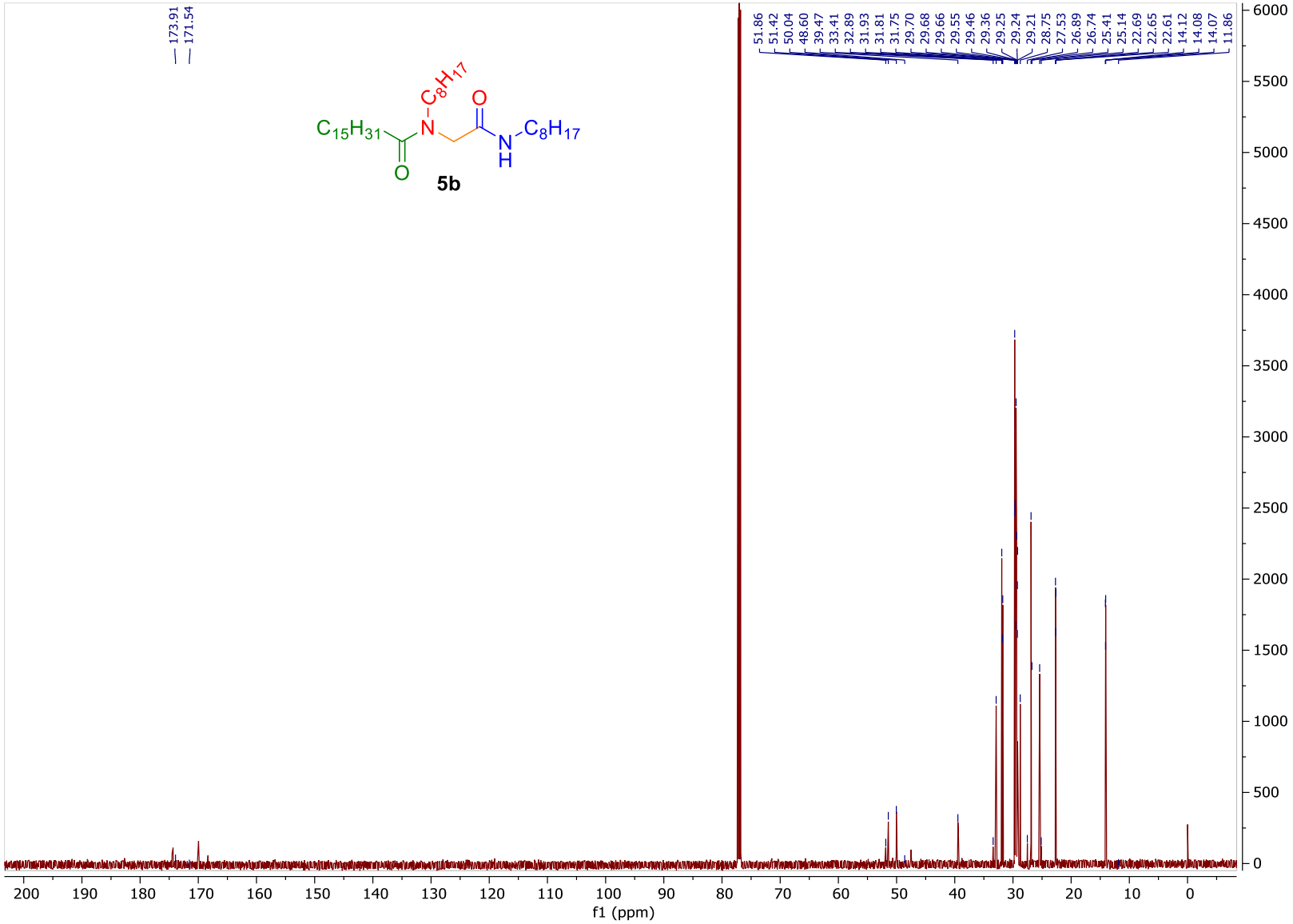


Figure S5. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **5b**.

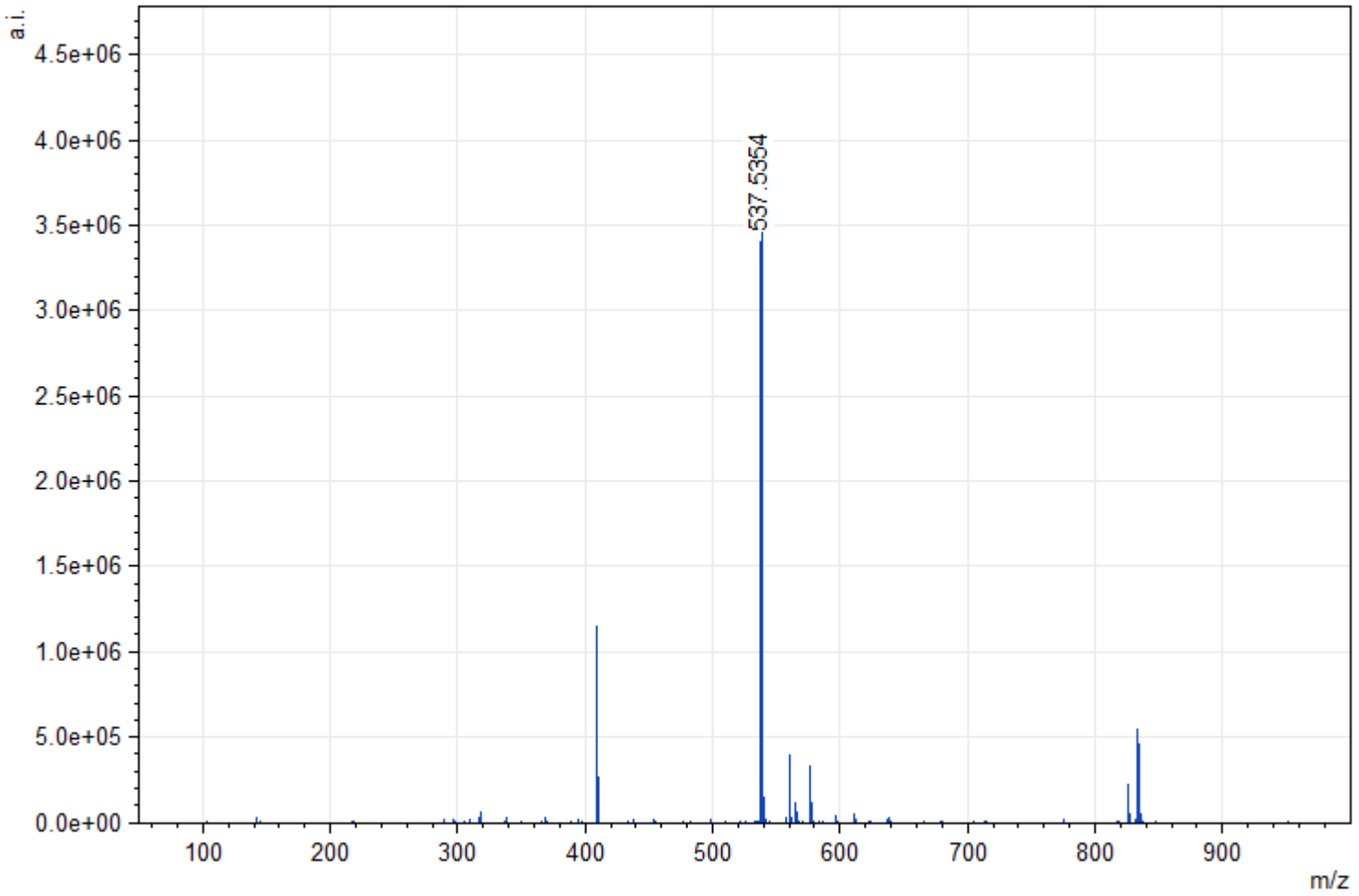


Figure S6. HRMS of compound **5b**.

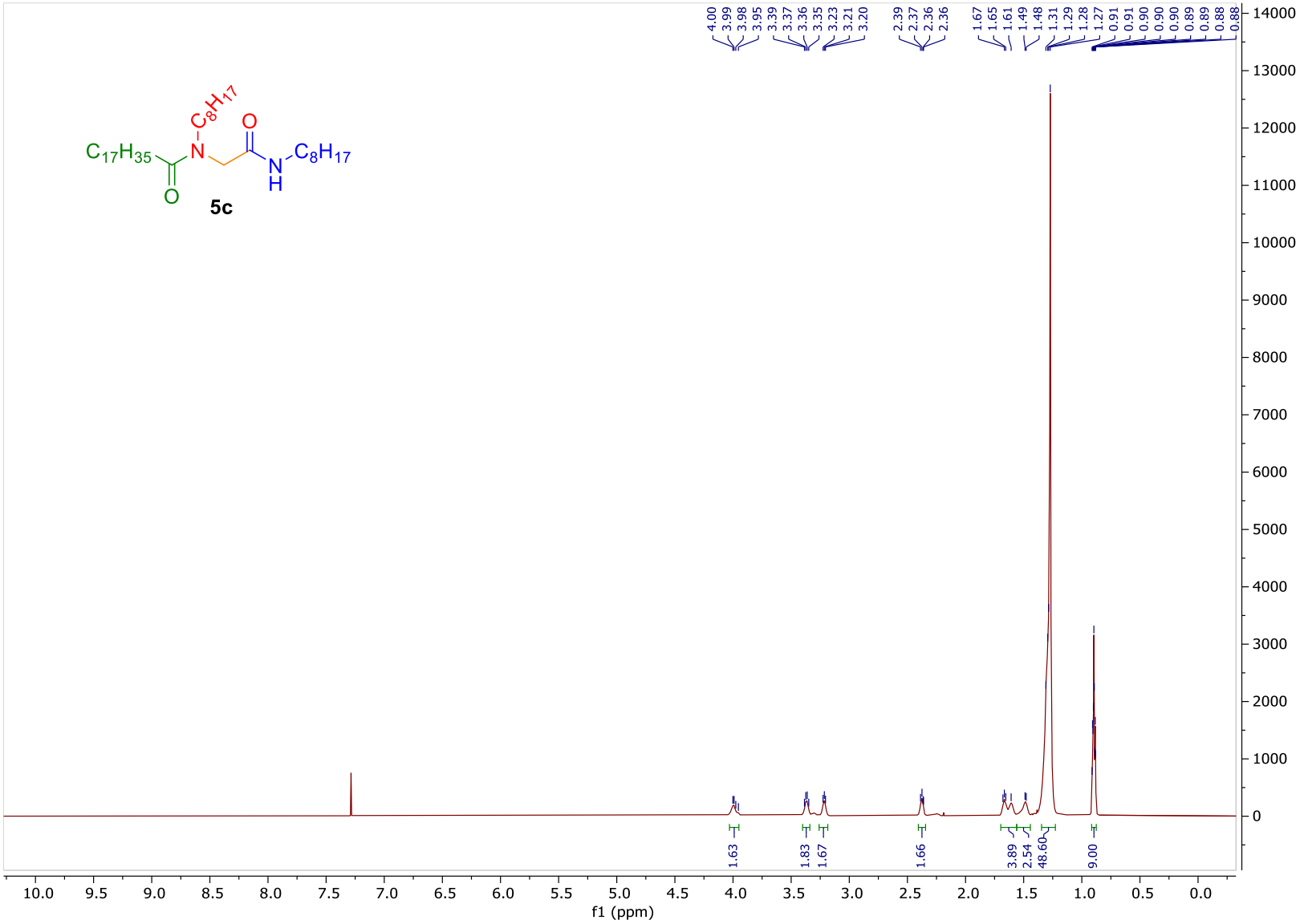


Figure S7. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **5c**.

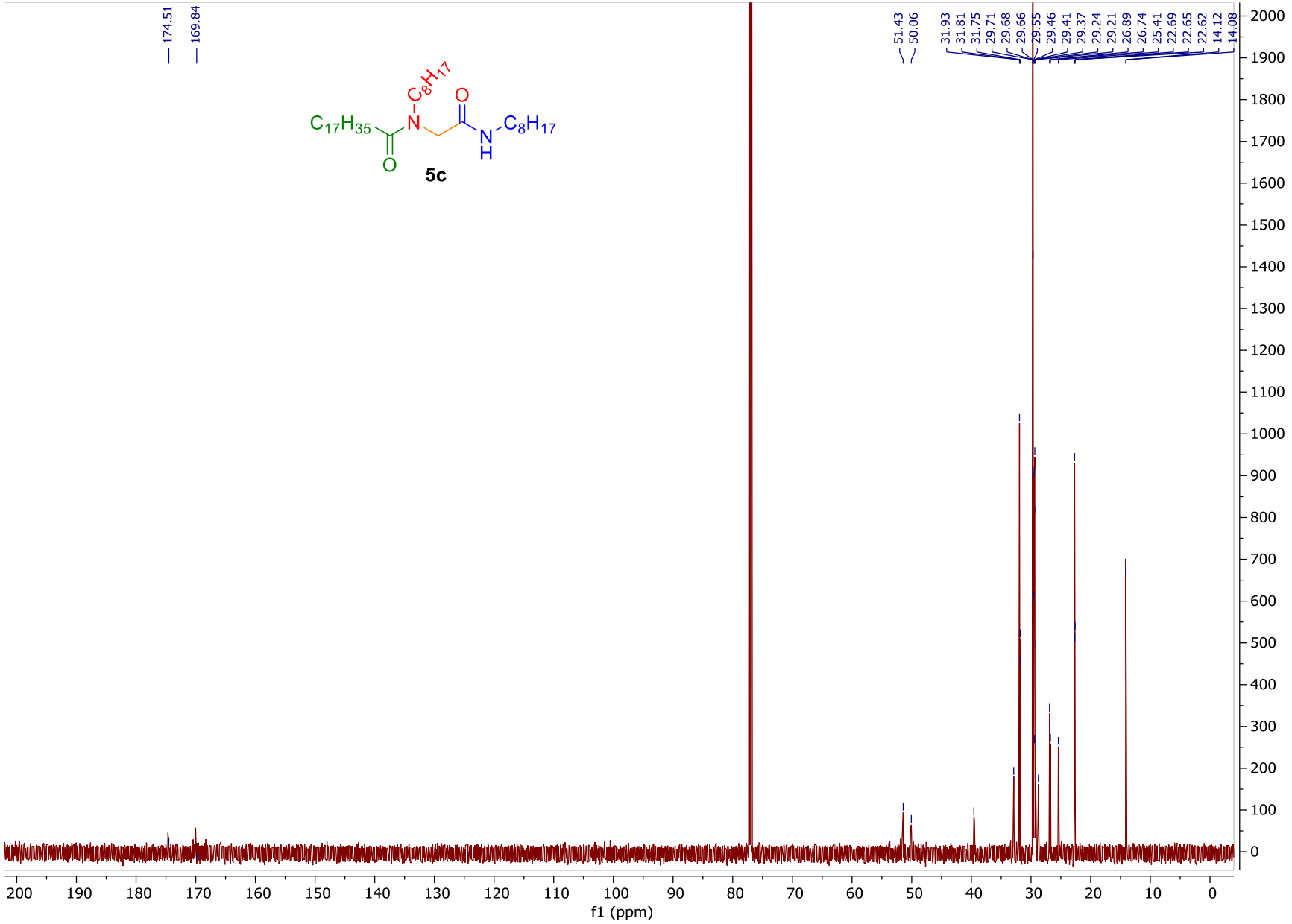


Figure S8. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **5c**.

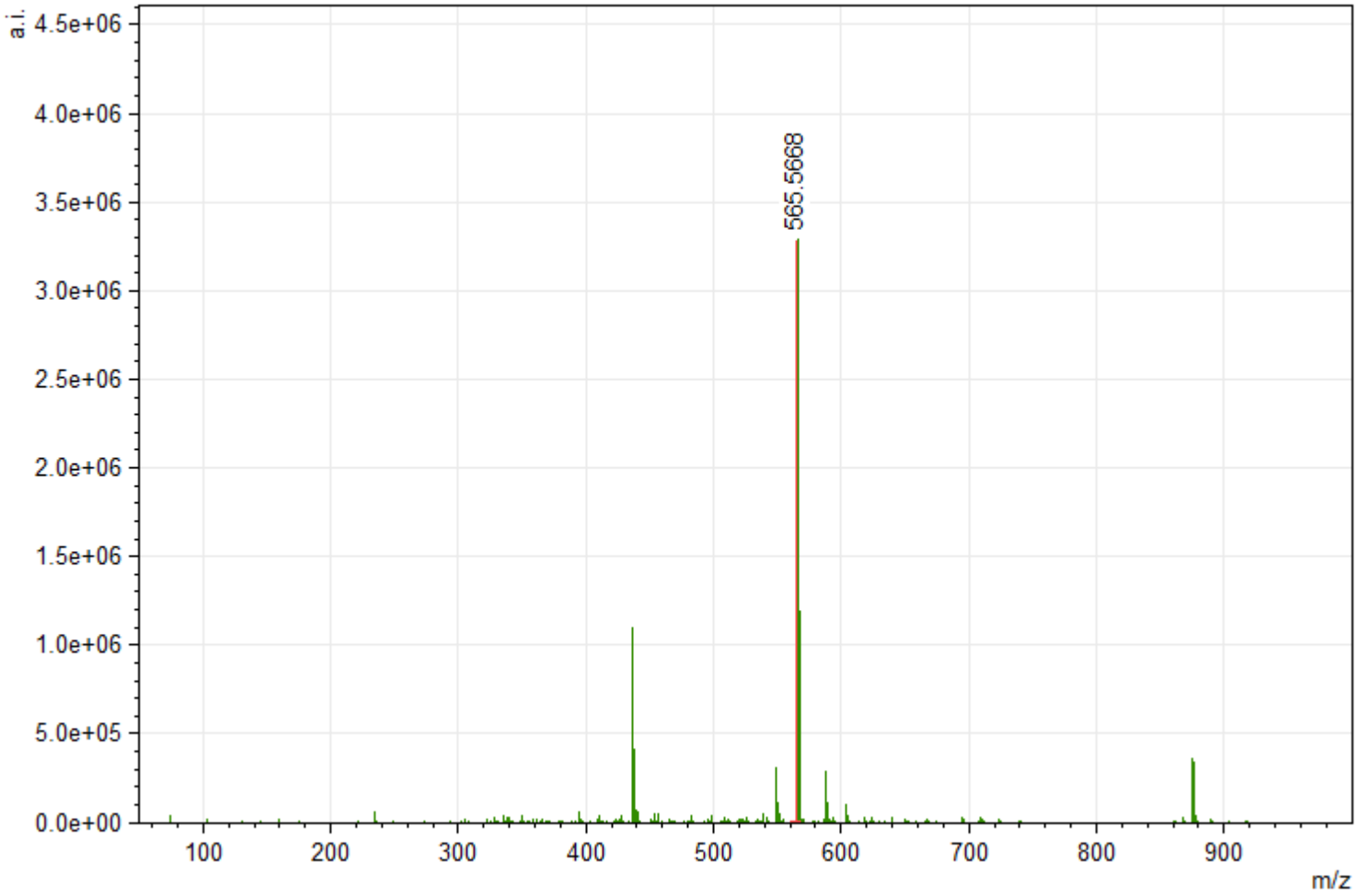


Figure S9. HRMS of compound **5c**.

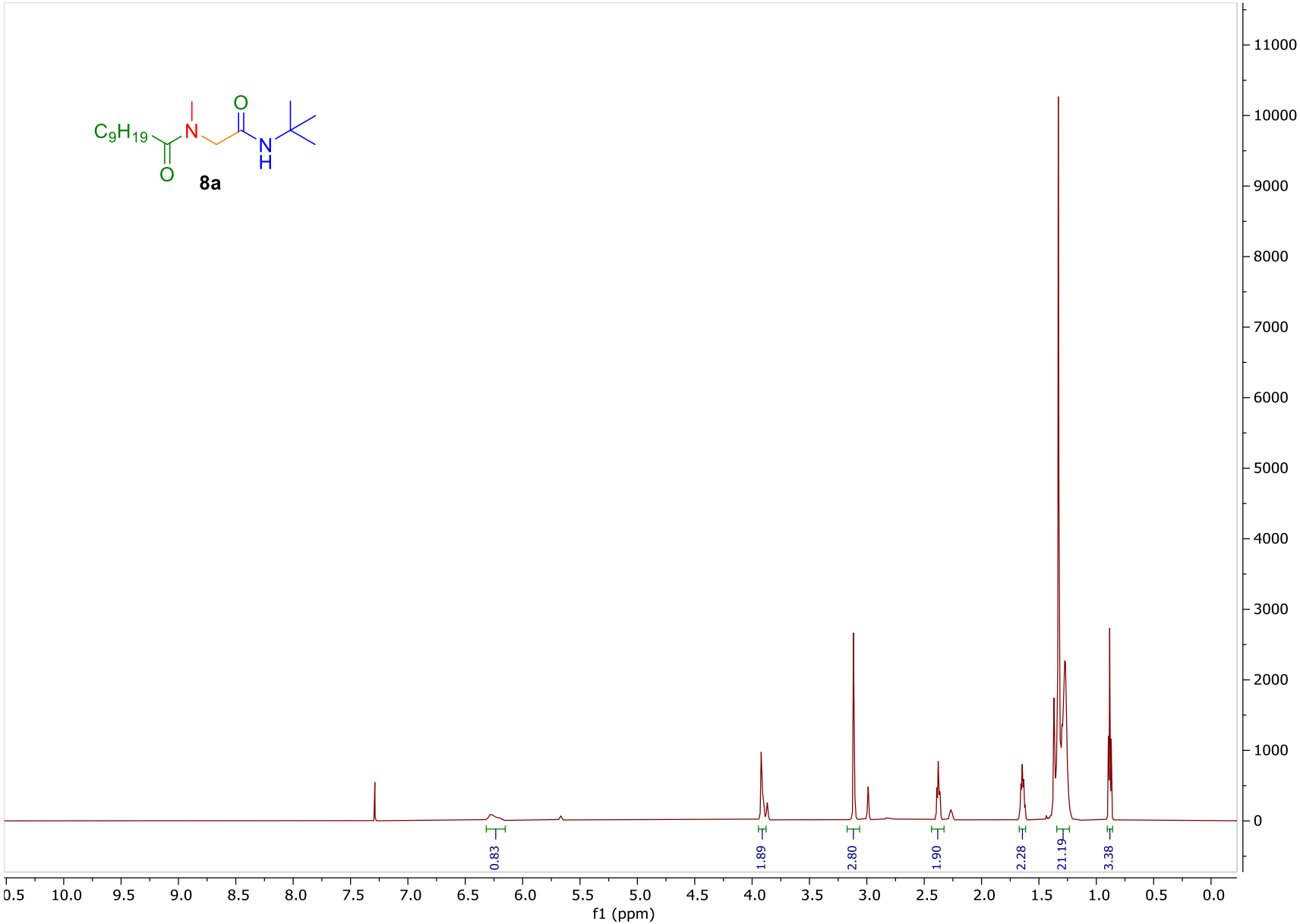


Figure S10. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8a**.

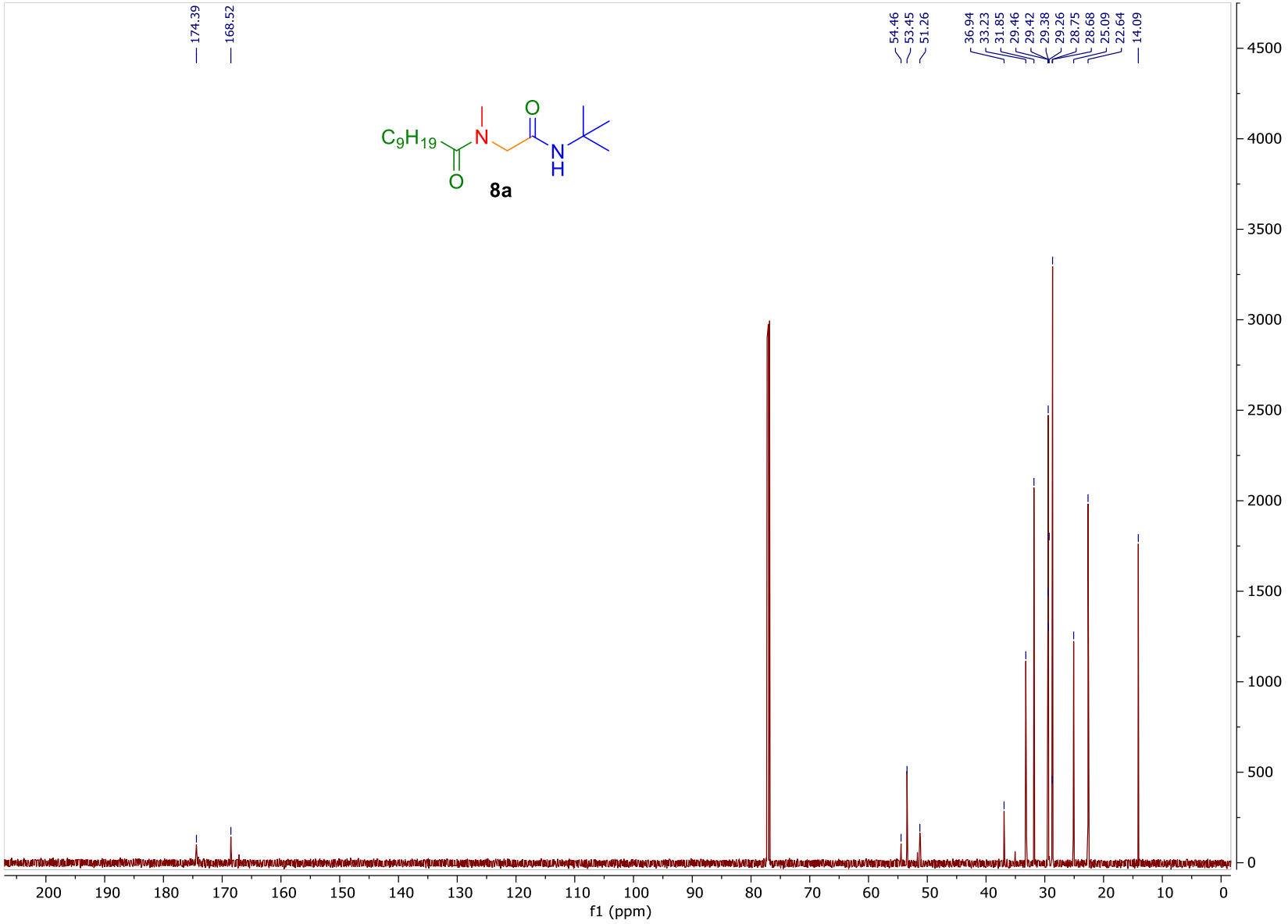


Figure S11. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8a**.

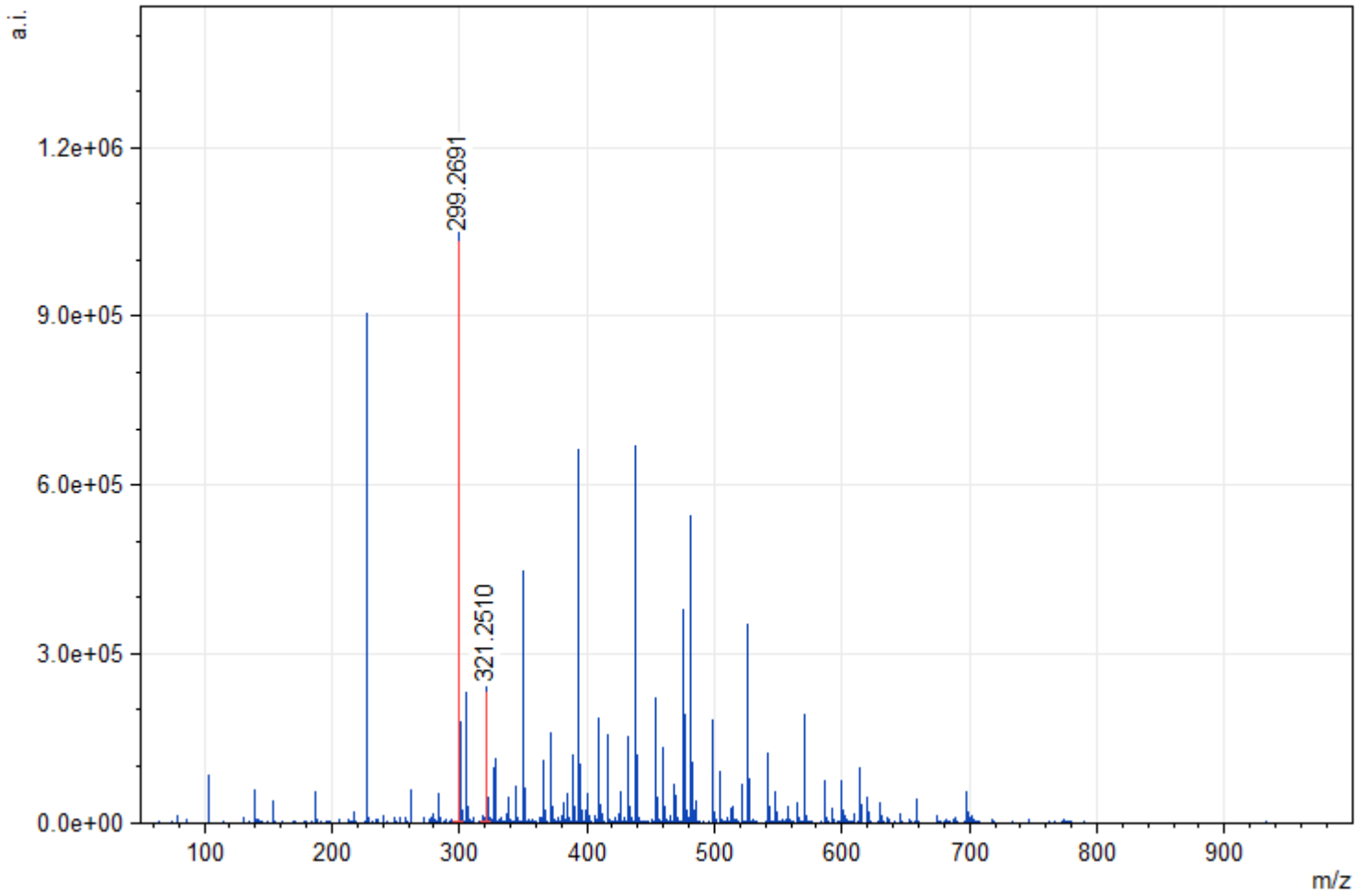


Figure S12. HRMS of compound **8a**.

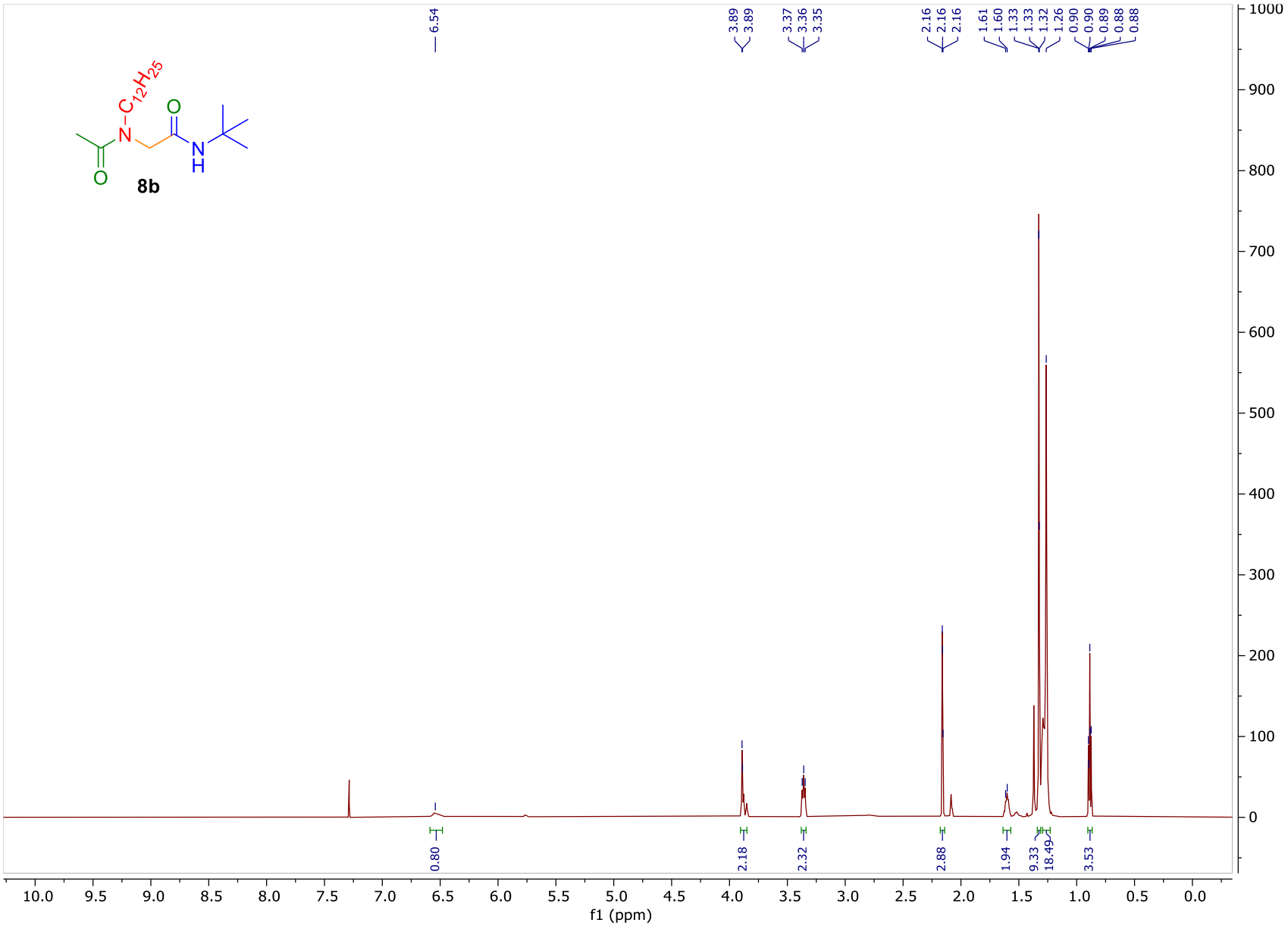


Figure S13. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8b**.

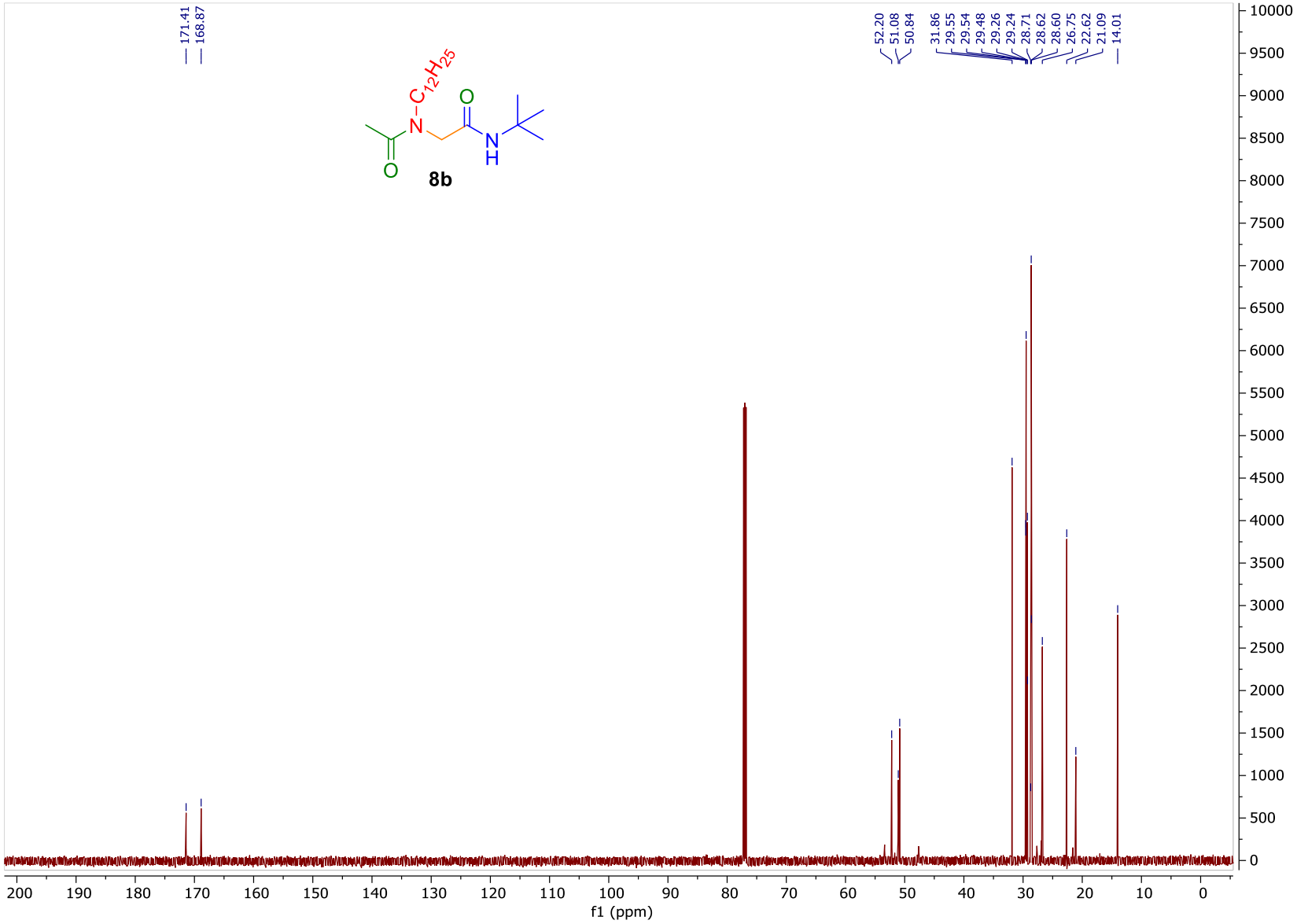


Figure S14. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8b**.

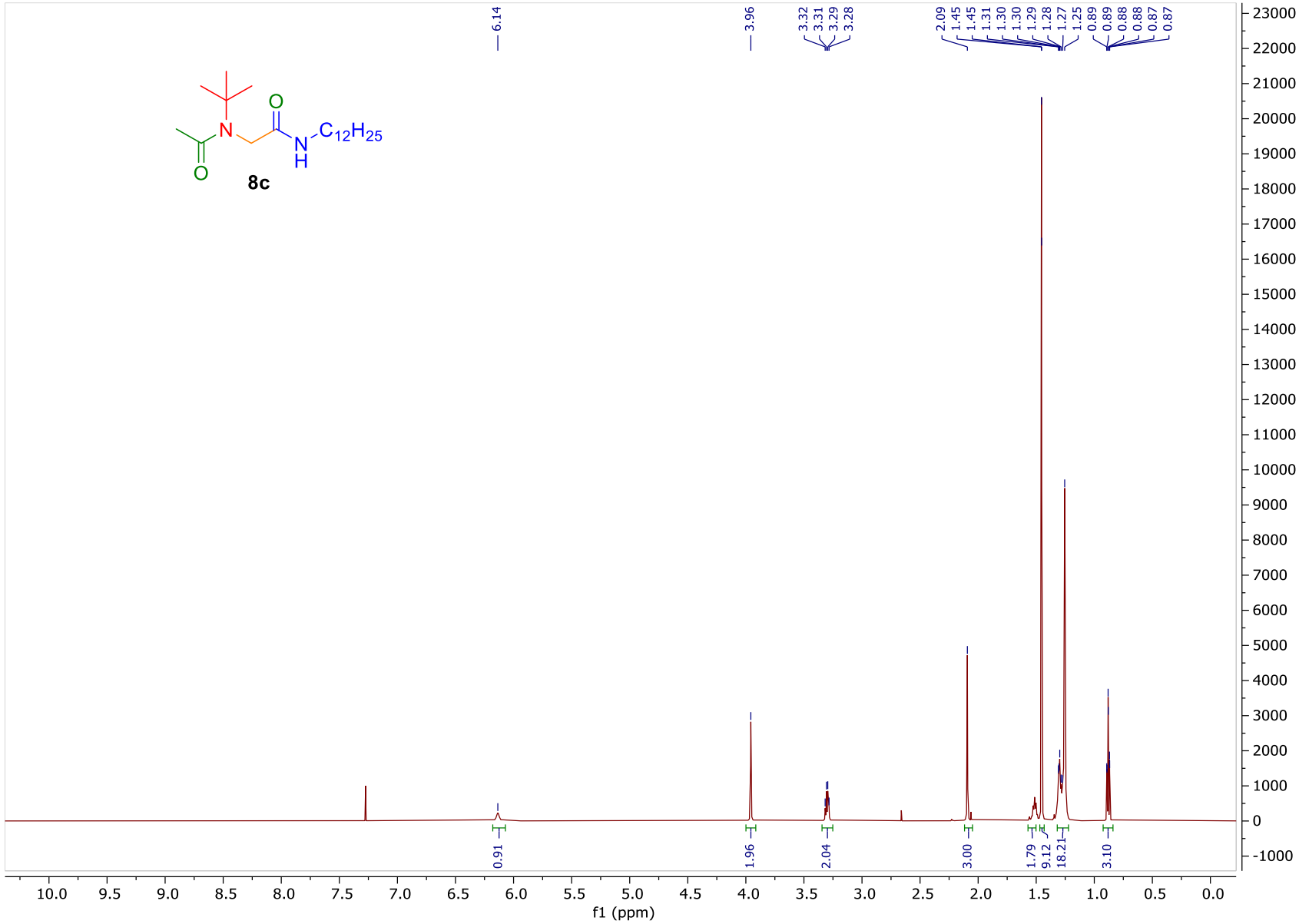


Figure S15. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8c**.

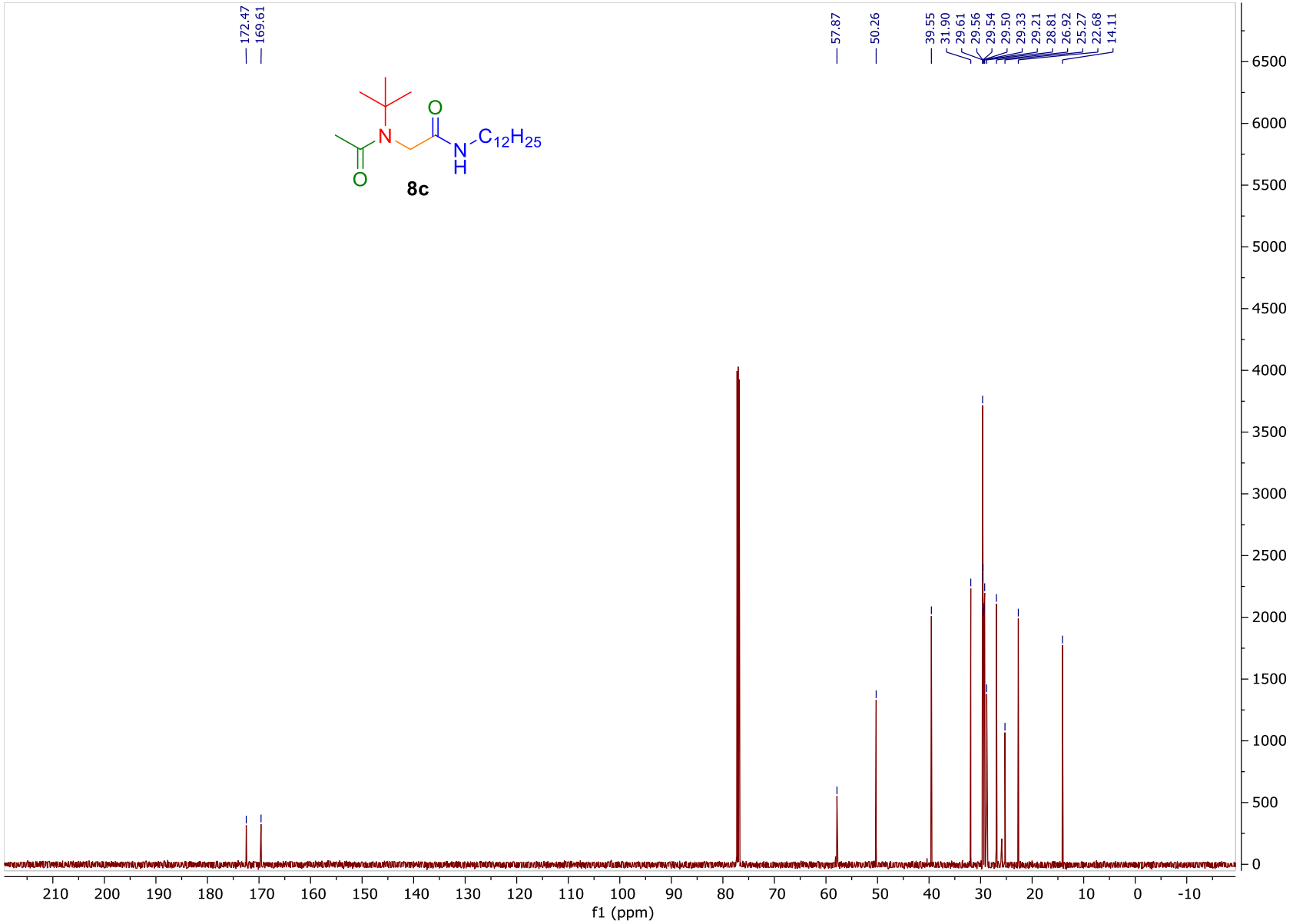


Figure S16. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8c**.

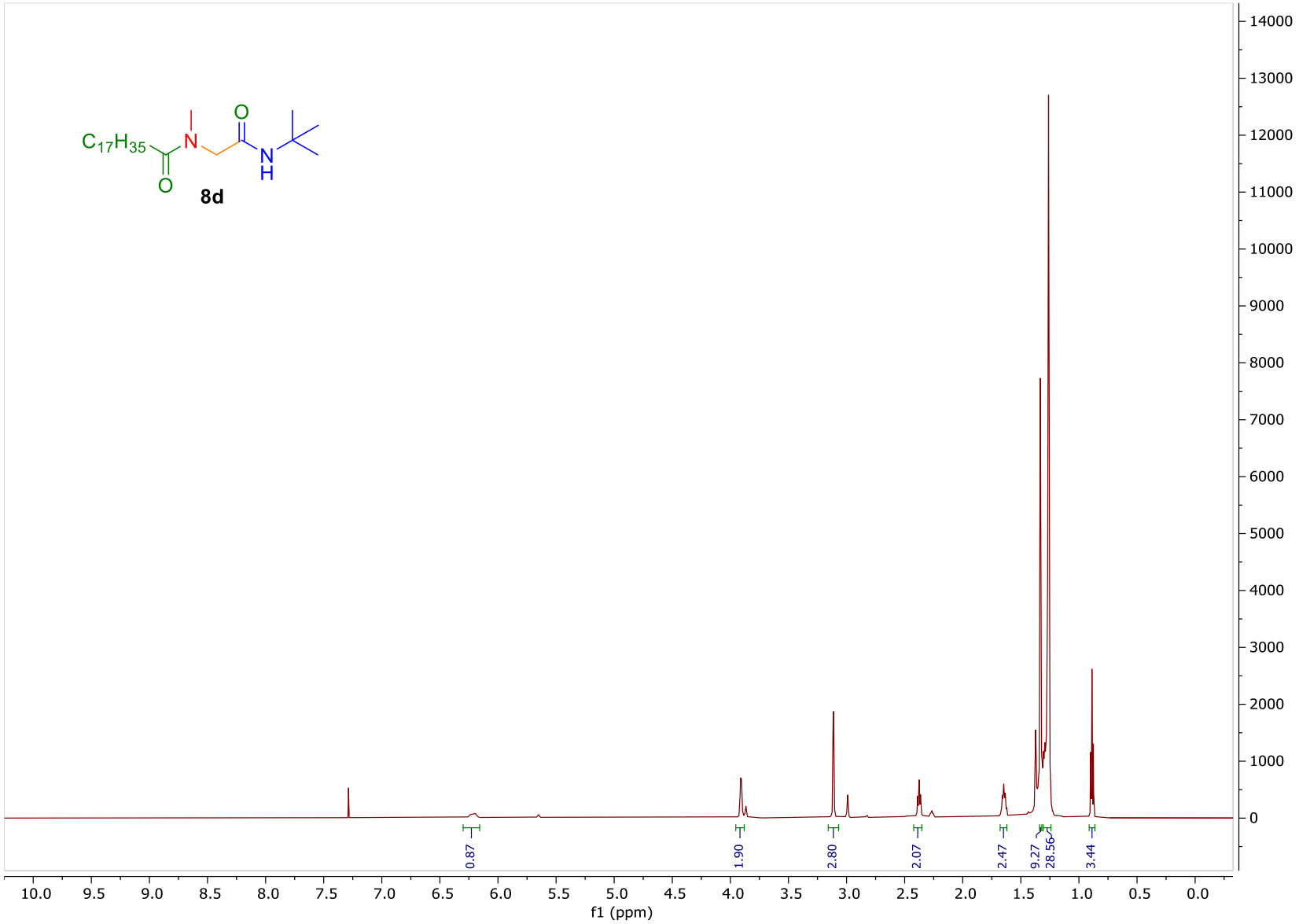


Figure S17. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8d**.

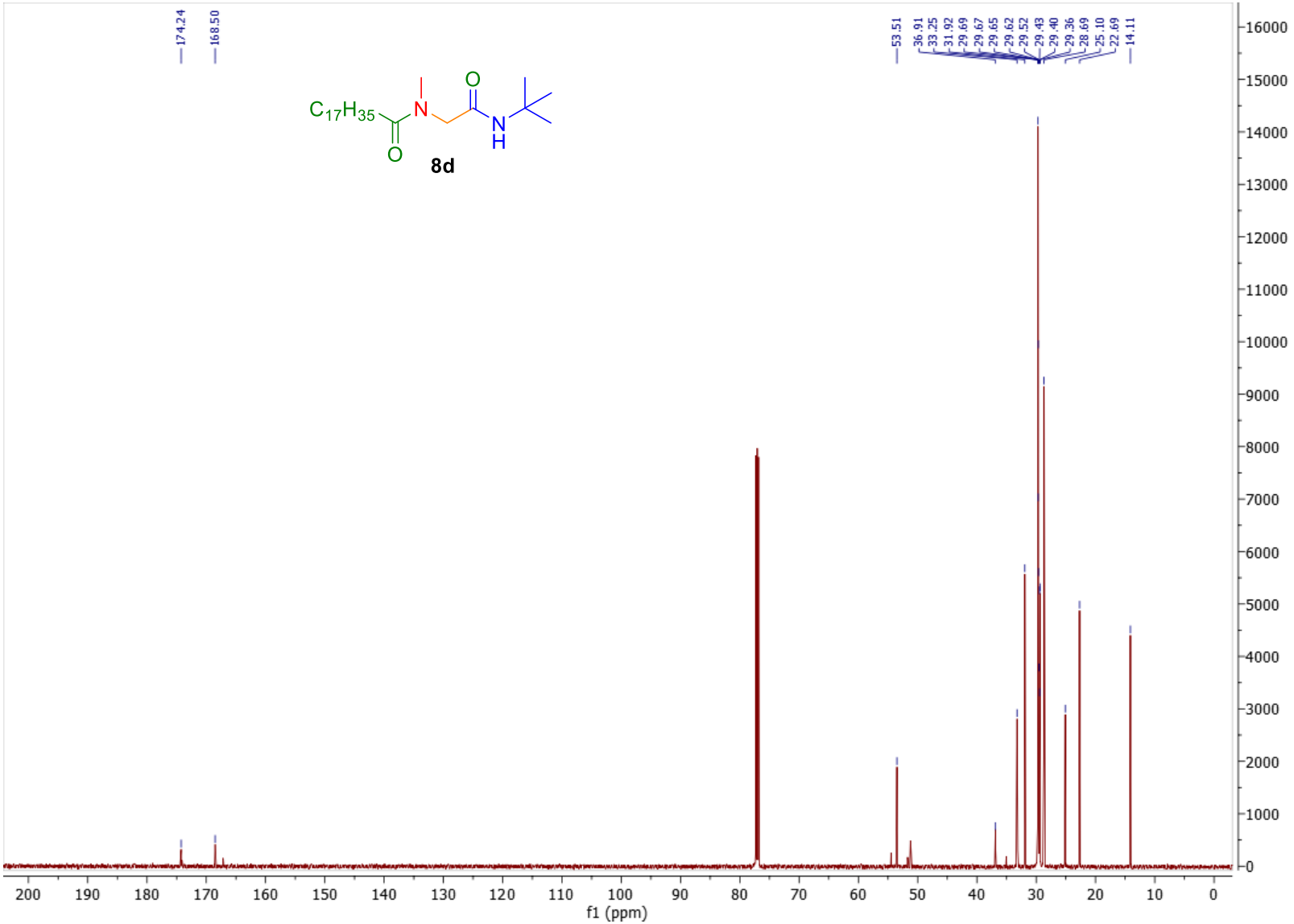


Figure S18. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8d**.

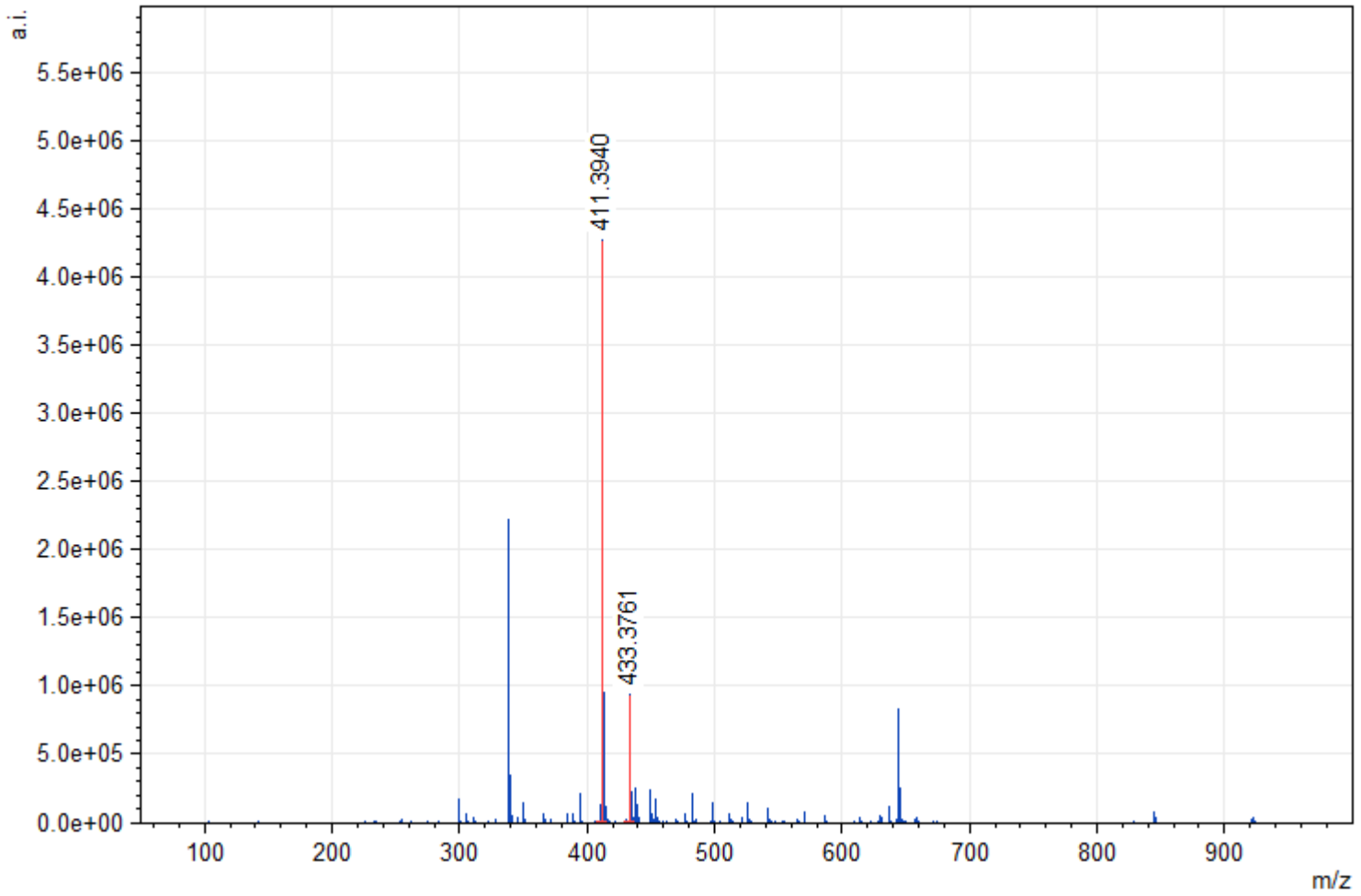


Figure S19. HRMS of compound **8d**.

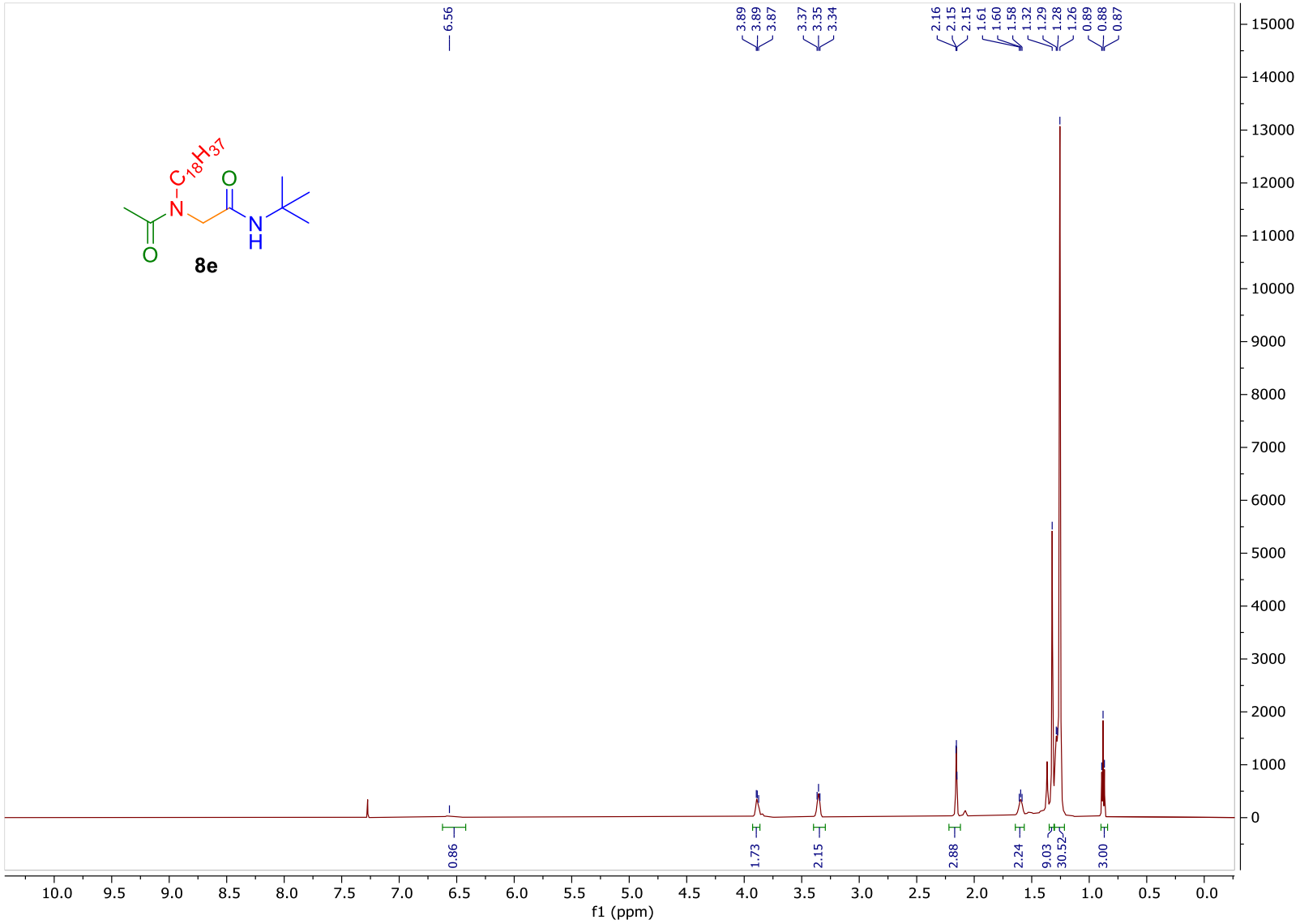


Figure S20. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8e**.

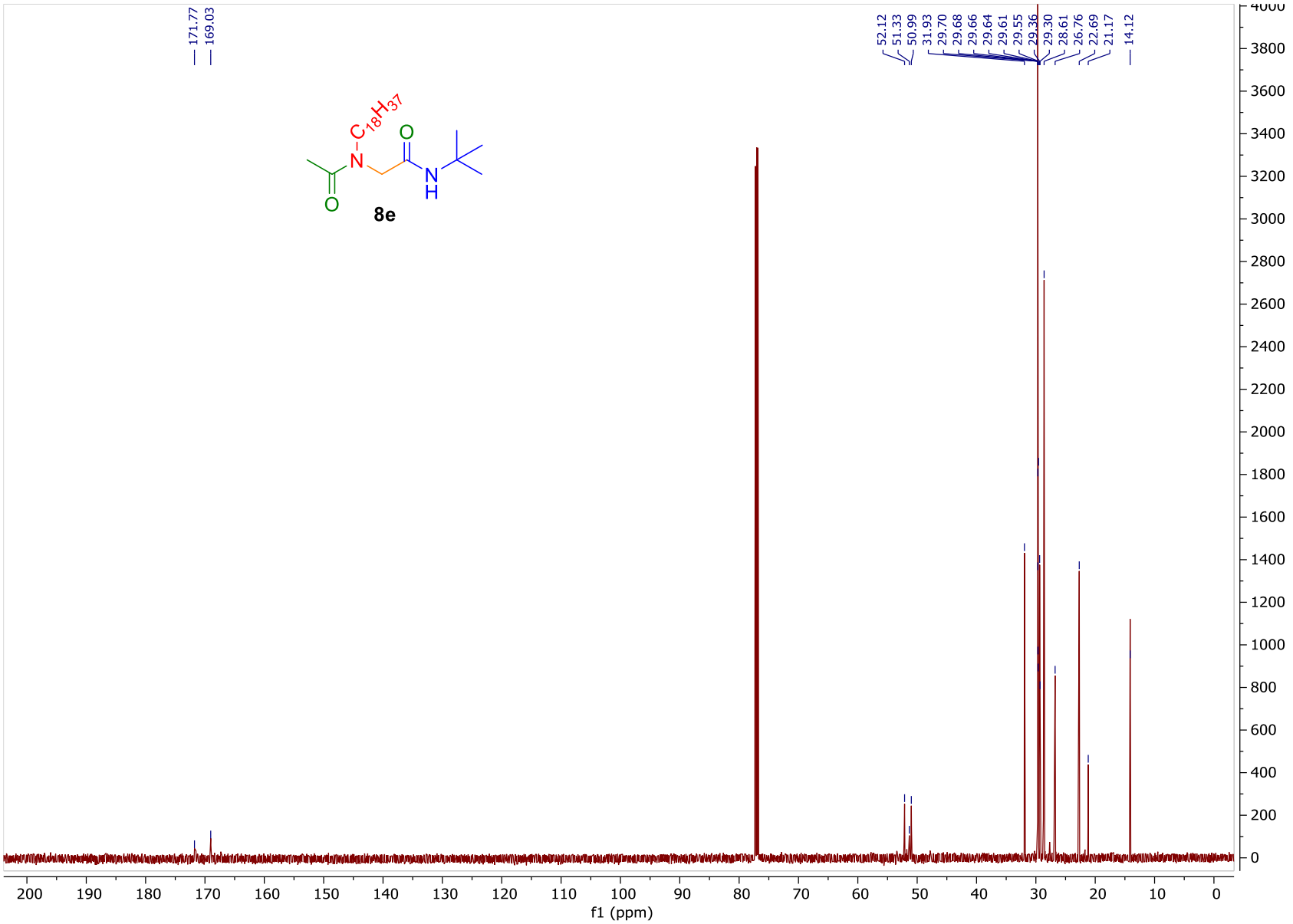


Figure S21. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8e**.

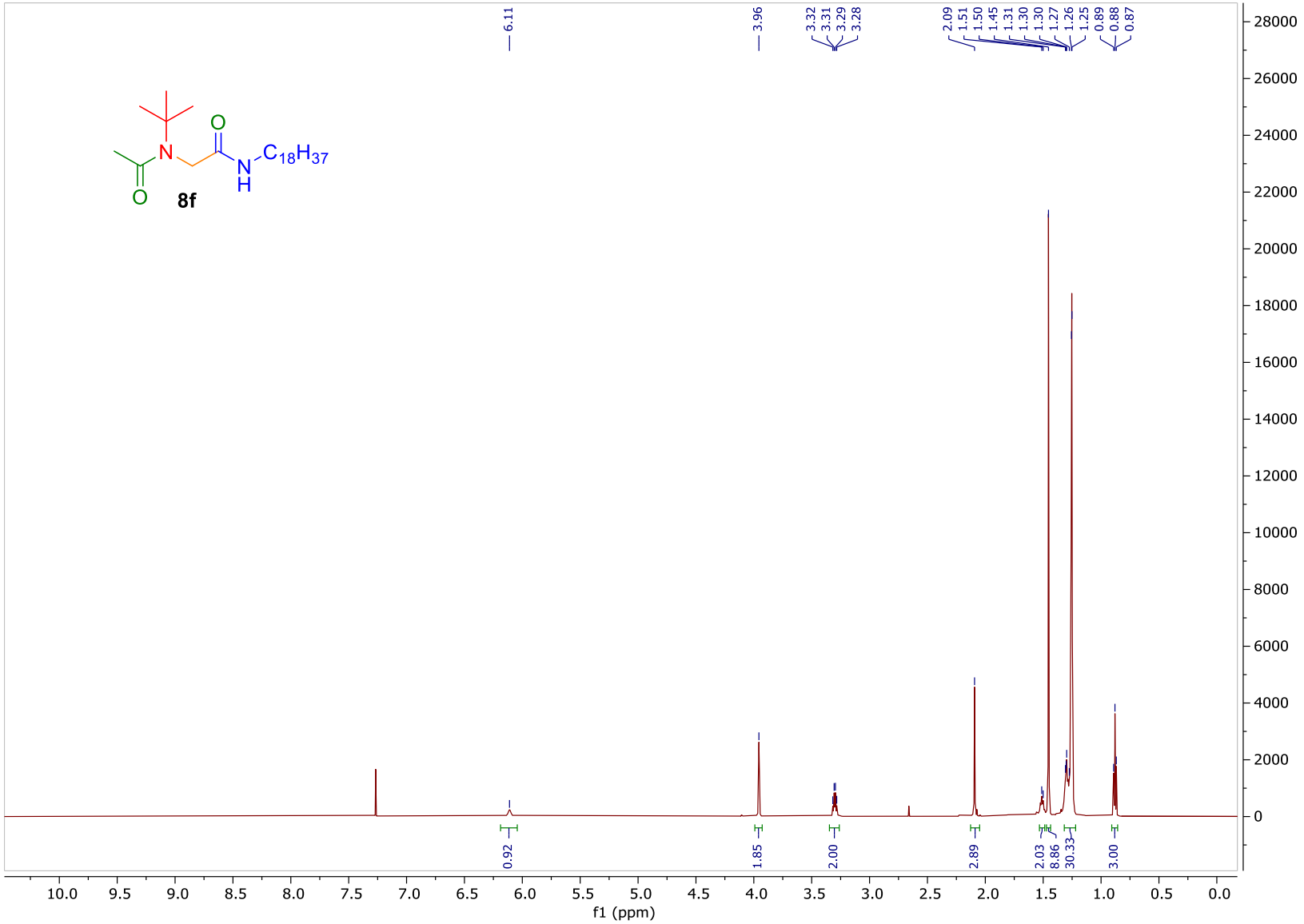


Figure S22. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8f**.

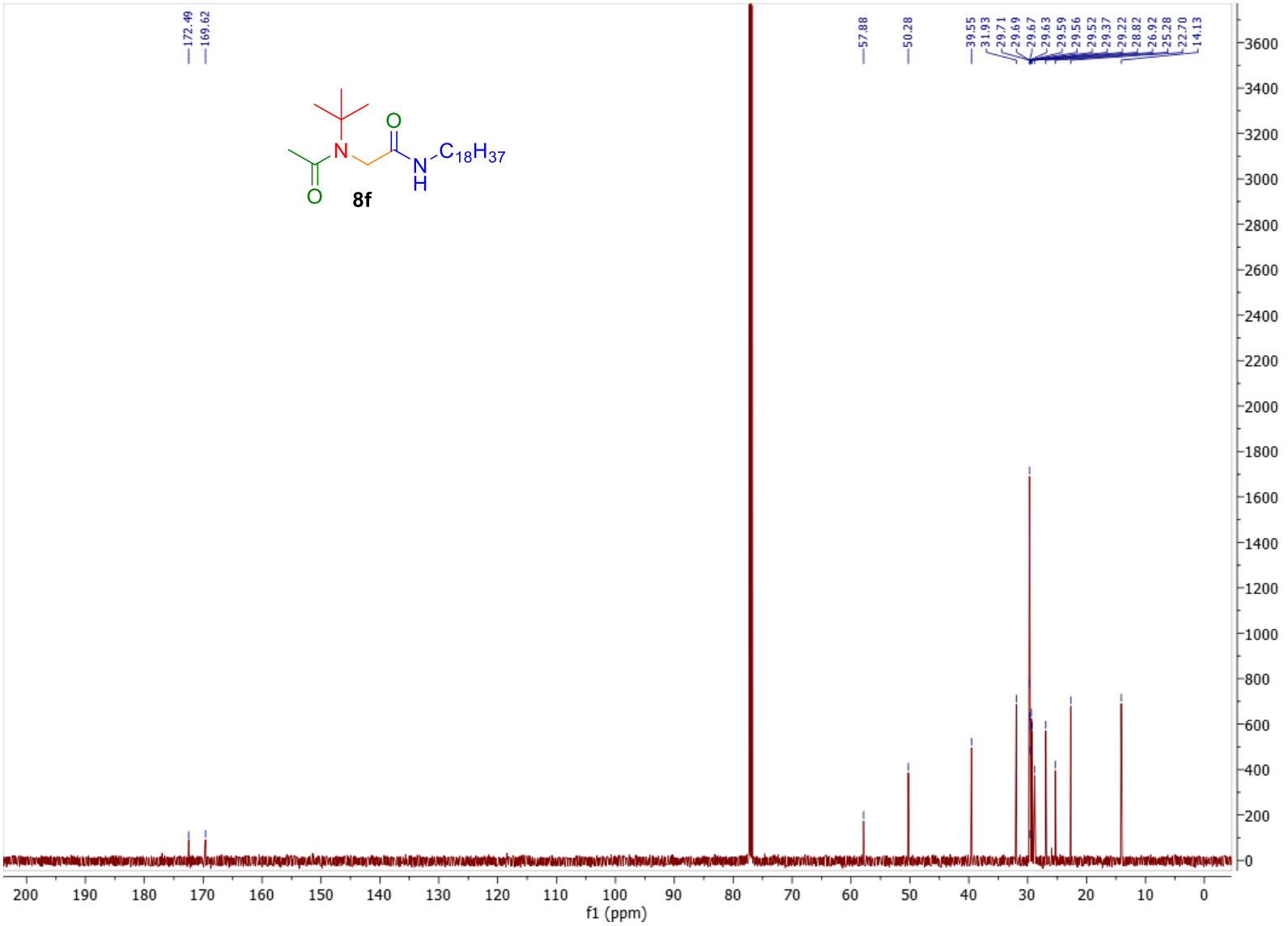


Figure S23. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8f**.

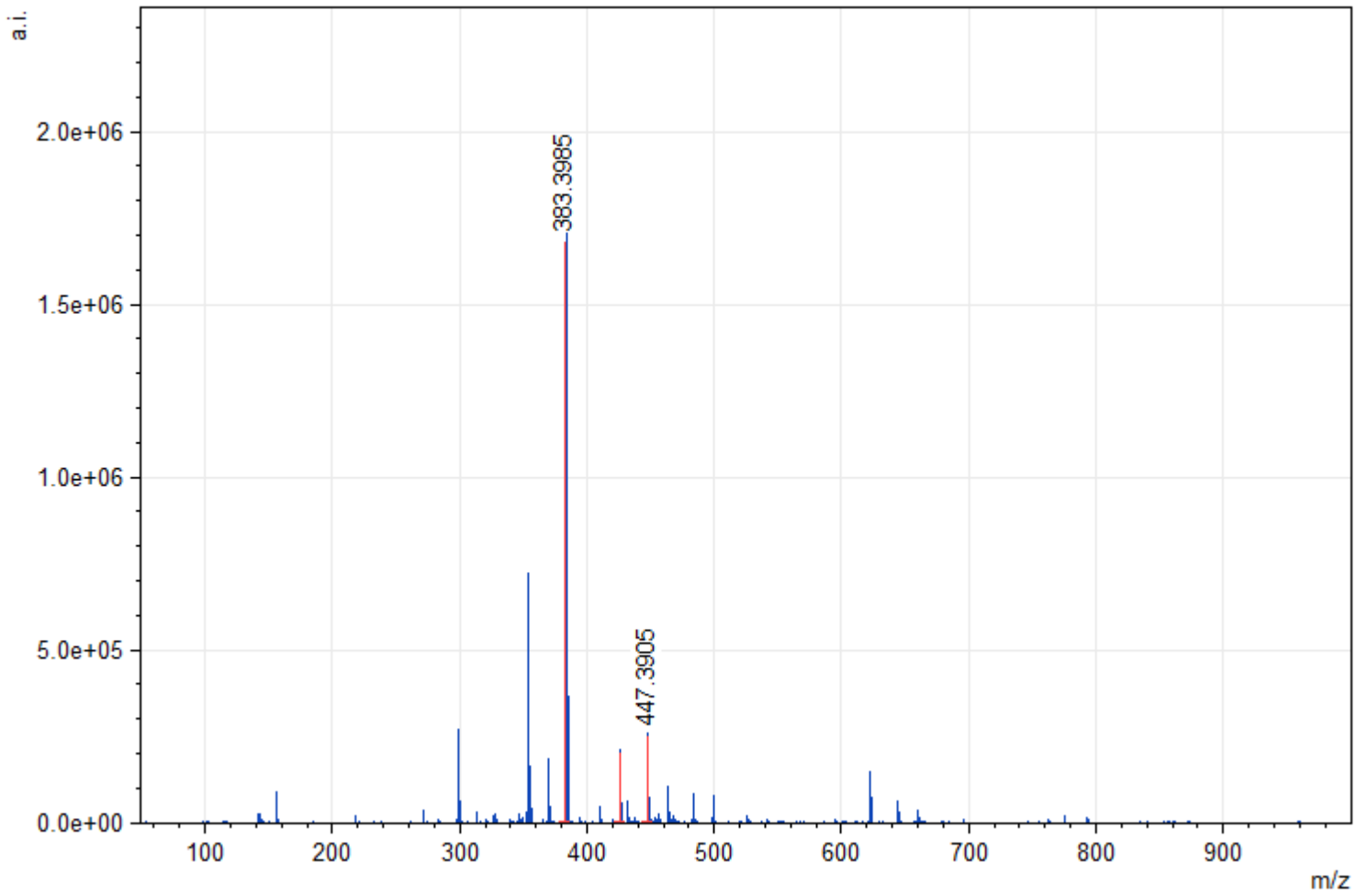


Figure S24. HRMS of compound **8f**.

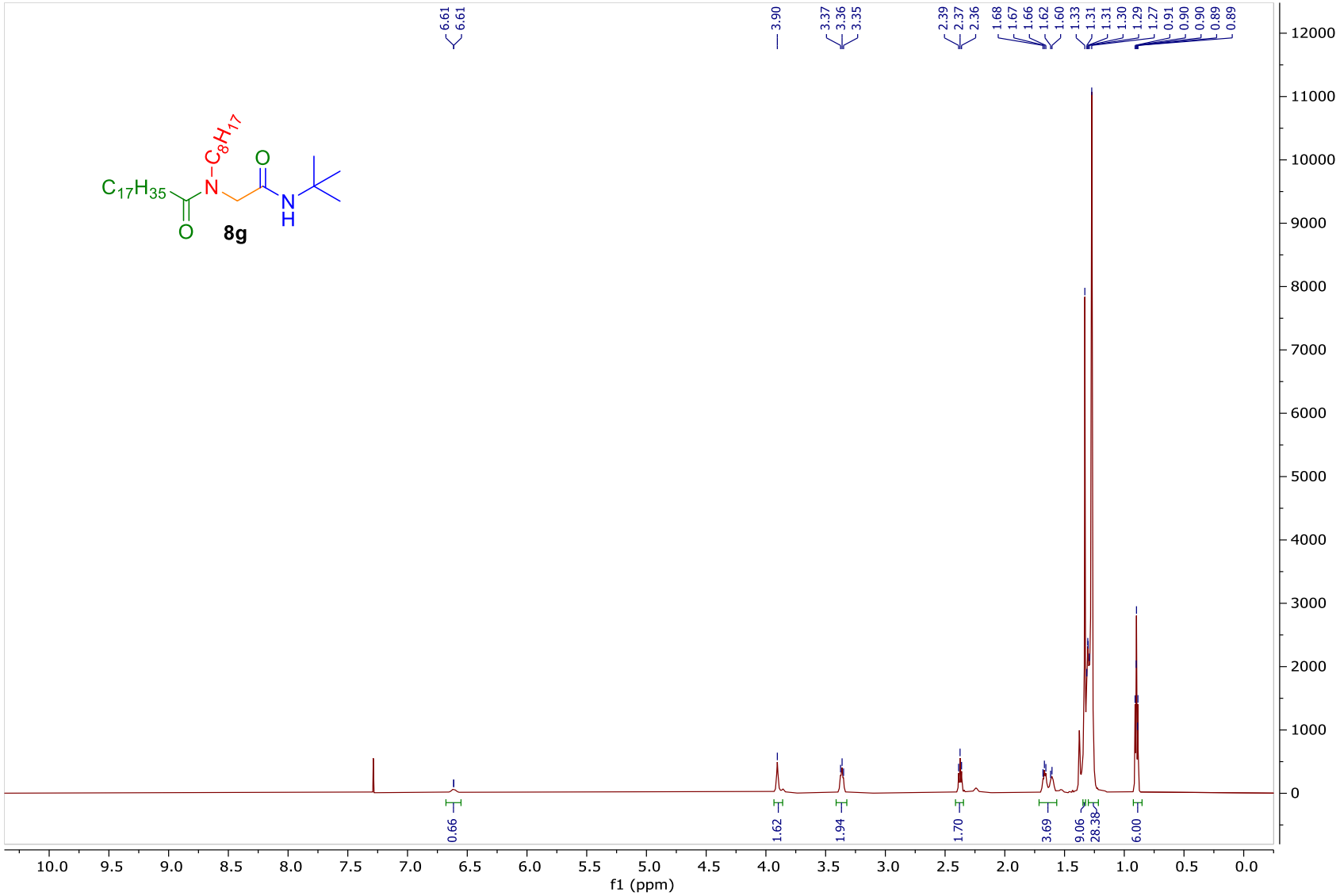


Figure S25. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8g**.

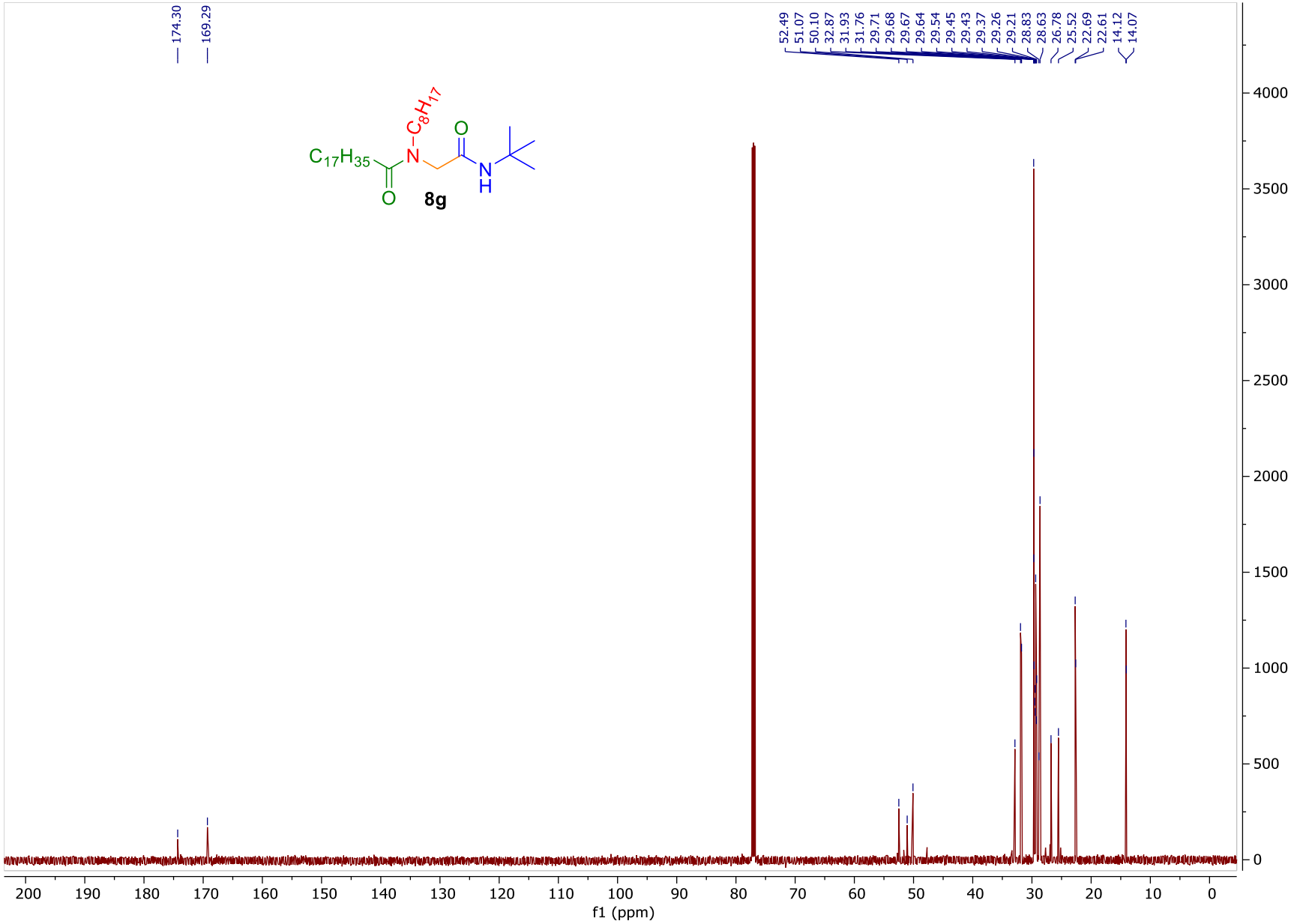


Figure S26. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8g**.

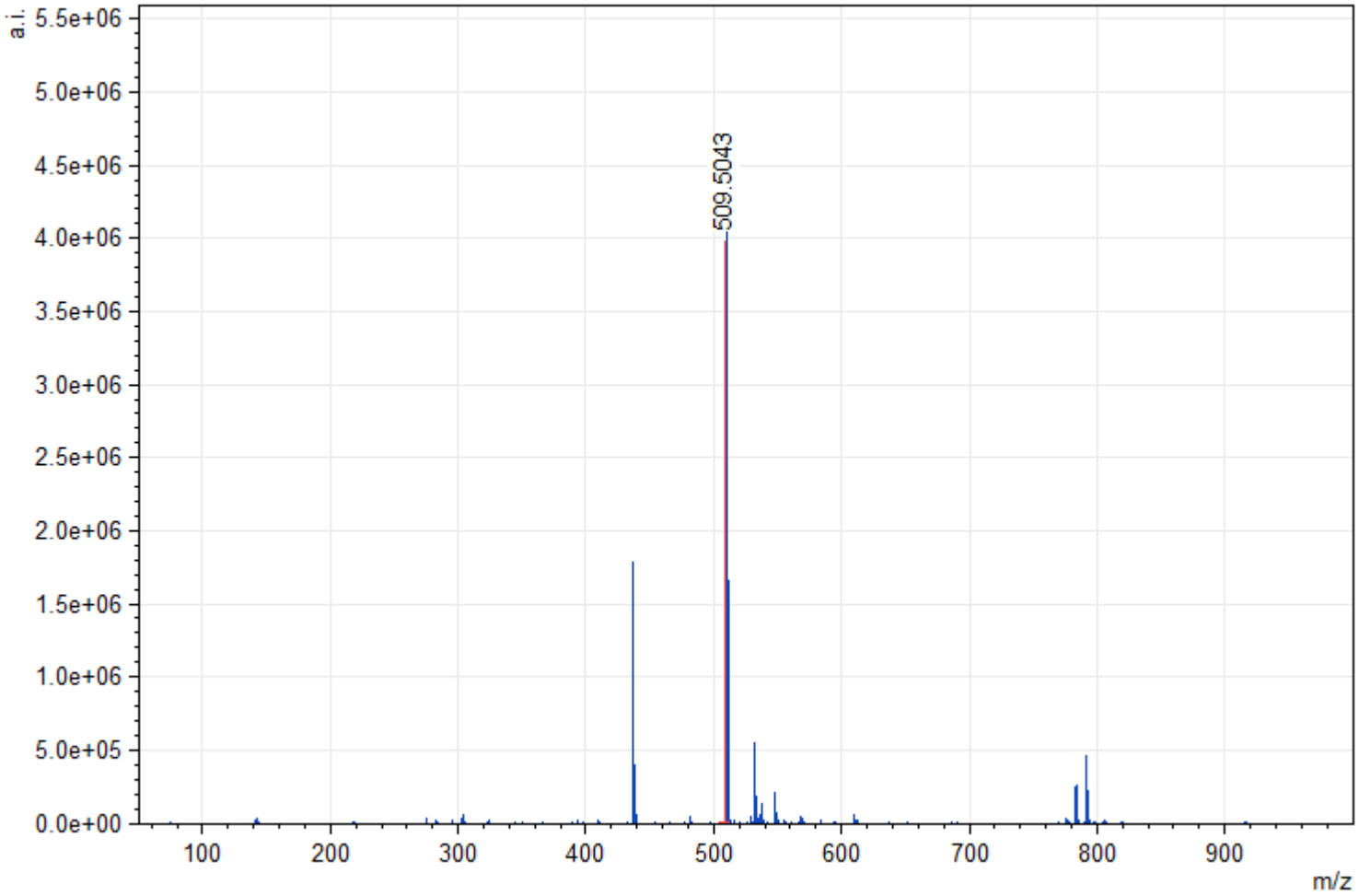


Figure S27. HRMS of compound **8g**.

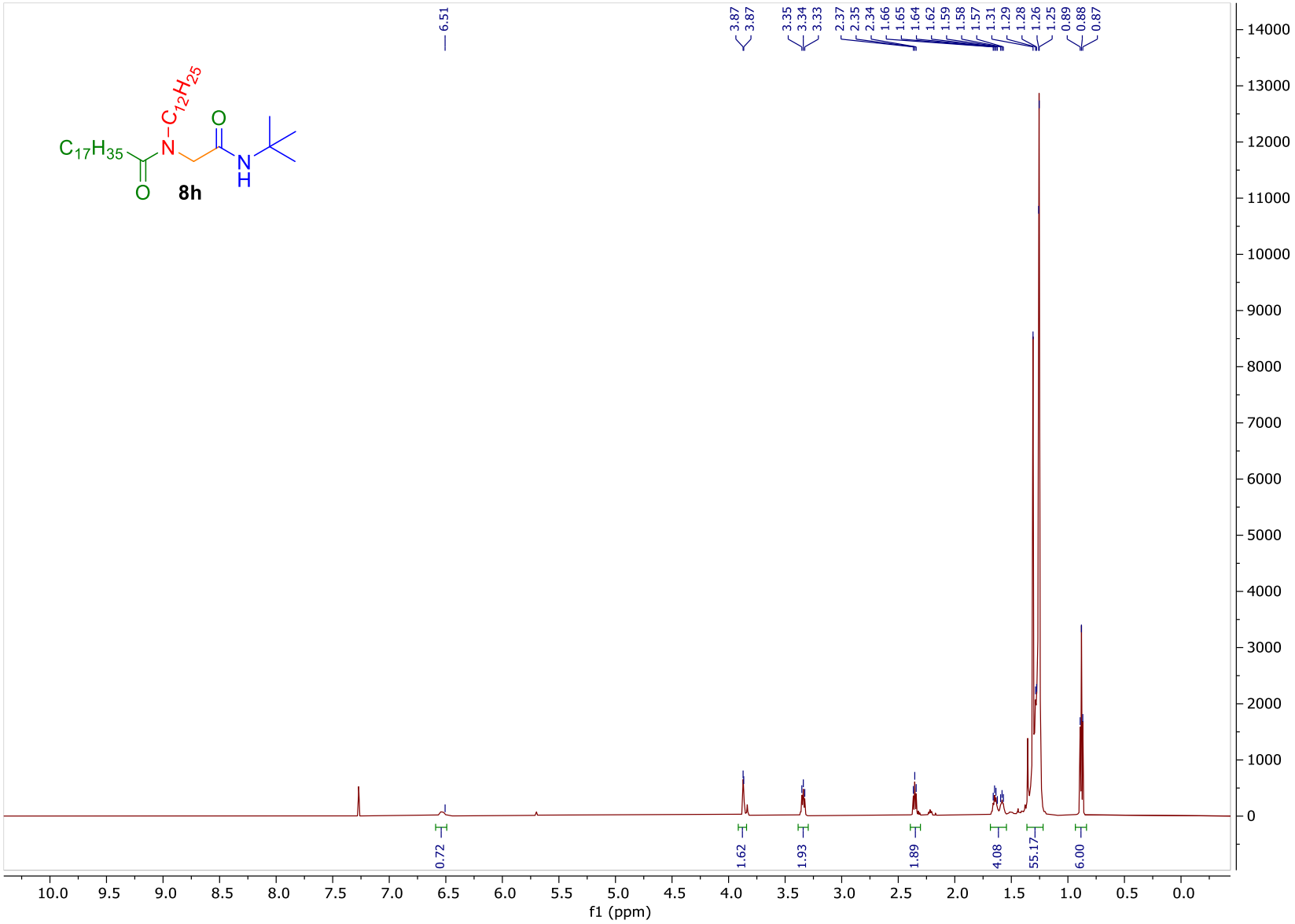


Figure S28. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8h.**

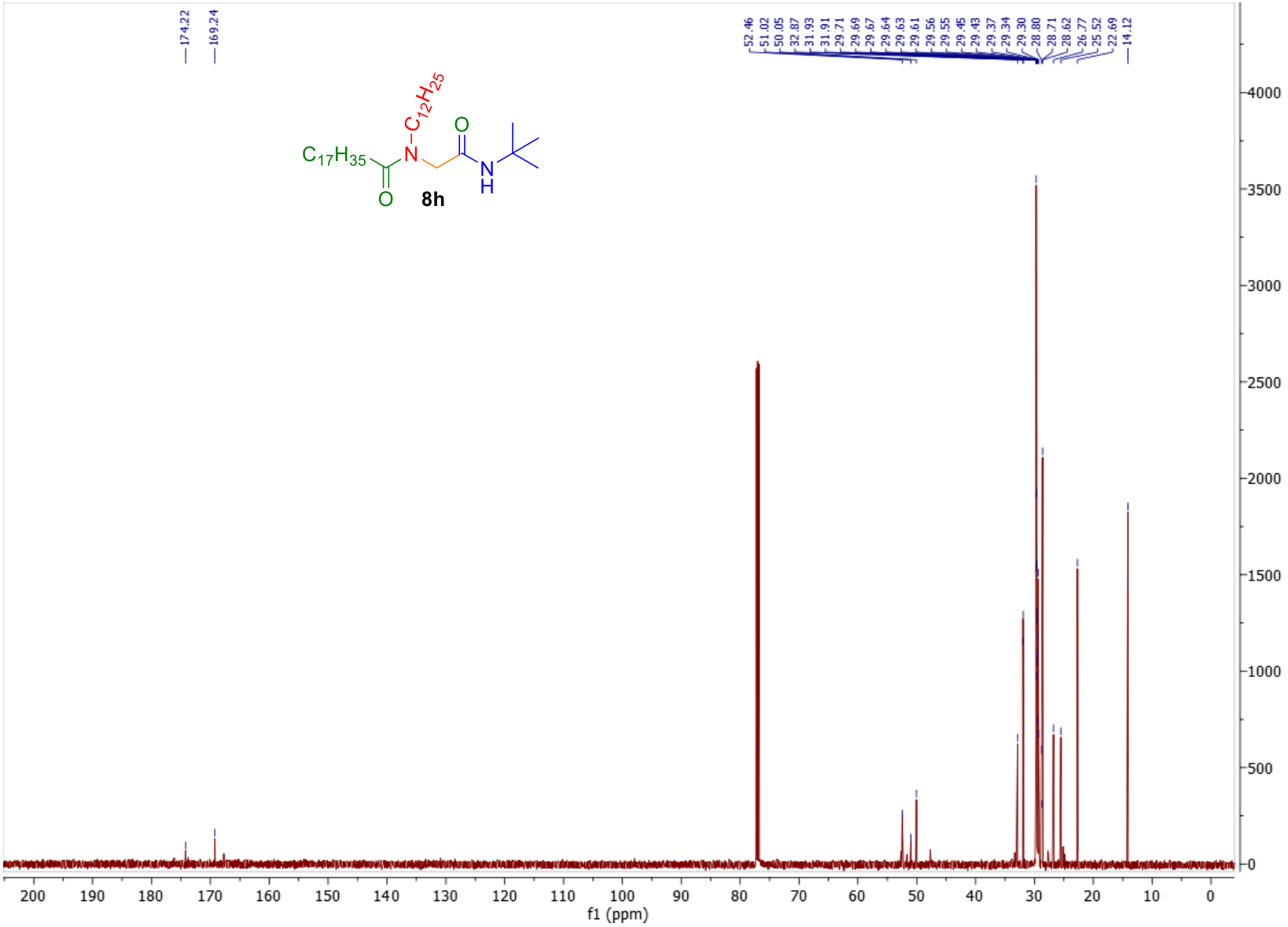


Figure S29. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8h**.

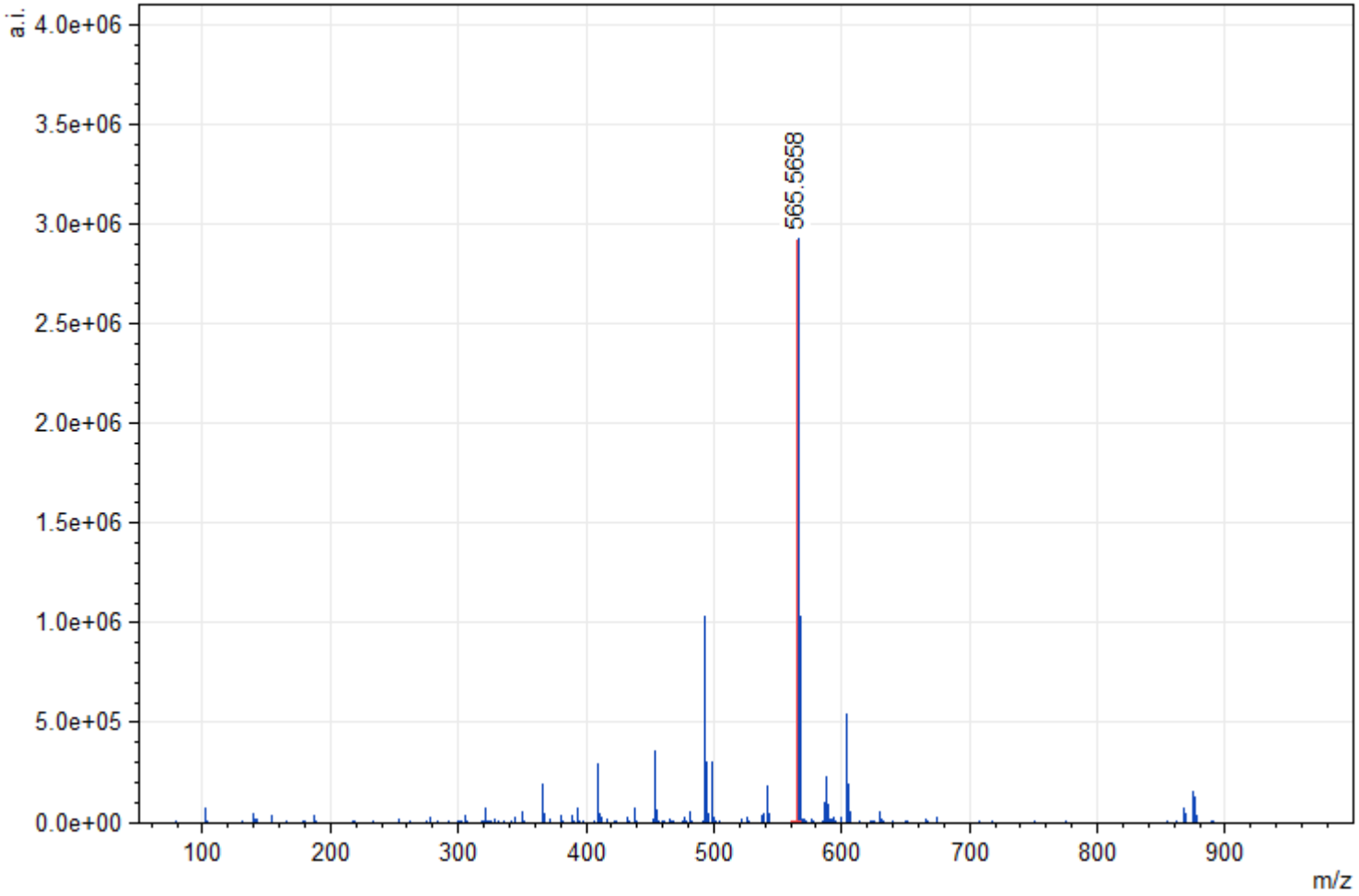


Figure S30. HRMS of compound **8h**.

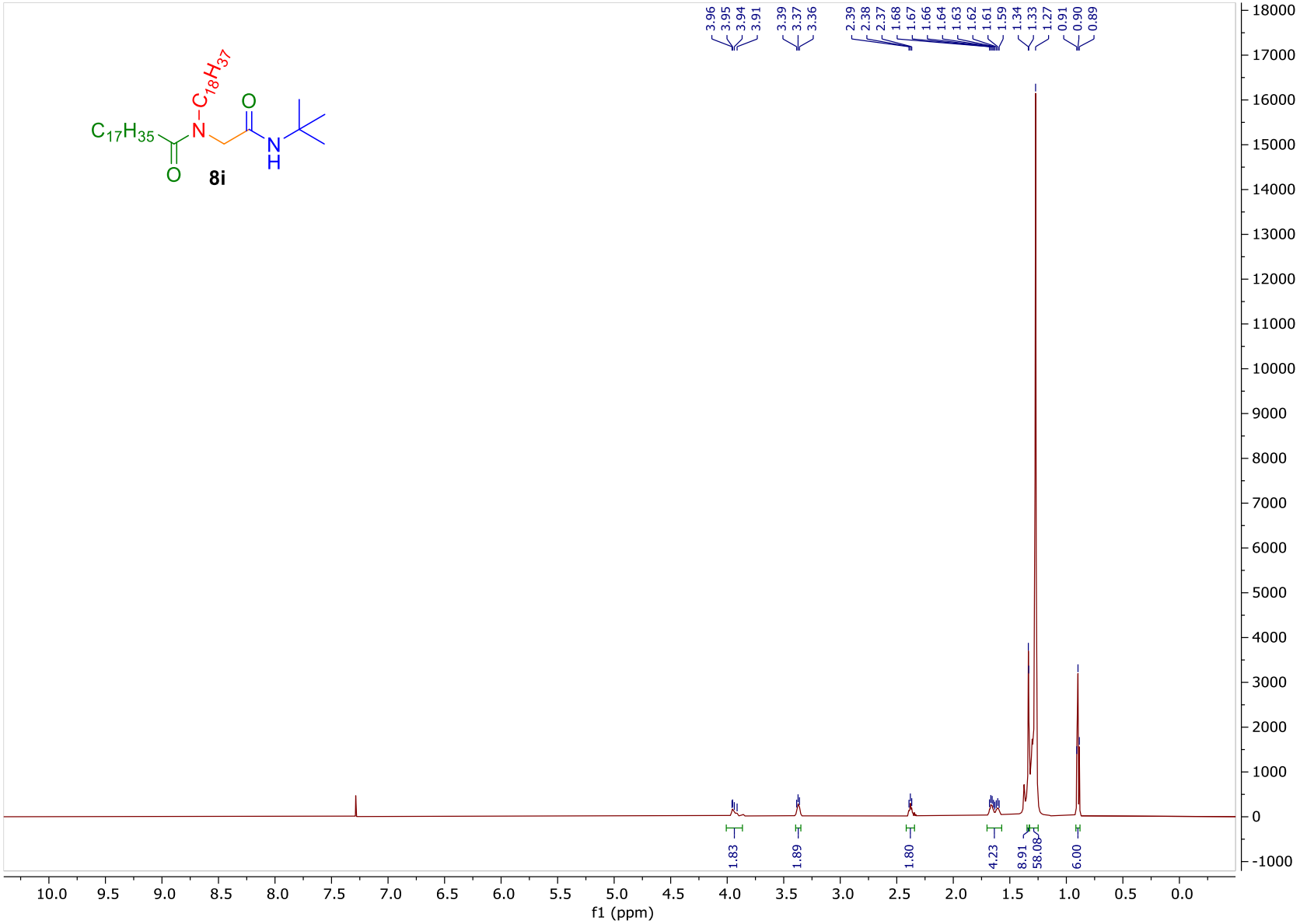


Figure S31. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8i.**

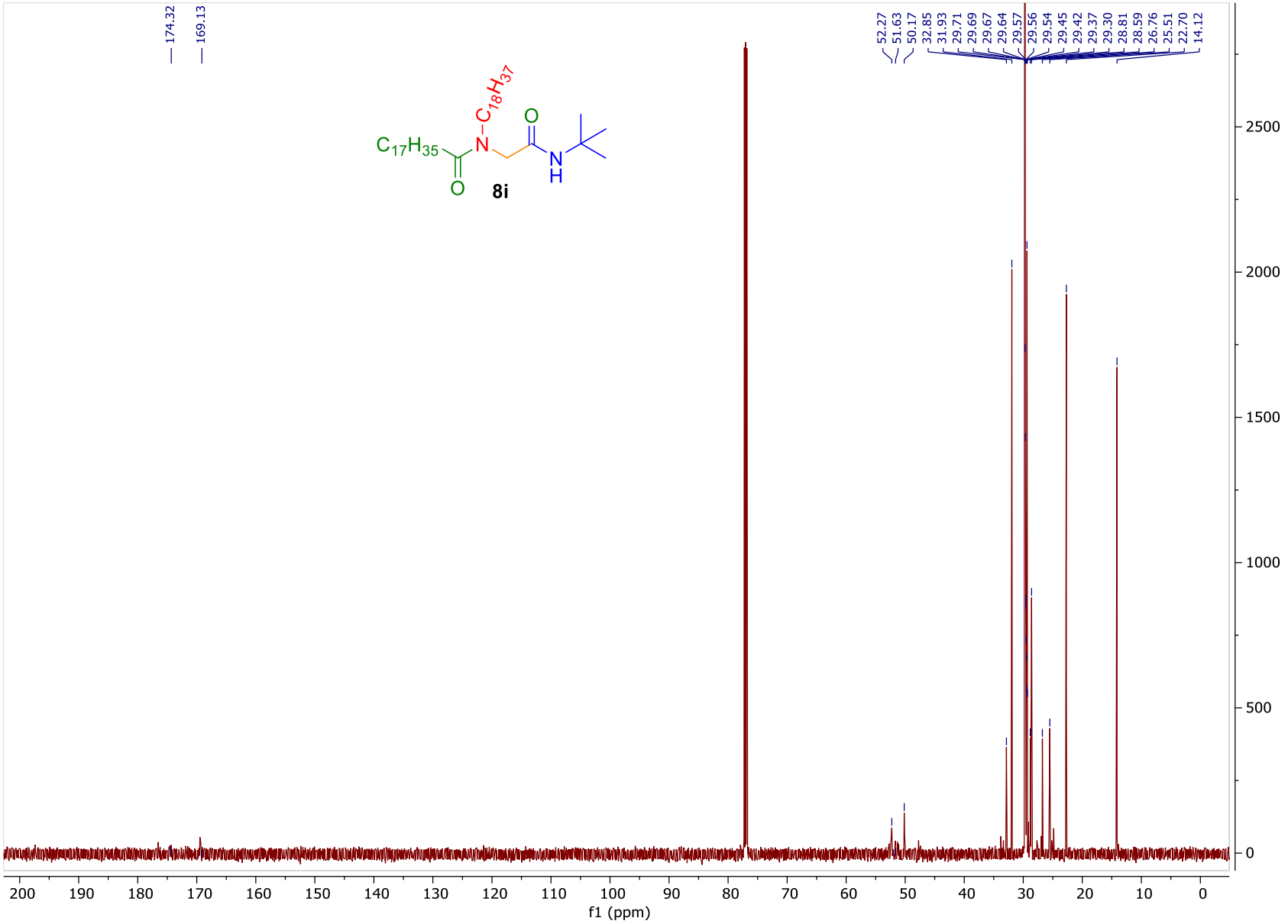


Figure S32. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8i.**

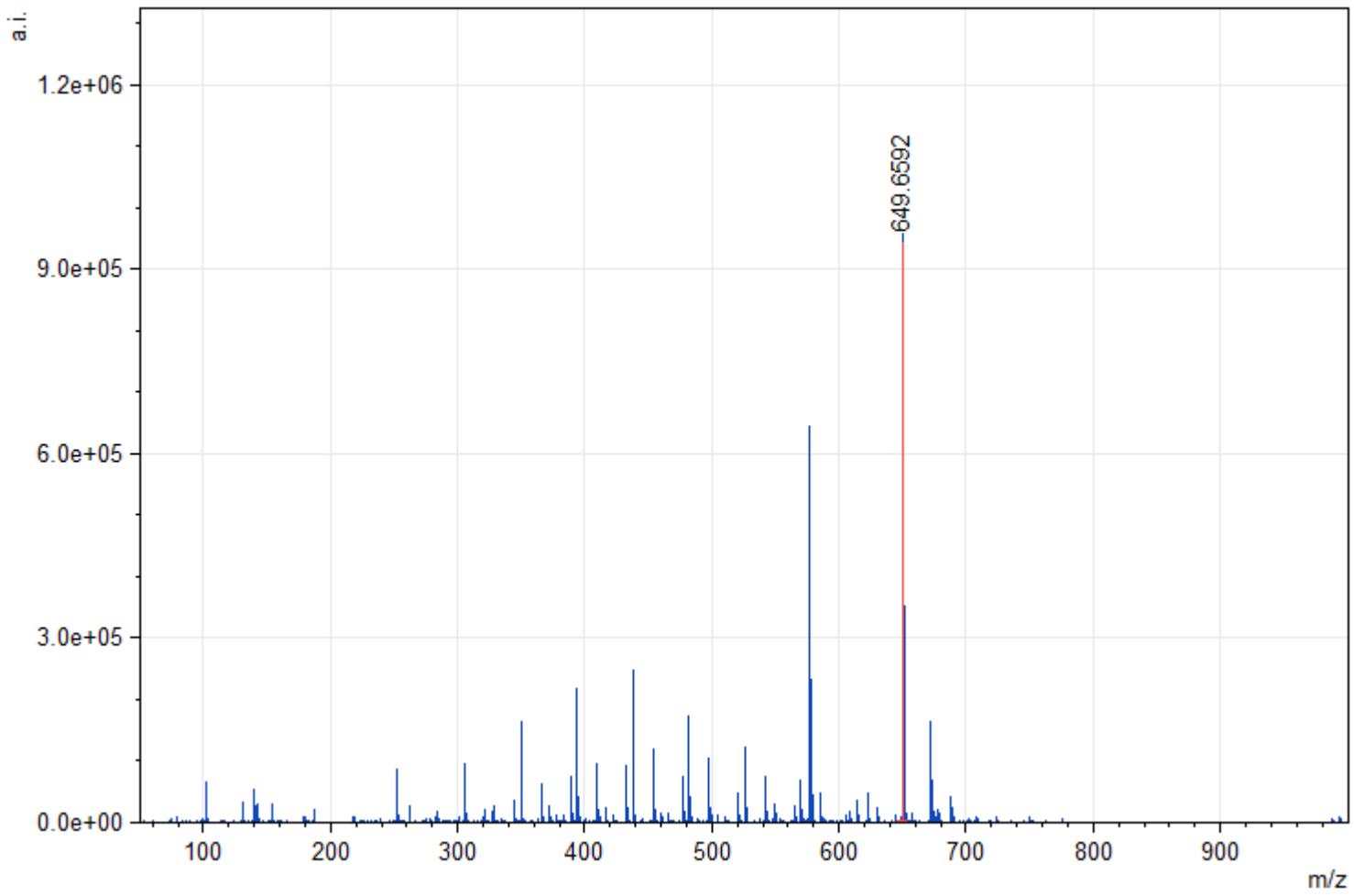


Figure S33. HRMS of compound **8i**.

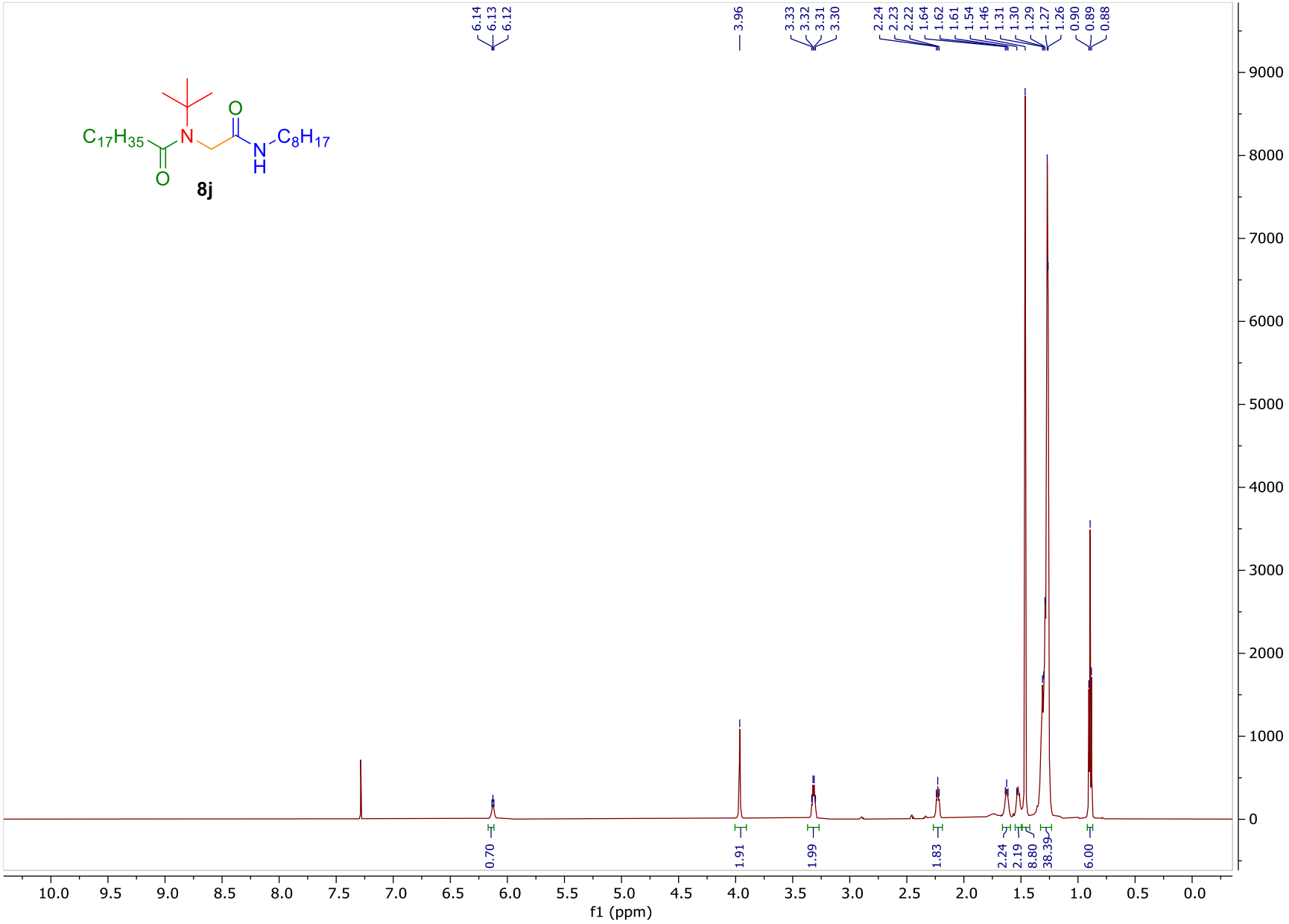


Figure S34. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8j**.

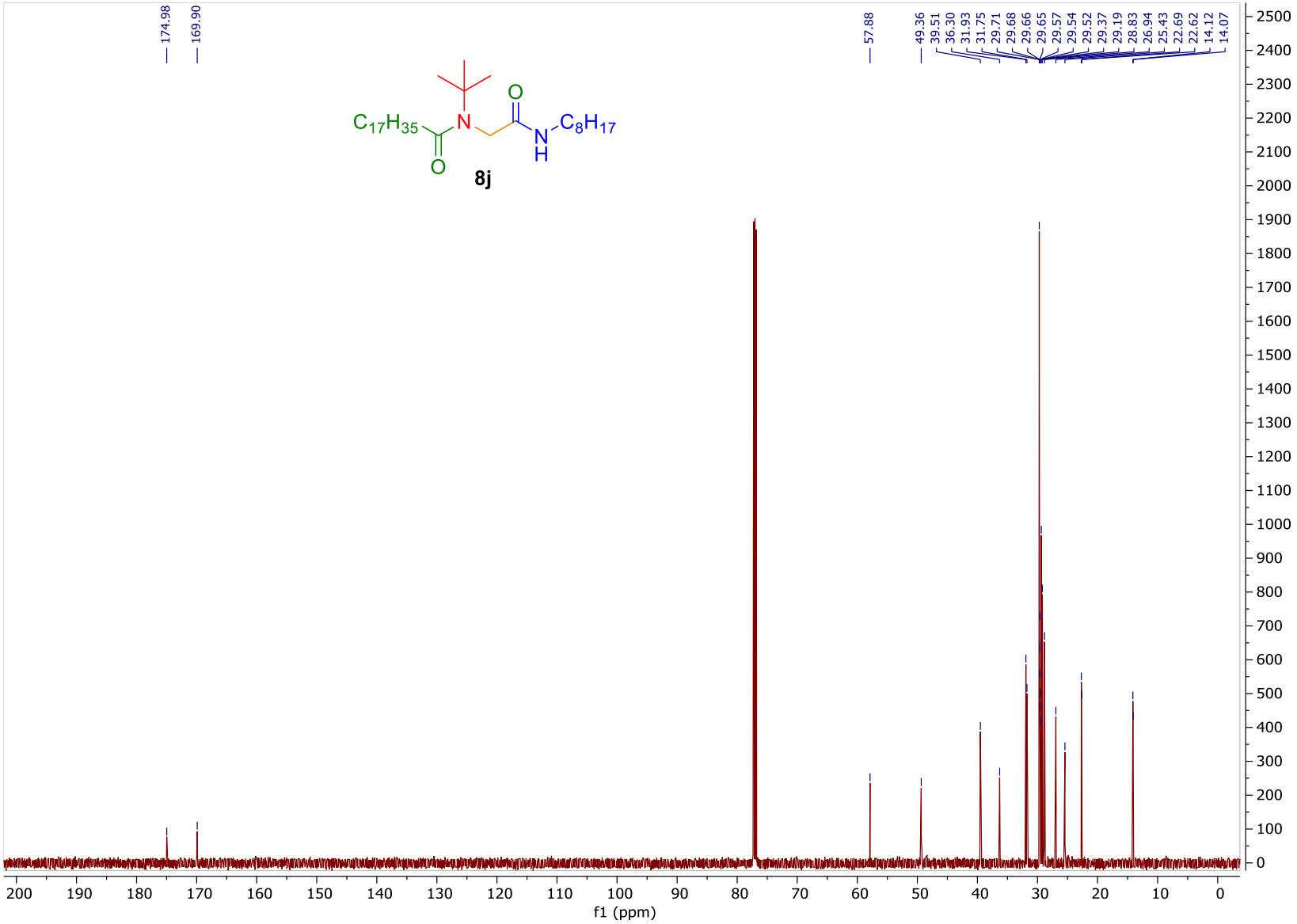


Figure S35. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8j**.

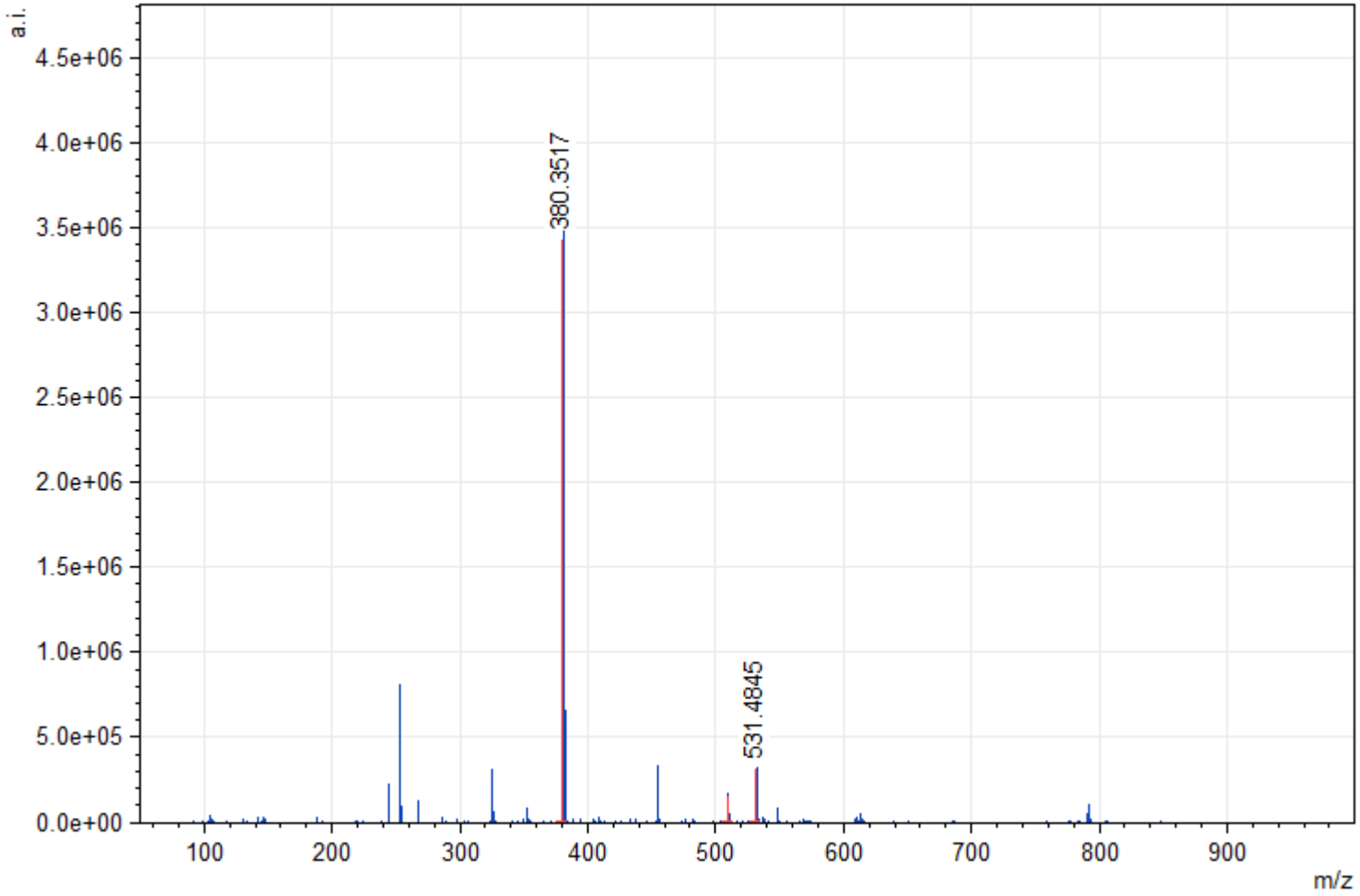


Figure S36. HRMS of compound **8j**.

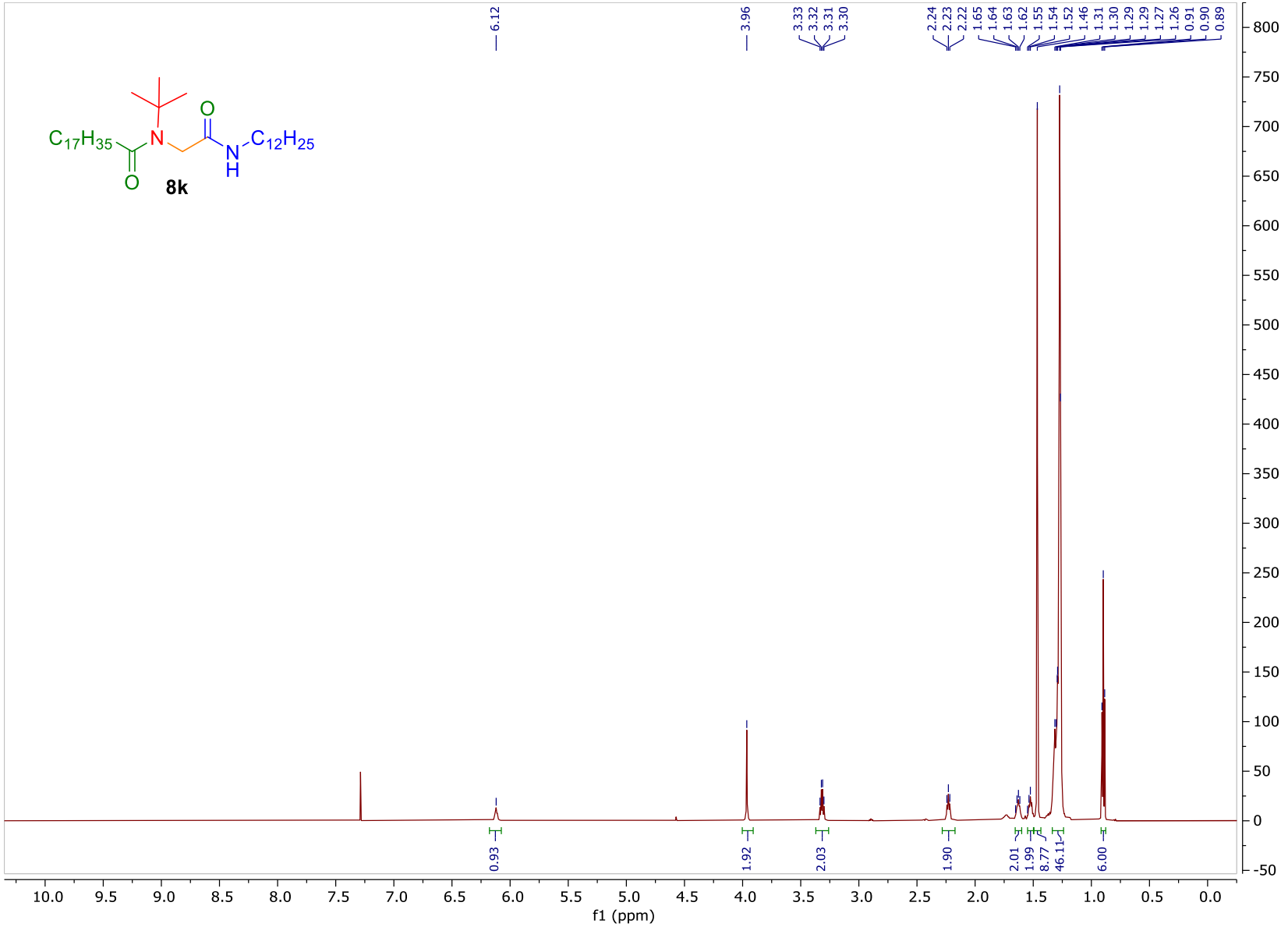


Figure S37. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8k**.

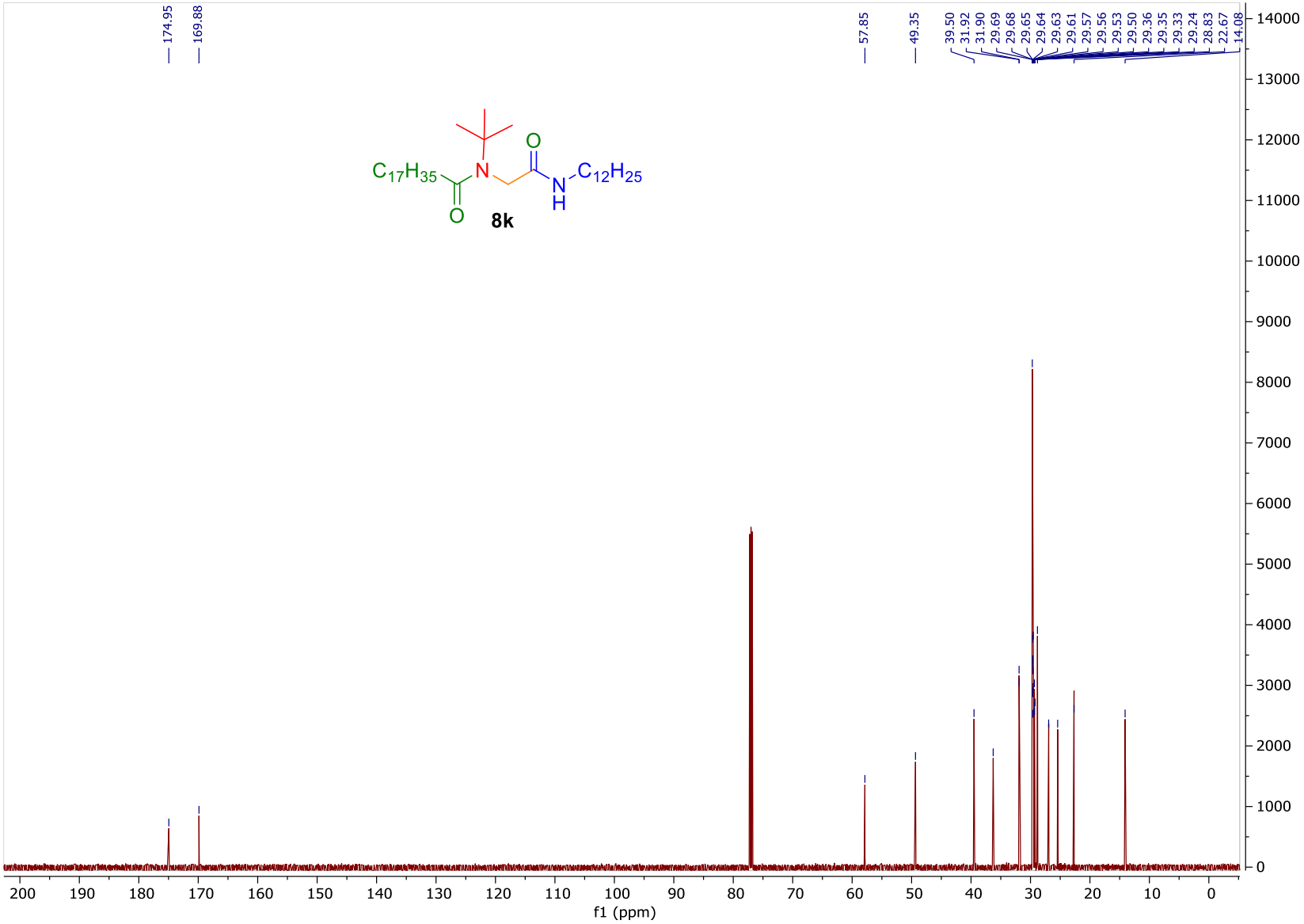


Figure S38. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8k**.

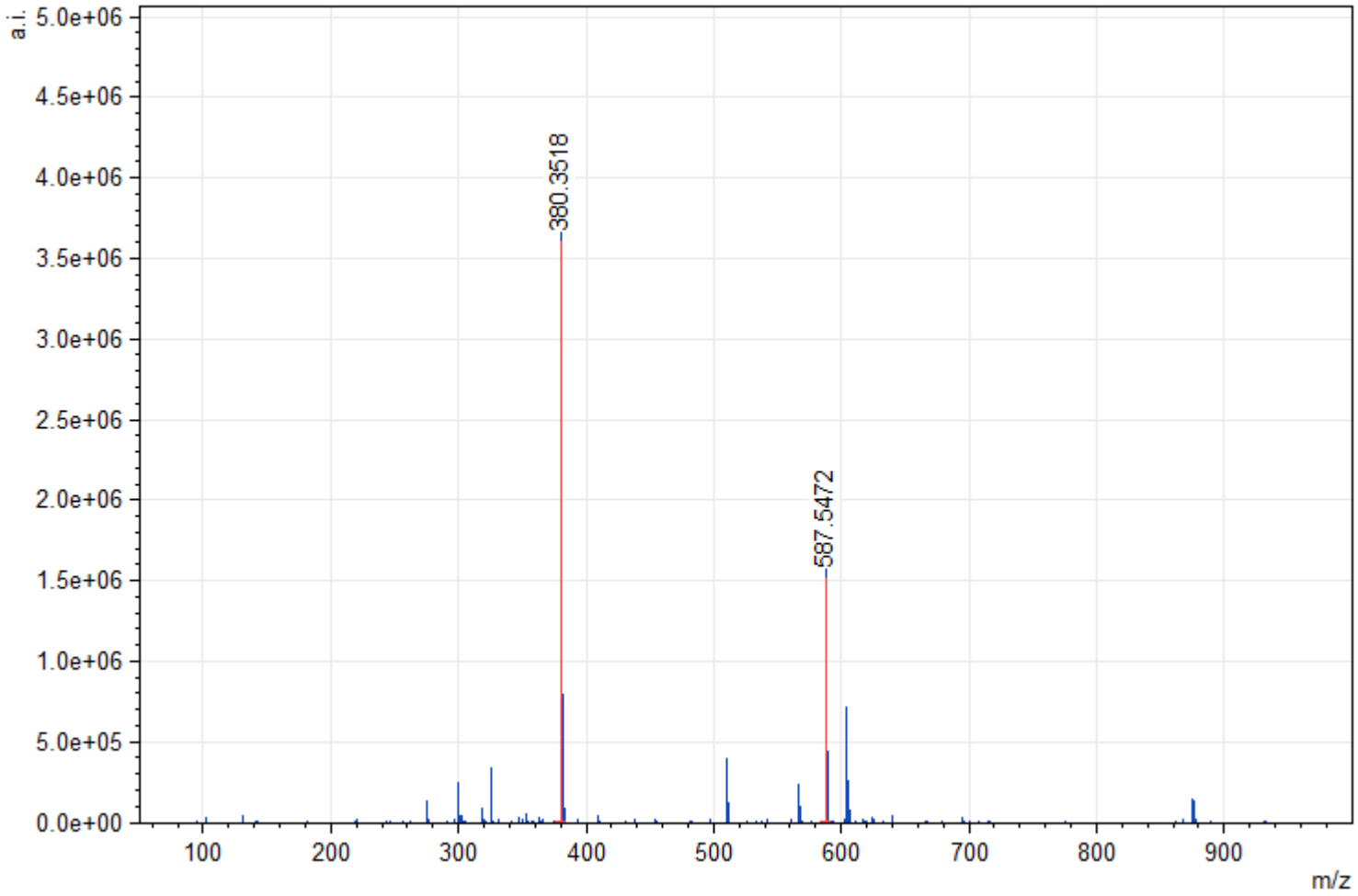


Figure S39. HRMS of compound **8k**.

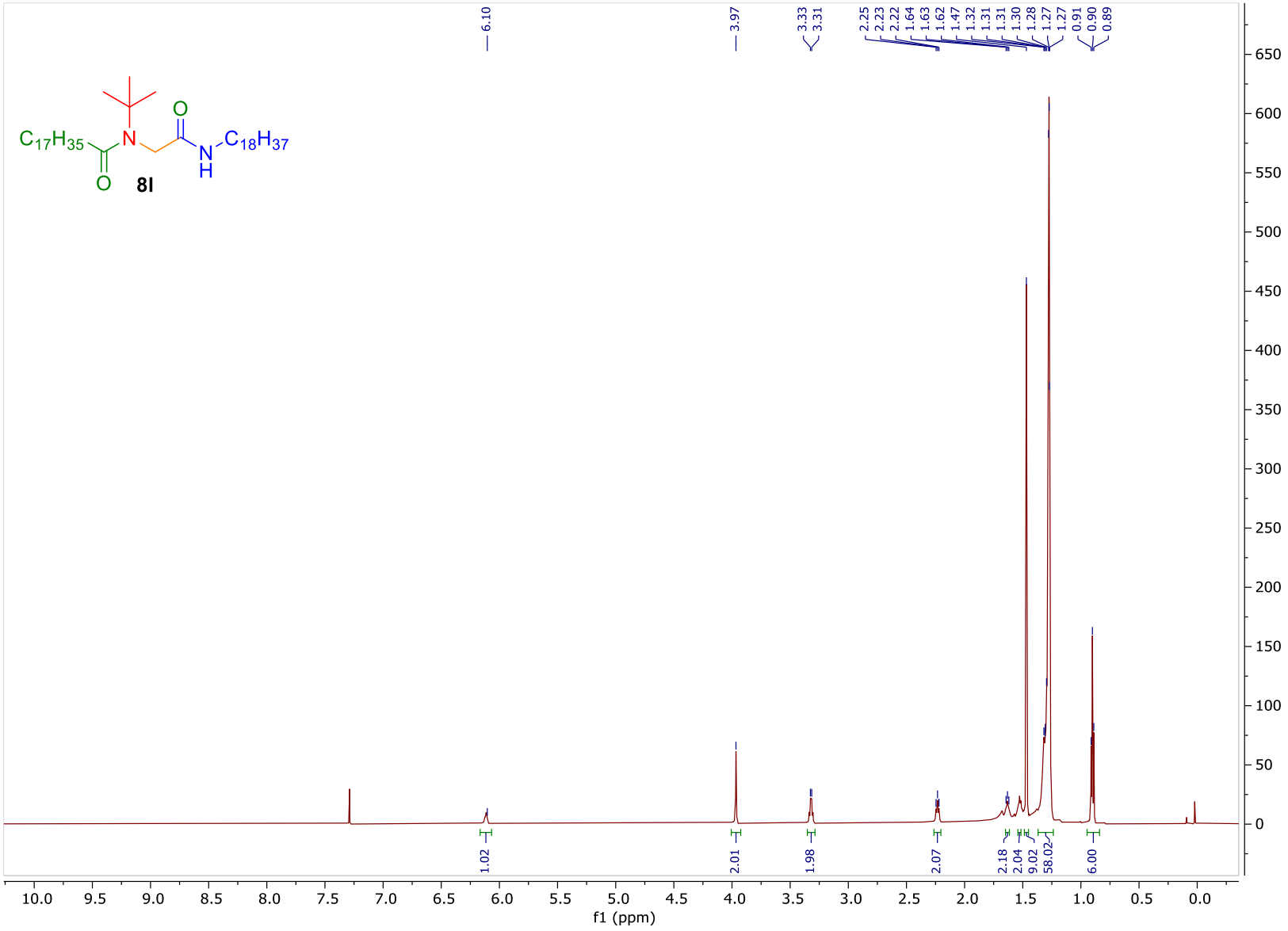


Figure S40. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8l**.

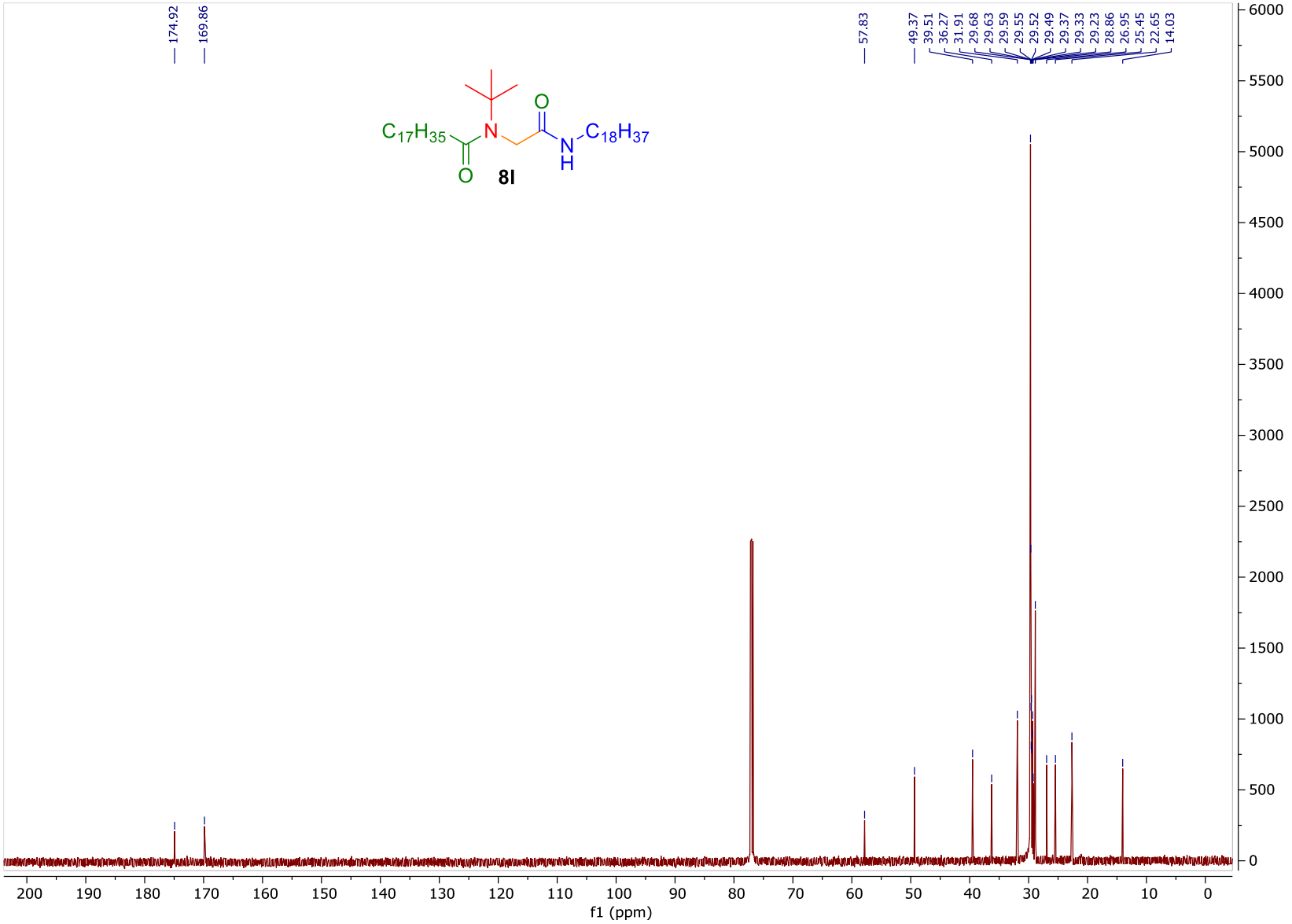


Figure S41. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8l**.

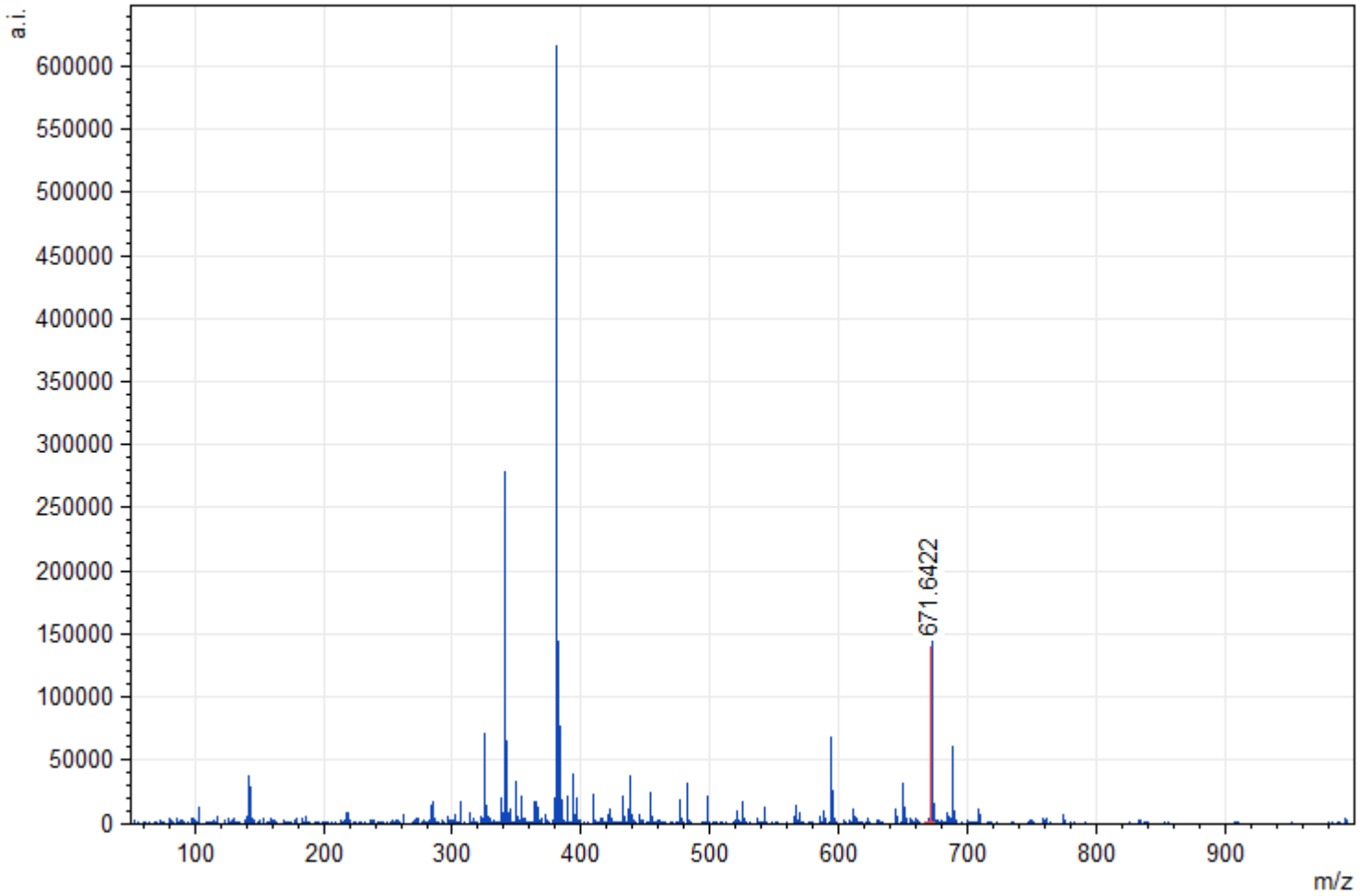


Figure S42. HRMS of compound **8l**.

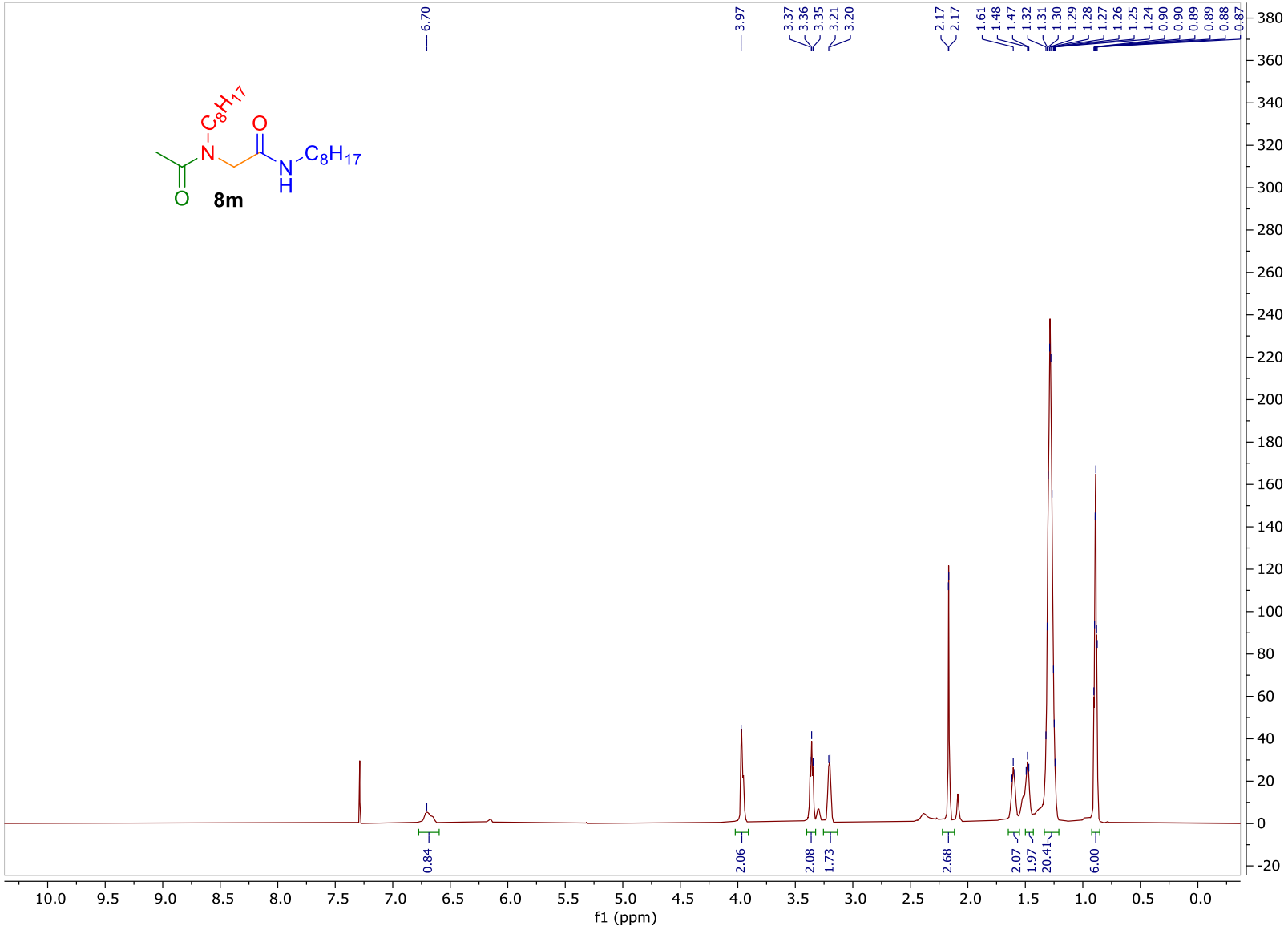


Figure S43. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8m**.

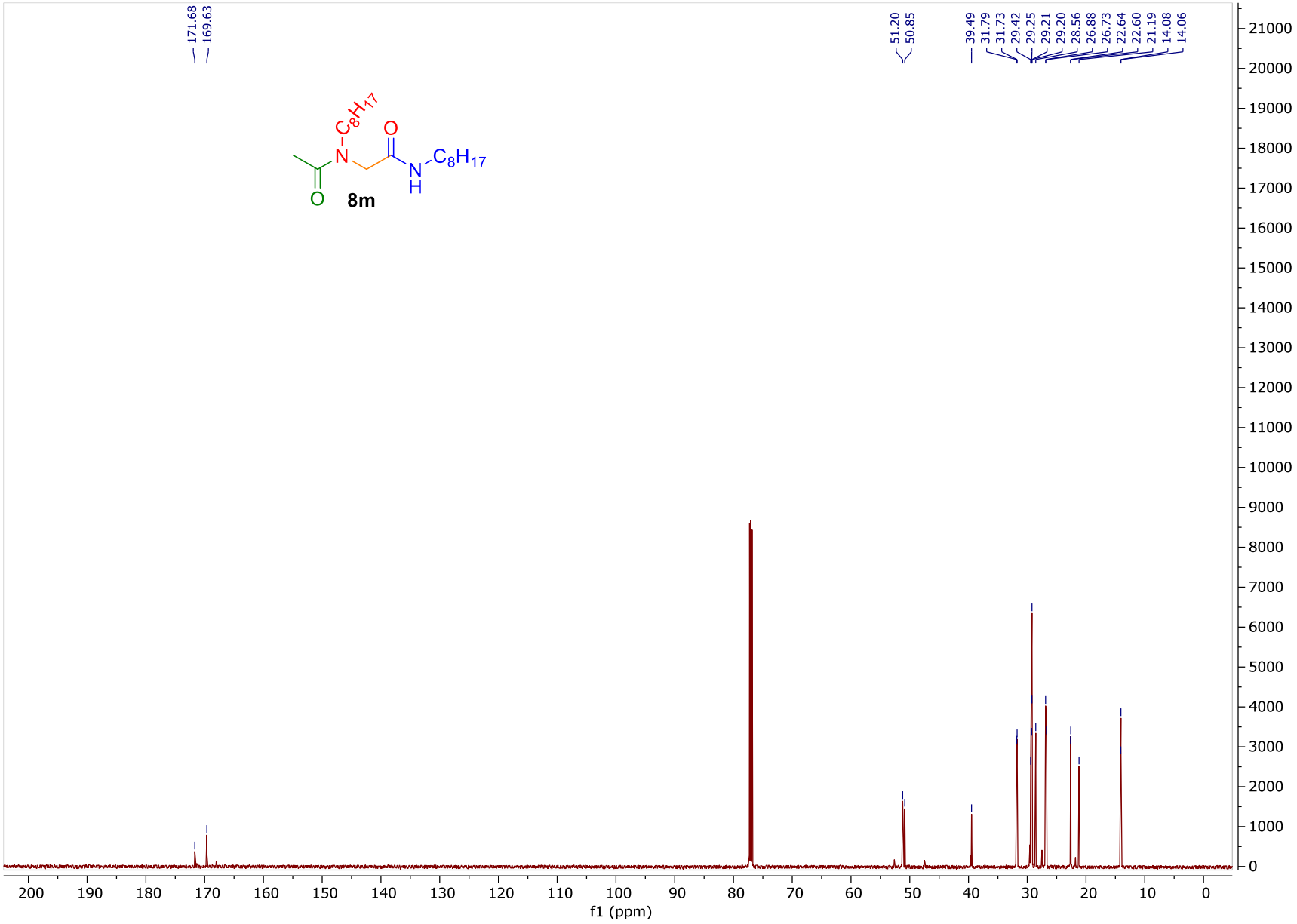


Figure S44. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8m**.

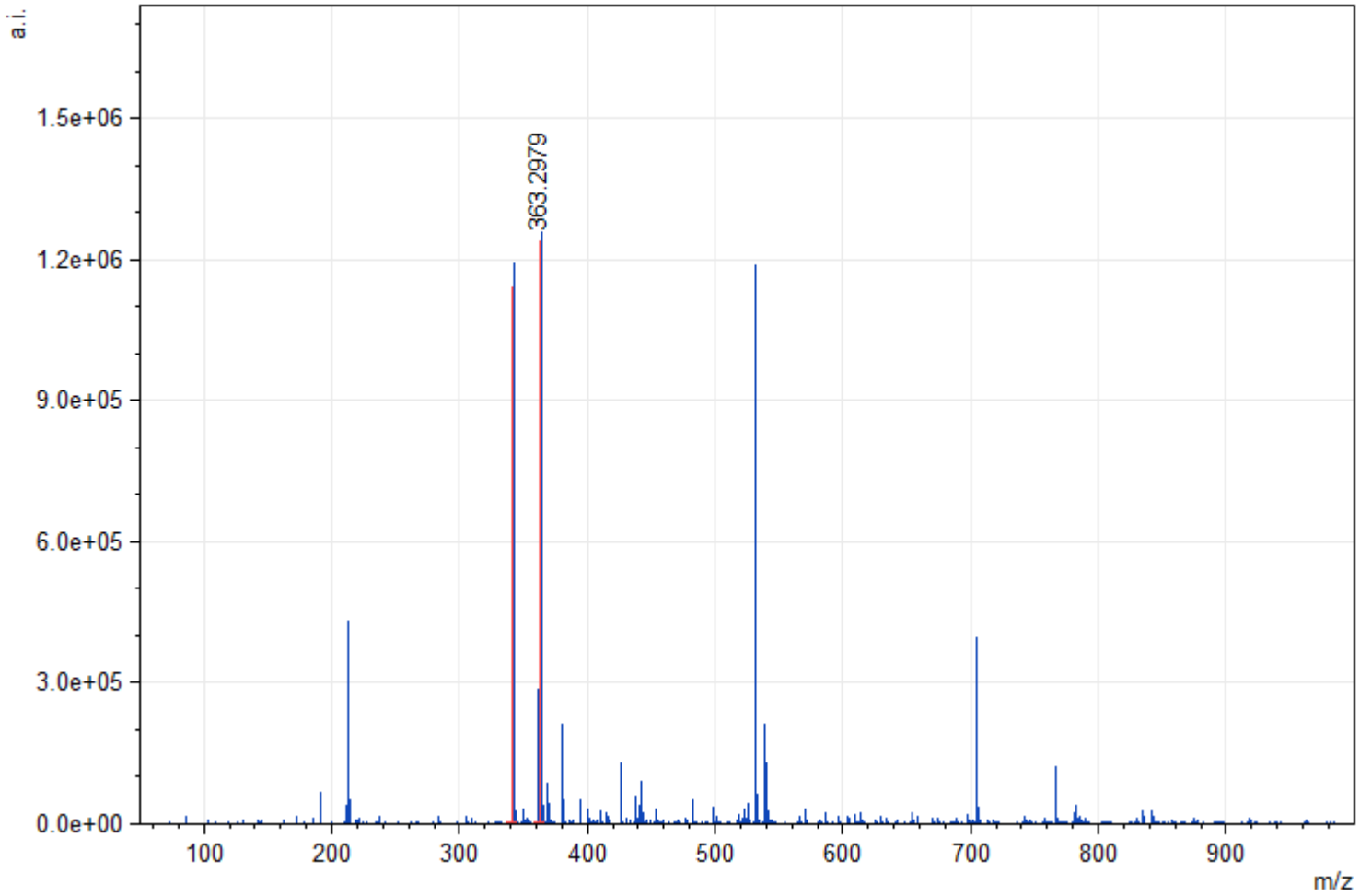


Figure S45. HRMS of compound **8m.**

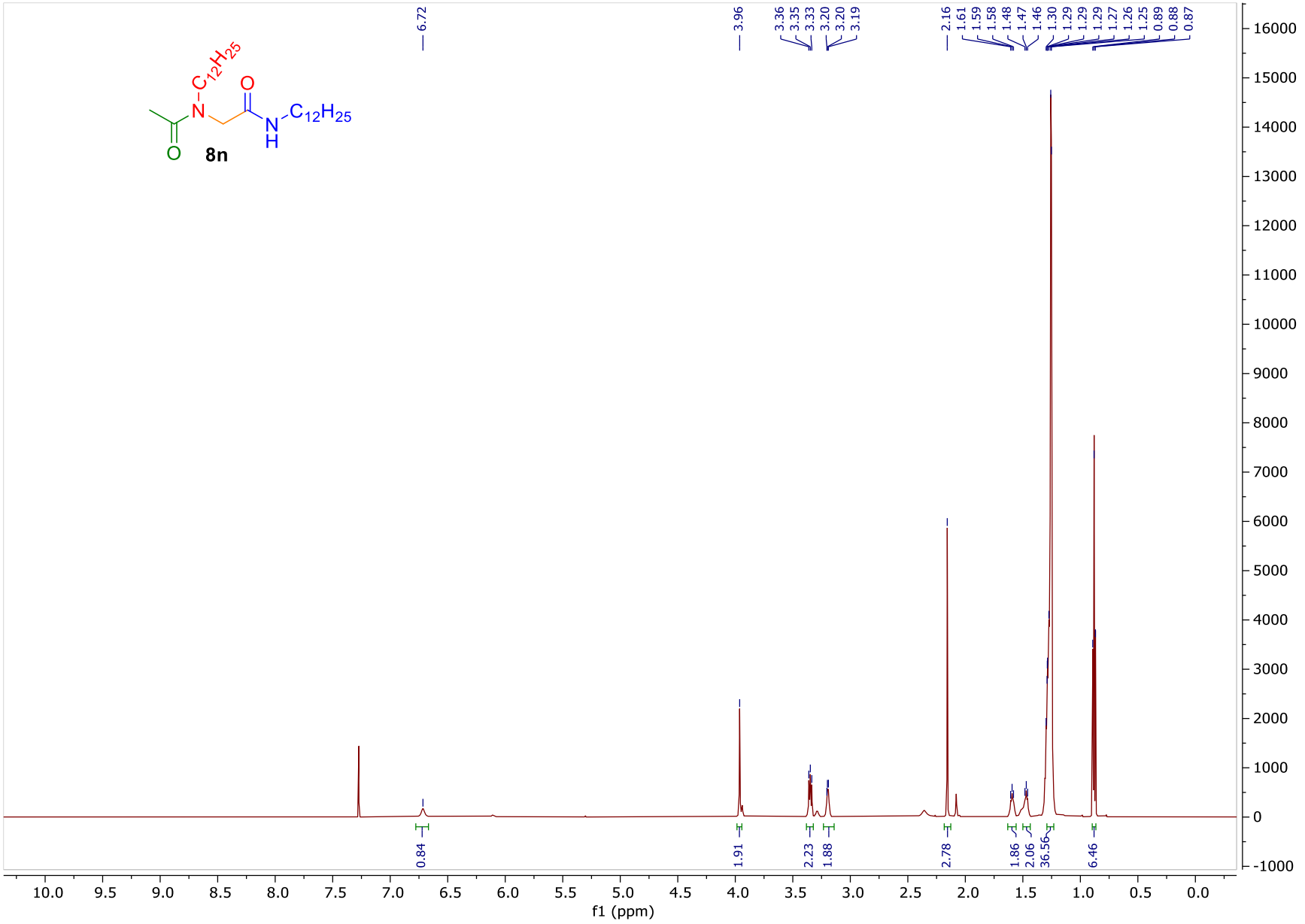


Figure S46. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8n**.

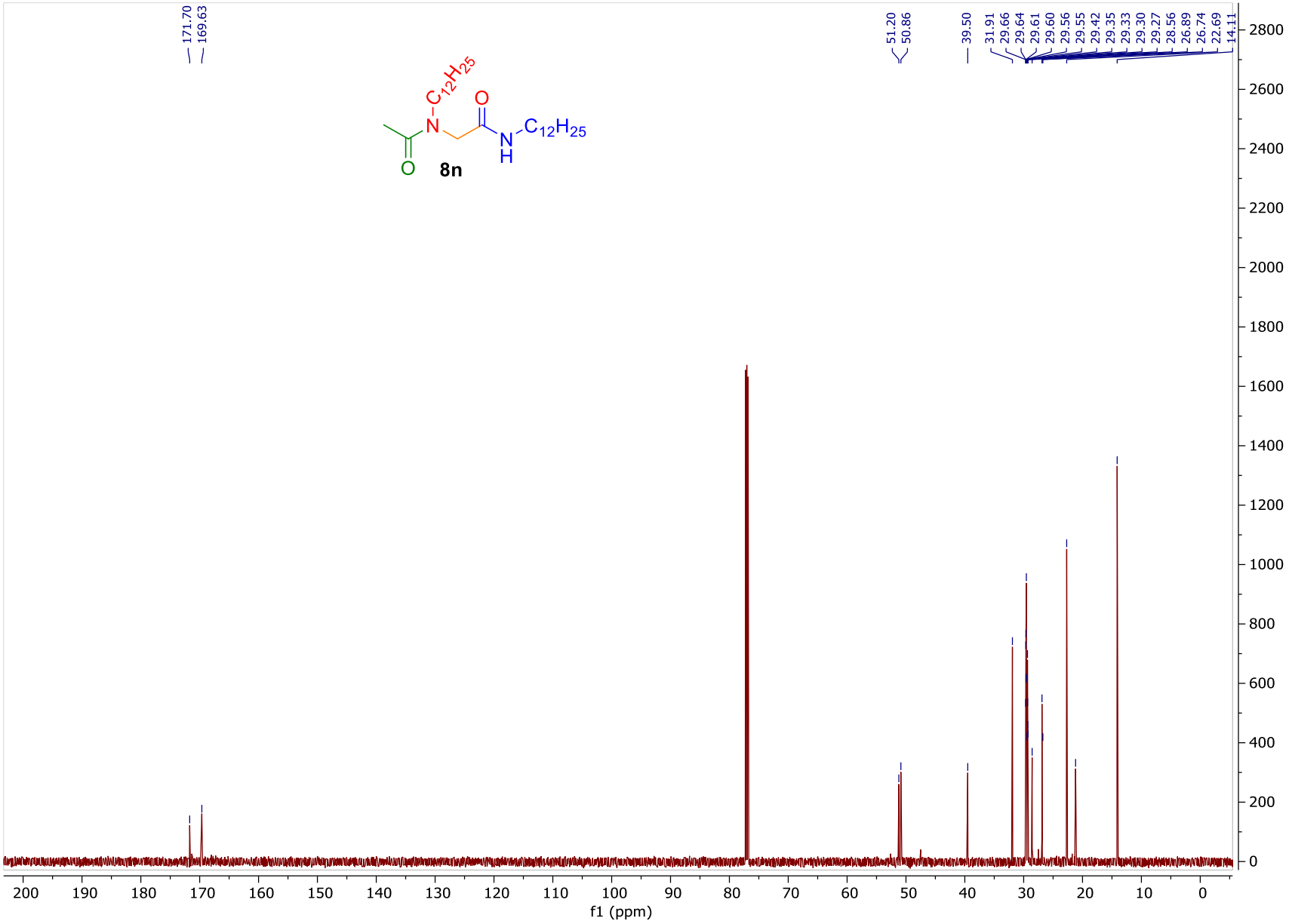


Figure S47. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8n**.

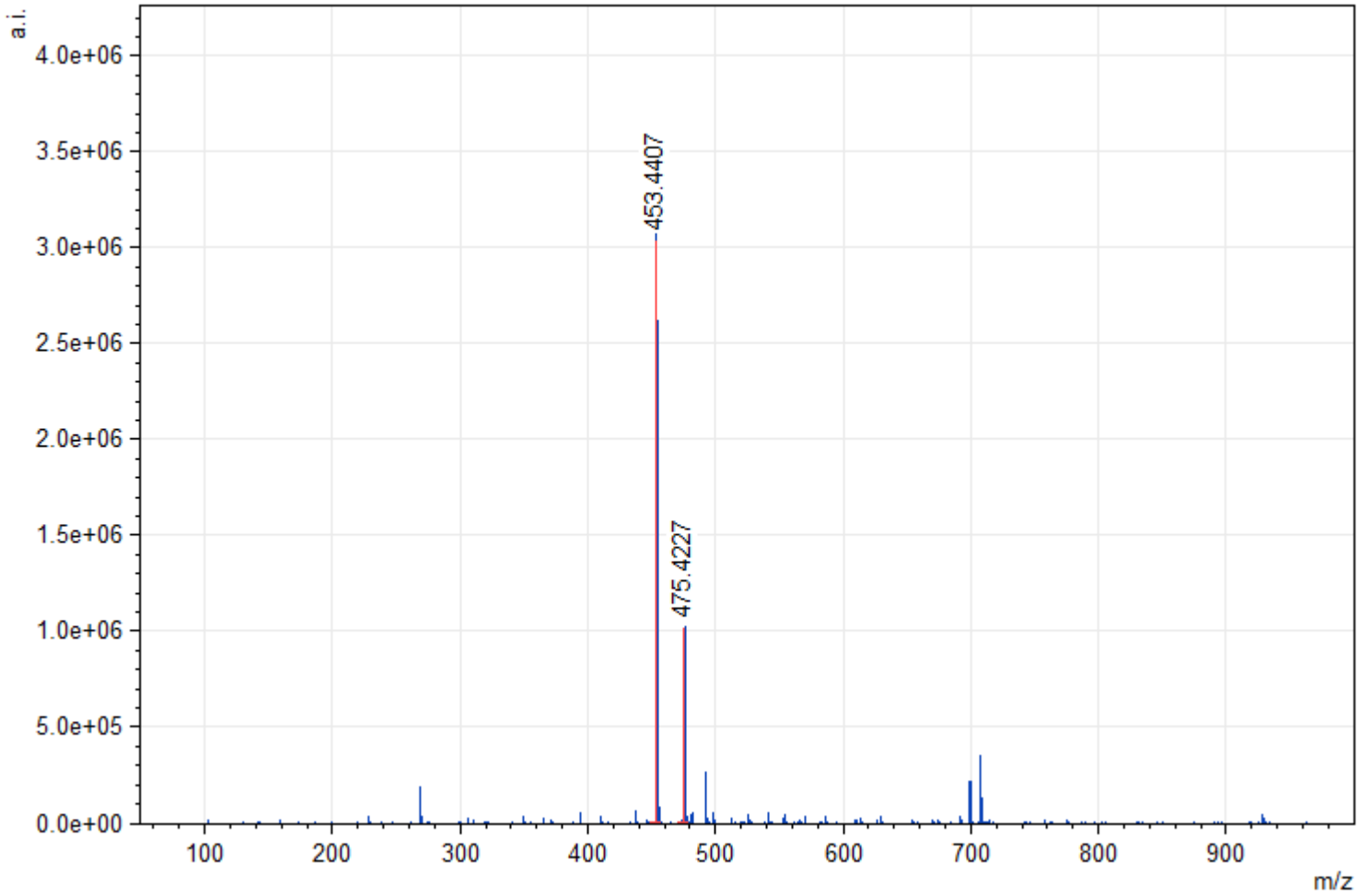
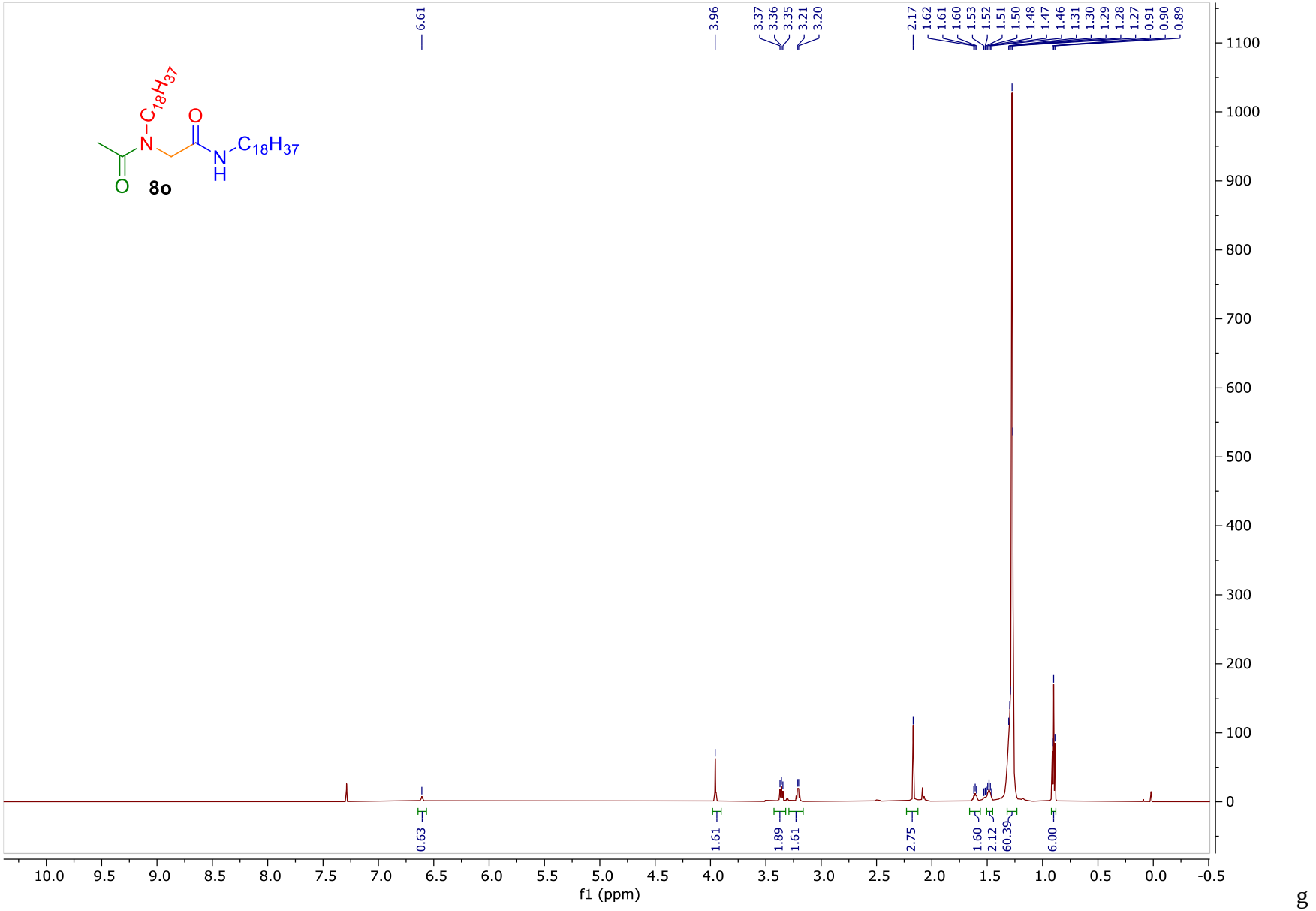


Figure S48. HRMS of compound **8n**.



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Figure S49. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8o**.

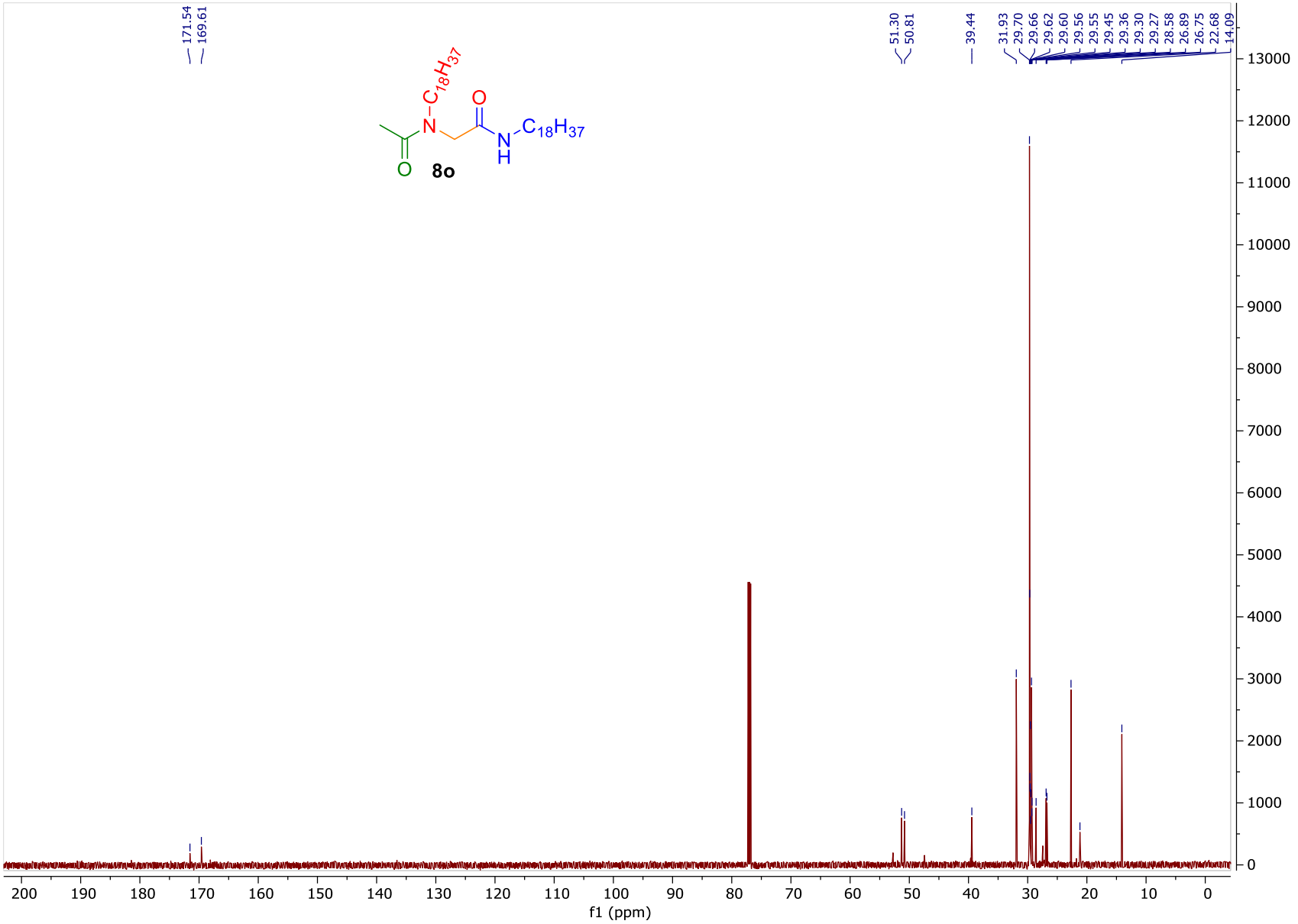


Figure S50. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8o**.

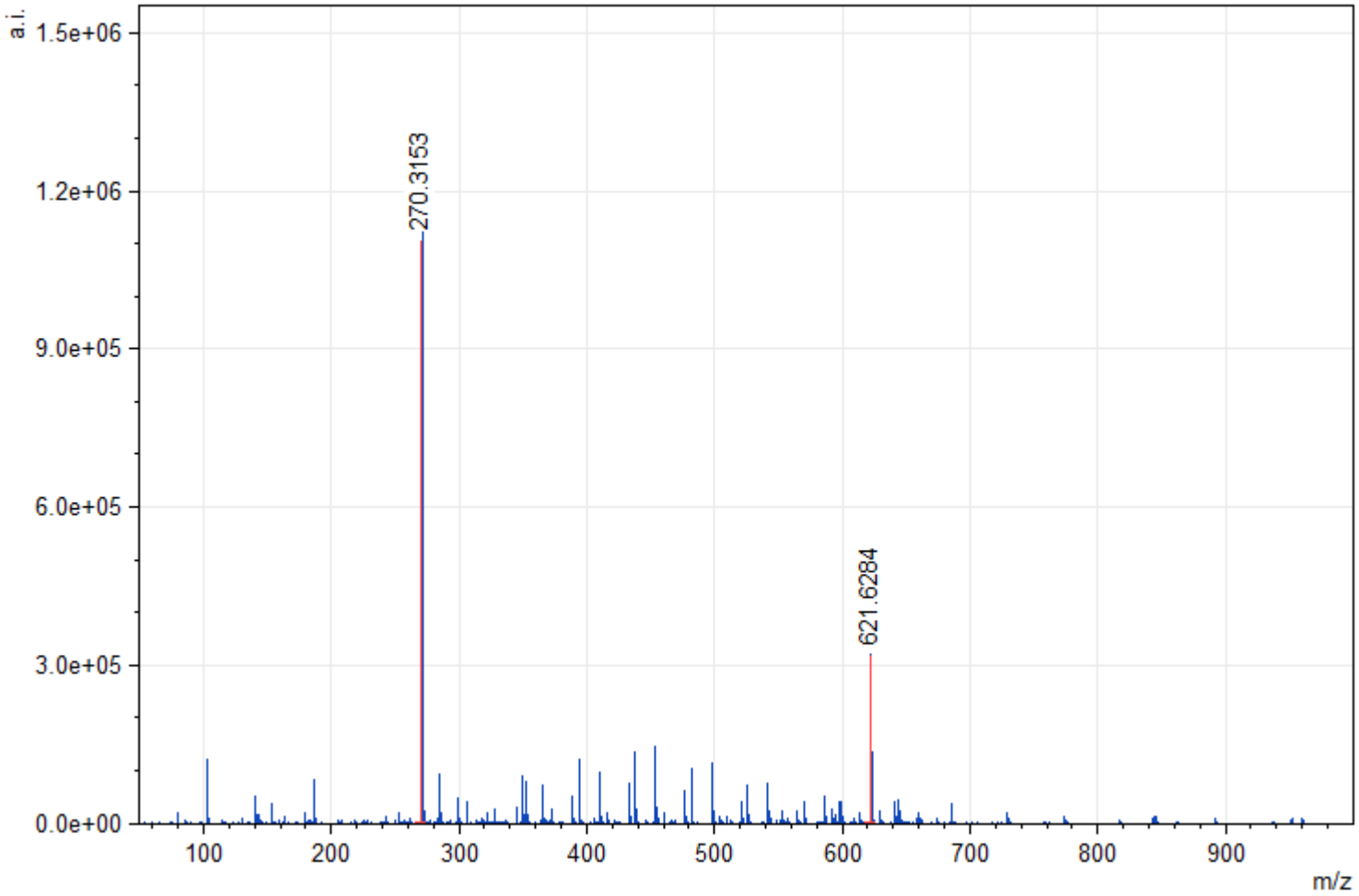


Figure S51. HRMS of compound **8o**.

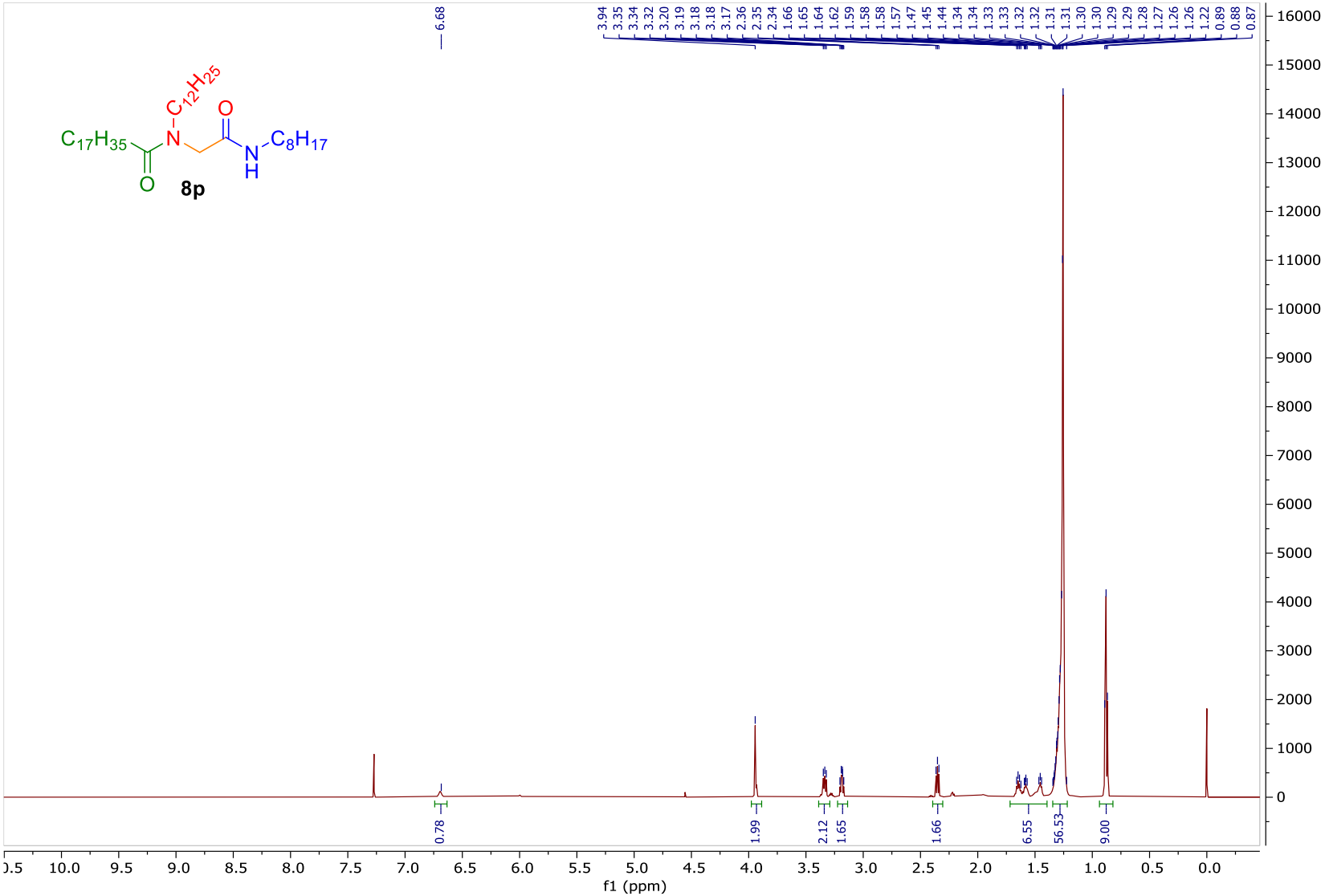


Figure S52. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8p**.

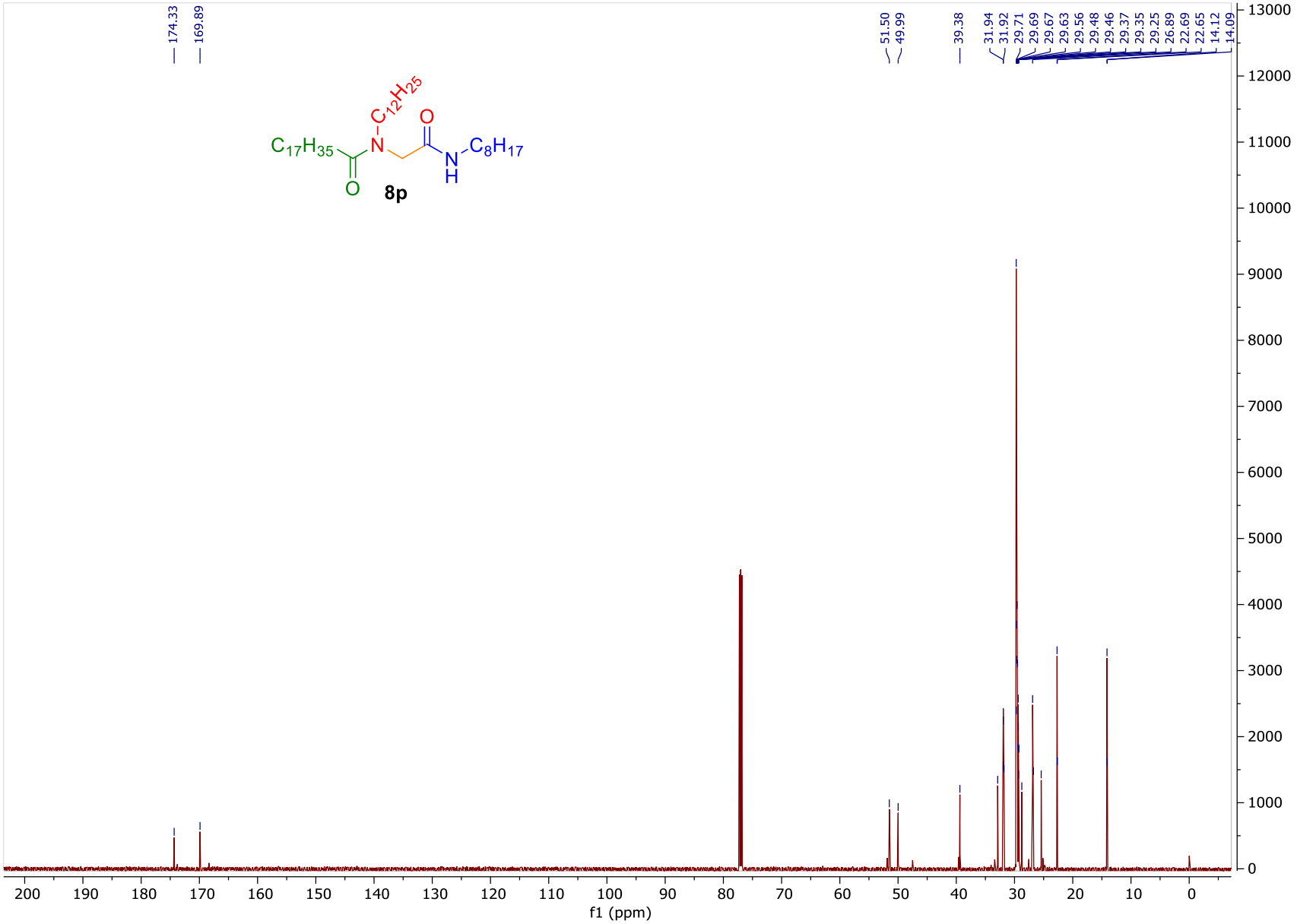


Figure S53. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8p**.

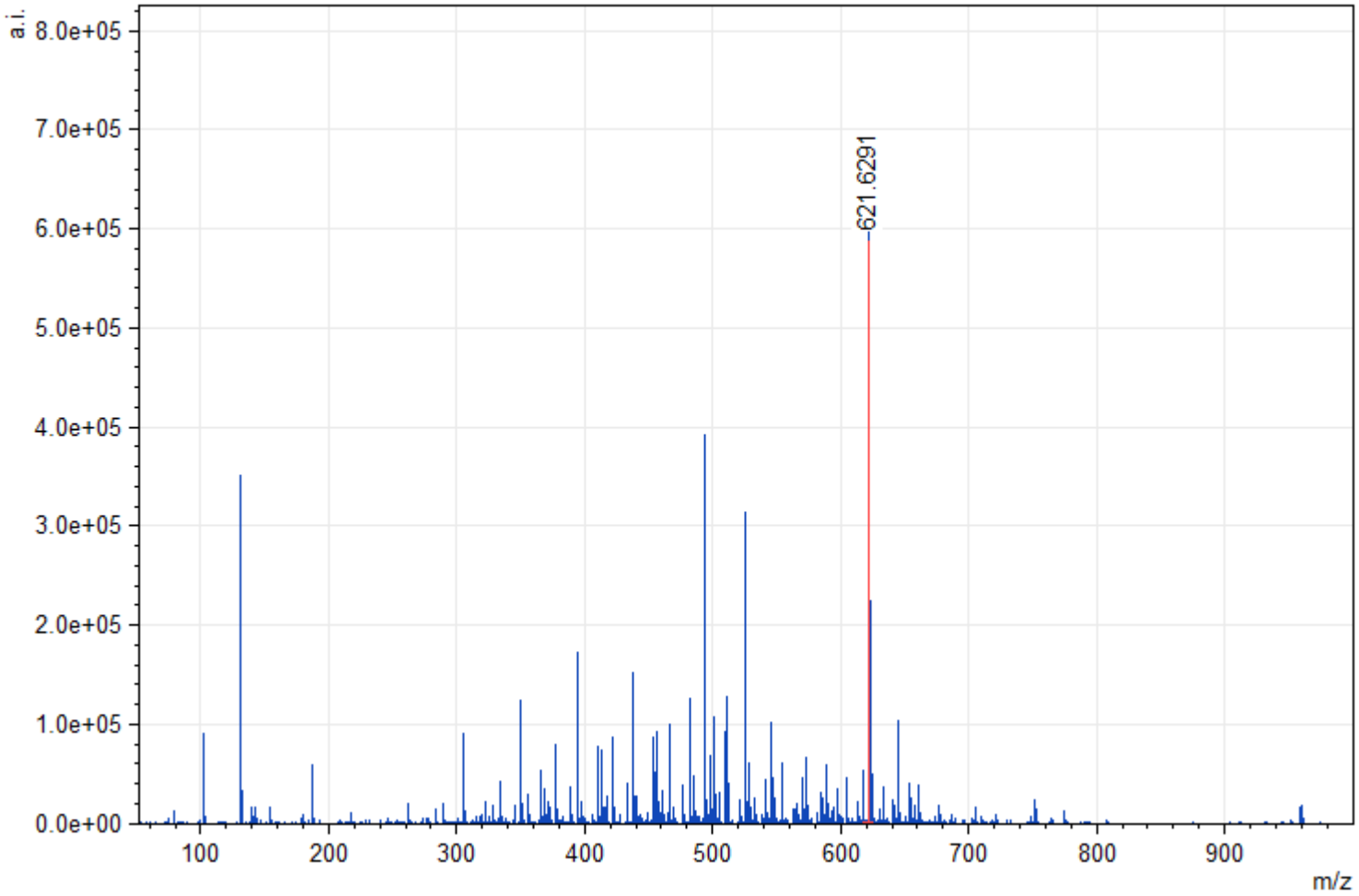


Figure S54. HRMS of compound **8p**.

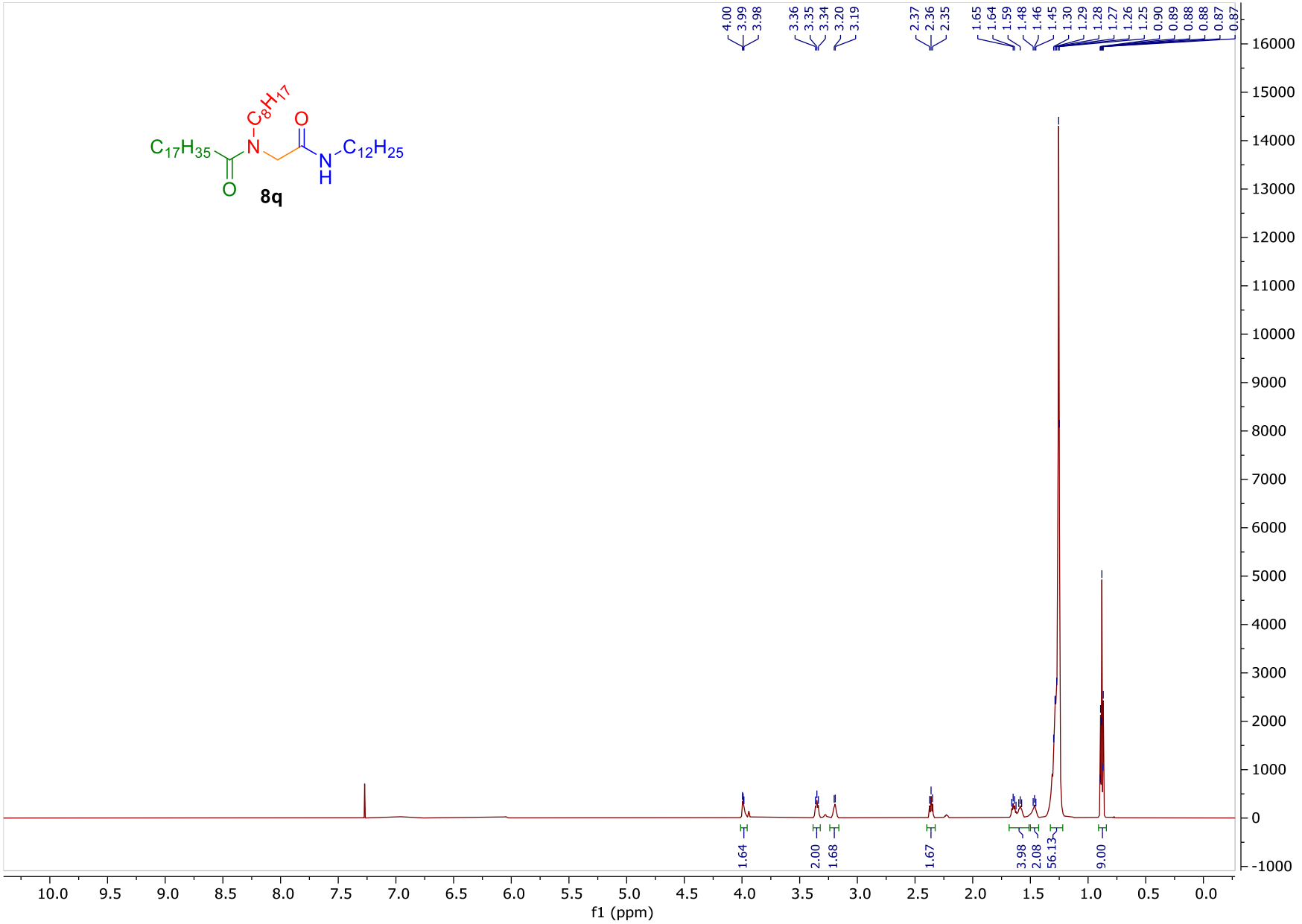


Figure S55. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8q.**

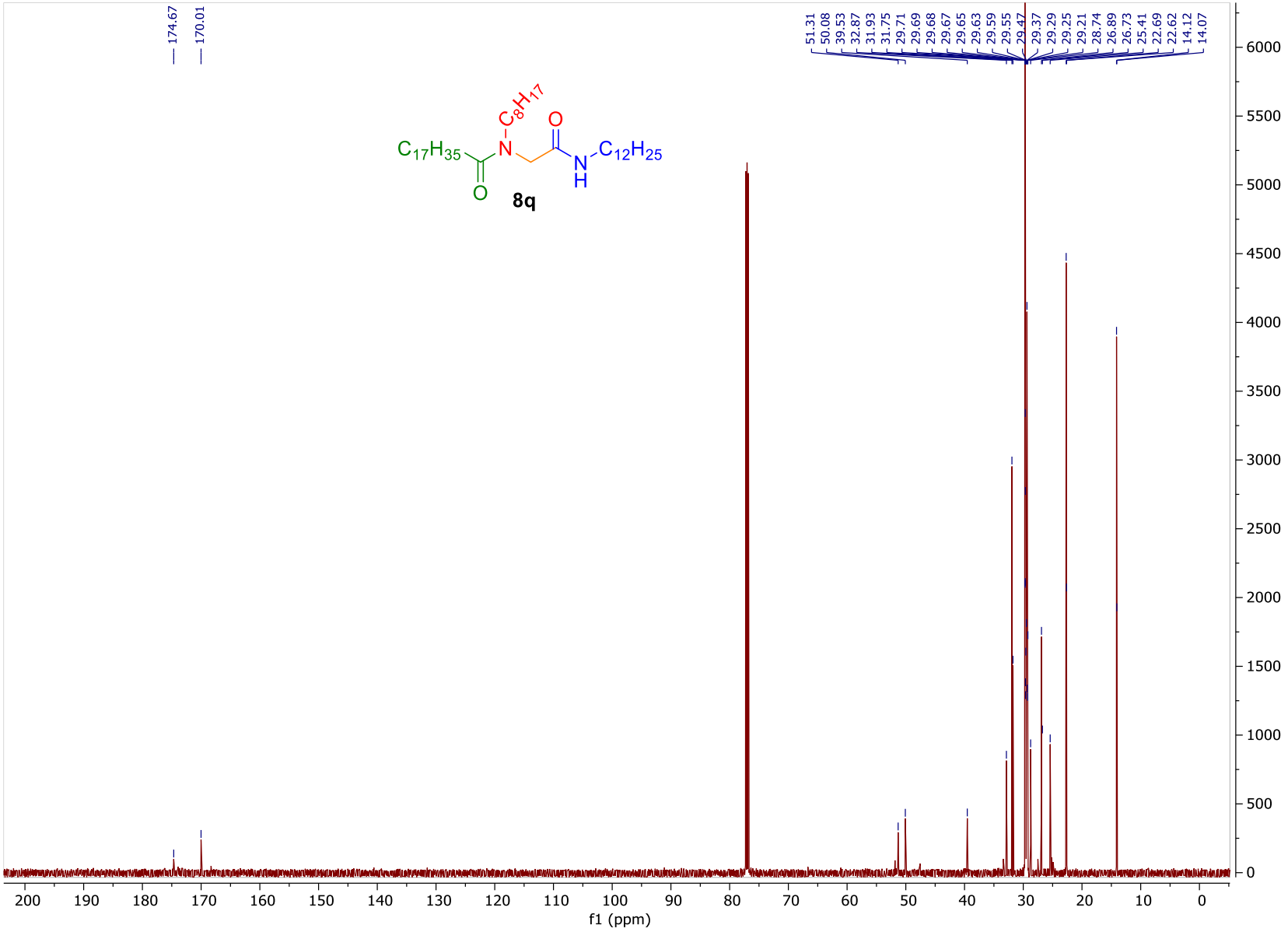


Figure S56. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8q**.

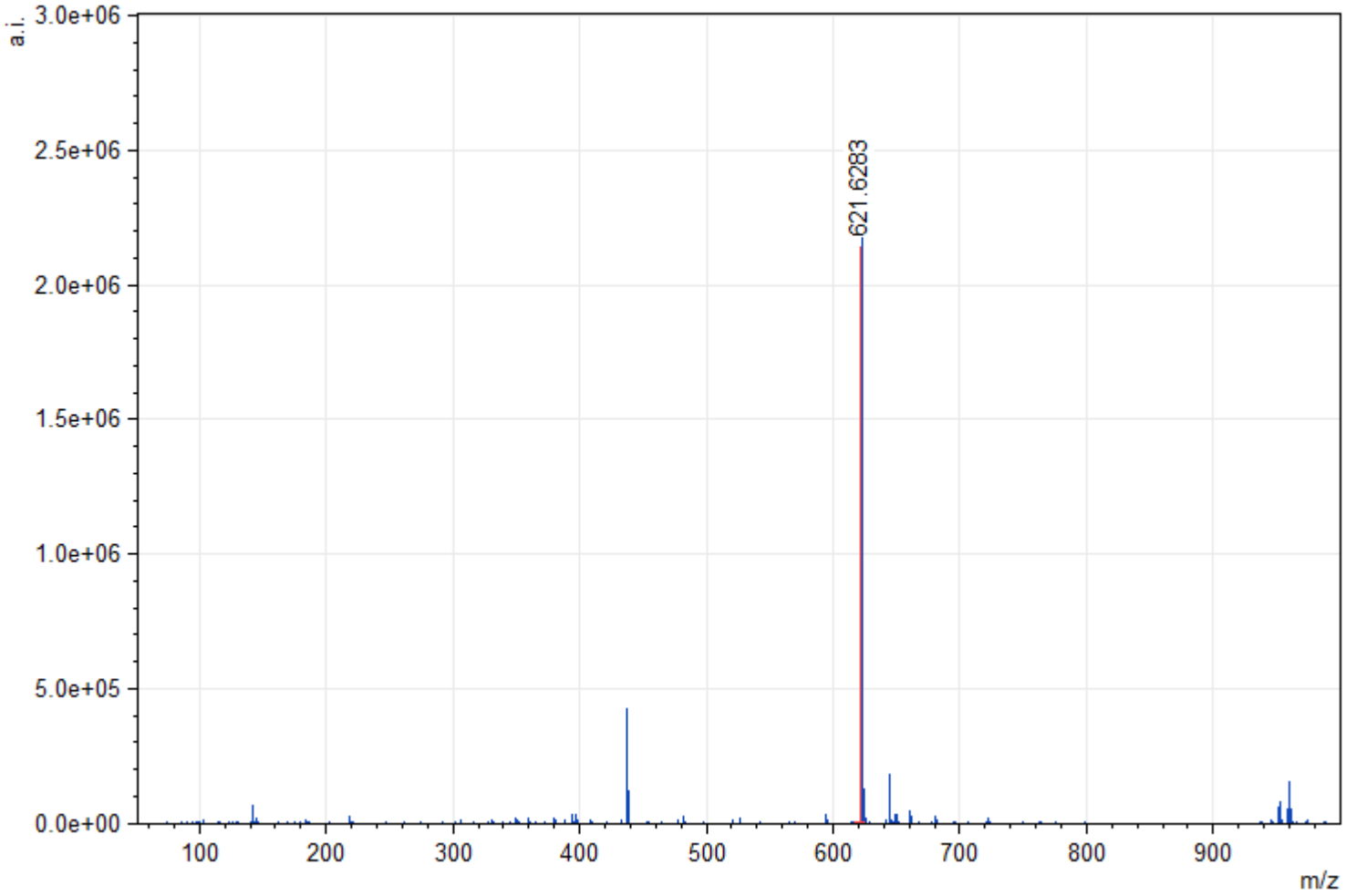


Figure S57. HRMS of compound **8q**.

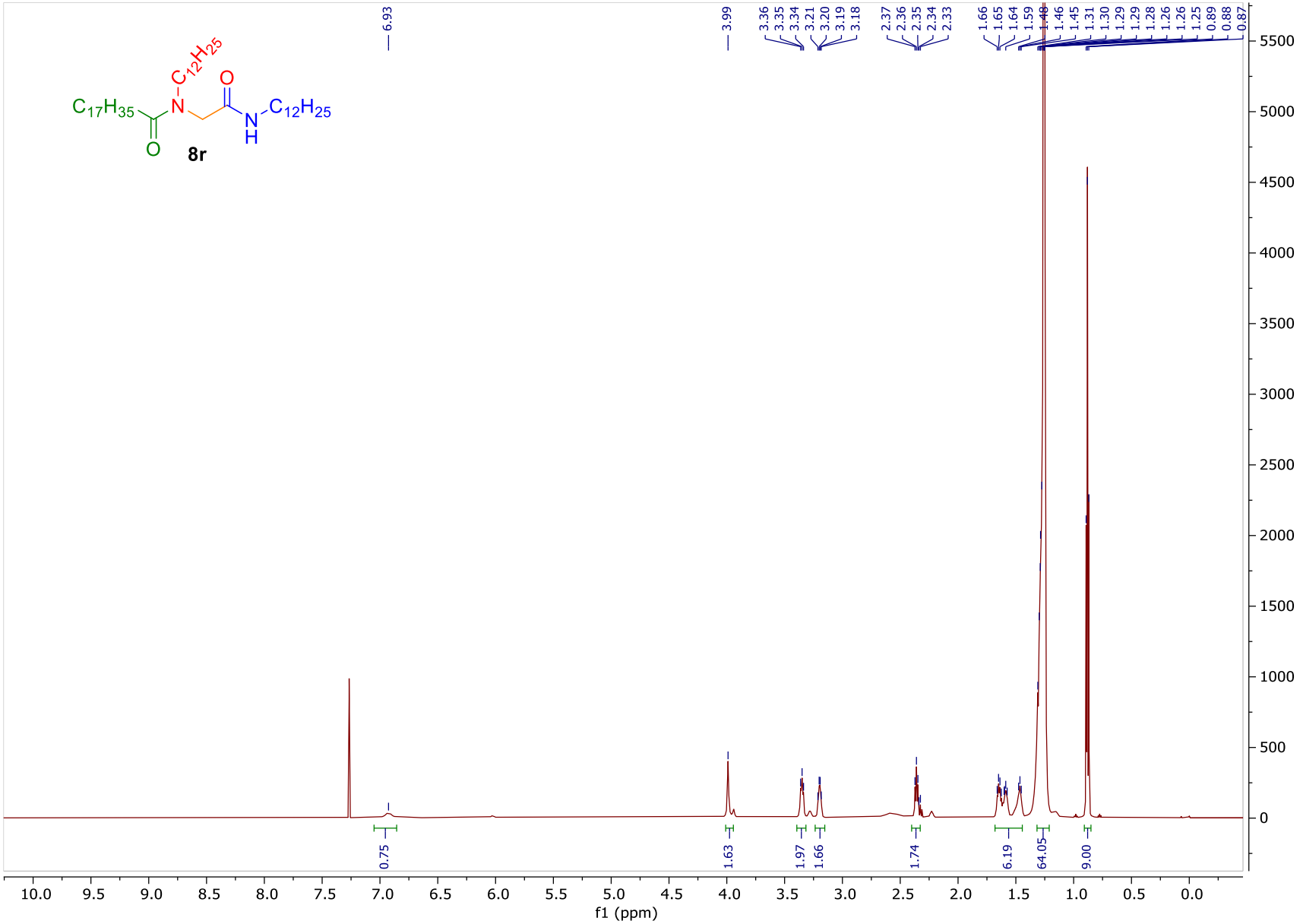


Figure S58. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8r.**

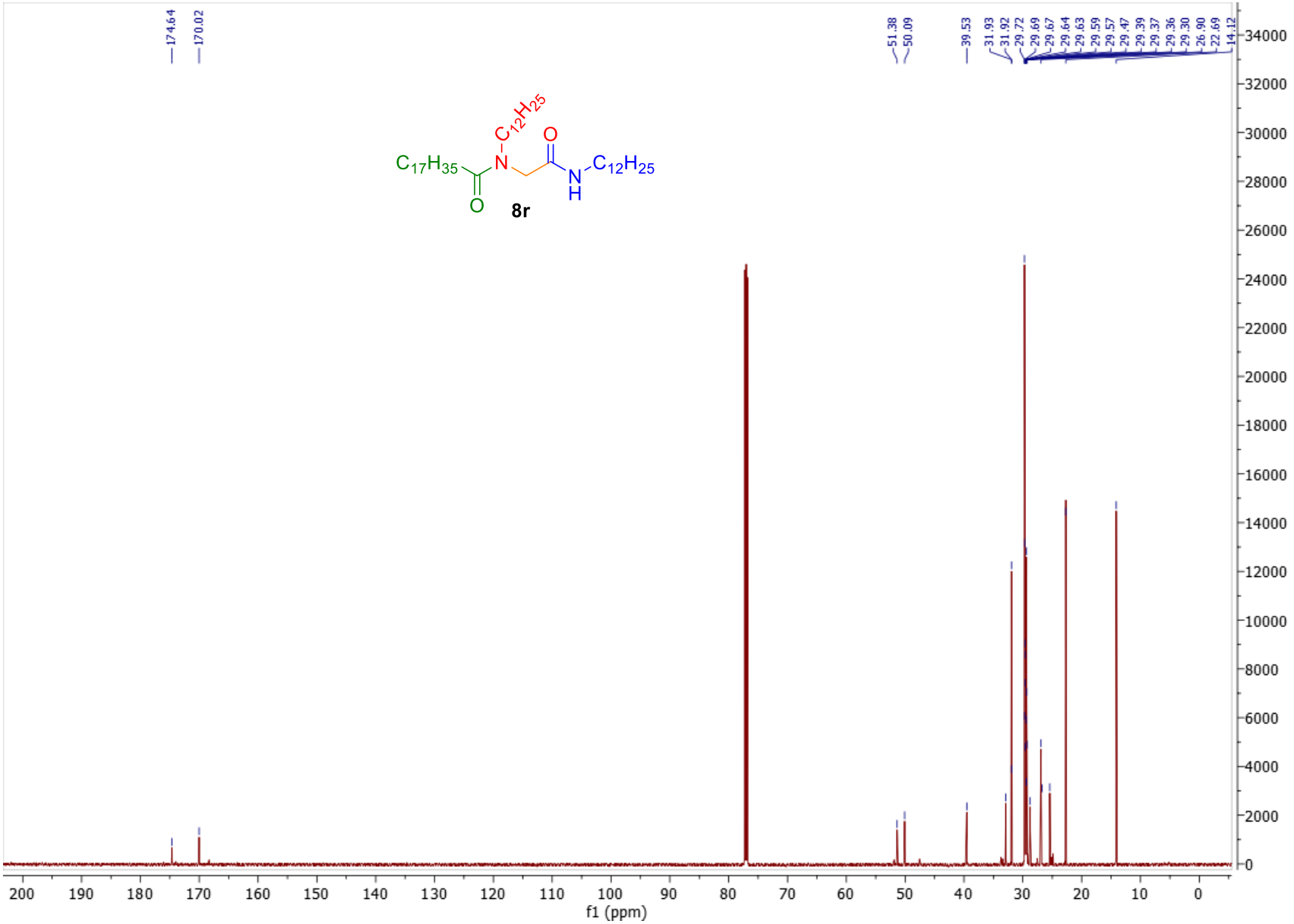


Figure S59. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8r**.

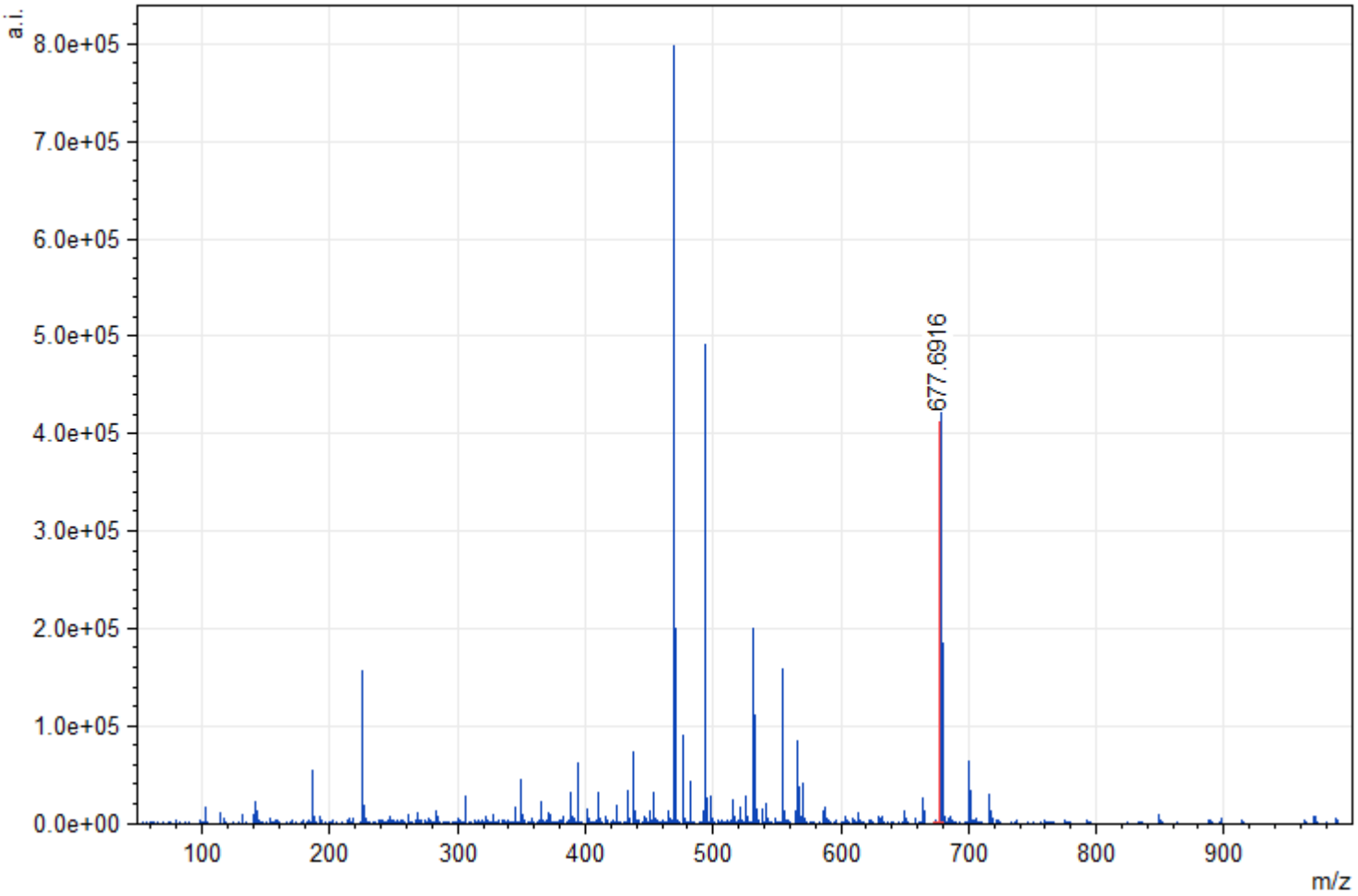


Figure S60. HRMS of compound **8r**.

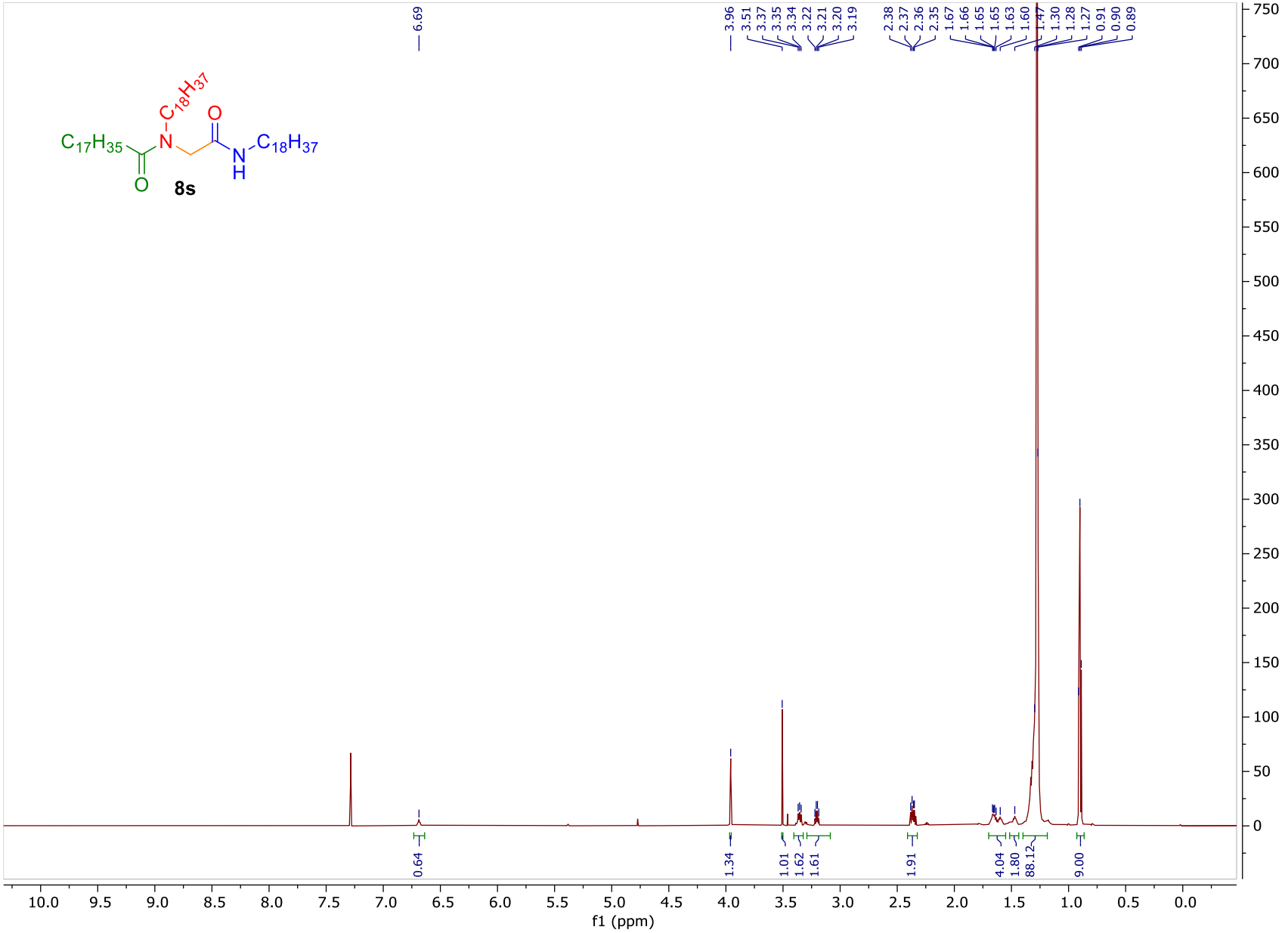


Figure S61. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8s.**

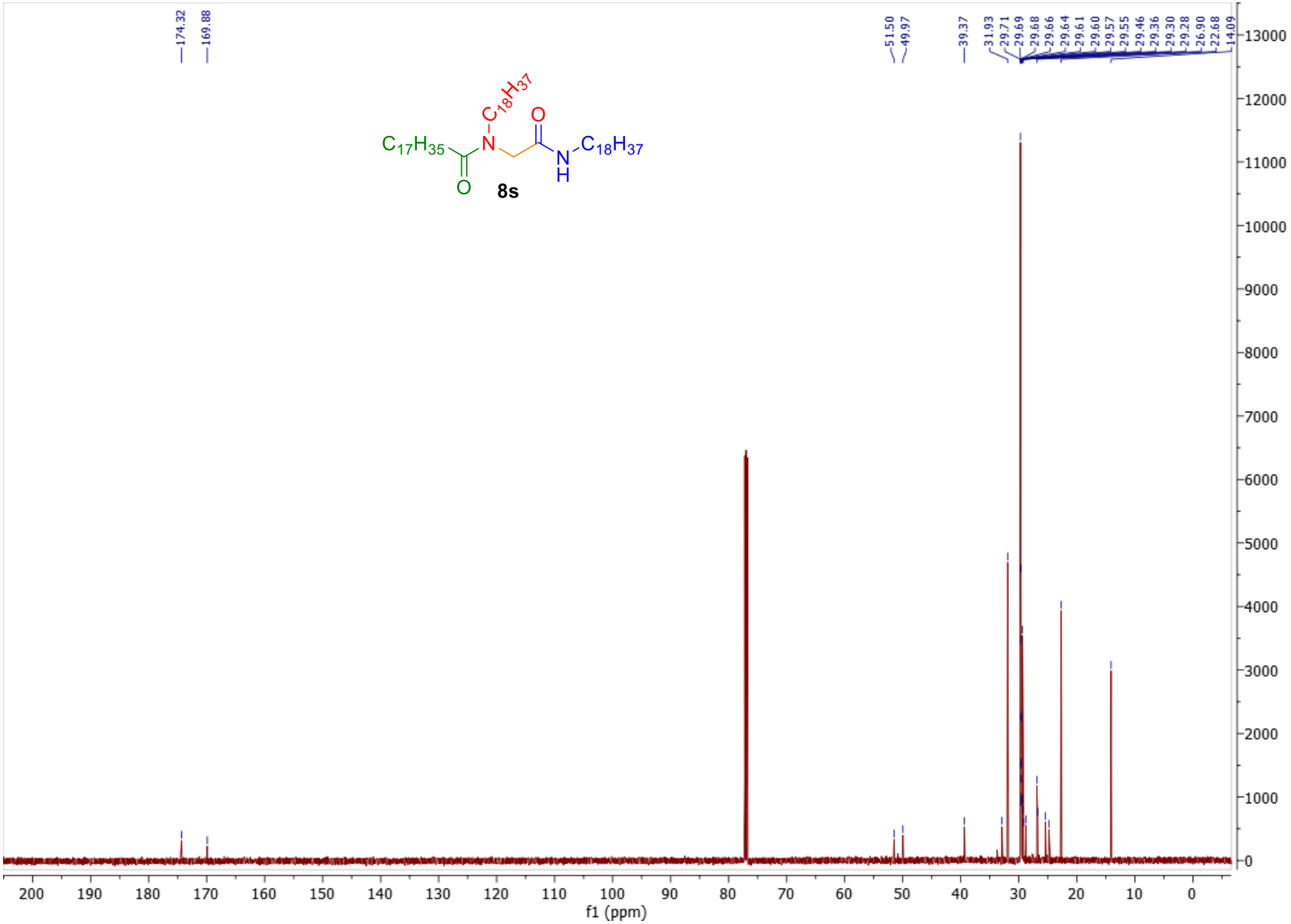


Figure S62. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8s**.

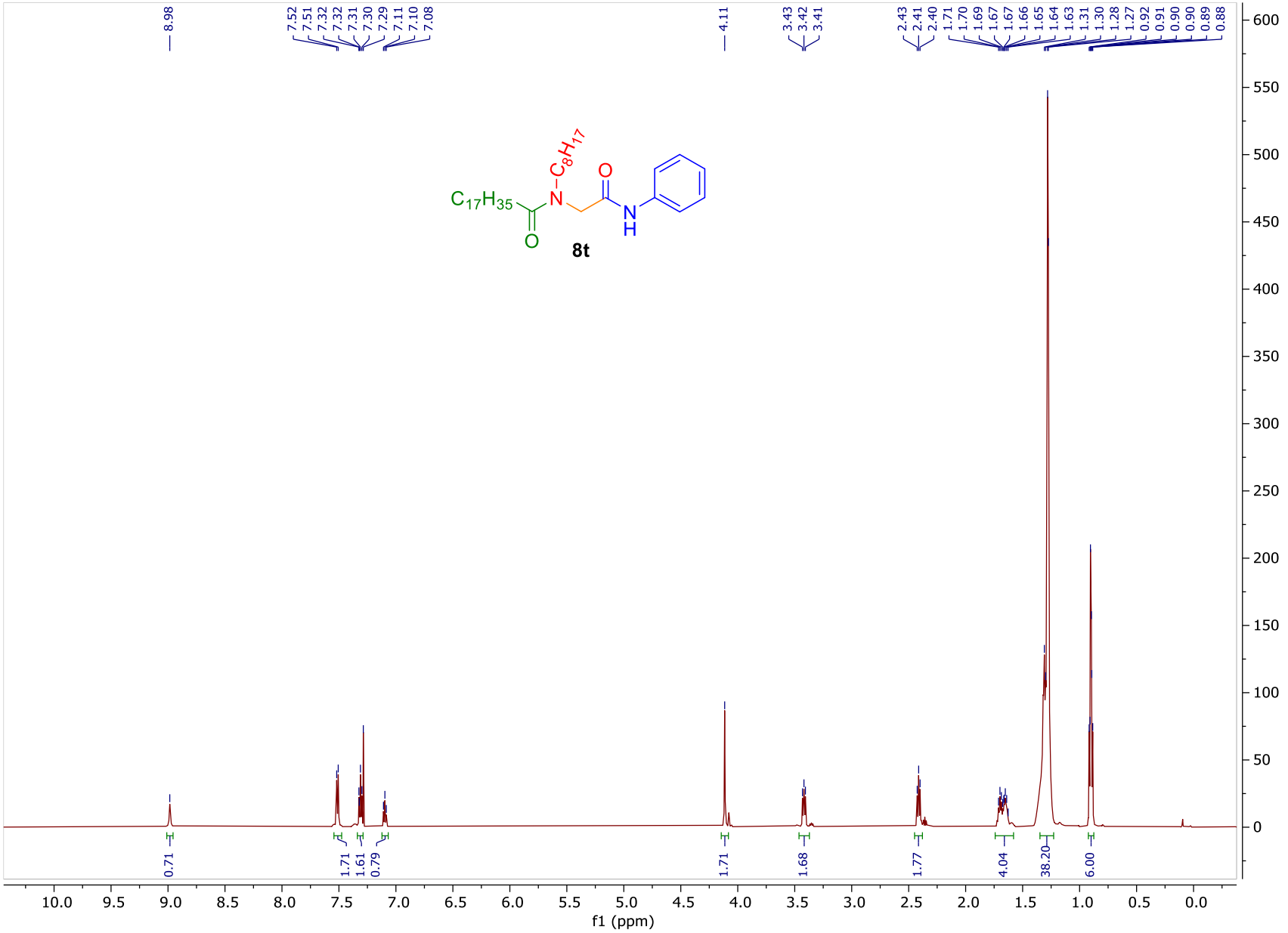


Figure S63. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8t.**

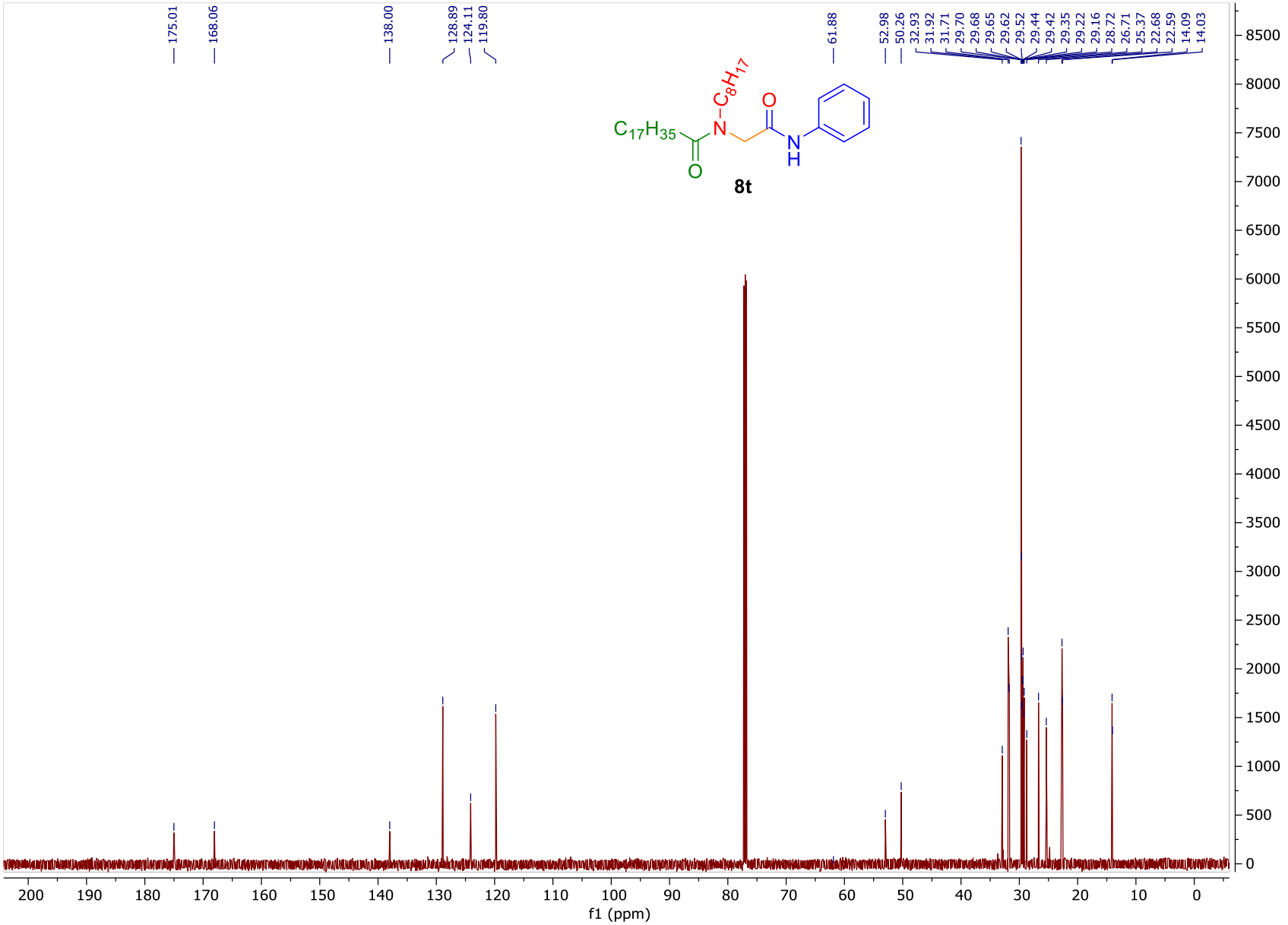


Figure S64. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8t.**

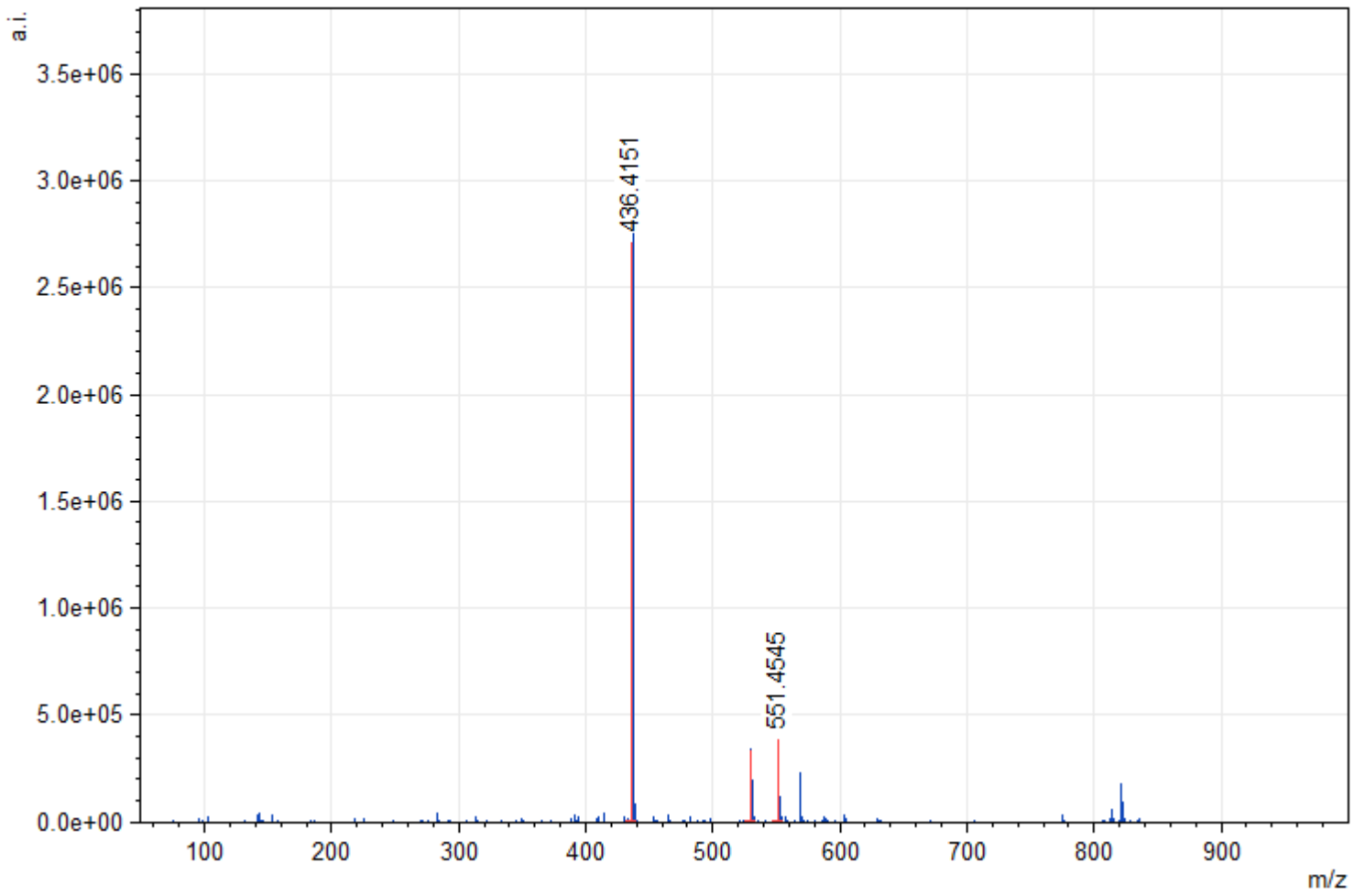


Figure S65. HRMS of compound **8t**.

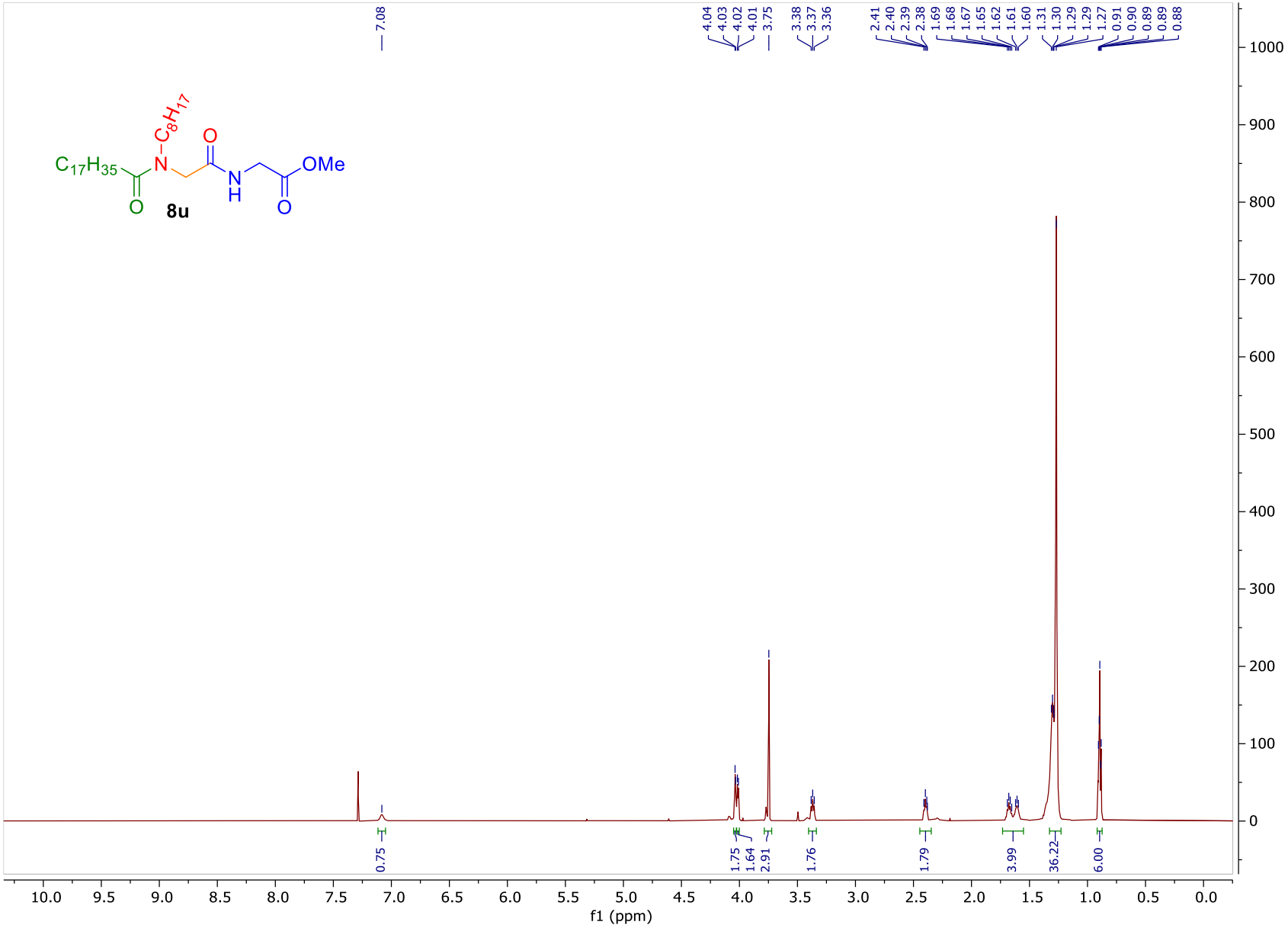


Figure S66. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8u.**

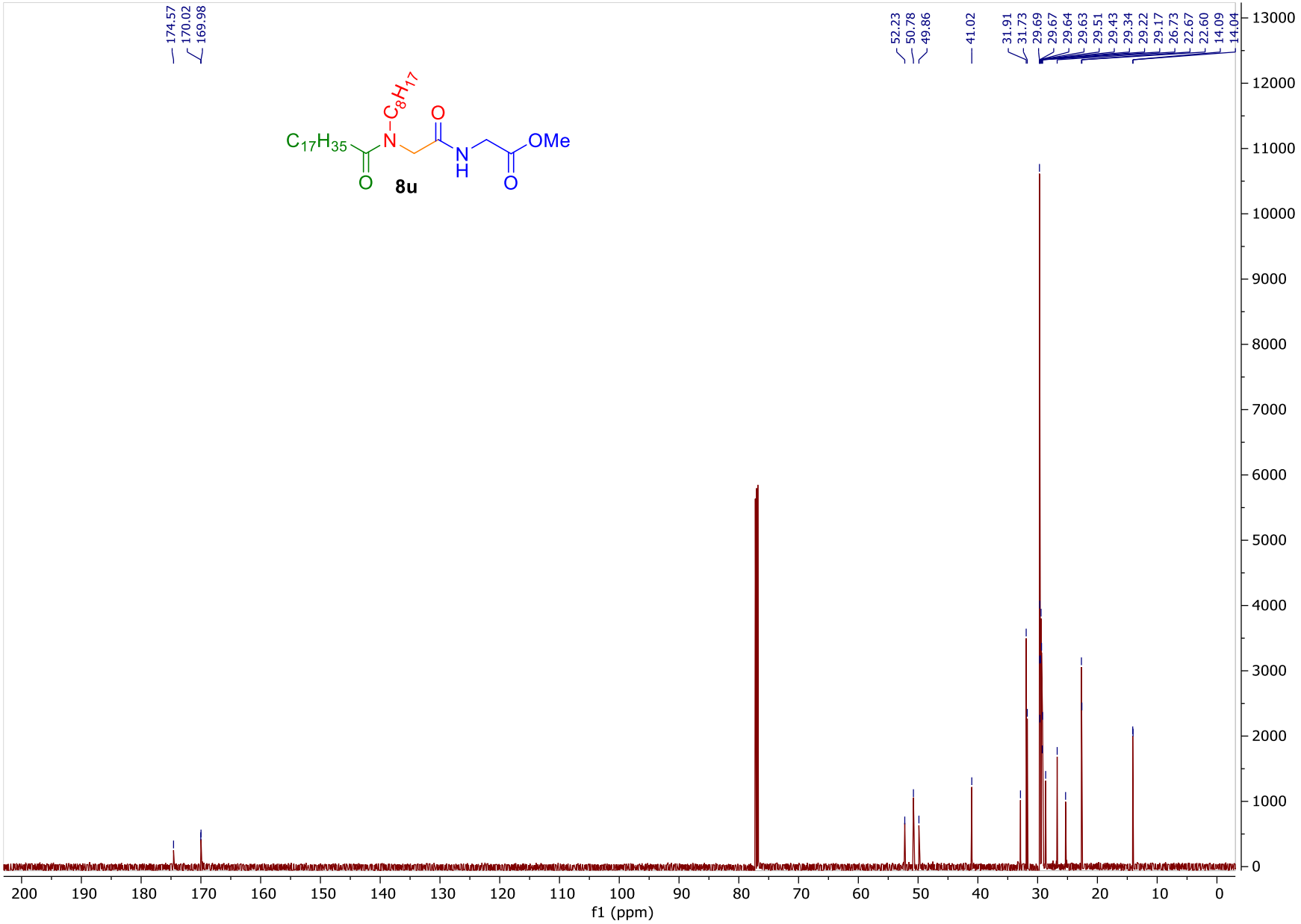


Figure S67. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8u**.

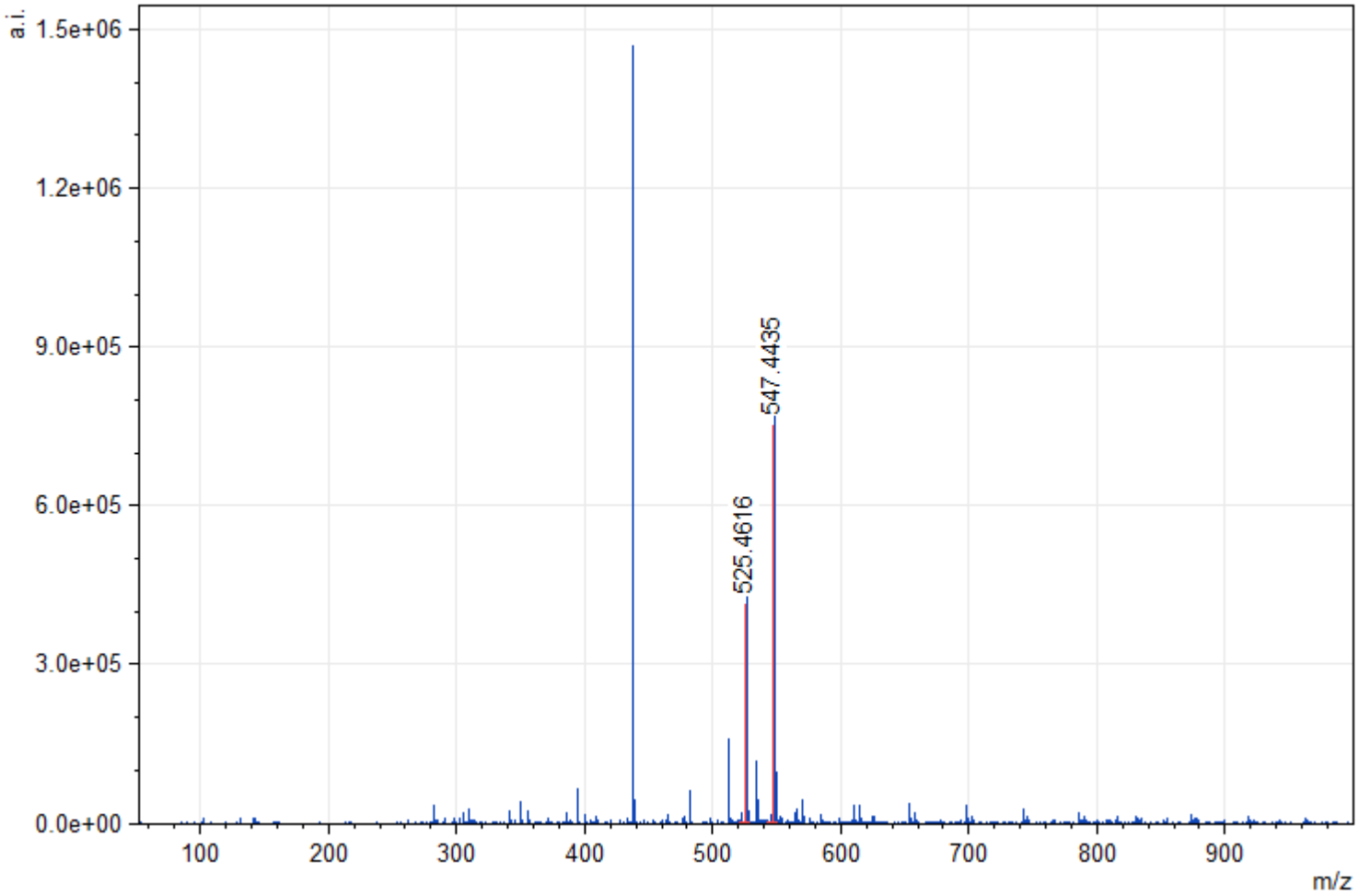


Figure S68. HRMS of compound **8u**.

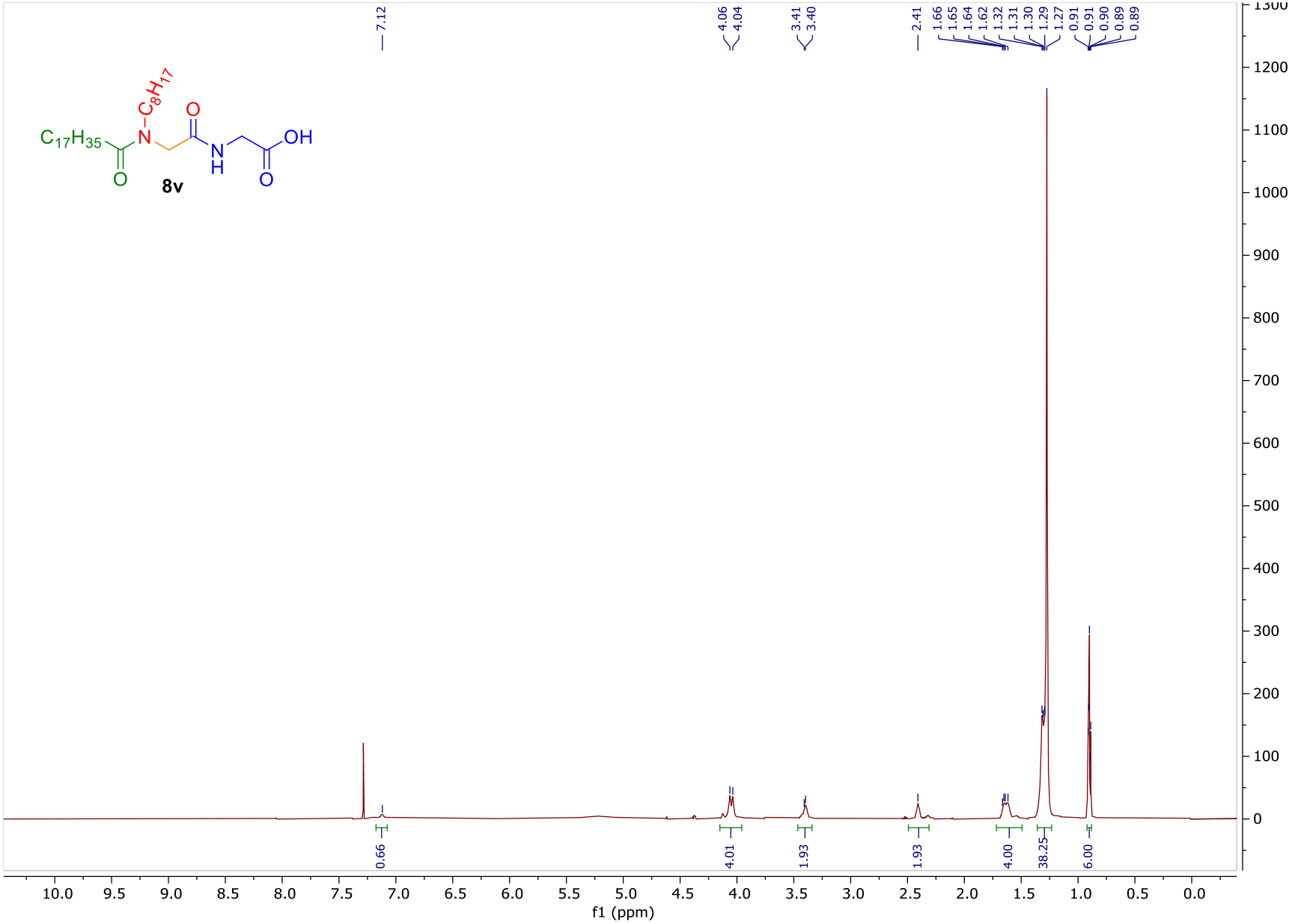


Figure S69. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **8v**.

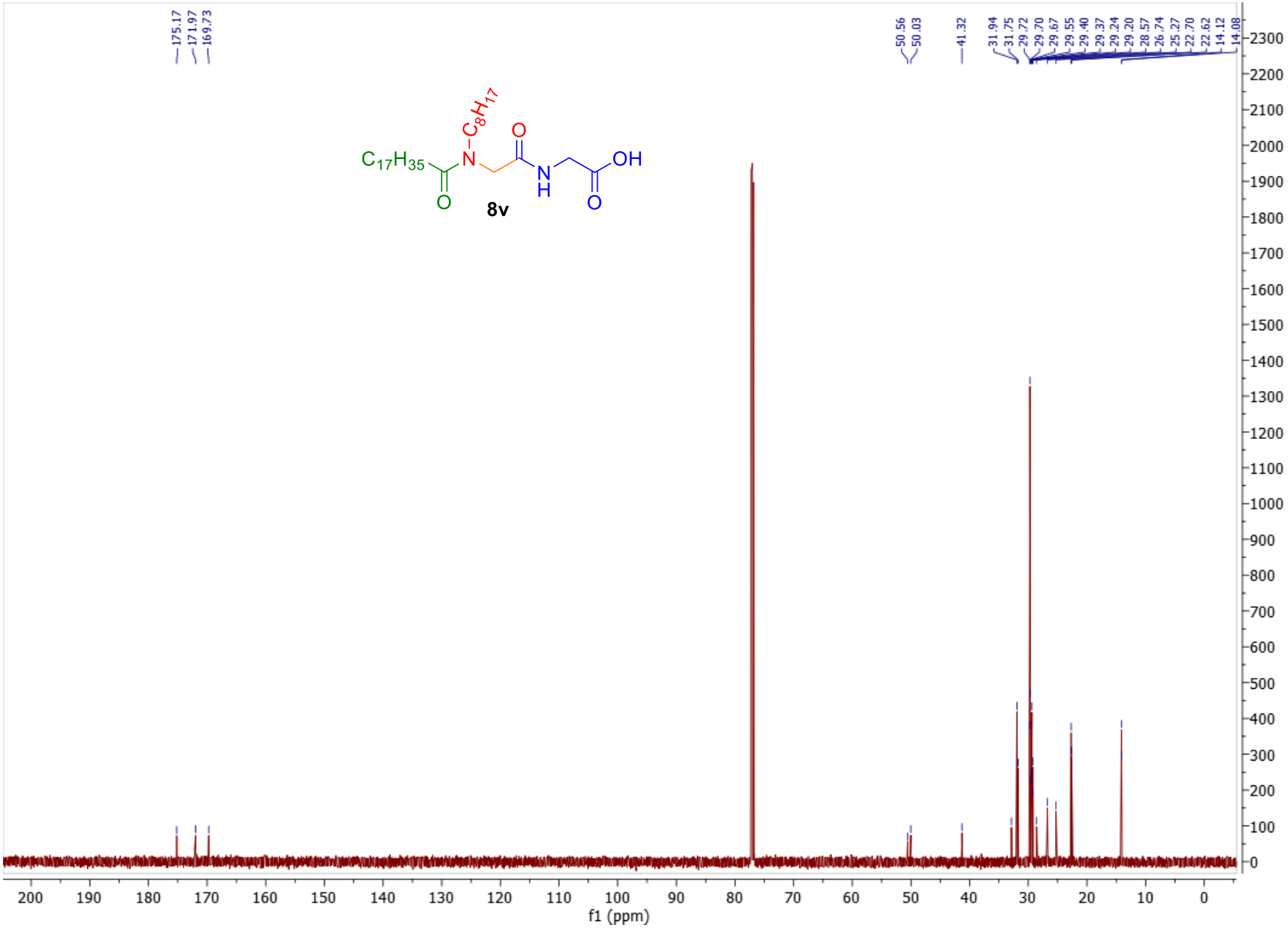


Figure S70. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **8v**.

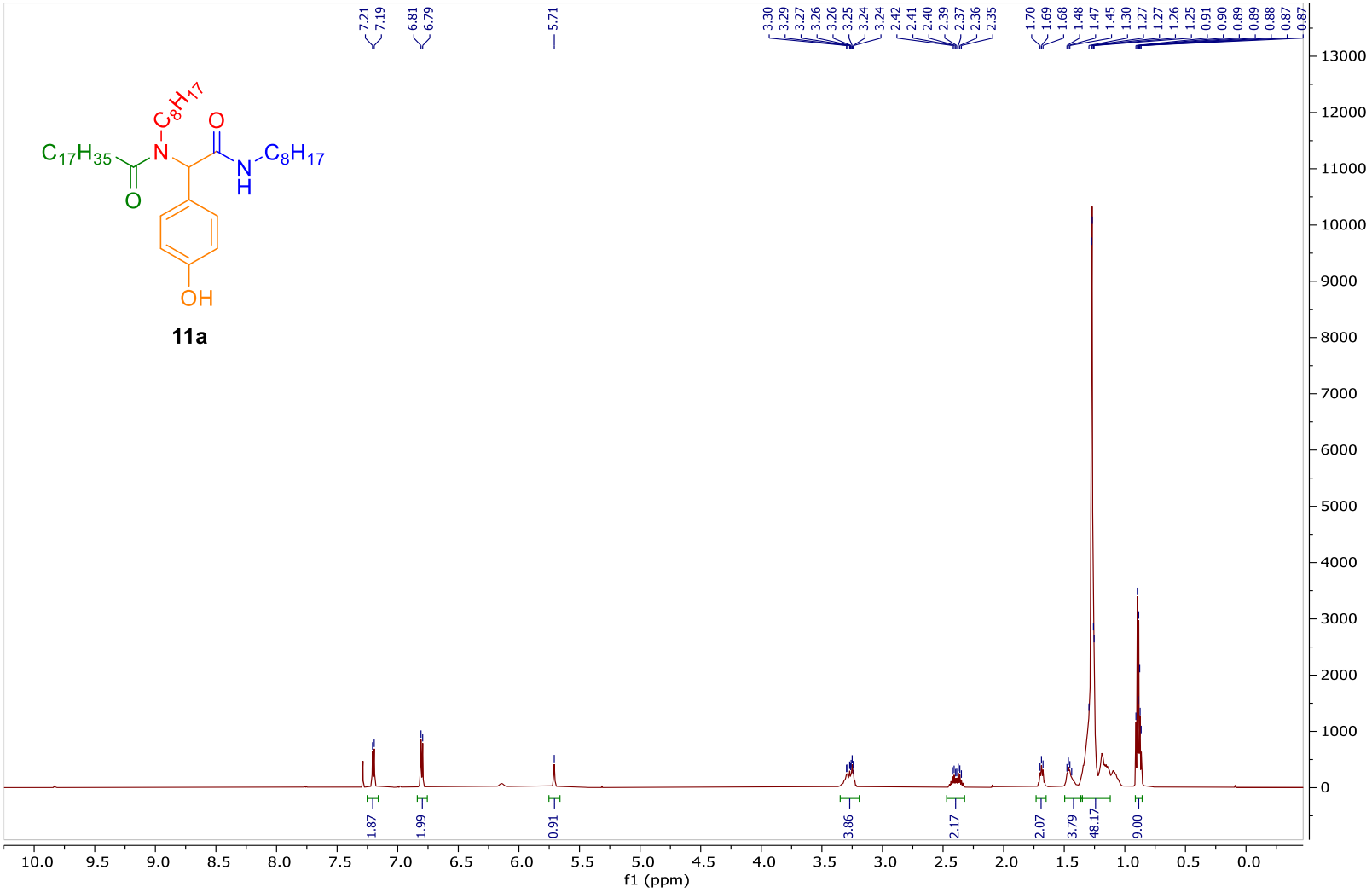


Figure S71. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **11a**.

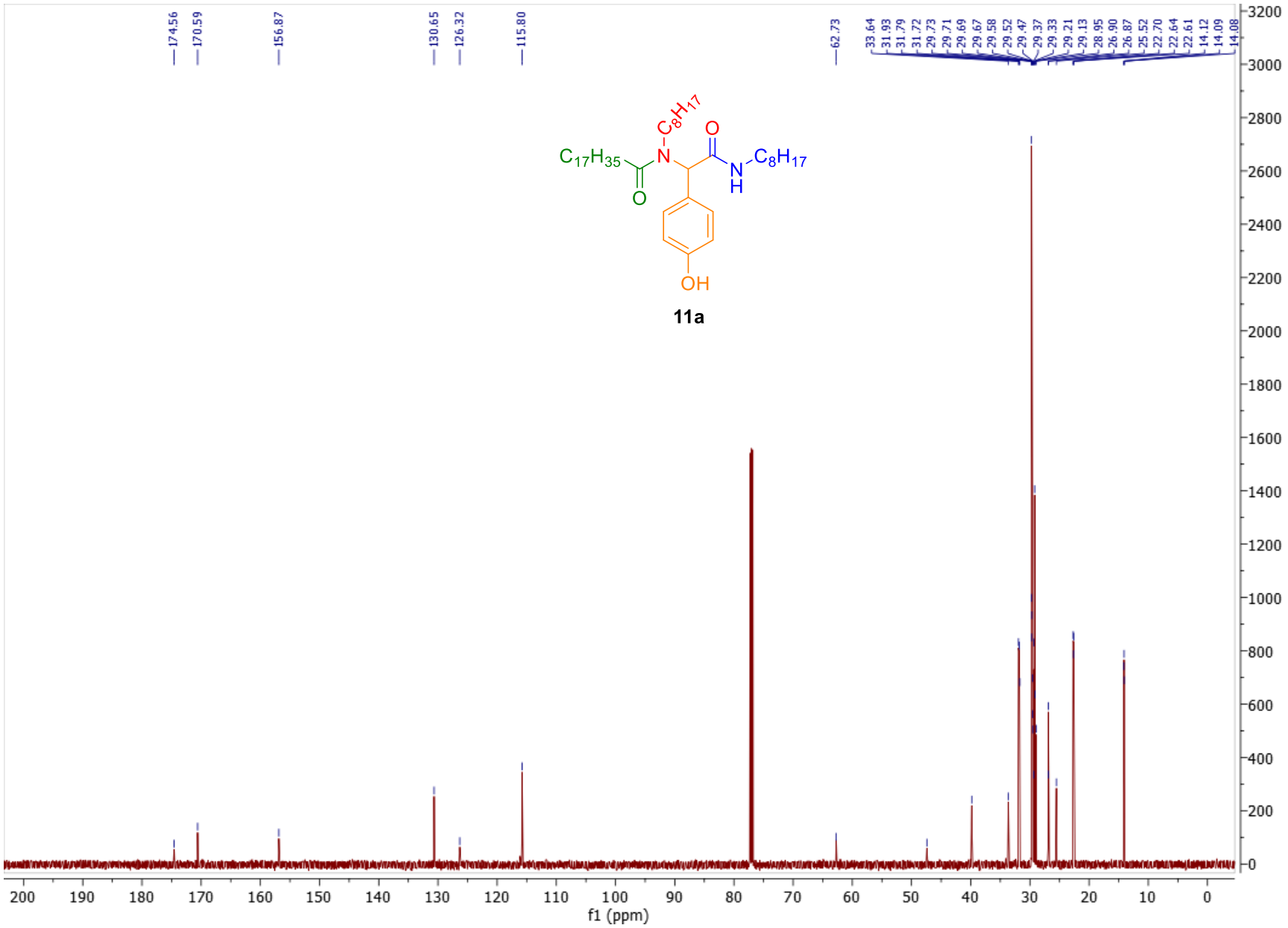


Figure S72. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **11a**.

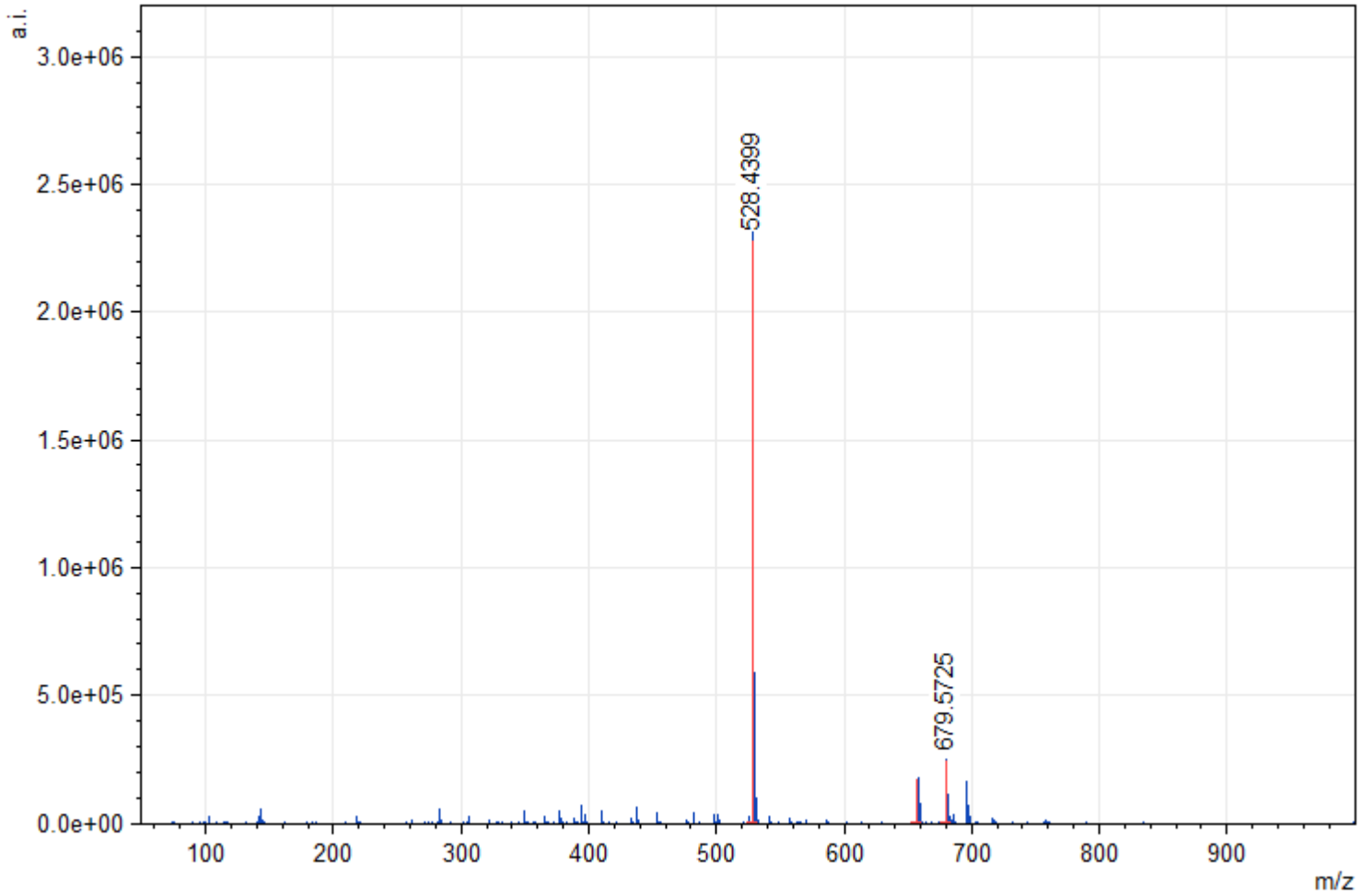


Figure S73. HRMS of compound **11a**.

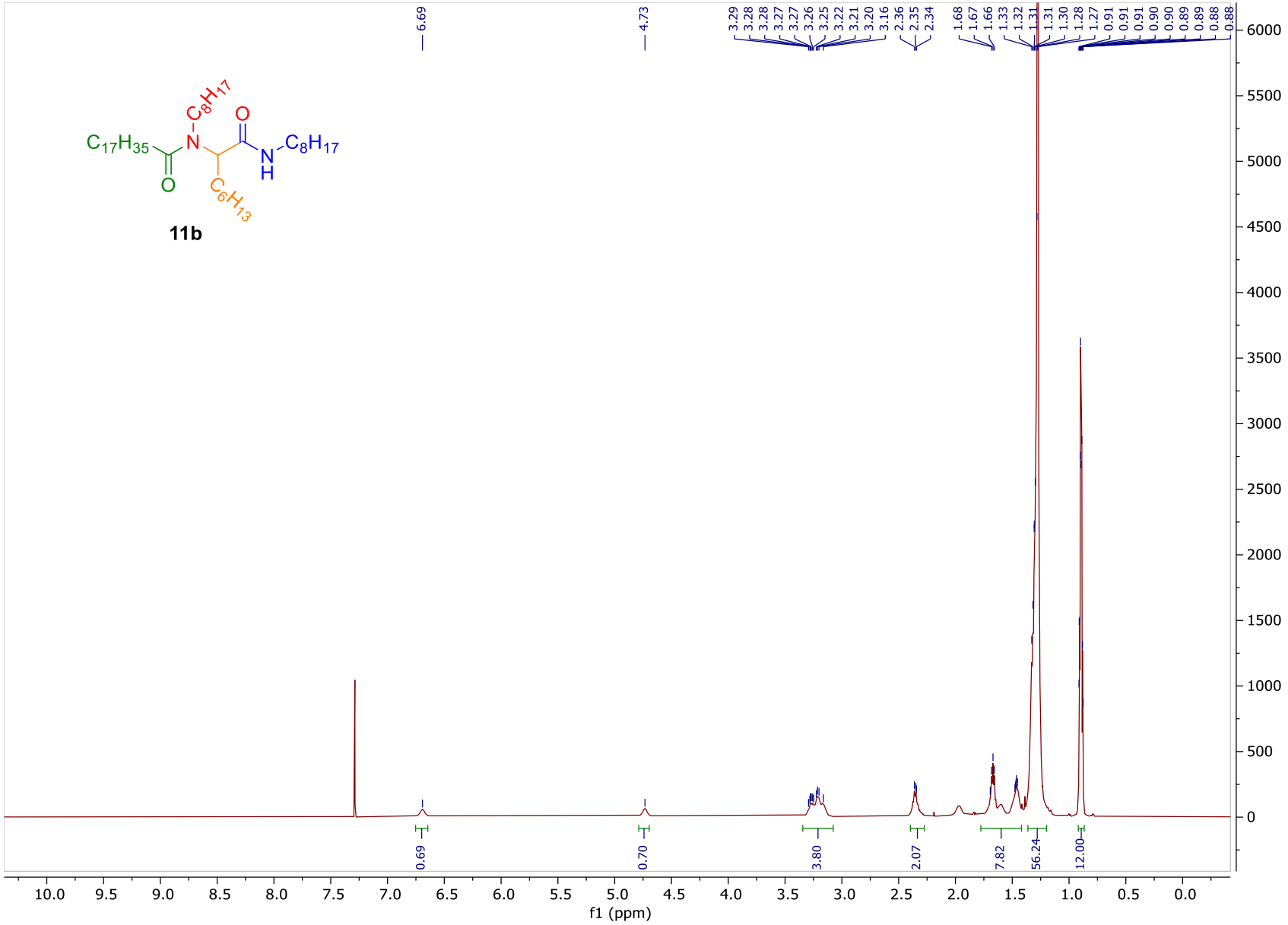


Figure S74. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **11b**.

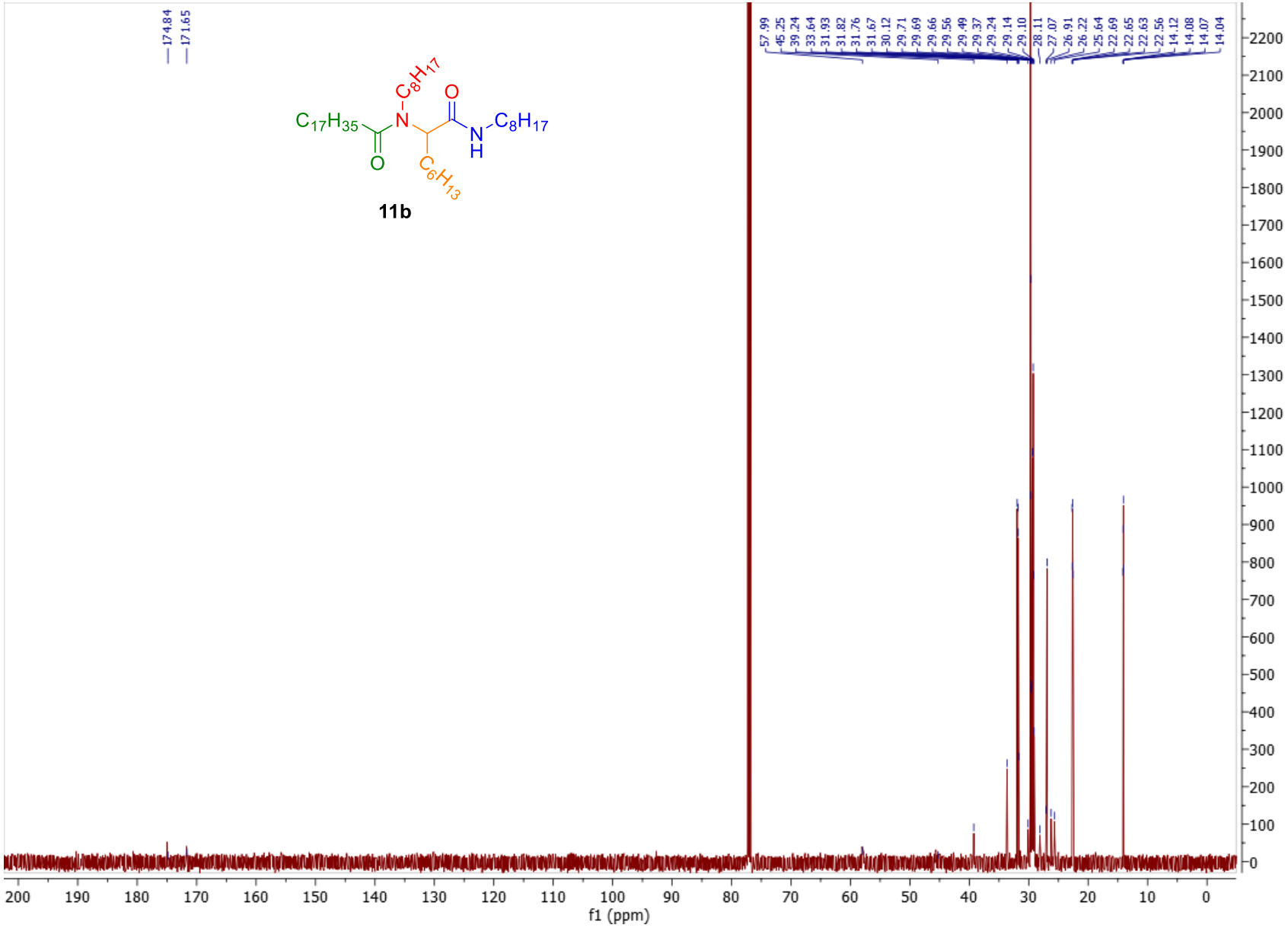


Figure S75. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **11b**.

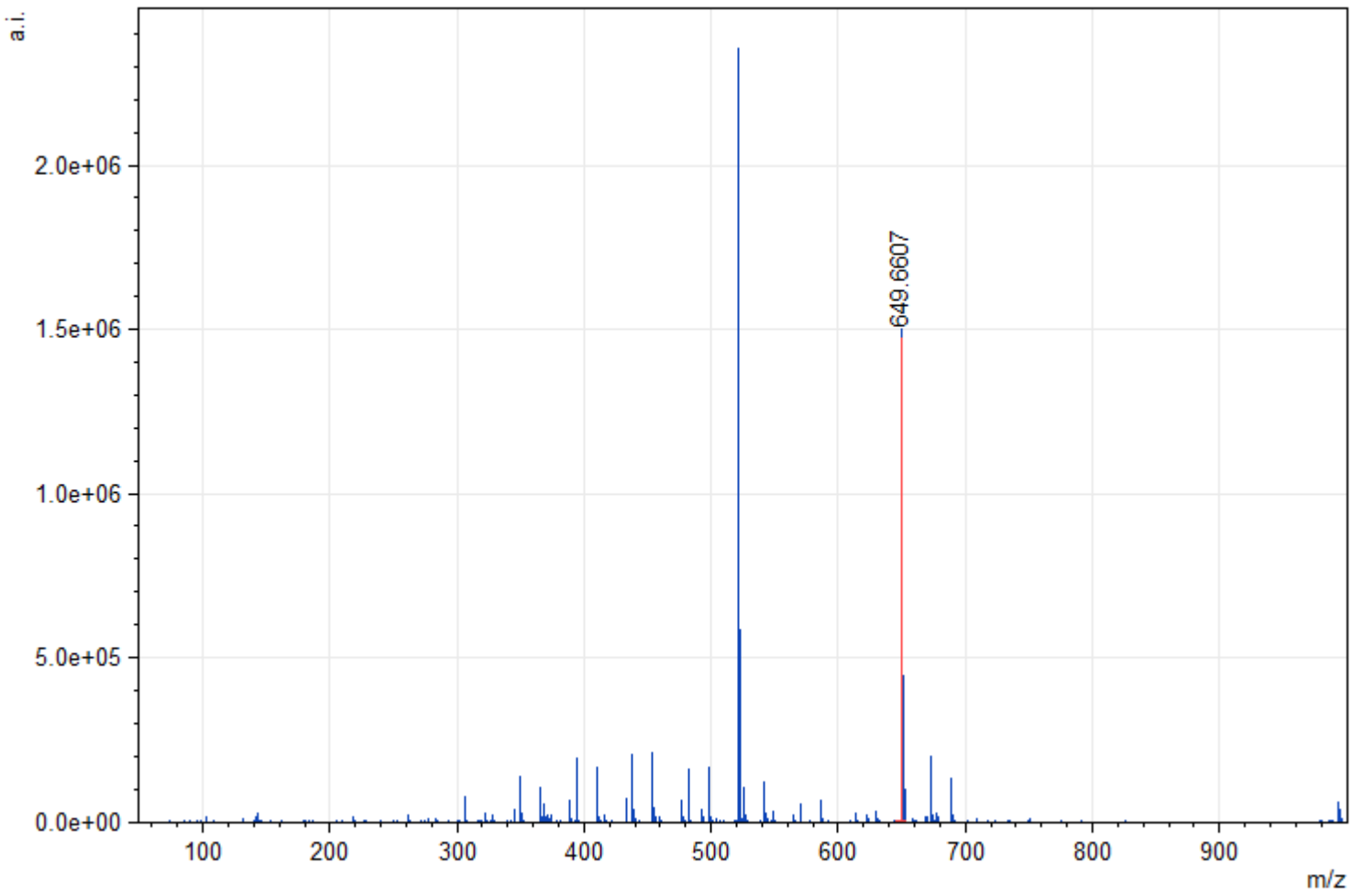


Figure S76. HRMS of compound **11b**.

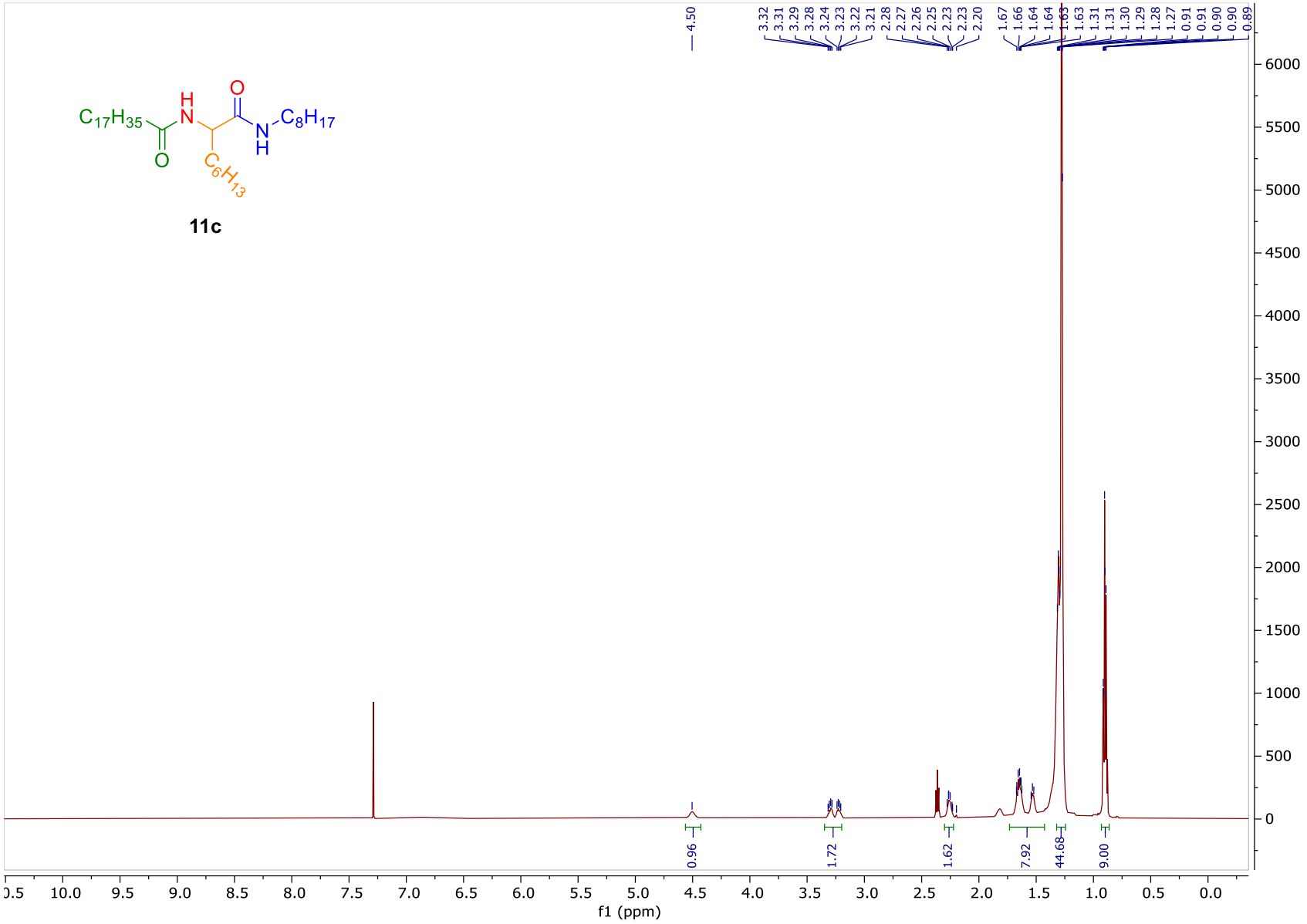


Figure S77. ^{1}H NMR (600 MHz, $CDCl_3$) Spectrum of compound **11c.**

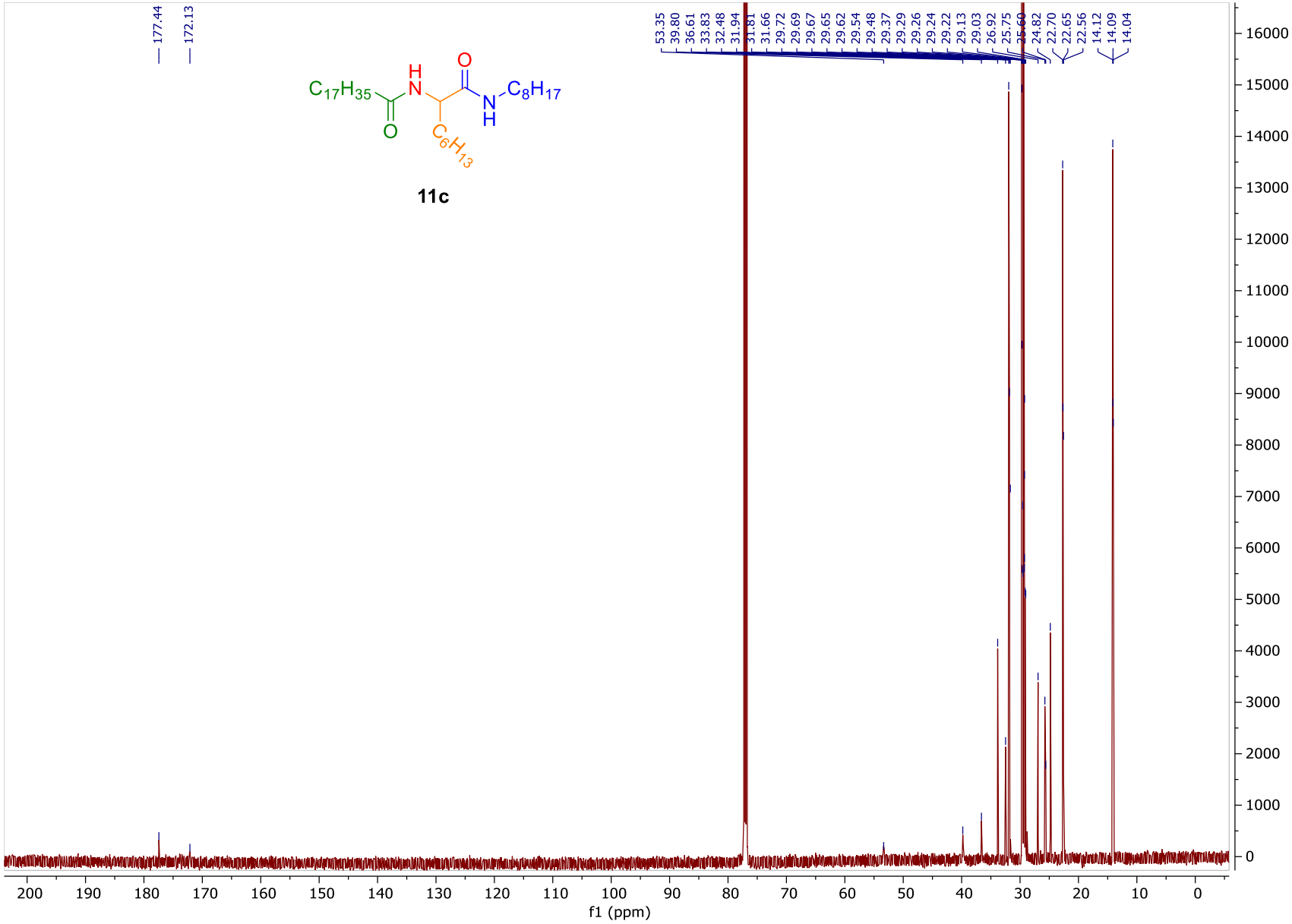


Figure S78. ^{13}C NMR (151 MHz, $CDCl_3$) Spectrum of compound **11c.**

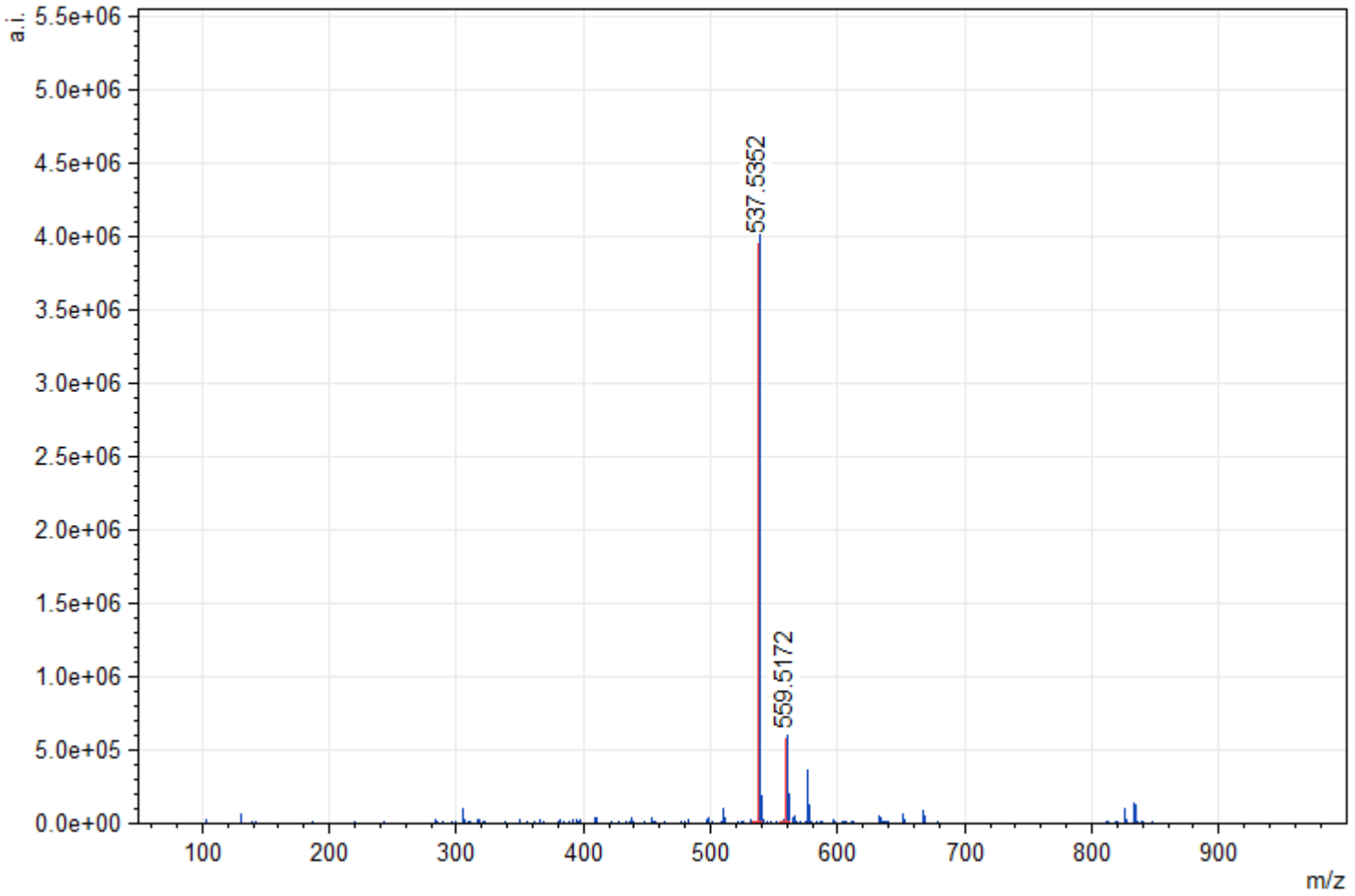


Figure S79. HRMS of compound **11c**.