An expeditious Click Approach towards the Synthesis of Galactose coated Novel glyco-dendrimers and dentromers utilizing double stage convergent method[±]

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[±]This manuscript is dedicated to Prof. Shiv P Singh, emeritus Professor at Kurukshetra University, Kurukshetra, India.

Table contents:

1. ^{1}H and ^{13}C NMR Spectrum of compounds (**1 - 25**)

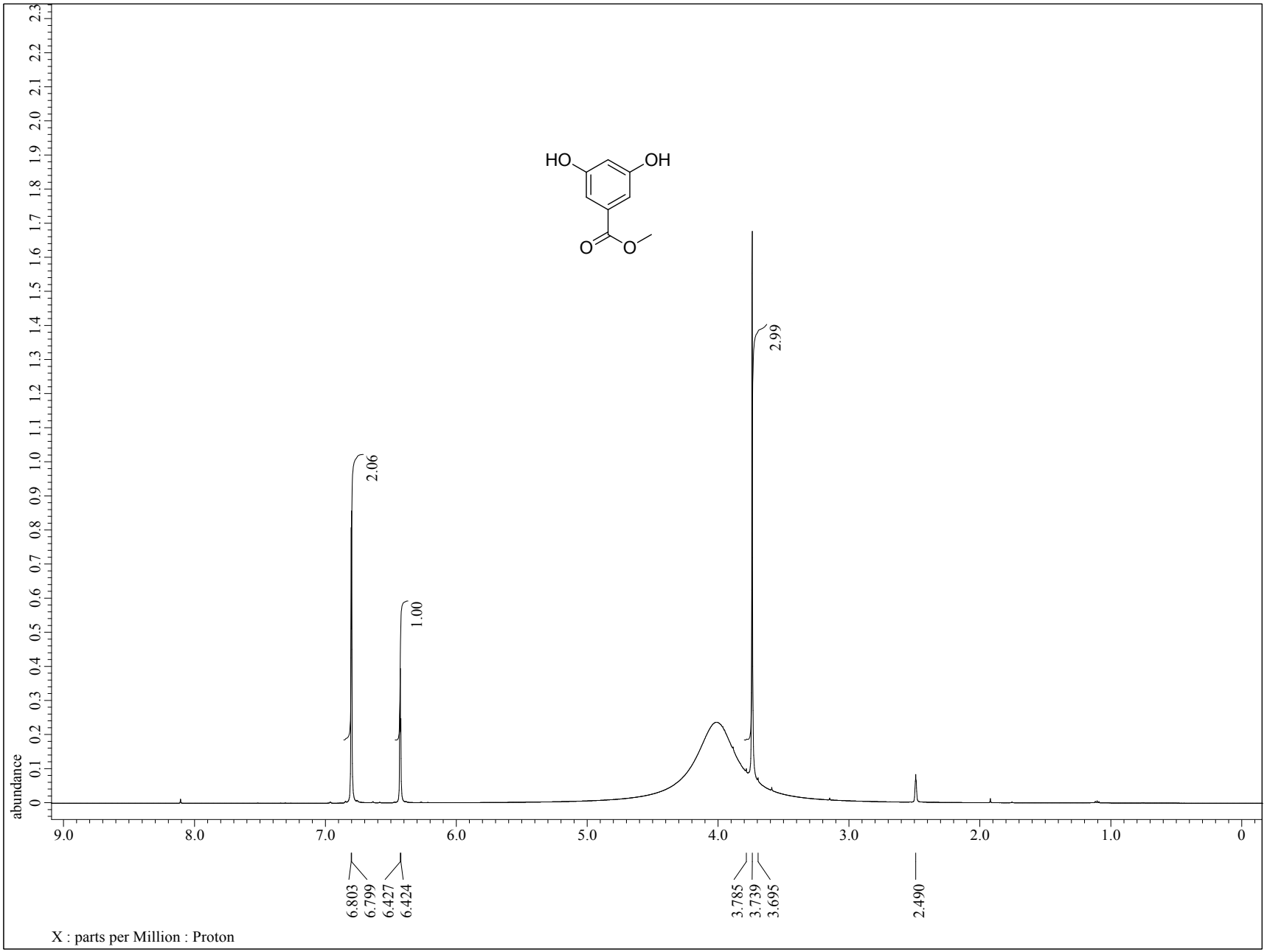


Figure S1. ^{1}H NMR (500 MHz, DMSO-d_6) of compound **3**

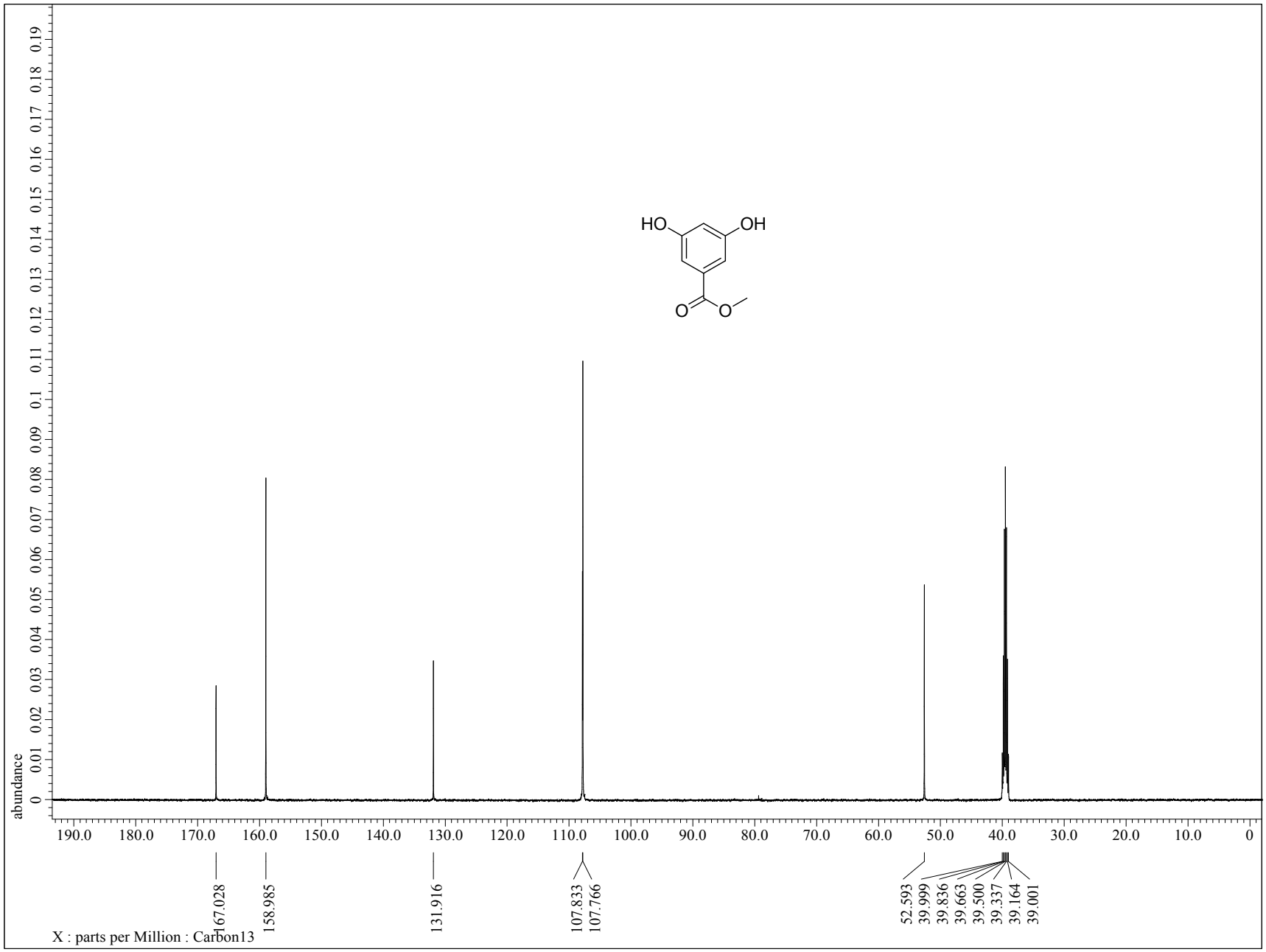


Figure S2. ^{13}C NMR (125 MHz, DMSO-d_6) of compound **3**

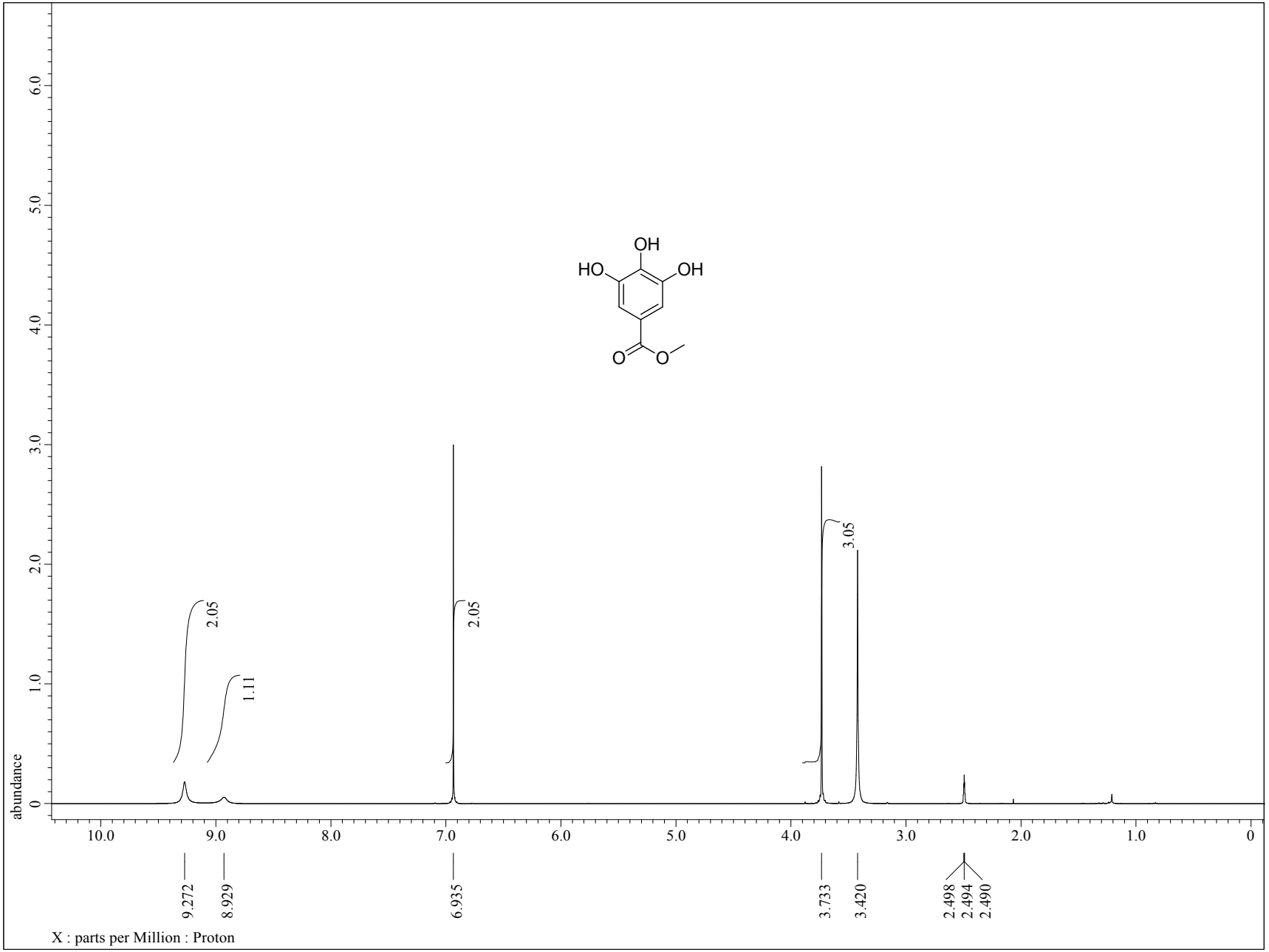


Figure S3. ^{1}H NMR (500 MHz, DMSO-d_6) of compound **4**

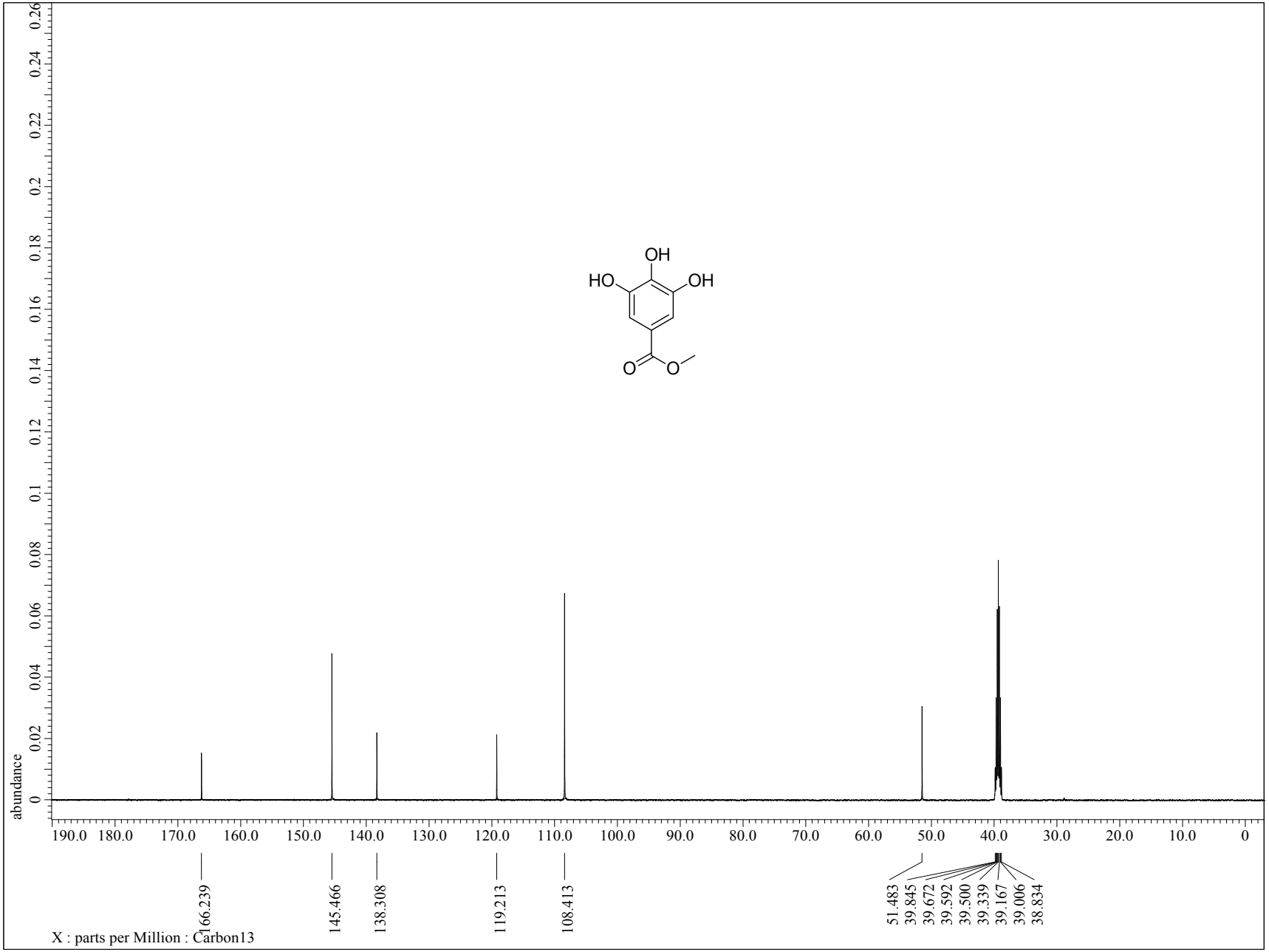


Figure S4. ^{13}C NMR (125 MHz, DMSO-d_6) of compound **4**

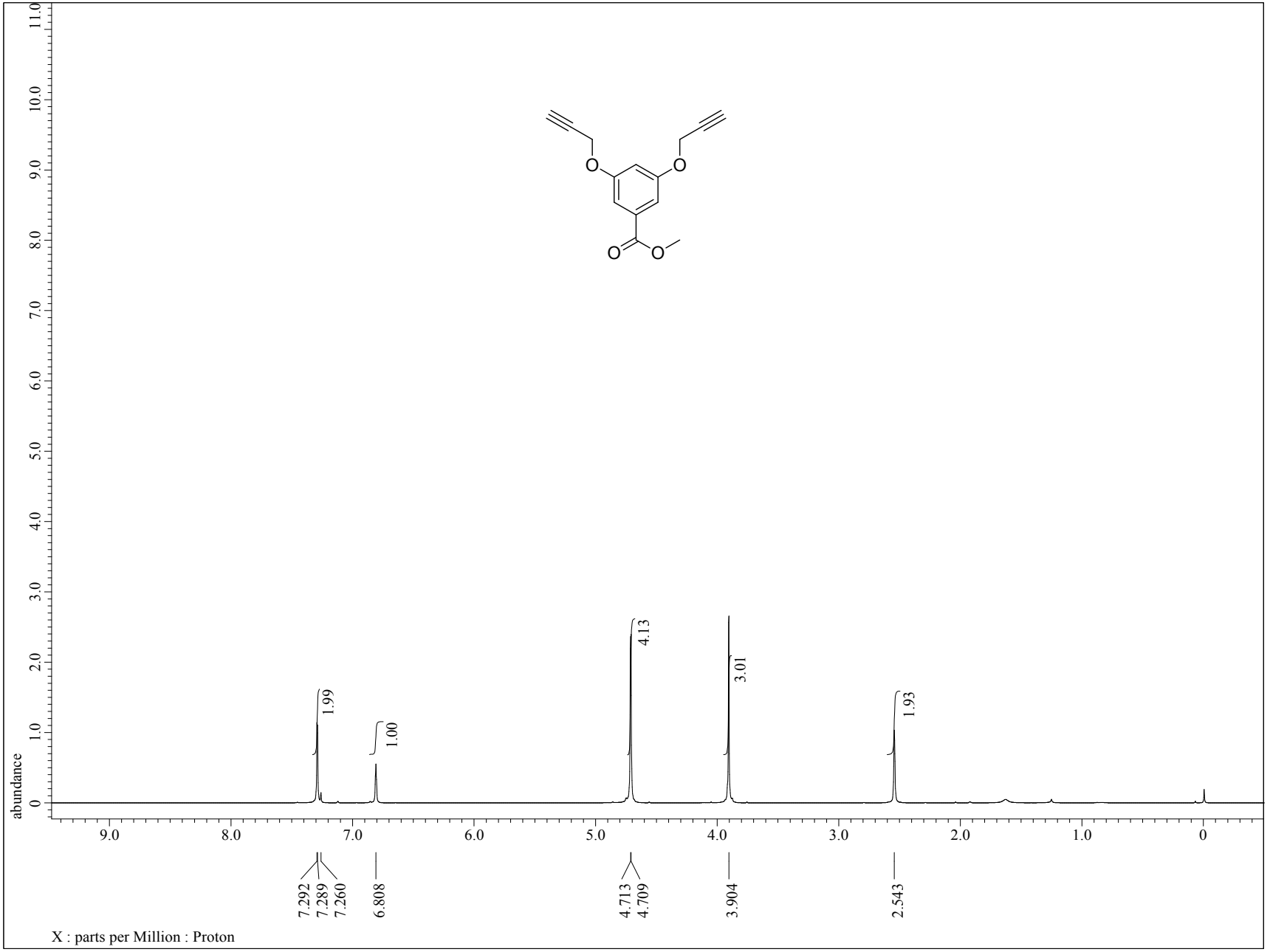


Figure S5. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **5**

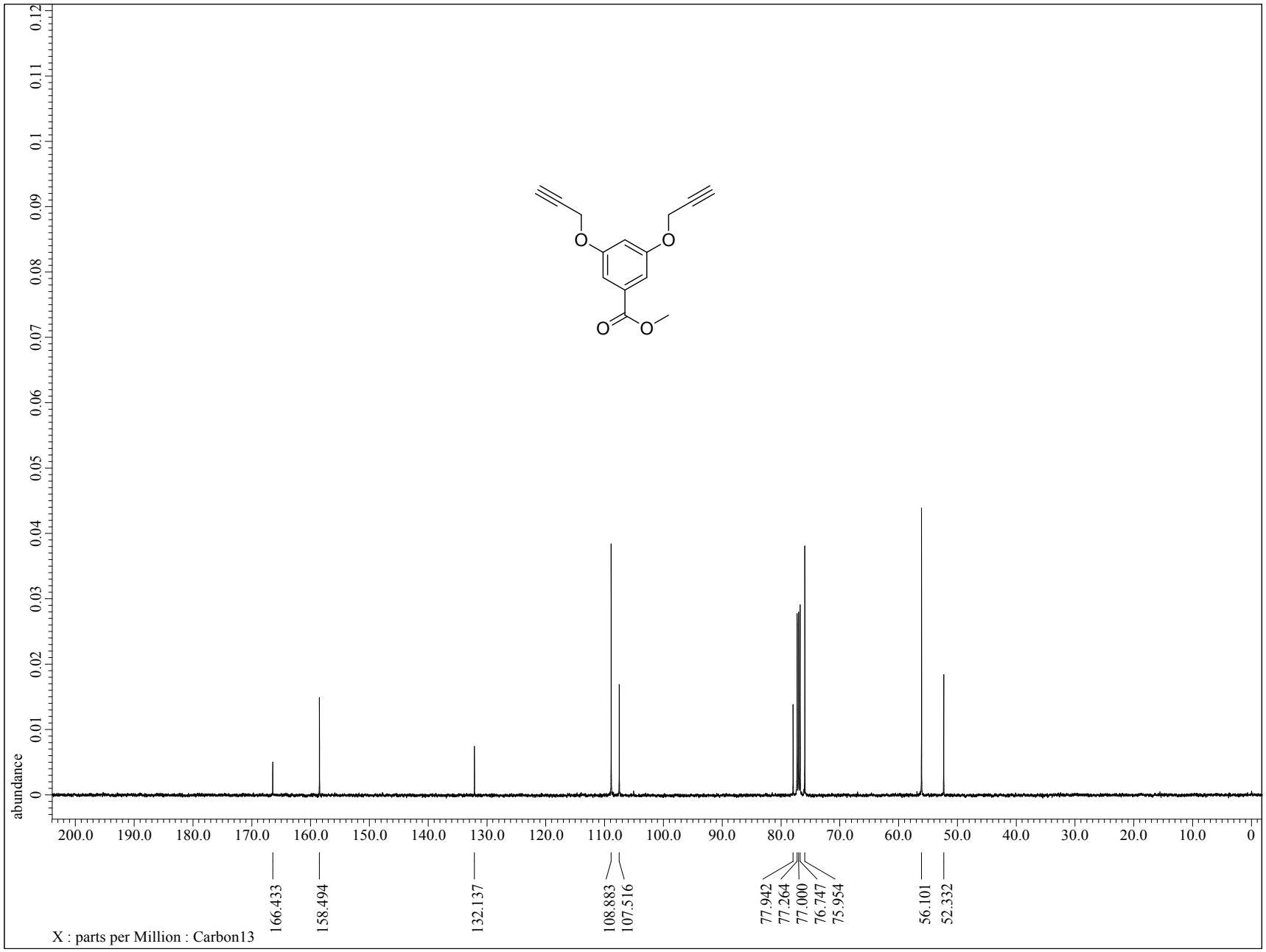


Figure S6. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **5**

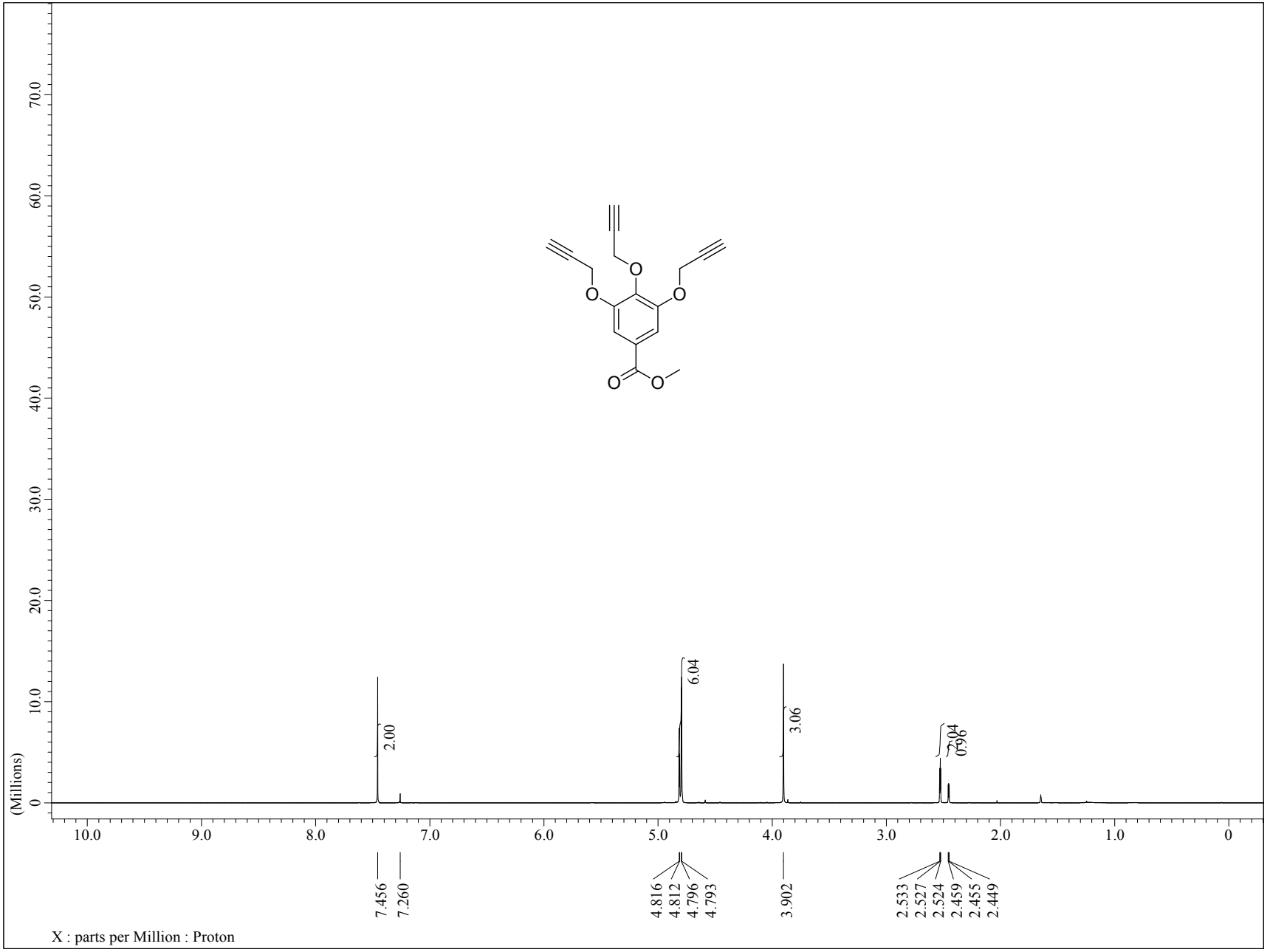


Figure S7. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **6**

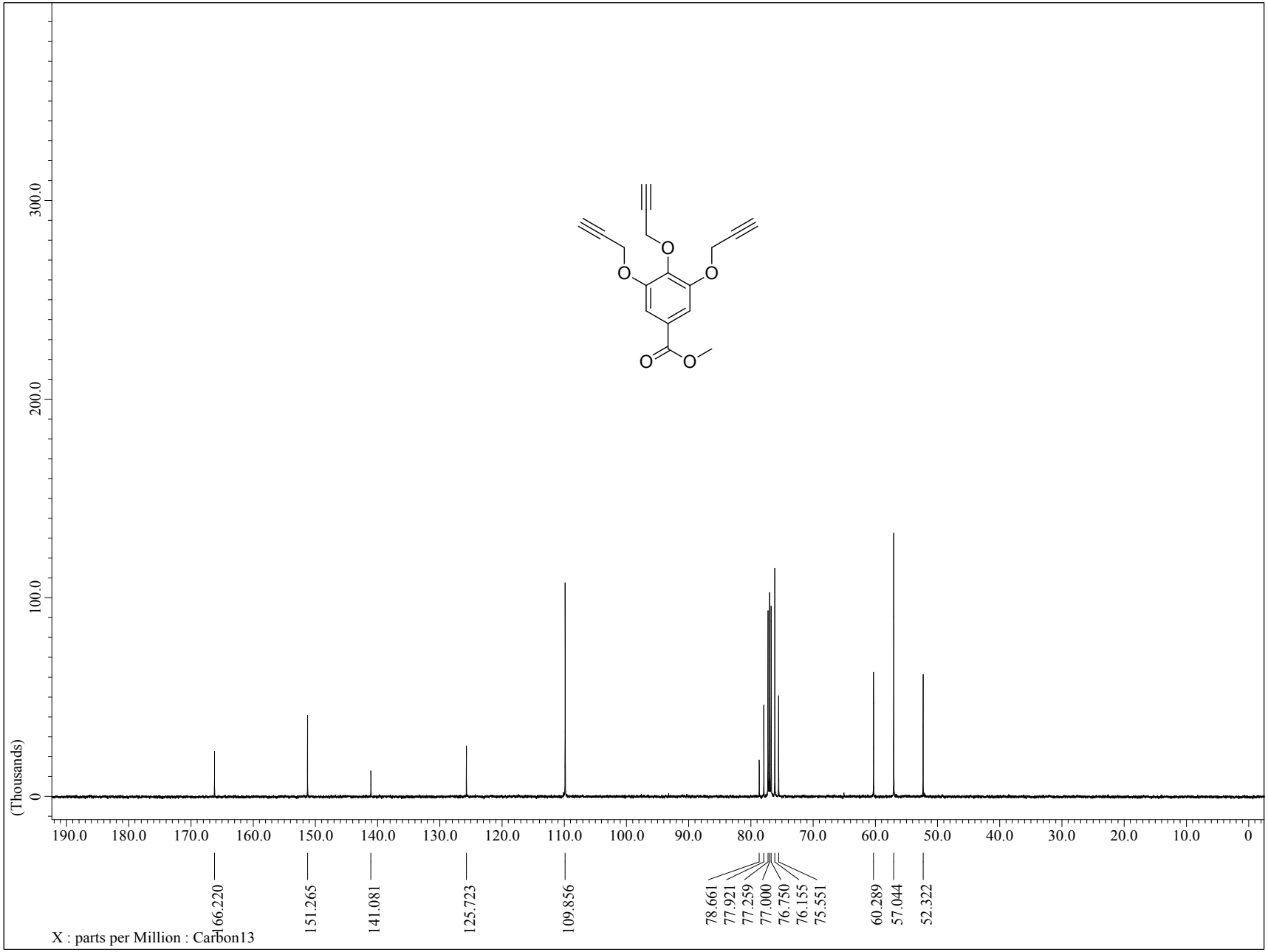


Figure S8. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **6**

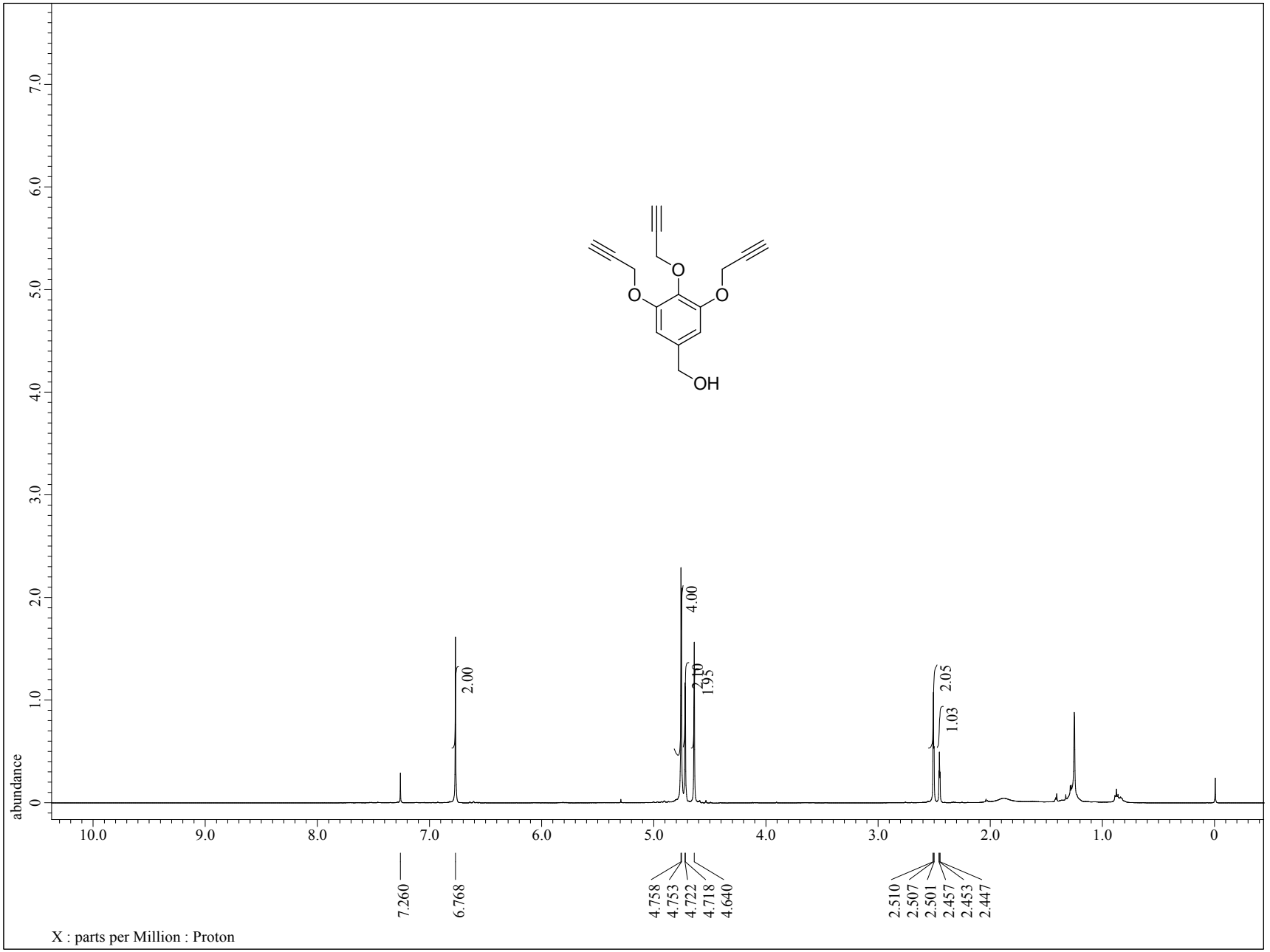


Figure S9. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **8**

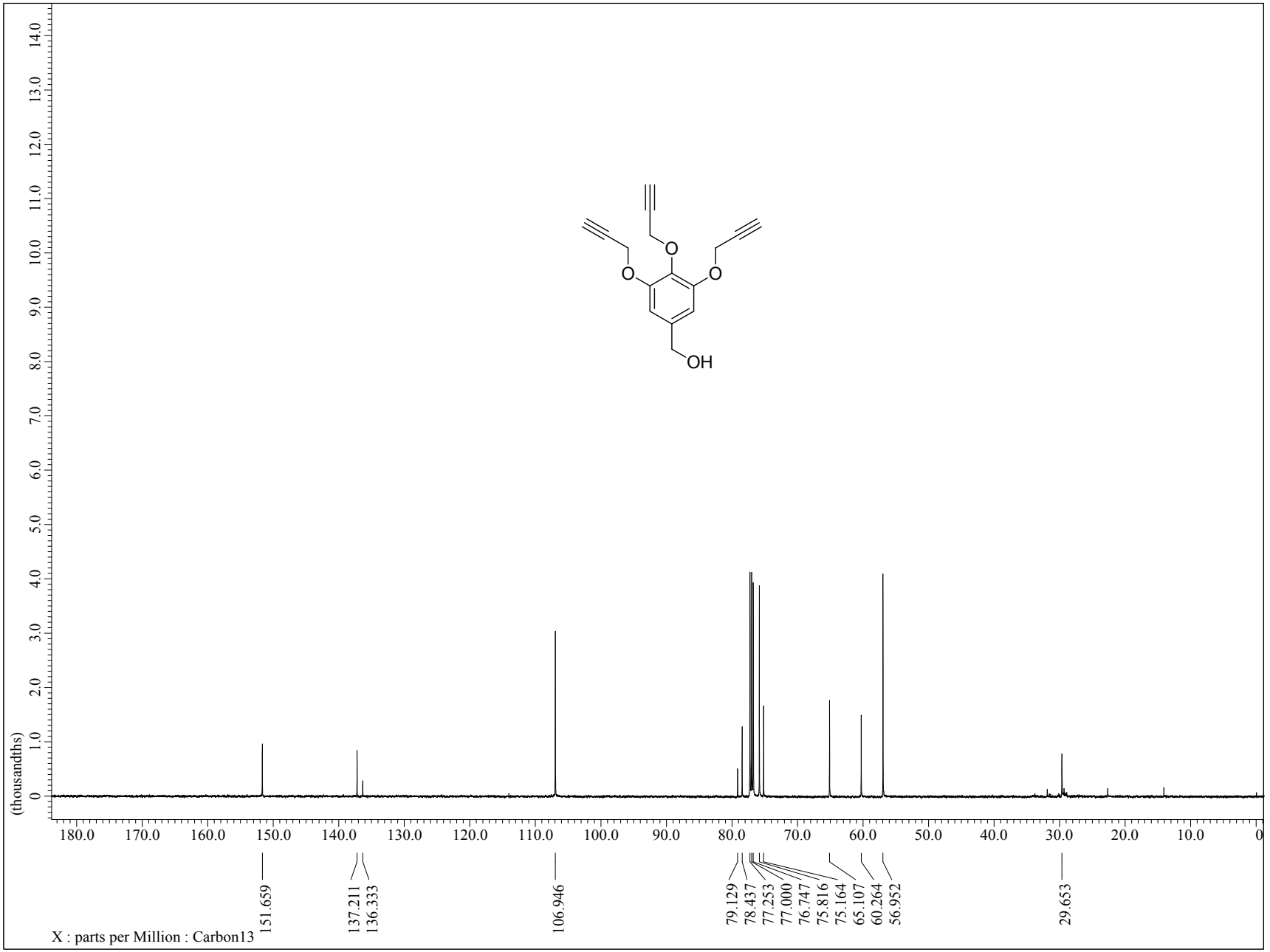


Figure S10. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **8**

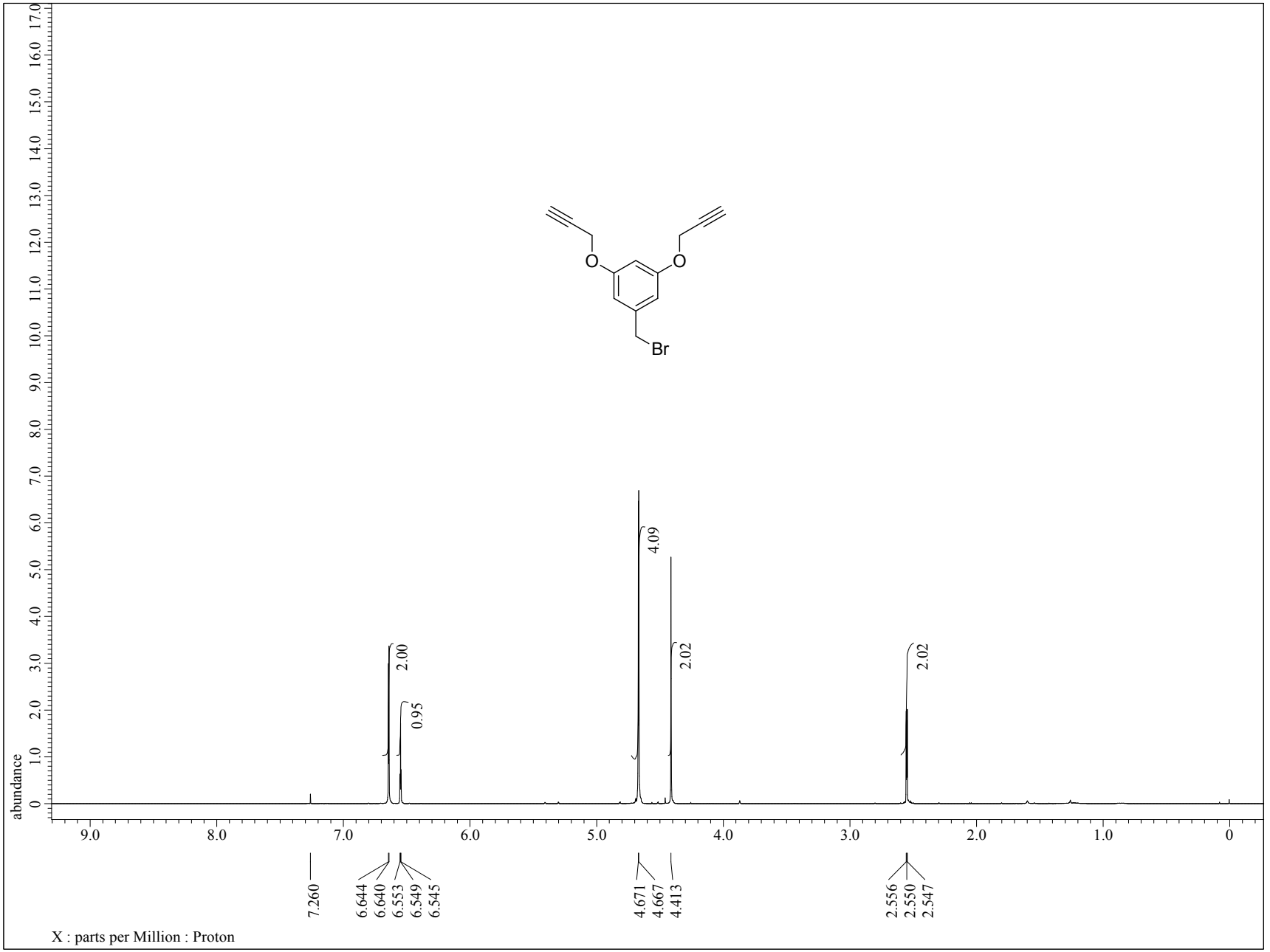


Figure S11. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **9**

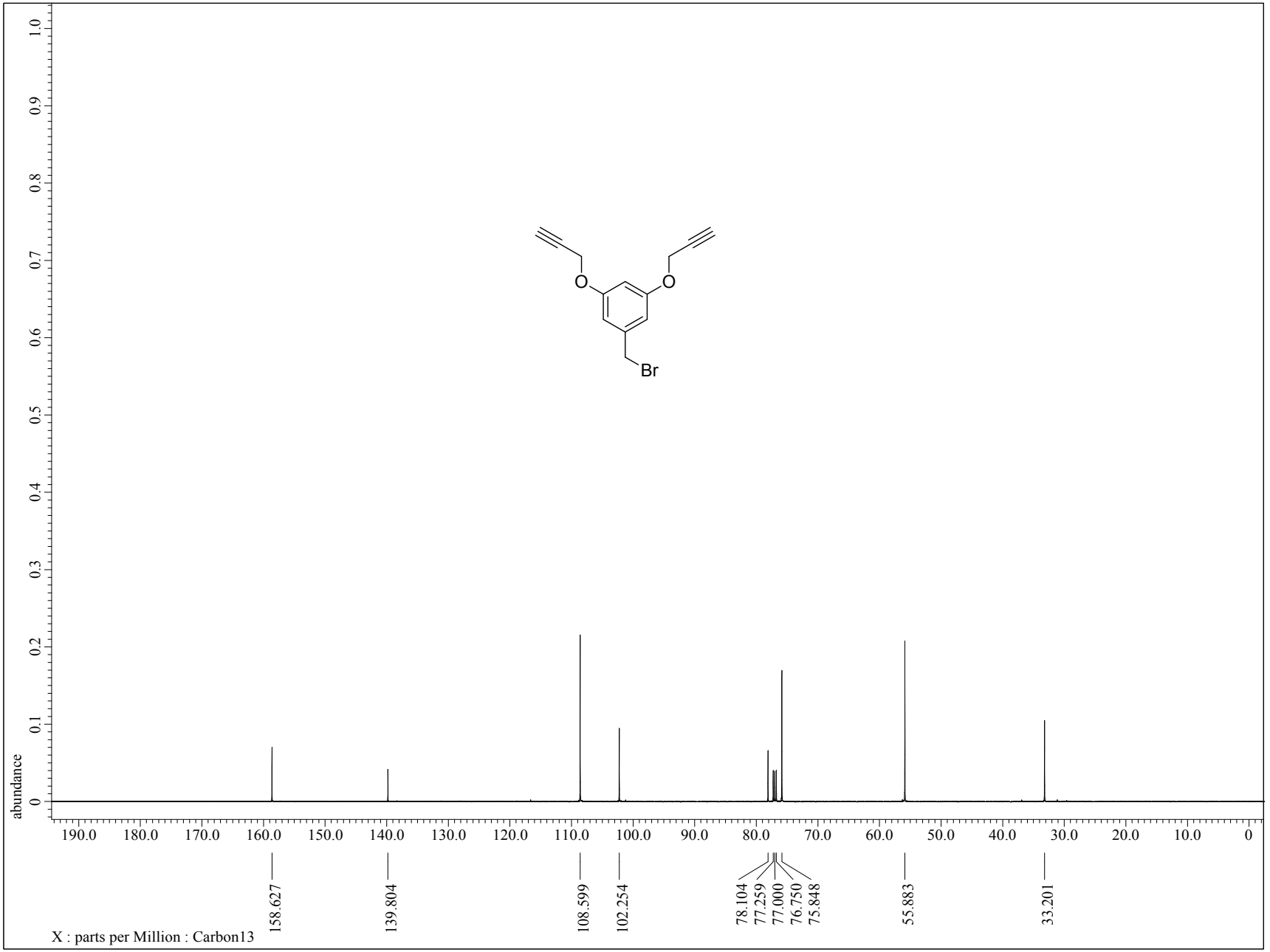


Figure S12. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **9**

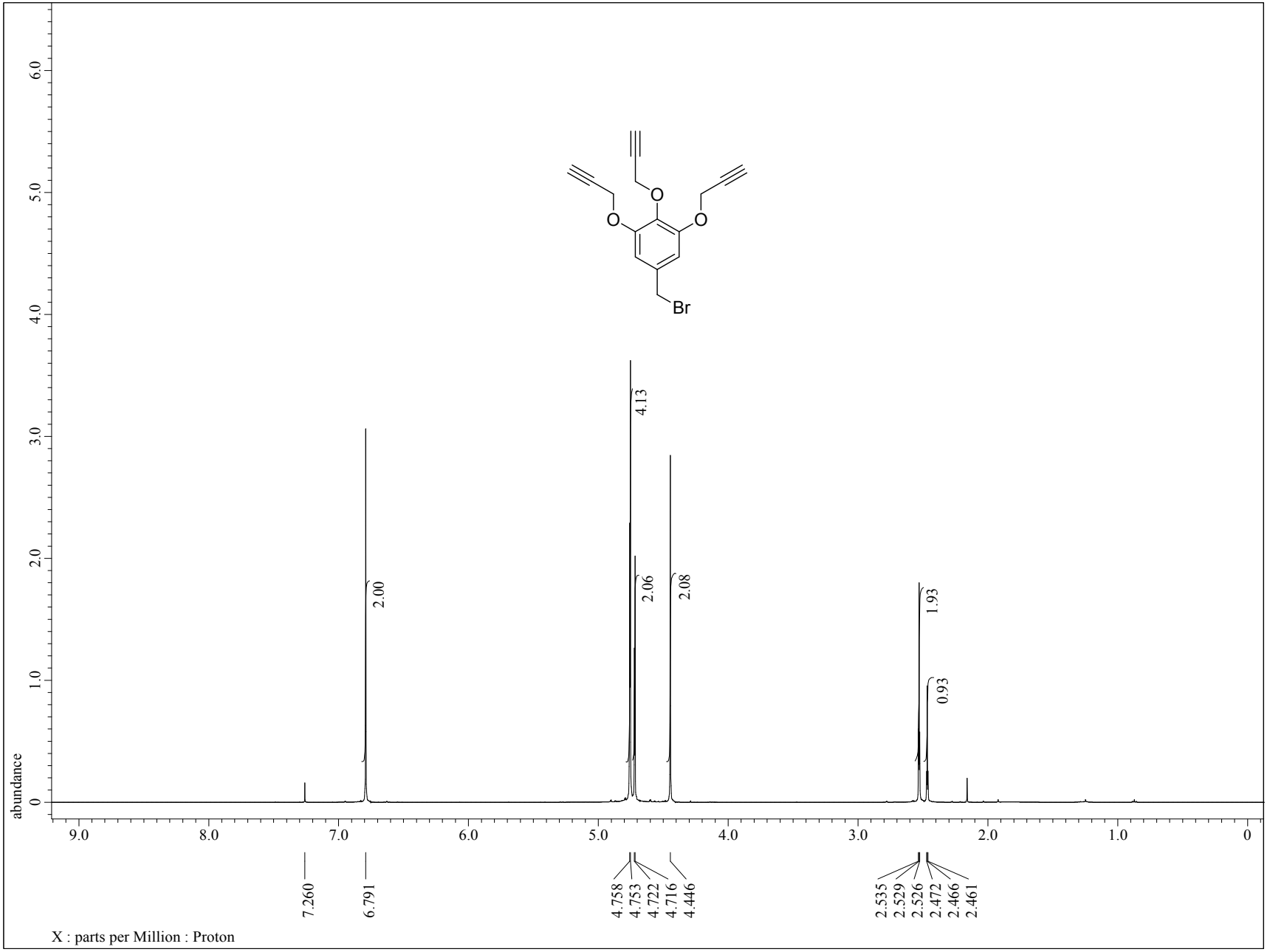


Figure S13. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **10**

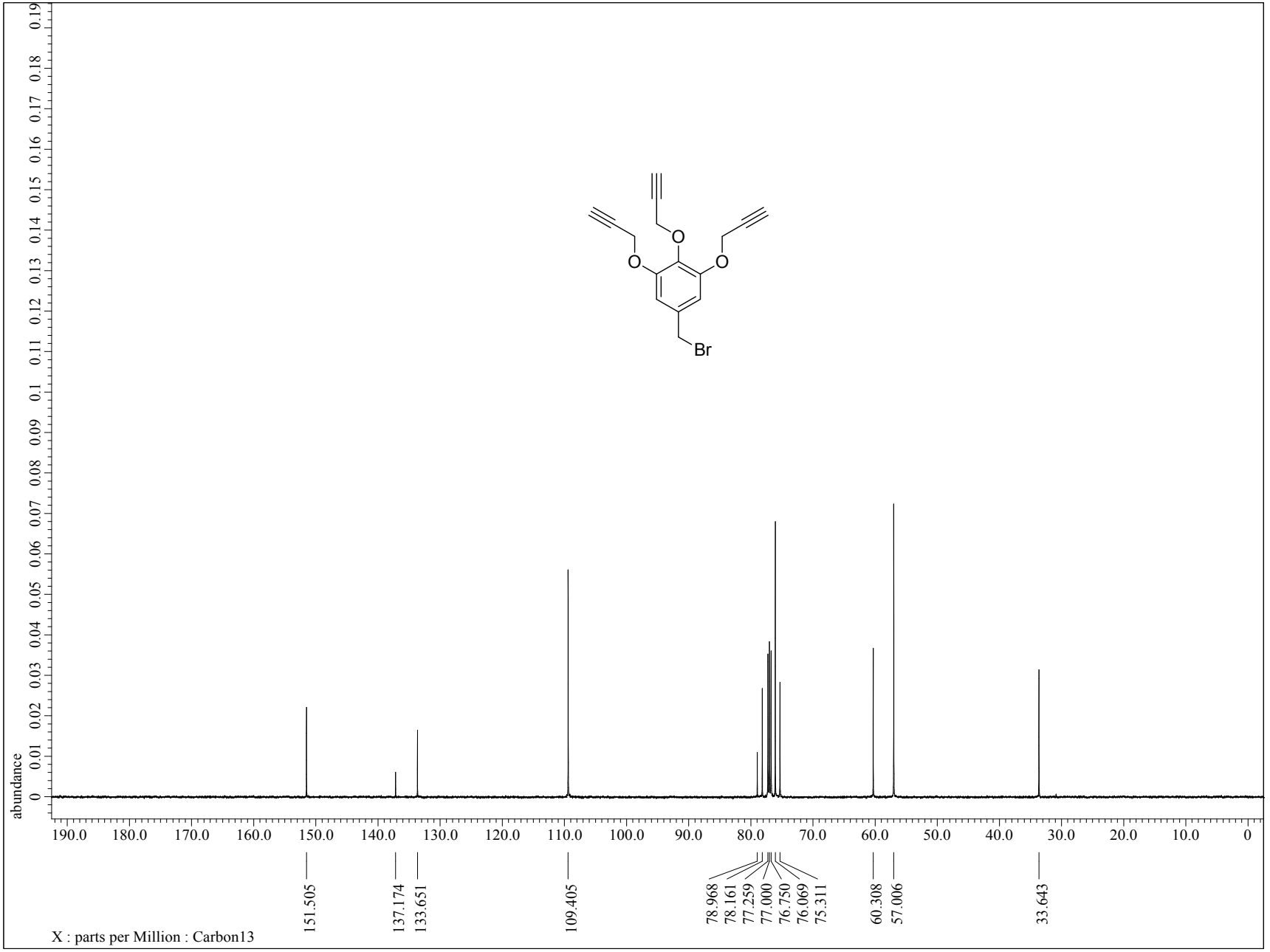


Figure S14. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **10**

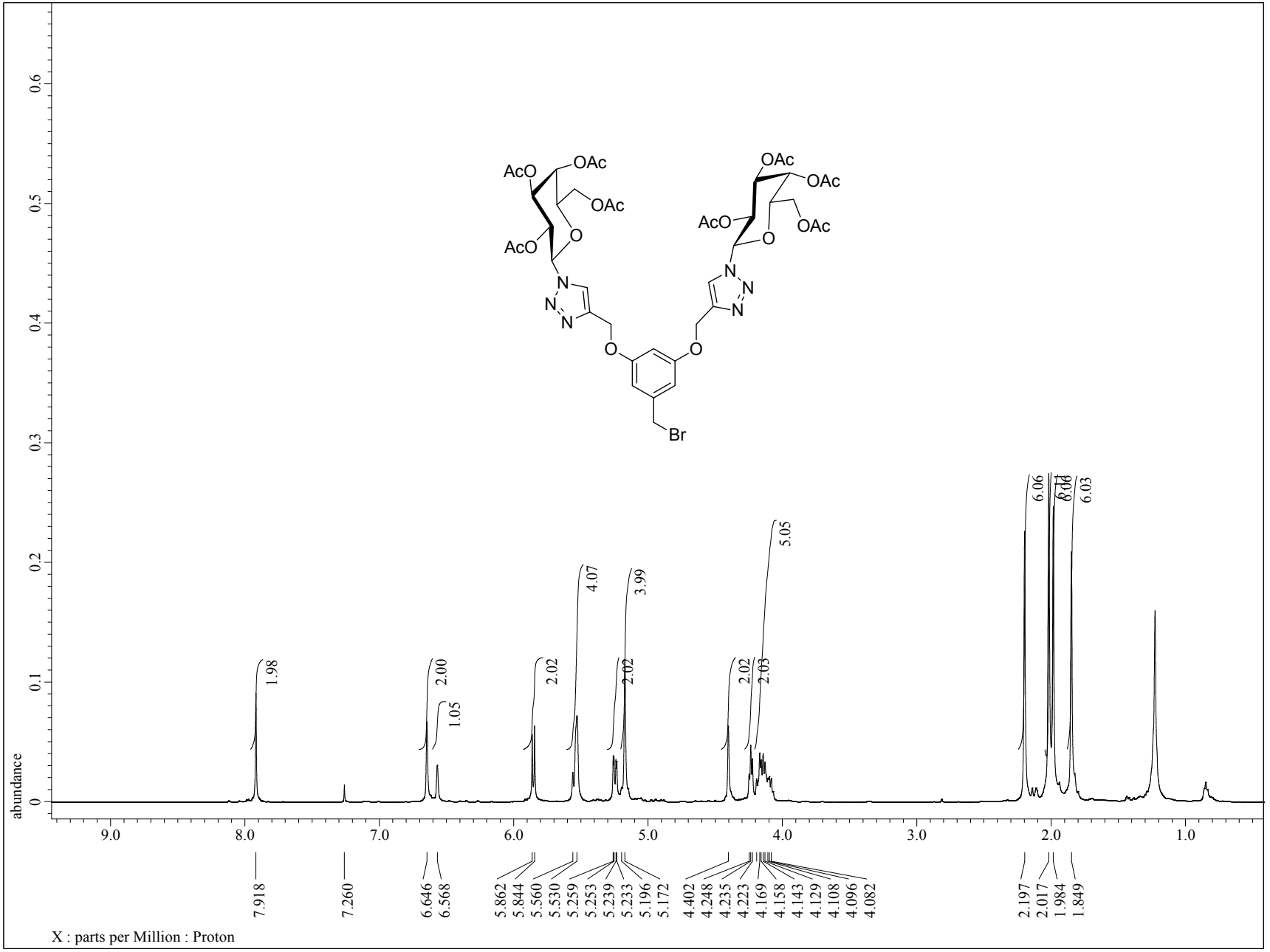


Figure S15. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **12**

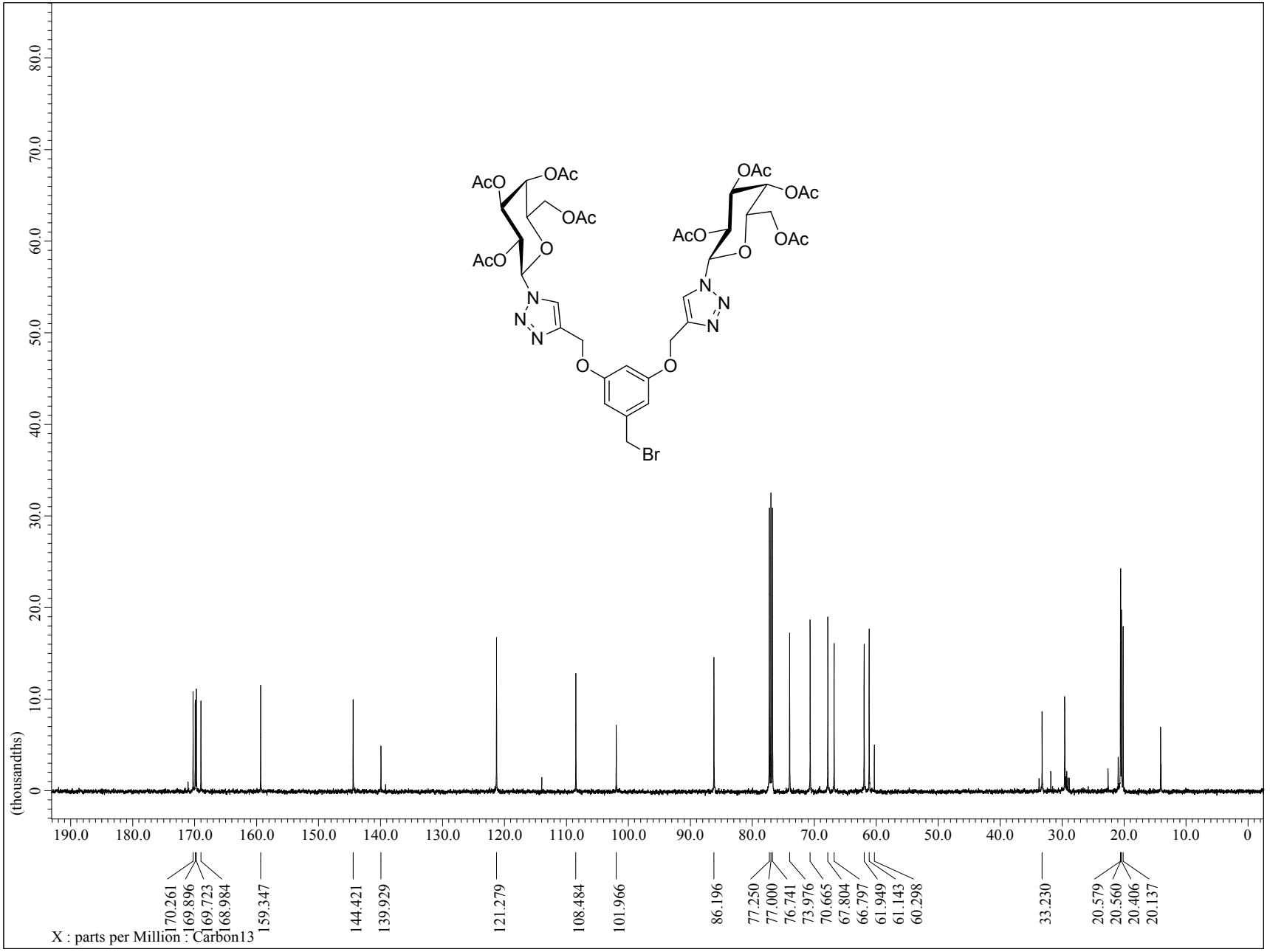


Figure S16. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **12**

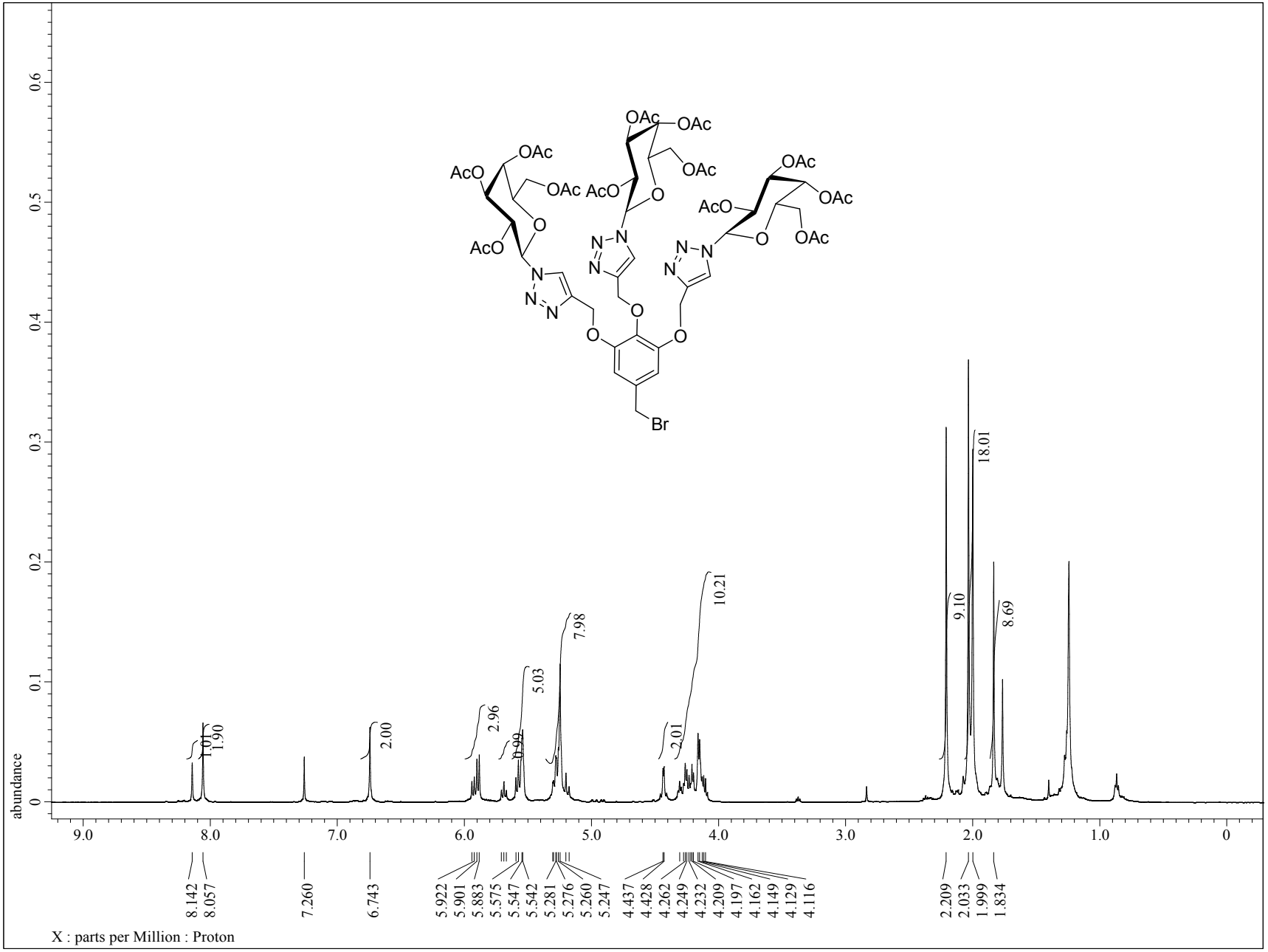


Figure S17. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **13**

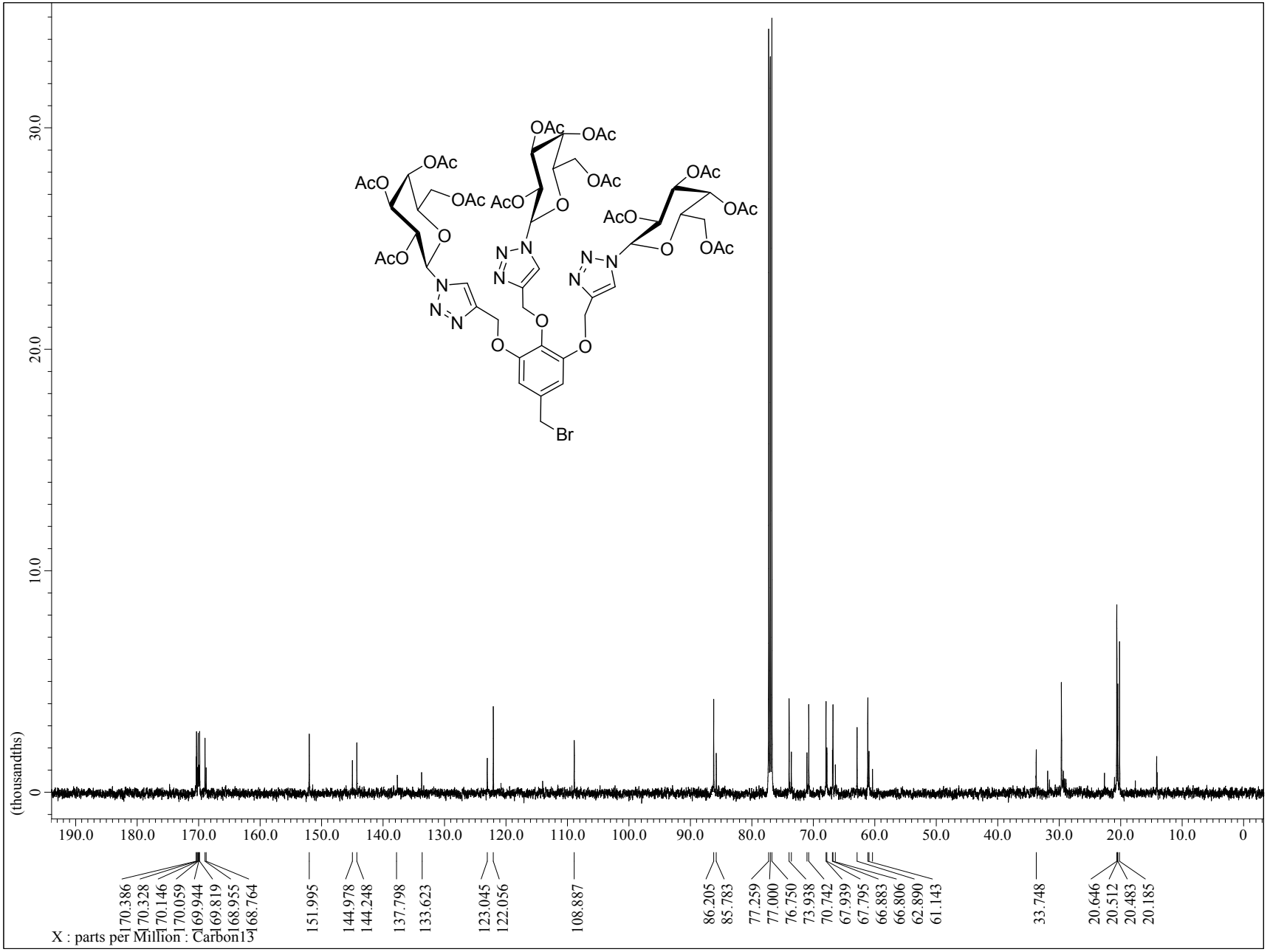


Figure S18. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **13**

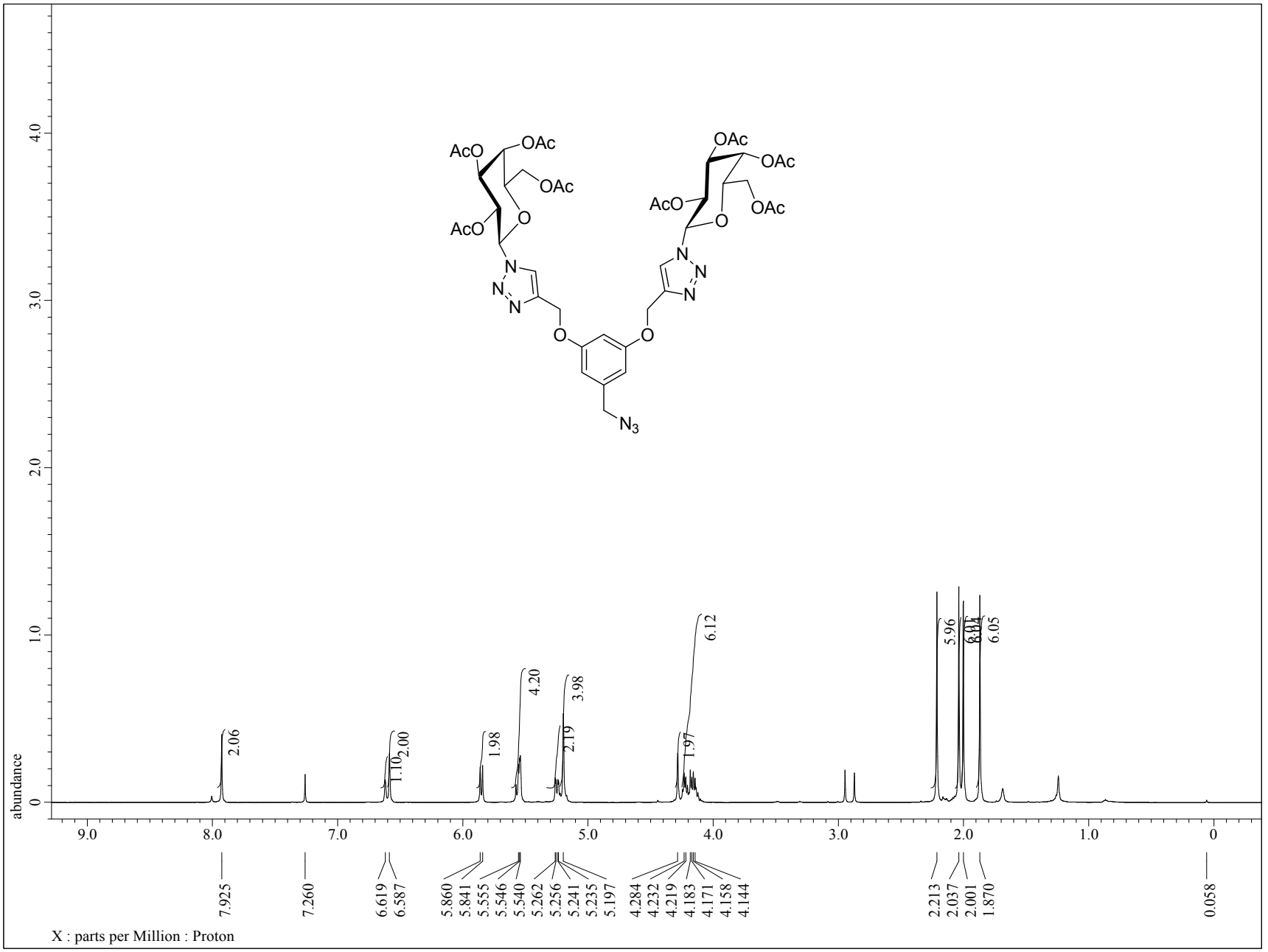


Figure S19. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **14**

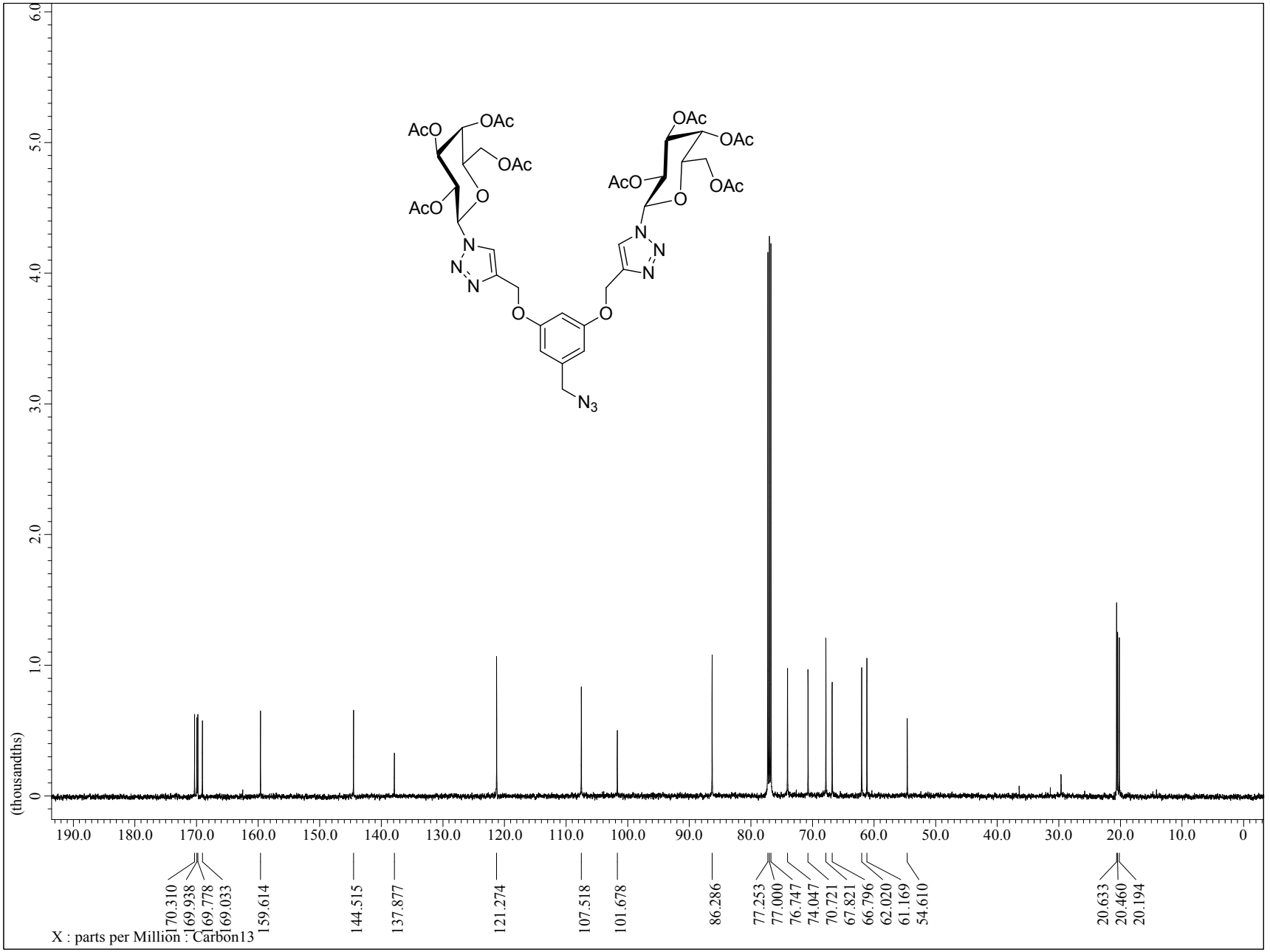


Figure S20. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **14**

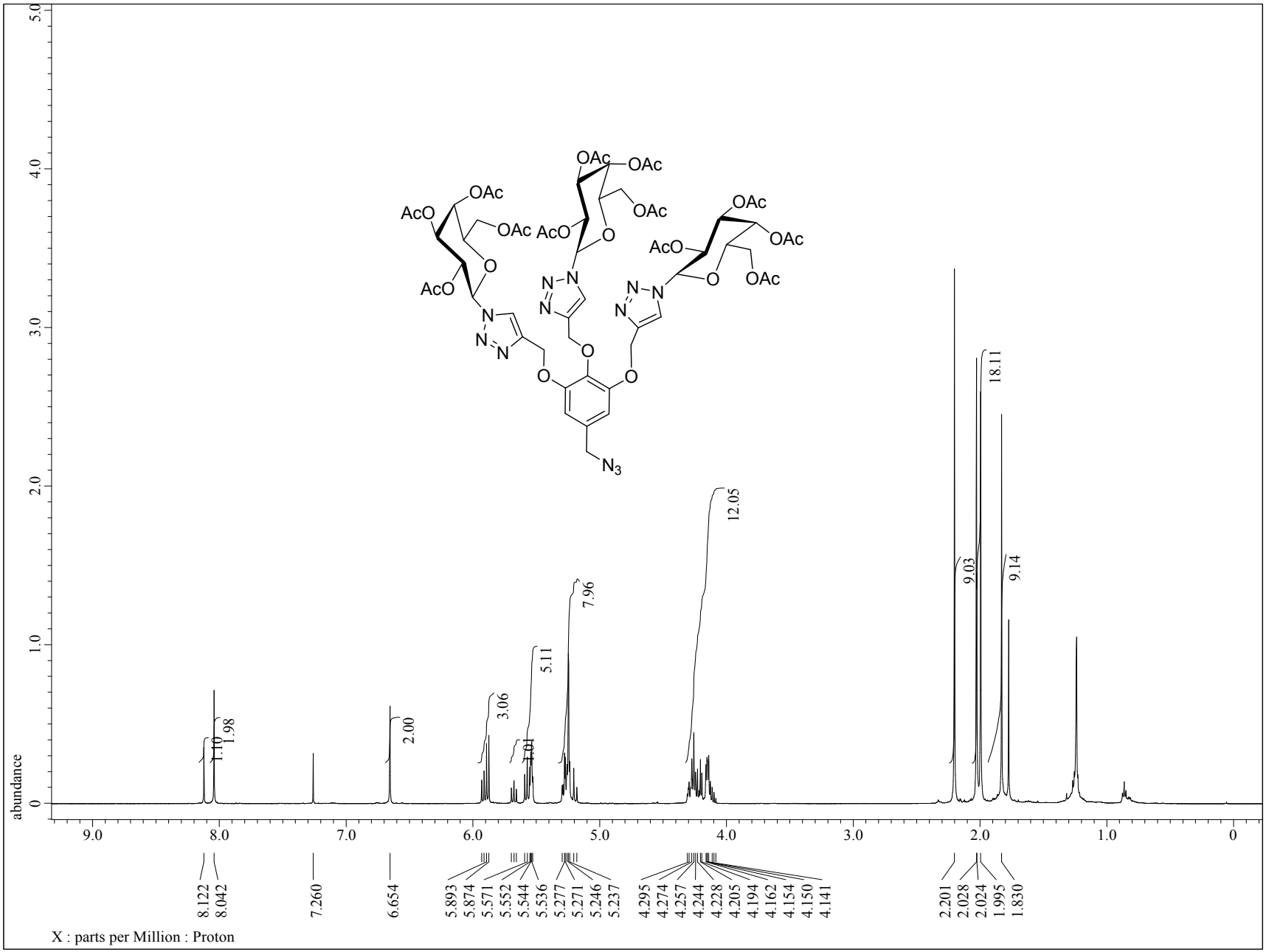


Figure S21. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **15**

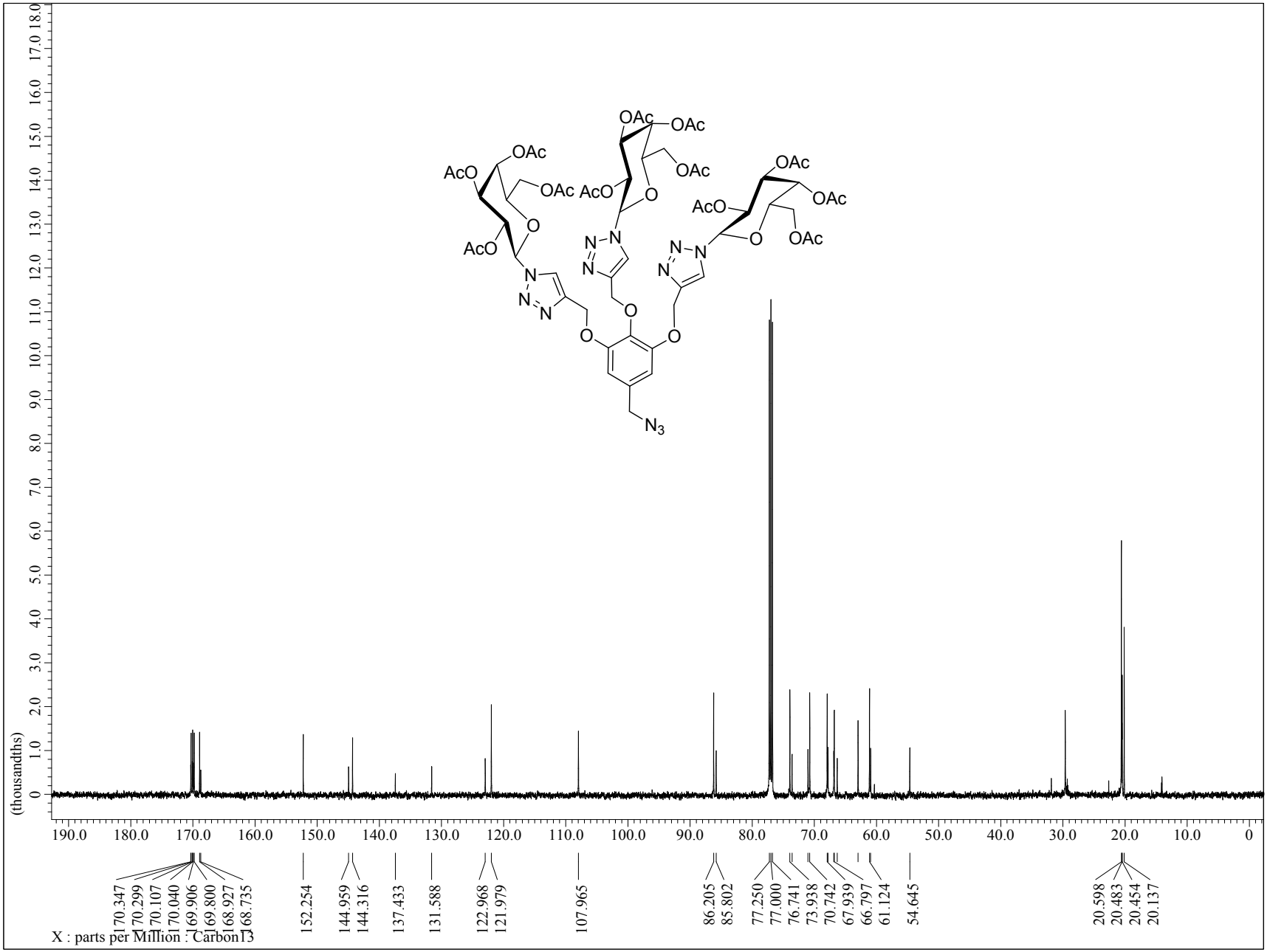


Figure S22. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **15**

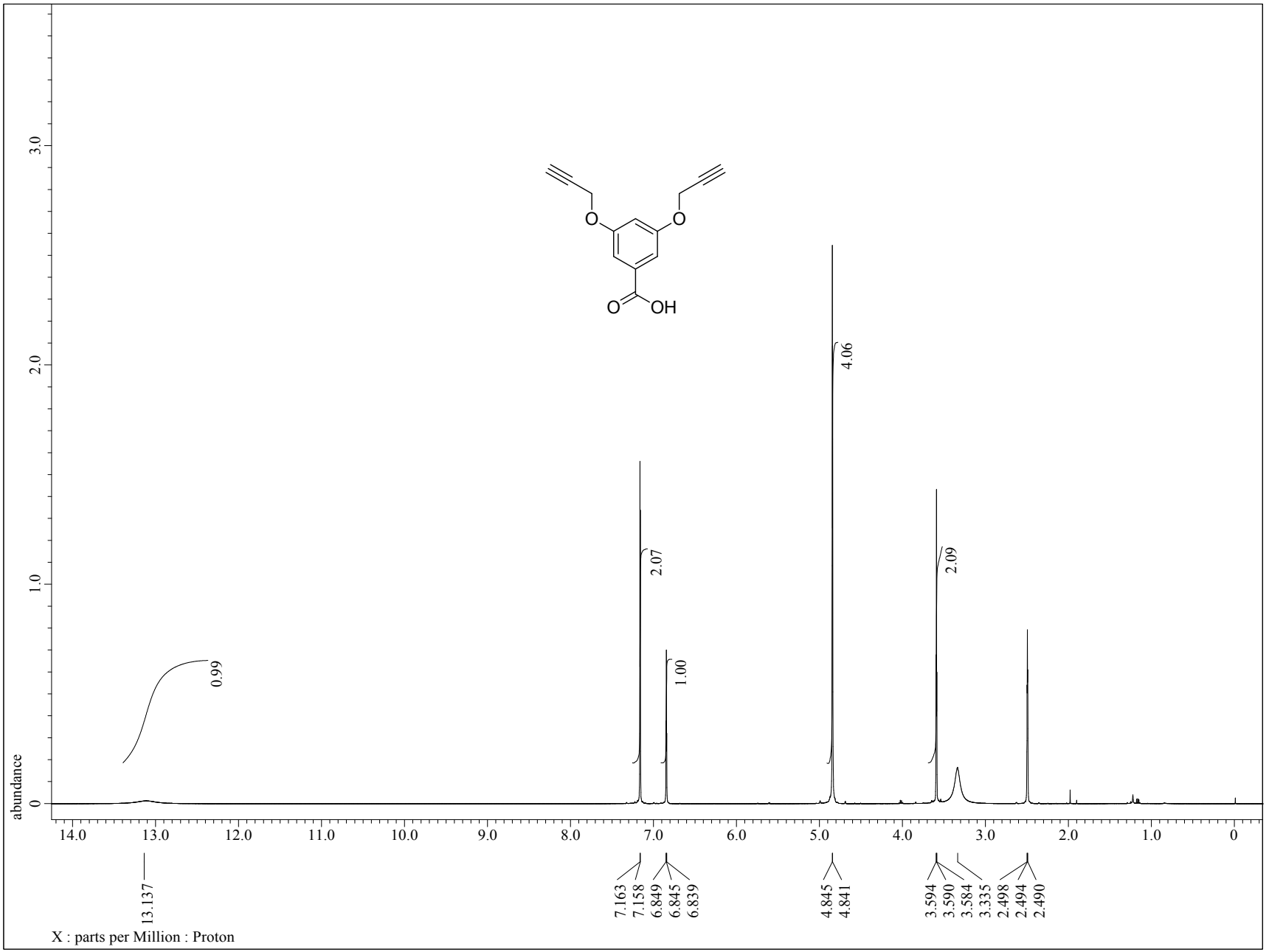


Figure S23. ^{1}H NMR (500 MHz, DMSO-D_6) of compound **16**

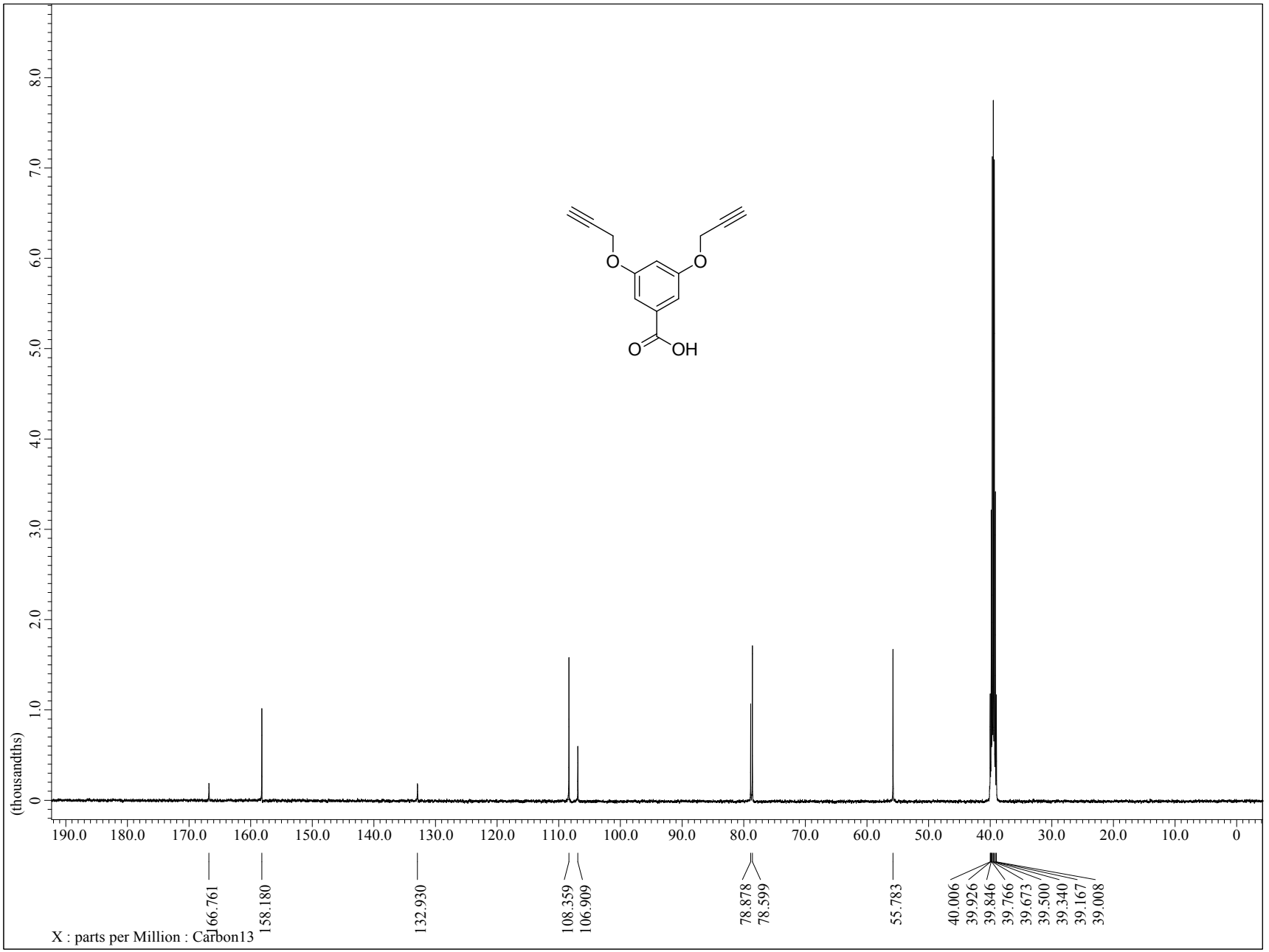


Figure S24. ^{13}C NMR (125 MHz, DMSO-D_6) of compound **16**

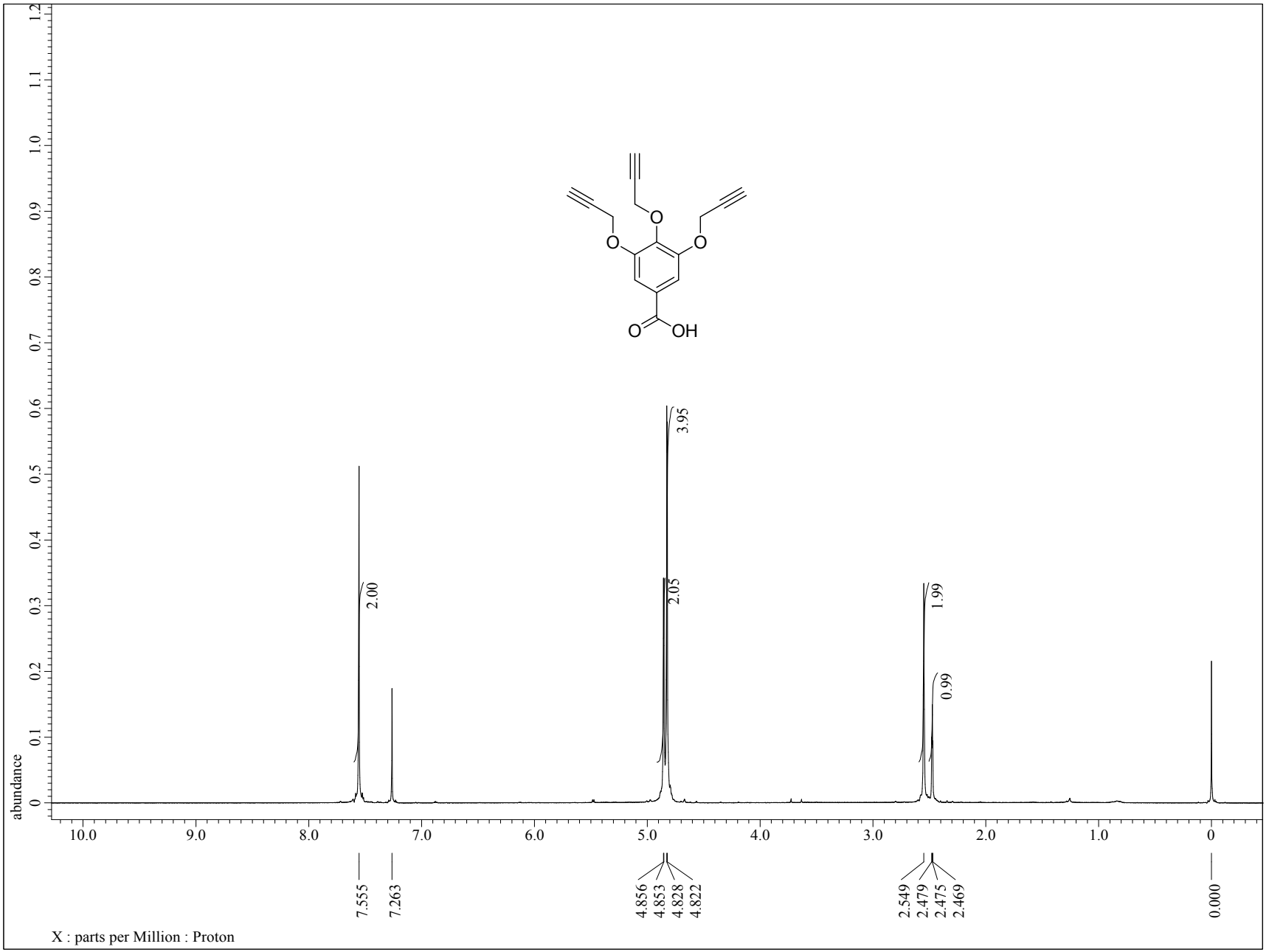


Figure S25. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **17**

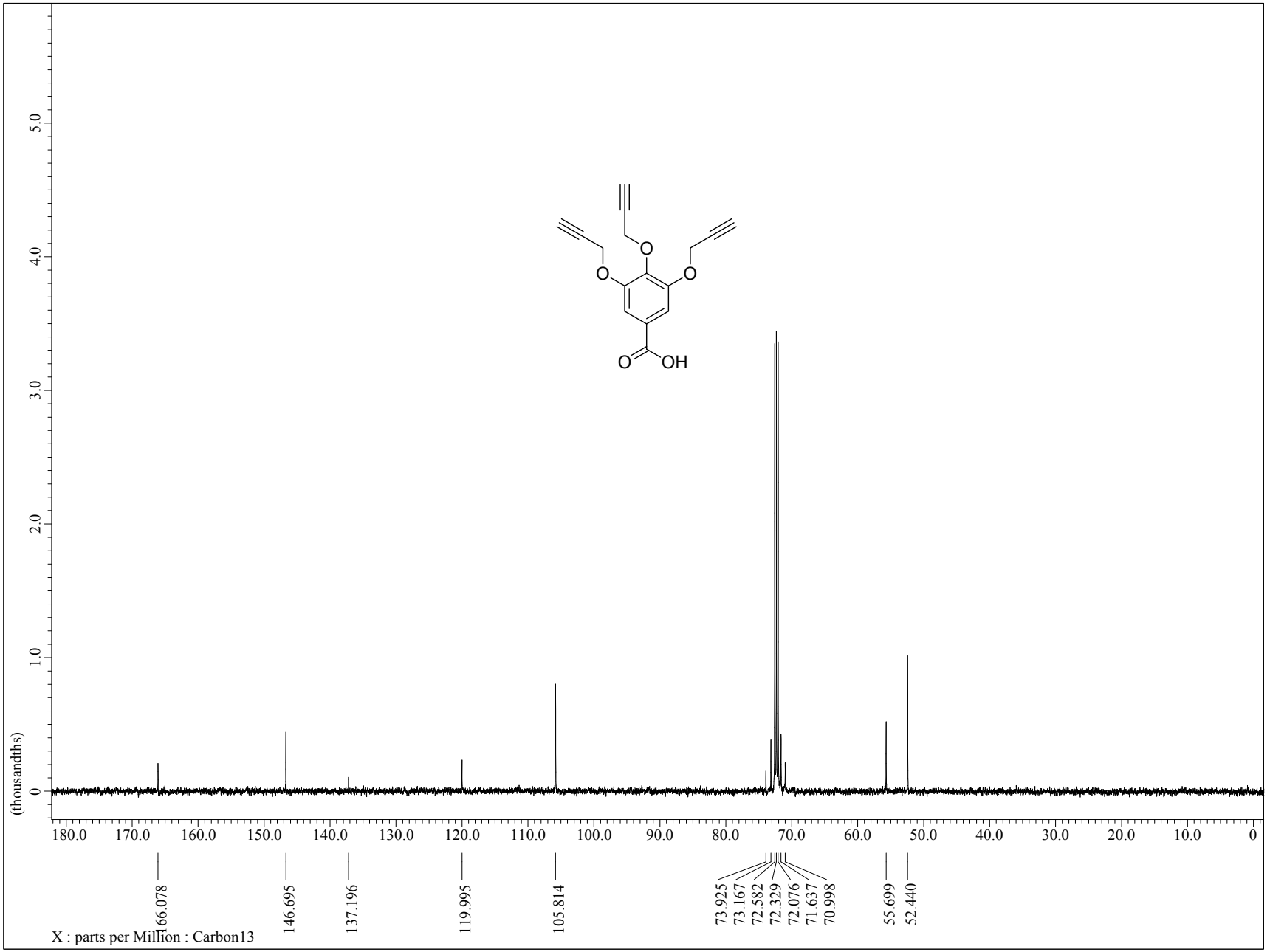


Figure S26. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **17**

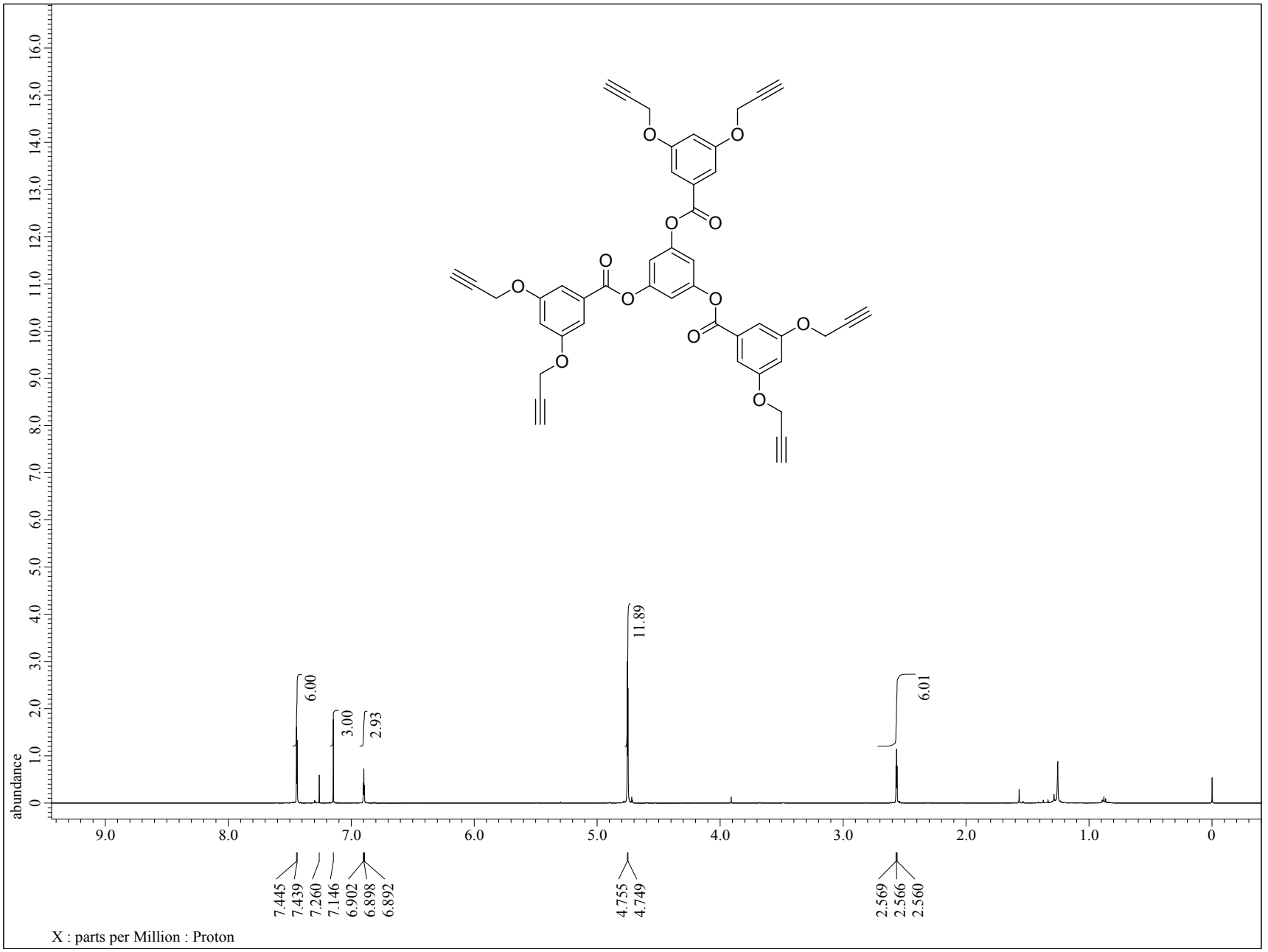


Figure S27. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **18**

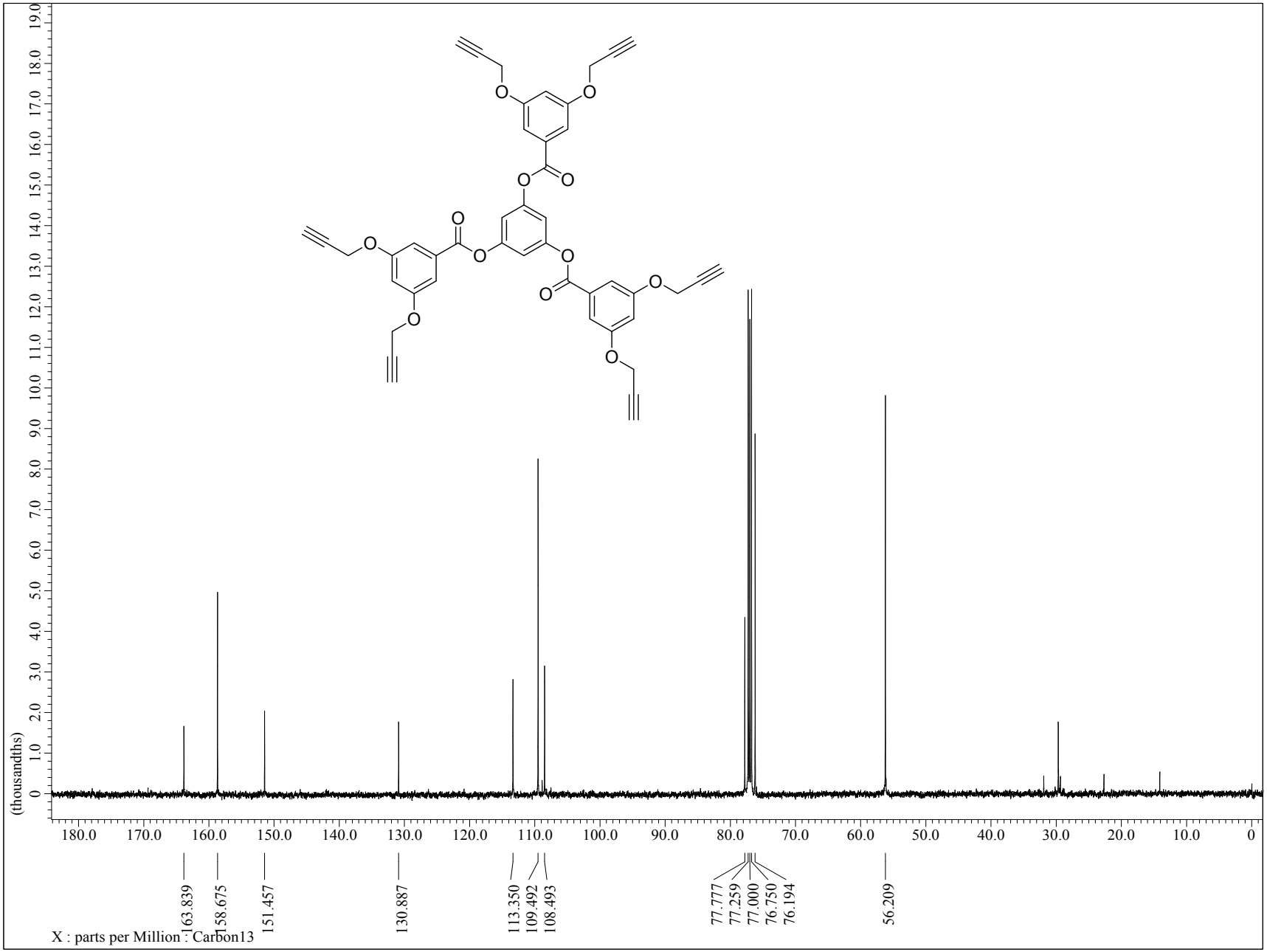


Figure S28. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **18**

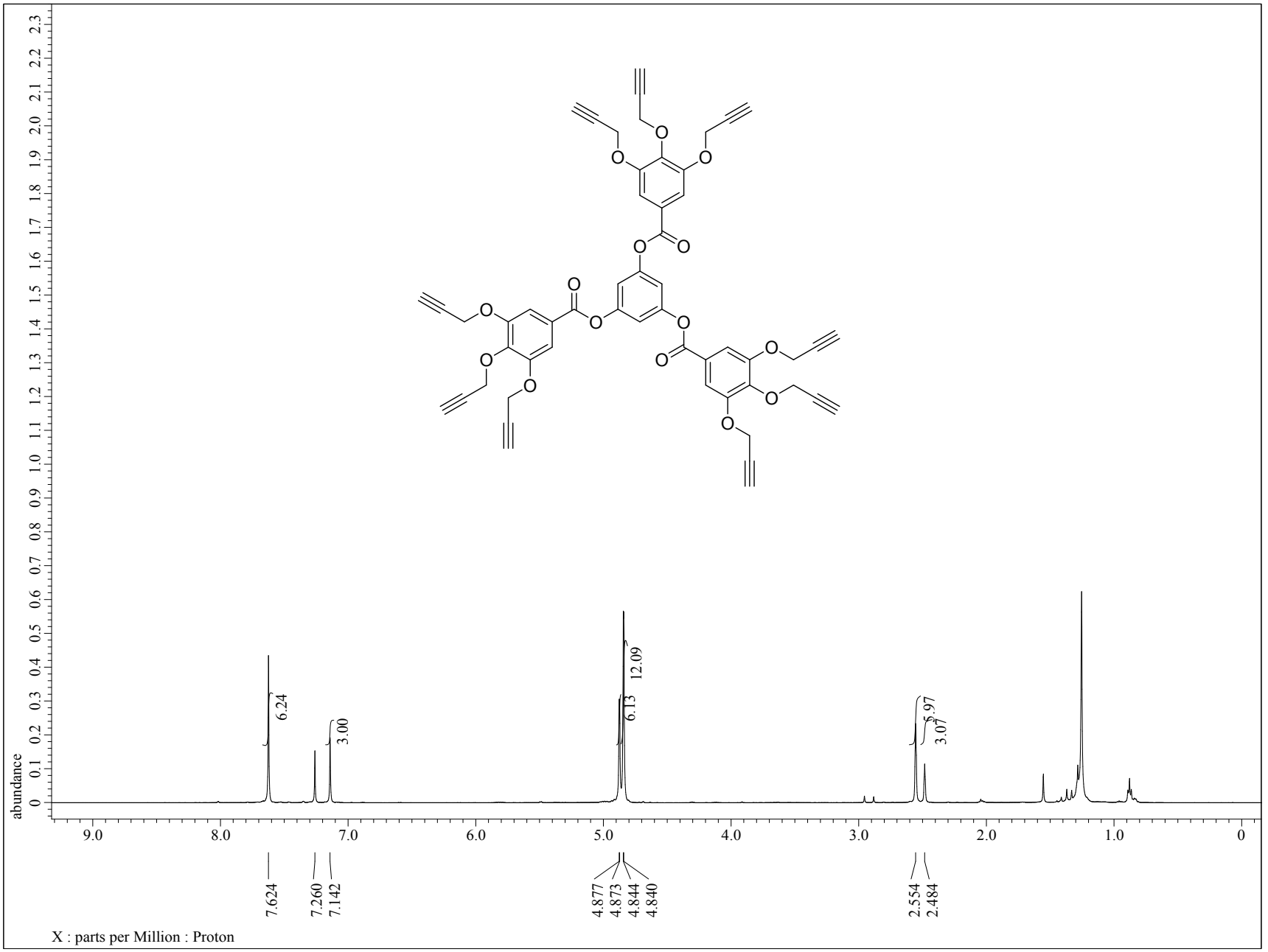


Figure S29. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **19**

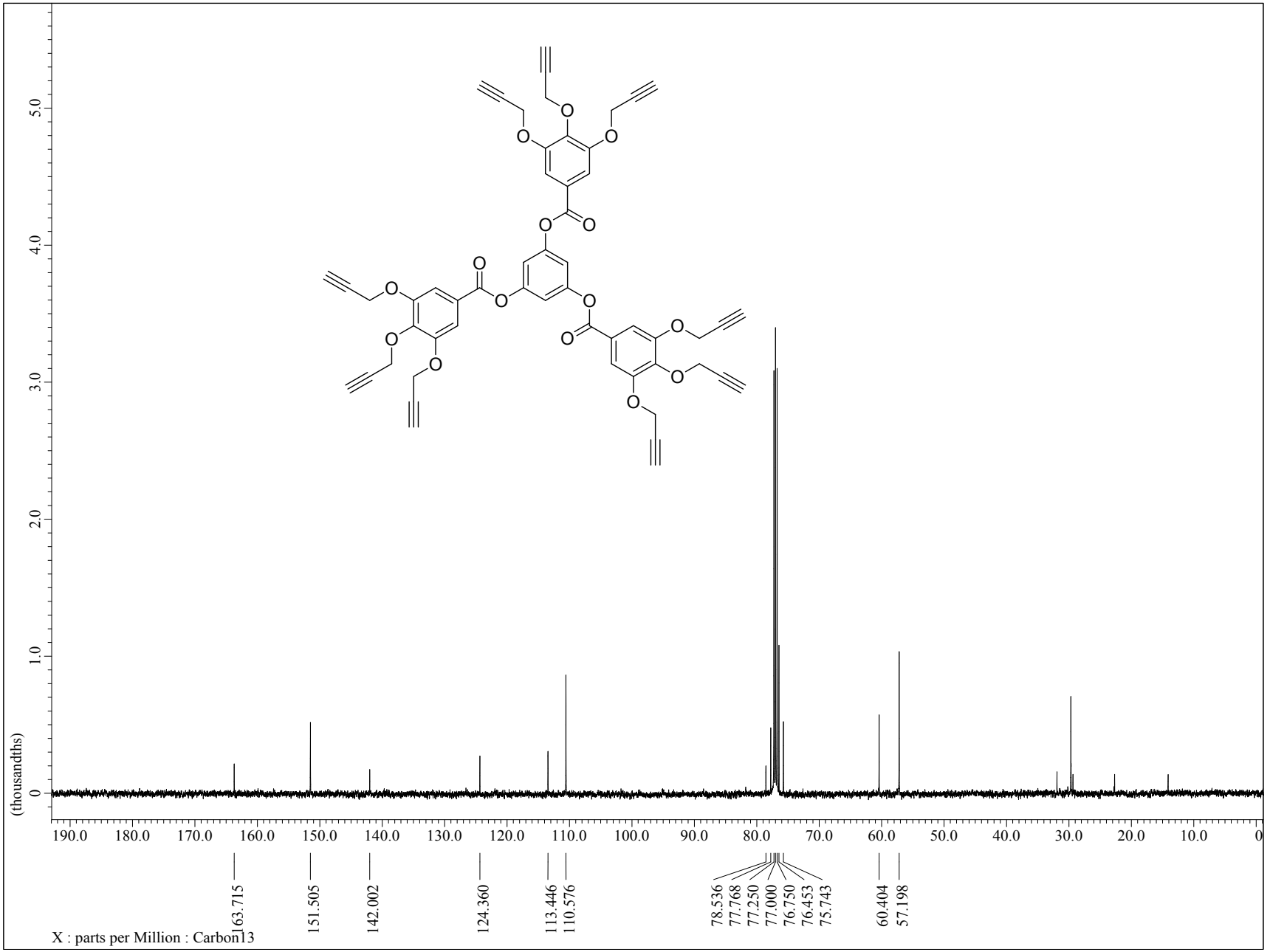


Figure S30. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **19**

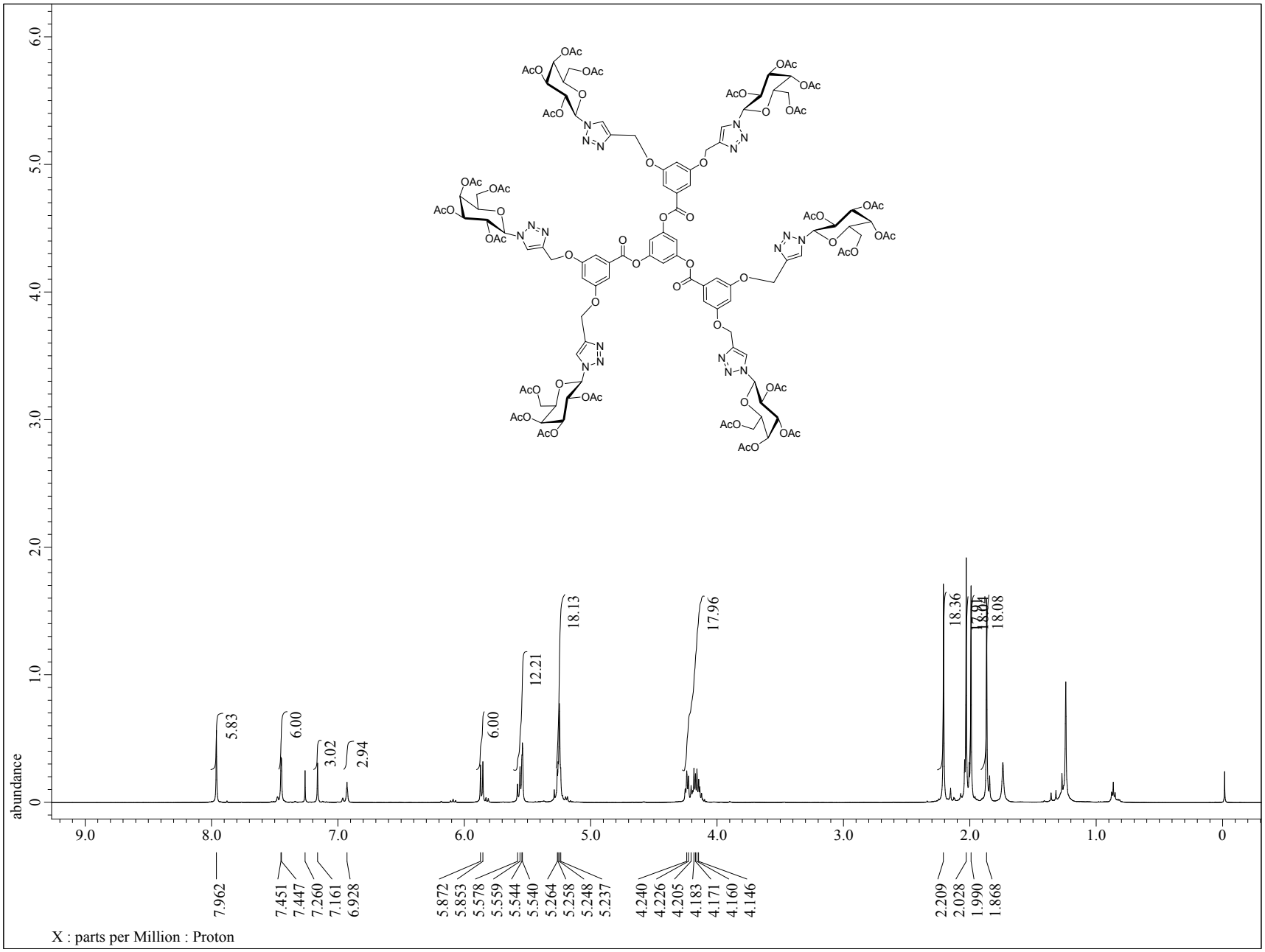


Figure S31. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **20**

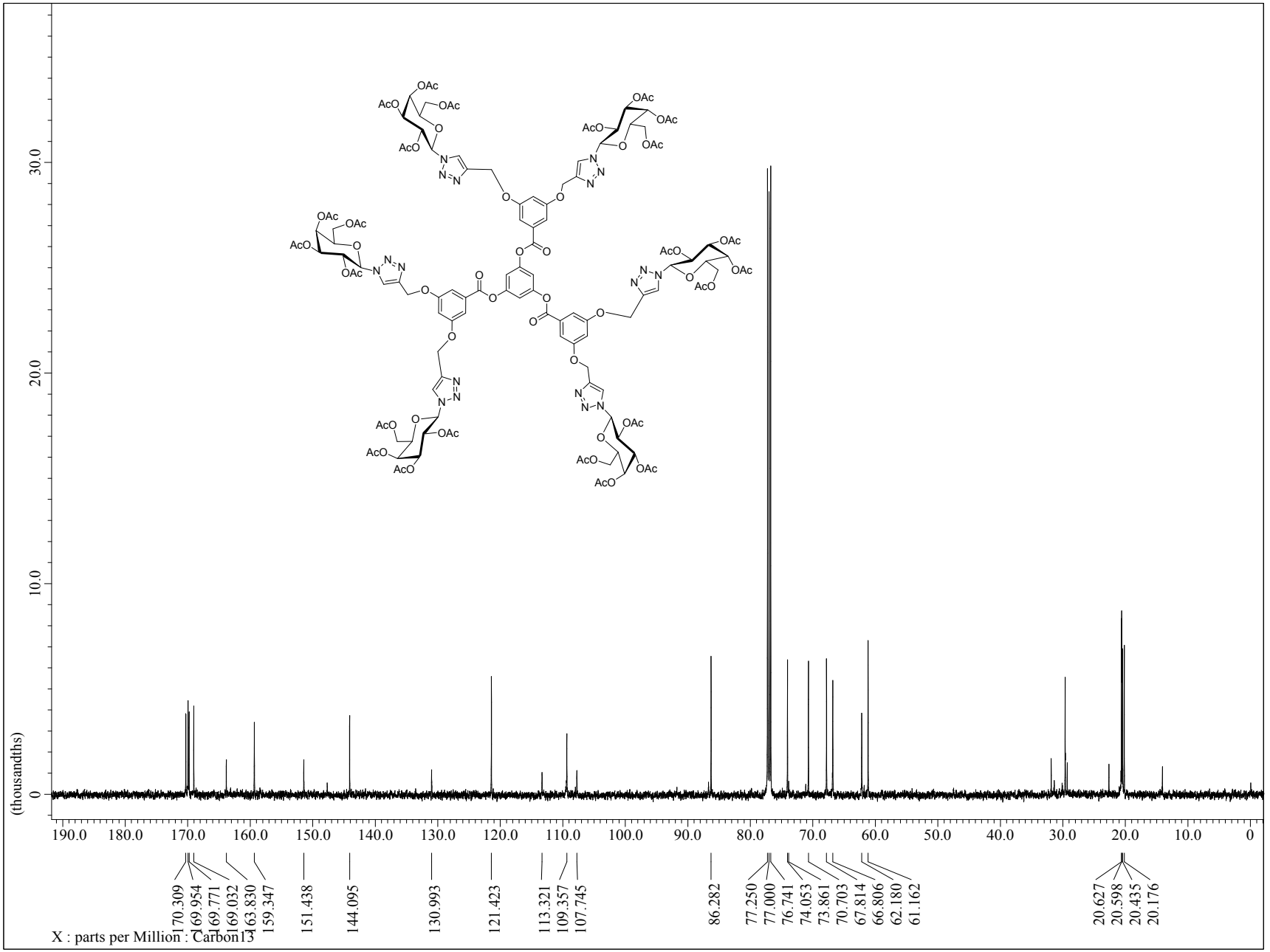


Figure S32. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **20**

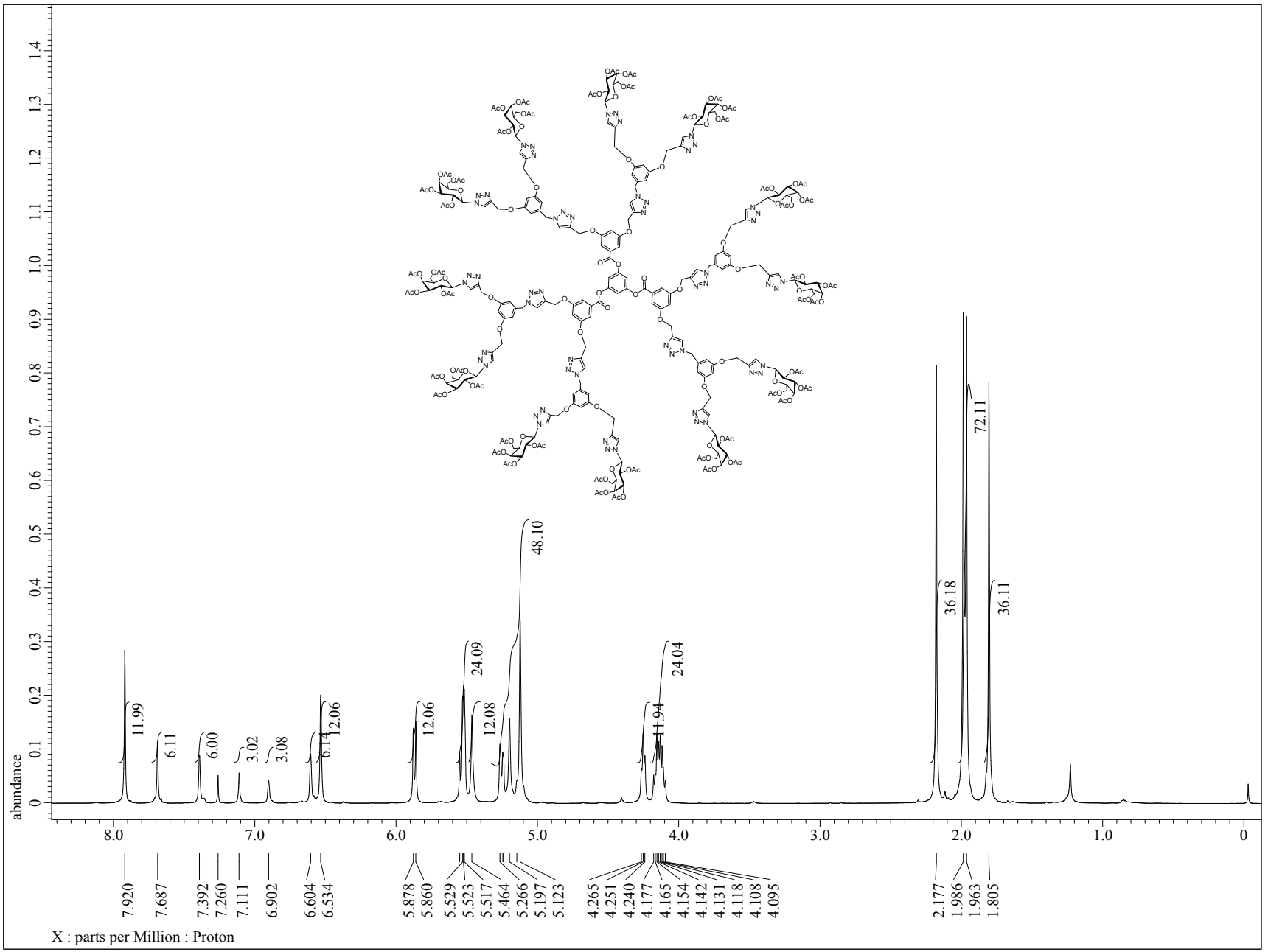


Figure S33. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **21**

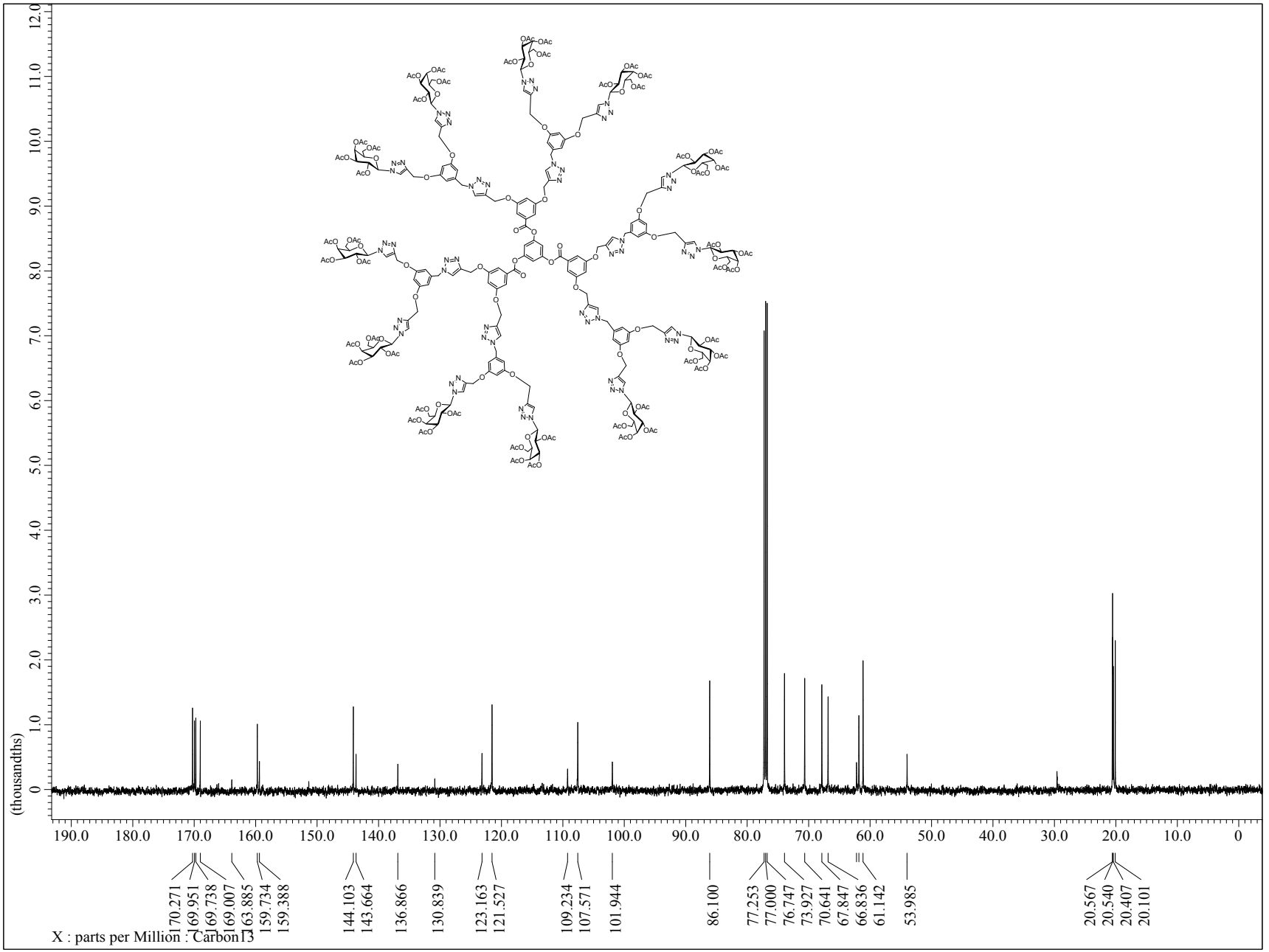


Figure S34. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **21**

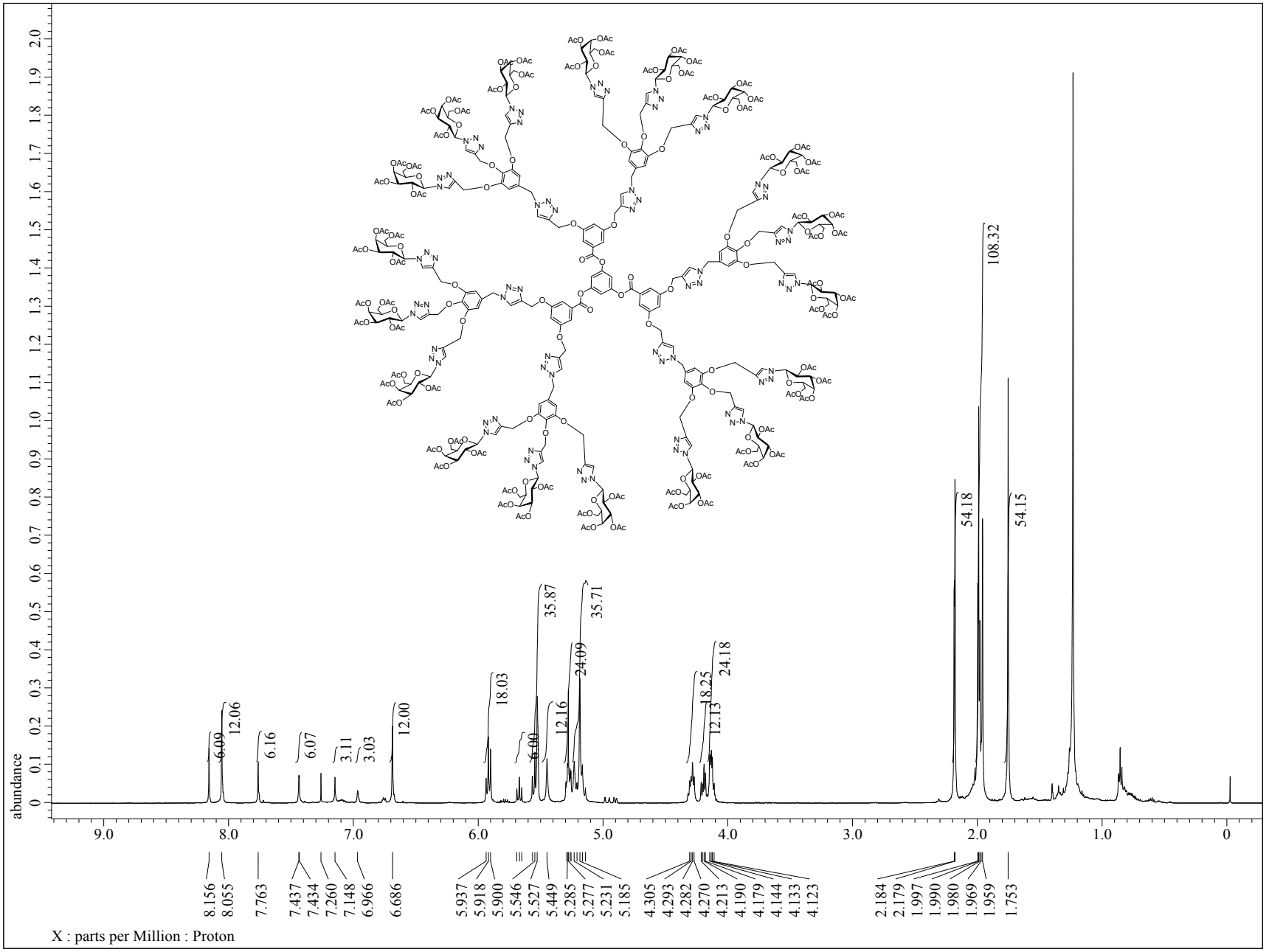


Figure S35. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **22**

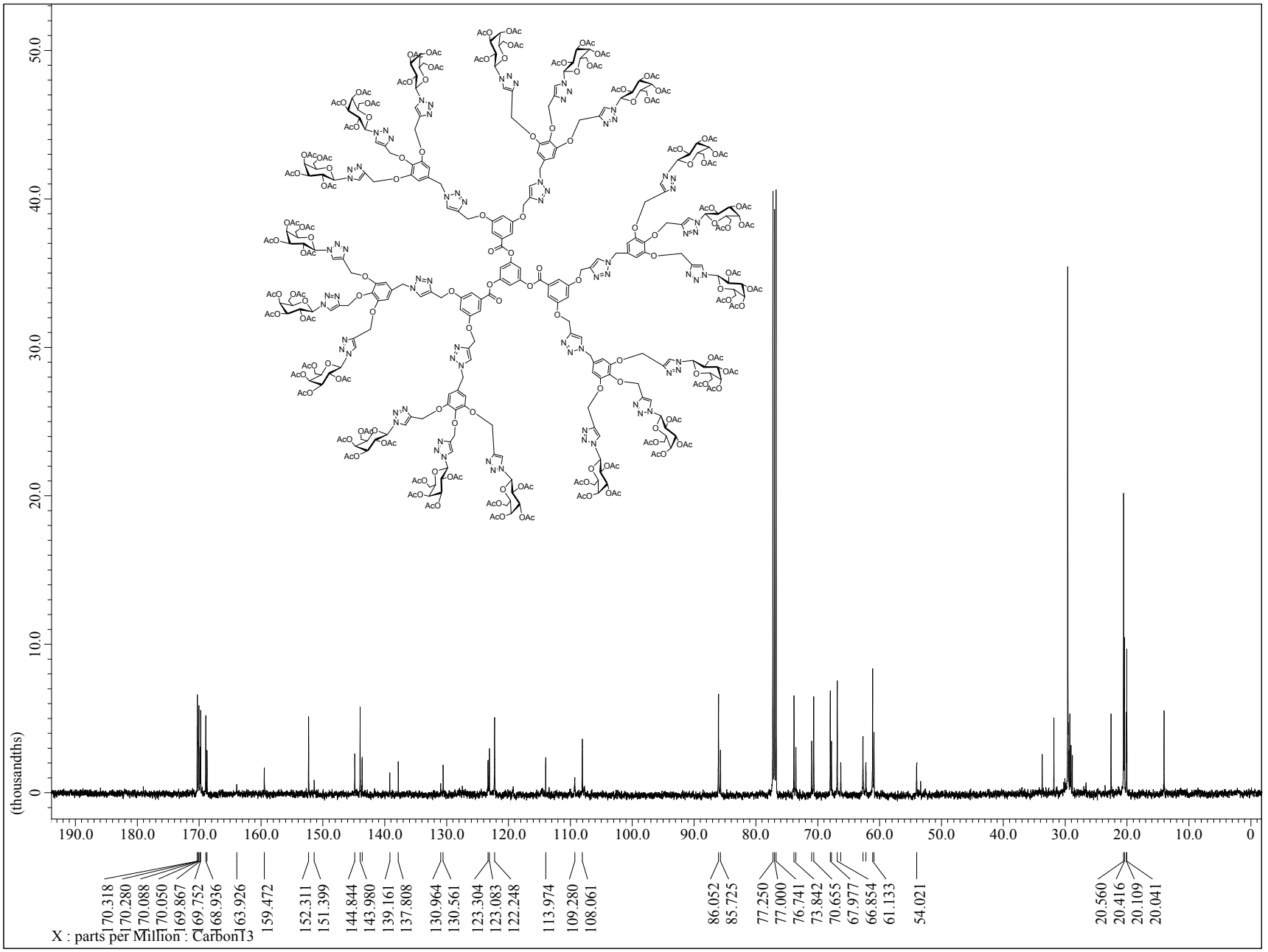


Figure S36. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **22**

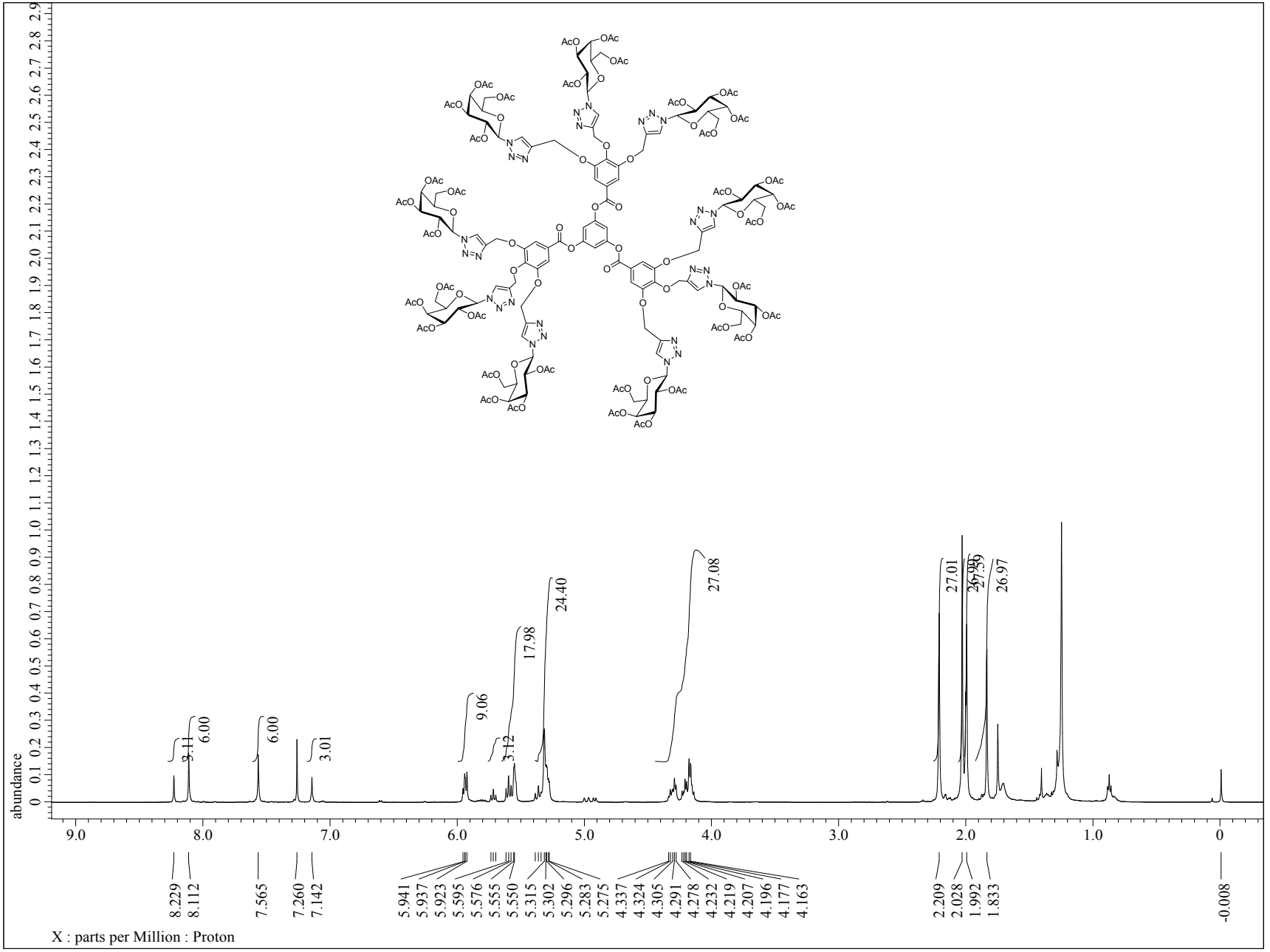


Figure S37. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **23**

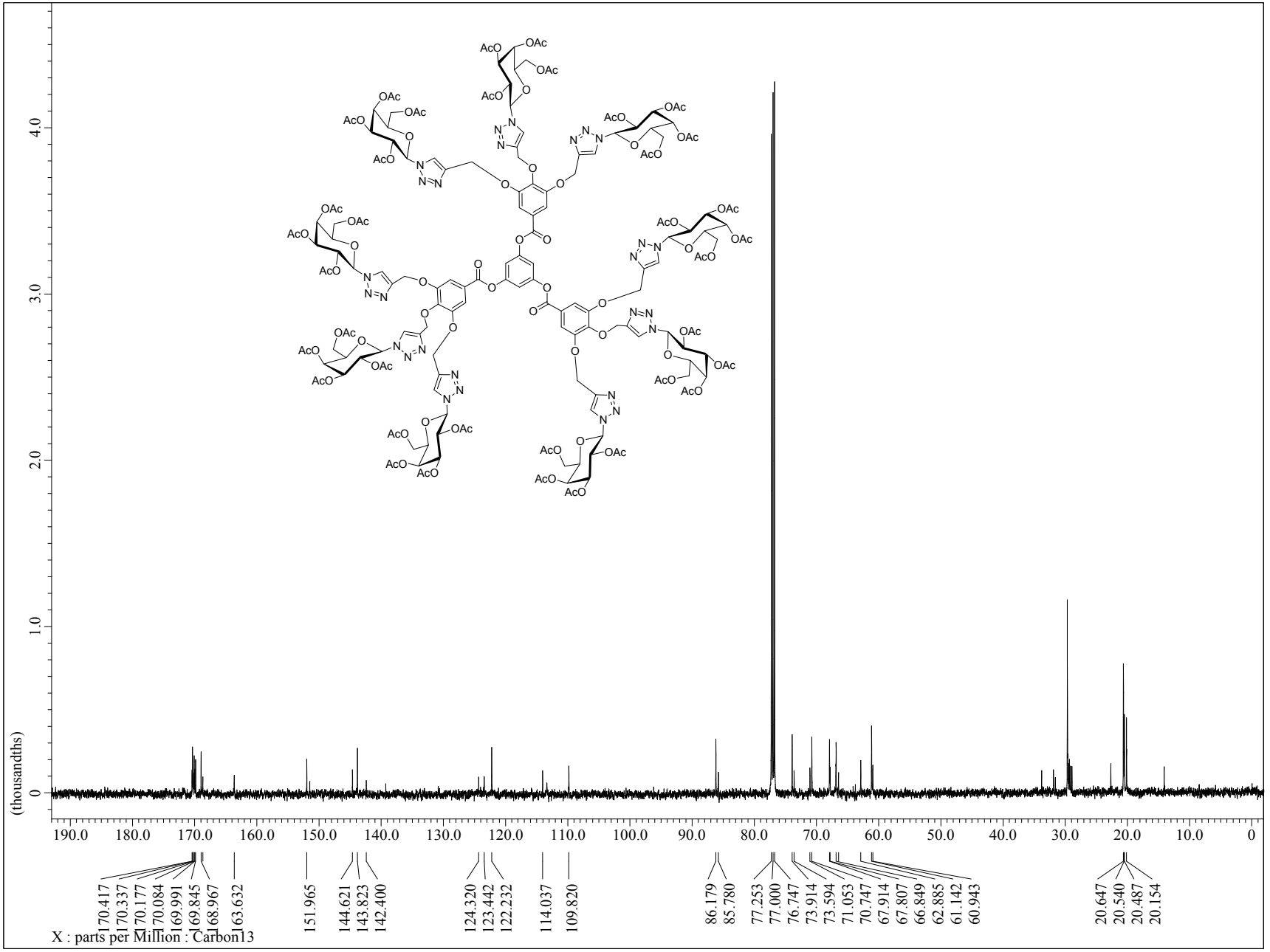


Figure S38. [1] NMR (125 MHz, $CDCl_3$) of compound **23**

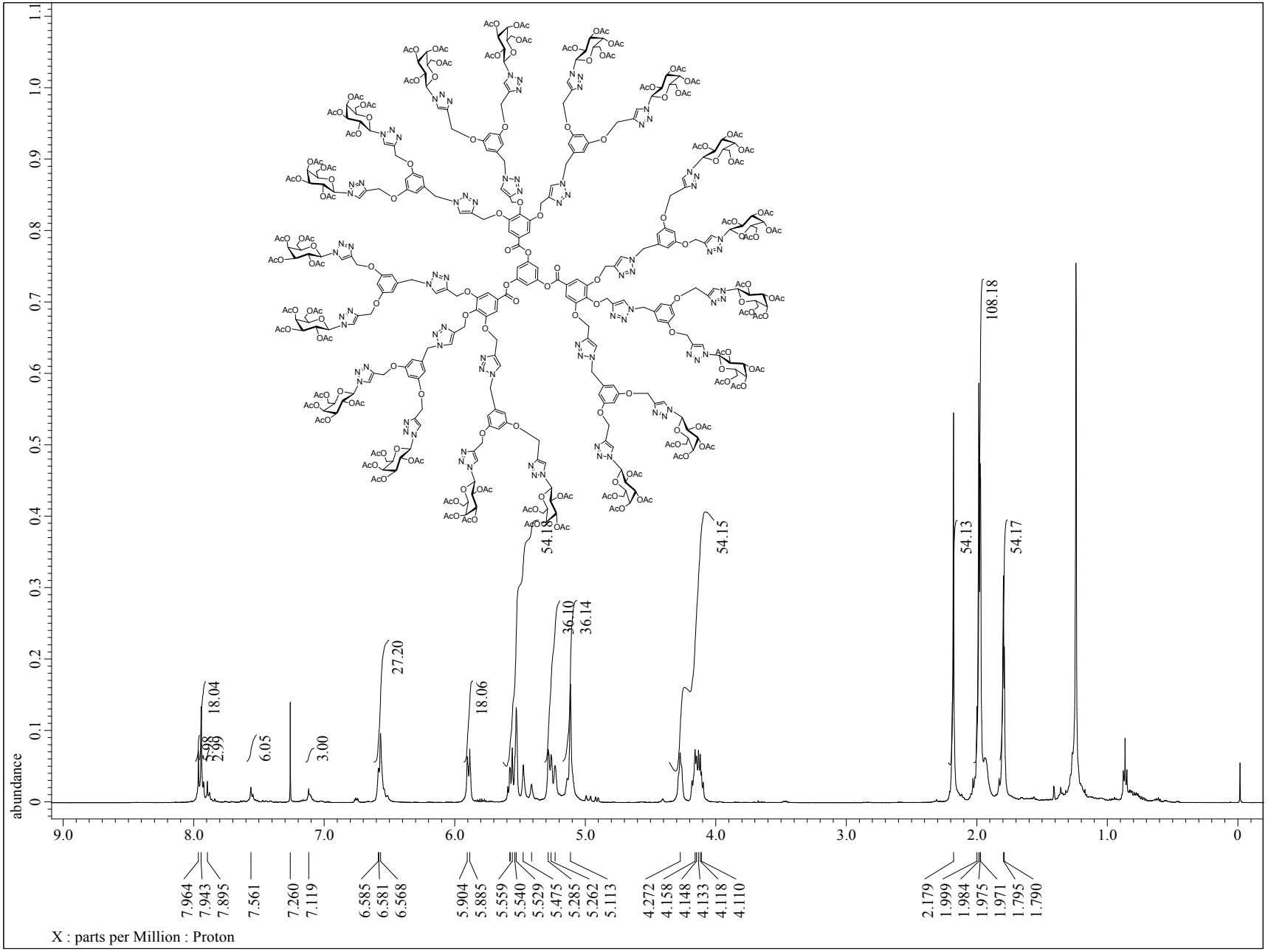


Figure S39. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **24**

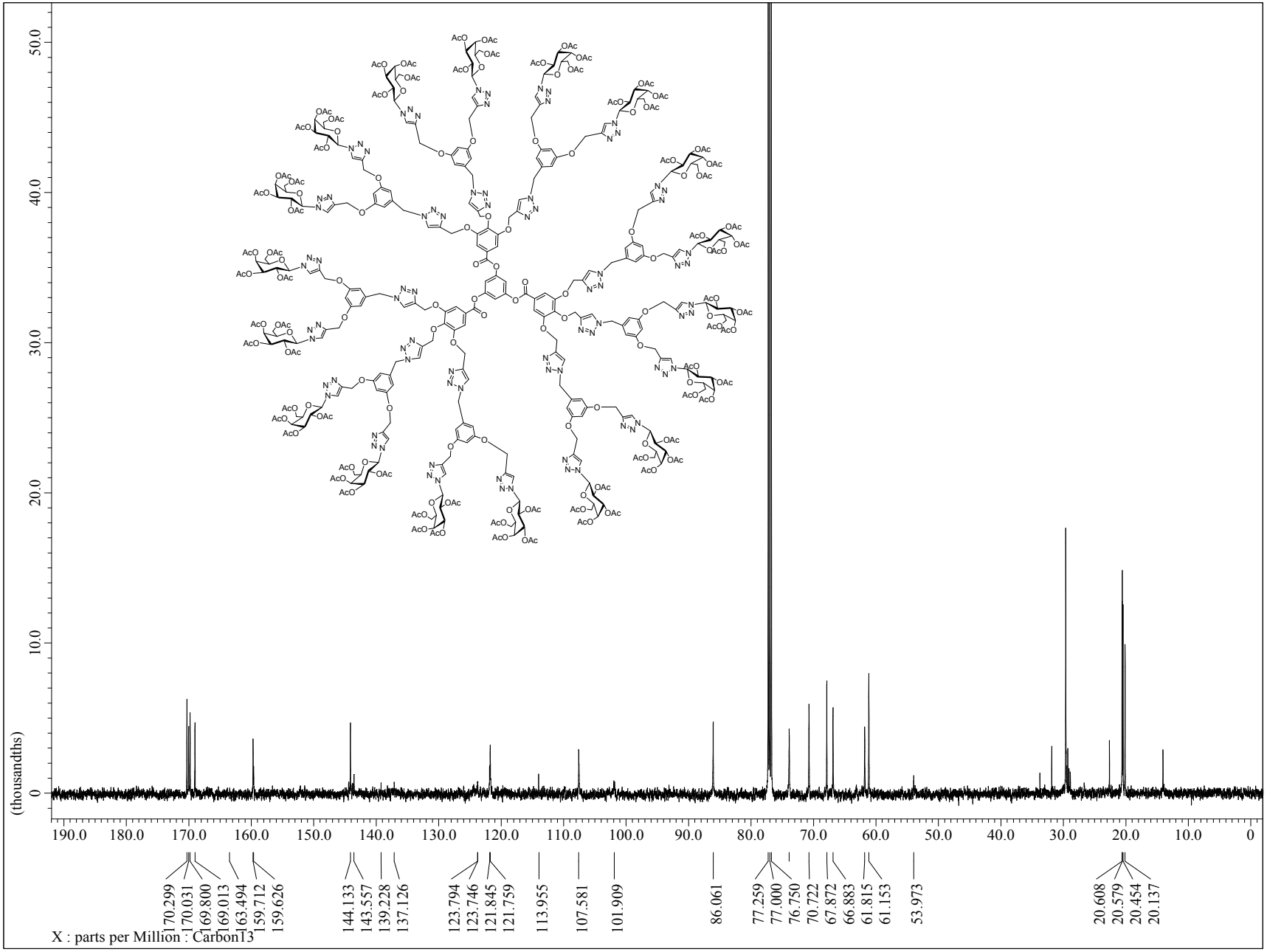


Figure S40. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **24**

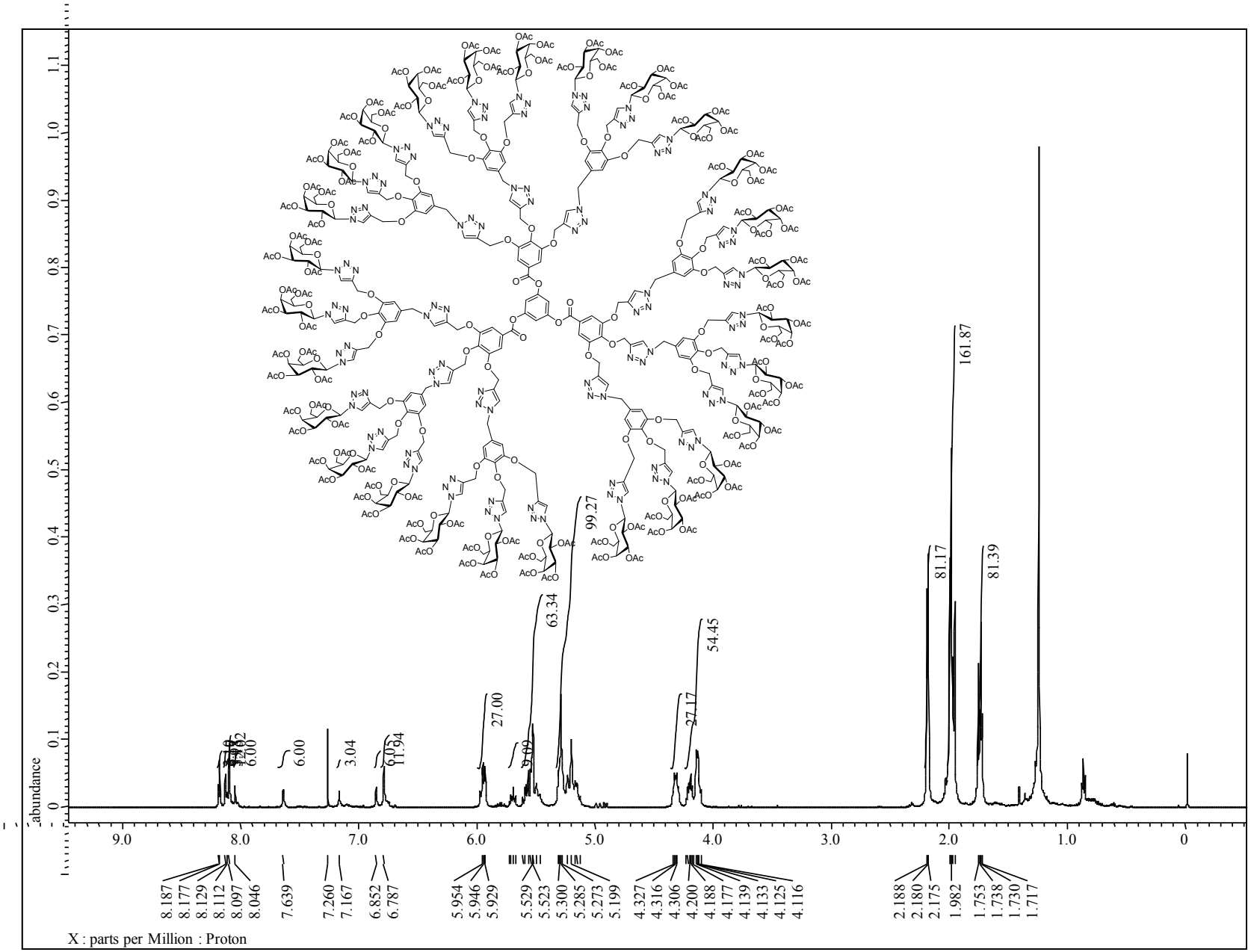


Figure S41. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **25**

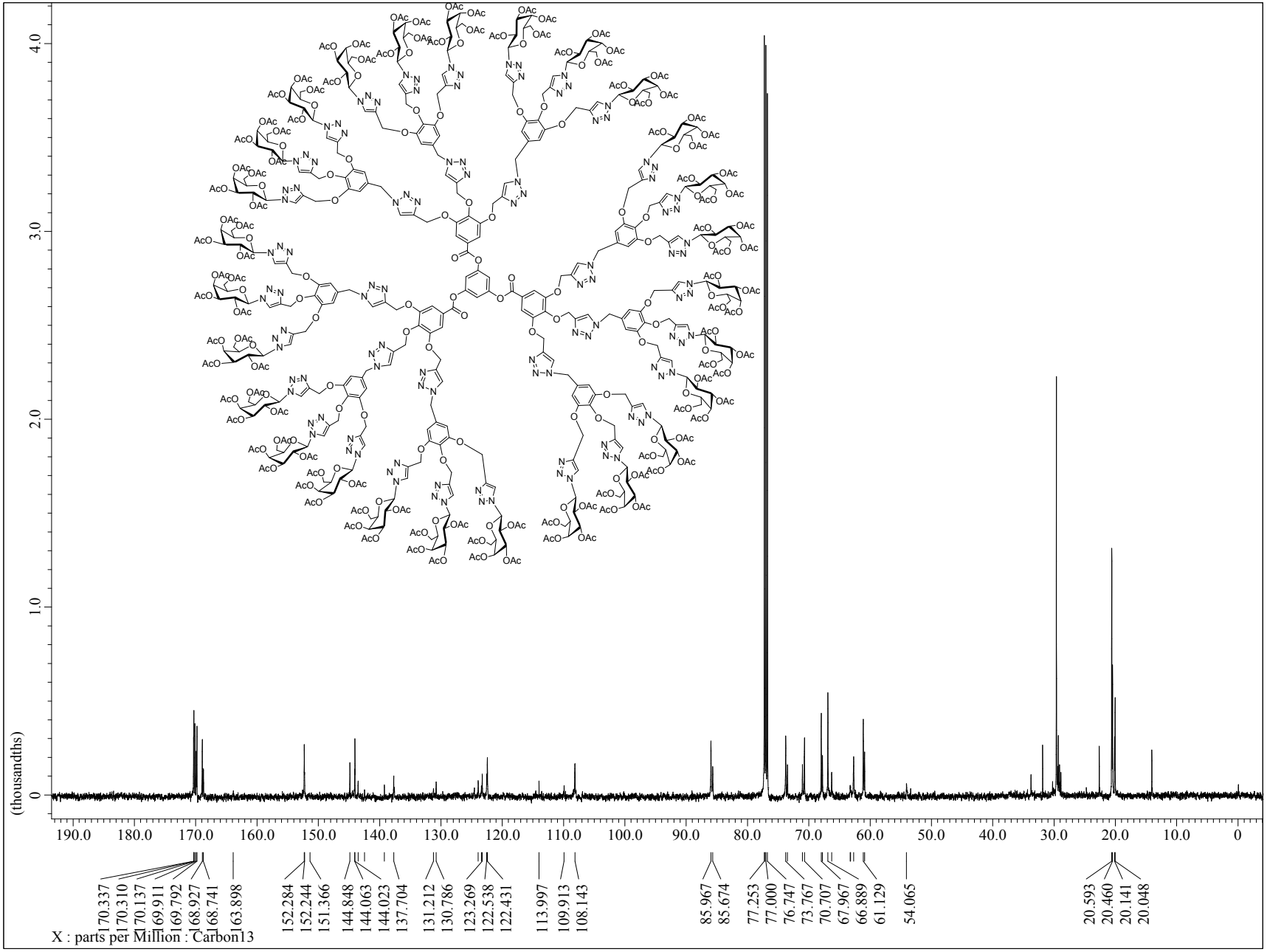


Figure S42. ^{13}C NMR (125 MHz, $CDCl_3$) of compound **25**

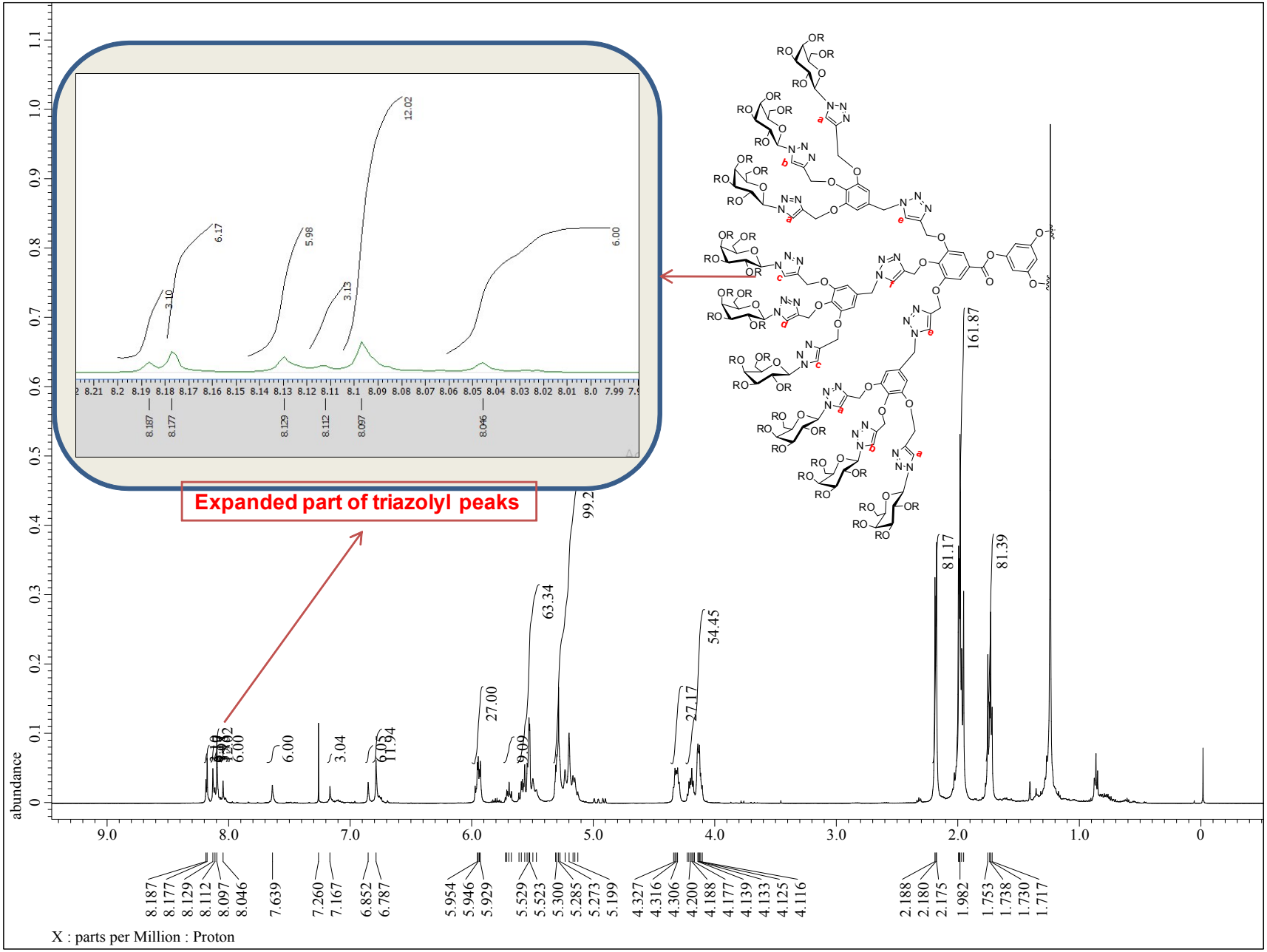


Figure S43. ^{1}H NMR (500 MHz, $CDCl_3$) of compound **25**

2. IR spectra of compound **14, 15 and 18-25.**

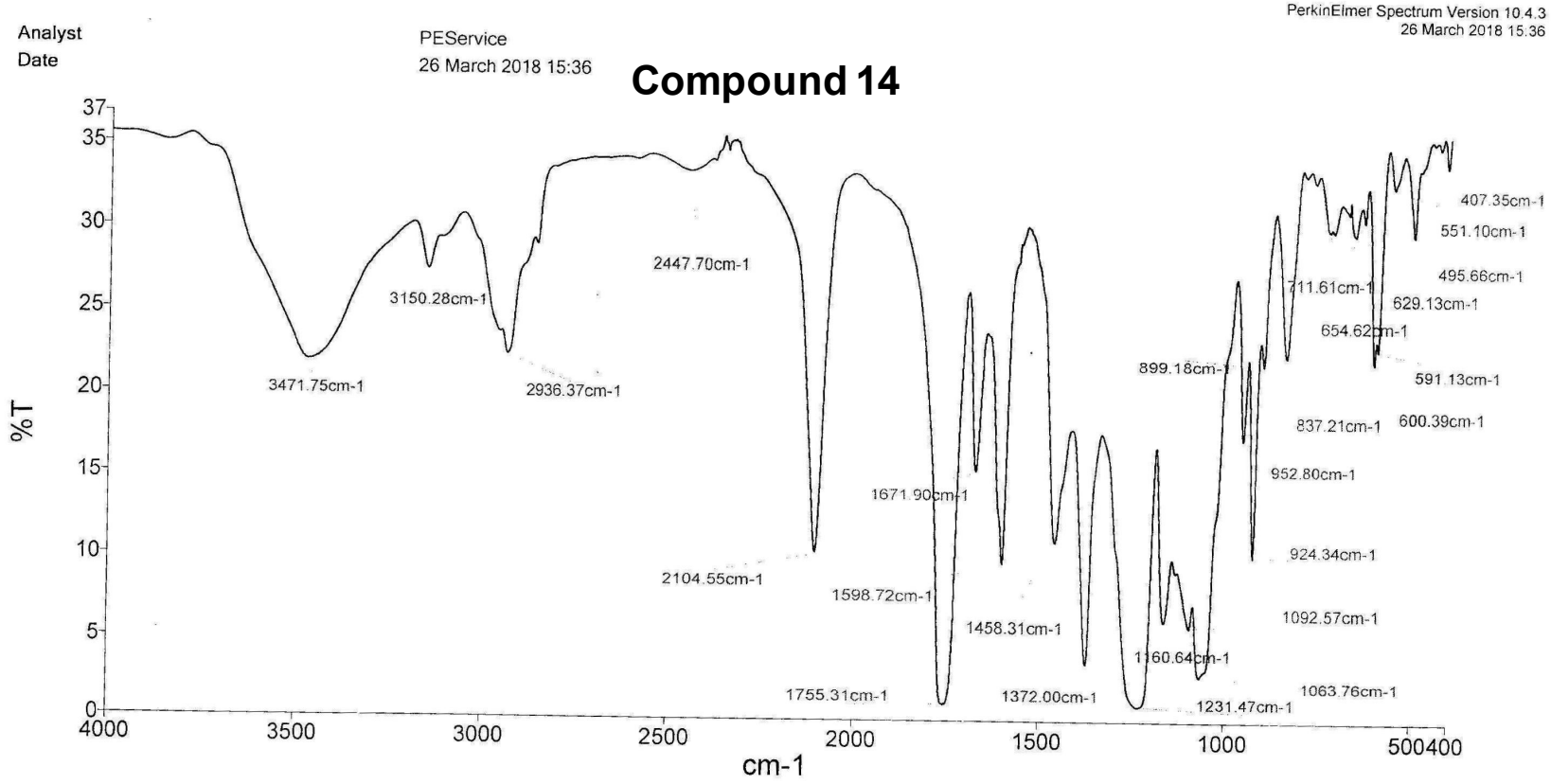


Figure S44. IR spectra of compound **14**

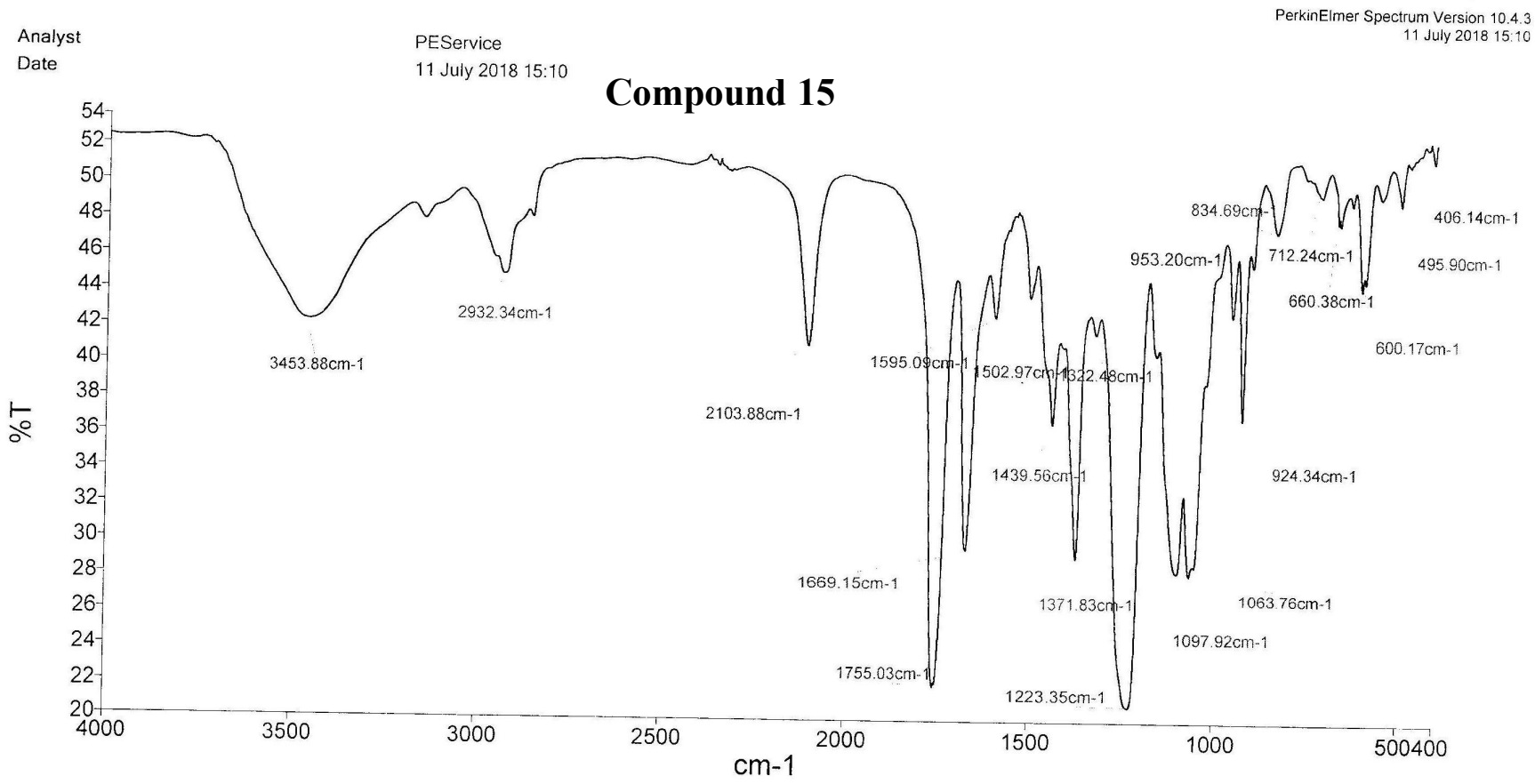


Figure S45. IR spectra of compound **15**

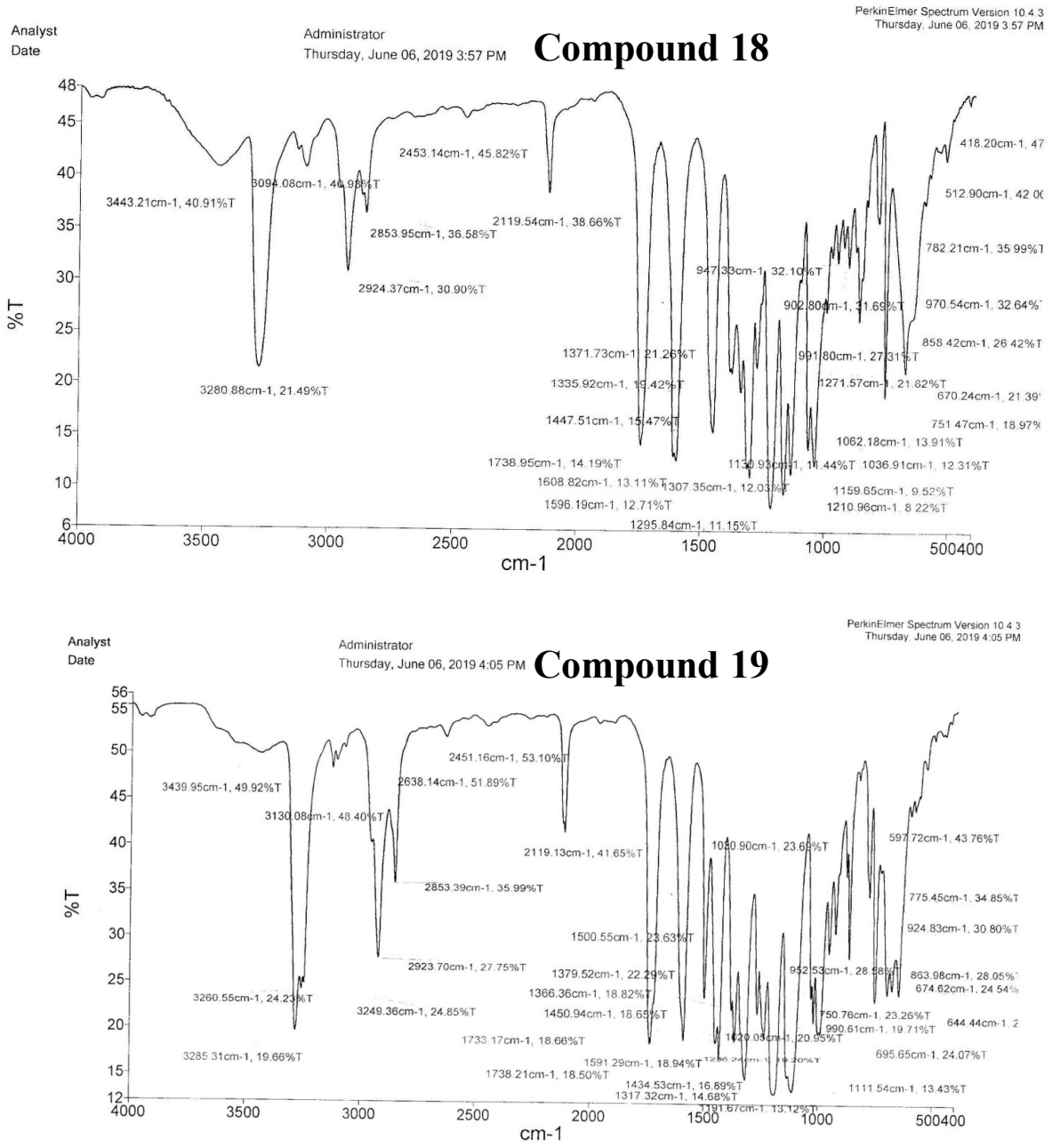


Figure S46. IR spectra of compounds **18** and **19**

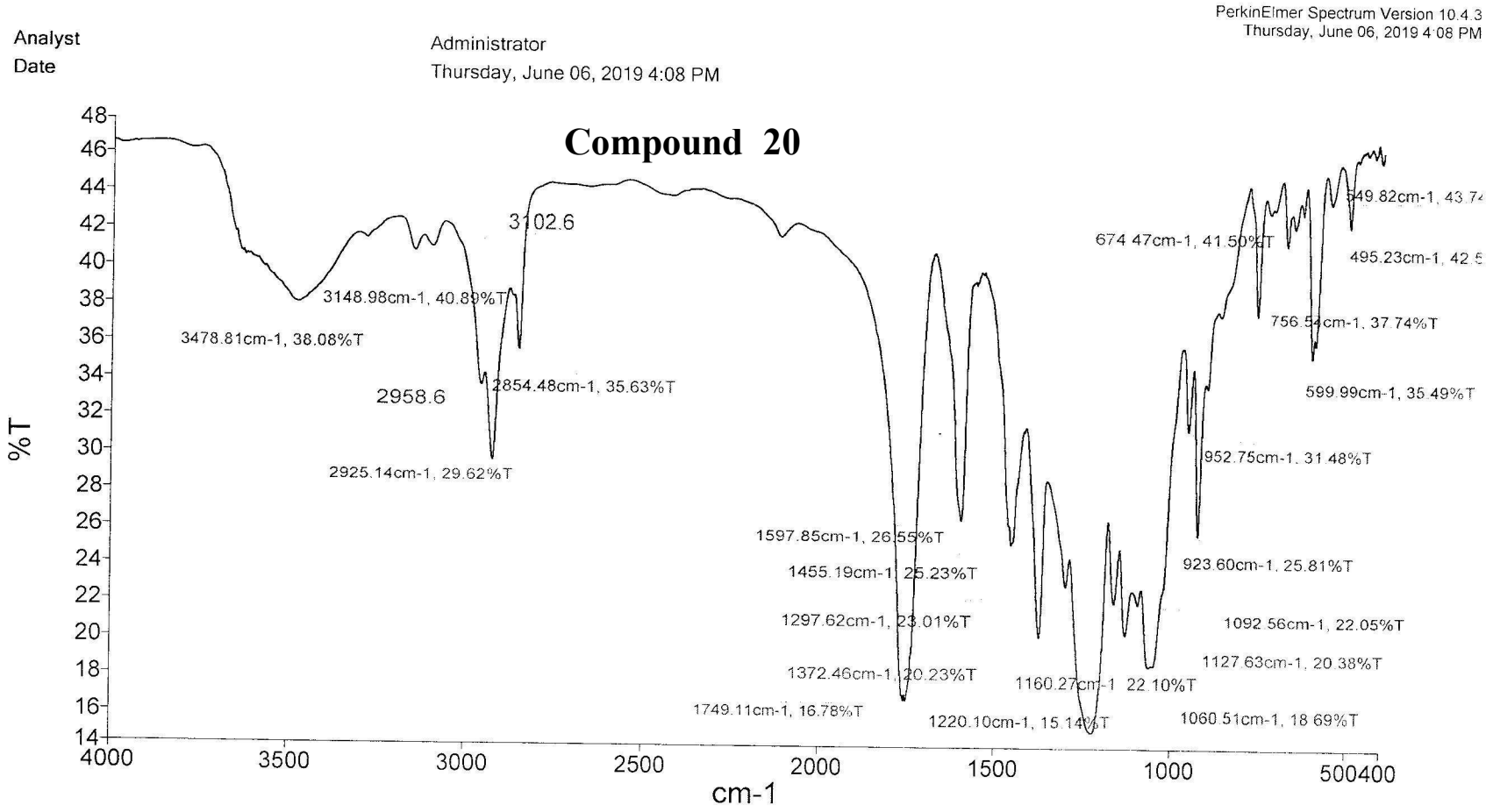


Figure S47. IR spectra of compound **20**

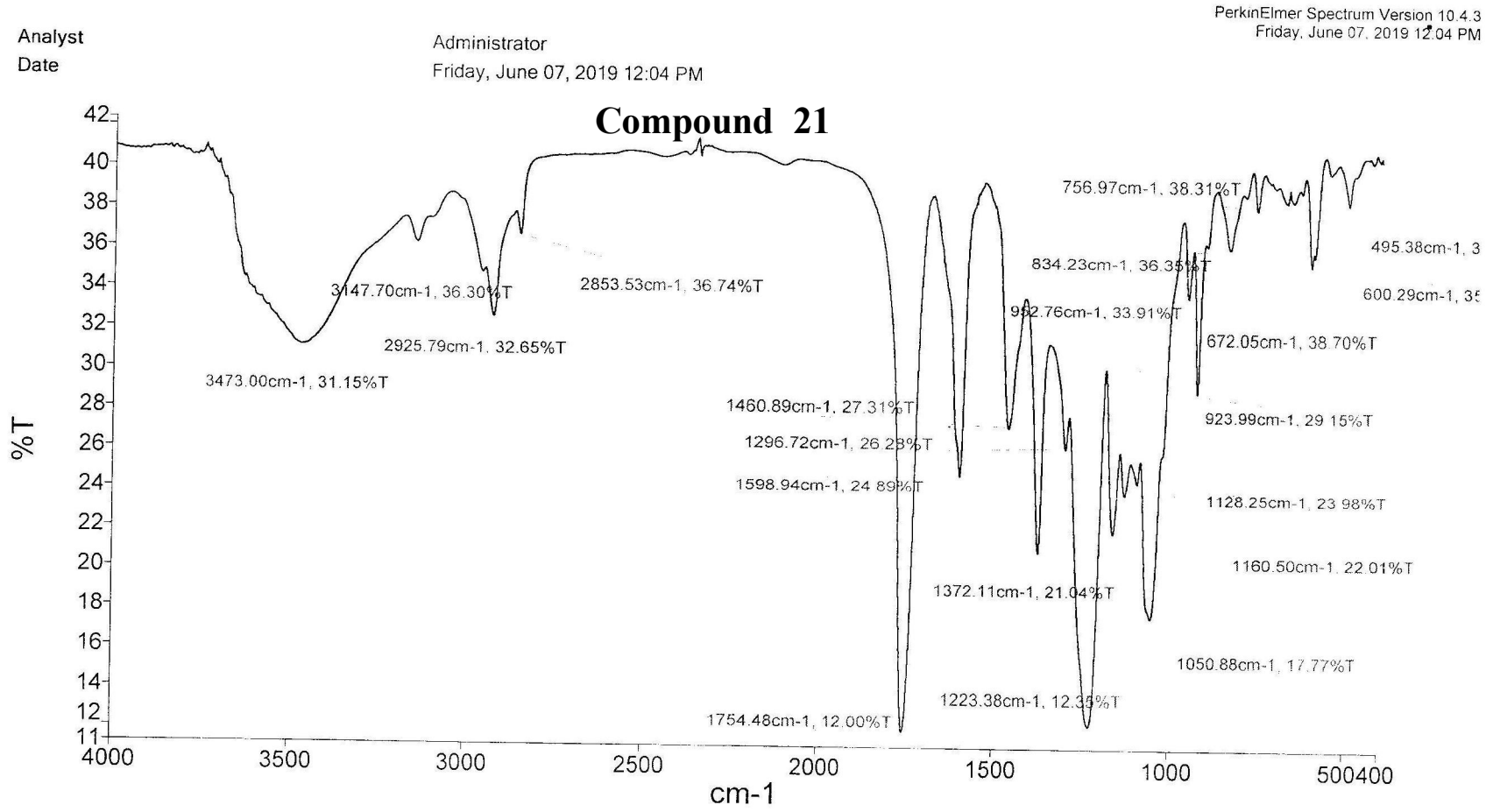


Figure S48. IR spectra of compound **21**

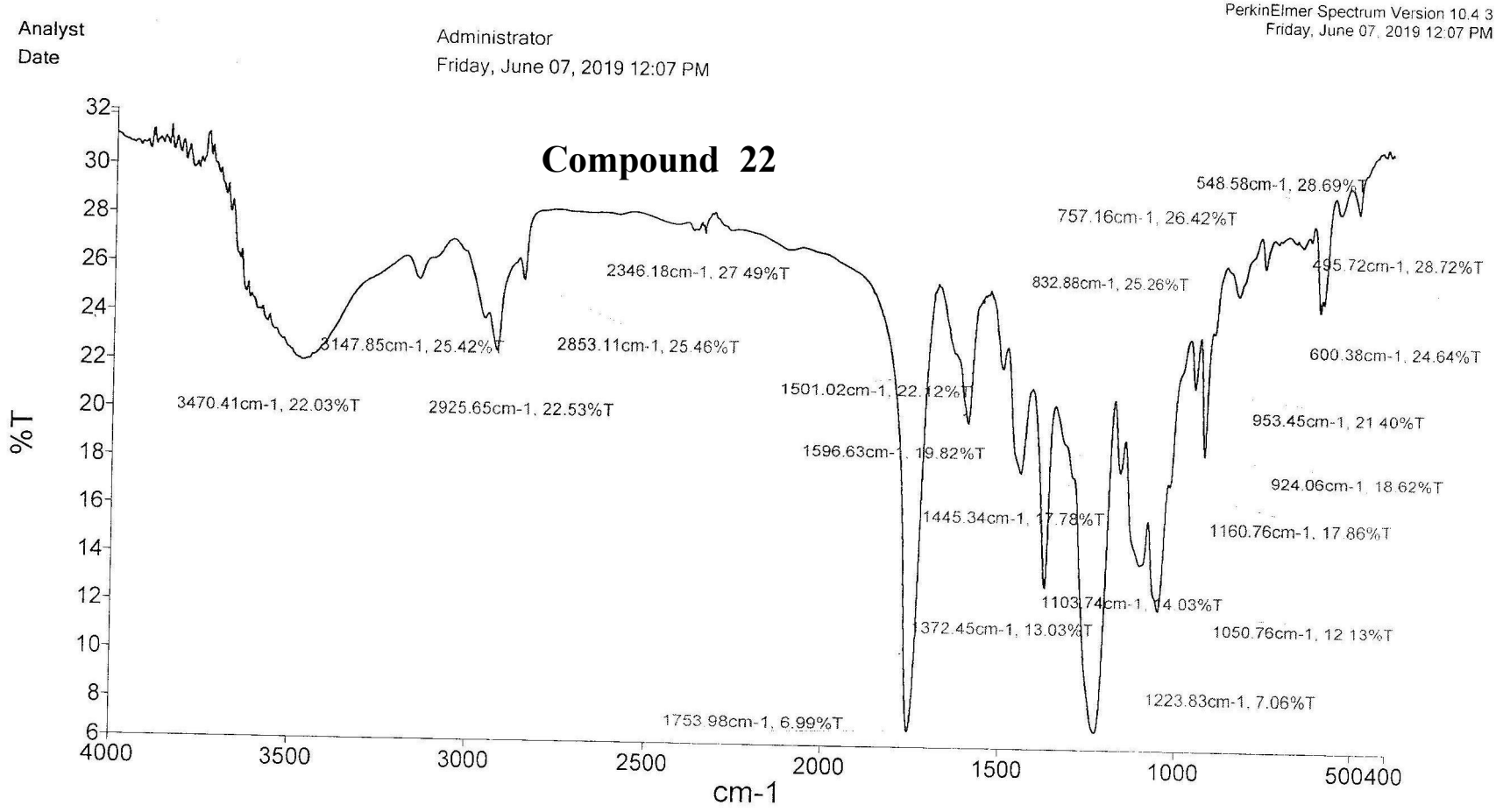


Figure S49. IR spectra of compound **22**

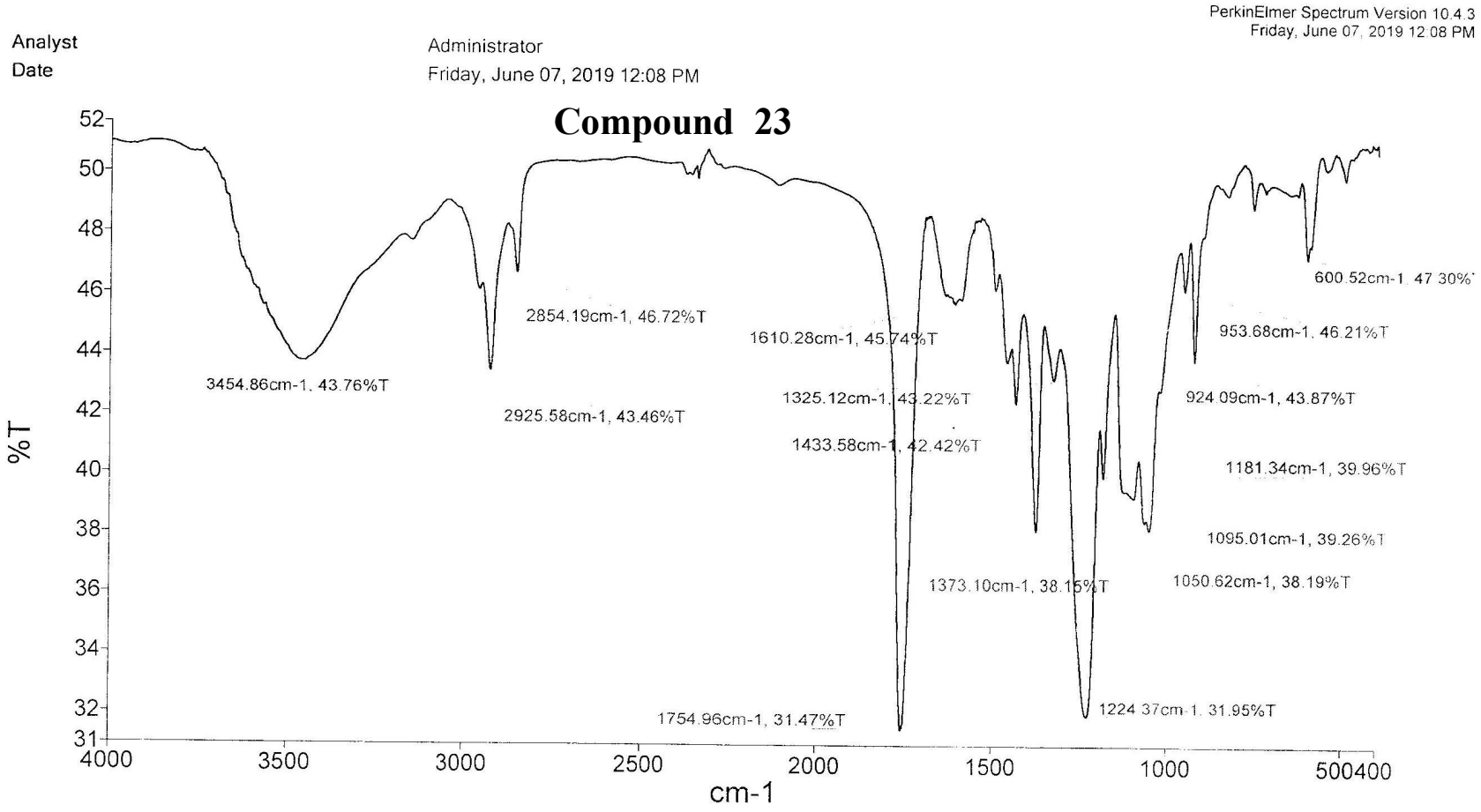


Figure S50. IR spectra of compound **23**

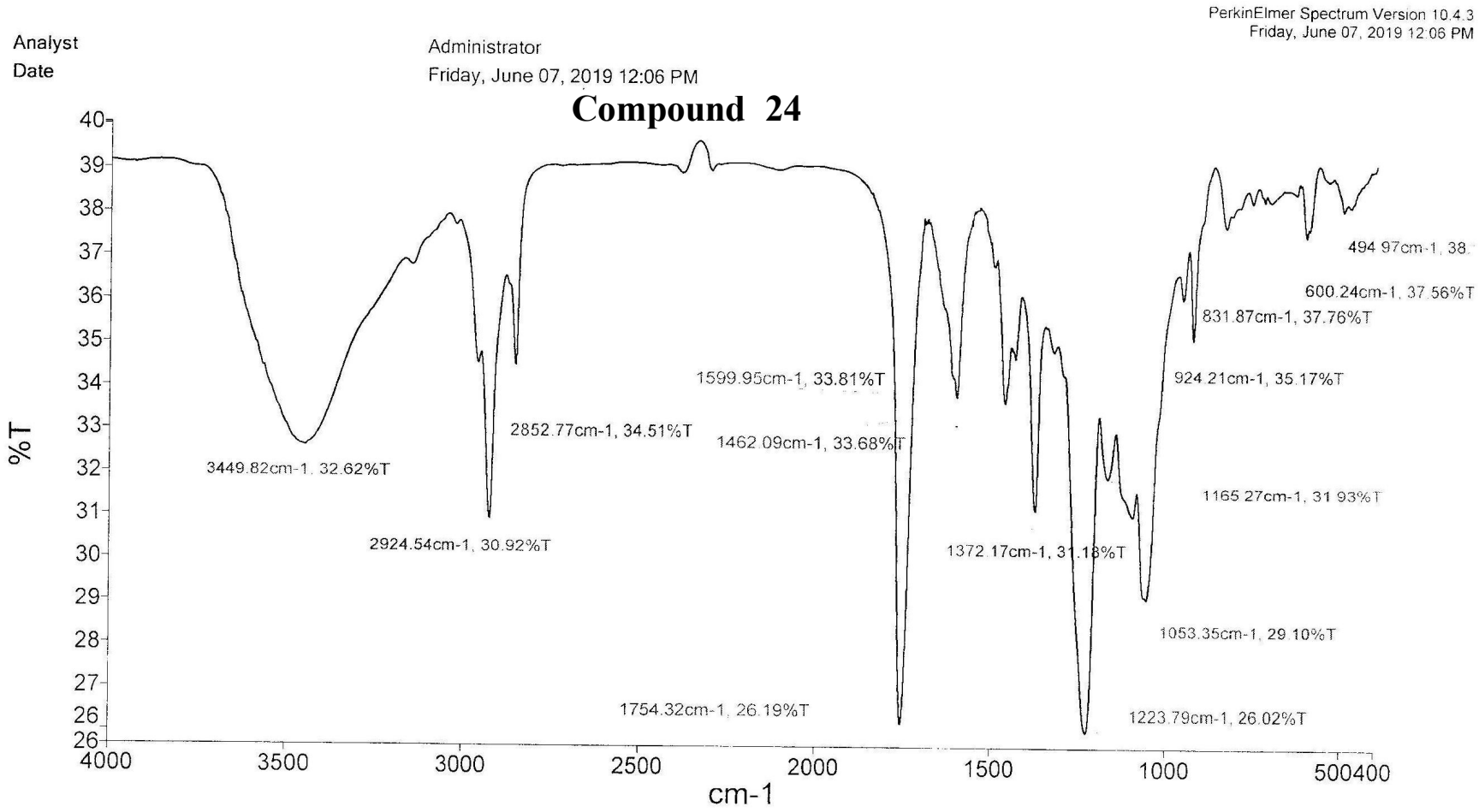


Figure S51. IR spectra of compound **24**

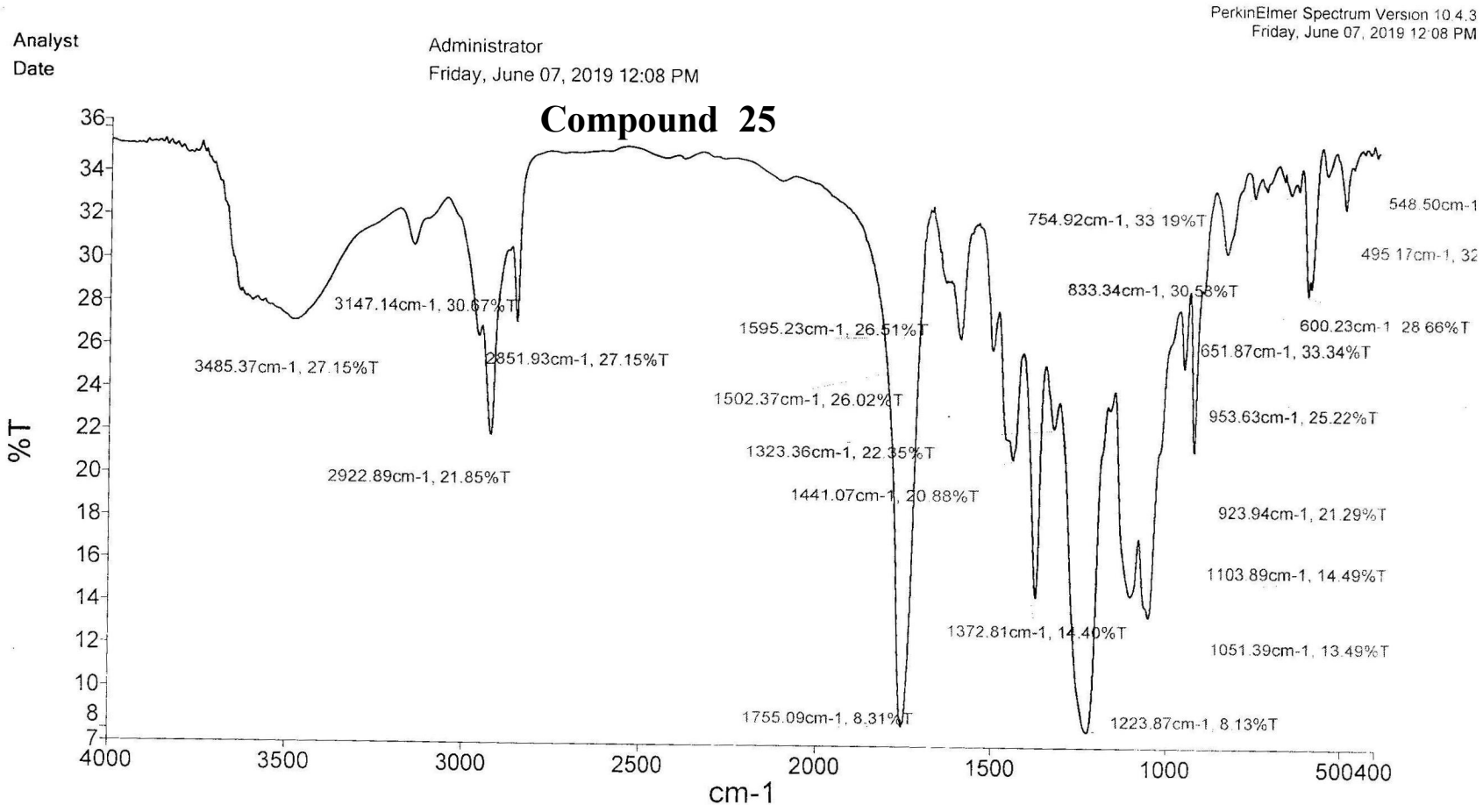


Figure S52. IR spectra of compound **25**

3. HRMS and MALDI-TOF MS spectra of compound **13, 14, 15, and 18-25.**

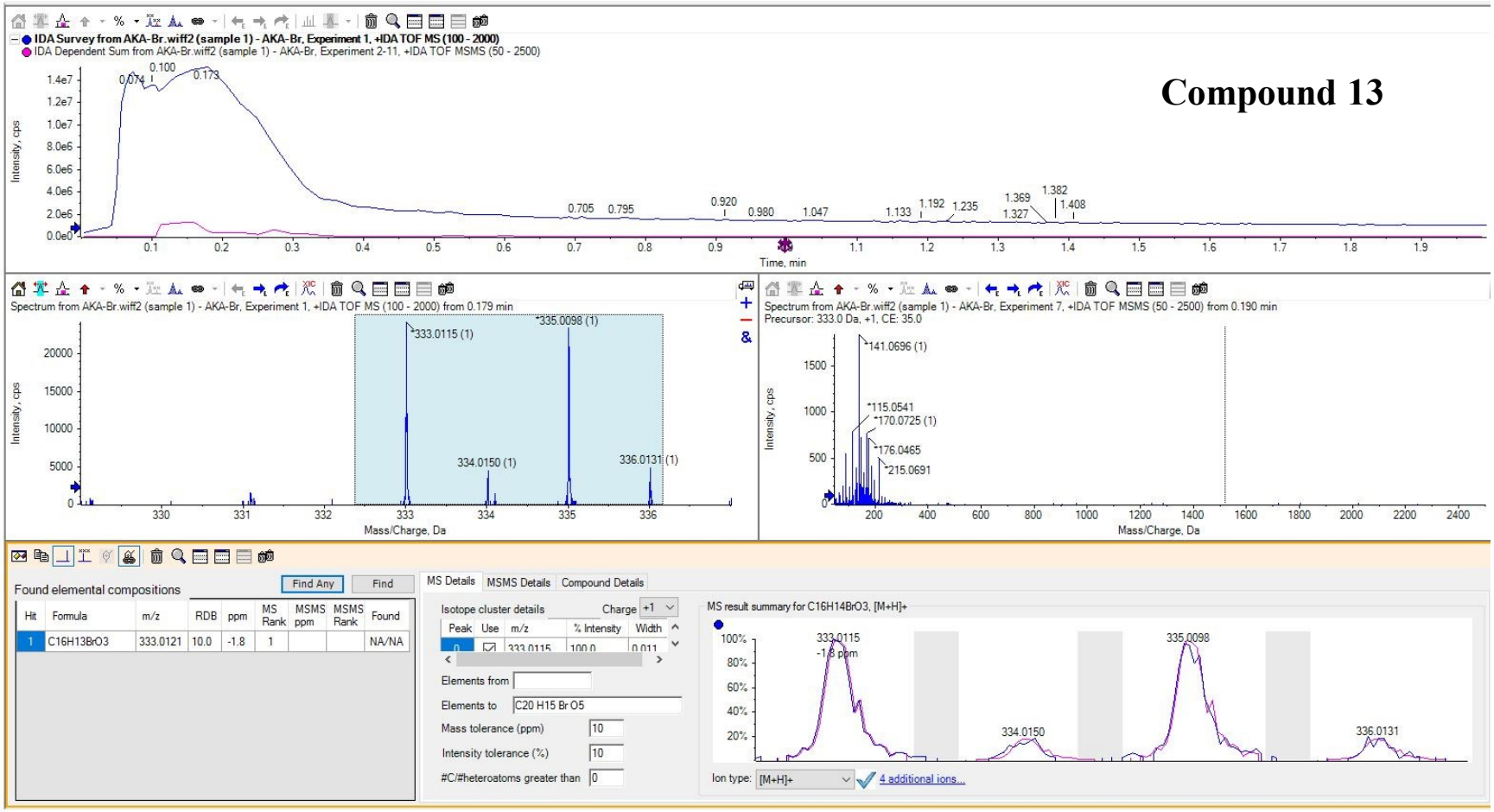


Figure S53. HRMS spectra of compound **13**

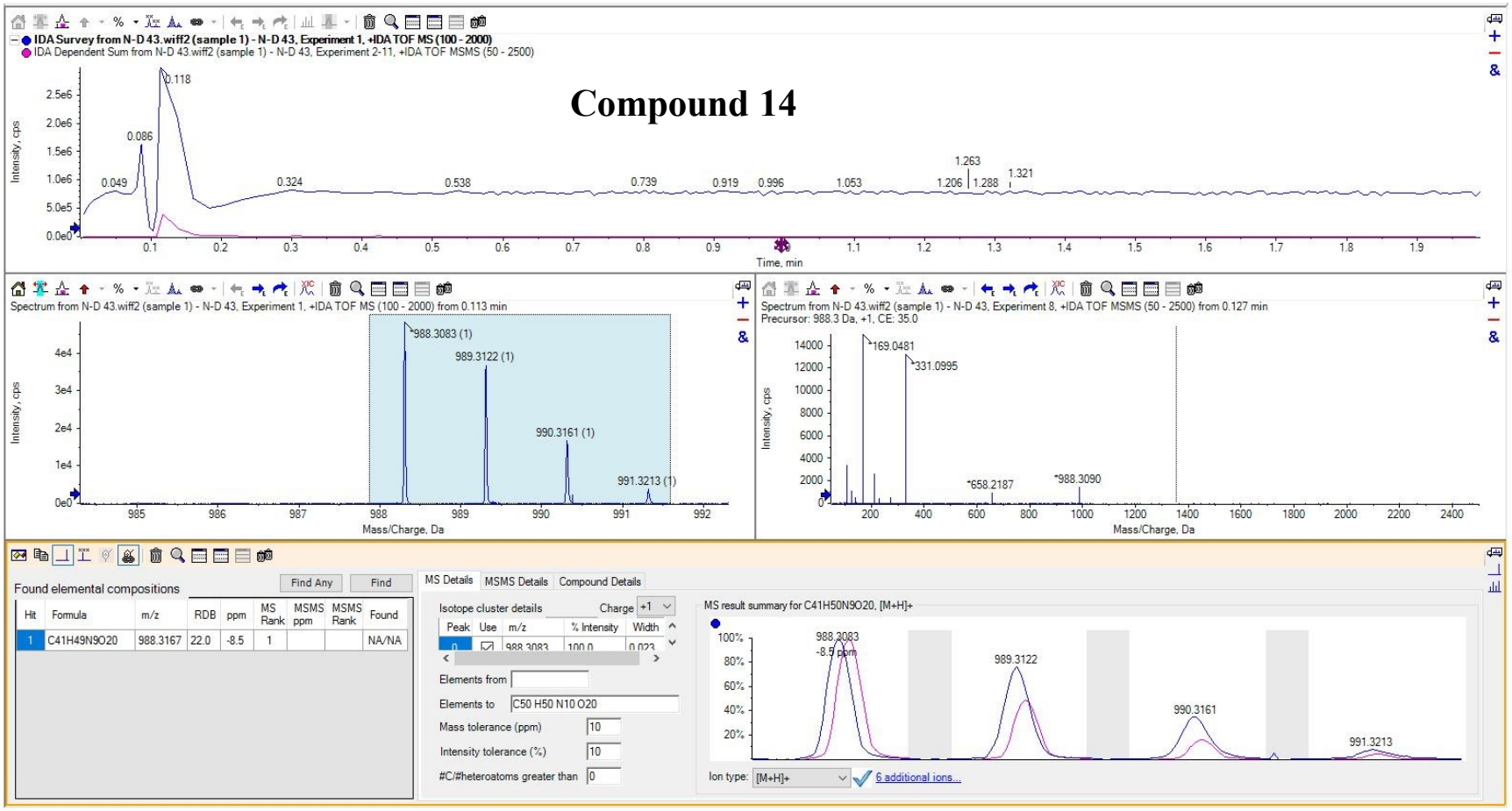


Figure S54. HRMS spectra of compound **14**

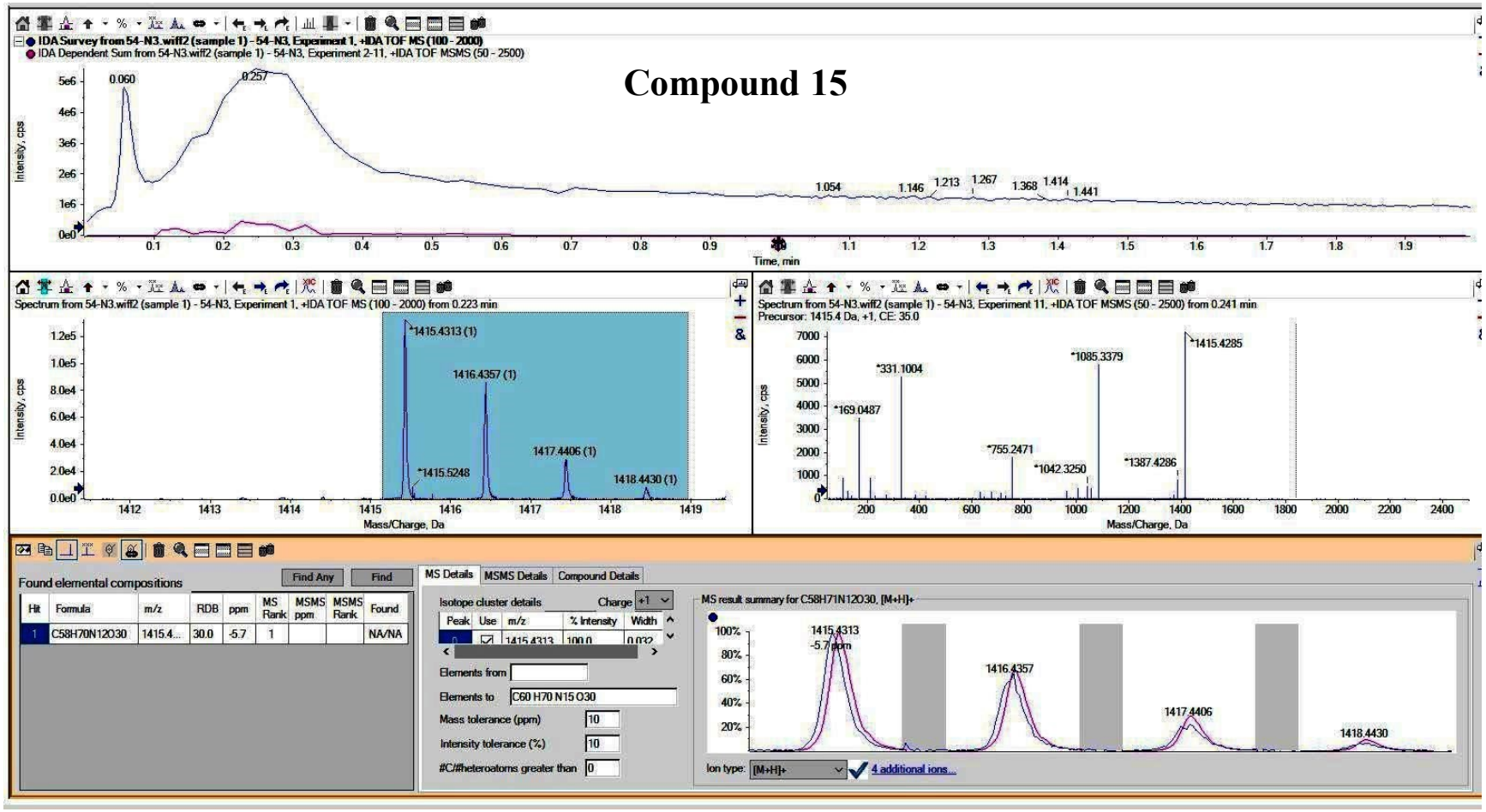


Figure S55. HRMS spectra of compound **15**

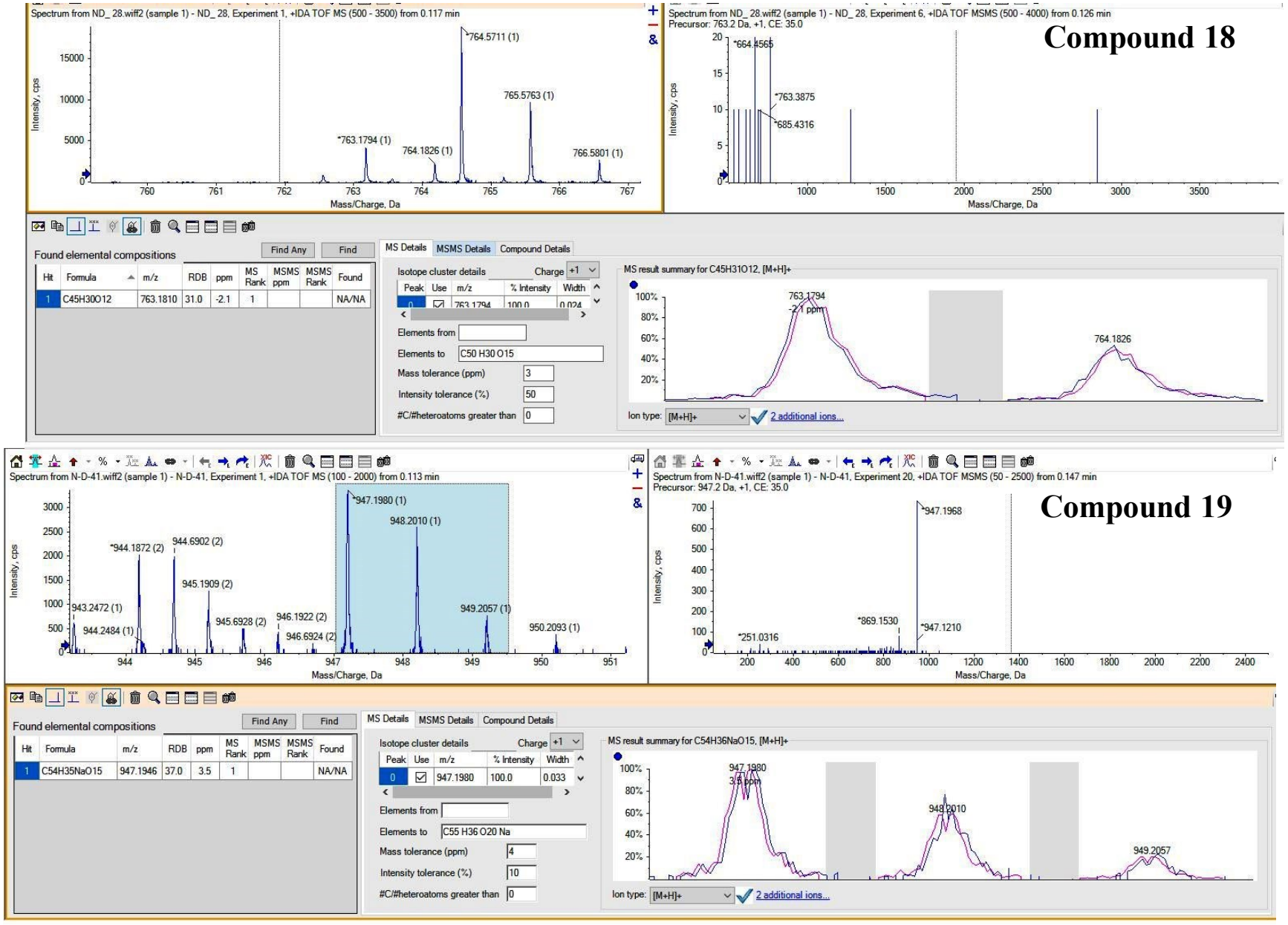


Figure S56. HRMS spectra of compounds **18** and **19**

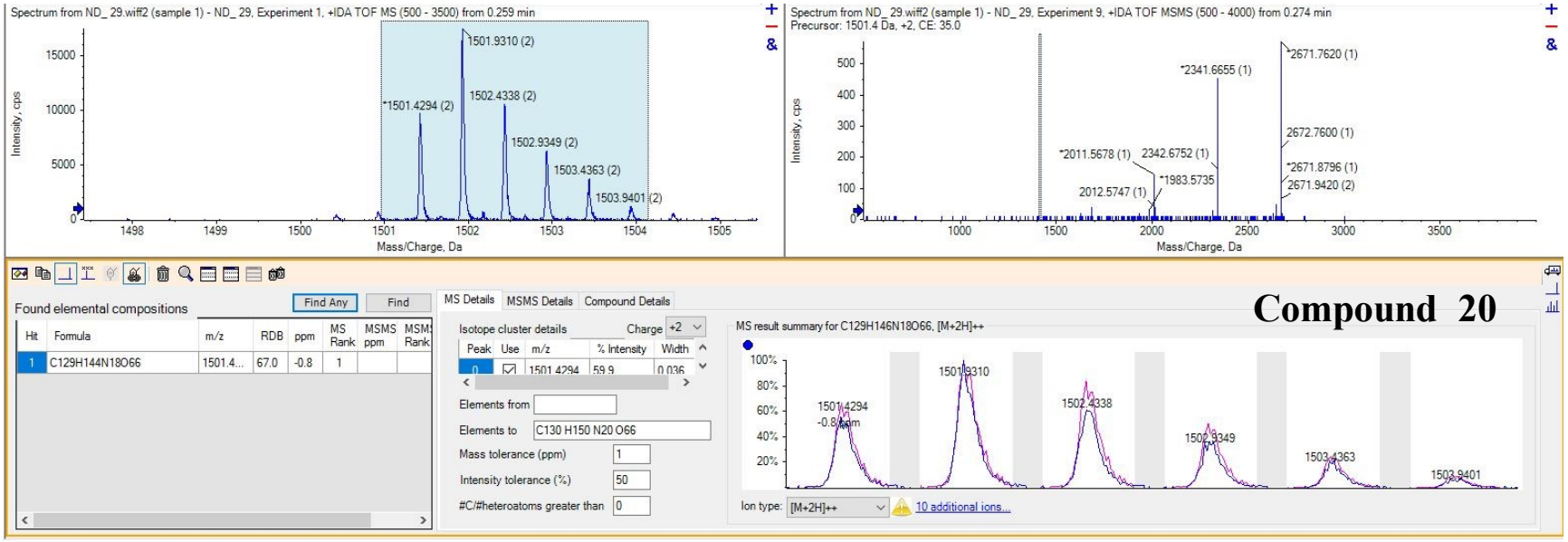
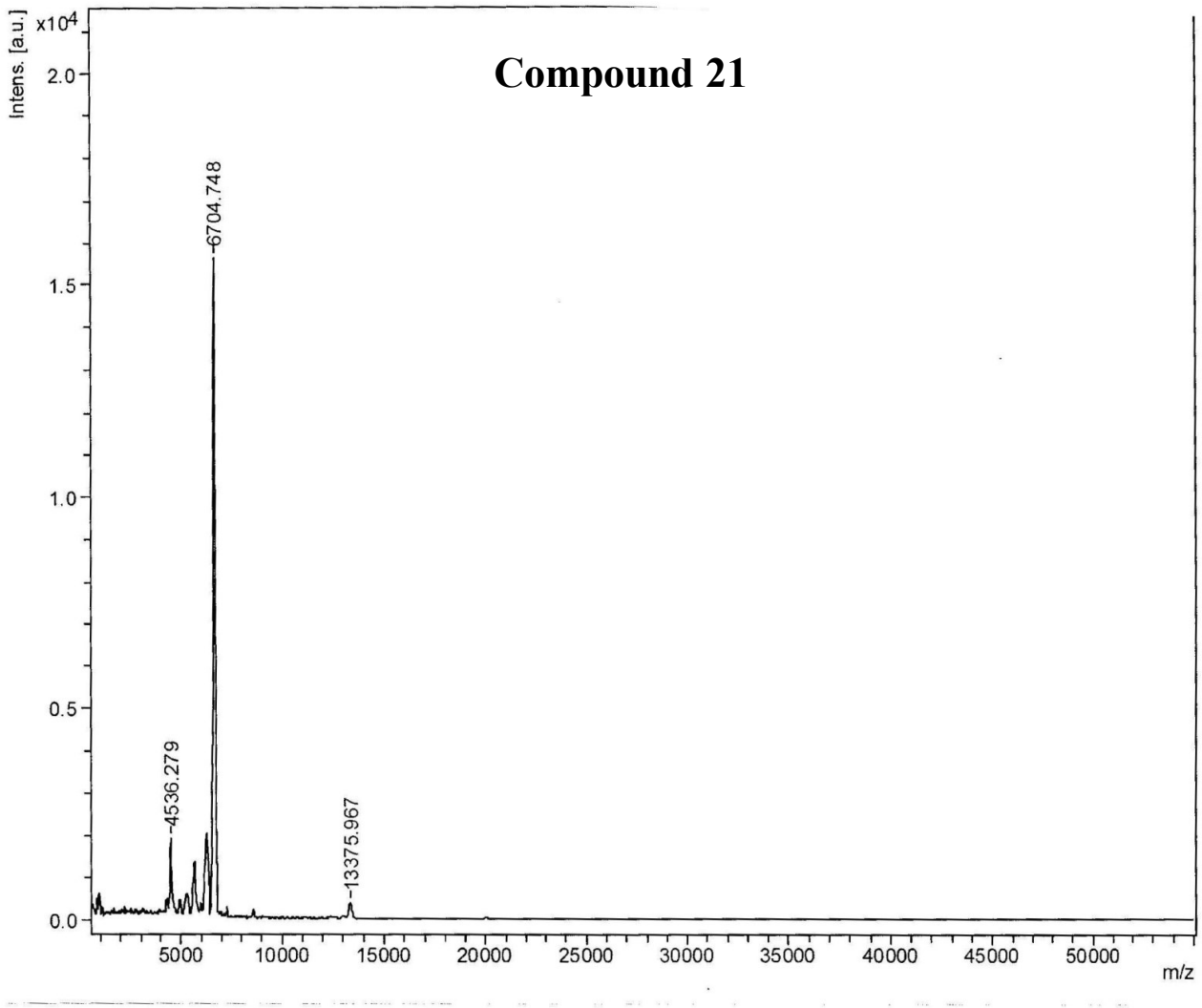


Figure S57. HRMS spectra of compound **20**



Acquisition Parameter

Date of acquisition	2018-05-04T16:46:51.908+05:30
Acquisition method name	D:\User Methods\LP_5-50_kDa.par
Aquisition operation mode	Linear
Voltage polarity	POS
Number of shots	3000
Name of spectrum used for calibration	
Calibration reference list used	Protein1CalibStandard_dimer

Figure S58. MALDI-TOF MS of compound **21**

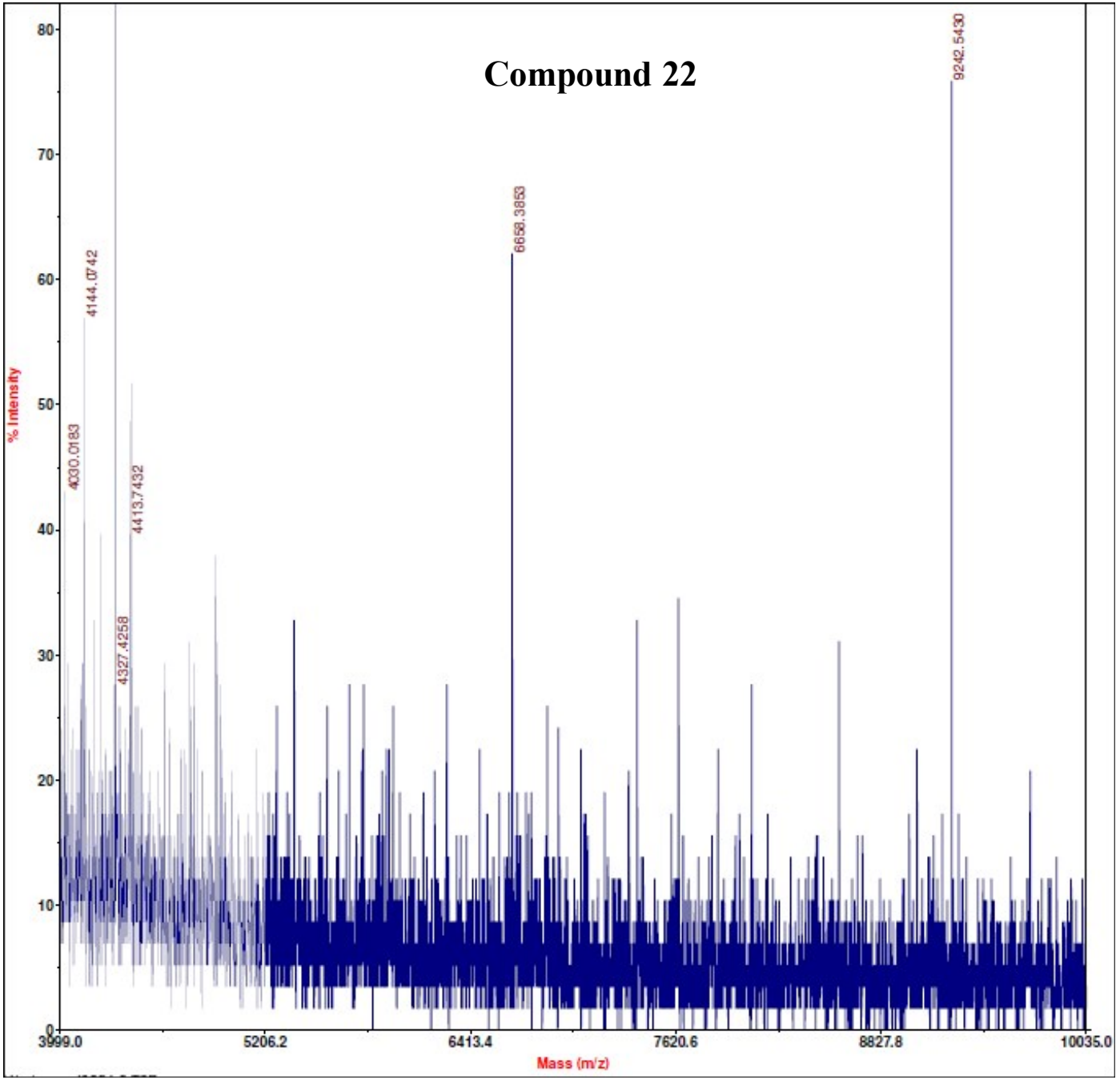


Figure S59. MALDI-TOF MS of compound **22**

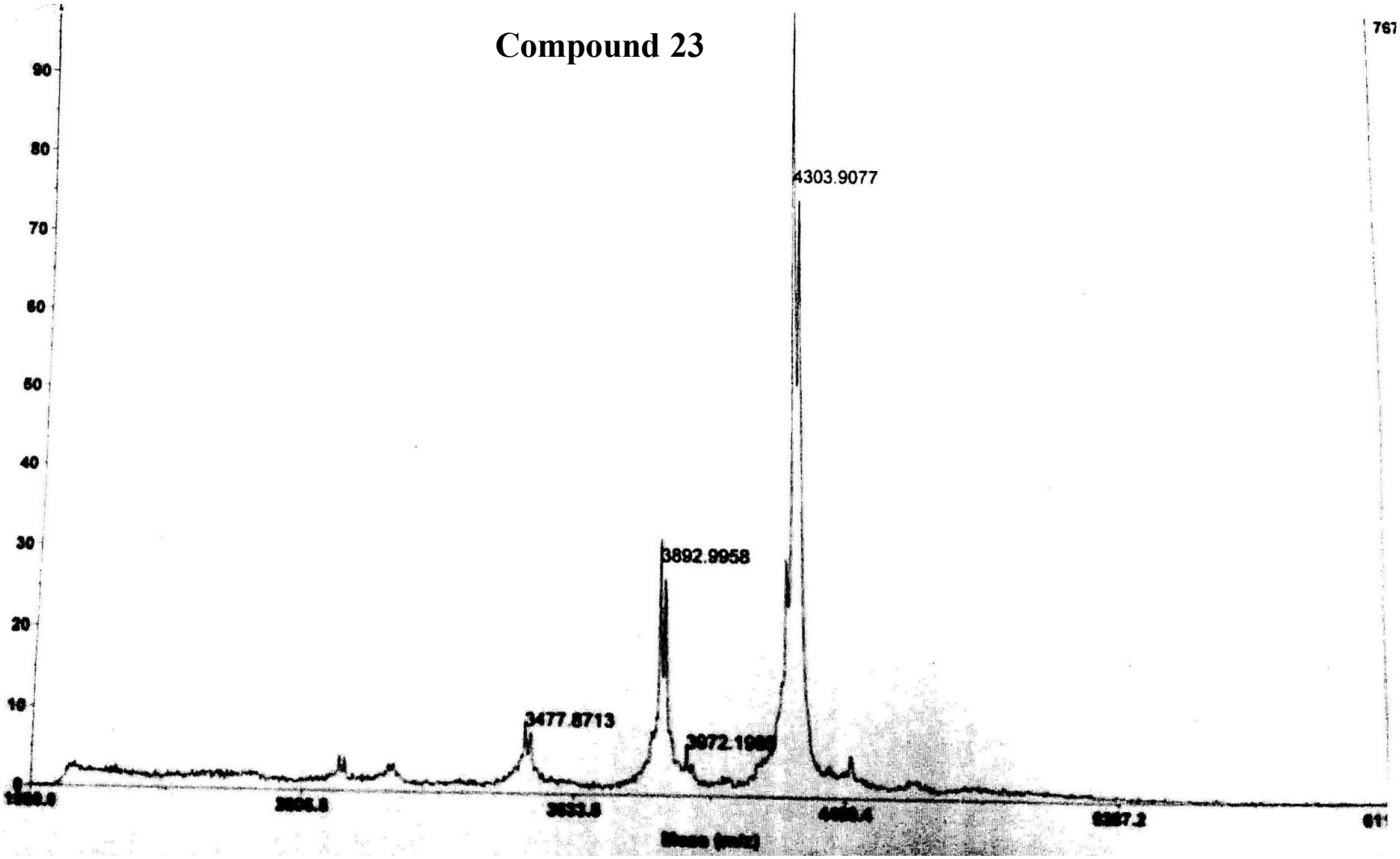
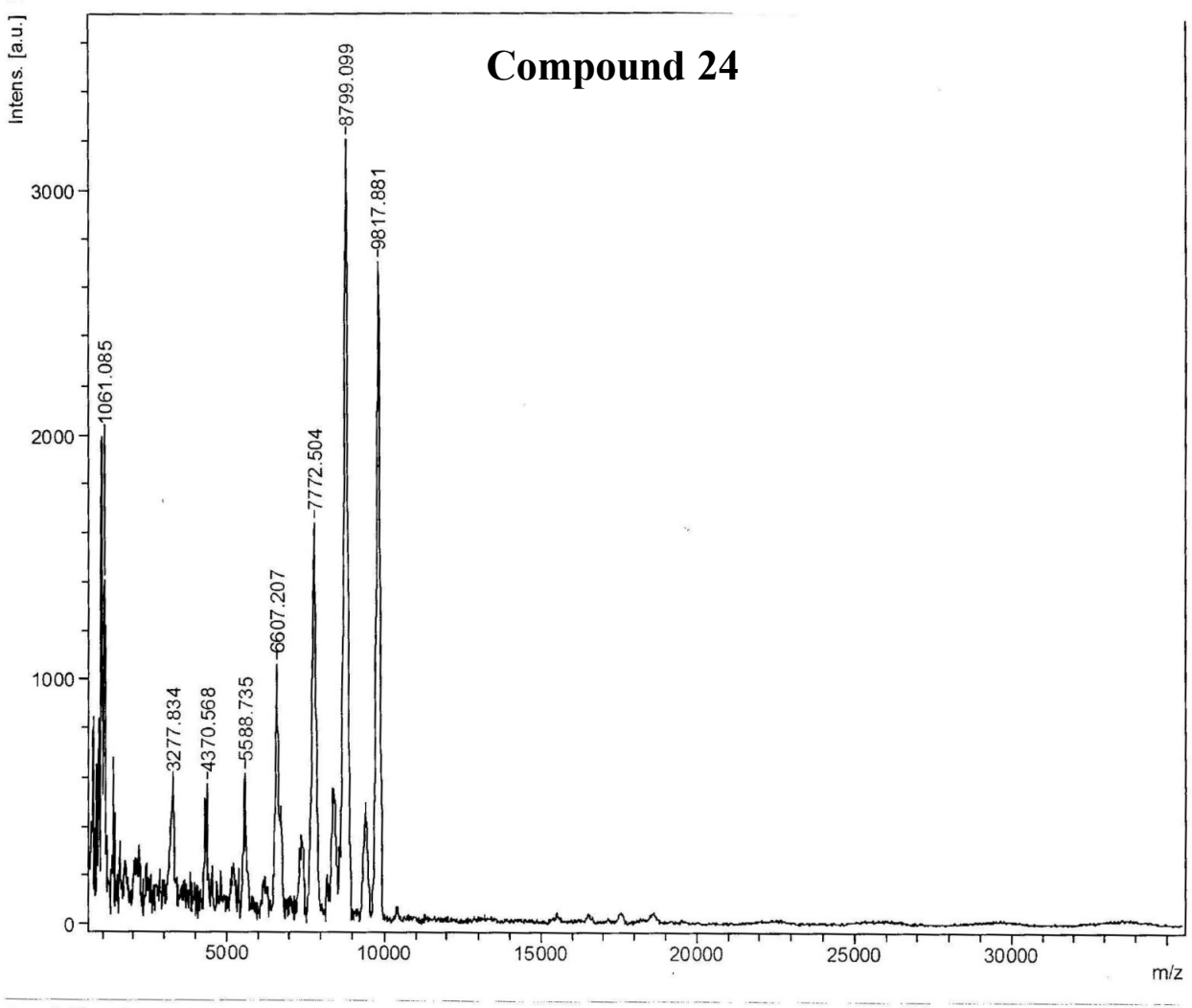


Figure S60. MALDI-TOF MS of compound **23**



Acquisition Parameter

Date of acquisition	2018-05-04T16:46:32.390+05:30
Acquisition method name	D:\User Methods\LP_5-50_kDa.par
Aquisition operation mode	Linear
Voltage polarity	POS
Number of shots	6000
Name of spectrum used for calibration	
Calibration reference list used	Protein1CalibStandard_dimer

Figure S61. MALDI-TOF MS of compound **24**

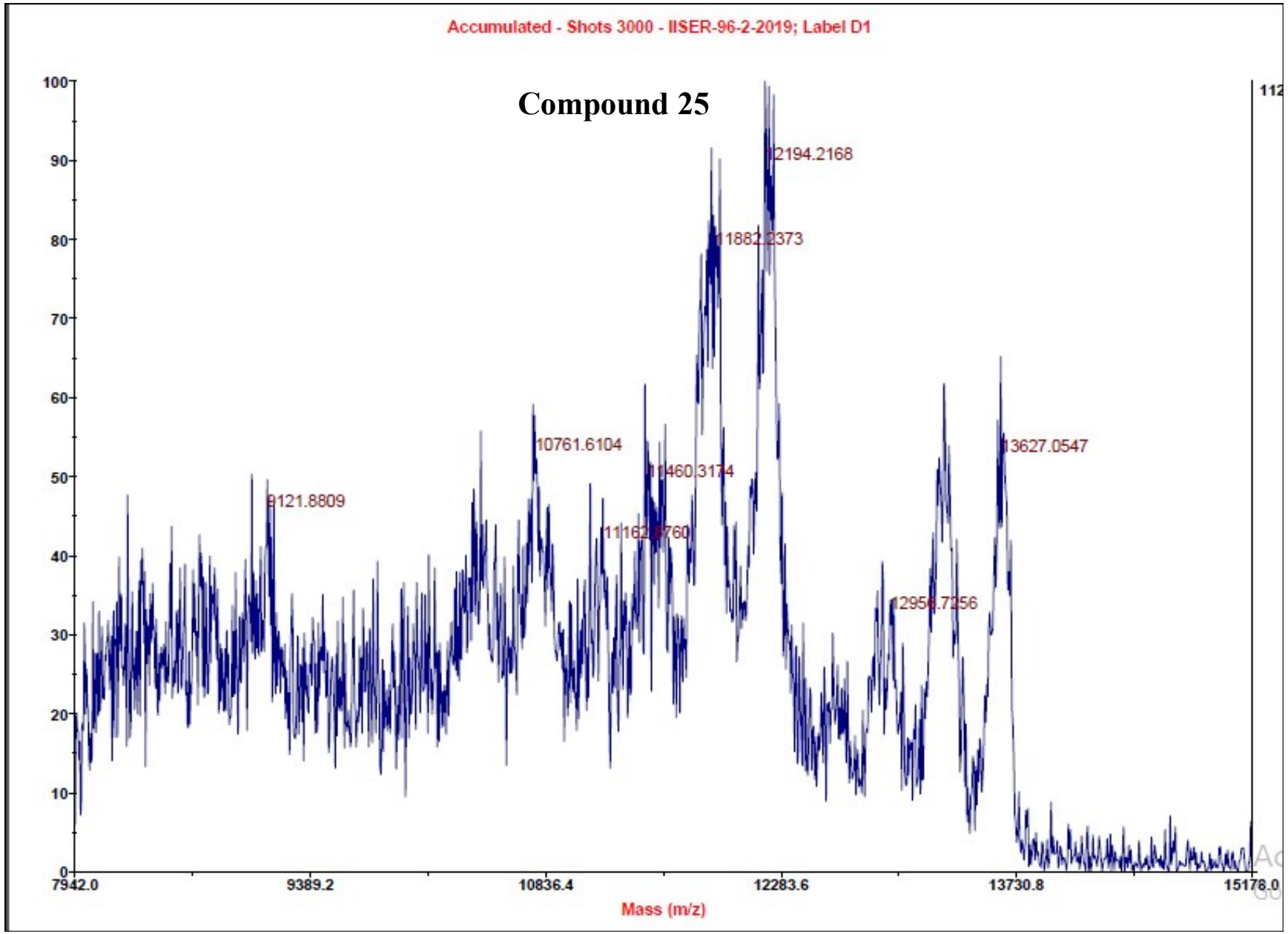


Figure S62. MALDI-TOF MS of compound **25**

4. Gel Permiation Chromatography of compound **20-25**

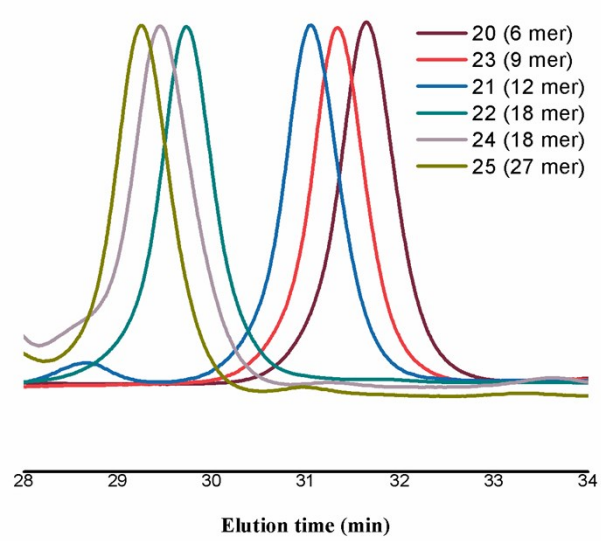


Figure S63:SEC Chromatogram of glycodendrimer 20-25 using DMF as eluent.

20: Mn=12,126; **Mw=**12,287; **PDI=1.01**

21: Mn=20,002; Mw=20,285; PDI=1.01

22: Mn=11,710; Mw=11,937; PDI=1.02

23: Mn=13,202; Mw=13,367; PDI=1.01

24: Mn=21,747; Mw=22,047; PDI=1.01

25: Mn=25,374; Mw=26,175; PDI=1.03

Note: CALIBRATED AGAINST POLYSTYRENE STANDARDS.

5. **Uv-Vis spectroscopy:**

Figure S64: Electronic Uv-Visible Absorption spectra of the developed glycodendrimers and glycodentromers **20-25**:

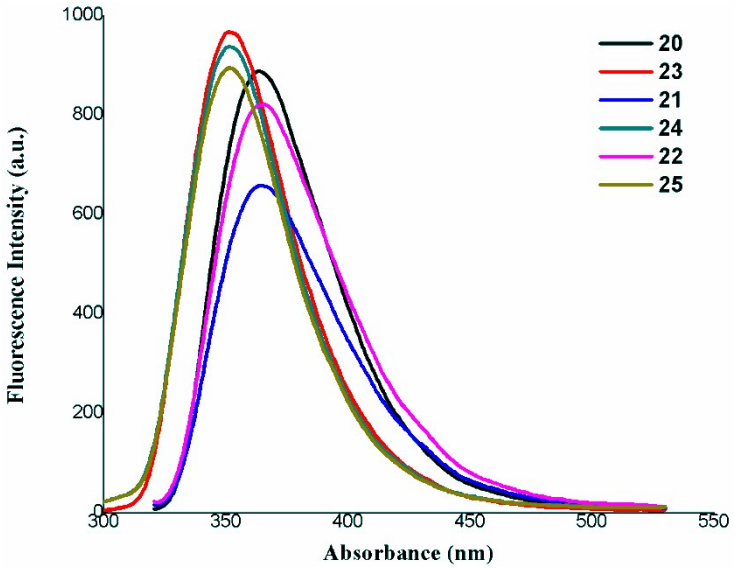


Figure S65: Electronic Uv-Visible Emission spectra of the glycodendrimers and glycodentromers **20-25**:

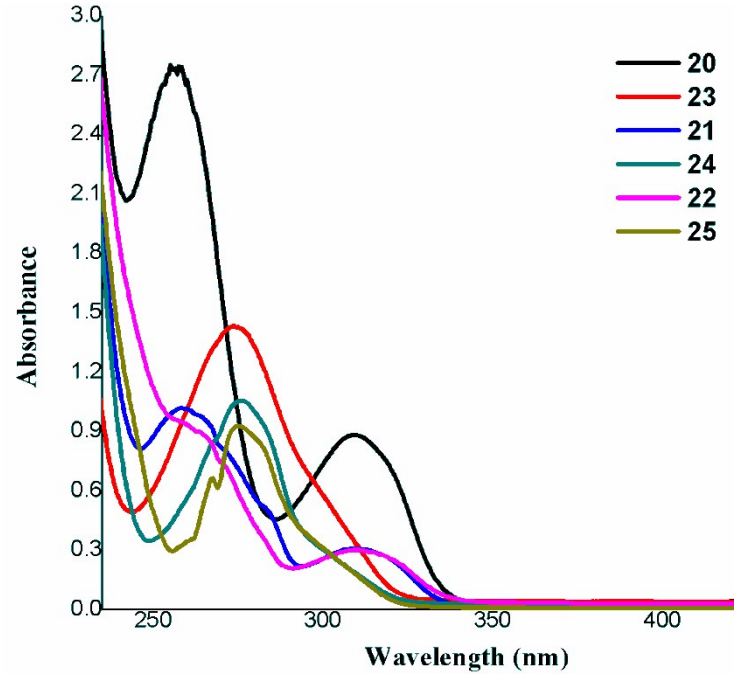


Table S1: Absorbance and Emission data

S.N.	Compound no.	Absorbance (λ max in nm)	Emisson (nm)
1.	Compound **20**	**309.03**	**363.9**
2.	Compound **21**	**310.80**	**364.47**
3.	Compound **22**	**310.84**	**364.47**
4.	Compound **23**	**274.16**	**349.73**
5.	Compound **24**	**275.97**	**350.78**
6.	Compound **25**	**274.61**	**351.31**