

Supplementary Materials:

Phytochemicals with Chemopreventive Activity Obtained from the Thai Medicinal Plant *Mammea siamensis* (Miq.) T. Anders.: Isolation and Structure Determination of New Prenylcoumarins Inhibitory Activity against Aromatase

Fenglin Luo ¹, Yoshiaki Manse ¹, Saowanee Chaipech ^{1,2}, Yutana Pongpiriyadacha ³, Osamu Muraoka ¹, and Toshio Morikawa ^{1,*}

¹ Pharmaceutical Research and Technology Institute, Kindai University, 3-4-1 Kowakae, Higashi-osaka 577-8502, Osaka, Japan

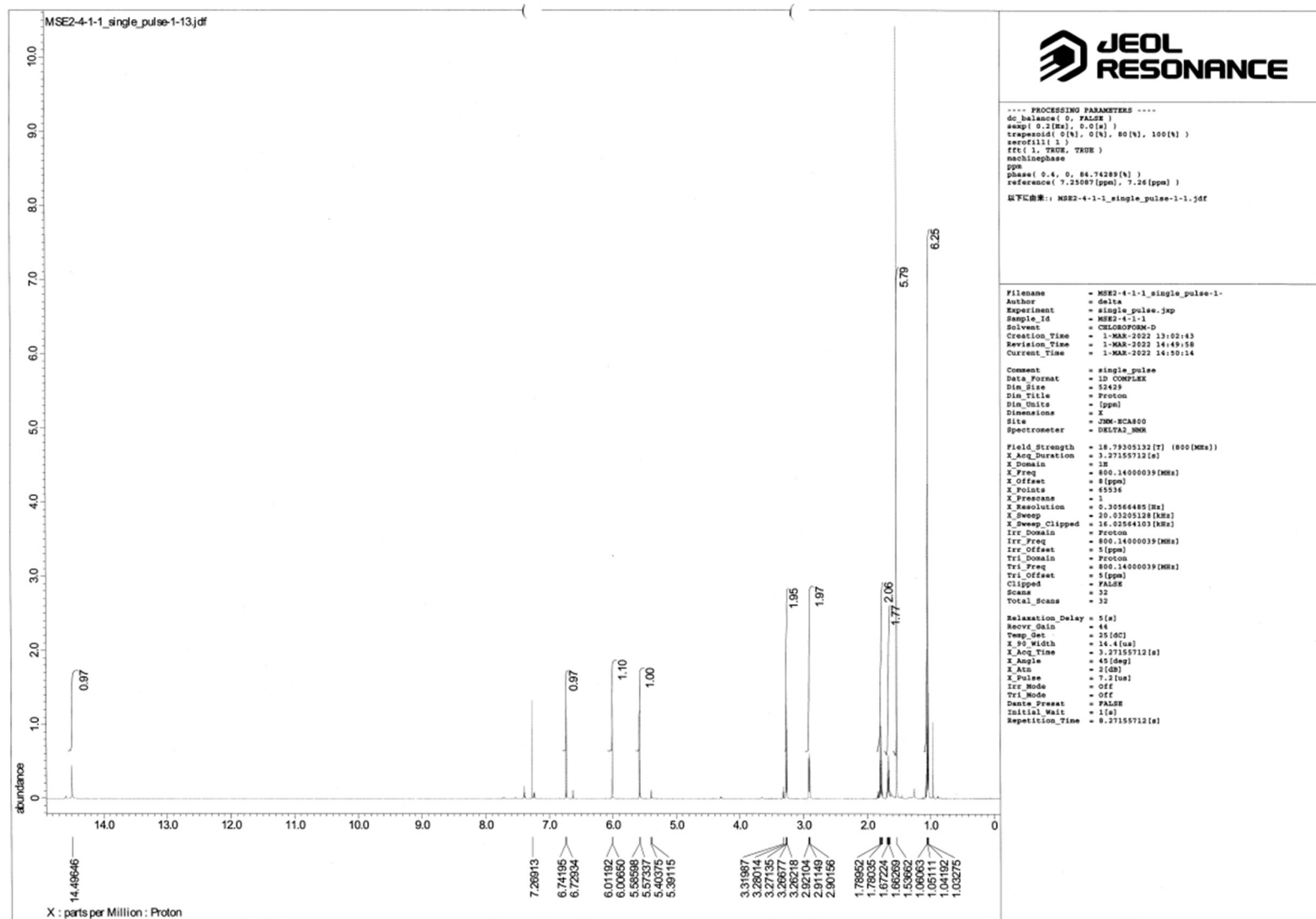
² Faculty of Agro-Industry, Rajamangala University of Technology Srivijaya, Thungyai, Nakhon Si Thammarat, 80240, Thailand

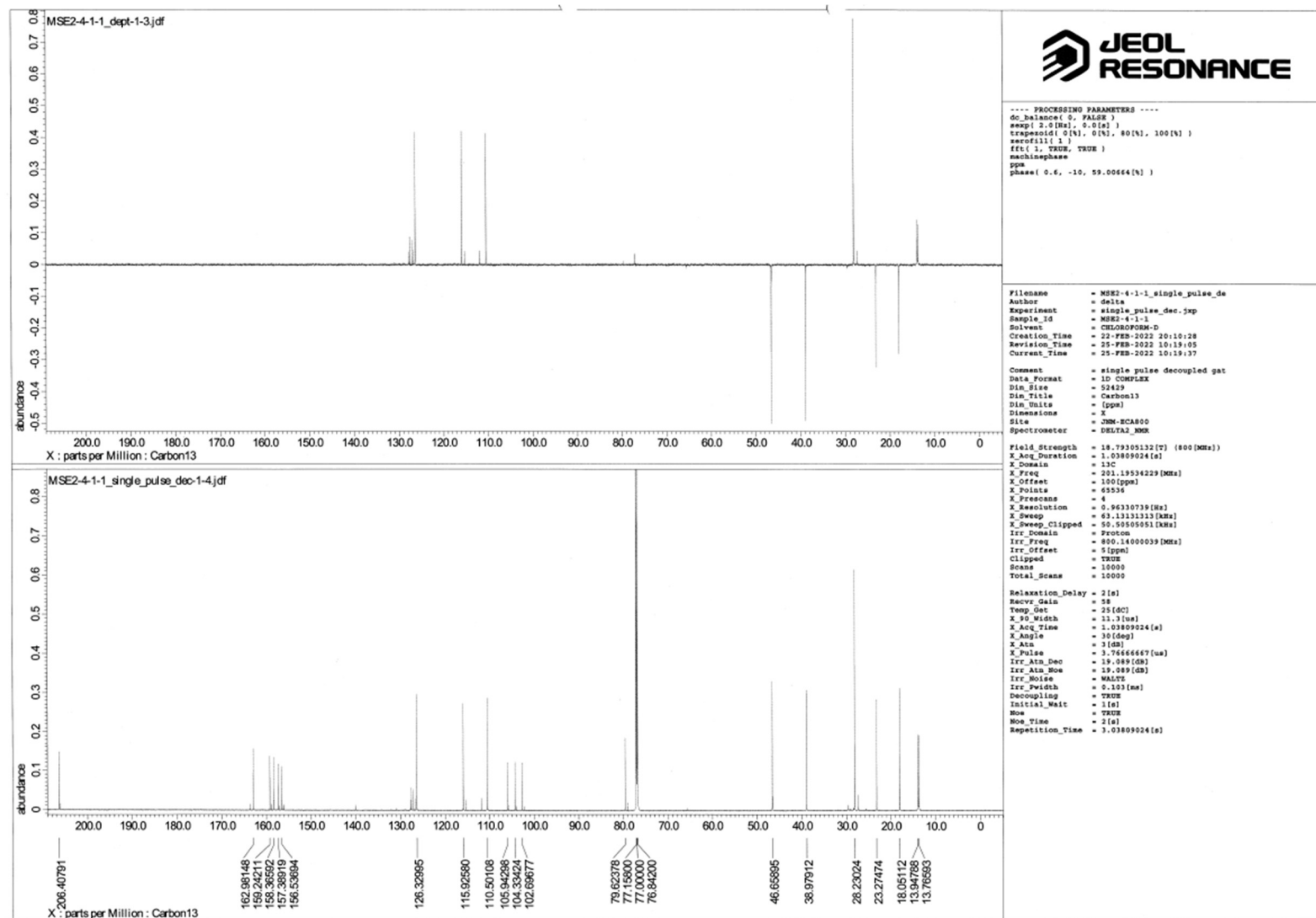
³ Faculty of Science and Technology, Rajamangala University of Technology Srivijaya, Thungyai, Nakhon Si Thammarat, 80240, Thailand

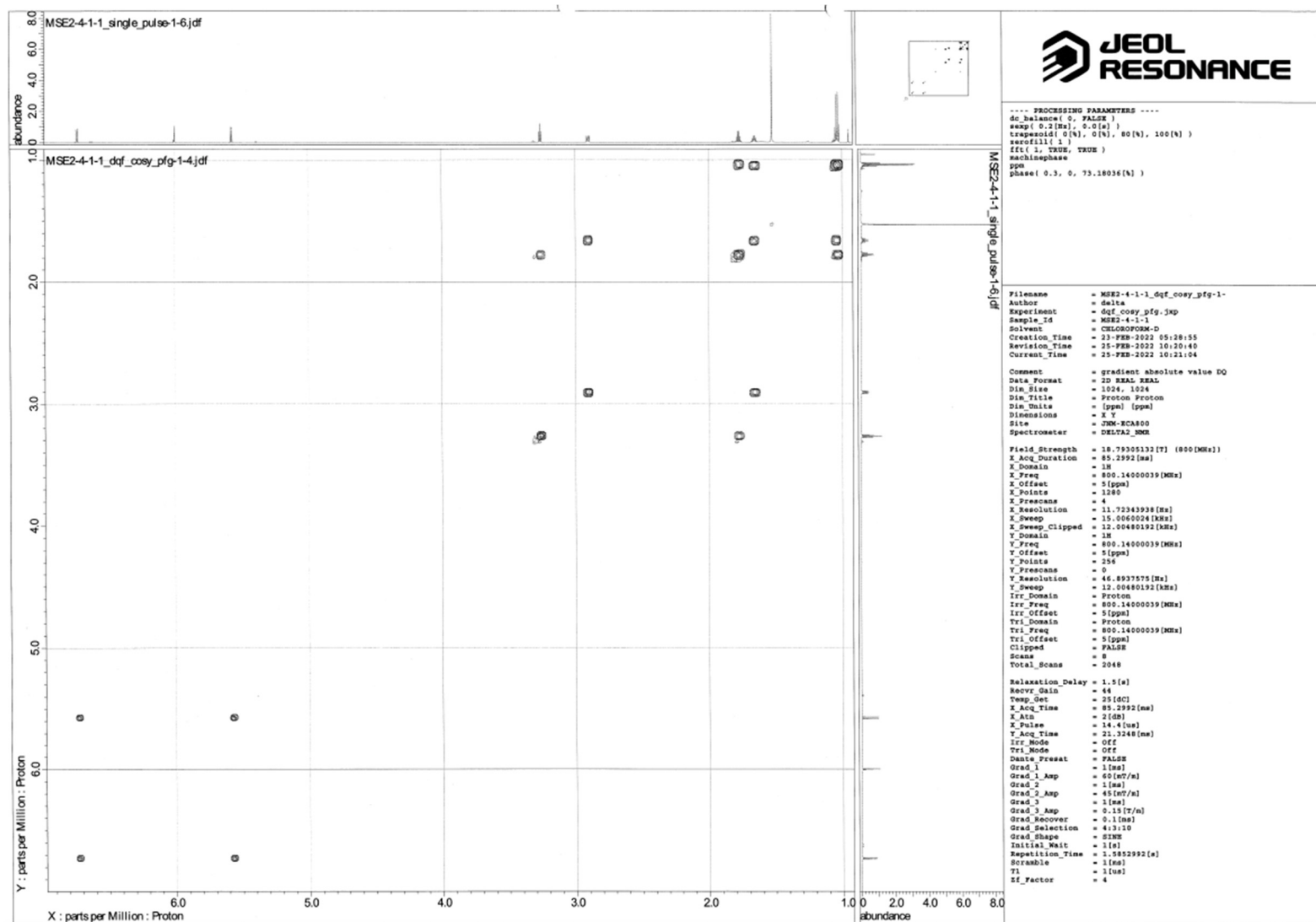
* Correspondence: morikawa@kindai.ac.jp; Tel. +81-6-4307-4306; Fax: +81-6-6729-3577

Table of Contents

Figure S1. ¹ H-NMR (800 MHz, CDCl ₃) spectrum of mammeasin K (1)	S2
Figure S2. ¹³ C-NMR (200 MHz, CDCl ₃) spectrum of mammeasin K (1)	S3
Figure S3. ¹ H- ¹ H COSY spectrum of mammeasin K (1)	S4
Figure S4. HSQC spectrum of mammeasin K (1)	S5
Figure S5. HMBC spectrum of mammeasin K (1)	S6
Figure S6. ¹ H-NMR (800 MHz, CDCl ₃) spectrum of mammeasin L (2)	S7
Figure S7. ¹³ C-NMR (200 MHz, CDCl ₃) spectrum of mammeasin L (2)	S8
Figure S8. ¹ H- ¹ H COSY spectrum of mammeasin L (2)	S9
Figure S9. HSQC spectrum of mammeasin L (2)	S10
Figure S10. HMBC spectrum of mammeasin L (2)	S11
Figure S11. ¹ H-NMR (500 MHz, CDCl ₃) spectrum of mammeasin M (3)	S12
Figure S12. ¹³ C-NMR (125 MHz, CDCl ₃) spectrum of mammeasin M (3)	S13
Figure S13. ¹ H- ¹ H COSY spectrum of mammeasin M (3)	S14
Figure S14. HSQC spectrum of mammeasin M (3)	S15
Figure S15. HMBC spectrum of mammeasin M (3)	S16
Figure S16. Difference NOE spectrum of mammeasin M (3)	S17
Figure S17. ¹ H-NMR (800 MHz, CDCl ₃) spectrum of mammeasin N (4)	S18
Figure S18. ¹³ C-NMR (200 MHz, CDCl ₃) spectrum of mammeasin N (4)	S19
Figure S19. ¹ H- ¹ H COSY spectrum of mammeasin N (4)	S20
Figure S20. HSQC spectrum of mammeasin N (4)	S21
Figure S21. HMBC spectrum of mammeasin N (4)	S22
Figure S22. ¹ H-NMR (500 MHz, CDCl ₃) spectrum of mammeasin O (5)	S23
Figure S23. ¹³ C-NMR (125 MHz, CDCl ₃) spectrum of mammeasin O (5)	S24
Figure S24. ¹ H- ¹ H COSY spectrum of mammeasin O (5)	S25
Figure S25. HSQC spectrum of mammeasin O (5)	S26
Figure S26. HMBC spectrum of mammeasin O (5)	S27
Figure S27. Lineweaver-Burk plots of the inhibition of human recombinant aromatase activity by 1 , 4–11 , 16 , 17 , 23–25 , 28 , 33 , 38 , and 39	S28

Figure S1. ^1H -NMR (800 MHz, CDCl_3) spectrum of mammeasin K (1)

Figure S2. ^{13}C -NMR (200 MHz, CDCl_3) spectrum of mammeasin K (1)

Figure S3. ^1H - ^1H COSY spectrum of mammeasin K (1)

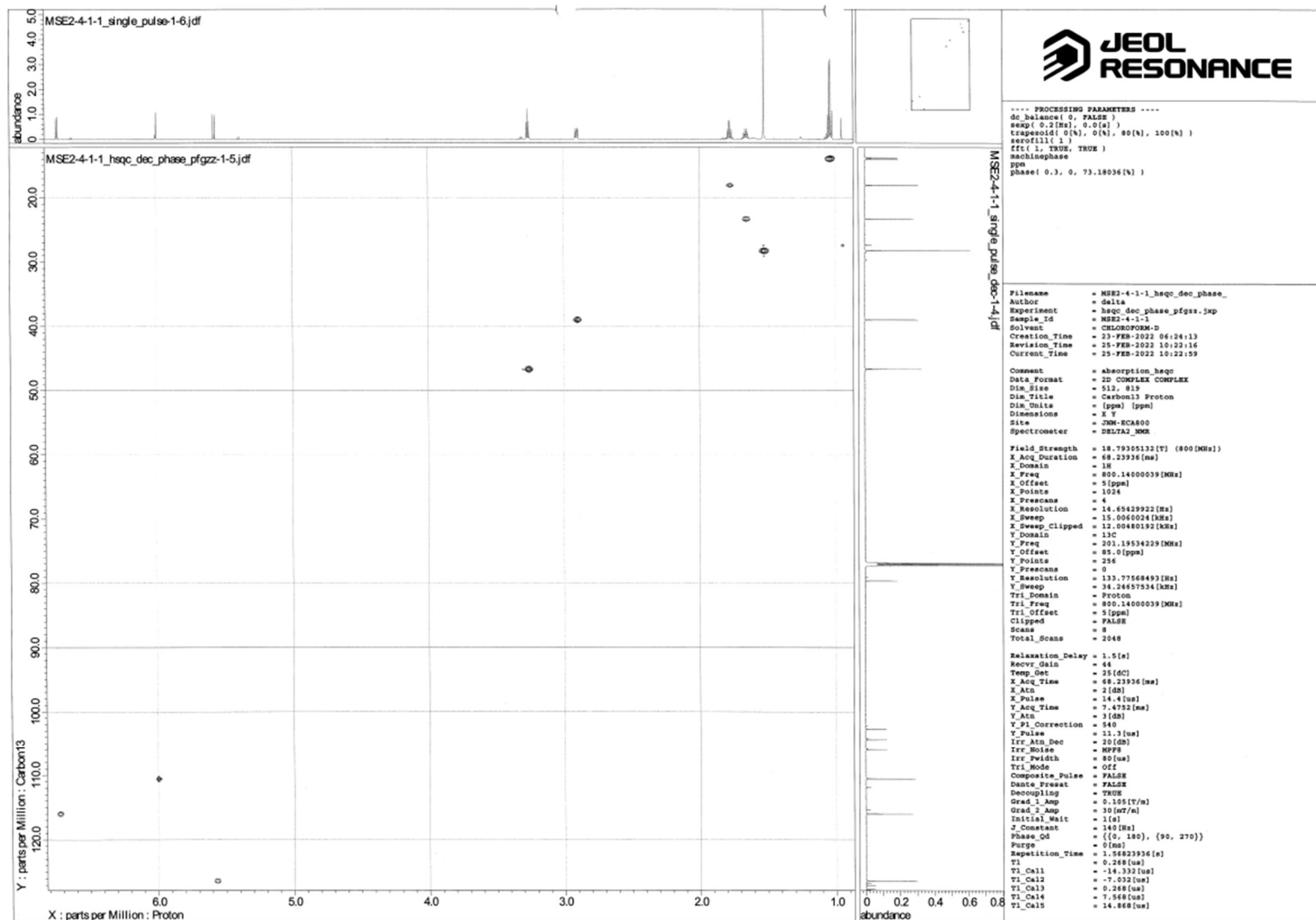


Figure S4. HSQC spectrum of mammeasin K (1)

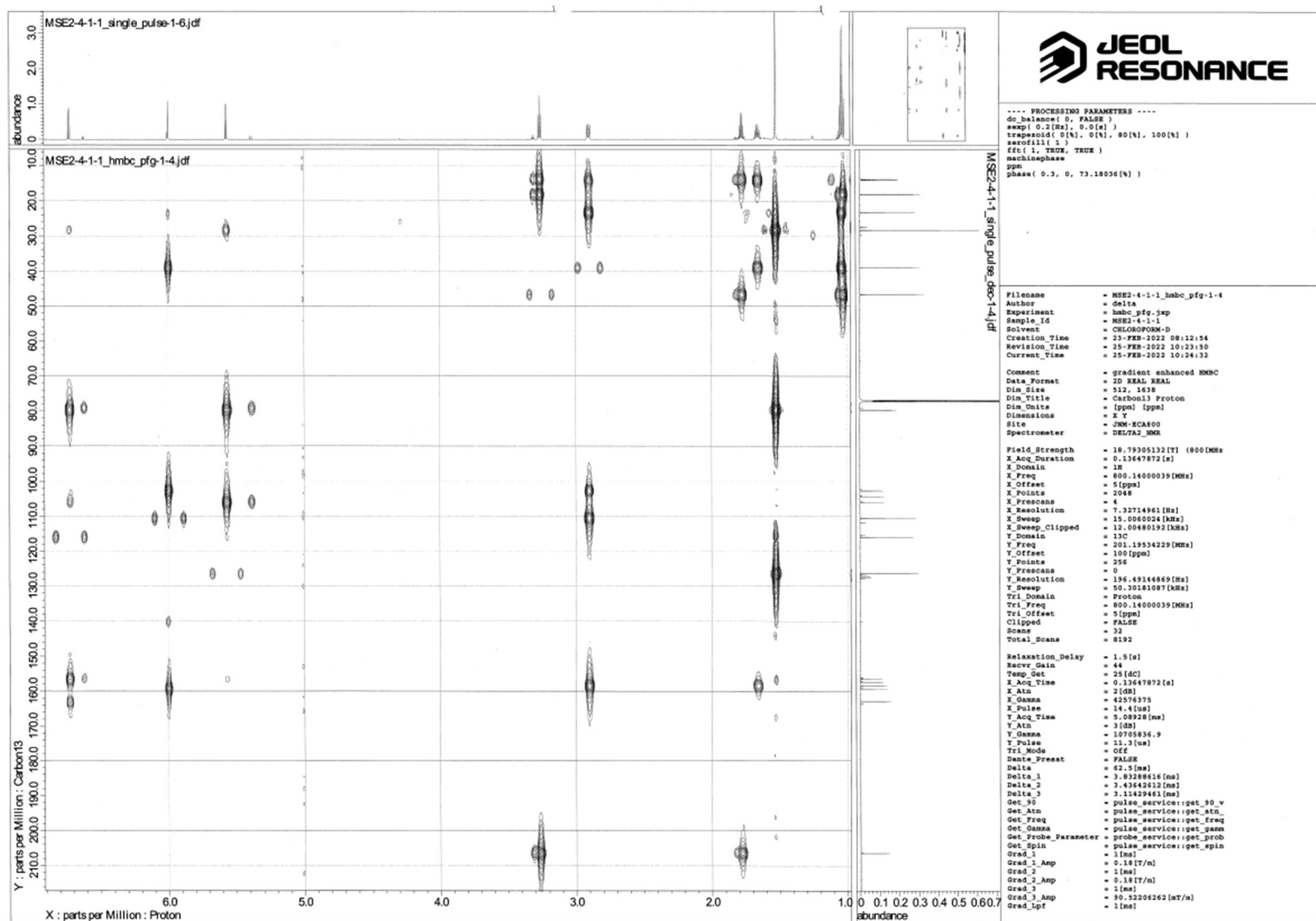
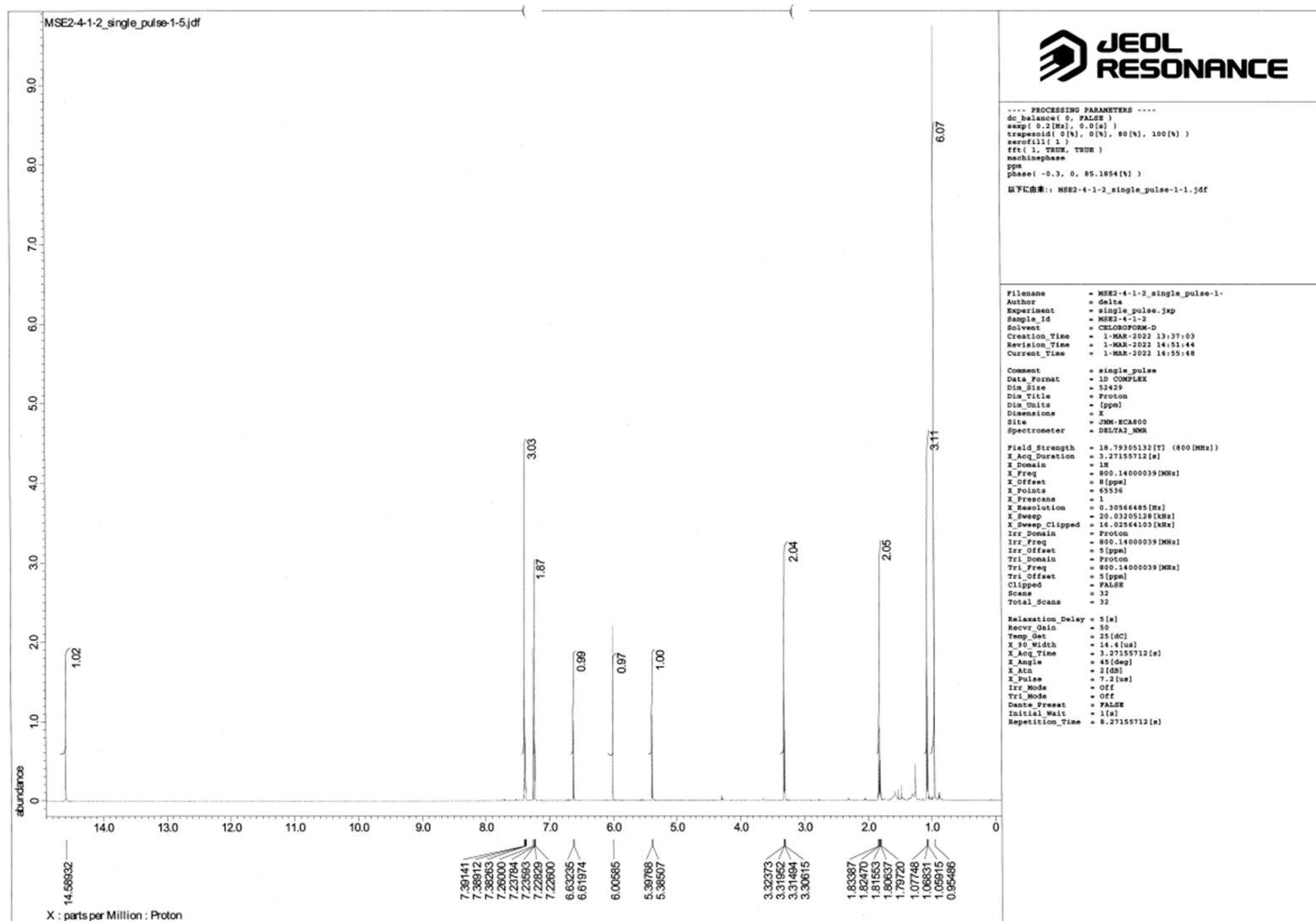
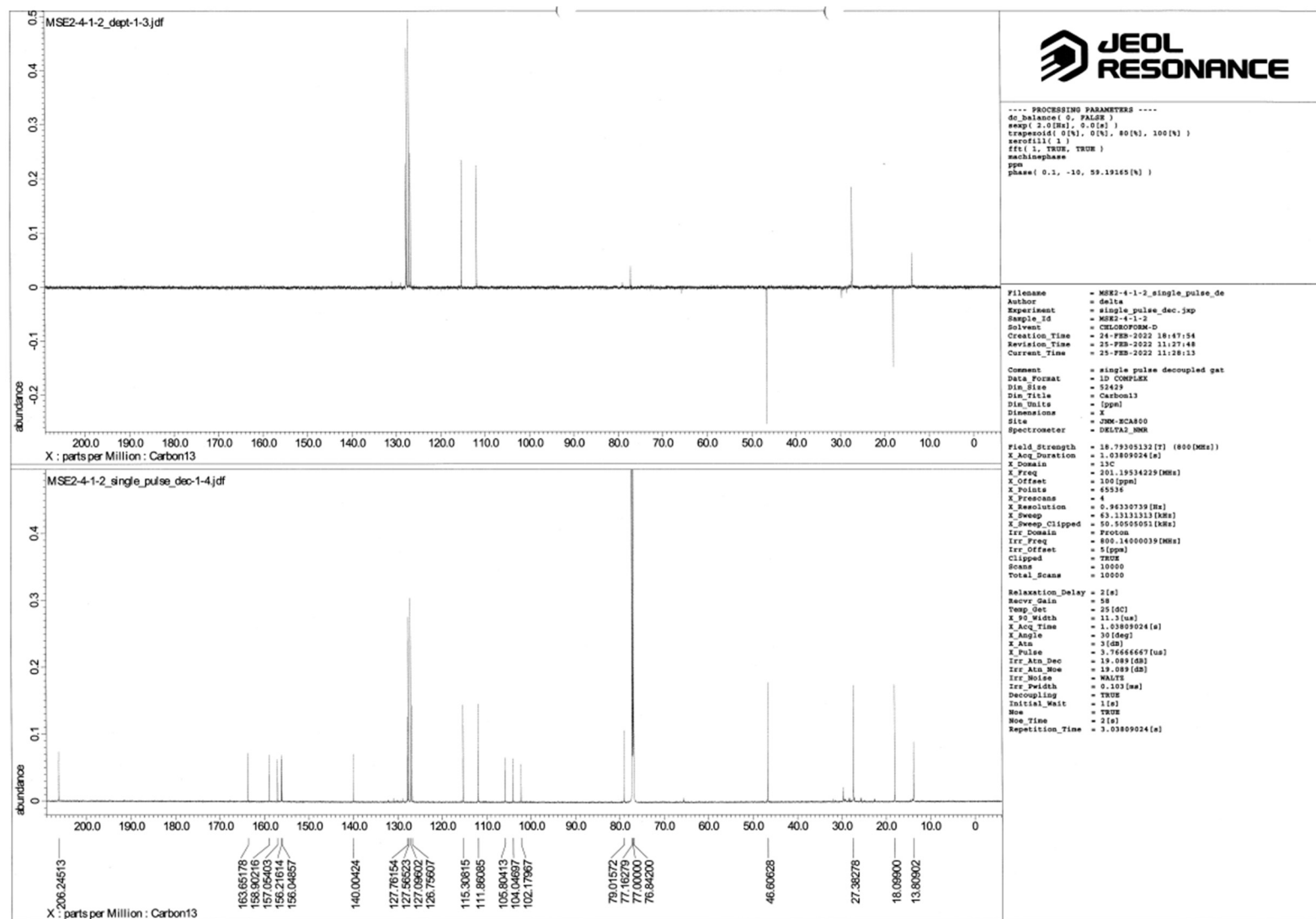
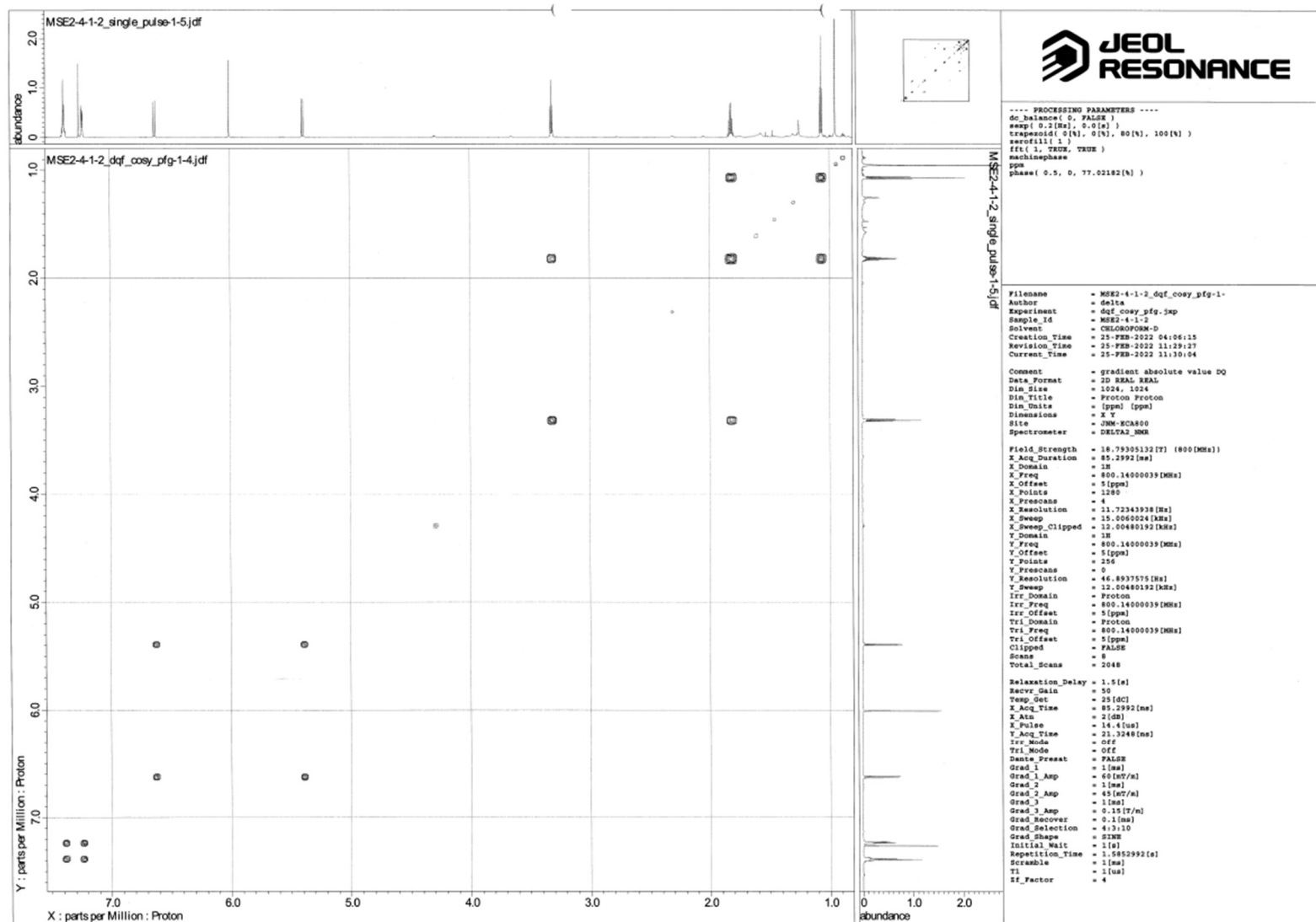


Figure S5. HMBC spectrum of mammeasin K (1)

Figure S6. ^1H -NMR (800 MHz, CDCl_3) spectrum of mammeasin L (2)

Figure S7. ^{13}C -NMR (200 MHz, CDCl_3) spectrum of mammeasin L (2)

Figure S8. ^1H - ^1H COSY spectrum of mammeasin L (2)

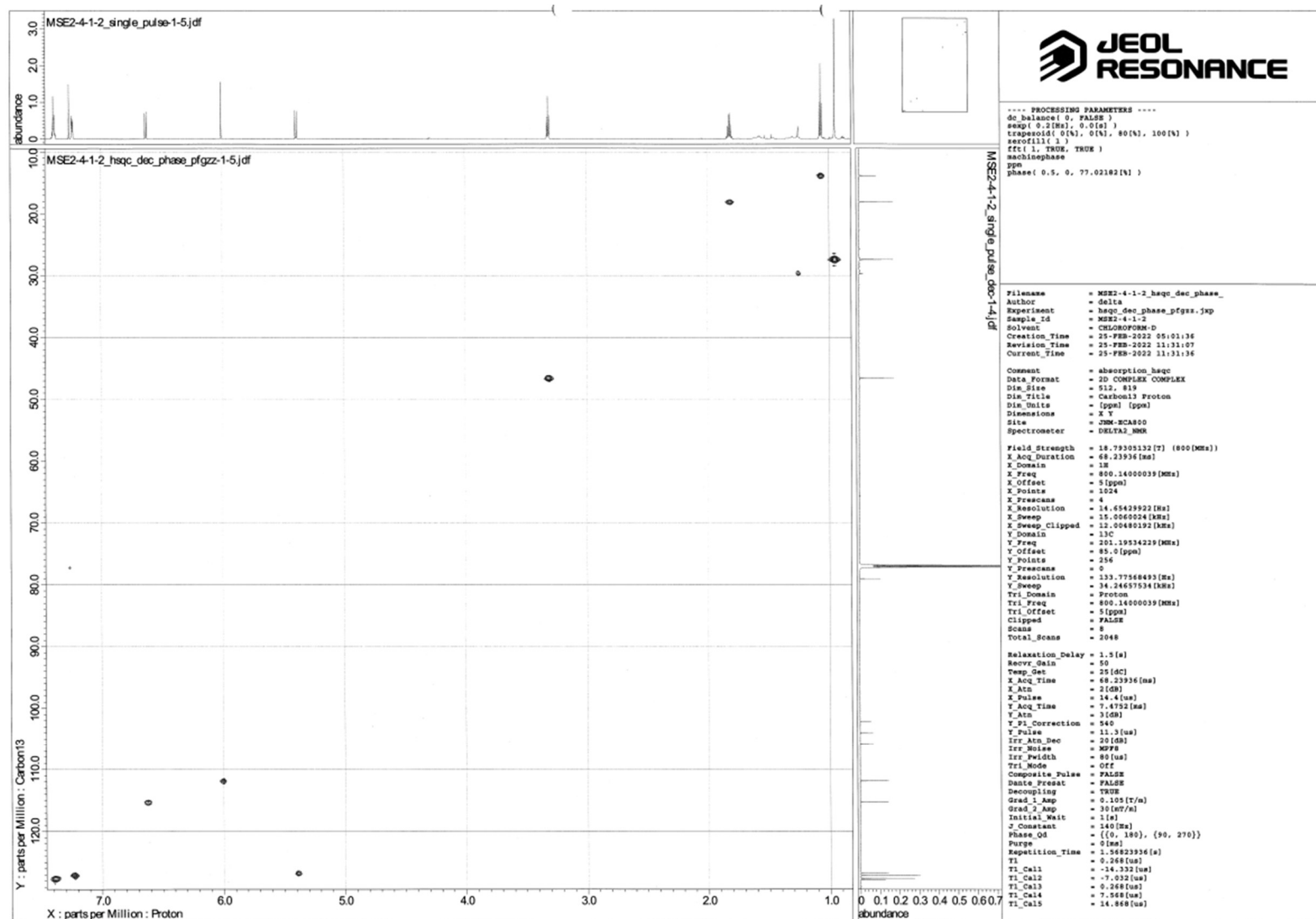
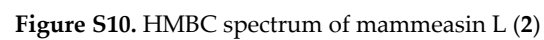
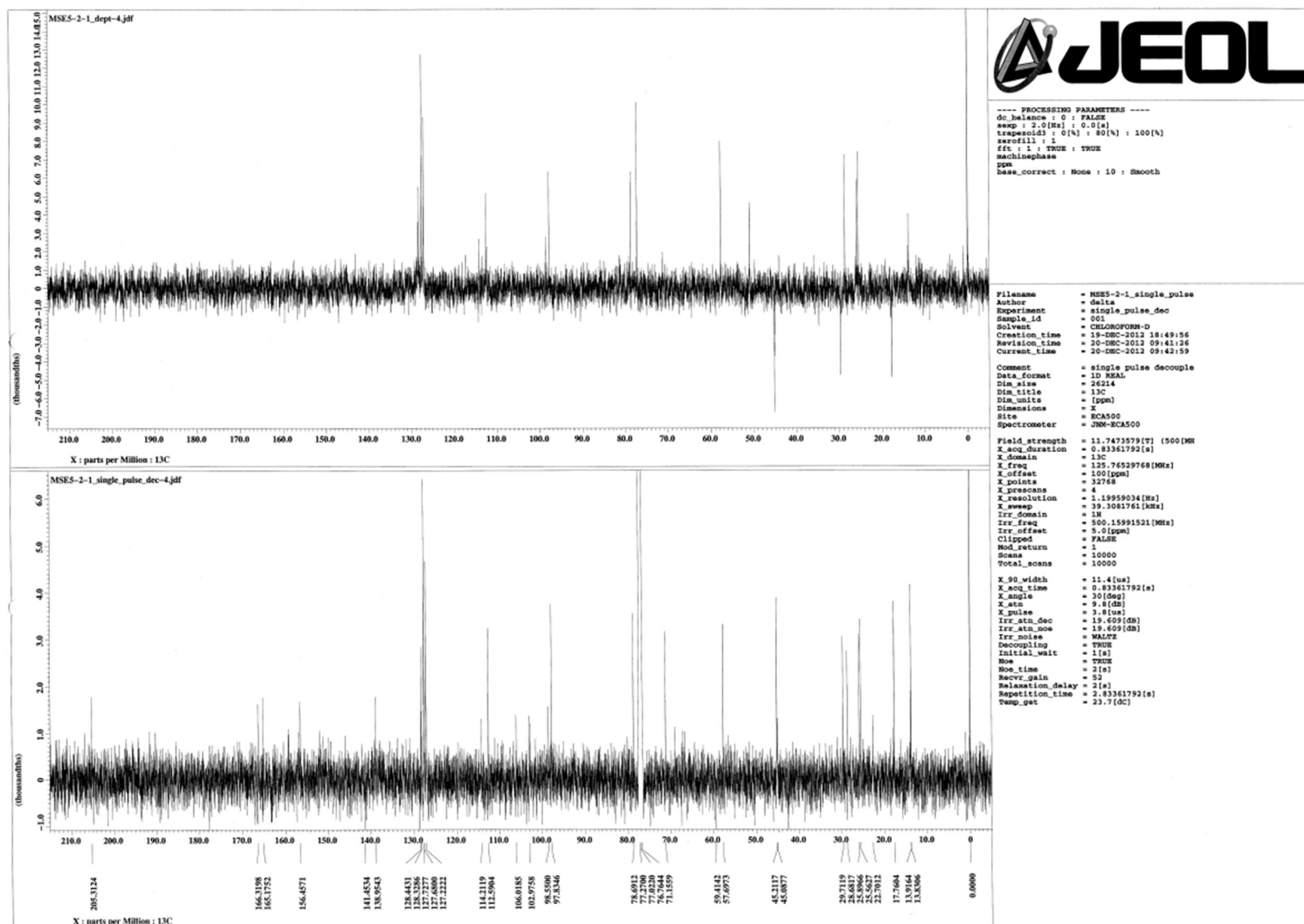
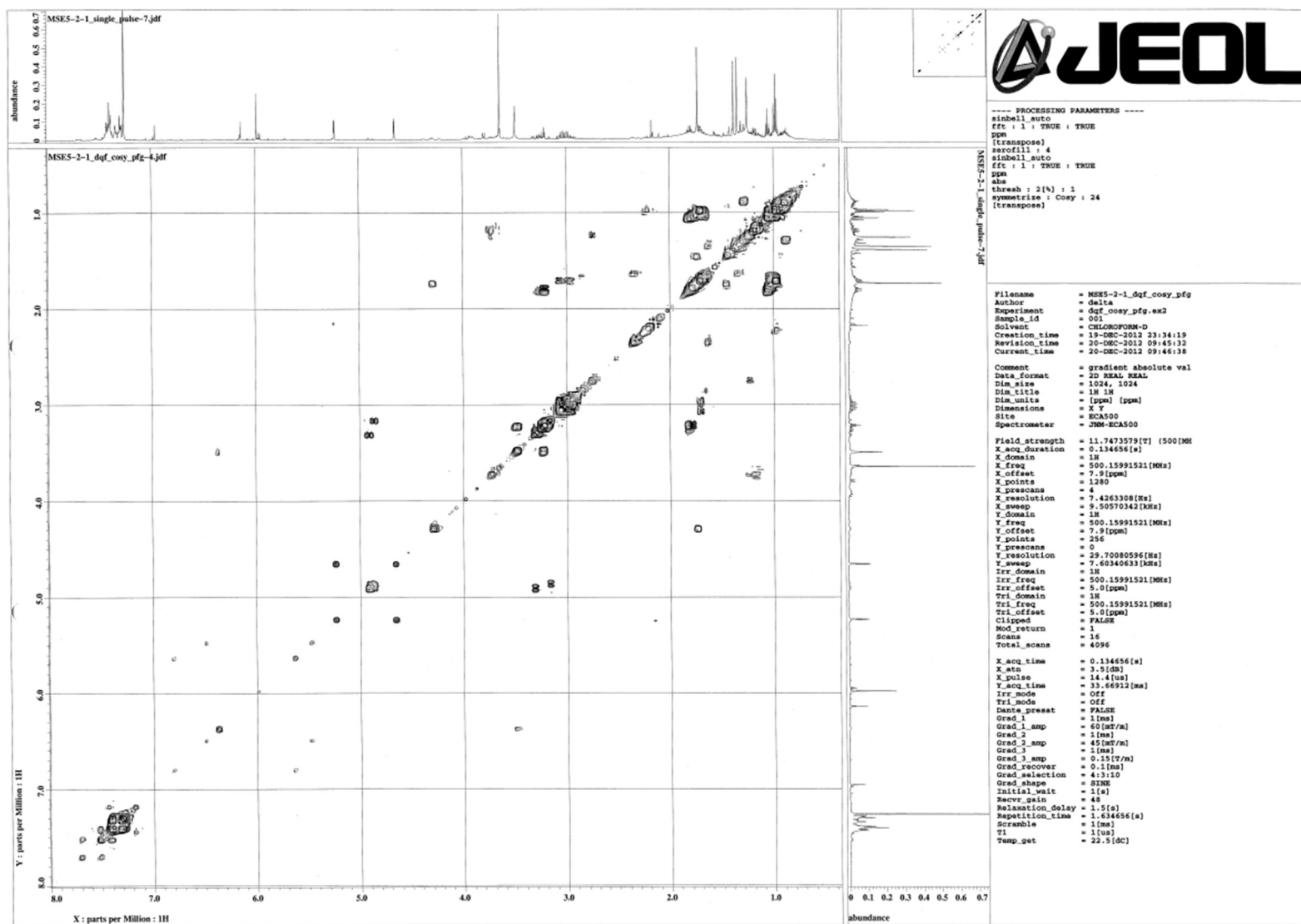


Figure S9. HSQC spectrum of mammeasin L (2)





Figure S12. ^{13}C -NMR (125 MHz, CDCl_3) spectrum of mammeasin M (3)

Figure S13. ^1H - ^1H COSY spectrum of mammeasin M (3)

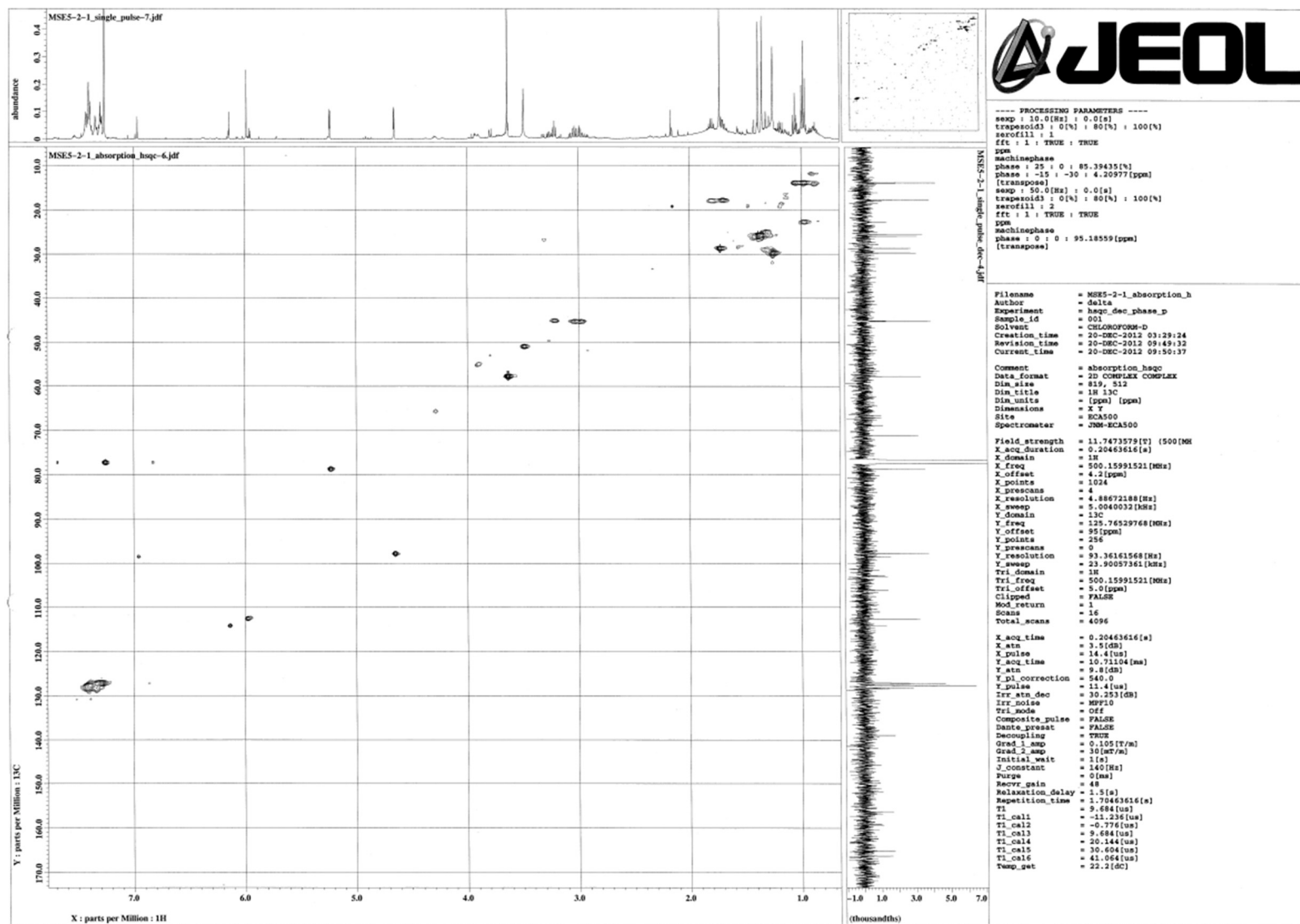


Figure S14. HSQC spectrum of mammeasin M (3)

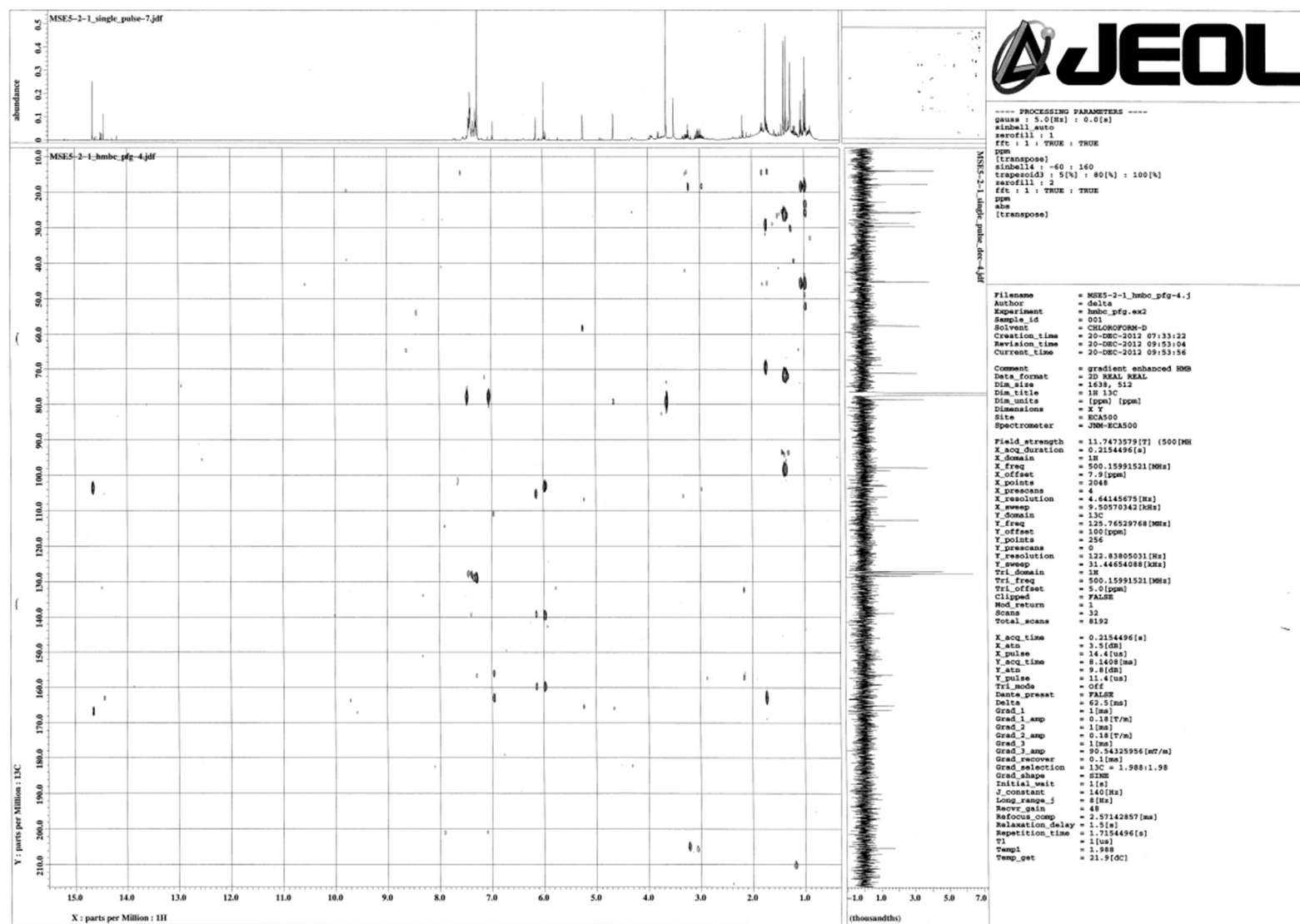


Figure S15. HMBC spectrum of mammeasin M (3)

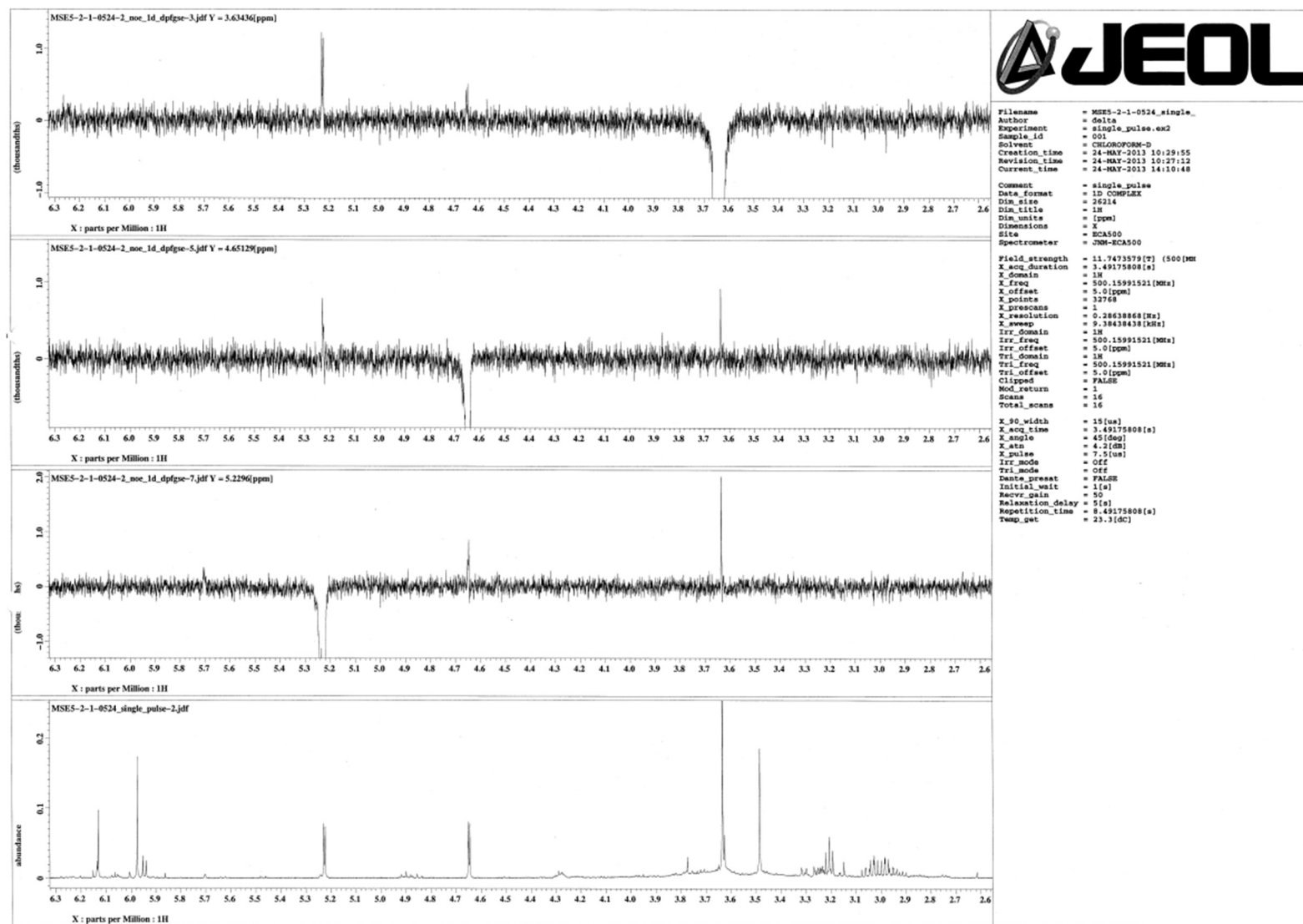
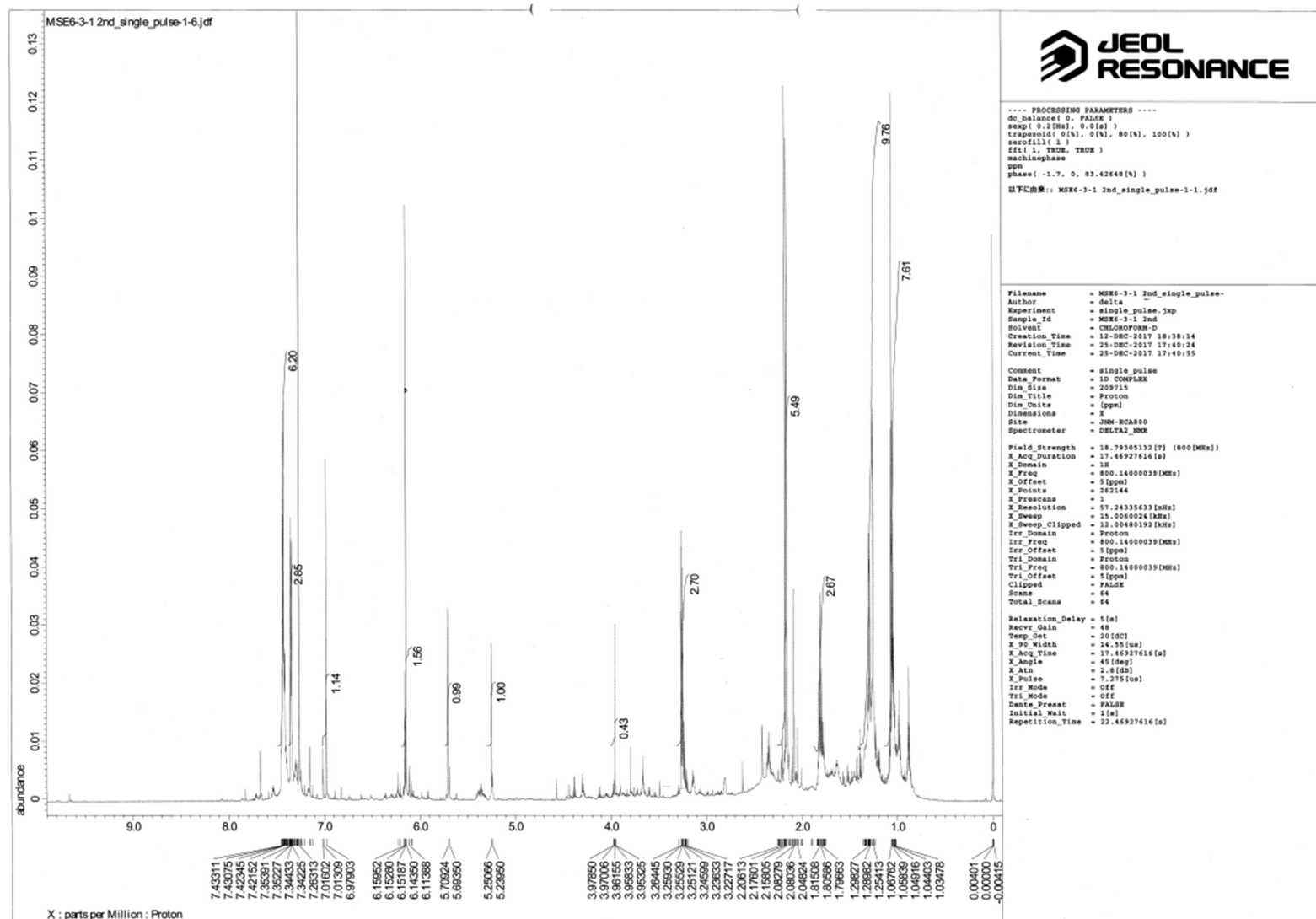
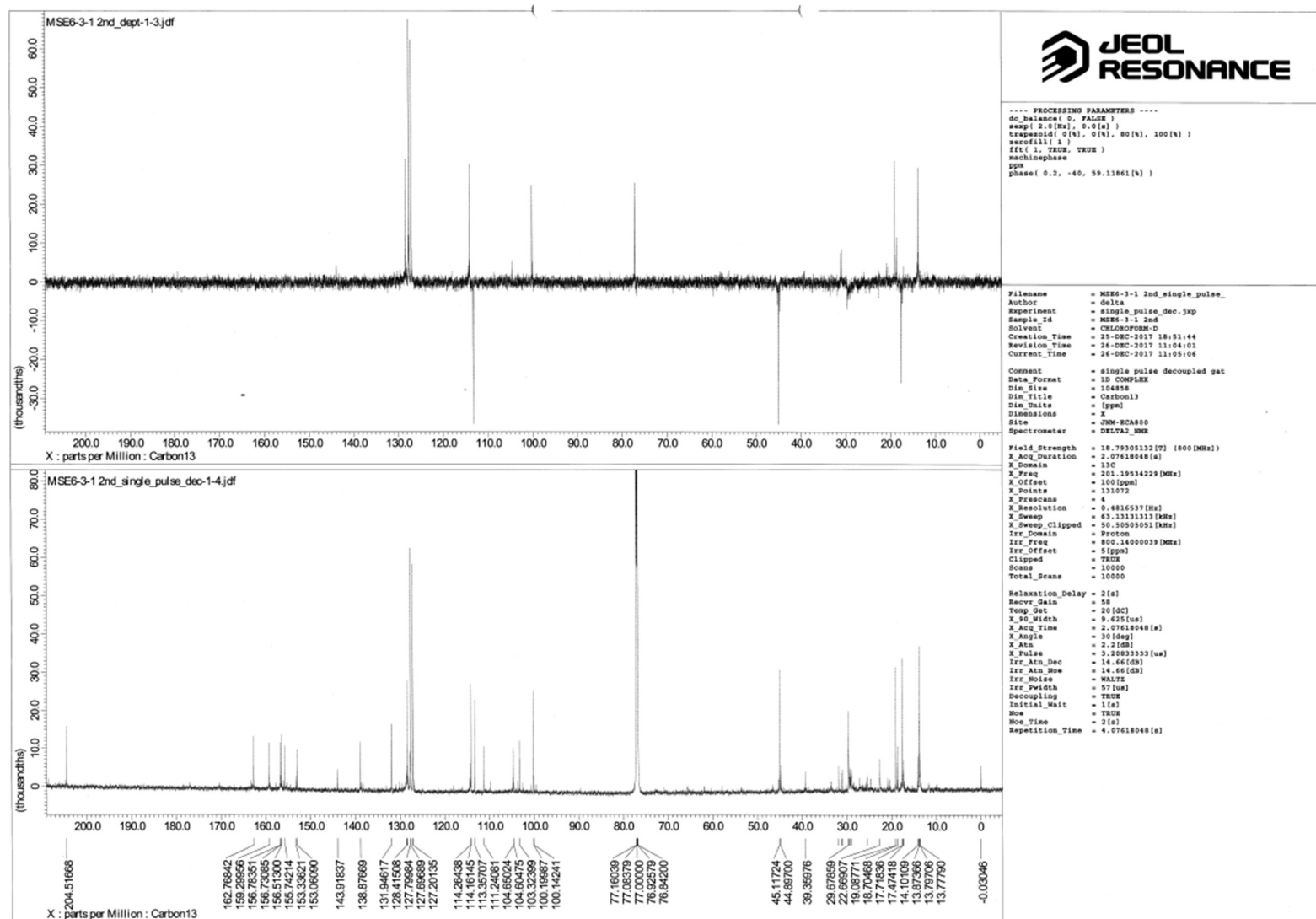
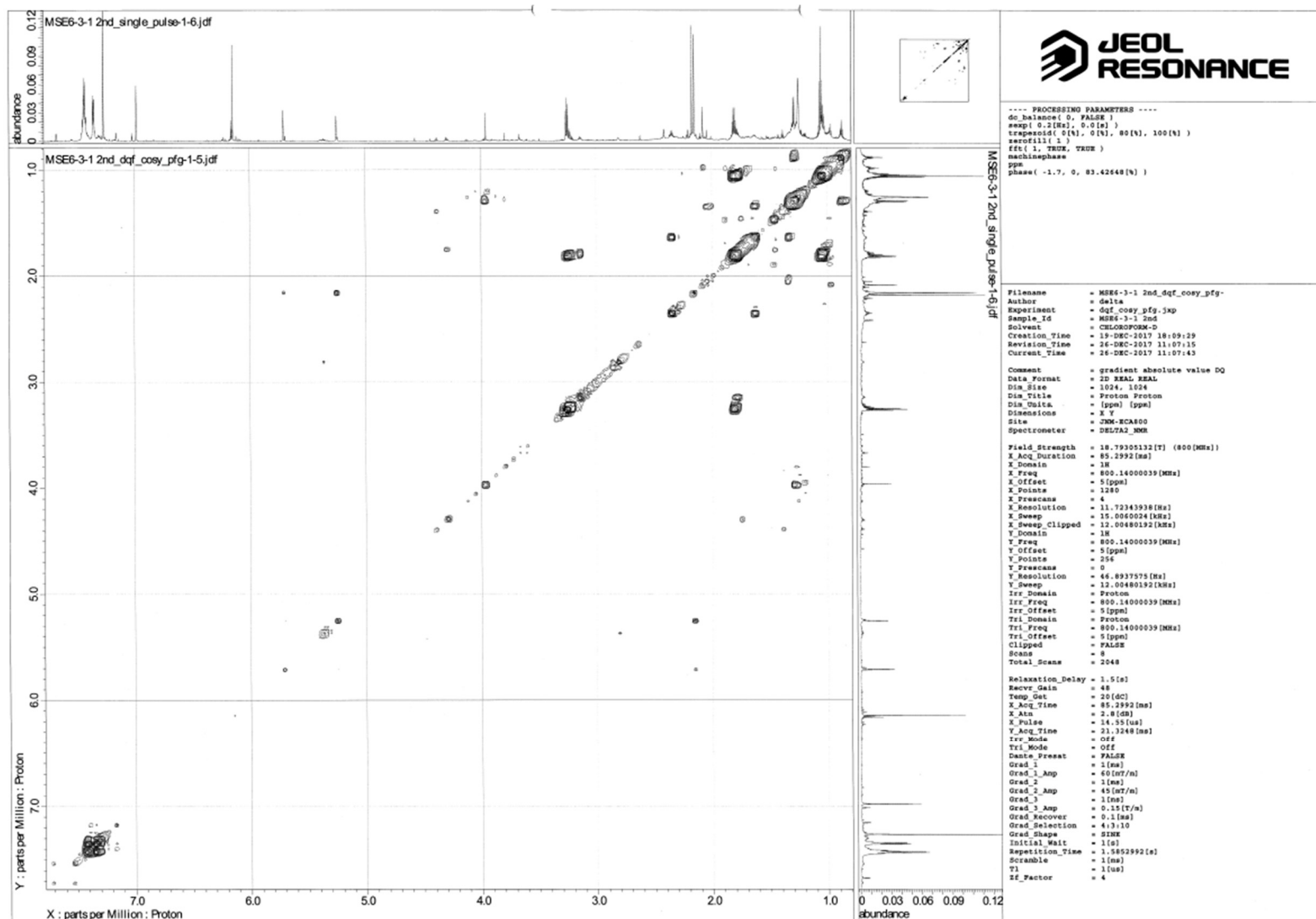


Figure S16. Difference NOE spectrum of mammeasin M (3)

Figure S17. ^1H -NMR (800 MHz, CDCl_3) spectrum of mammeasin N (4)

Figure S18. ^{13}C -NMR (200 MHz, CDCl_3) spectrum of mammeasin N (4)

Figure S19. ^1H - ^1H COSY spectrum of mammeasin N (4)

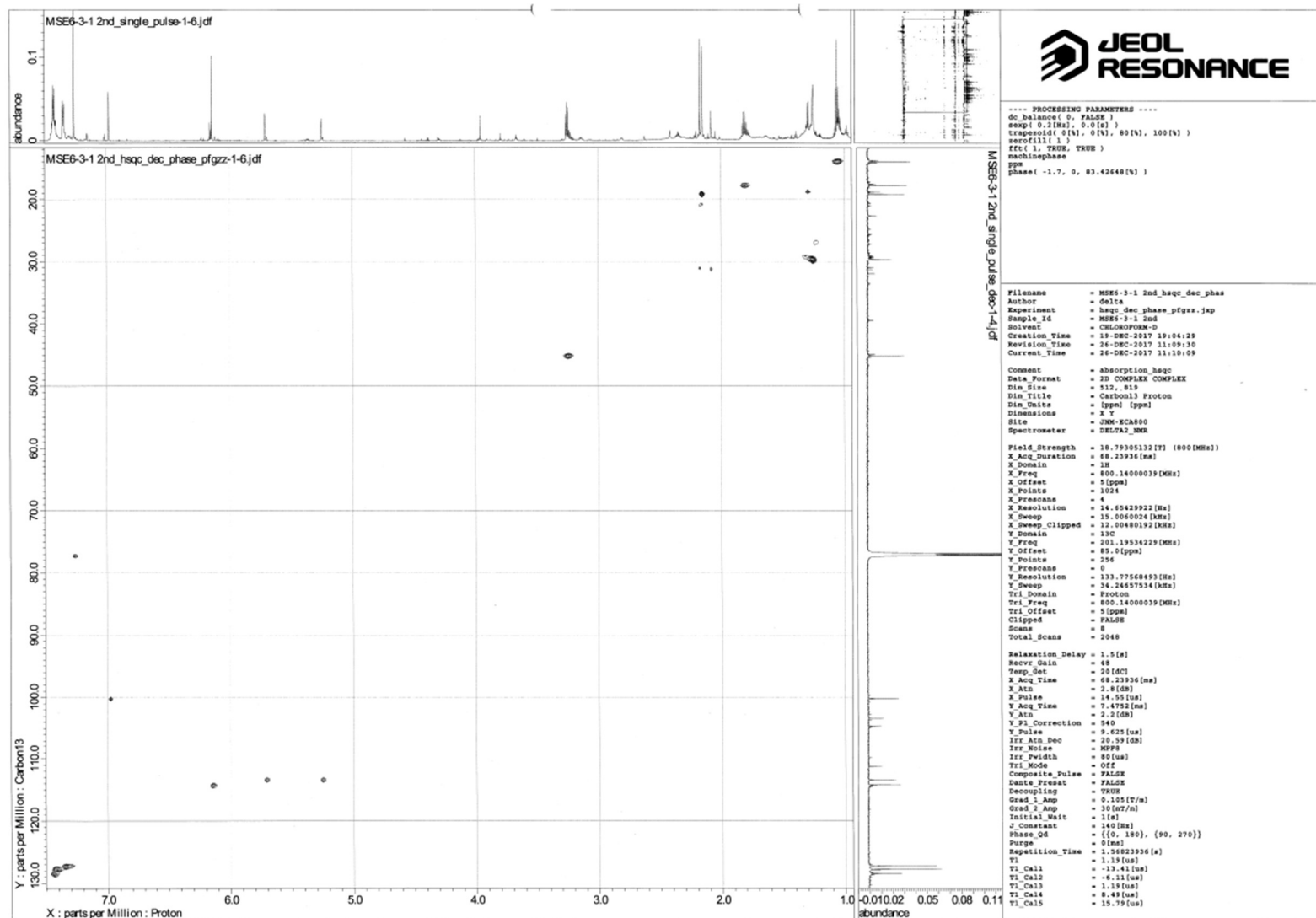


Figure S20. HSQC spectrum of mammeasin N (4)

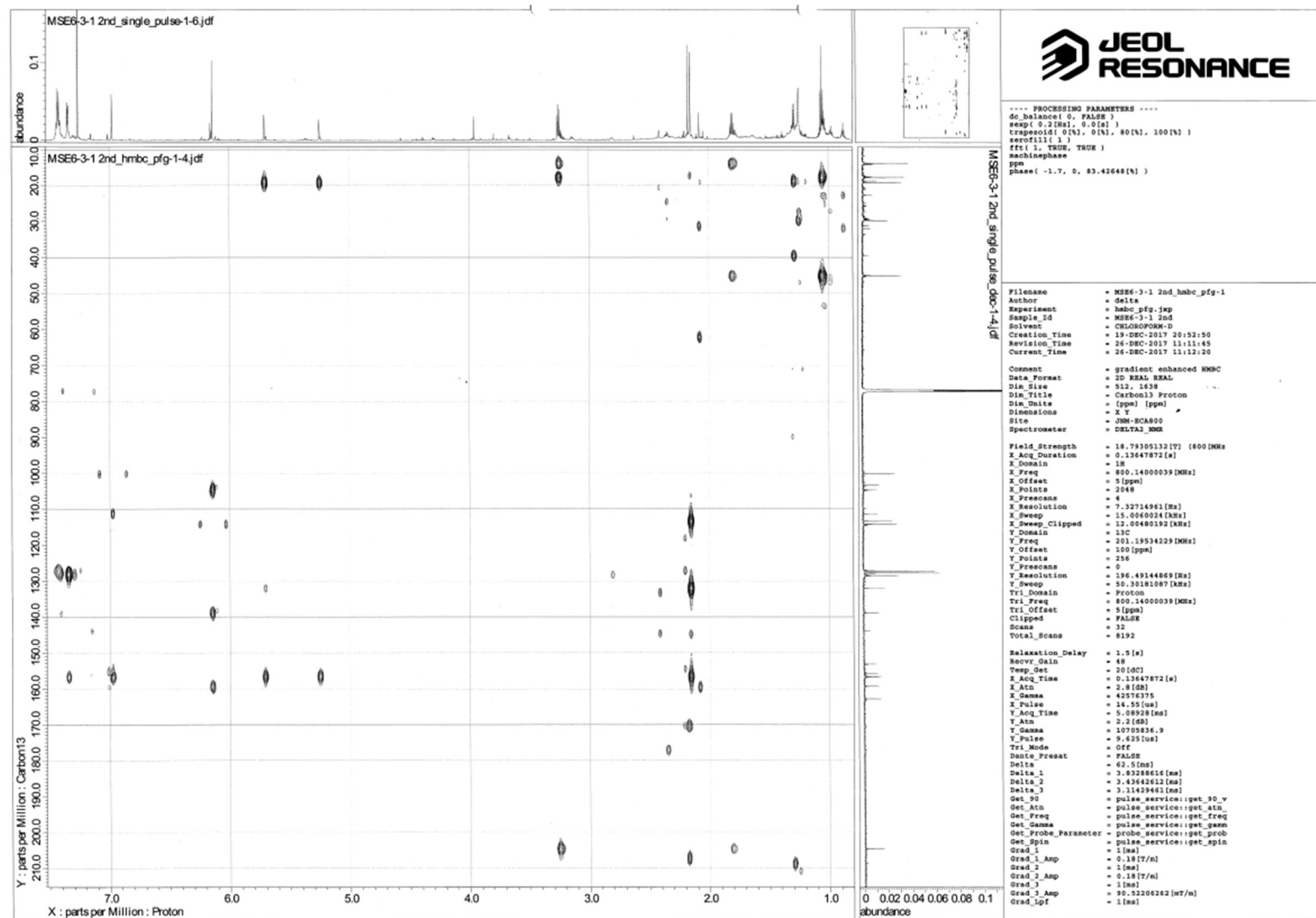
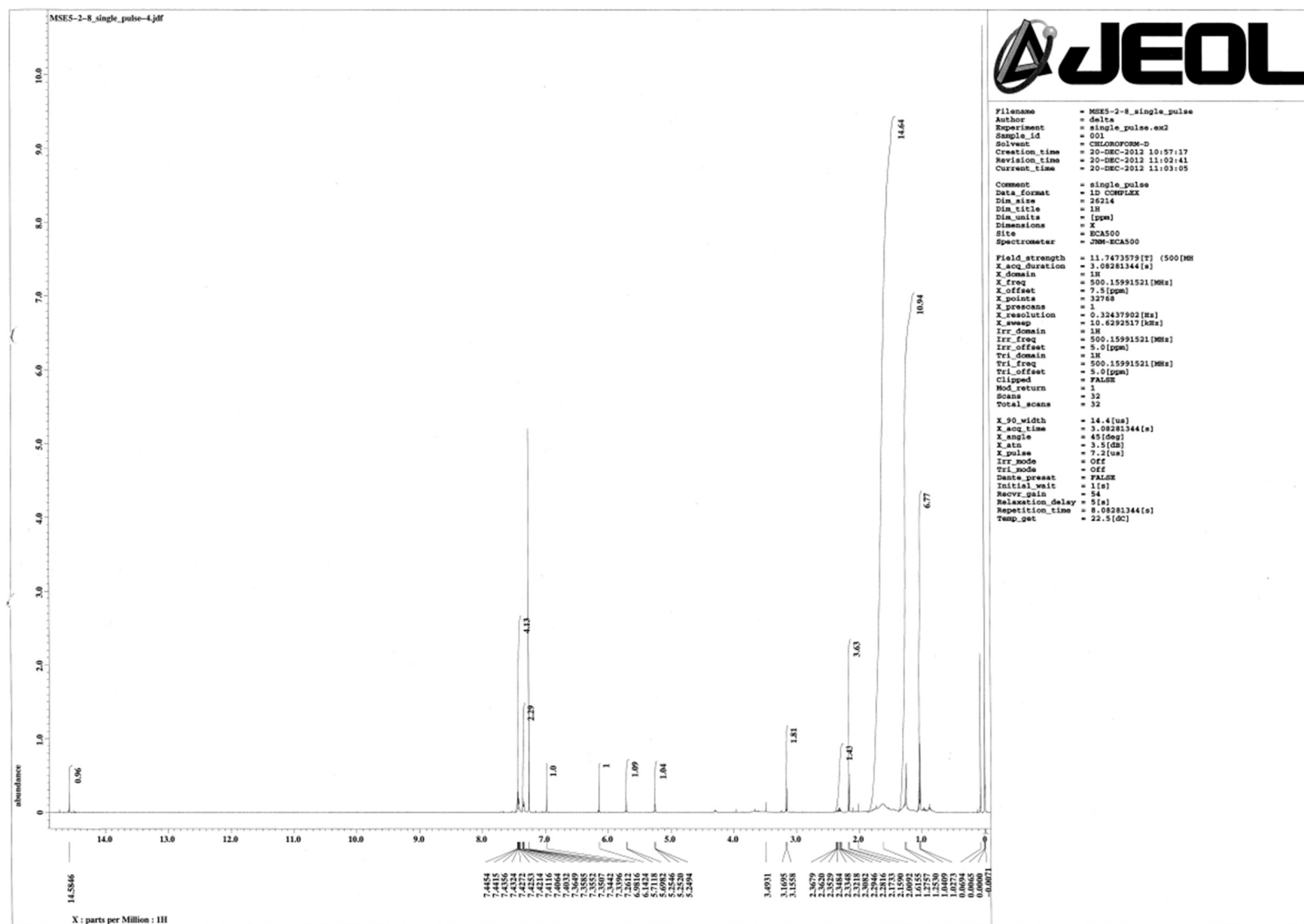
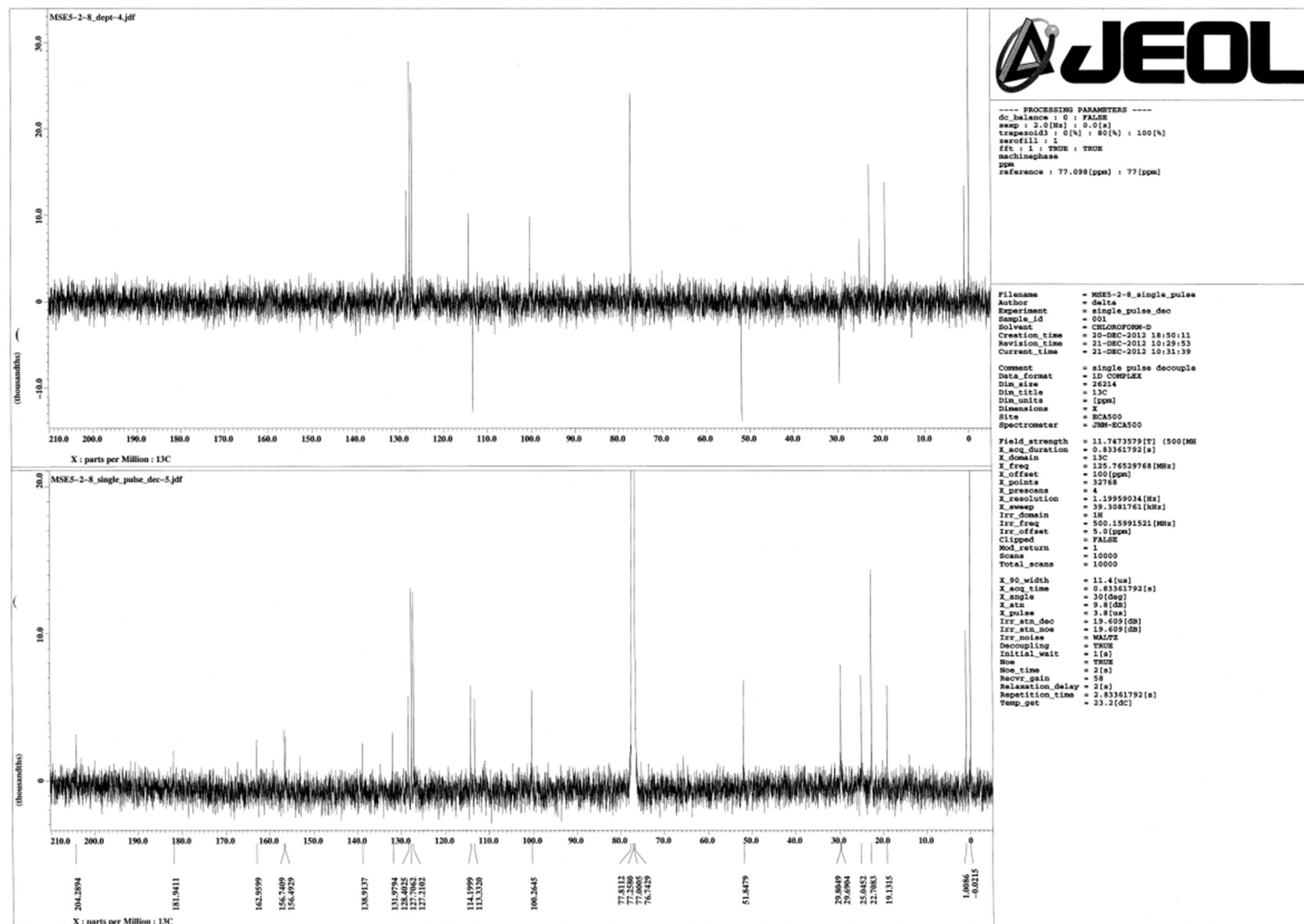
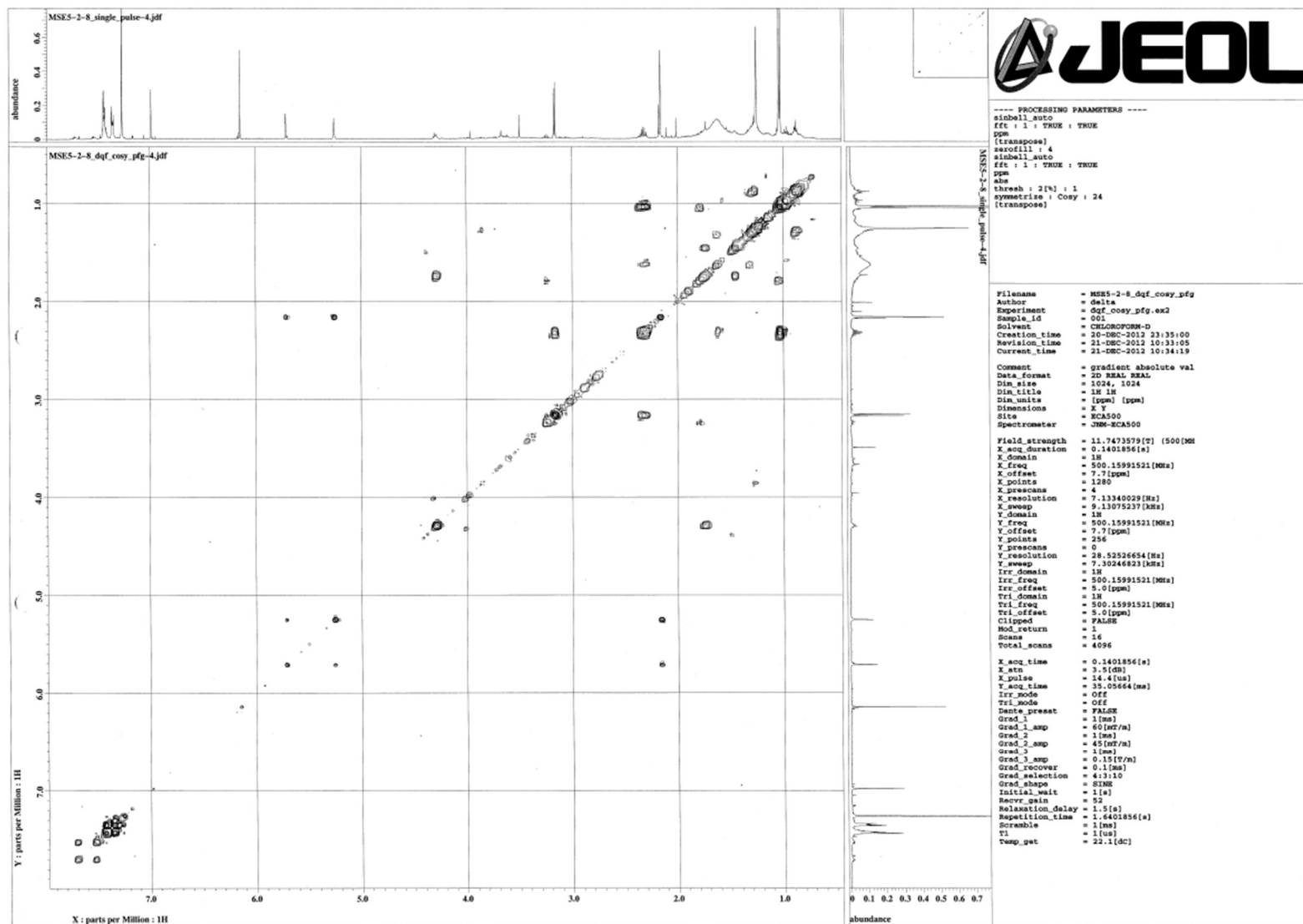


Figure S21. HMBC spectrum of mammeasin N (4)

Figure S22. ¹H-NMR (500 MHz, CDCl₃) spectrum of mammeasin O (5)

Figure S23. ^{13}C -NMR (125 MHz, CDCl_3) spectrum of mammeasin O (5)

Figure S24. ^1H - ^1H COSY spectrum of mammeasin O (5)

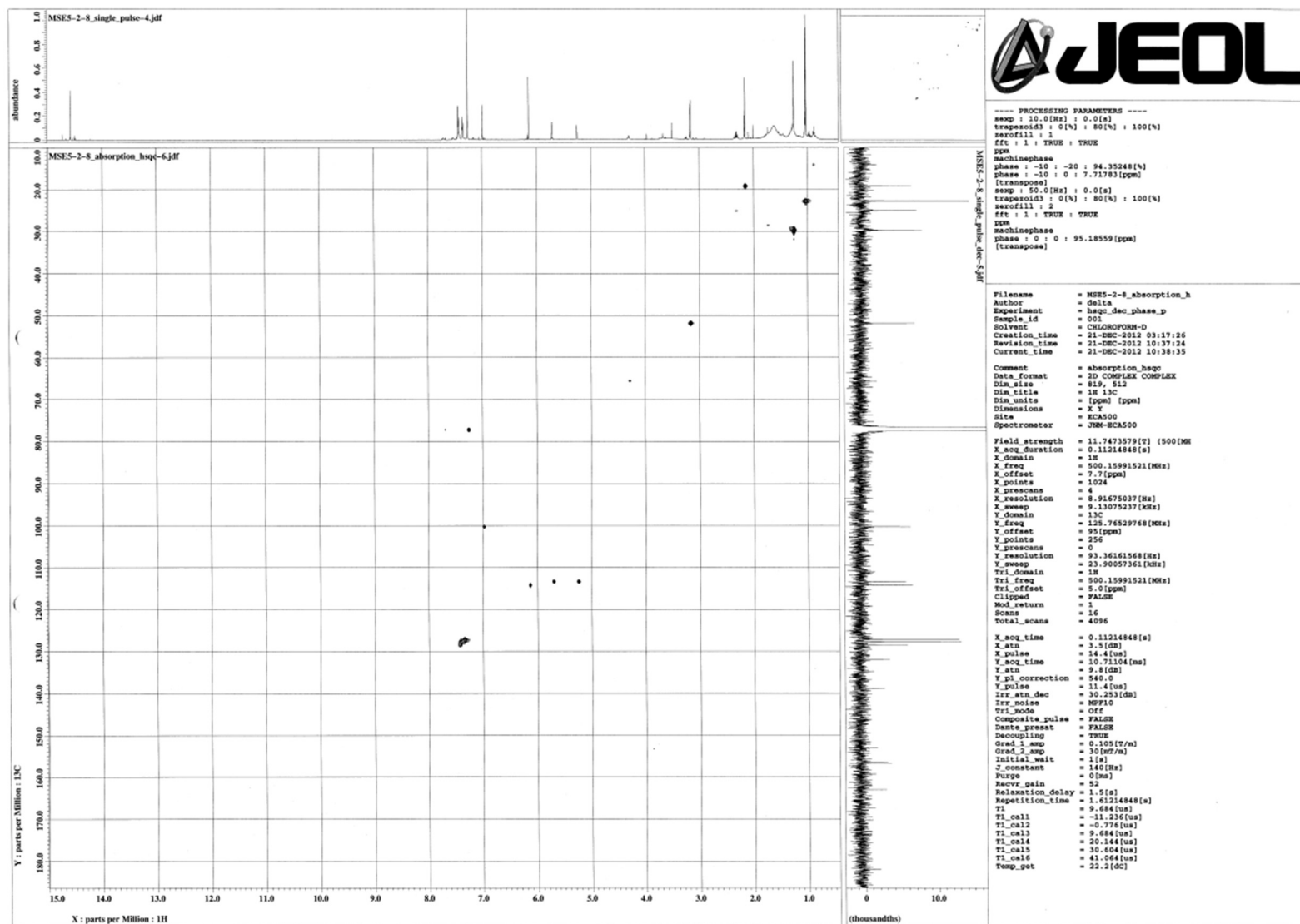


Figure S25. HSQC spectrum of mammeasin O (5)

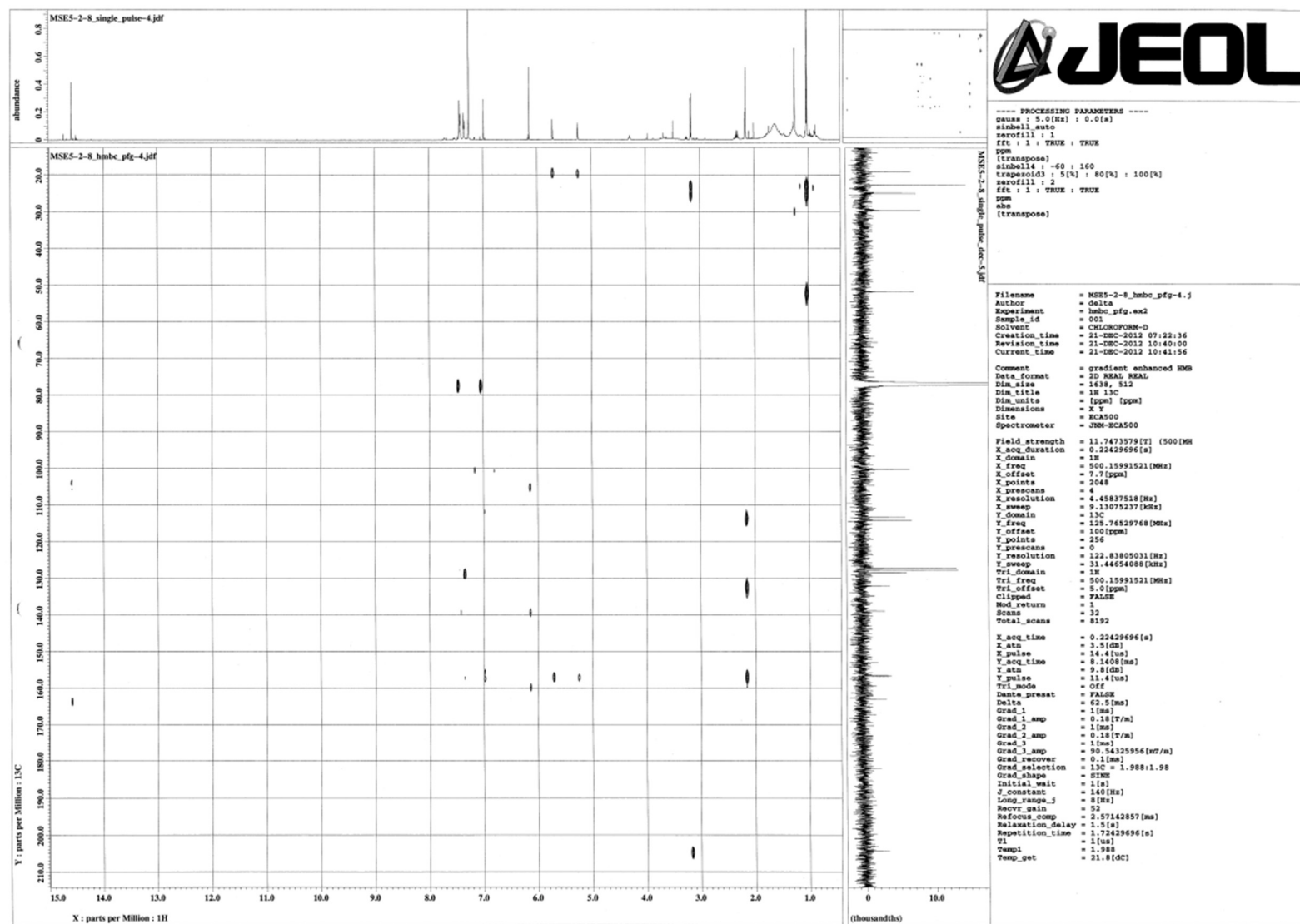


Figure S26. HMBC spectrum of mammeasin O (5)

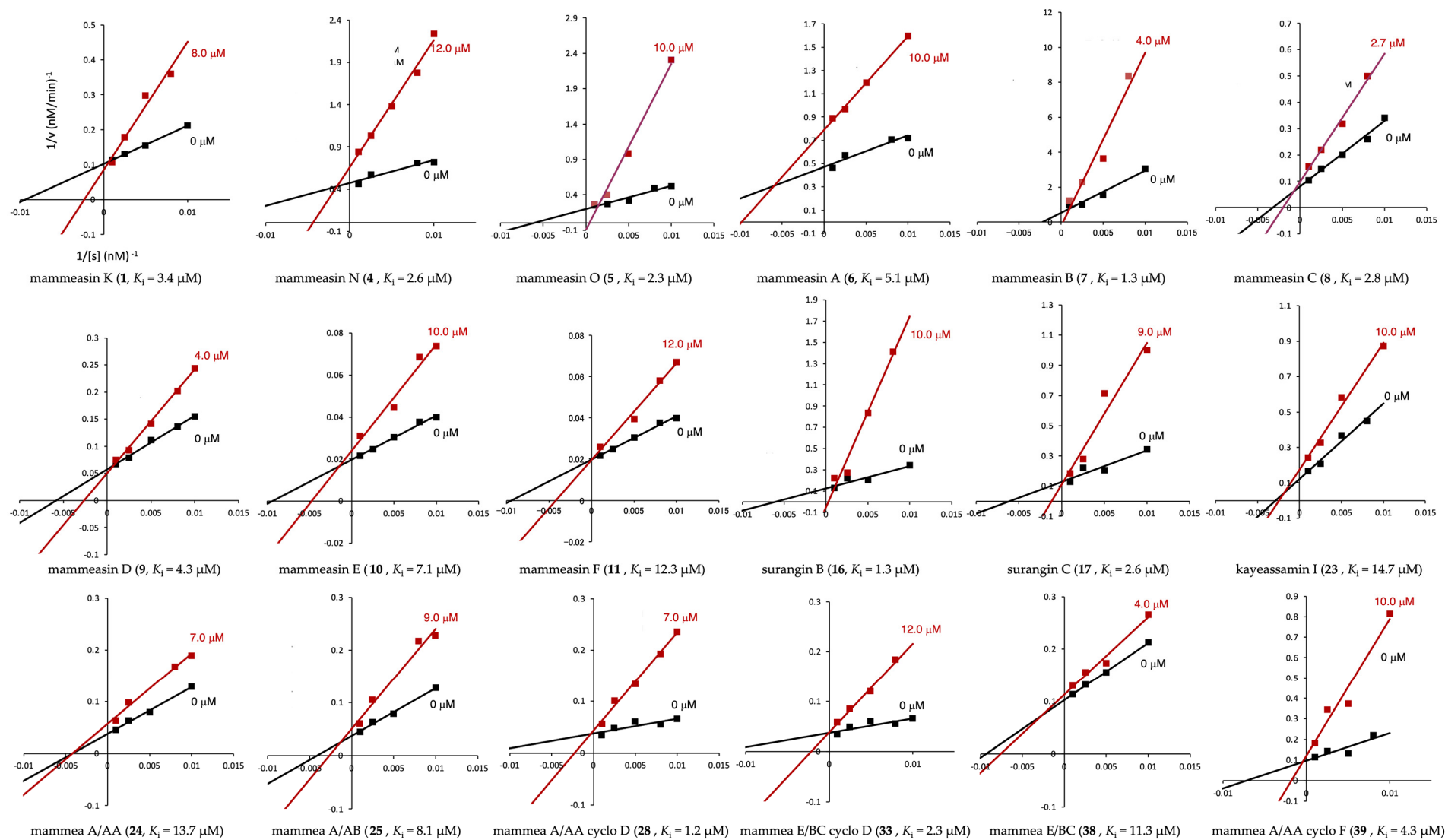


Figure S27. Lineweaver-Burk plots of the inhibition of human recombinant aromatase activity by 1, 4–11, 16, 17, 23–25, 28, 33, 38, and 39