

Supplementary Materials

Anti-Inflammatory Effects of Curvularin-Type Metabolites from a Marine-Derived Fungal Strain *Penicillium* sp. SF-5859 in Lipopolysaccharide-Induced RAW264.7 Macrophages

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List of supporting information

Figure/Table	Content	Page
Figure S1	HRESI mass spectrum of compound 1	S1
Figure S2	^1H NMR spectrum (400 MHz, acetone- d_6) of compound 1	S2
Figure S3	^1H NMR spectrum (400 MHz, CDCl_3) of compound 1	S3
Figure S4	^{13}C NMR spectrum (100 MHz, CDCl_3) of compound 1	S4
Figure S5	NOESY spectrum of compound 1	S5
Figure S6	HRESI mass spectrum of compound 3a	S6
Figure S7	^1H NMR spectrum (400 MHz, CD_3OD) of compound 3a	S7
Figure S8	^{13}C NMR spectrum (100 MHz, CD_3OD) of compound 3a	S8
Figure S9	HMQC spectrum of compound 3a	S9
Figure S10	COSY spectrum of compound 3a	S10
Figure S11	HMBC spectrum of compound 3a	S11
Figure S12	HRESI mass spectrum of compound 3b	S12
Figure S13	^1H NMR spectrum (400 MHz, CD_3OD) of compound 3b	S13
Figure S14	^{13}C NMR spectrum (100 MHz, CD_3OD) of compound 3b	S14

Figure S15	HRESI mass spectrum of compound 3c	S15
Figure S16	^1H NMR spectrum (400 MHz, acetone- d_6) of compound 3c	S16
Figure S17	NOESY spectrum of compound 3c	S17
Figure S18	HRESI mass spectrum of compound 3d	S18
Figure S19	^1H NMR spectrum (400 MHz, CDCl_3) of compound 3d	S19
Table S1	The optical rotation values of 1-9 in comparison with the published values.	S20

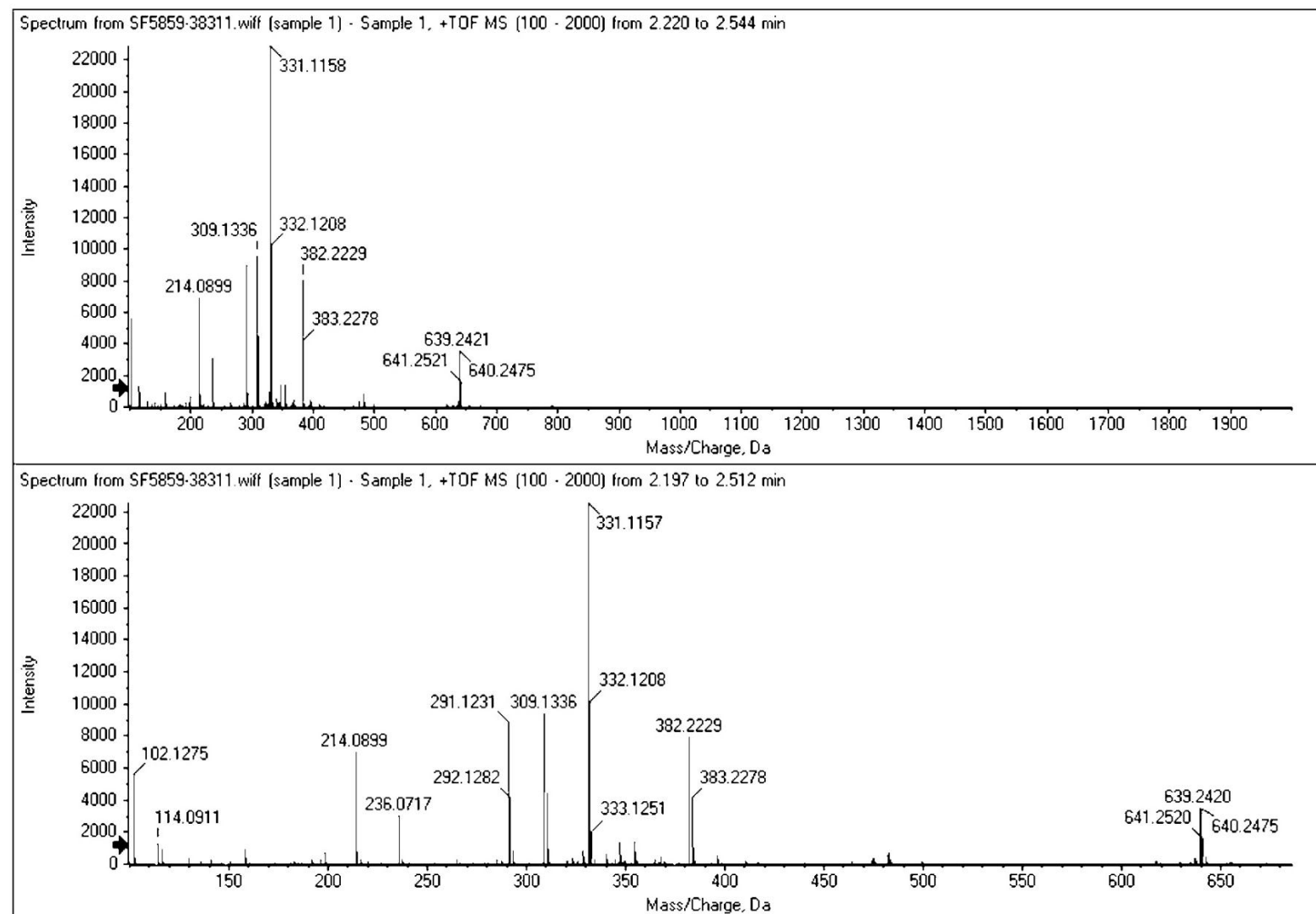


Figure S1. HRESI mass spectrum of compound 1

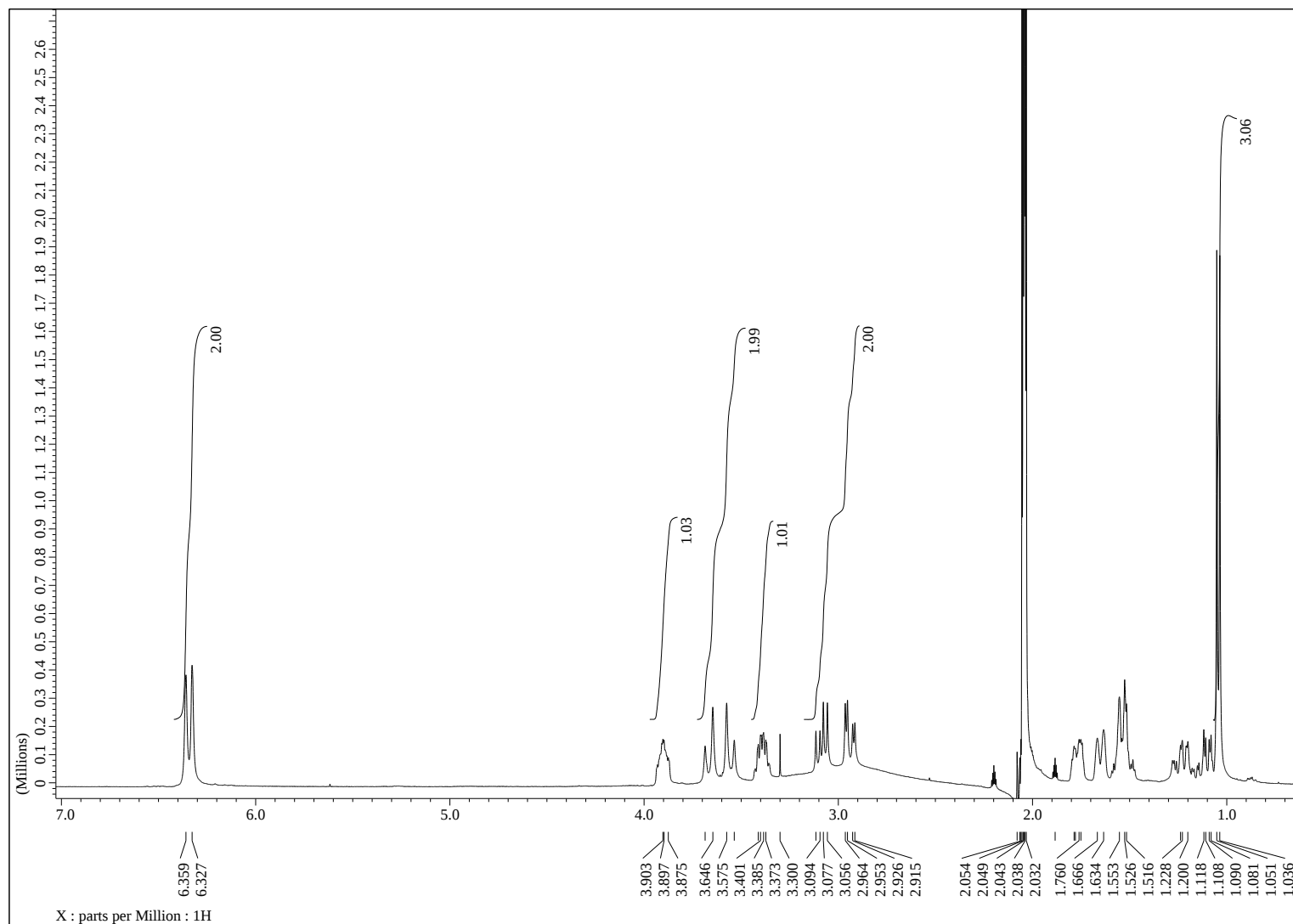


Figure S2. ¹H NMR spectrum of **1** recorded in acetone-*d*₆

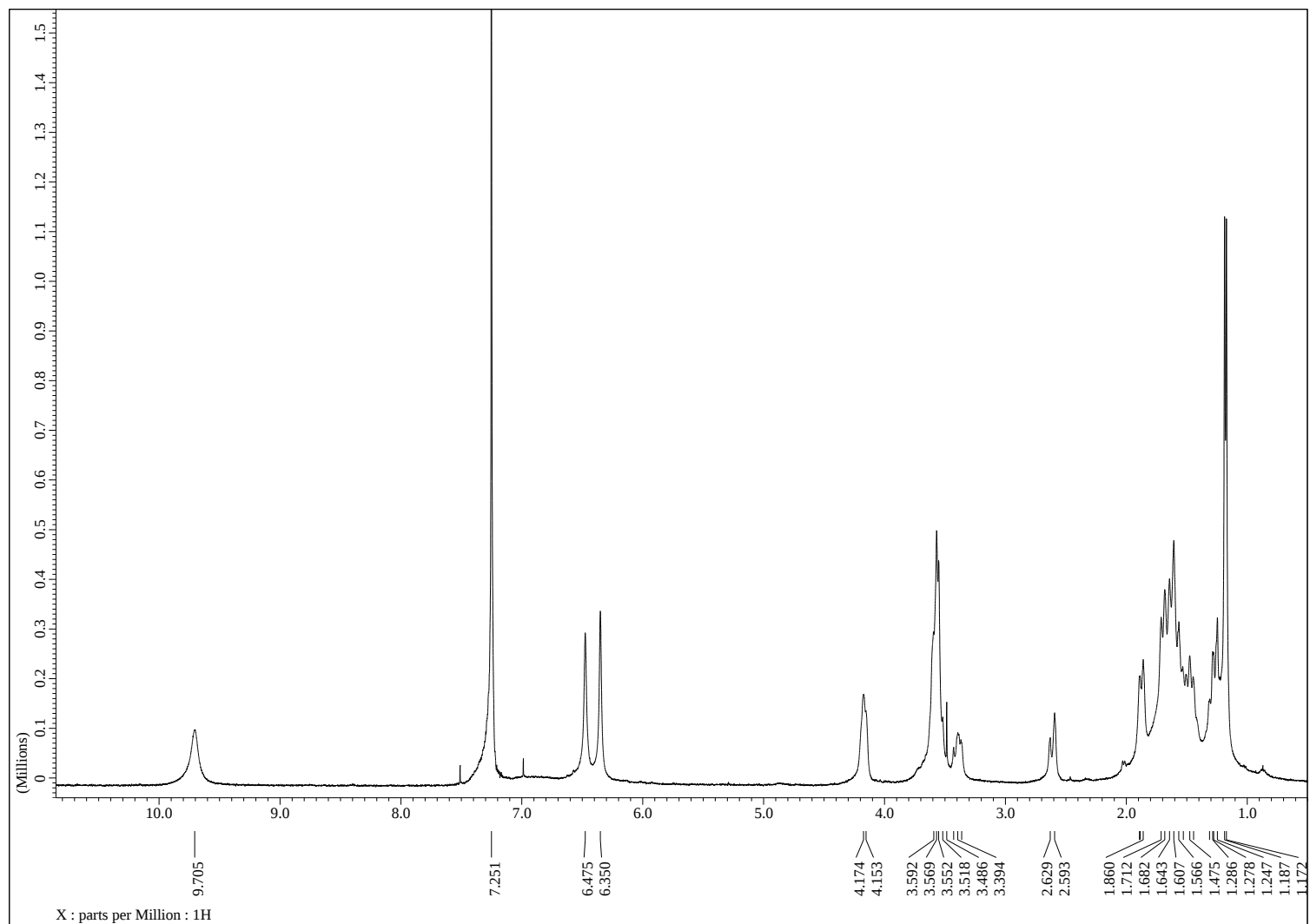


Figure S3. ^1H NMR spectrum of **1** recorded in CDCl_3

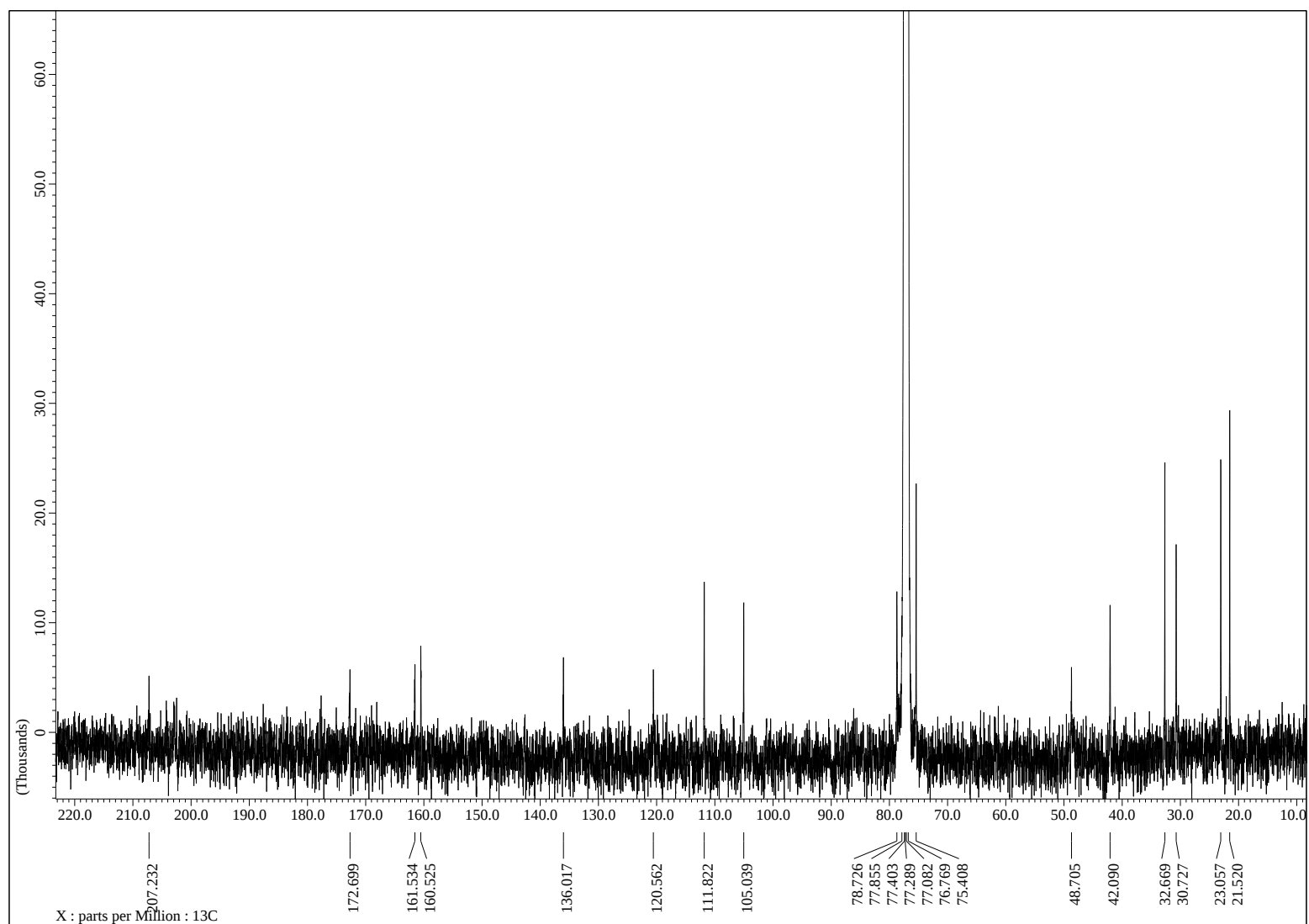


Figure S4. ¹³C NMR spectrum of **1** recorded in CDCl₃

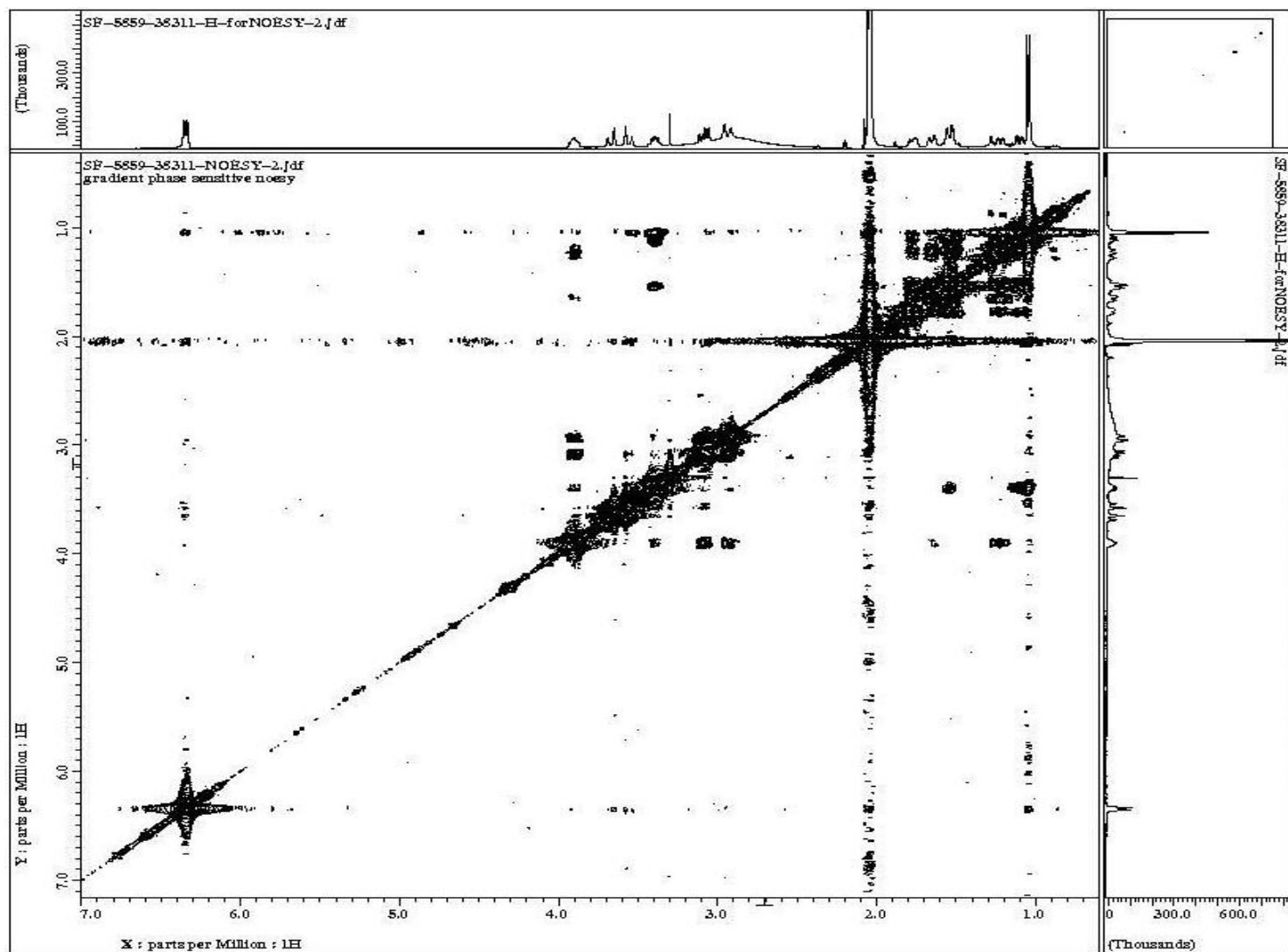


Figure S5. NOESY spectrum of compound 1

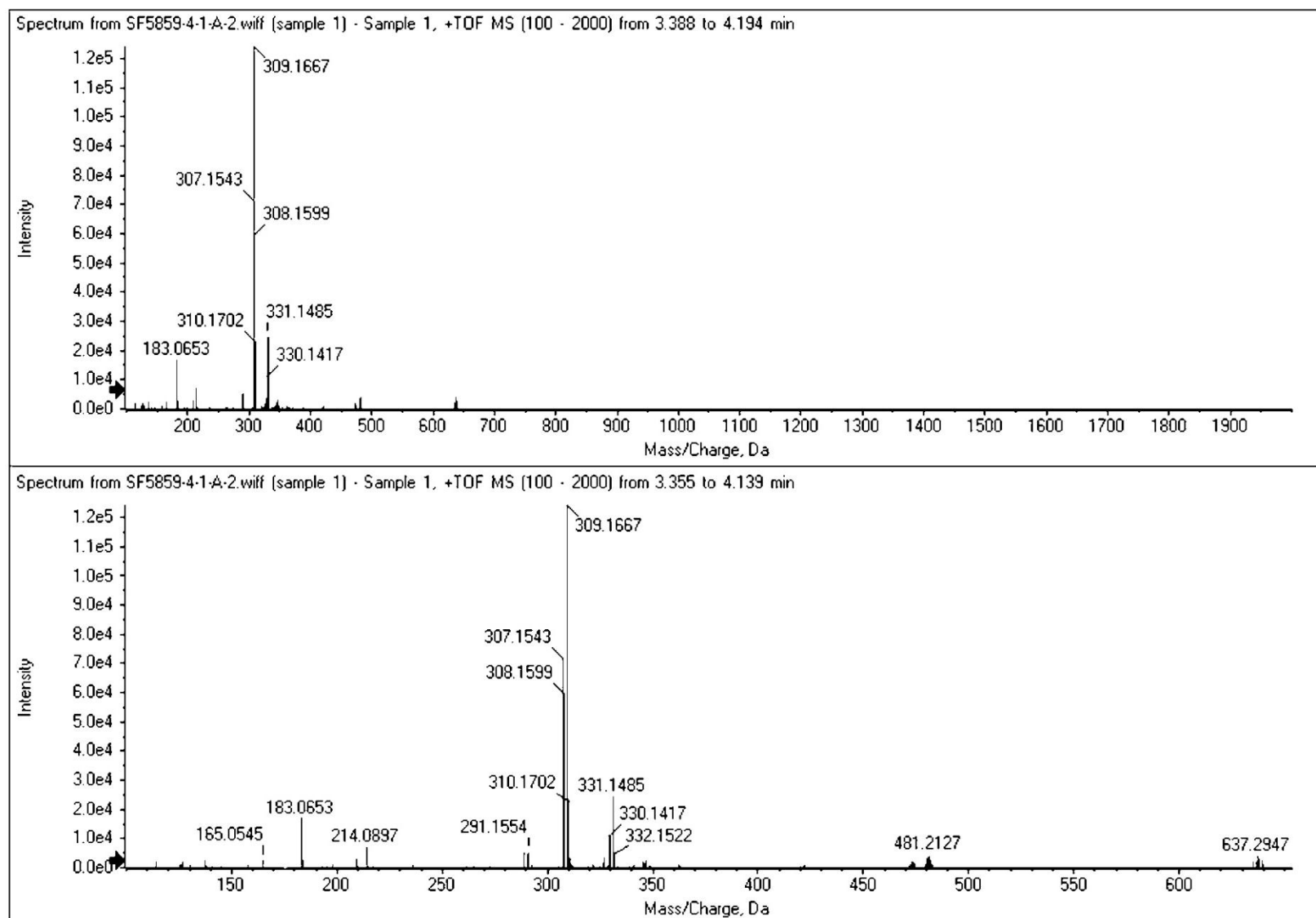


Figure S6. HRESI mass spectrum of compound 3a

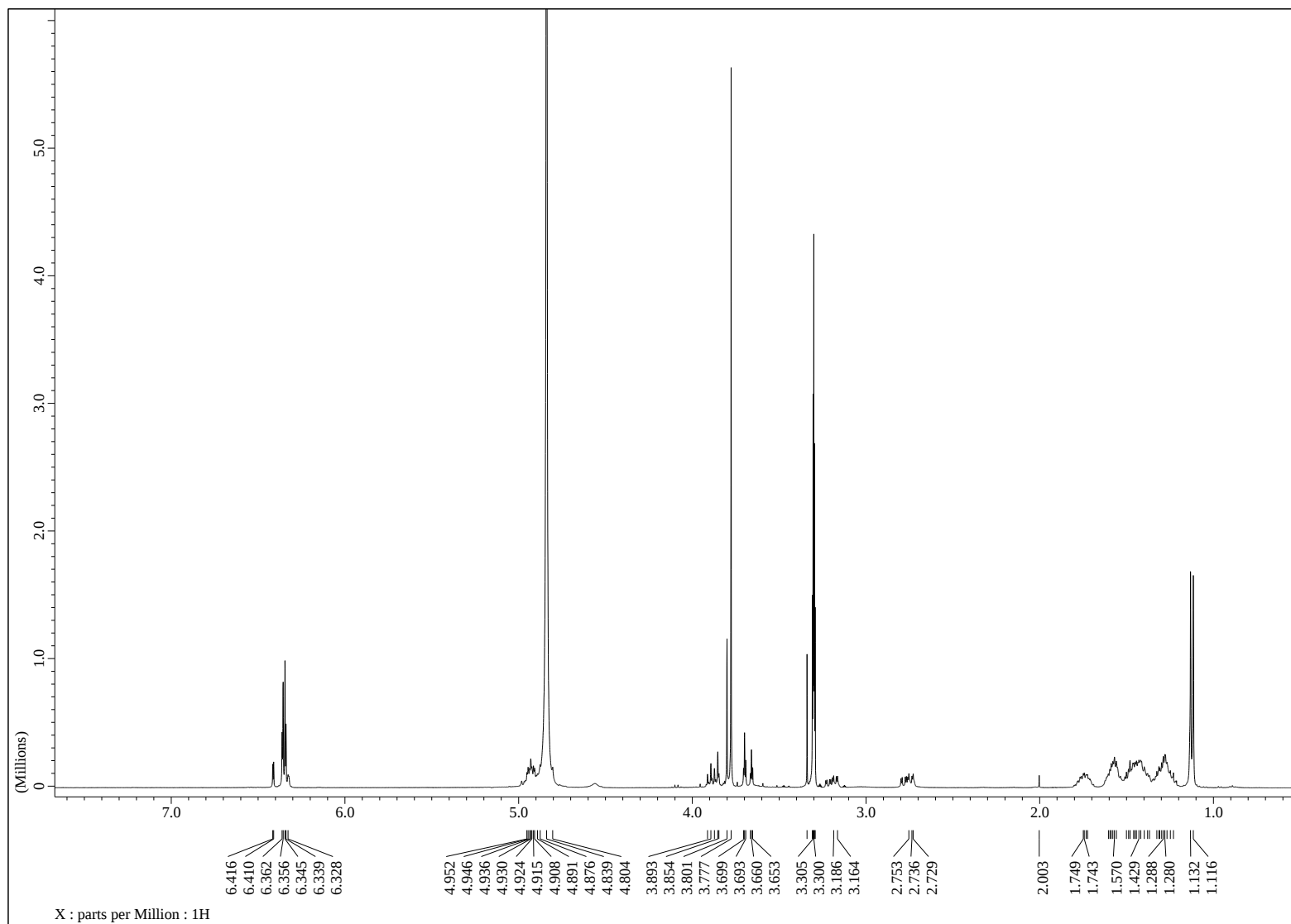


Figure S7. ¹H NMR spectrum (400 MHz, CD₃OD) of compound 3a

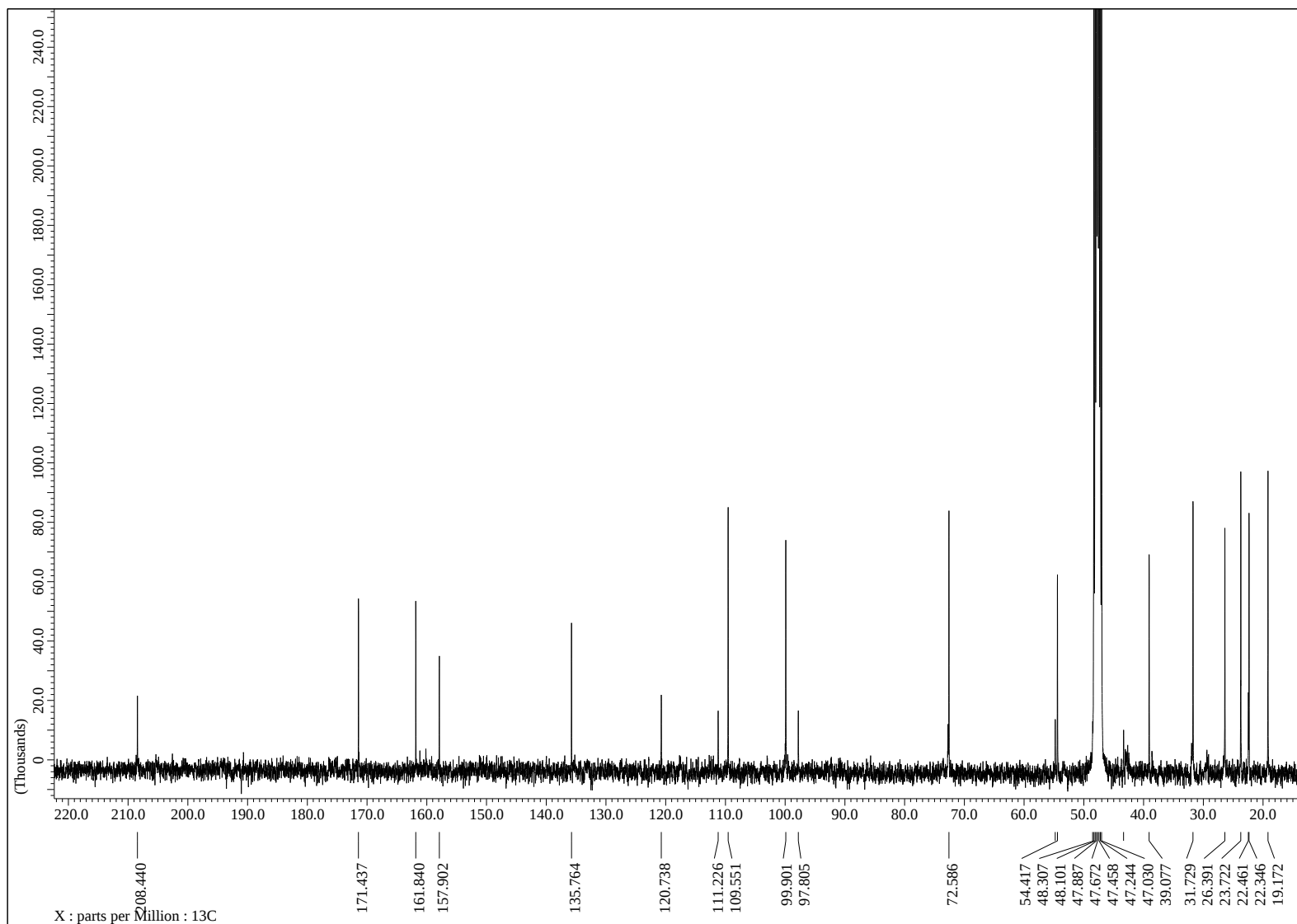


Figure S8. ¹³C NMR spectrum (100MHz, CD₃OD) of compound 3a

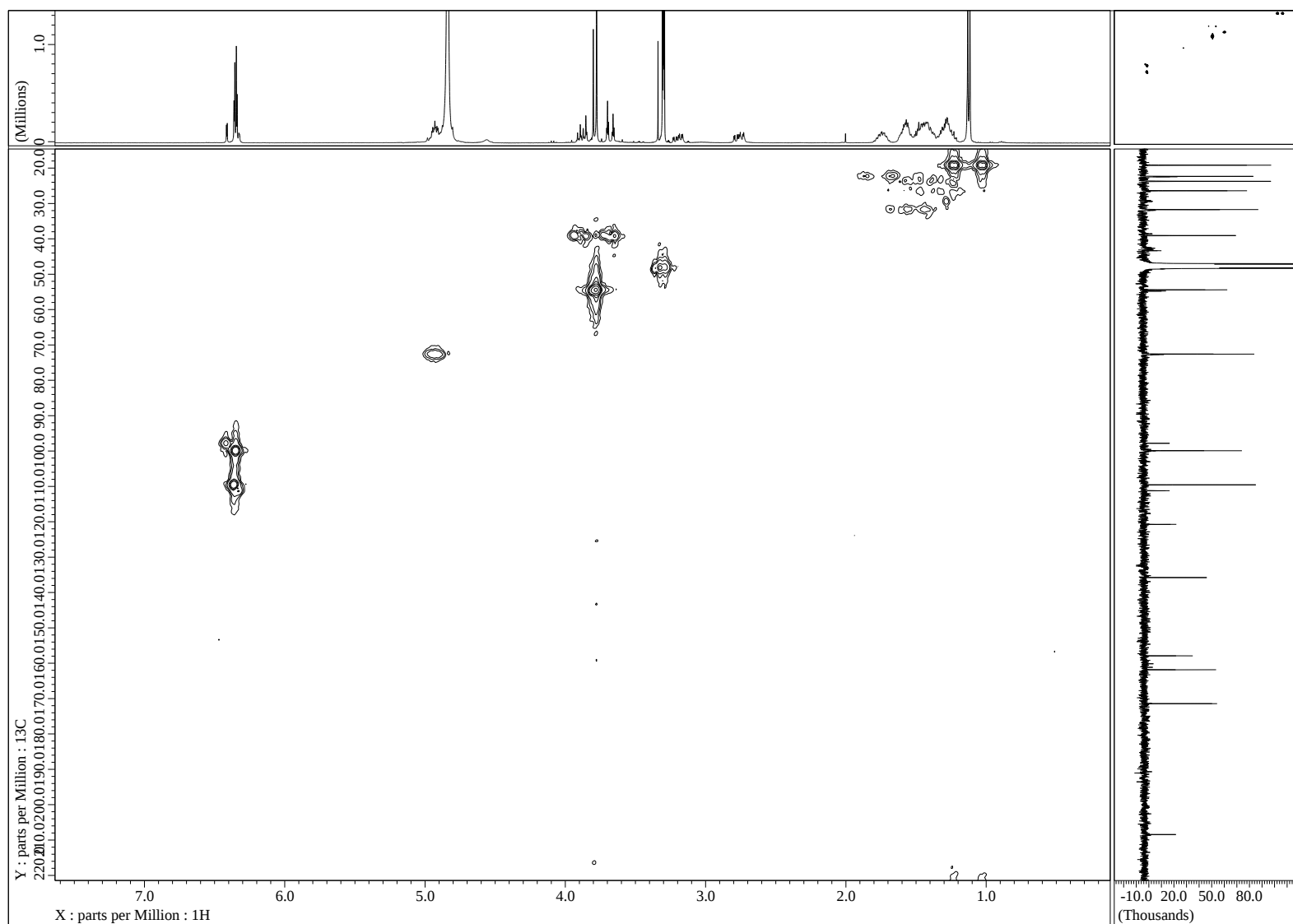


Figure S9. HMQC spectrum of compound 3a

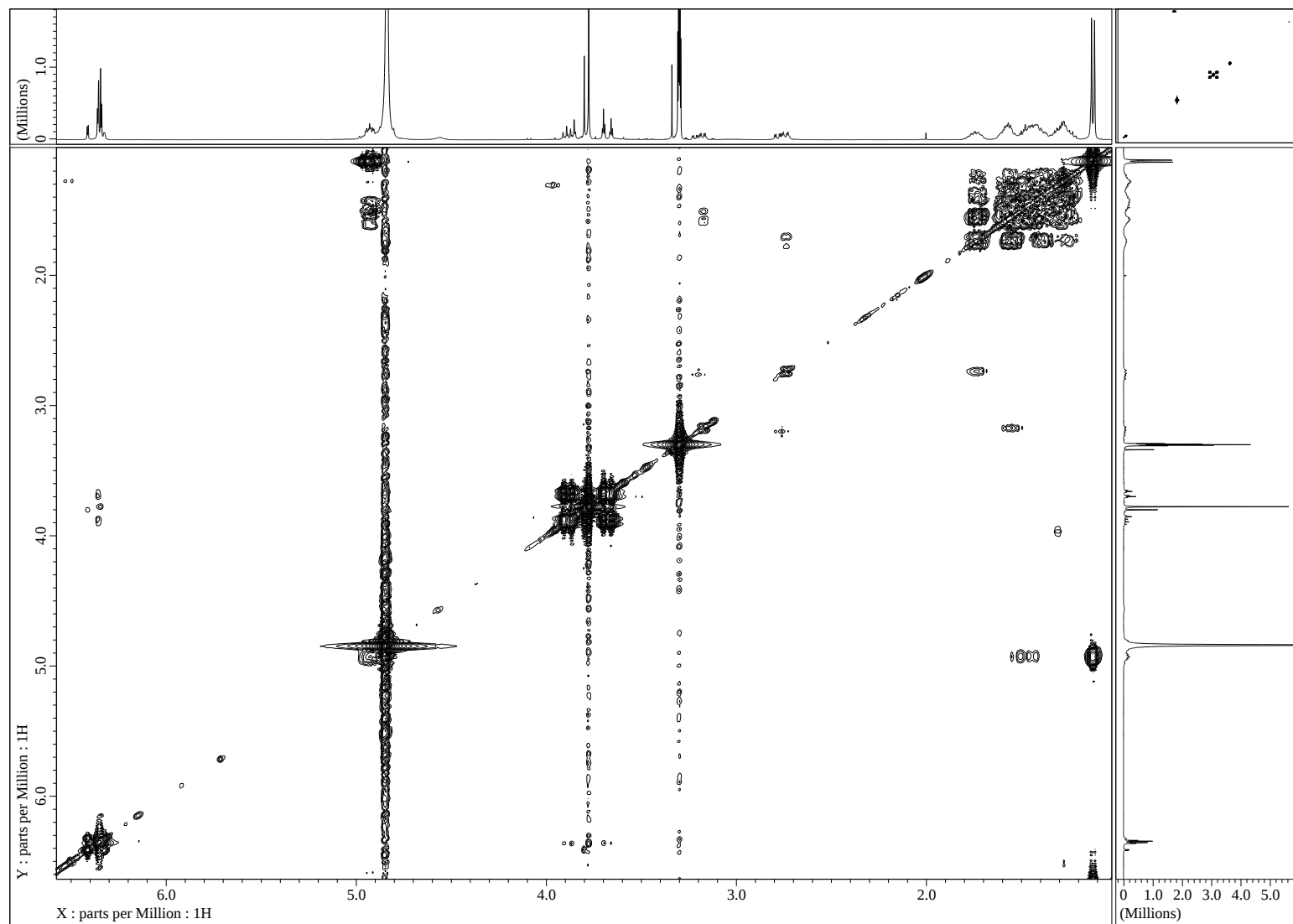


Figure S10. COSY spectrum of compound 3a

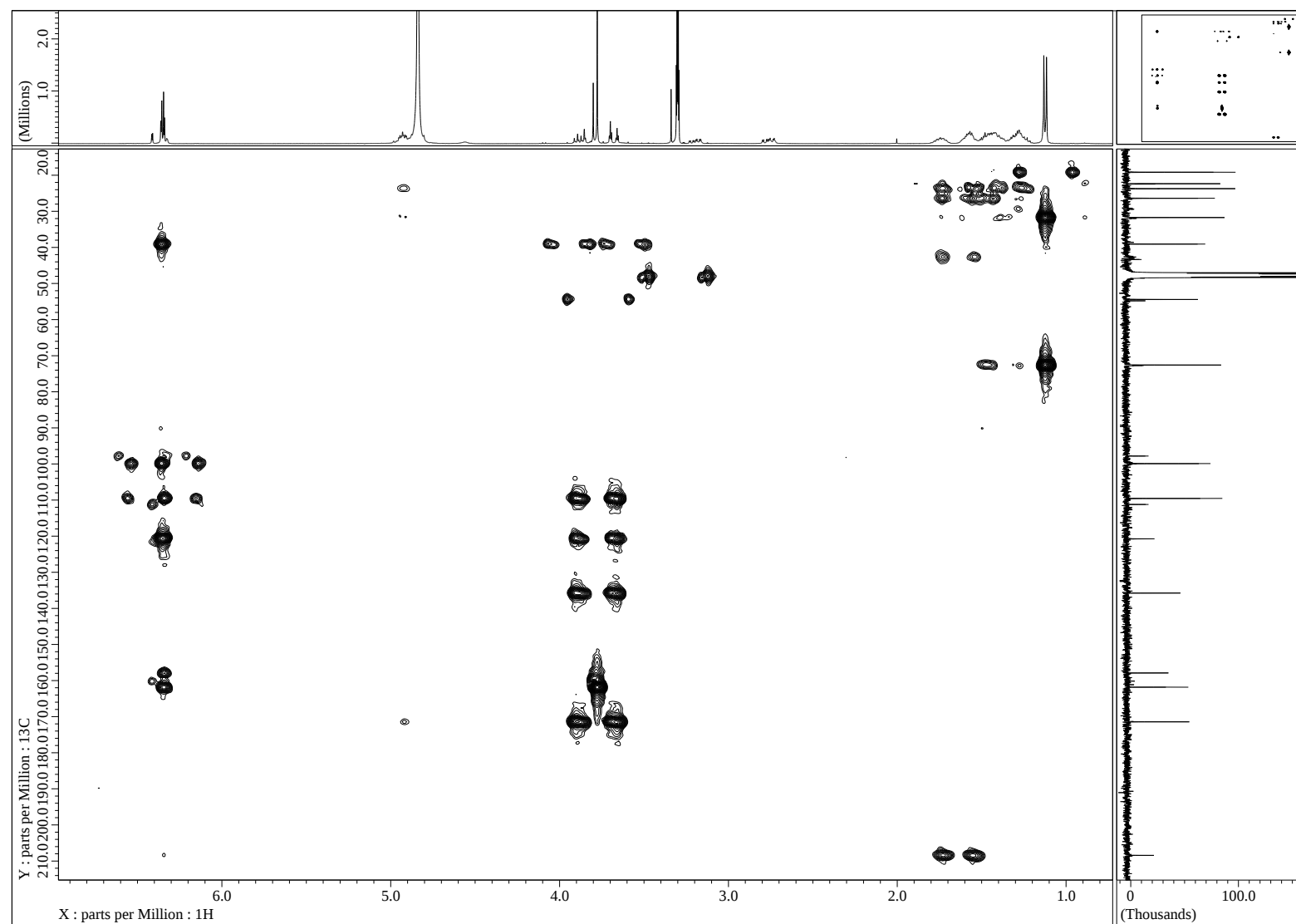


Figure S11. HMBC spectrum of compound 3a

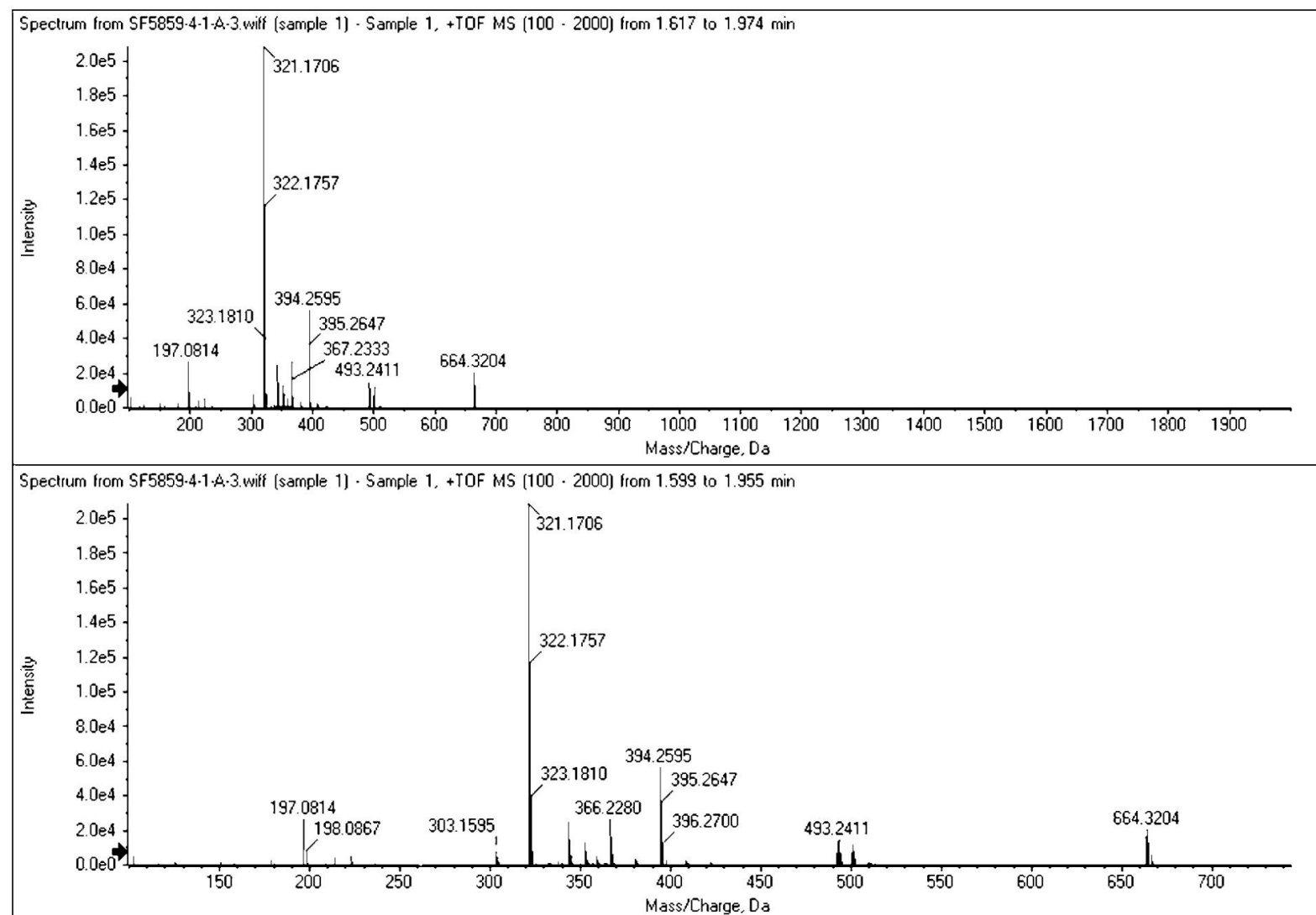


Figure S12. HRESI mass spectrum of compound **3b**

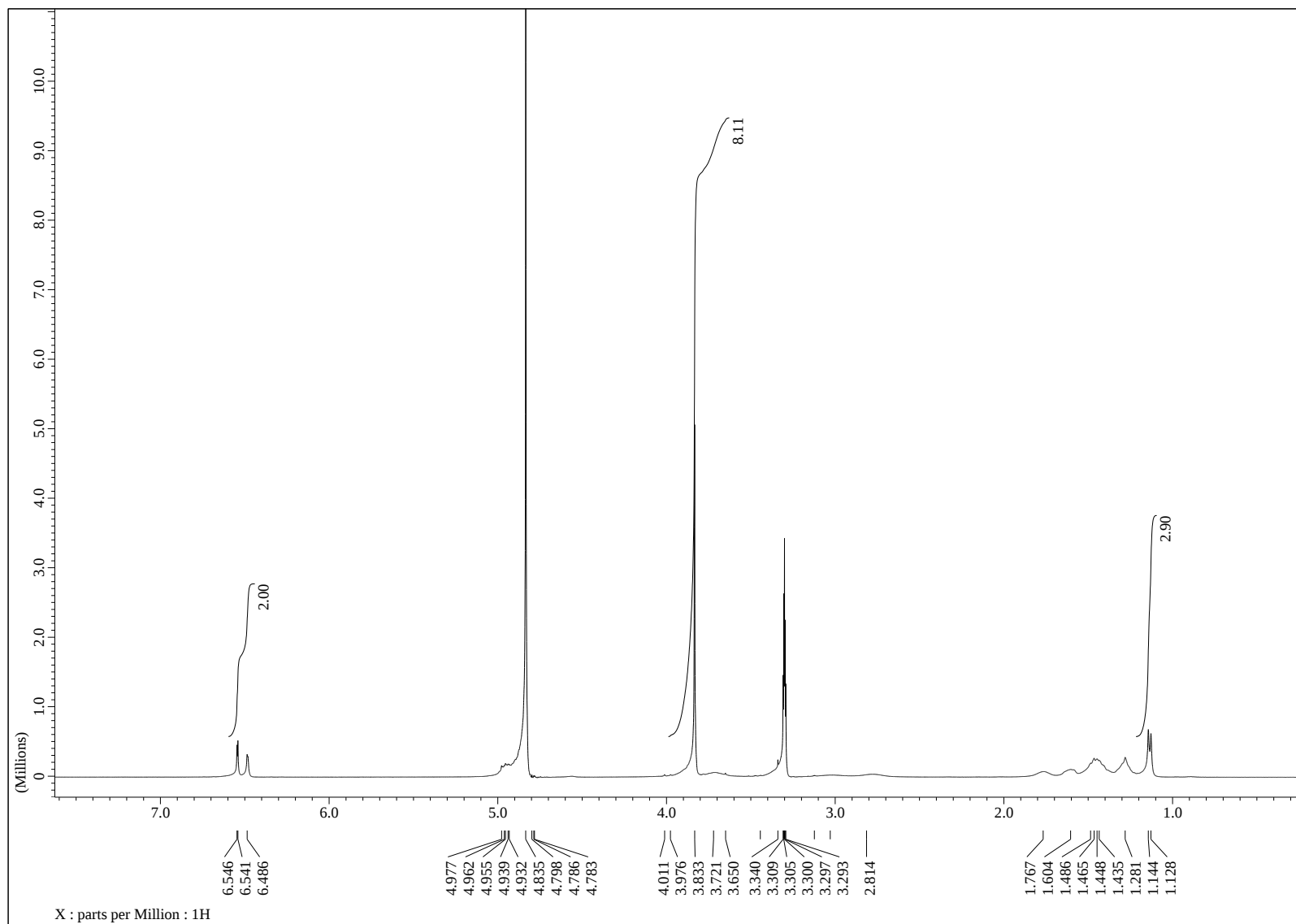


Figure S13. ¹H NMR spectrum (400 MHz, CD₃OD) of compound **3b**

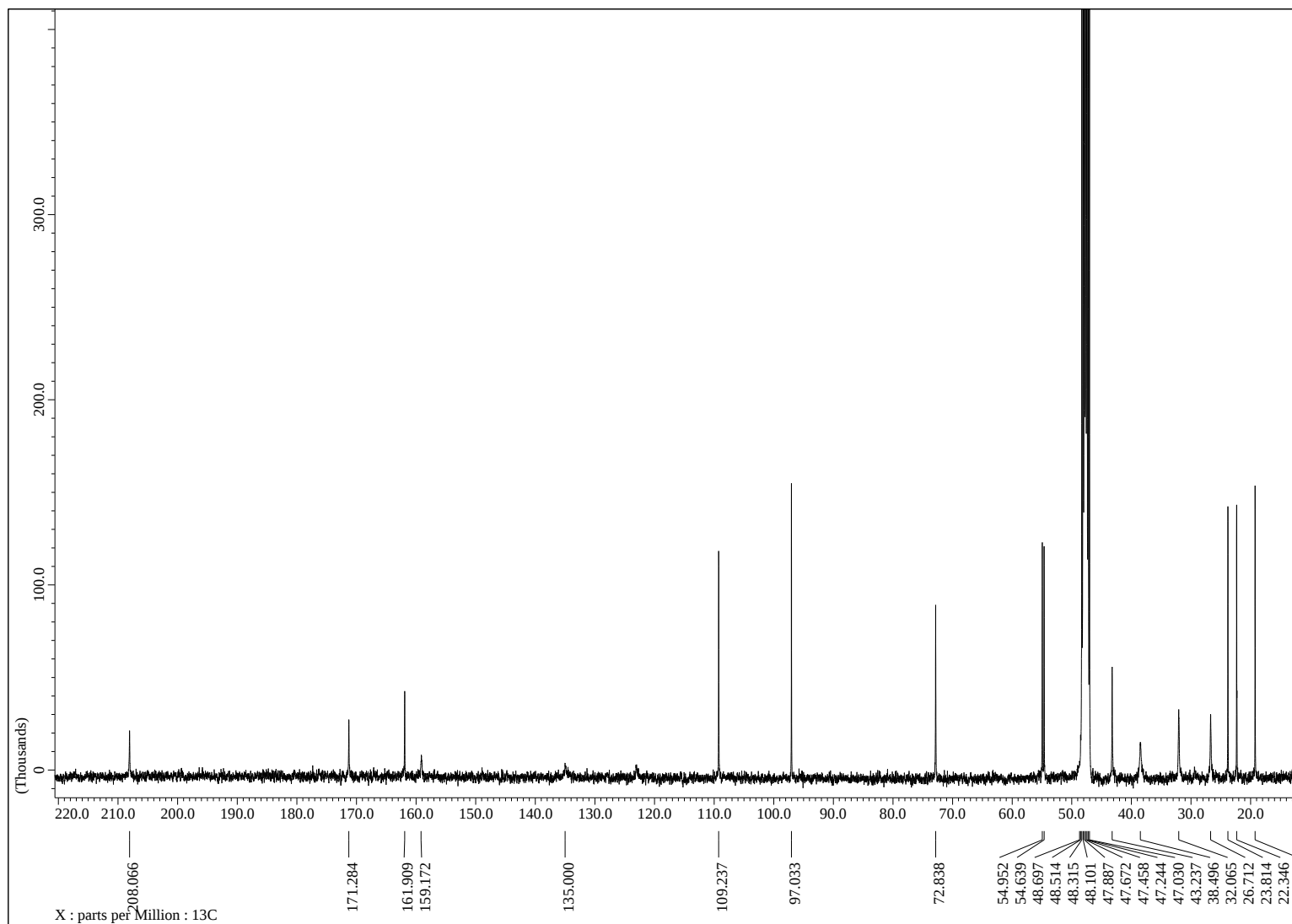


Figure S14. ^{13}C NMR spectrum (100 MHz, CD_3OD) of compound **3b**

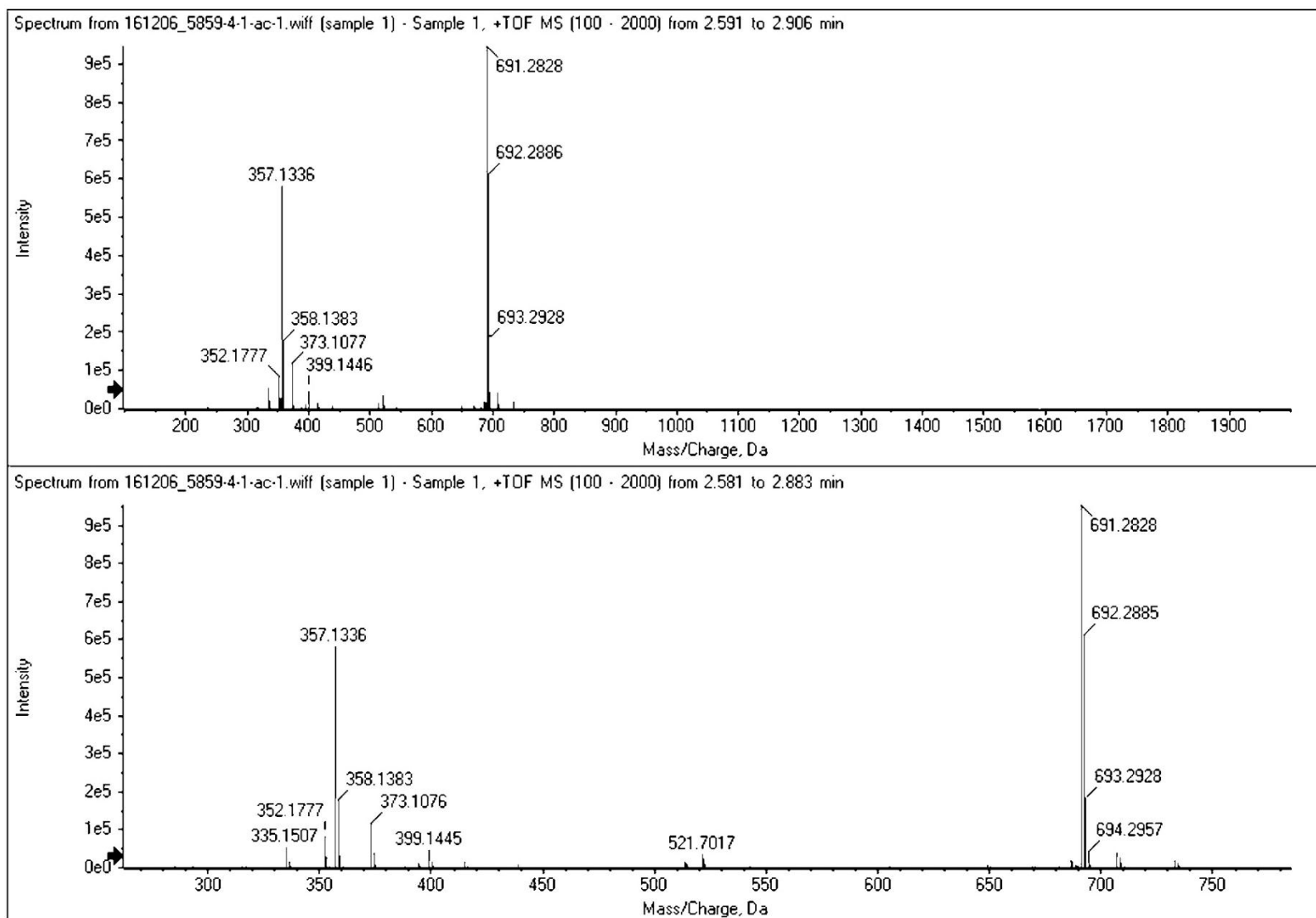


Figure S15. HRESI mass spectrum of compound **3c**

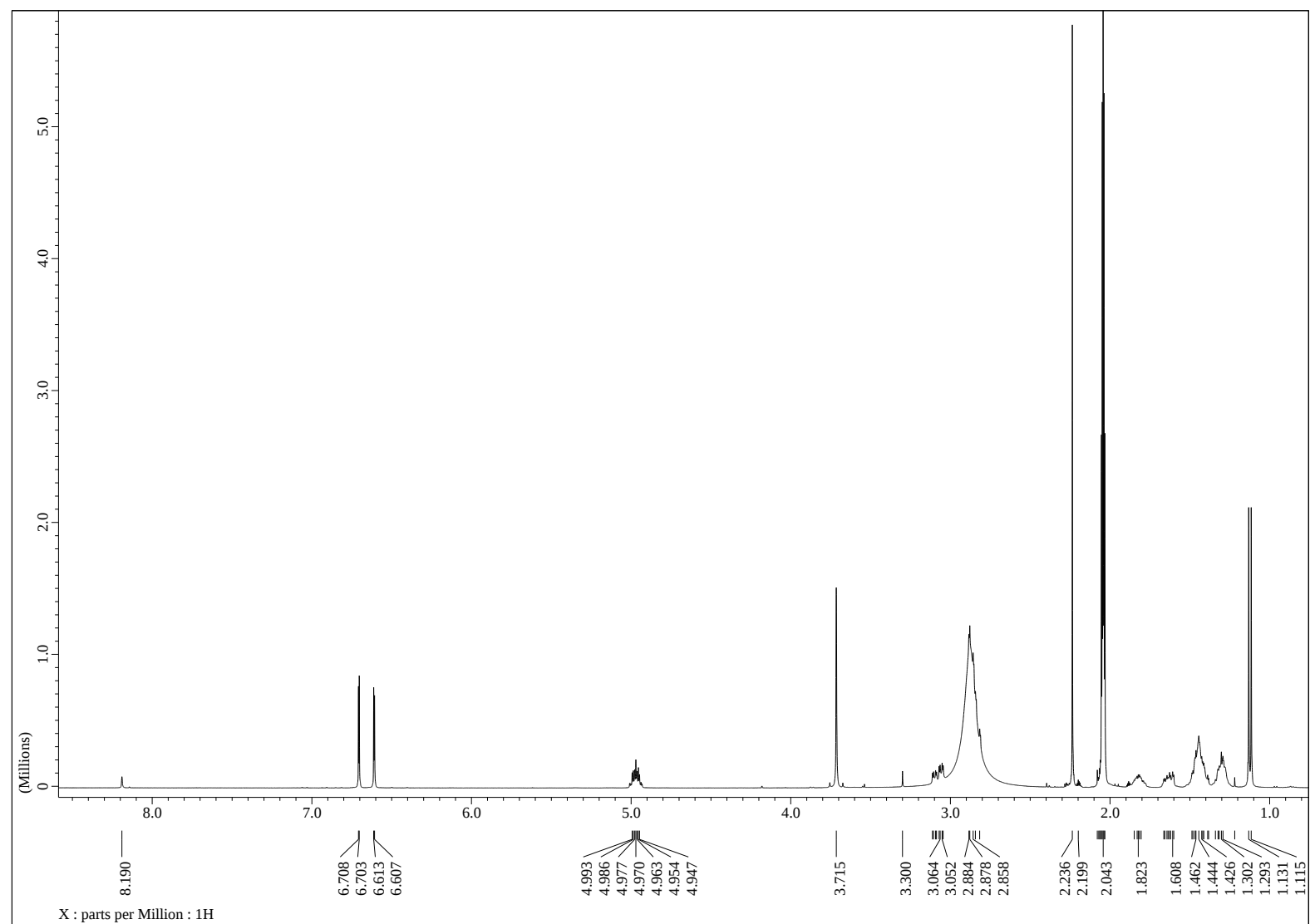


Figure S16. ¹H NMR spectrum (400 MHz, acetone-*d*₆) of compound **3c**

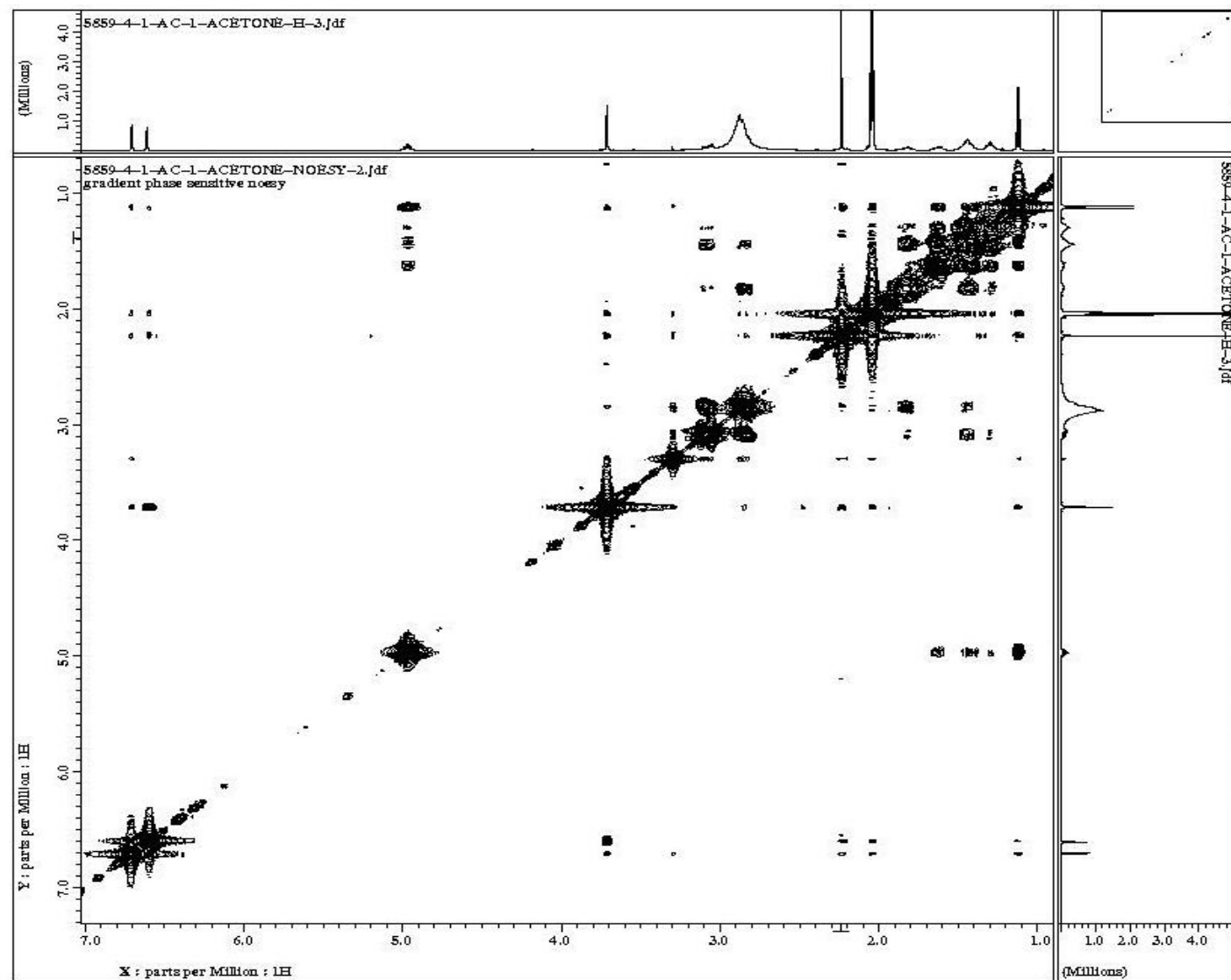


Figure S17. NOESY spectrum of compound 3c

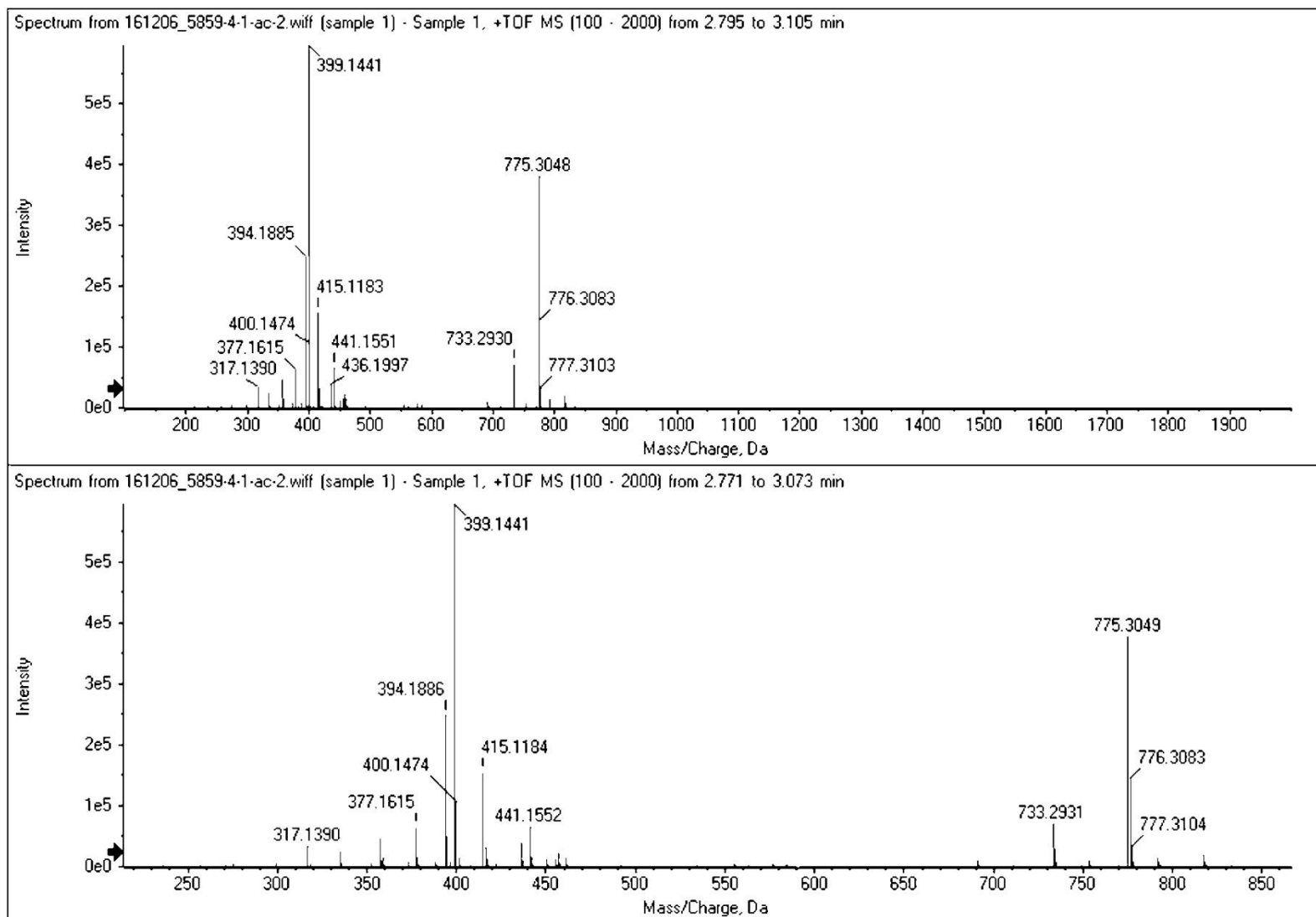


Figure S18. HRESI mass spectrum of compound **3d**

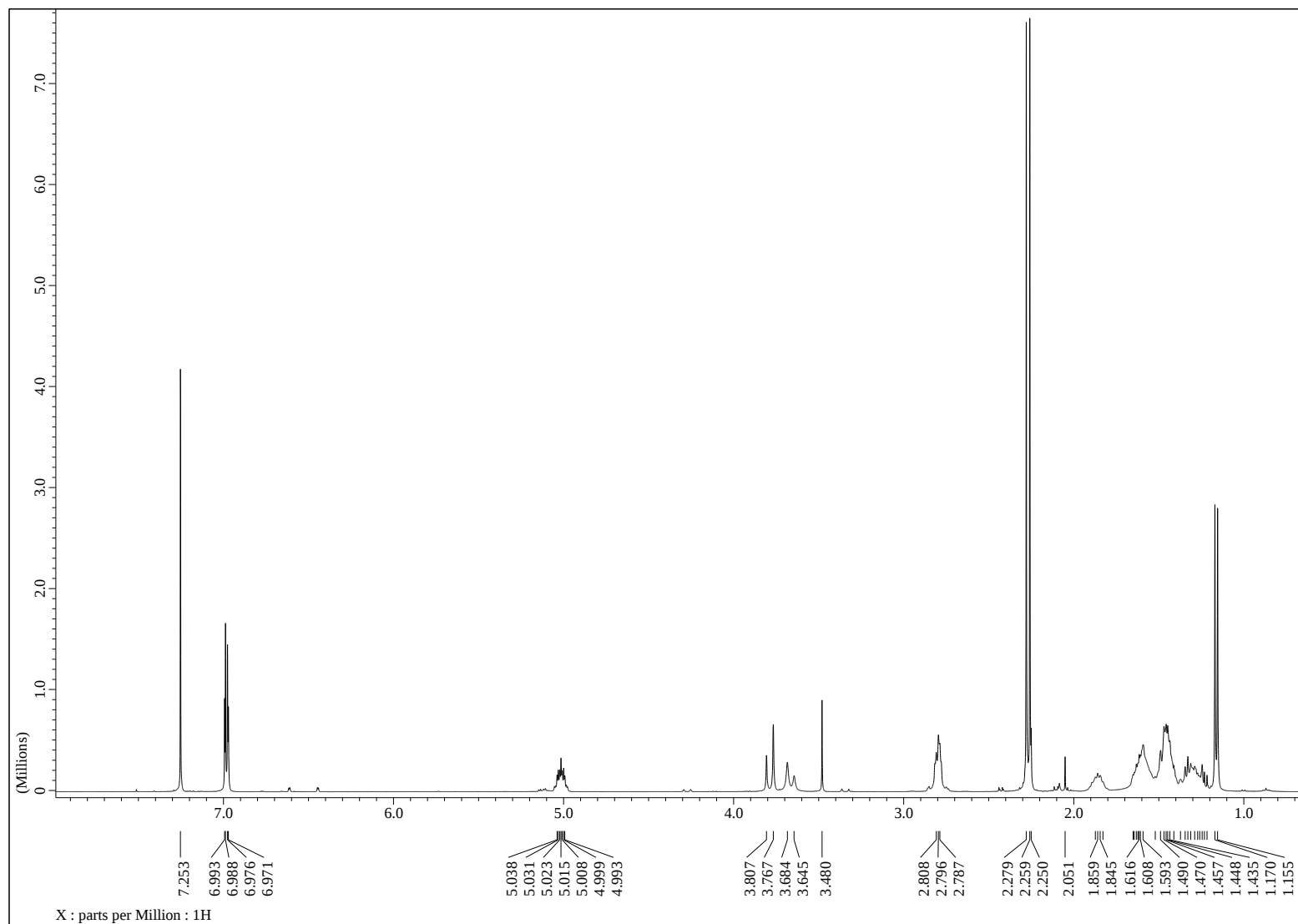


Figure S19. ^1H NMR spectrum (400 MHz, CDCl_3) of compound **3d**

Table S1. The optical rotation values of **1-9** in comparison with the published values.

Compounds	Optical rotation value, $[\alpha]_D$		
	measured value	literature value	literature value of enantiomer
	(EtOH)	(EtOH)	(EtOH)
Curvulone C (1)	+13.6 (c = 0.22)	-	-
Curvulone B (2)	-15.2 (c = 0.18)	-22.0 (c = 0.27) ¹	n.e
Curvularin (3)	-37.1 (c = 2.4)	-33.0 (c = 2.0) ²	+32.6 (c = 0.75) ³
(11 <i>R</i> ,15 <i>S</i>)-11-hydrocurvularin (4)	-14.9 (c = 0.44)	- 29.4 (c = 0.33) ⁴	+25.2 (c = 0.26) ⁴
(11 <i>S</i> ,15 <i>S</i>)-11-hydrocurvularin (5)	-54.6 (c = 0.56)	-10.9 (c = 0.19) ⁴	+6.9 (c = 0.47) ⁴
(11 <i>R</i> ,15 <i>S</i>)-11-methoxycurvularin (6)	-7.1 (c = 0.43)	-4.0 (c = 0.3) ⁵	n.e
(11 <i>S</i> ,15 <i>S</i>)-11-methoxycurvularin (7)	-17.0 (c = 0.51)	-17 (c = 1.0) ⁵	n.e
(10 <i>E</i> ,15 <i>S</i>)-10,11-dehydrocurvularin (8)	-51.6 (c = 2.22)	-79.8 (c = 3.0) ⁴	+79.1 (c = 0.4) ⁴
(10 <i>Z</i> ,15 <i>S</i> [*])-10,11-dehydrocurvularin (9)	-19.9 (c = 0.15)	+7.3 (c = 0.78) ⁶	n.e

n.e: no enantiomer reported in the literature

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