

SUPPLEMENT INFORMATION

Identification and characterization of α -glucosidase inhibition flavonol glycosides from jack bean (*Canavalia ensiformis* (L.) DC.

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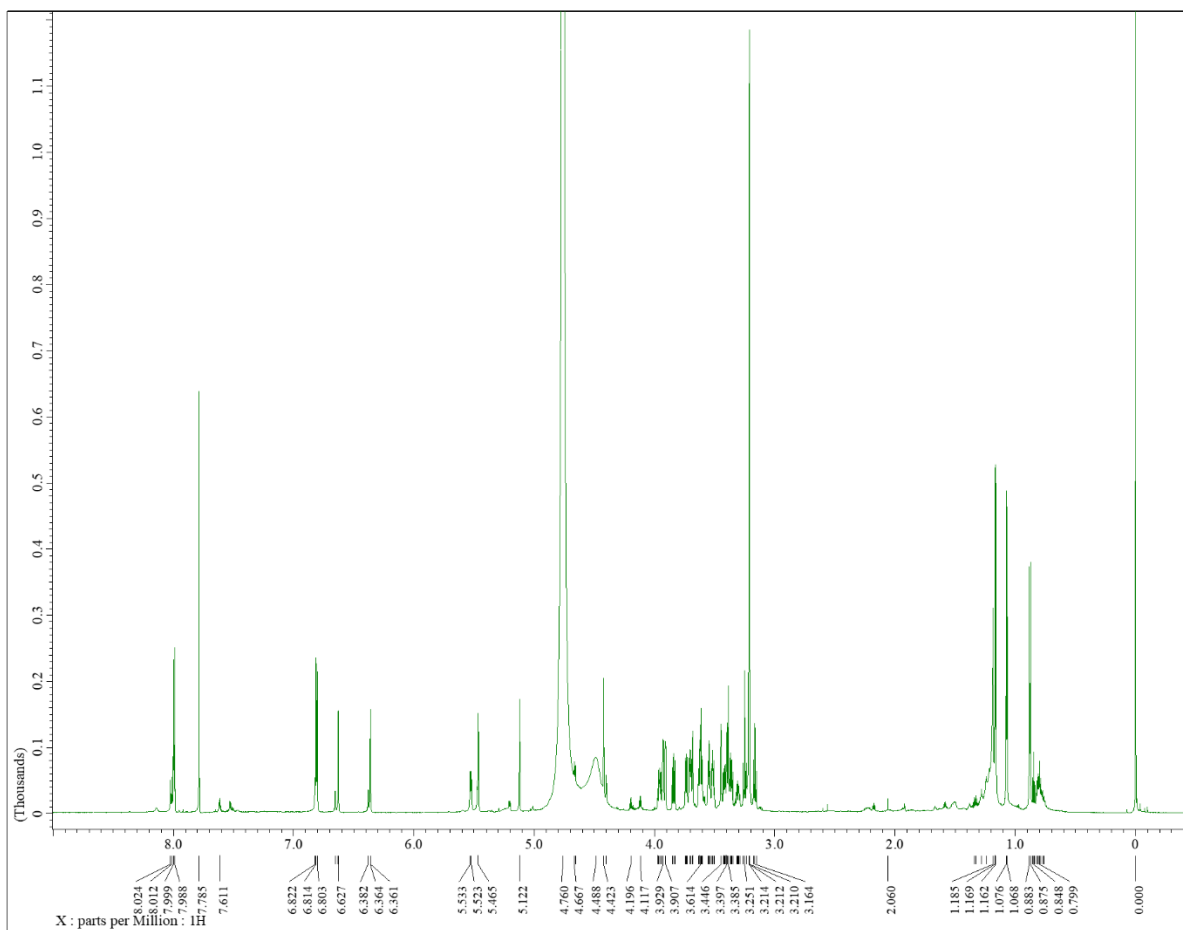


Figure S1. ¹H NMR spectrum of compound 1 (CD₃OD, 800 MHz)

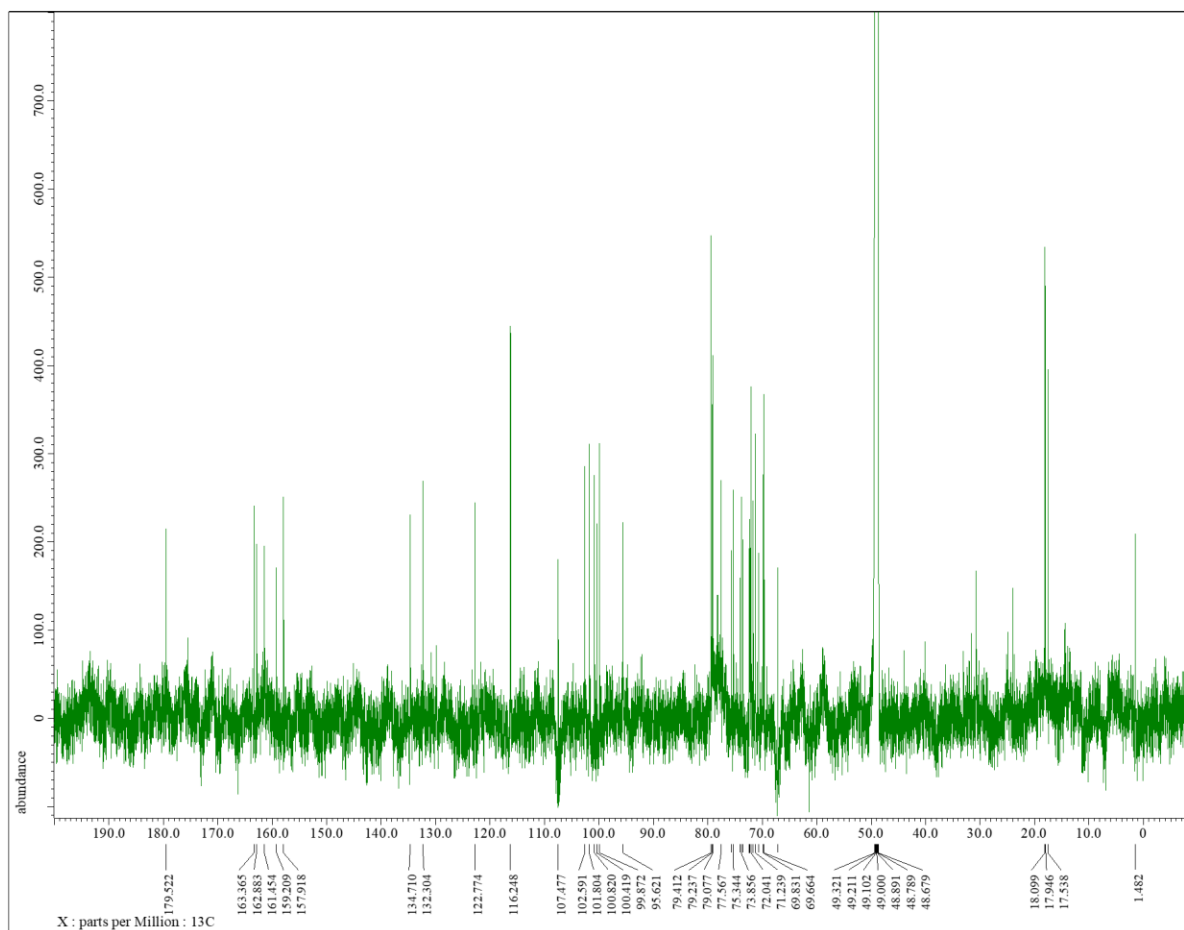


Figure S2. ^{13}C NMR spectrum of compound 1 (CD_3OD , 800 MHz)

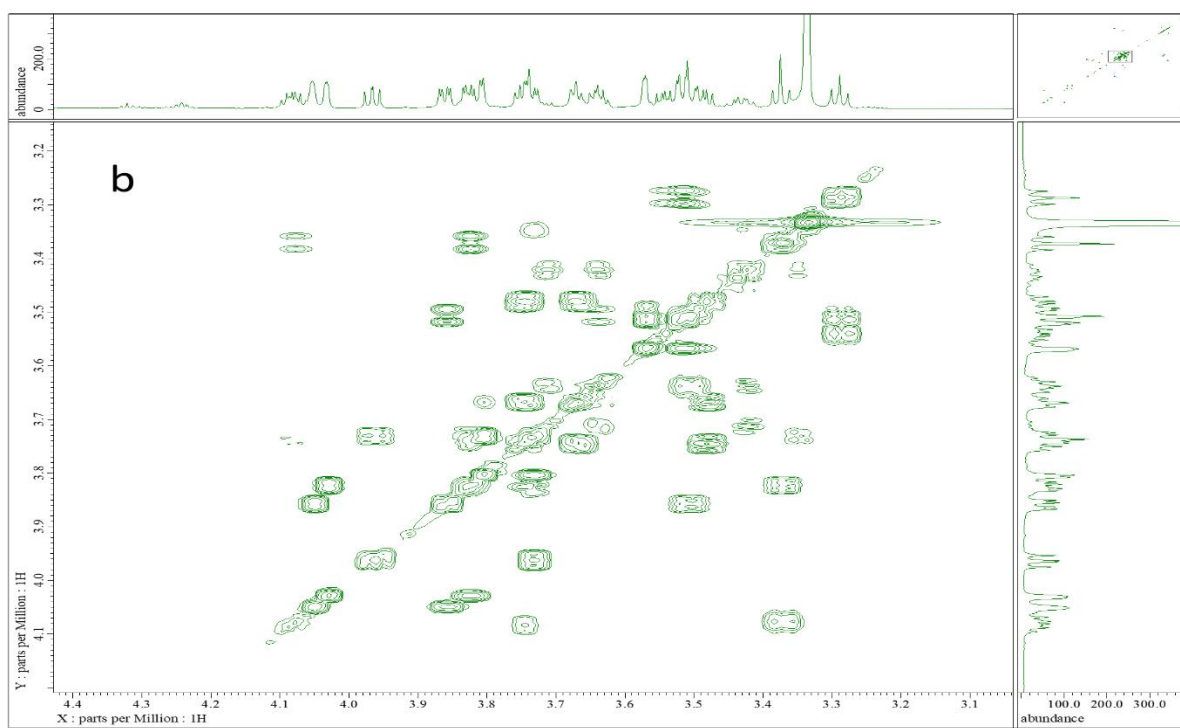
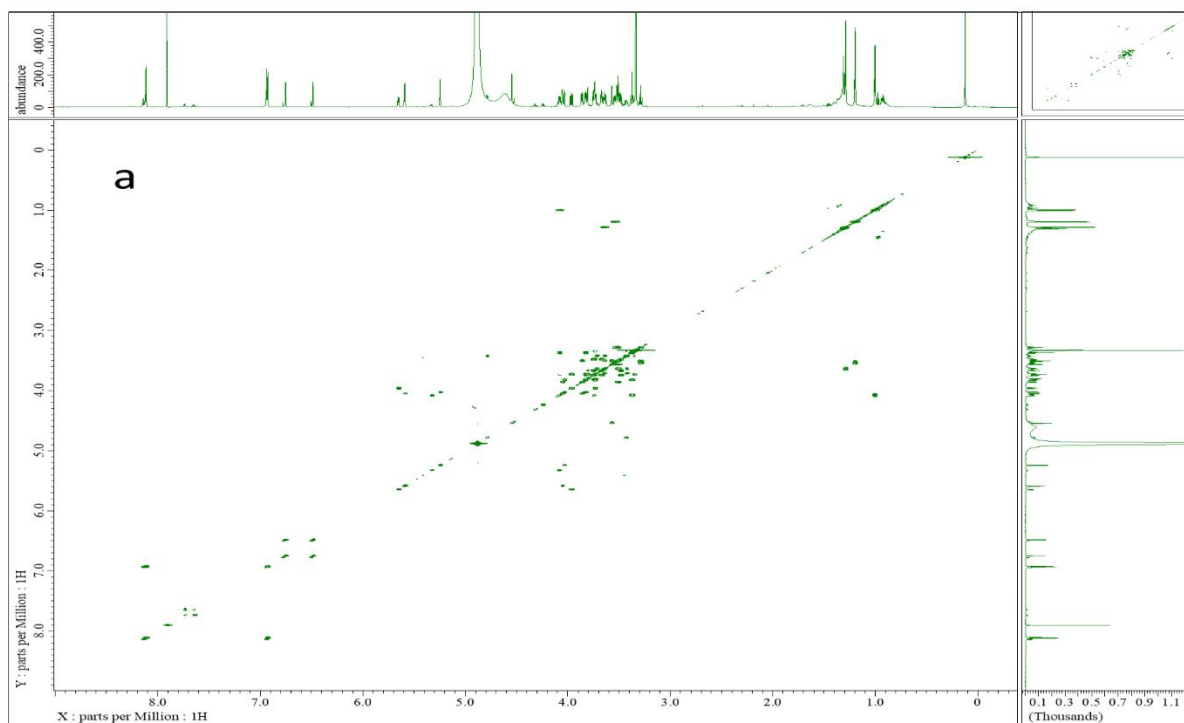


Figure S3. ^1H - ^1H COSY of compound **1** (CD_3OD , 800 MHz)

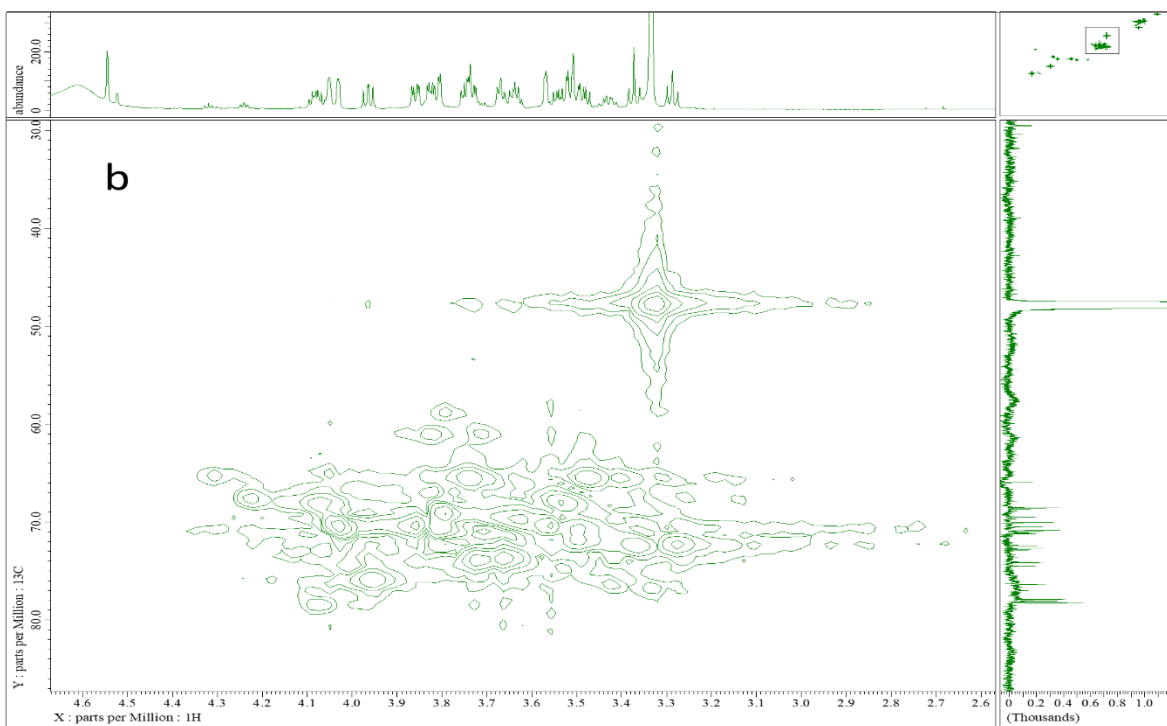
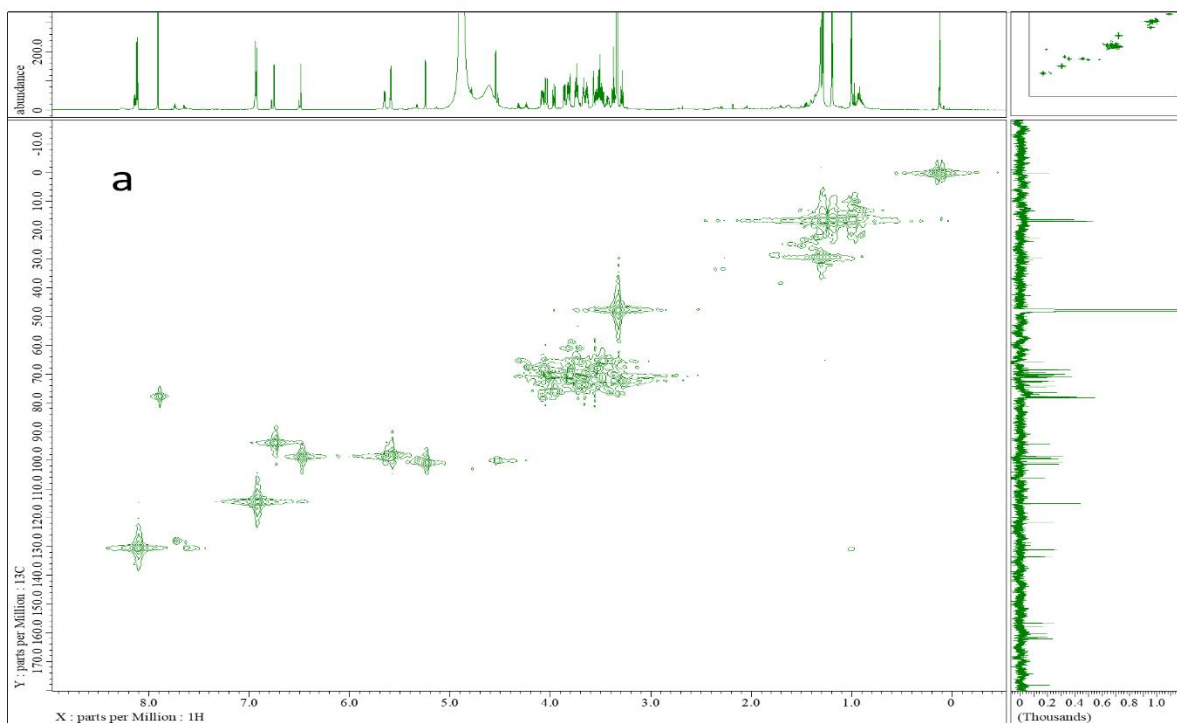


Figure S4. HMQC of compound 1 (CD₃OD, 800 MHz)

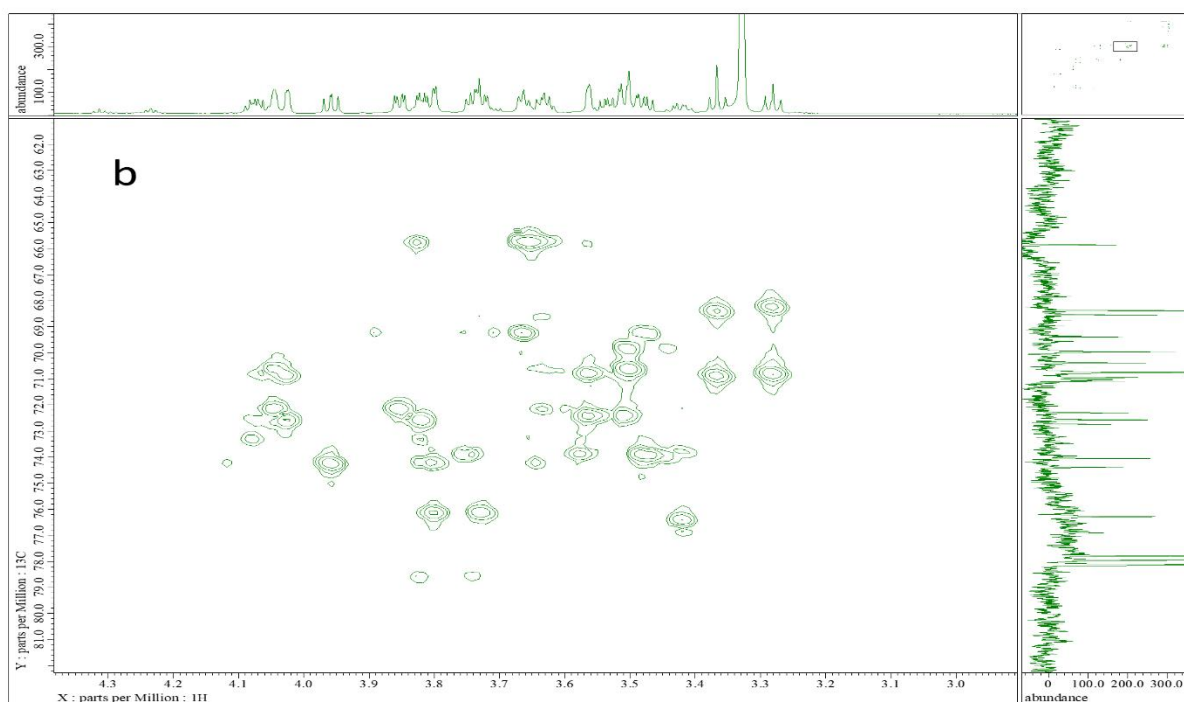
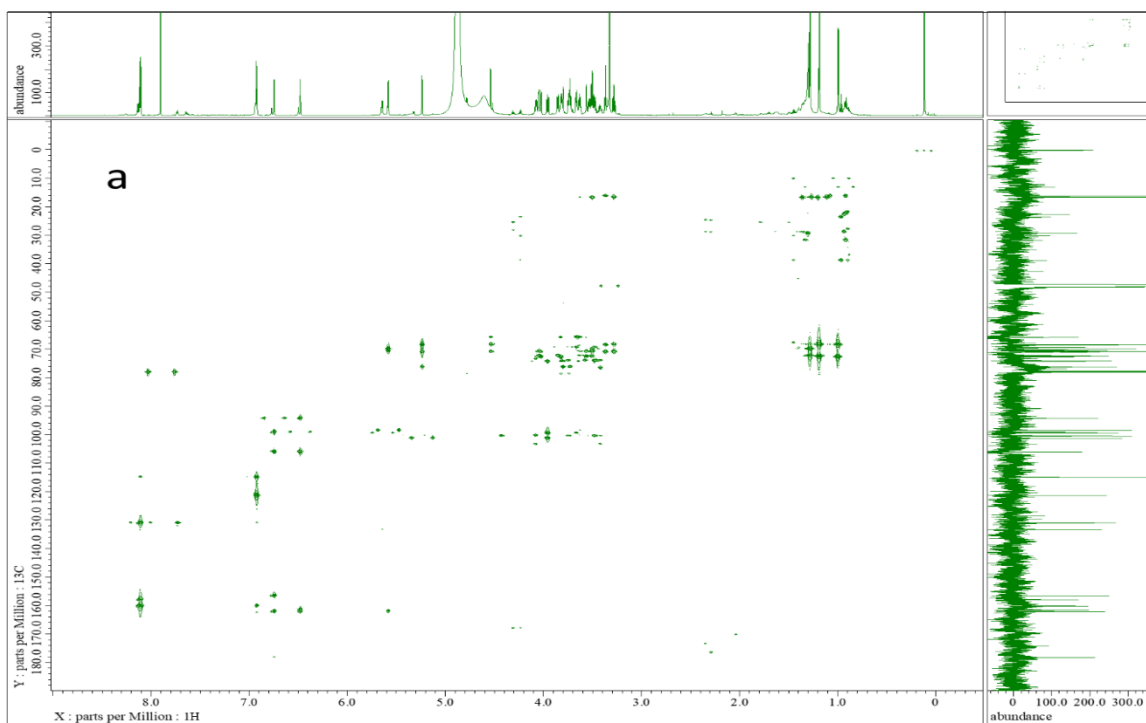


Figure S5. HMBC of compound 1 (CD₃OD, 800 MHz)

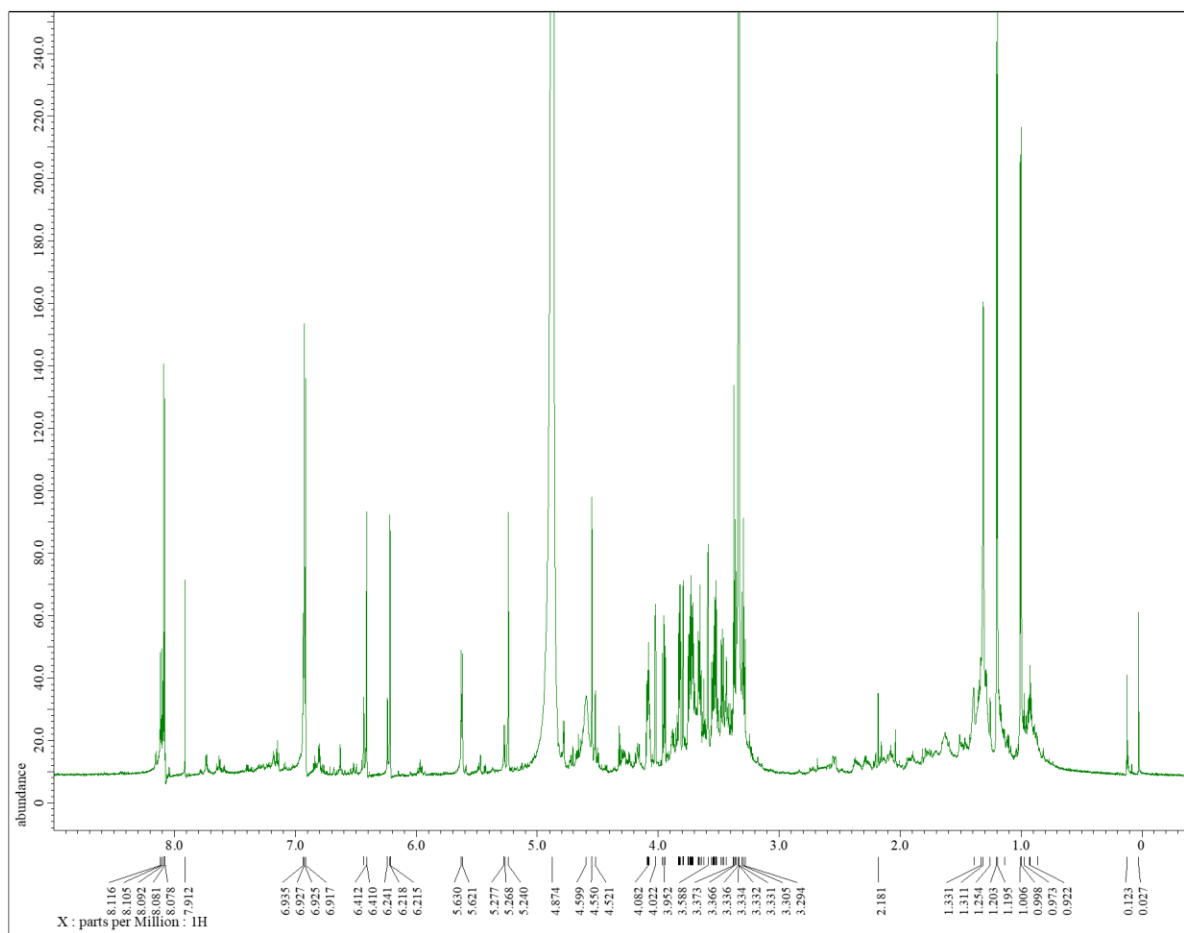


Figure S6. ¹H NMR spectrum of compound 2 (CD₃OD, 800 MHz)

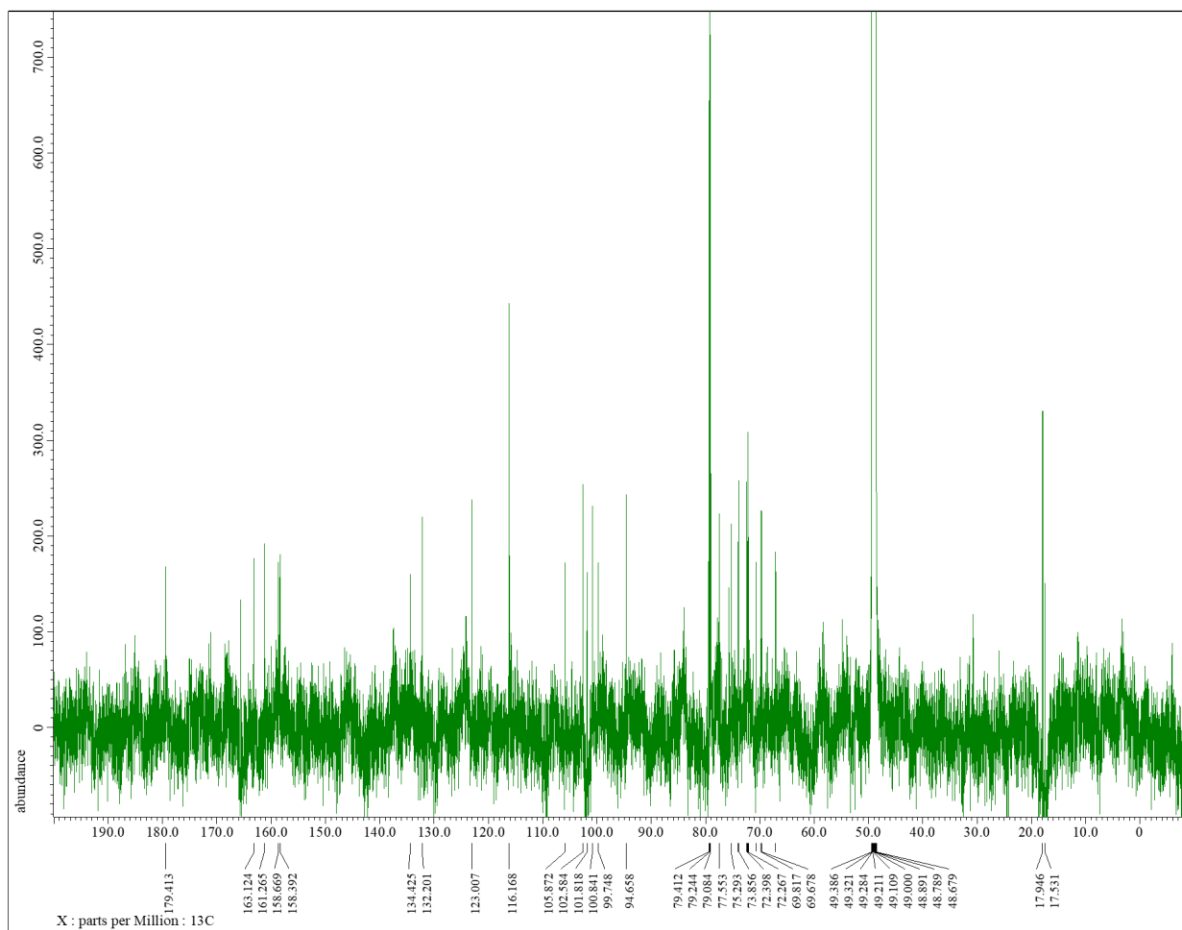


Figure S7. ^{13}C NMR spectrum of compound 2 (CD_3OD , 800 MHz)

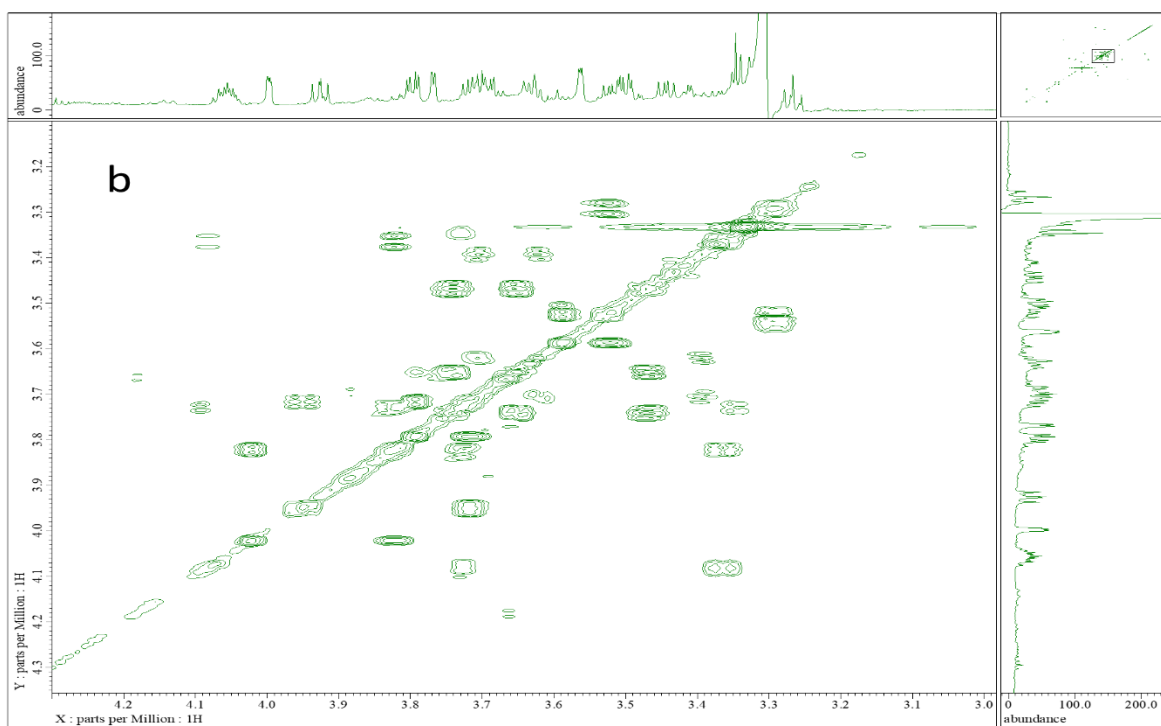
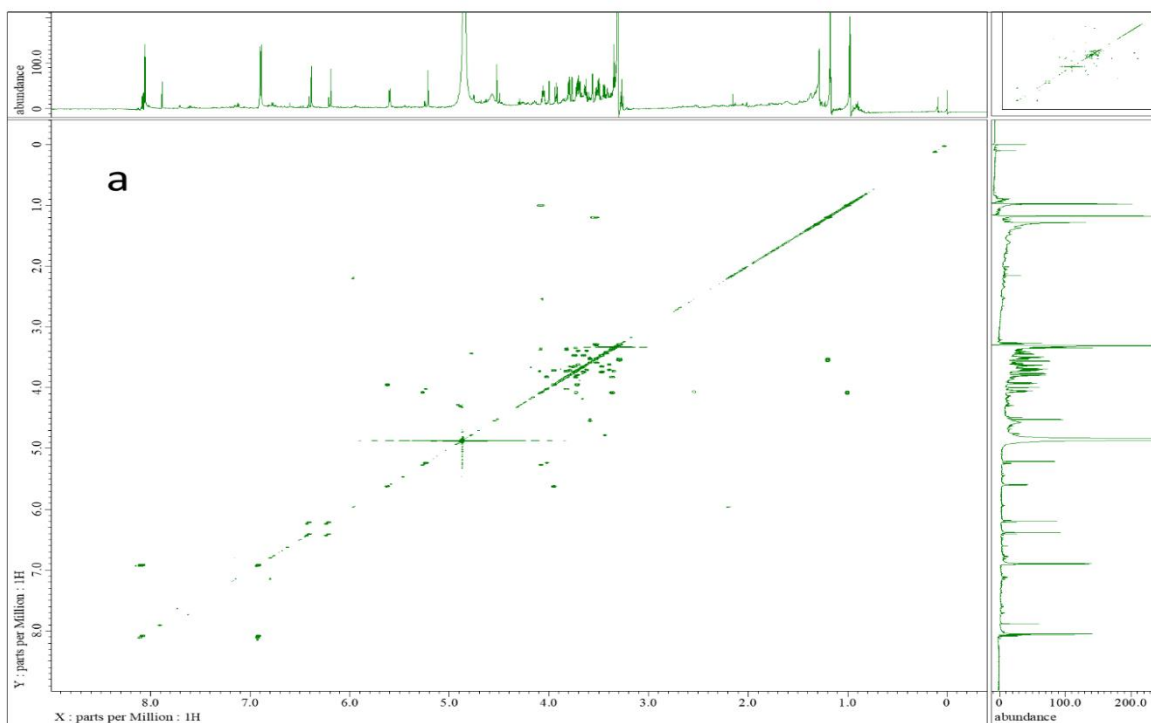


Figure S8. ^1H - ^1H COSY of compound 2 (CD_3OD , 800 MHz)

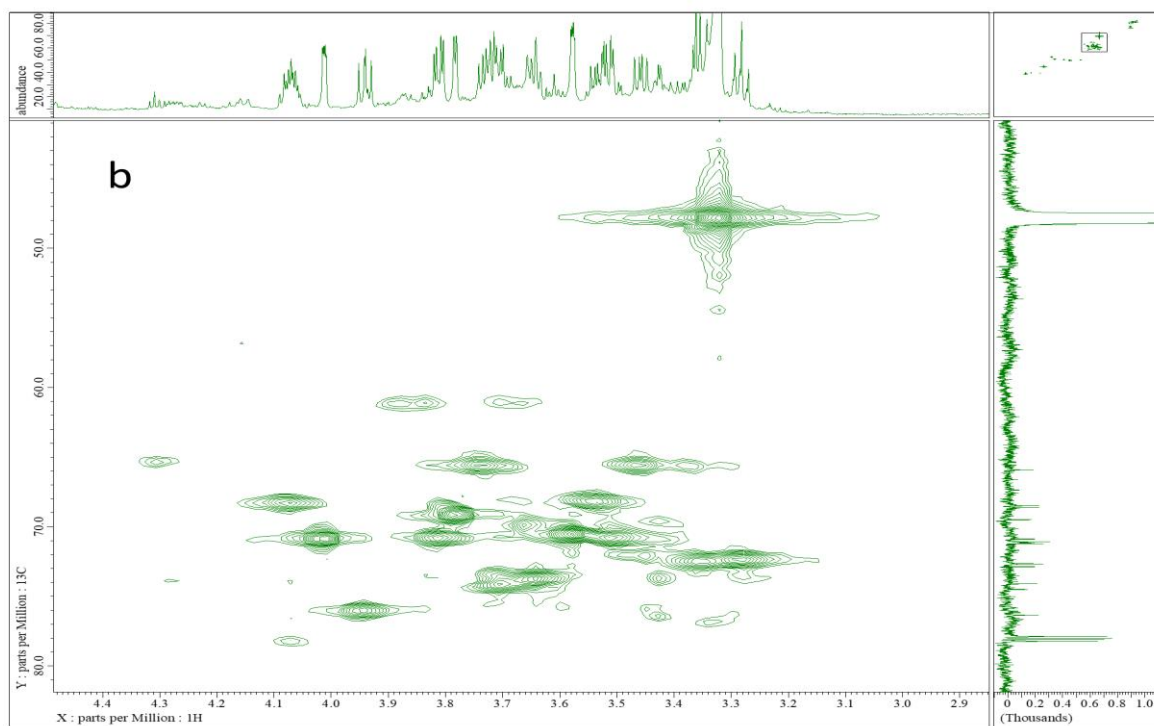
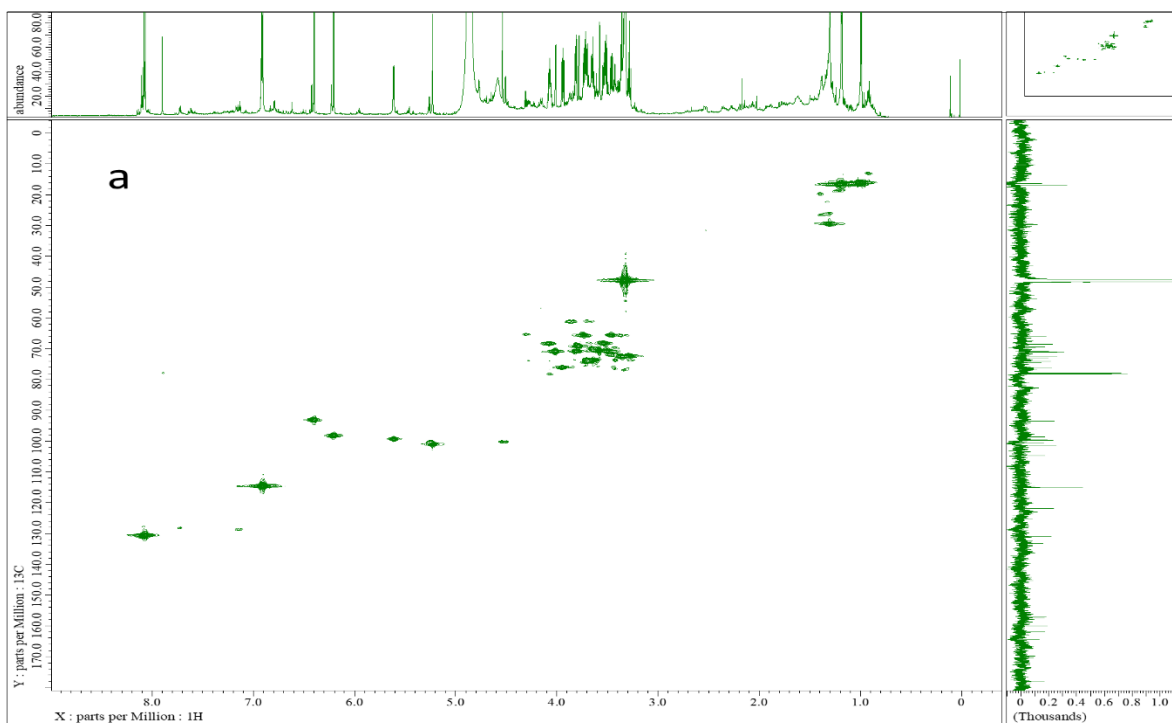


Figure S9. HMQC of compound 2 (CD_3OD , 800 MHz)

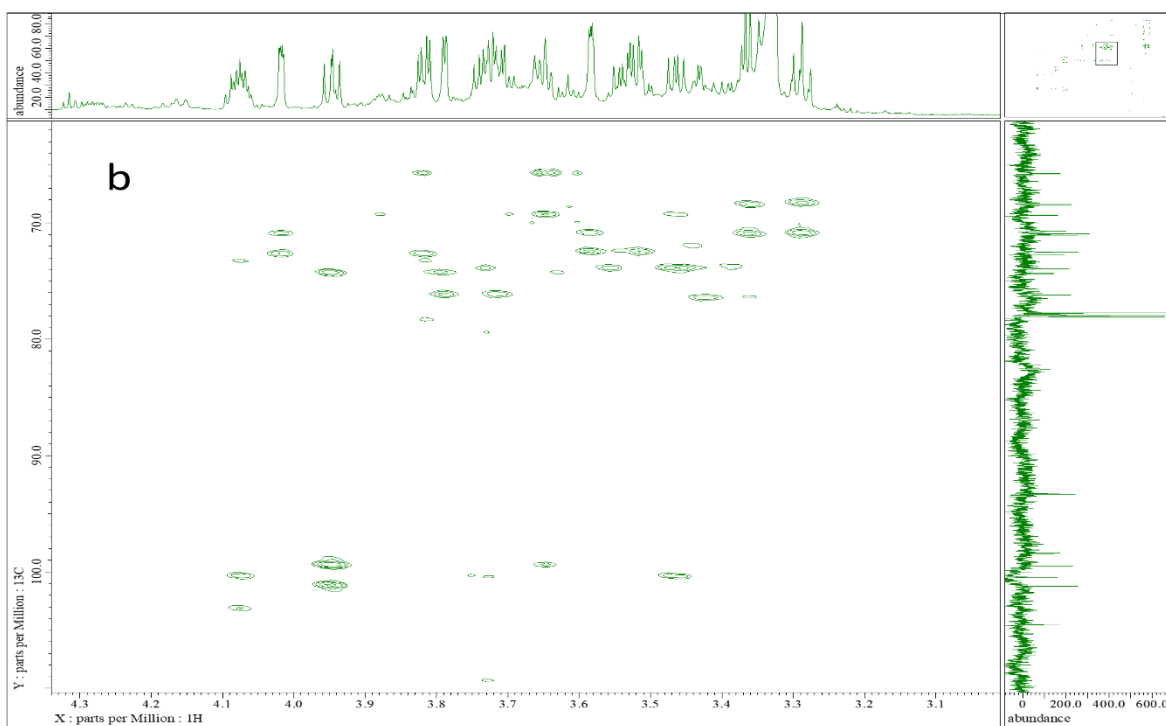
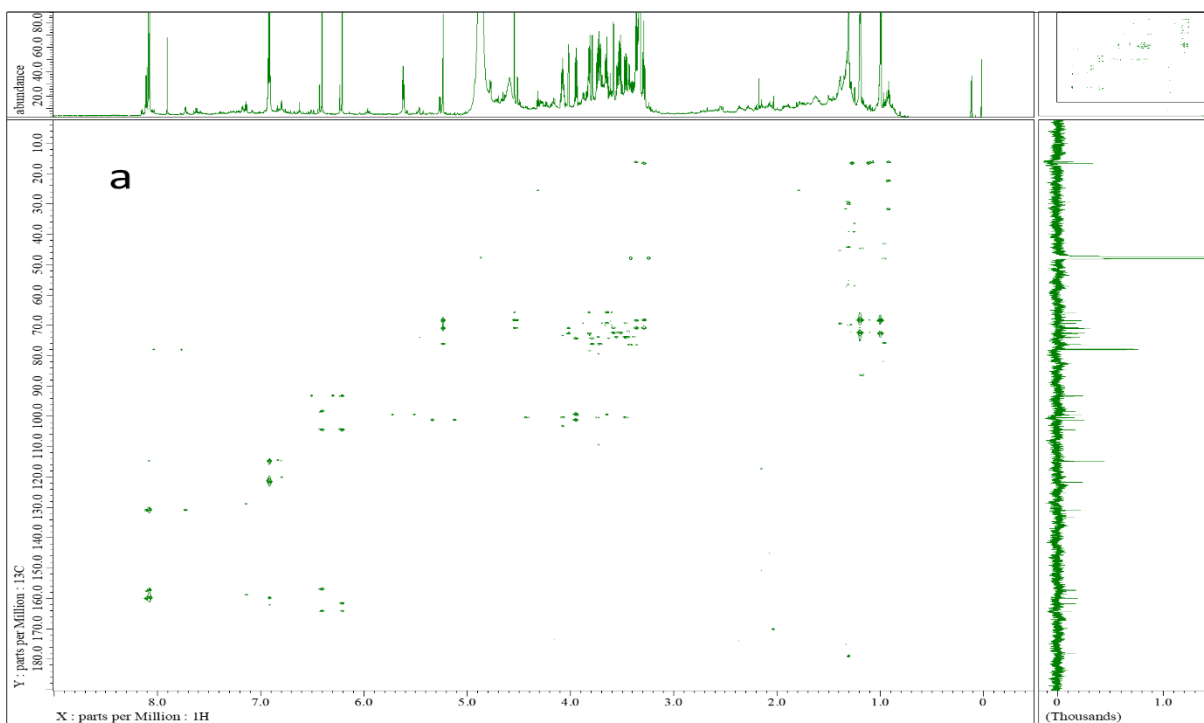


Figure S10. HMBC of compound 2 (CD₃OD, 800 MHz)

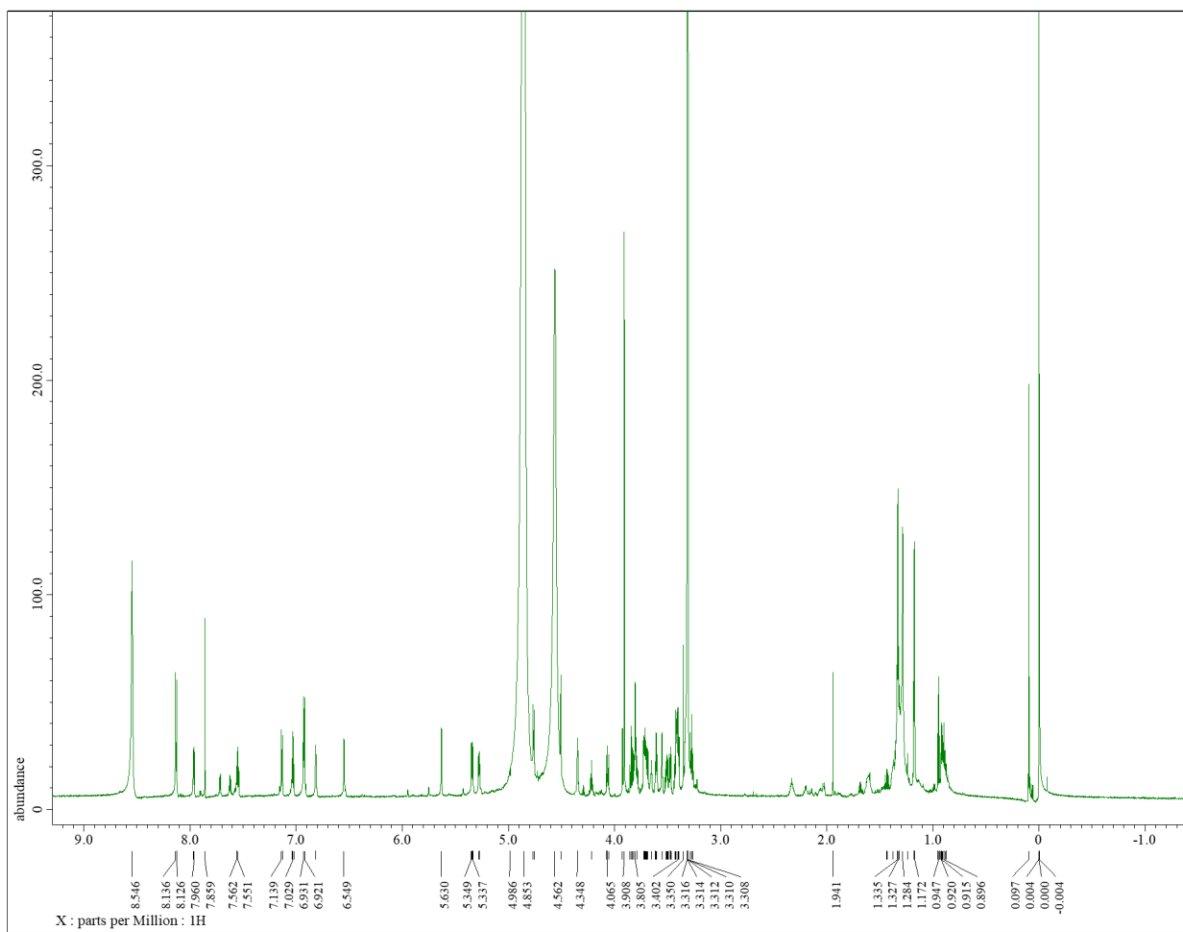


Figure S11. ^1H NMR spectrum of compound **3** (CD_3OD , 800 MHz)

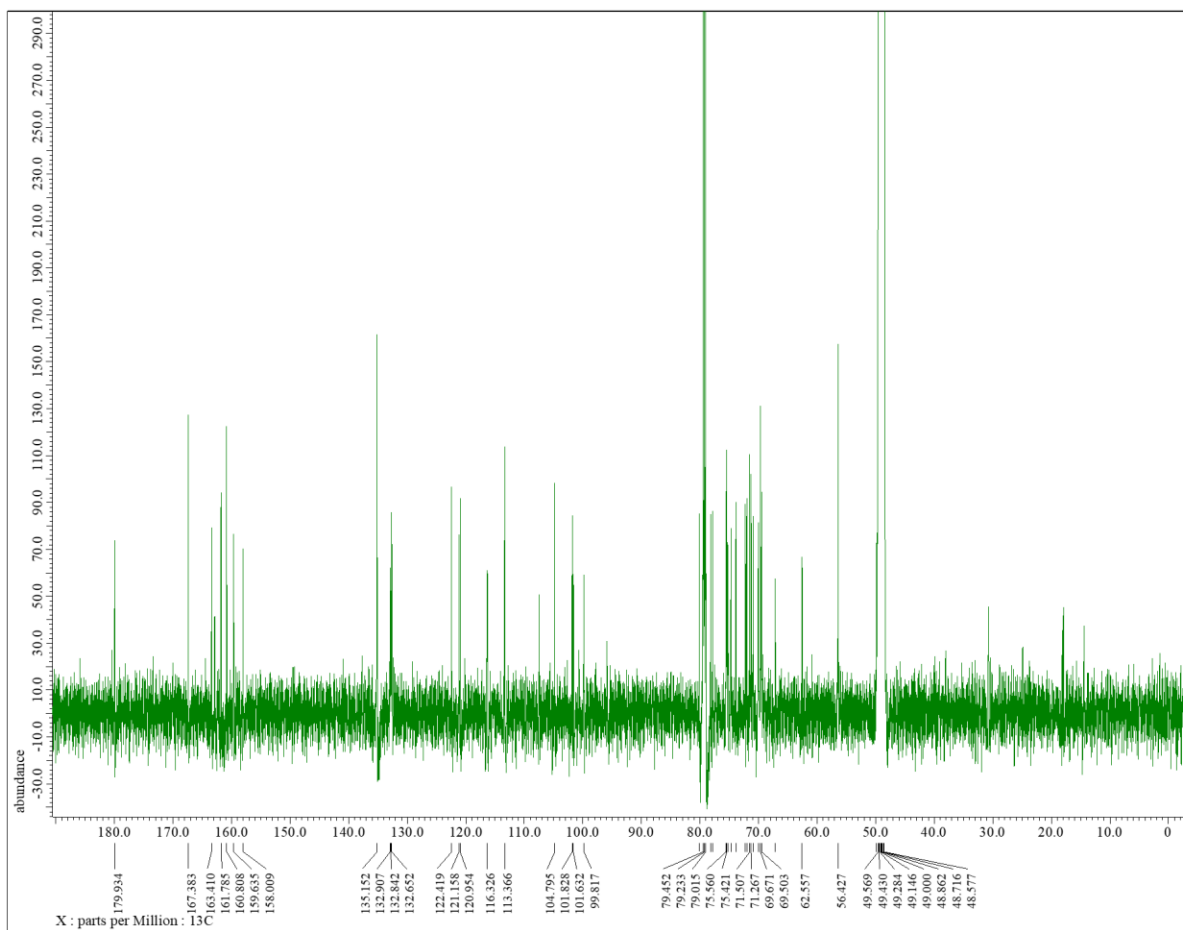


Figure S12. ^{13}C NMR spectrum of compound **3** (CD_3OD , 800 MHz)

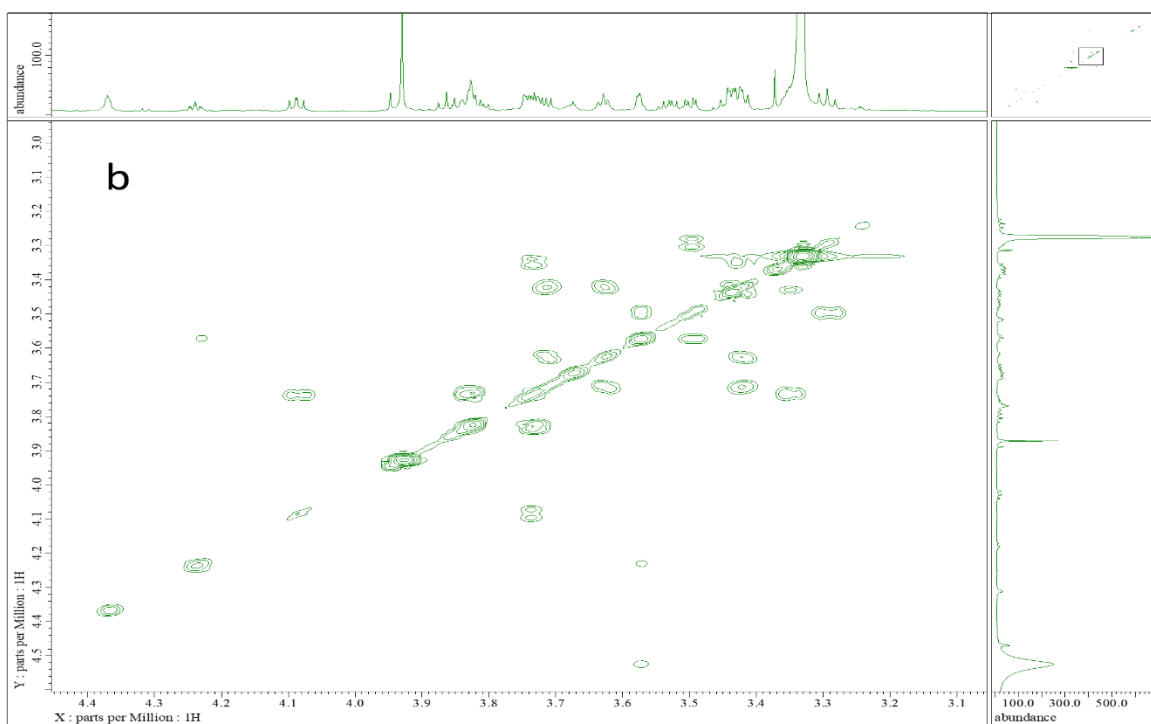
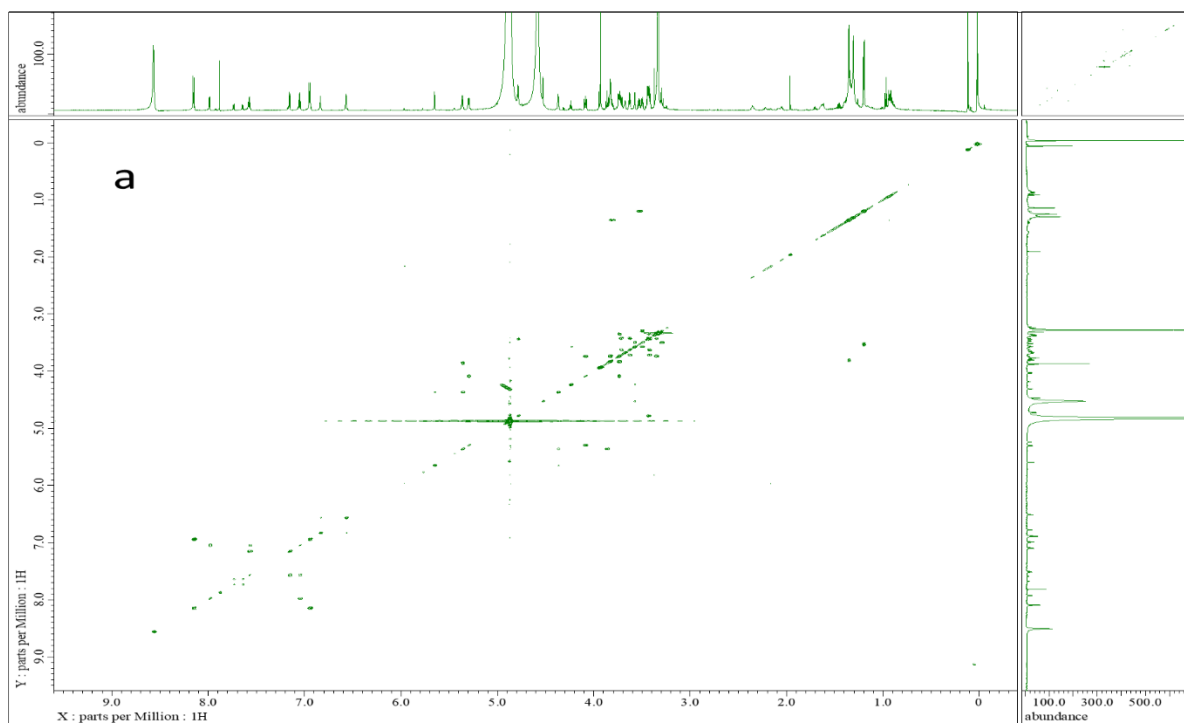


Figure S13. ^1H - ^1H COSY of compound 3 (CD_3OD , 800 MHz)

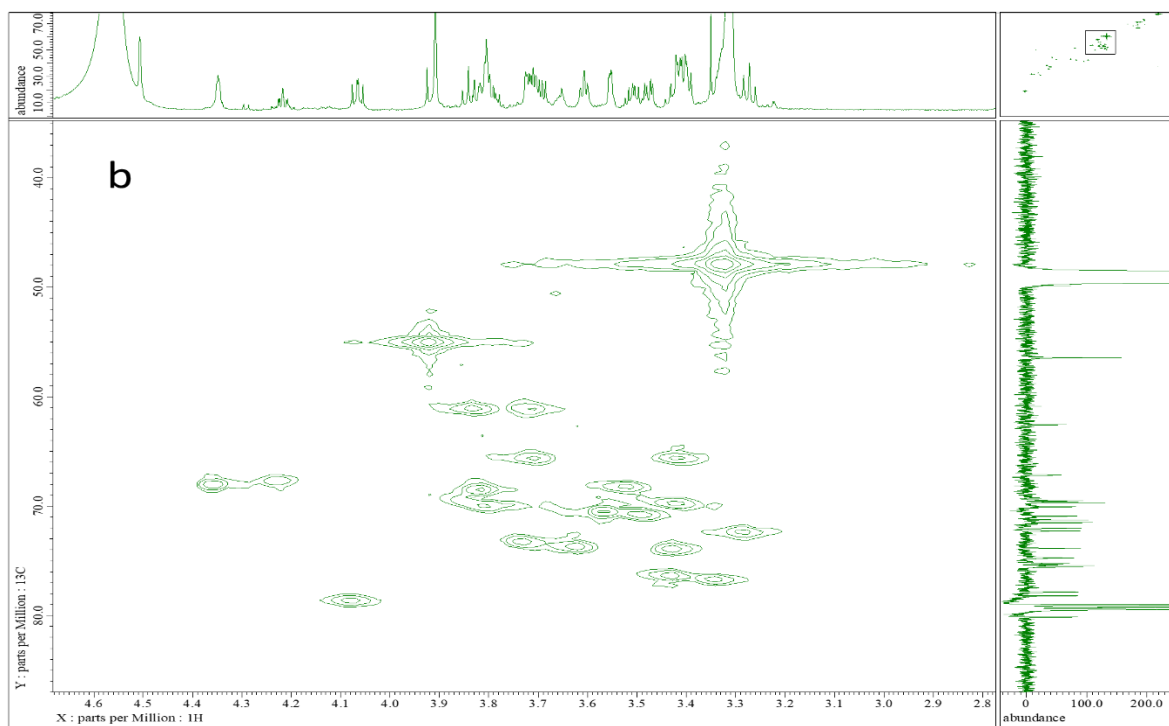
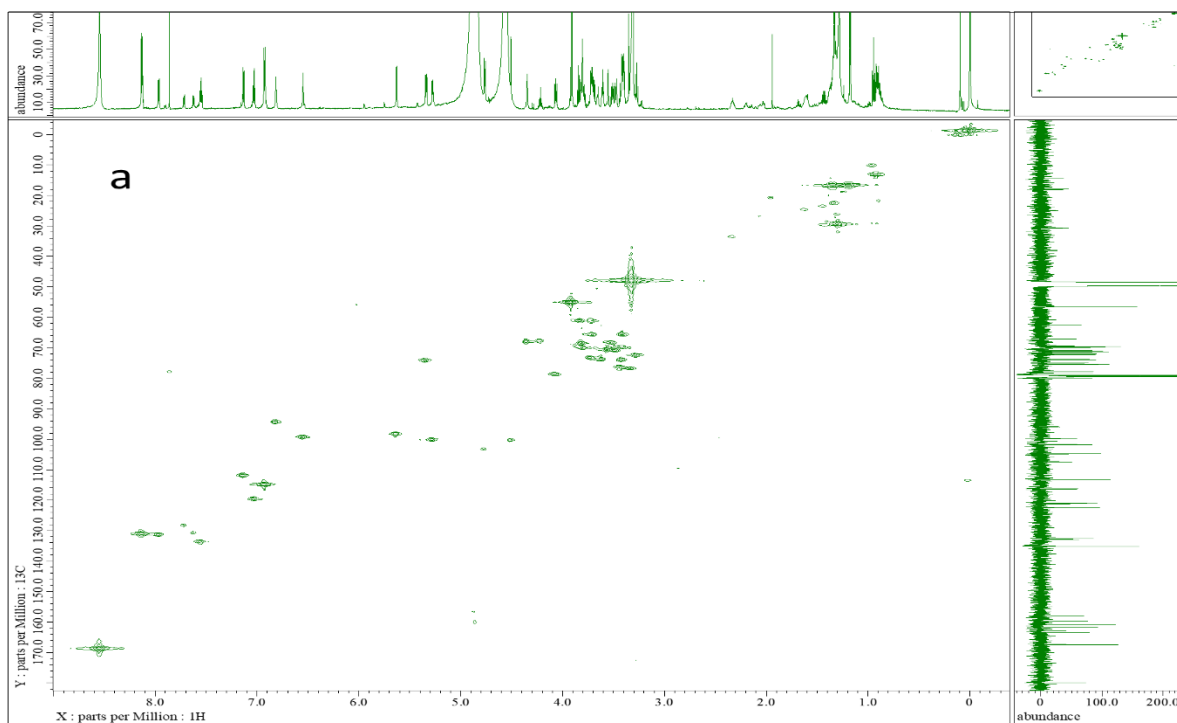


Figure S14. HMQC of compound 3 (CD₃OD, 800 MHz)

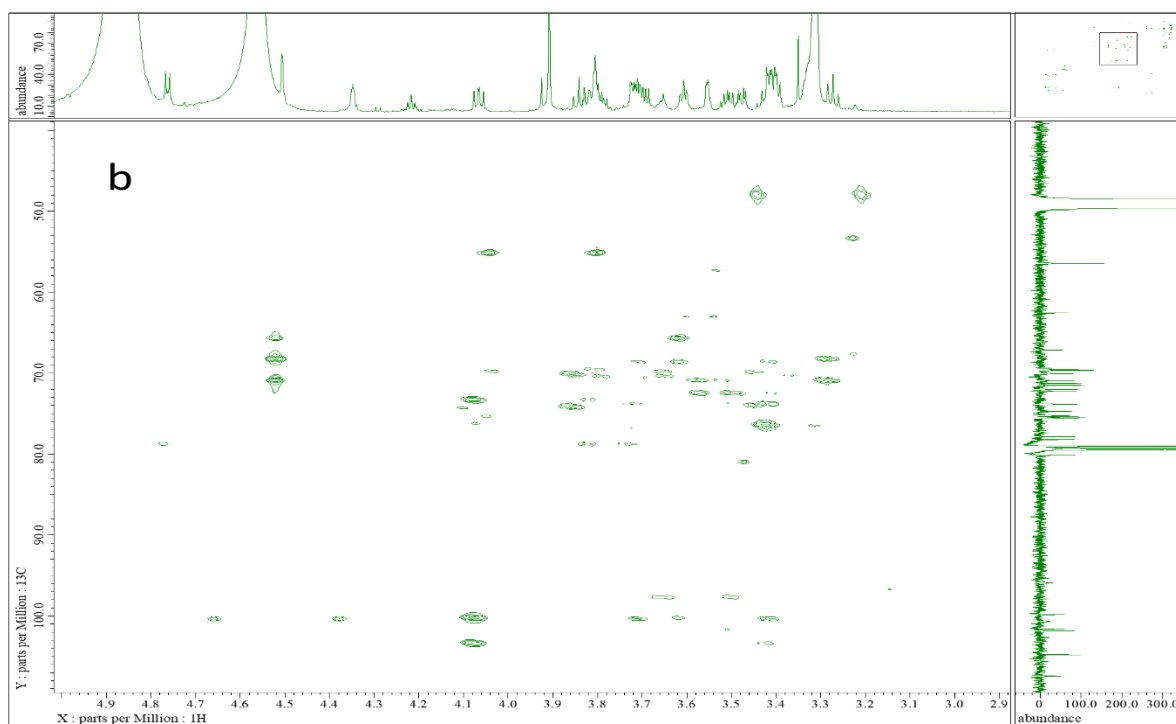
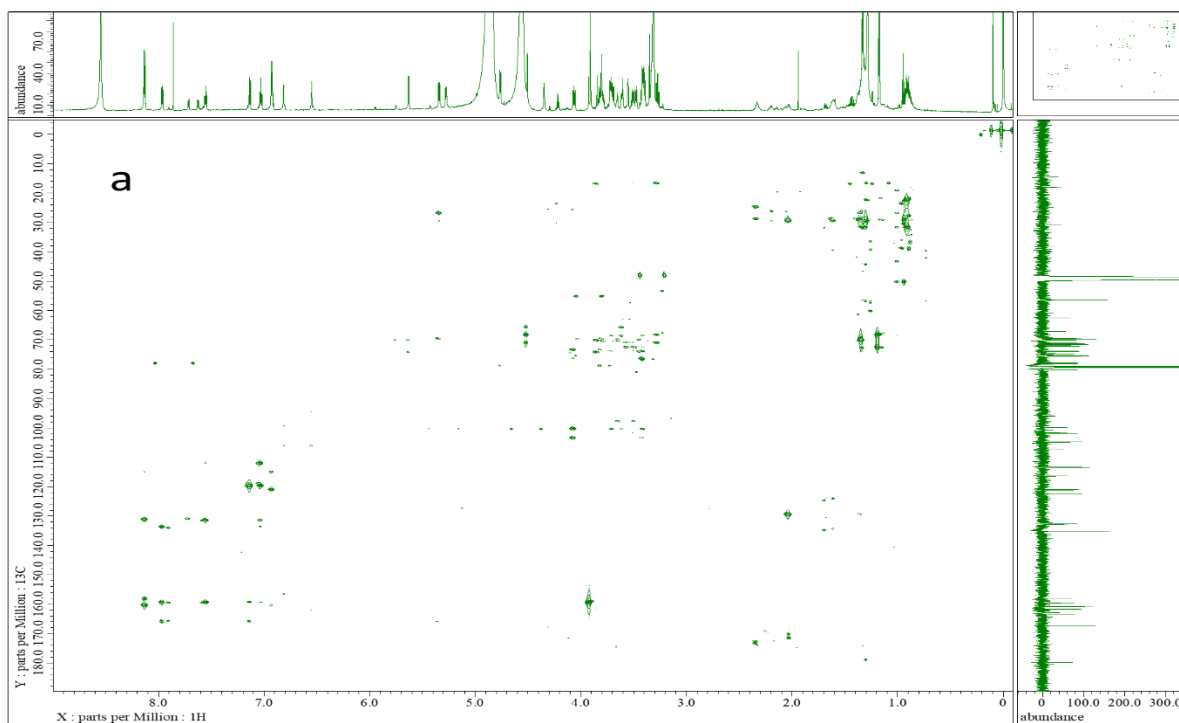


Figure S15. HMBC of compound 3 (CD₃OD, 800 MHz)

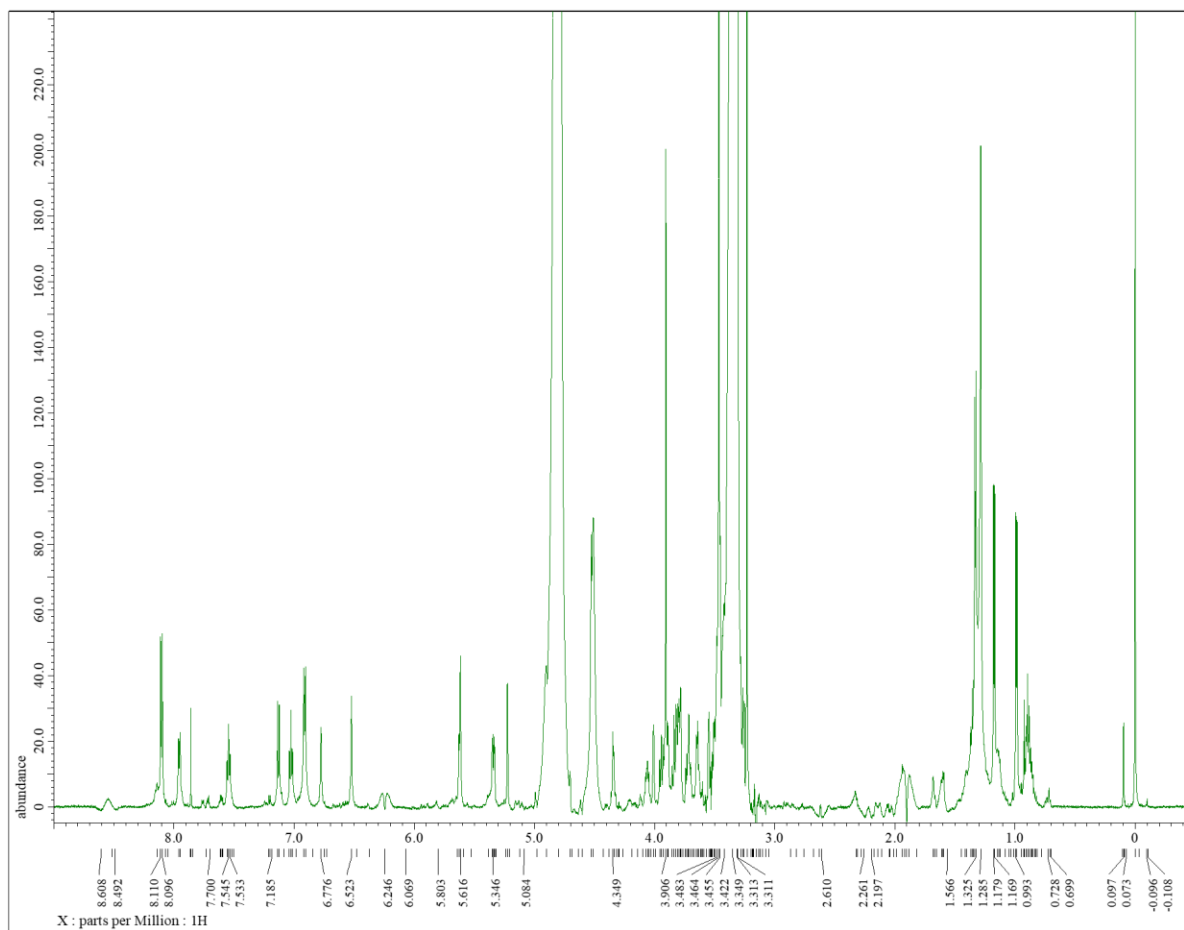


Figure S16. ¹H NMR spectrum of compound 4 (CD₃OD, 600 MHz)

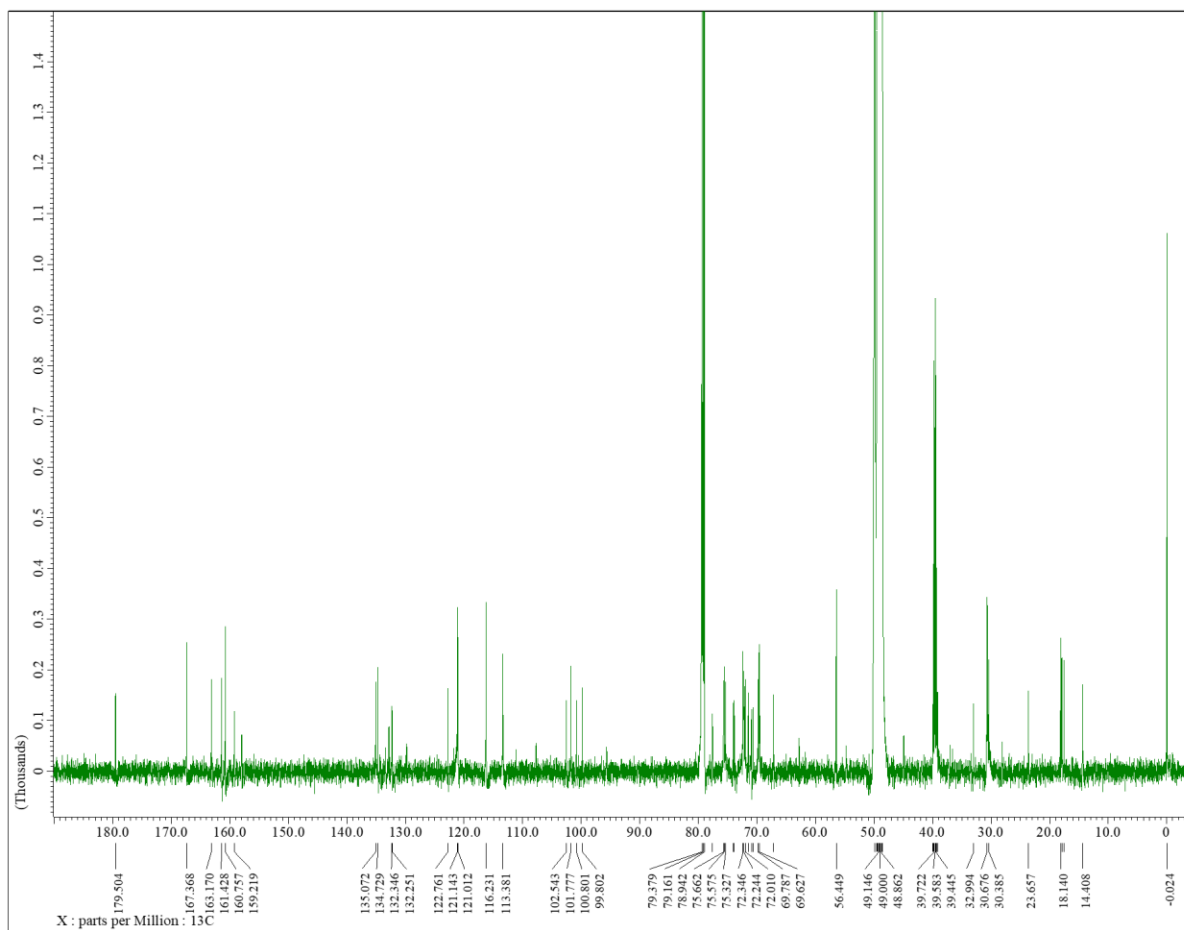


Figure S17. ^{13}C NMR spectrum of compound **4** (CD_3OD , 600 MHz)

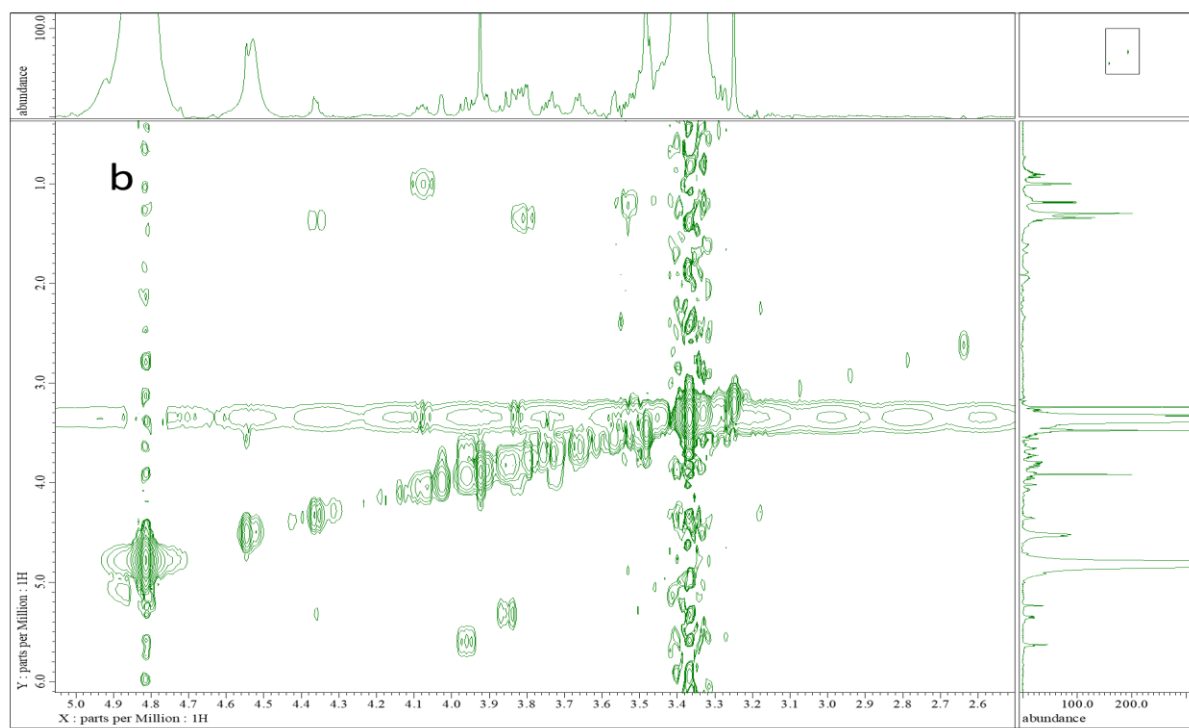
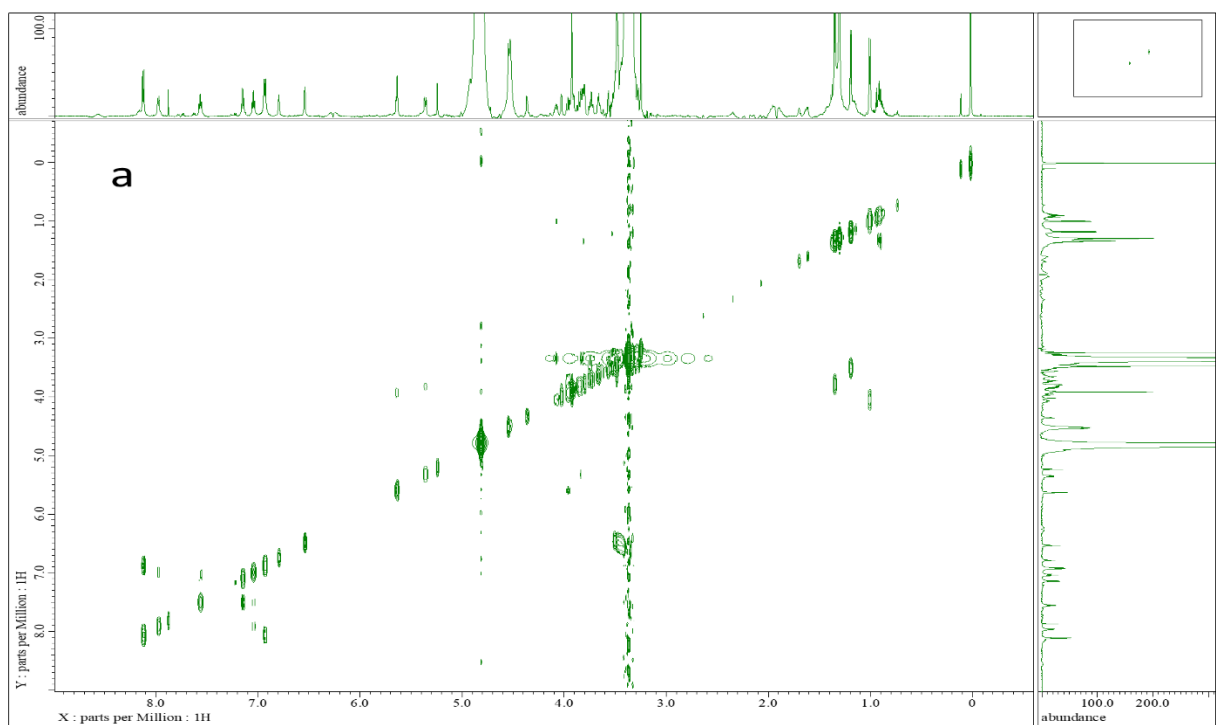


Figure S18. ^1H - ^1H COSY of compound 4 (CD_3OD , 600 MHz)

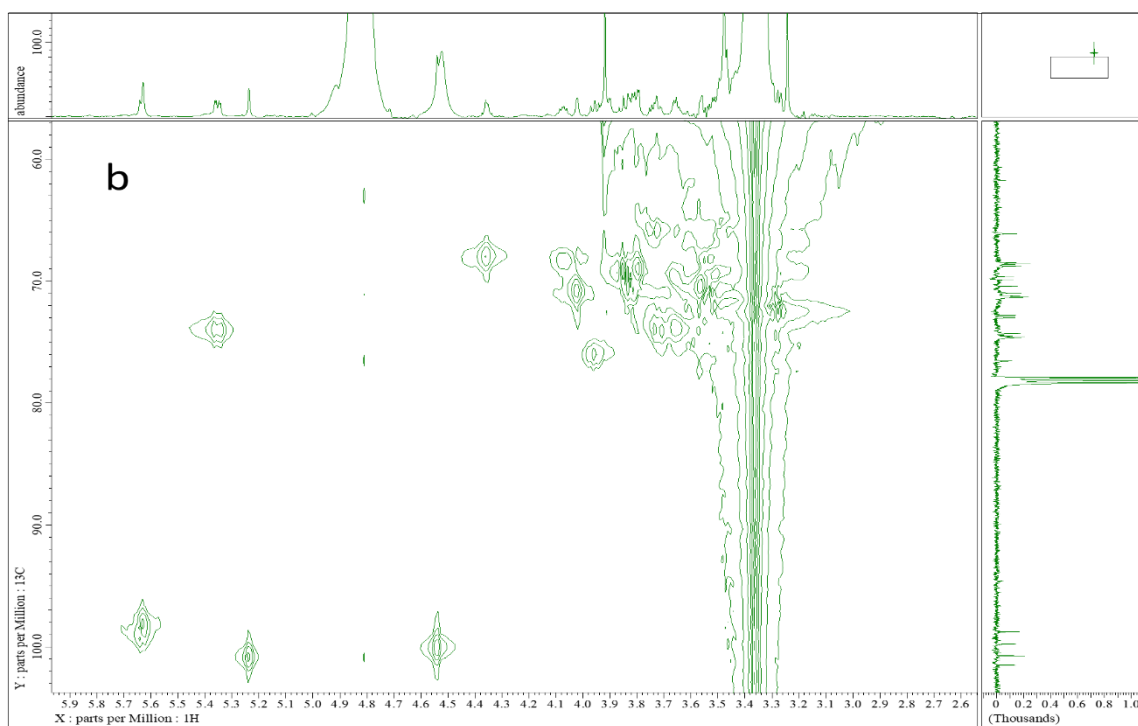
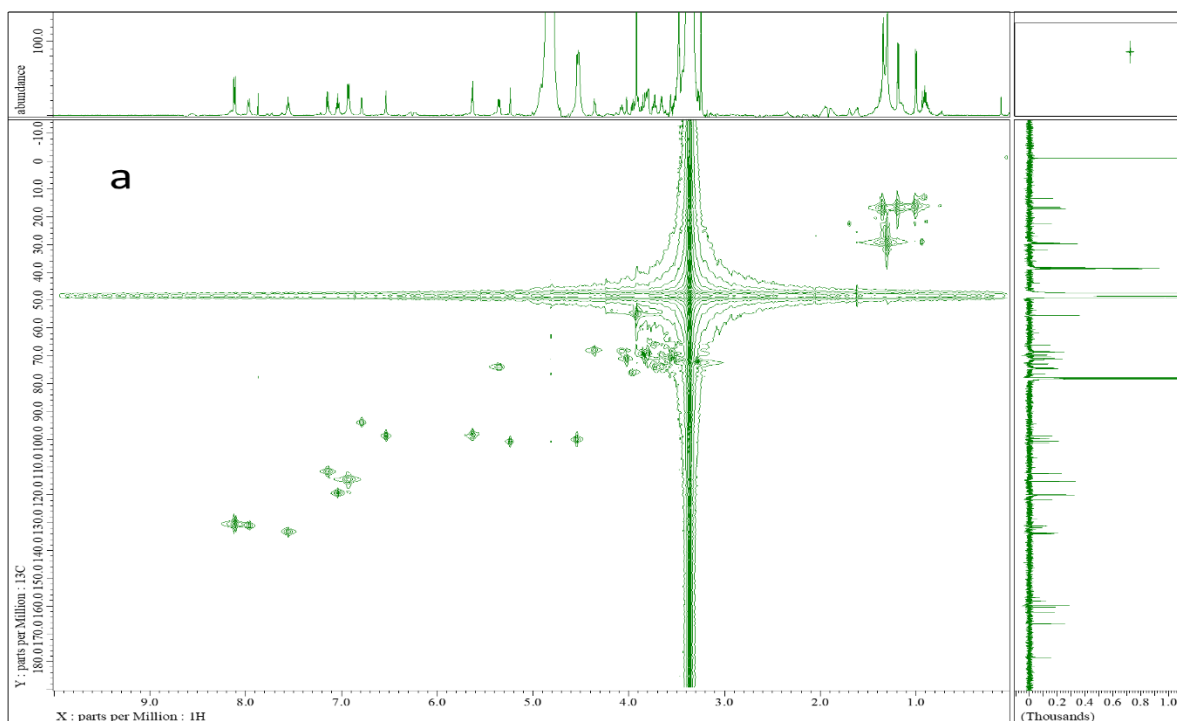


Figure S19. HMQC of compound 4 (CD₃OD, 600 MHz)

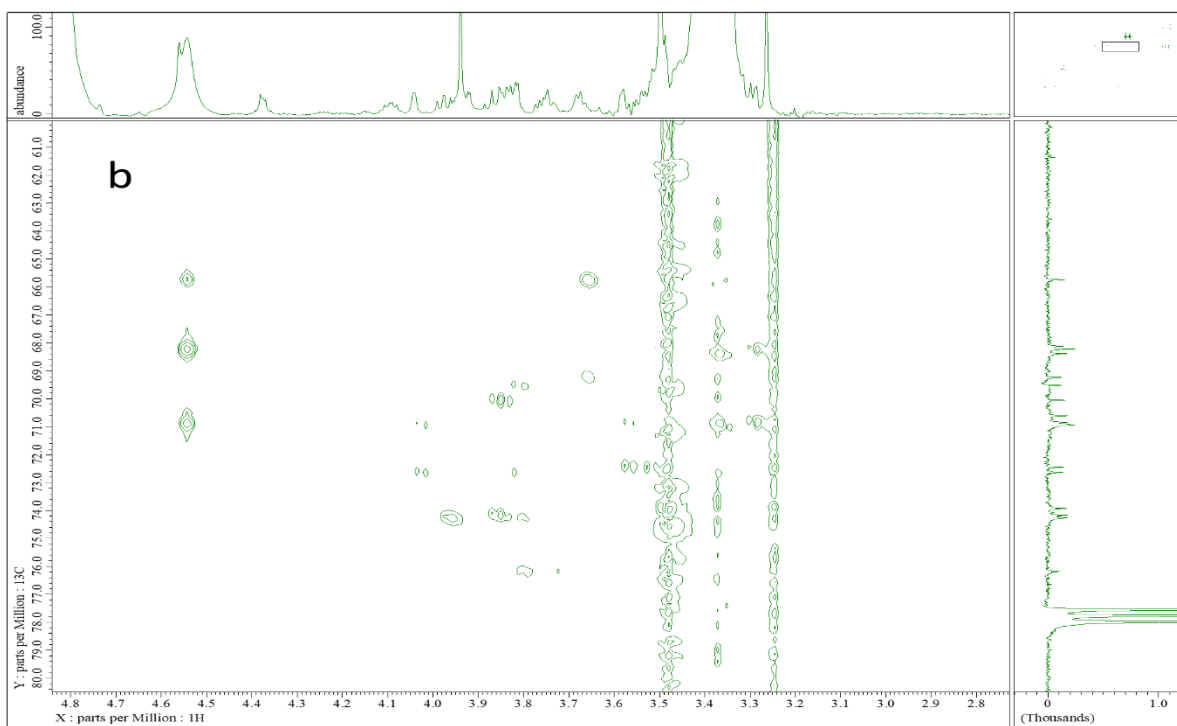
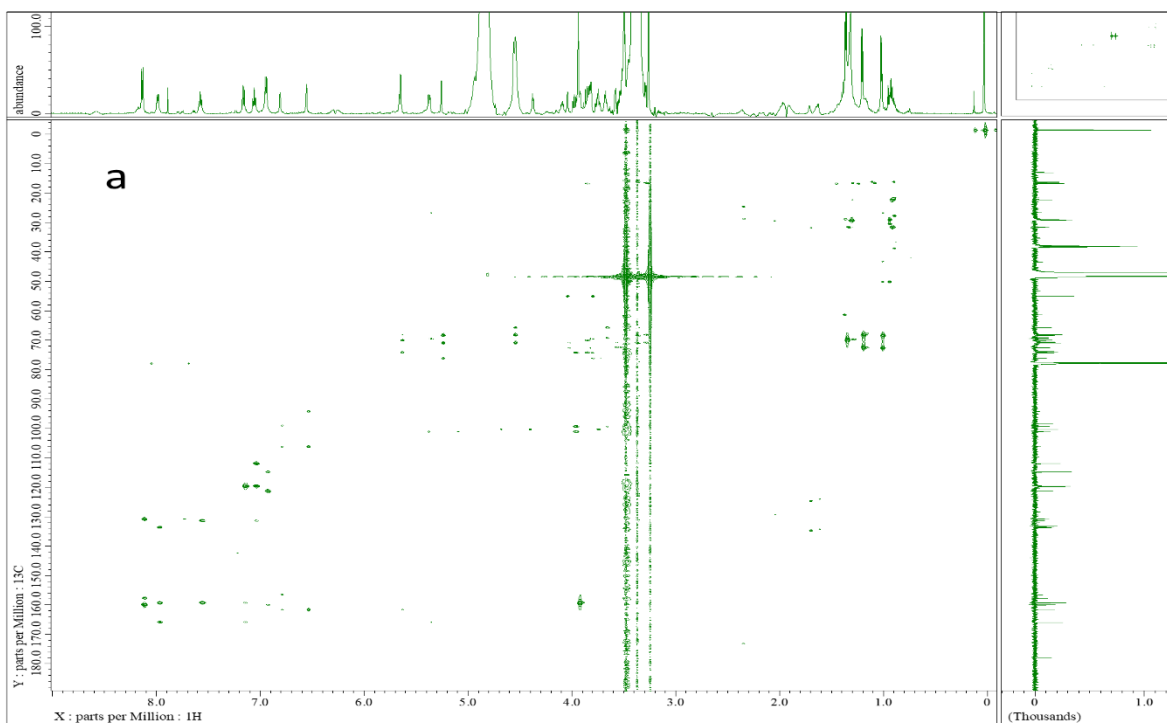


Figure S20. HMBC of compound 4 (CD₃OD, 600 MHz)

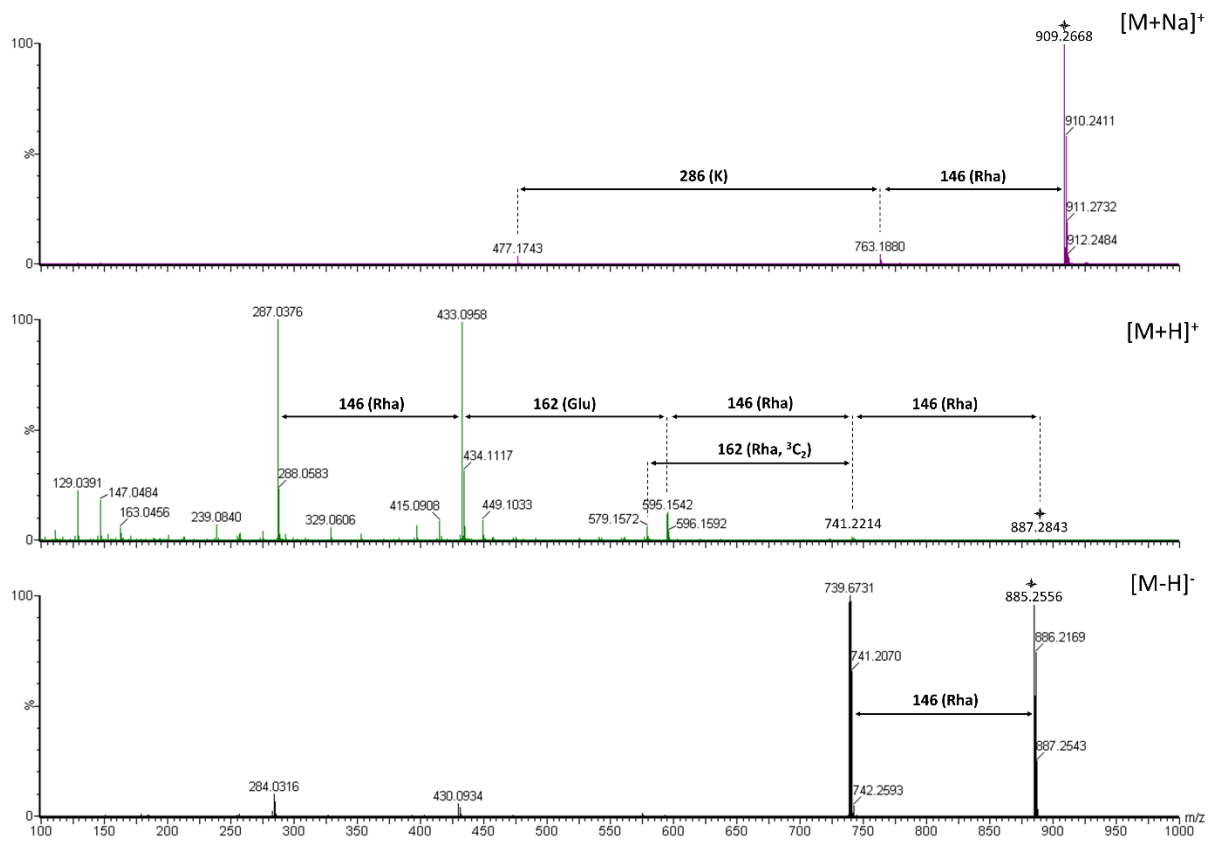


Figure S21. LC/ESI/MS/MS data of compound 1

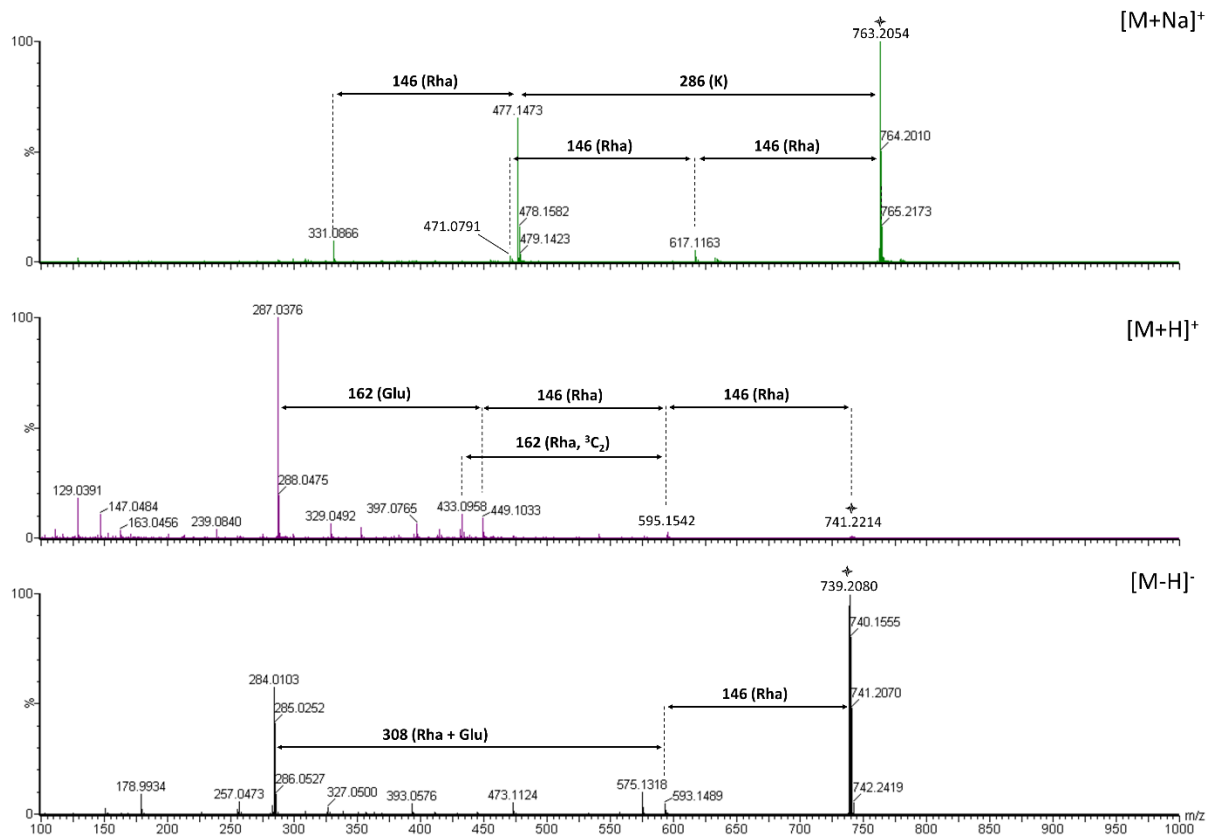


Figure S22. LC/ESI/MS/MS data of compound 2

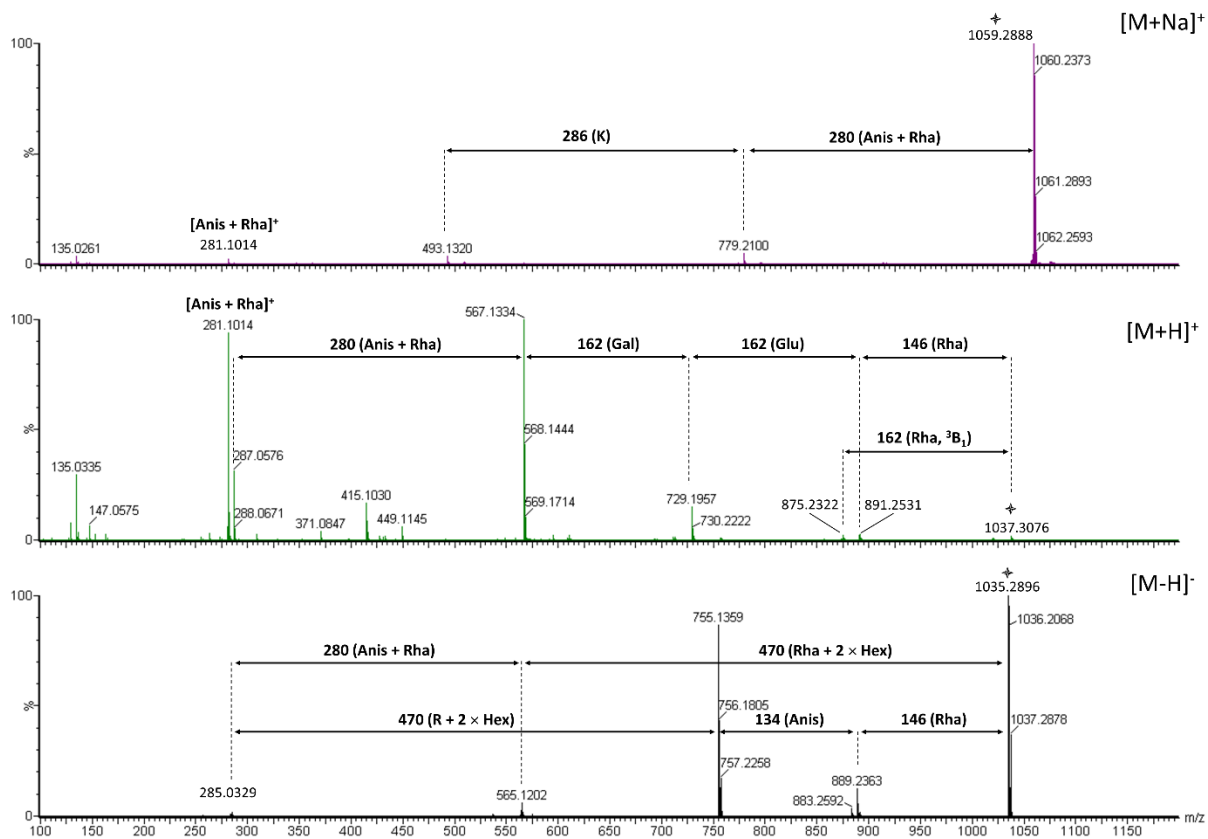


Figure S23. LC/ESI/MS/MS data of compound 3

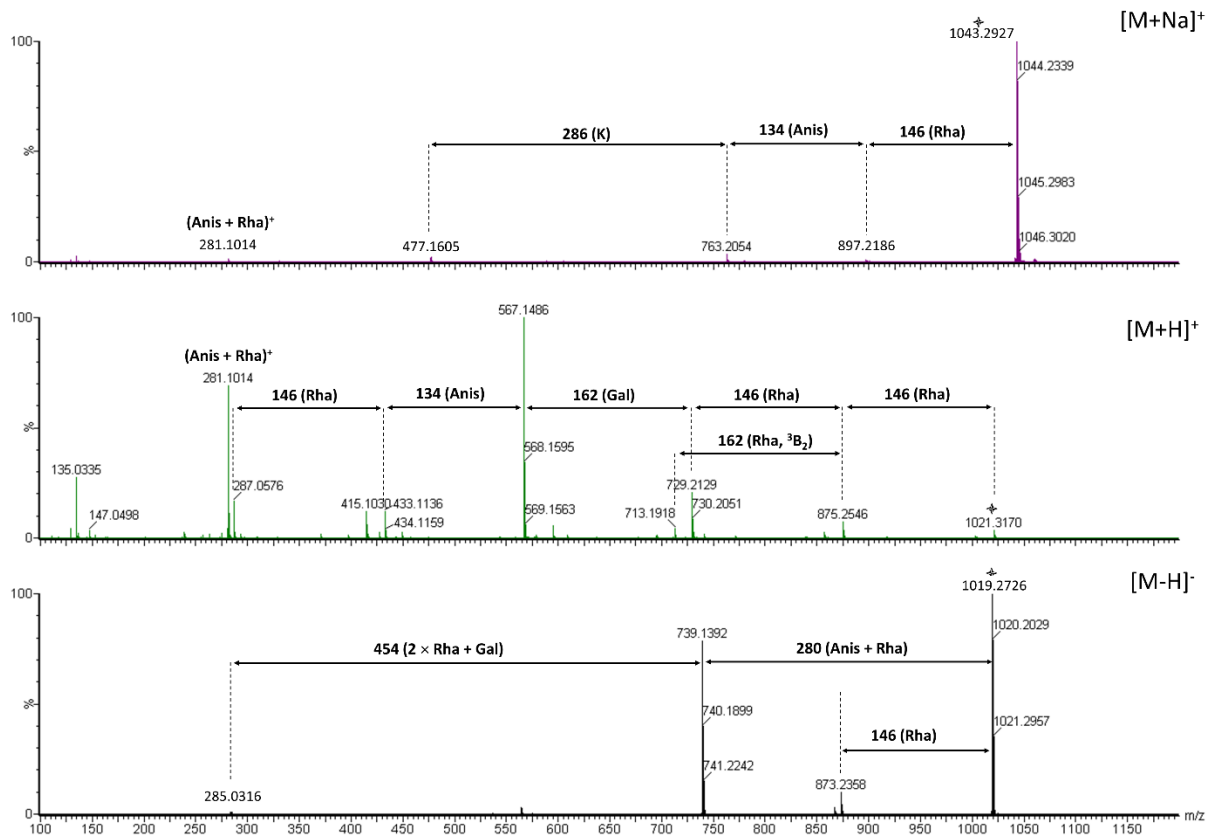


Figure S24. LC/ESI/MS/MS data of compound 4

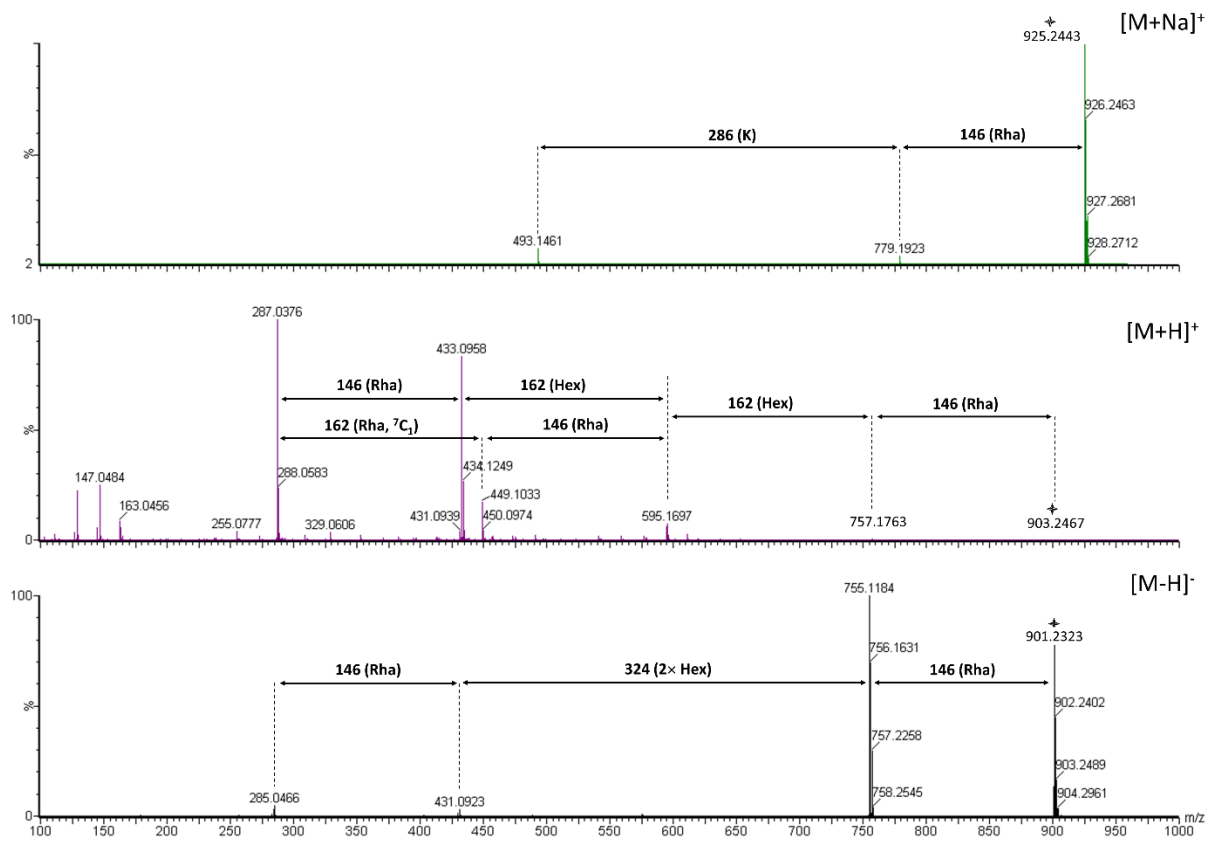


Figure S25. LC/ESI/MS/MS data of compound 5

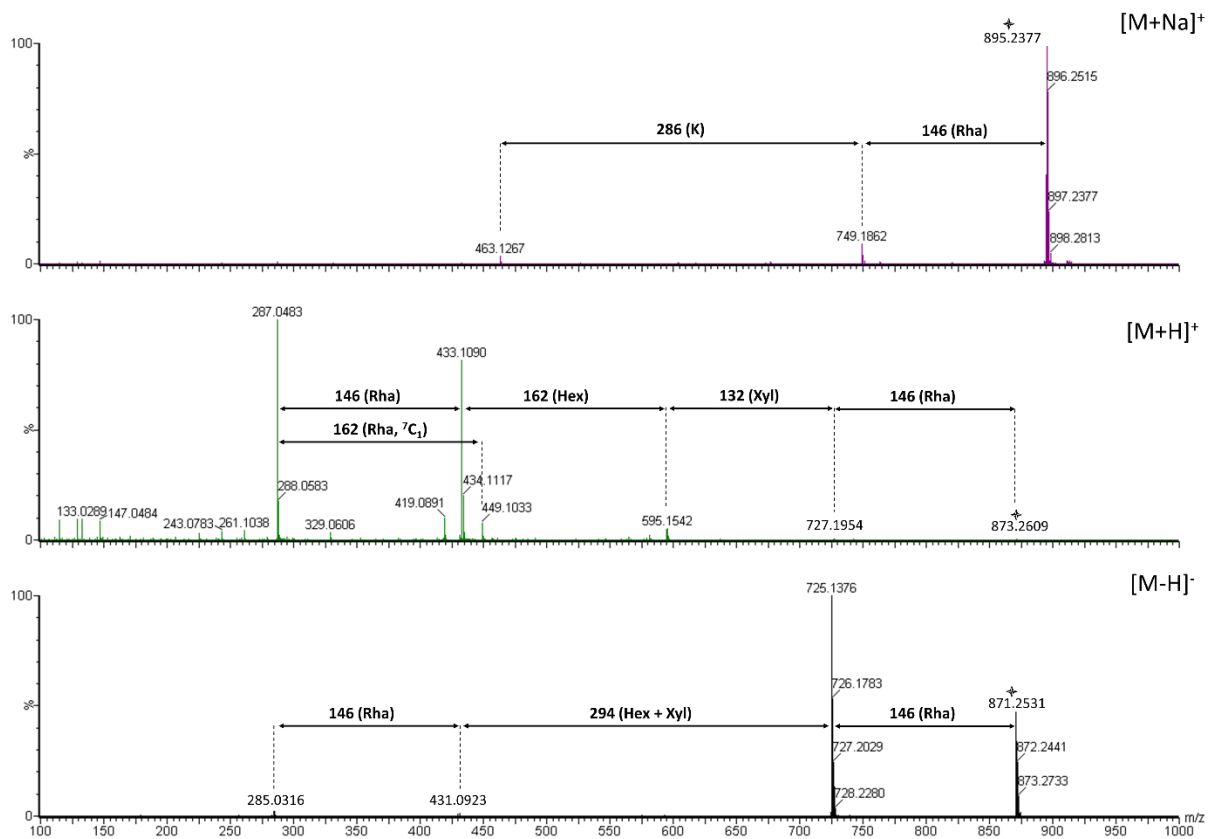


Figure S26. LC/ESI/MS/MS data of compound 6

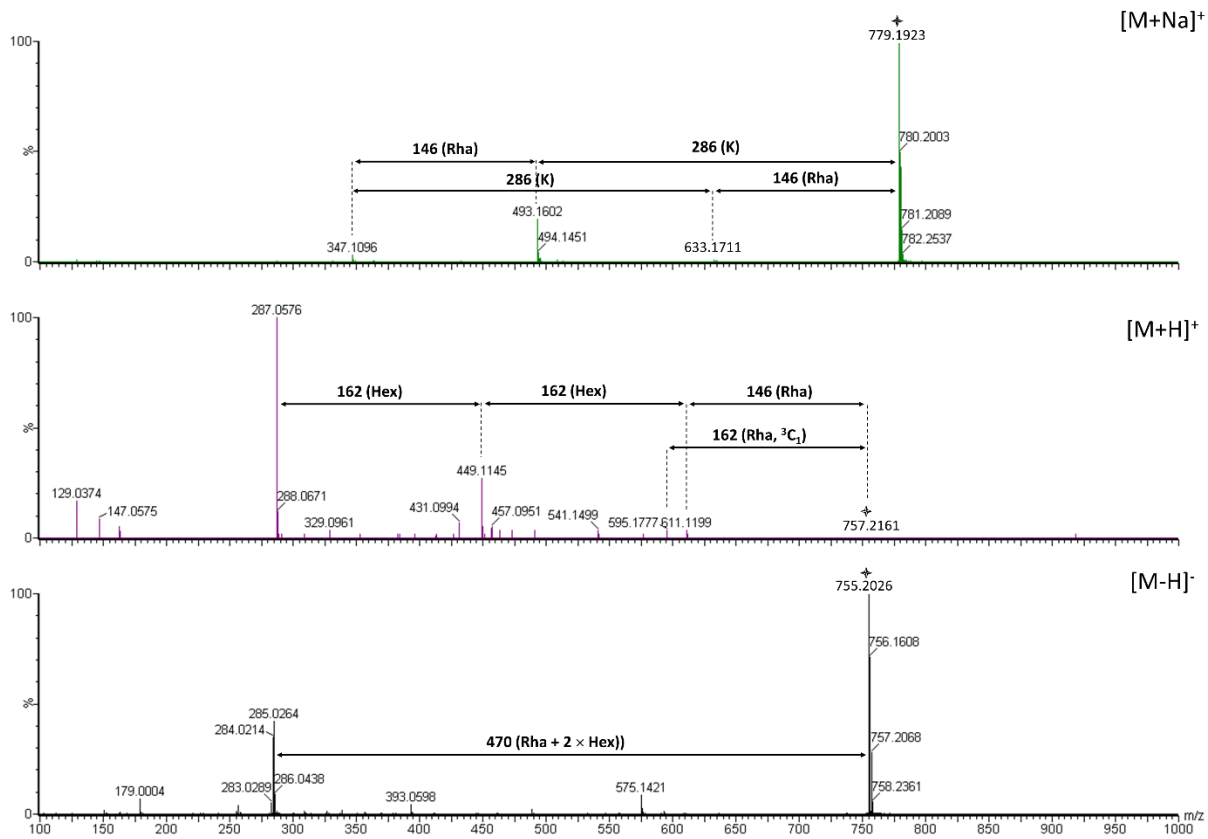


Figure S27. LC/ESI/MS/MS data of compound 7

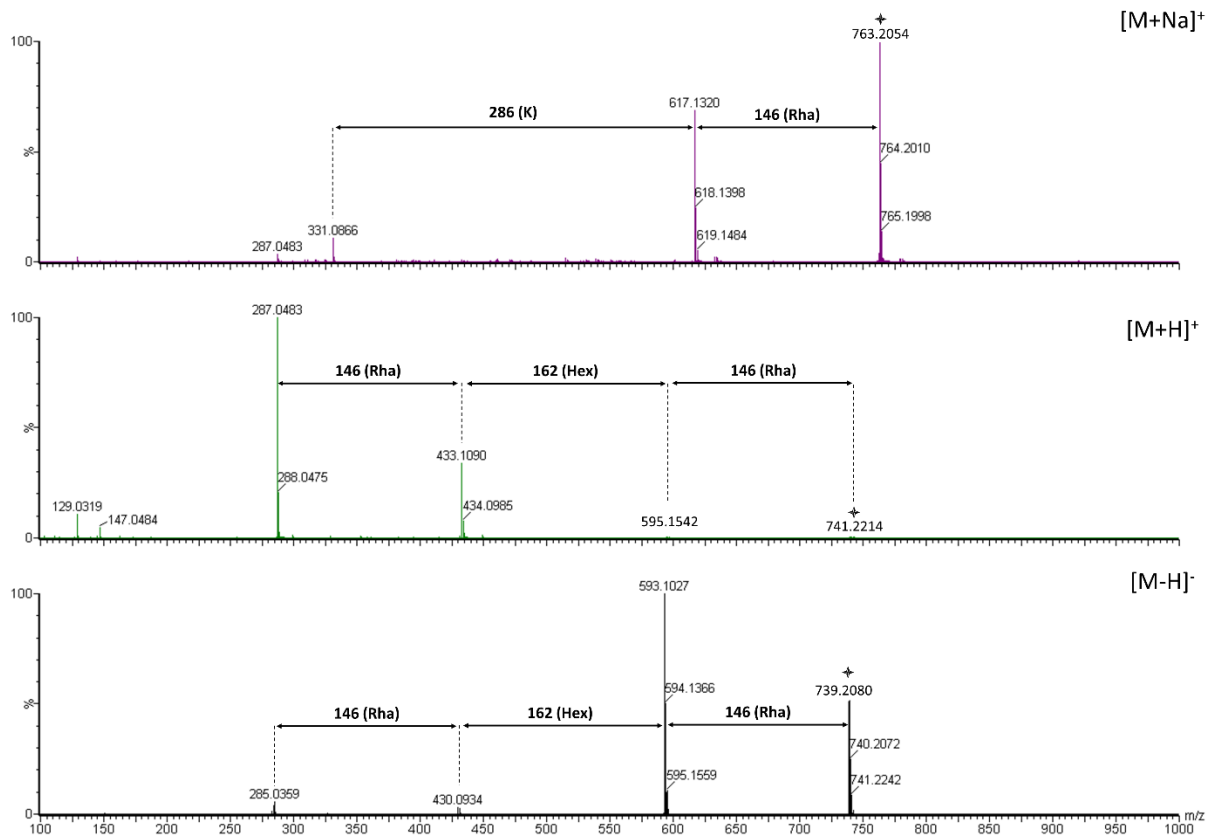


Figure S28. LC/ESI/MS/MS data of compound 8

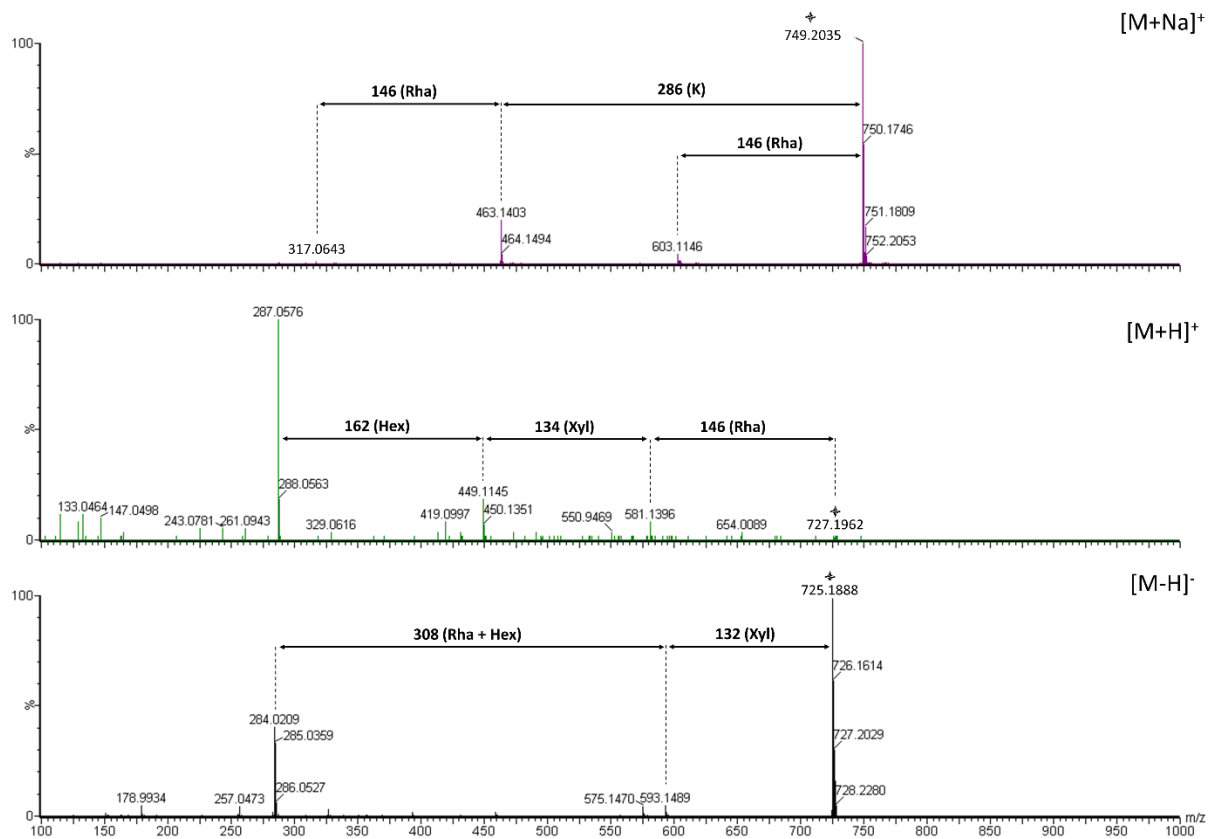


Figure S29. LC/ESI/MS/MS data of compound 9

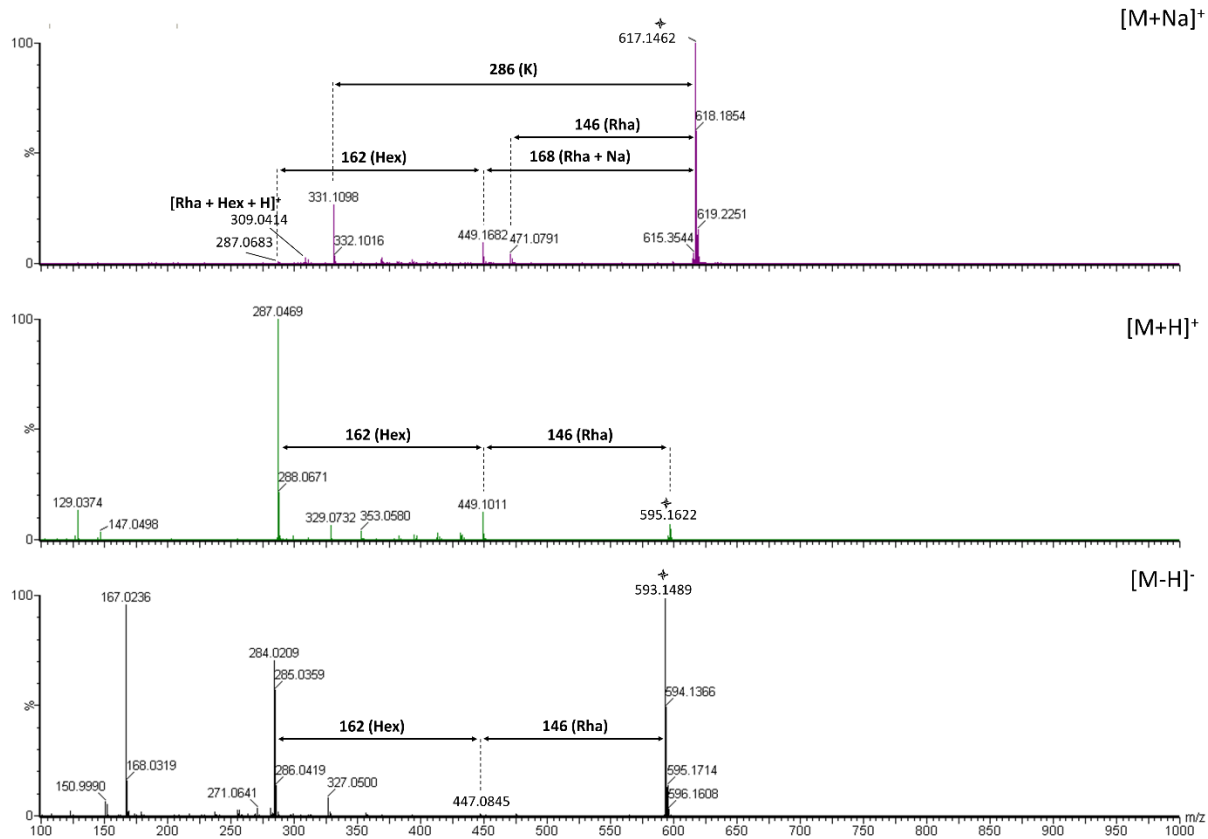


Figure S30. LC/ESI/MS/MS data of compound 10

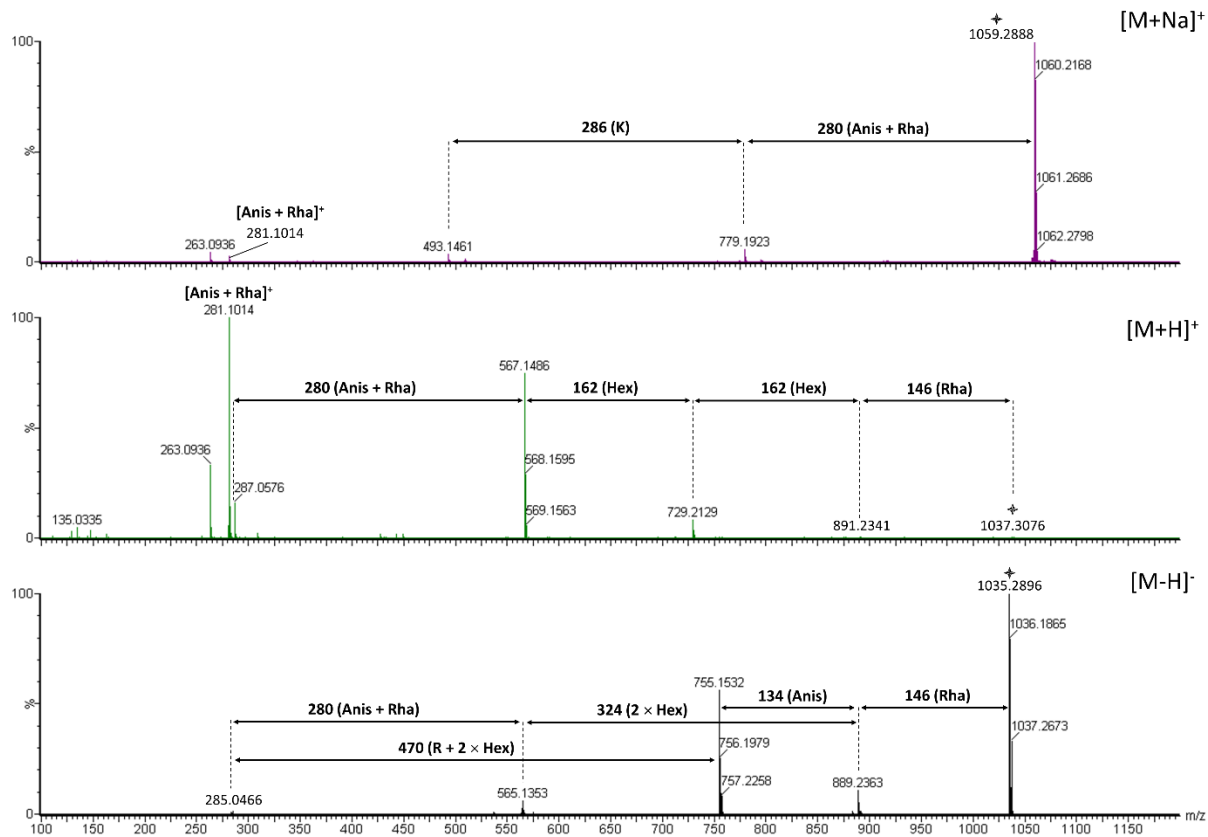


Figure S31. LC/ESI/MS/MS data of compound 11

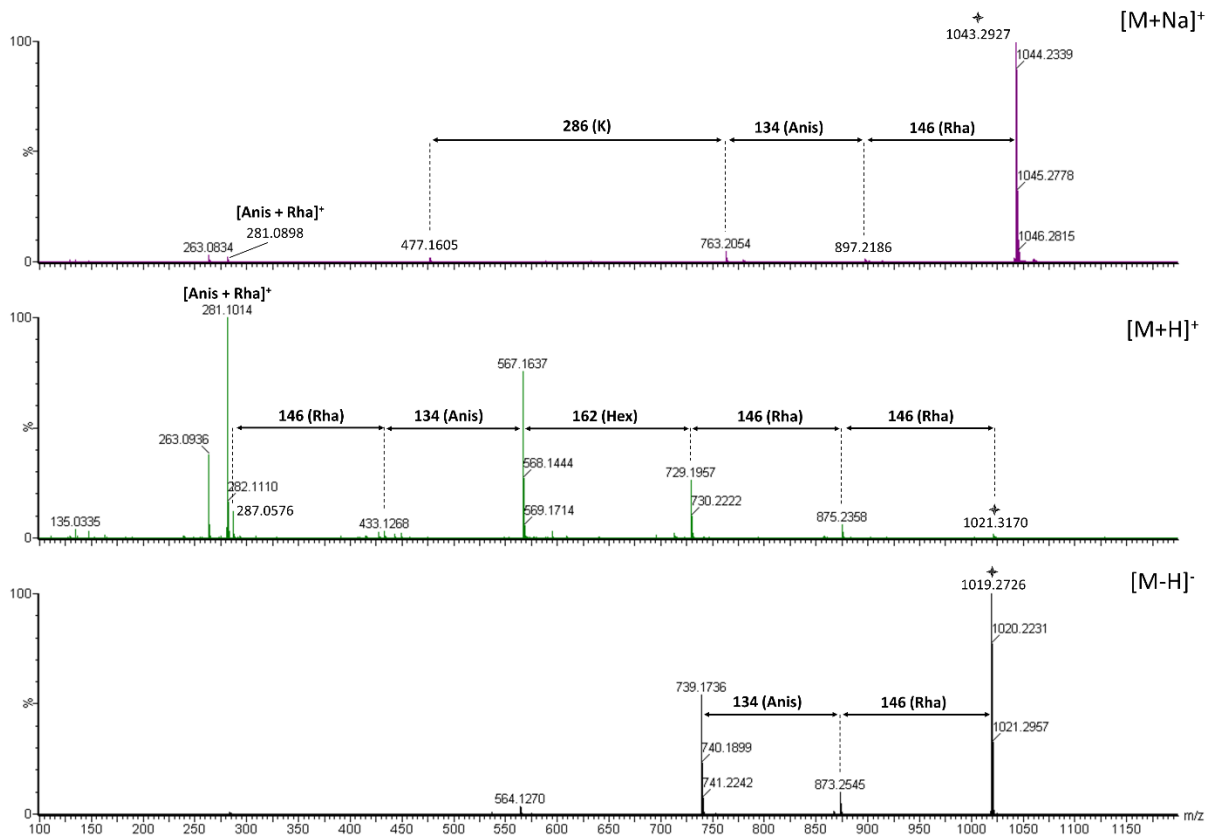


Figure S32. LC/ESI/MS/MS data of compound 12

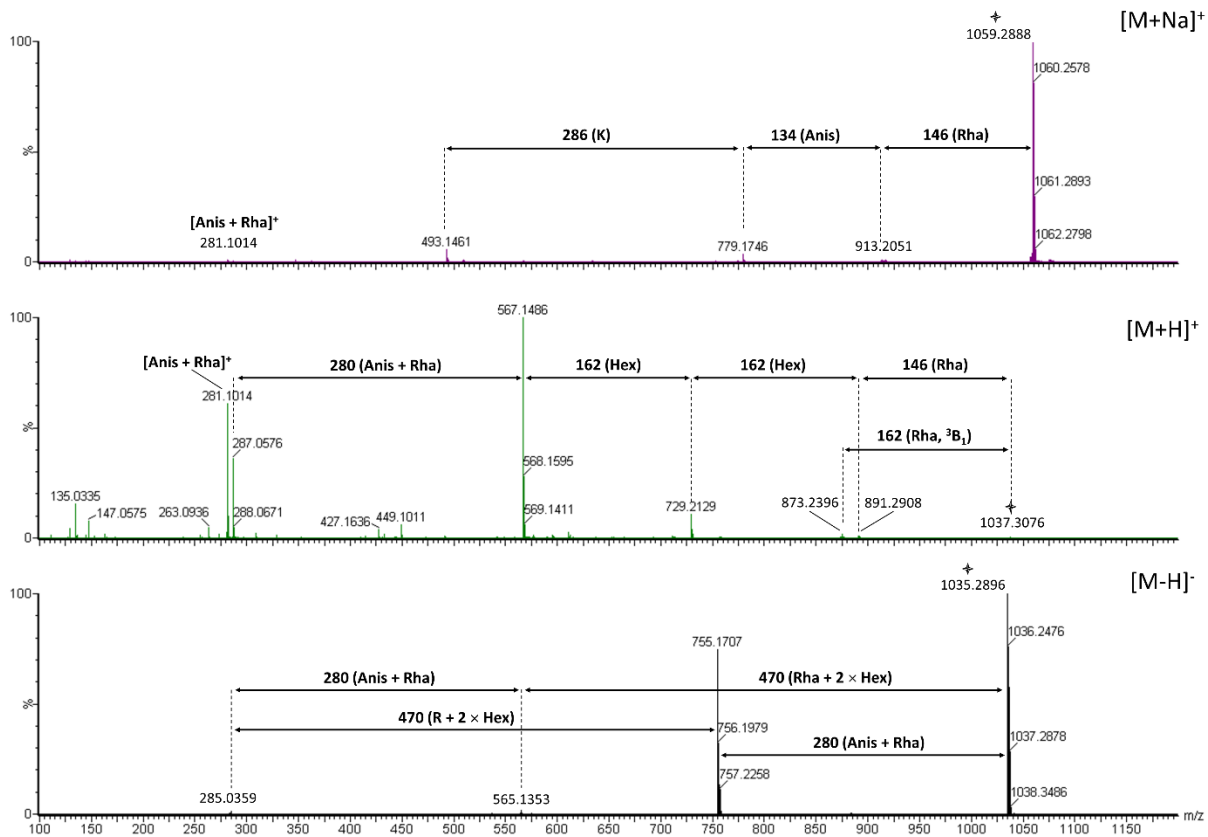


Figure S33. LC/ESI/MS/MS data of compound 13

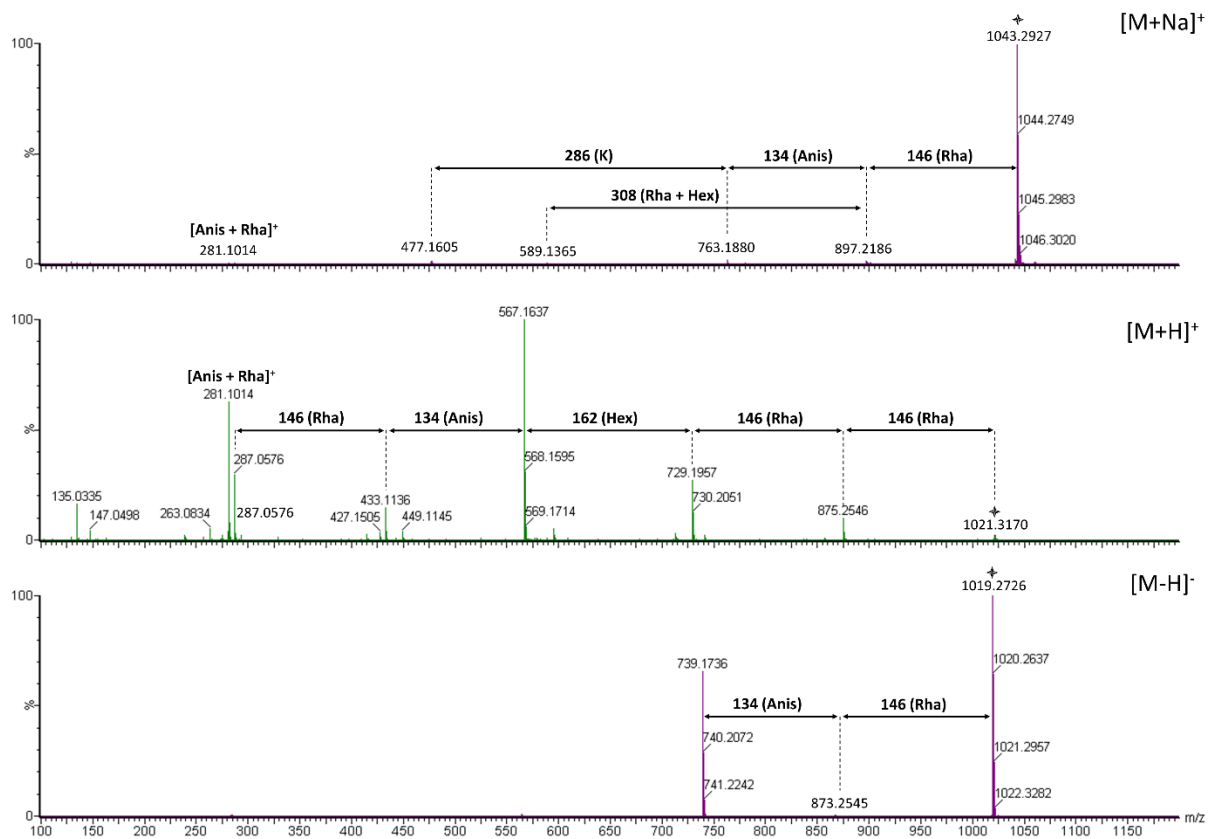


Figure S34. LC/ESI/MS/MS data of compound 14

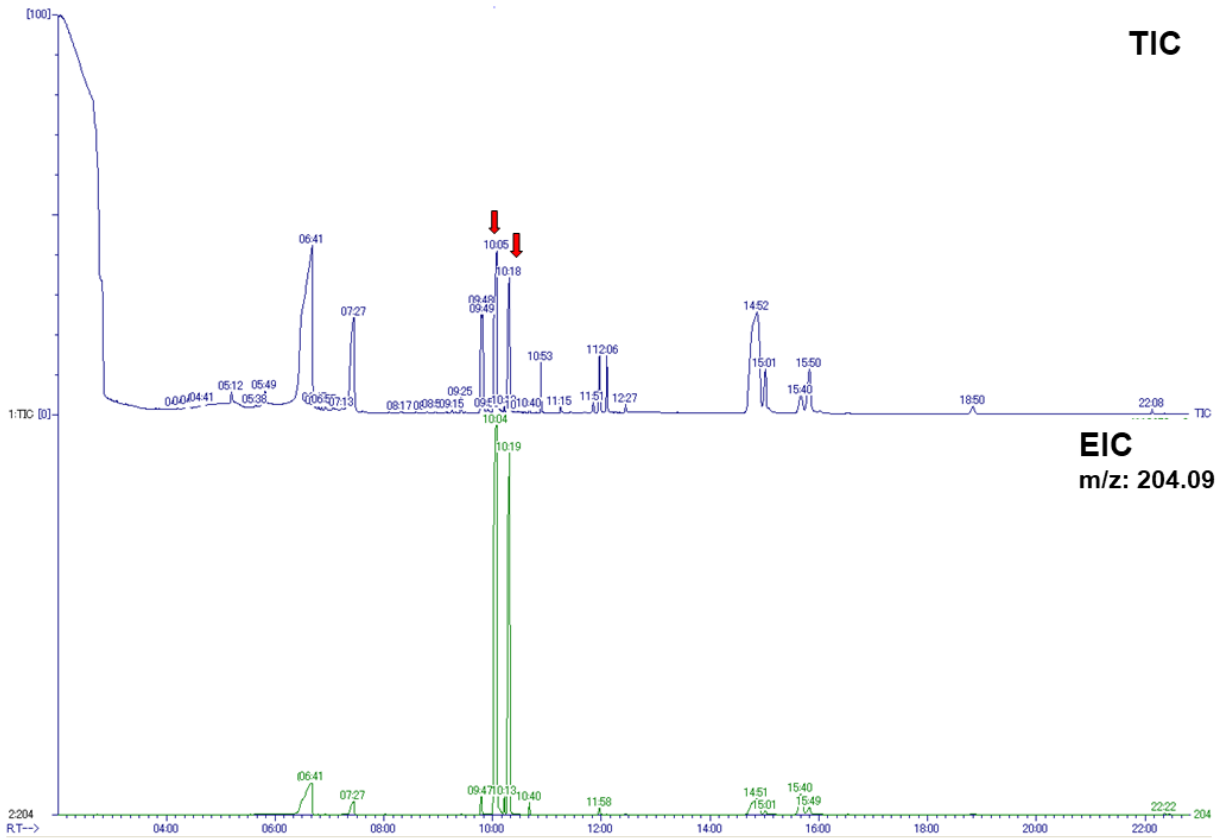


Figure S35. GC-MS total ion chromatogram and extracted ion chromatogram of trimethylsilyl (TMS) derivatives of galactose

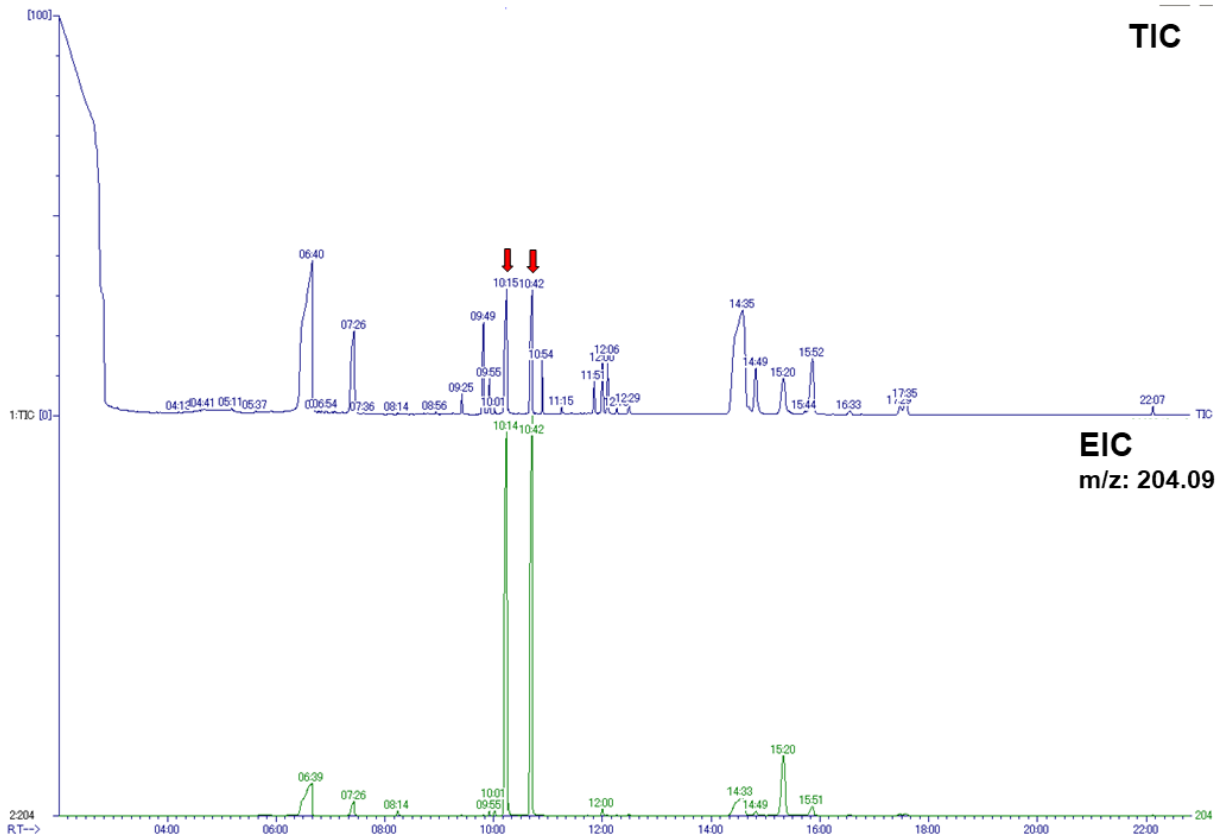


Figure S36. GC-MS total ion chromatogram and extracted ion chromatogram of trimethylsilyl (TMS) derivatives of glucose

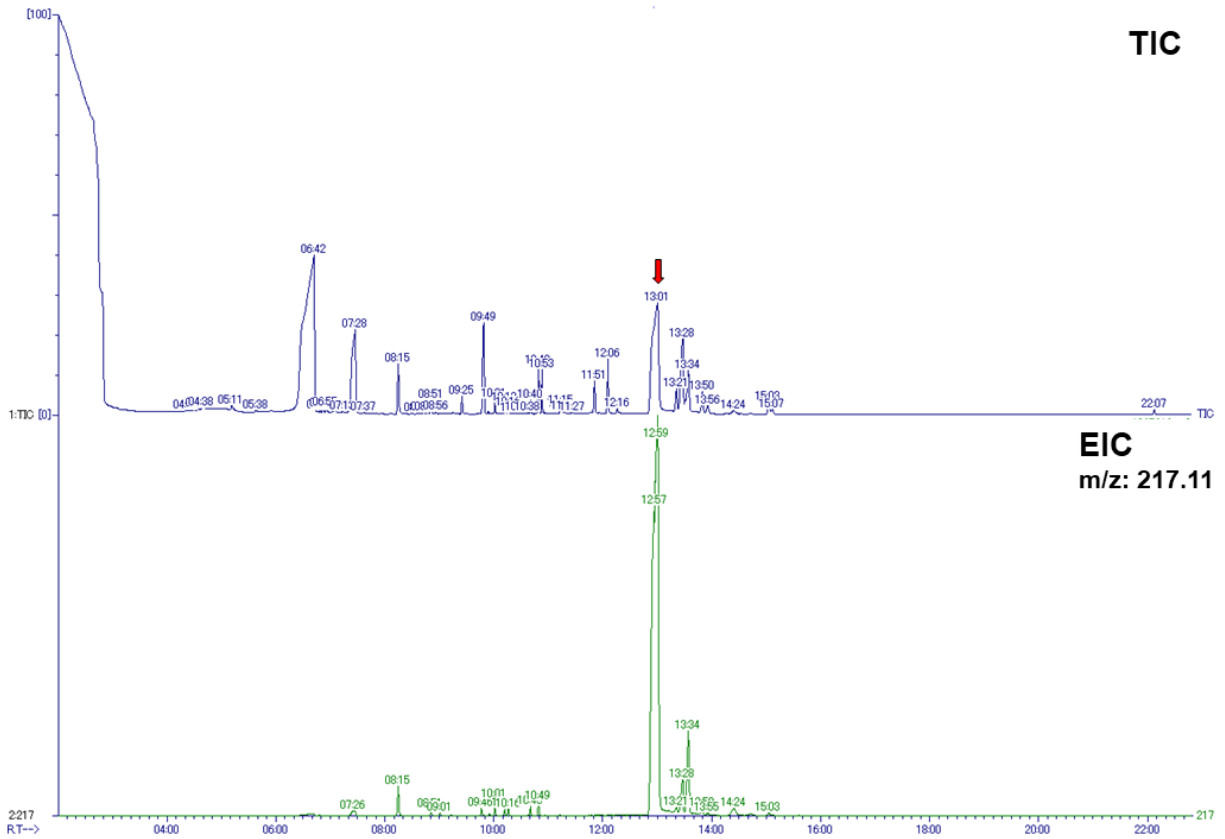


Figure S37. GC-MS total ion chromatogram and extracted ion chromatogram of trimethylsilyl (TMS) derivatives of rhamnose

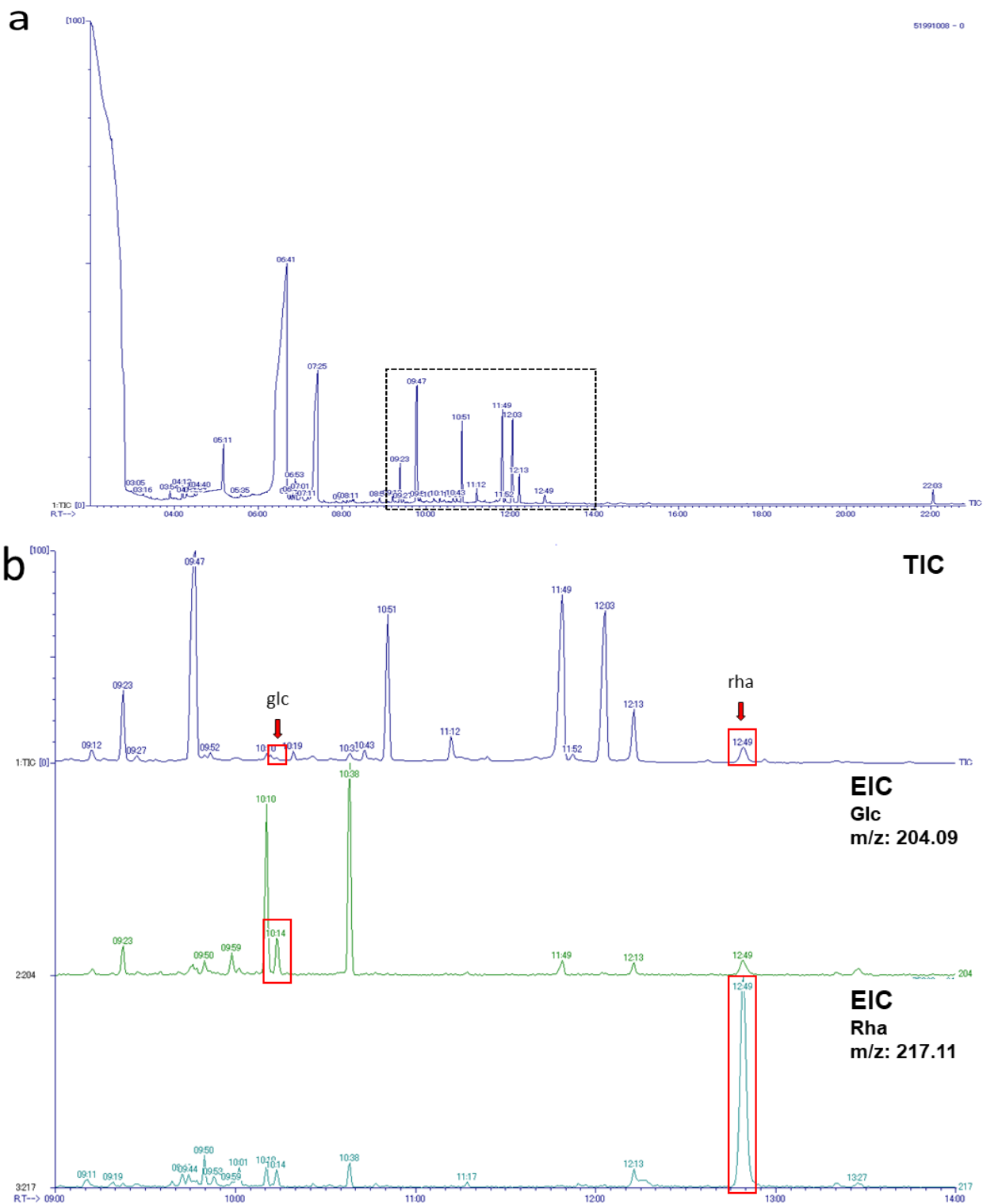


Figure S38. GC-MS total ion chromatogram and extracted ion chromatogram trimethylsilyl (TMS) derivatives of compound 1. (a) full retention time chromatogram, (b) expand on retention time chromatogram.

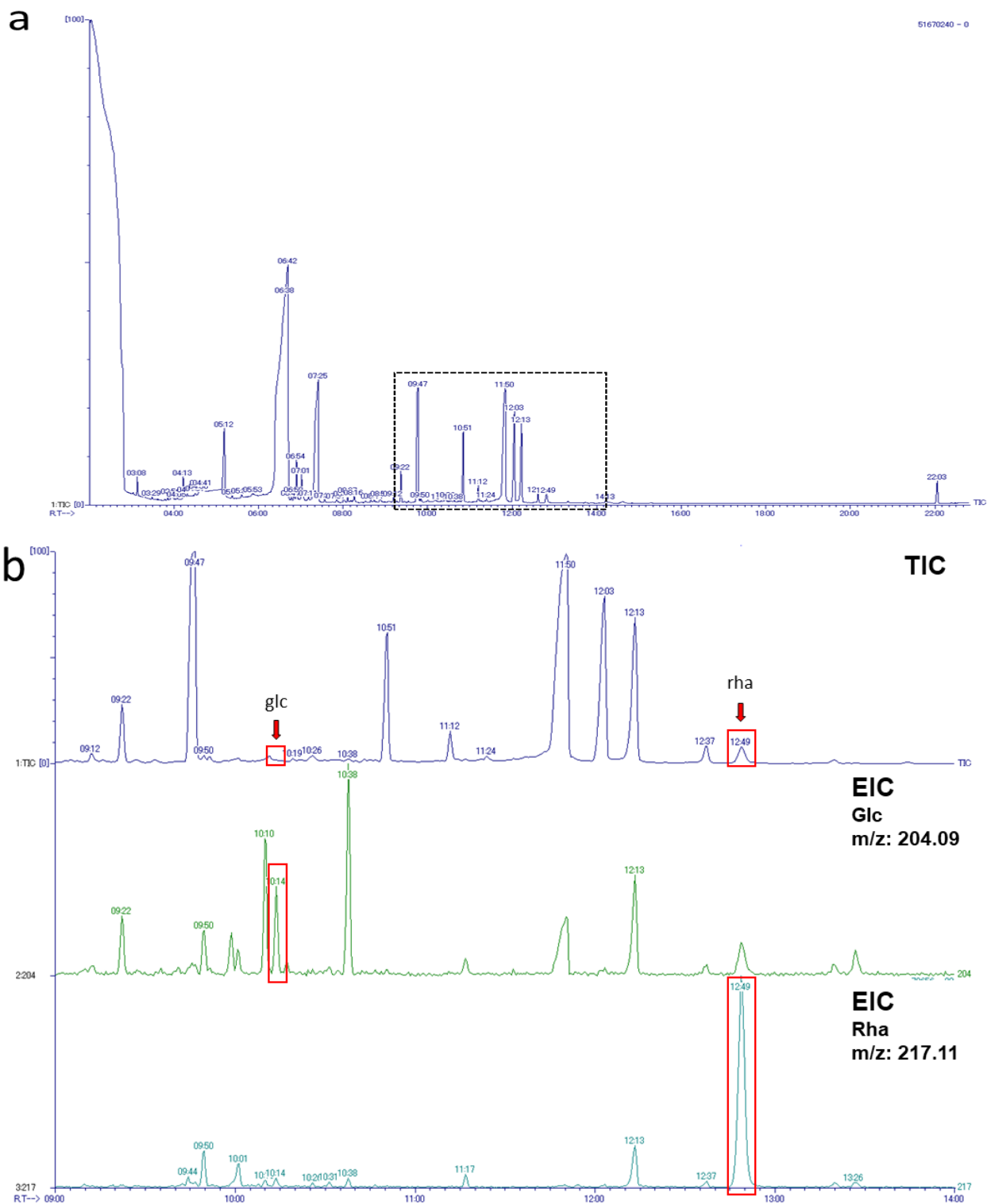


Figure S39. GC-MS total ion chromatogram and extracted ion chromatogram trimethylsilyl (TMS) derivatives of compound 2. (a) full retention time chromatogram, (b) expand on retention time chromatogram.

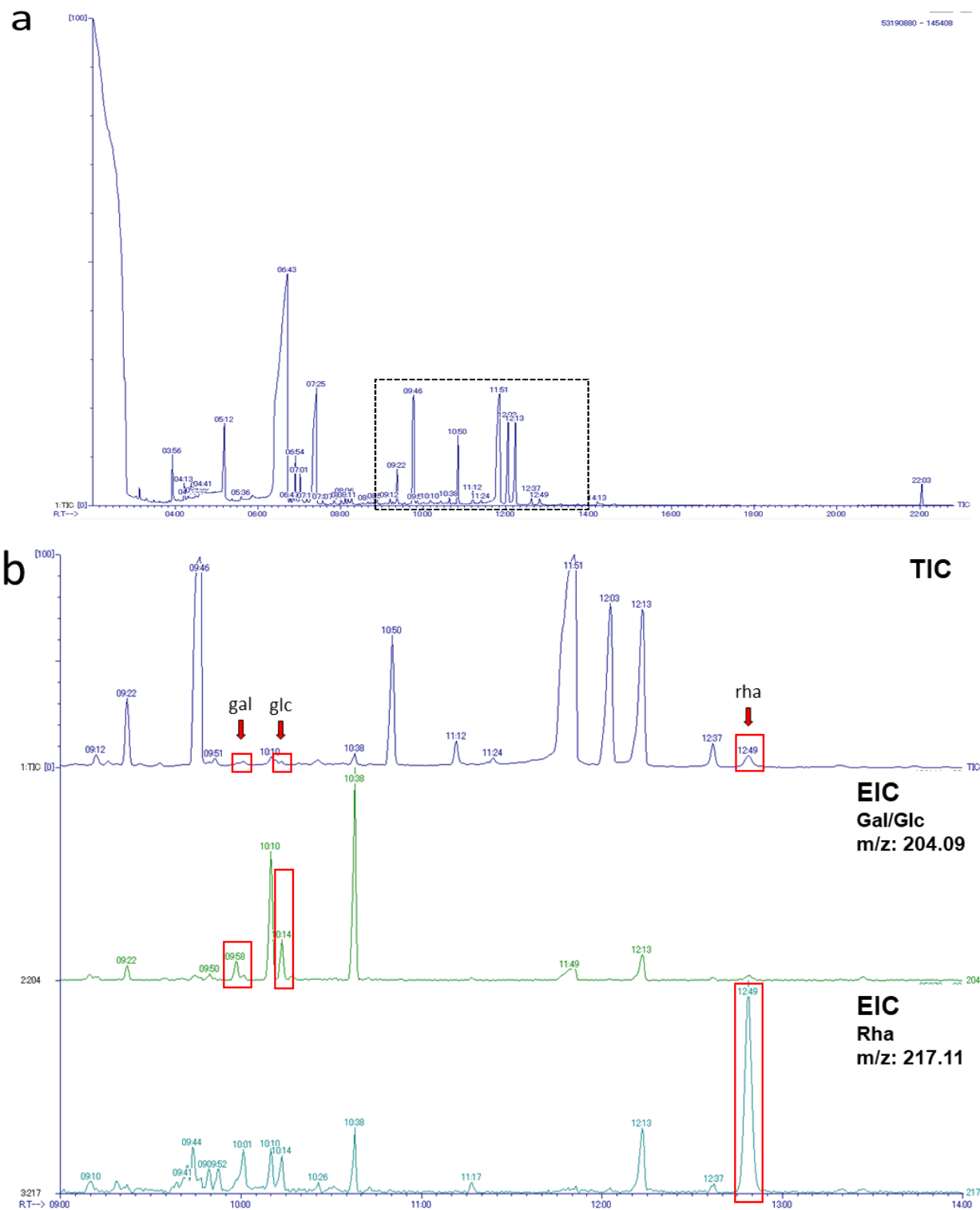


Figure S40. GC-MS total ion chromatogram and extracted ion chromatogram trimethylsilyl (TMS) derivatives of compound 3. (a) full retention time chromatogram, (b) expand on retention time chromatogram.

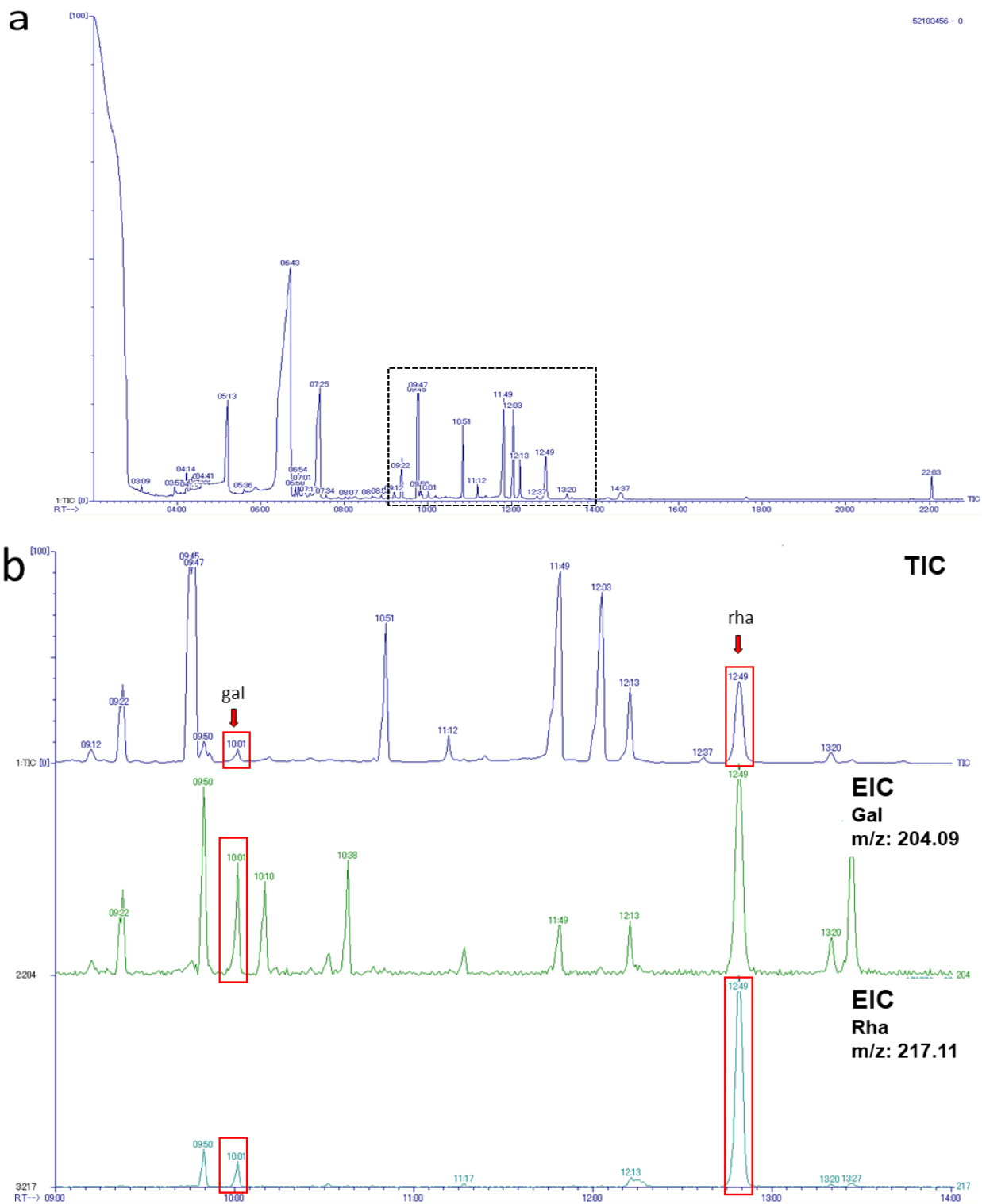


Figure S41. GC-MS total ion chromatogram and extracted ion chromatogram trimethylsilyl (TMS) derivatives of compound **4**. (a) full retention time chromatogram, (b) expand on retention time chromatogram.

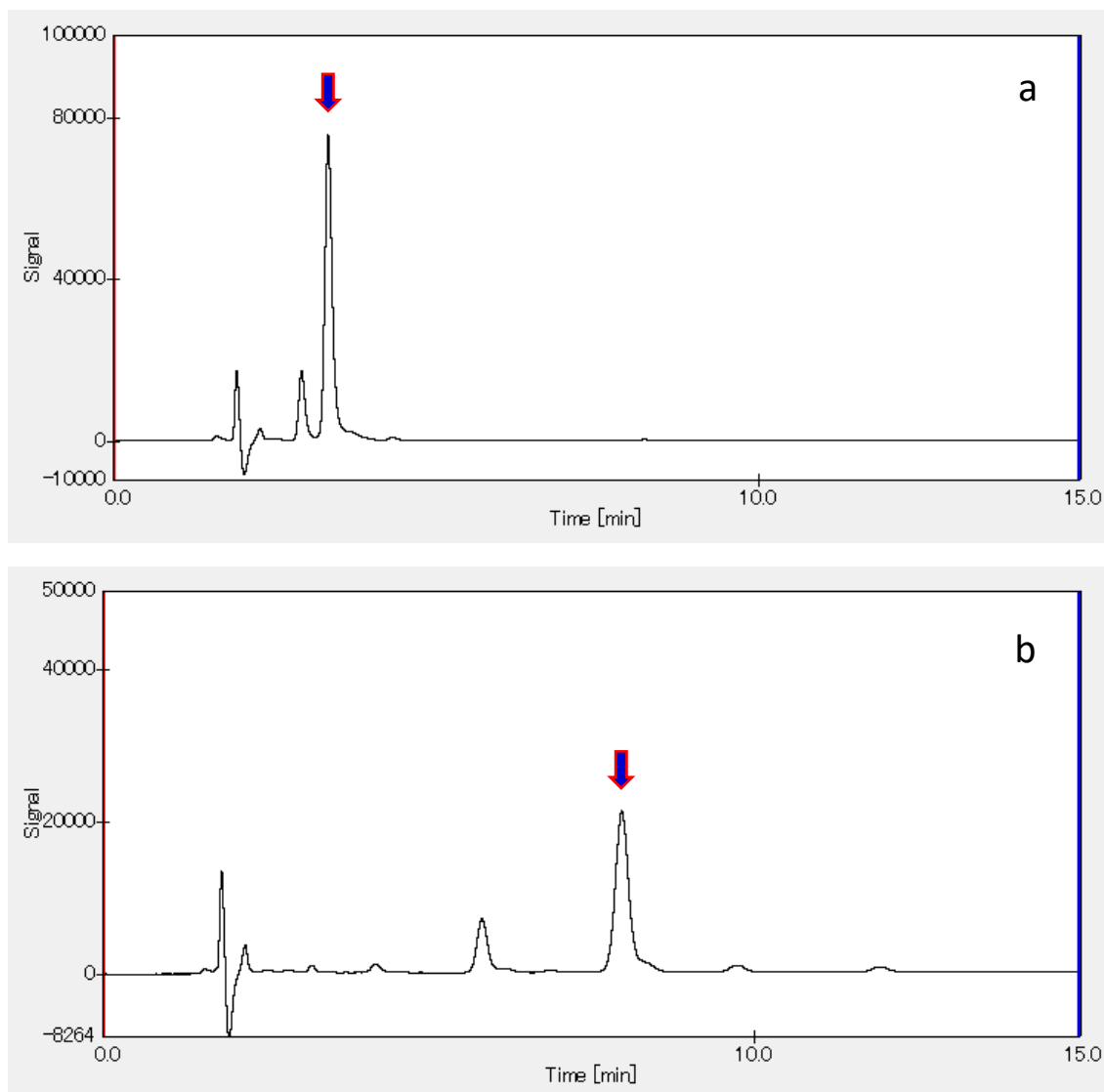


Figure S42. Chromatogram of compounds 1 (a) and 2 (b)

Note:

HPLC was performed using a Jasco PU2089 intelligent pump equipped with a Jasco UV-2075 detector (Tokyo, Japan) and a Shimadzu CTO-10ACVP column oven (Kyoto, Japan). Cosmosil 5C18-MS-II column (4.6 mm I.D. × 150 mm, particle size of 5 μm) was used and the temperature was 35 $^{\circ}\text{C}$. Elution was performed with 15% MeCN and 0.5% HCOOH in water. The flow rate of the eluent was 1.0 mL/min.

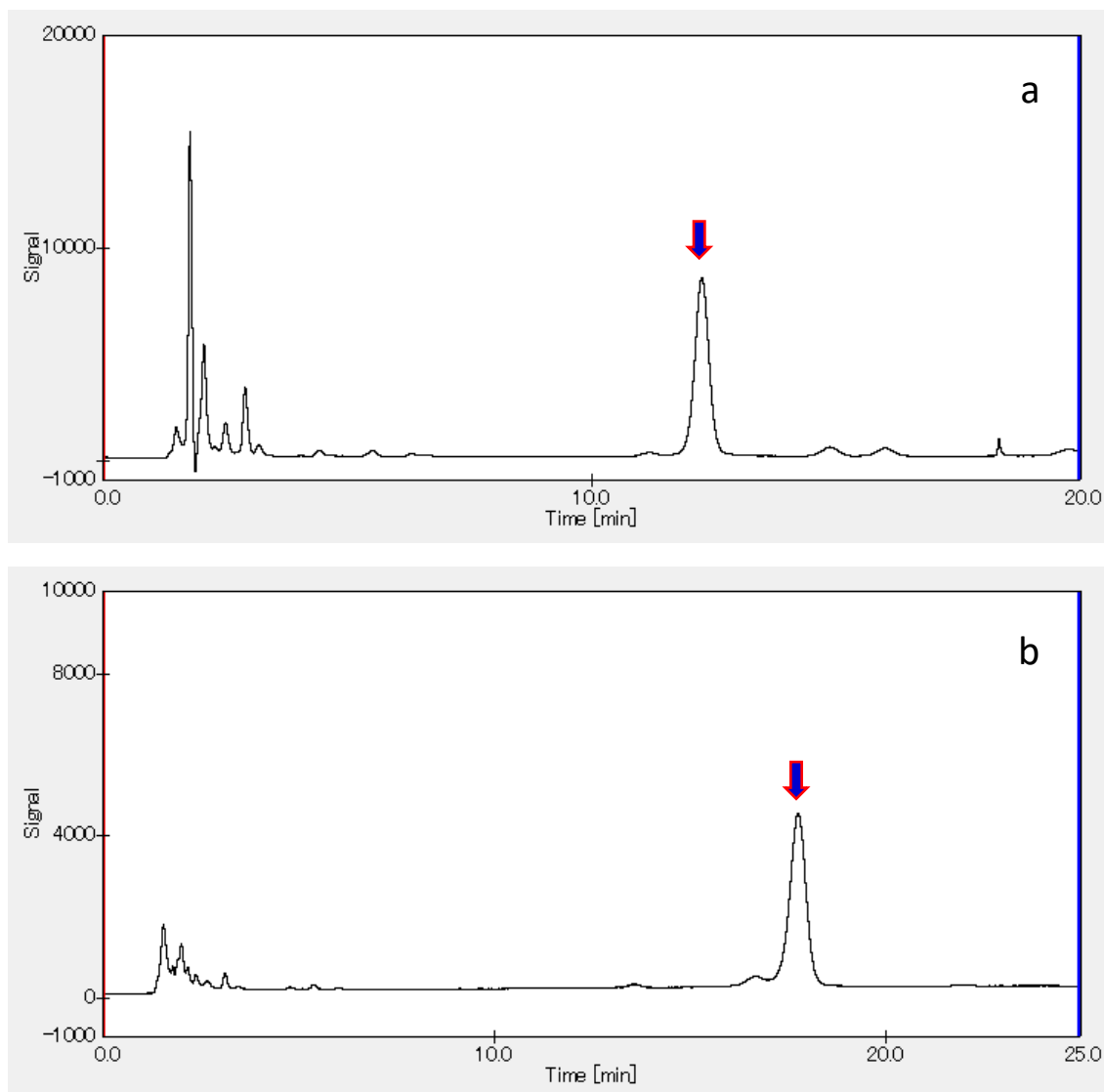


Figure S43. Chromatogram of compounds **3** (a) and **4** (b)

Note:

HPLC was performed using a Jasco PU2089 intelligent pump equipped with a Jasco UV-2075 detector (Tokyo, Japan) and a Shimadzu CTO-10ACVP column oven (Kyoto, Japan). Cosmosil 5C18-MS-II column (4.6 mm I.D. × 150 mm, particle size of 5 μm) was used and the temperature was 35 $^{\circ}\text{C}$. Elution was performed with 20 % MeCN and 0.5% HCOOH in water. The flow rate of the eluent was 1.0 mL/min.