

Supporting Information

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**New γ -Lactone Carboxylic Acids From The Lichen *Parmotrema praesorediosum* (Nyl.) Hale,
Parmeliaceae.**

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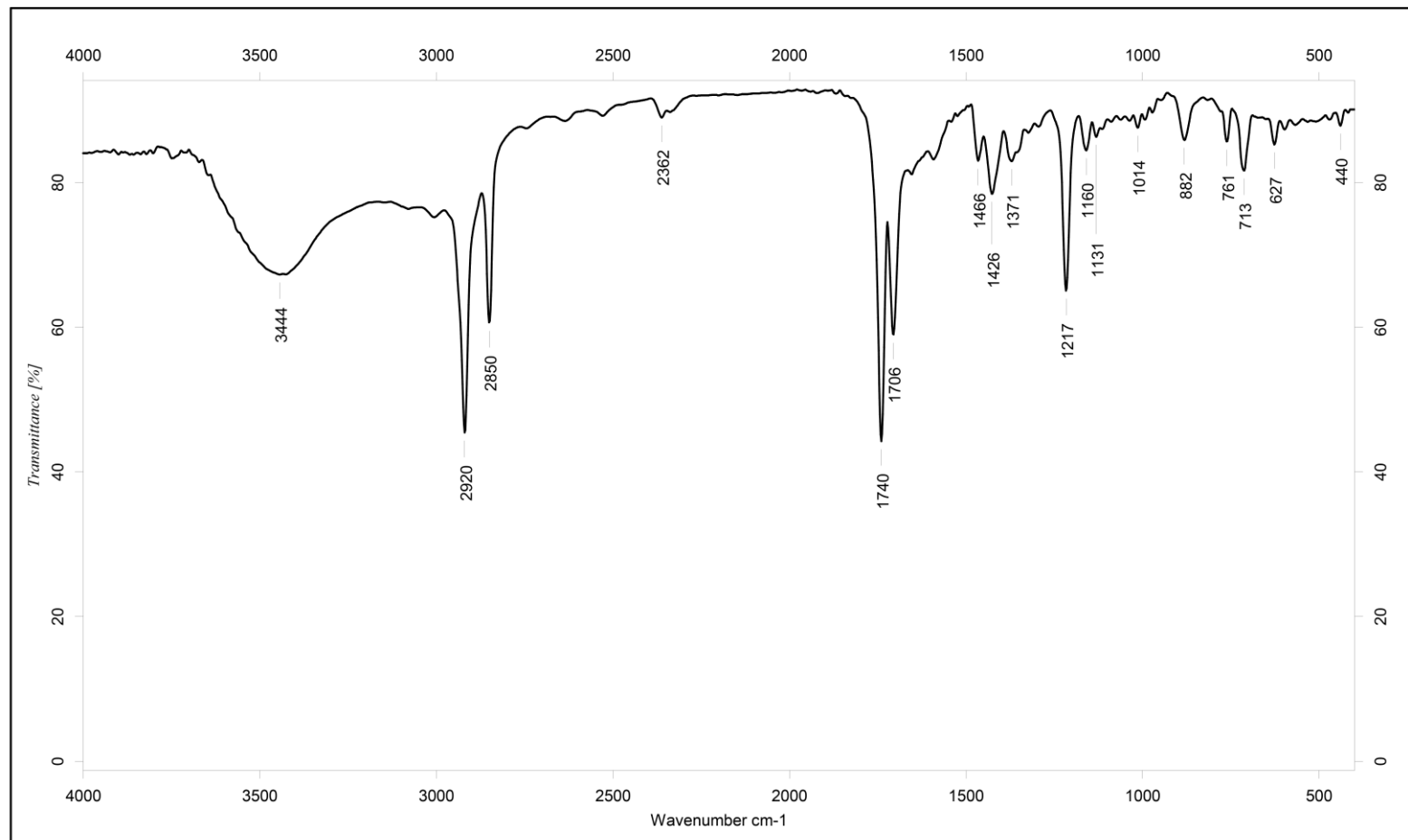
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S1.1: IR spectrum for (+)-vinapraesorediosic acid A (**1**).



Sample : PRAES-C1		Frequency Range : 4000.27 - 399.255		Measured on : 2011/01/04			
Technique : KBr		Resolution : 4		Instrument : EQUINOX55		Sample Scans : 16	
Operator : THANHTU		Zerofilling : 2		Acquisition : Double Sided,Forward-Backward			

S1.2: HRMS spectrum for (+)-vinapraesorediosic acid A (1).

Display Report

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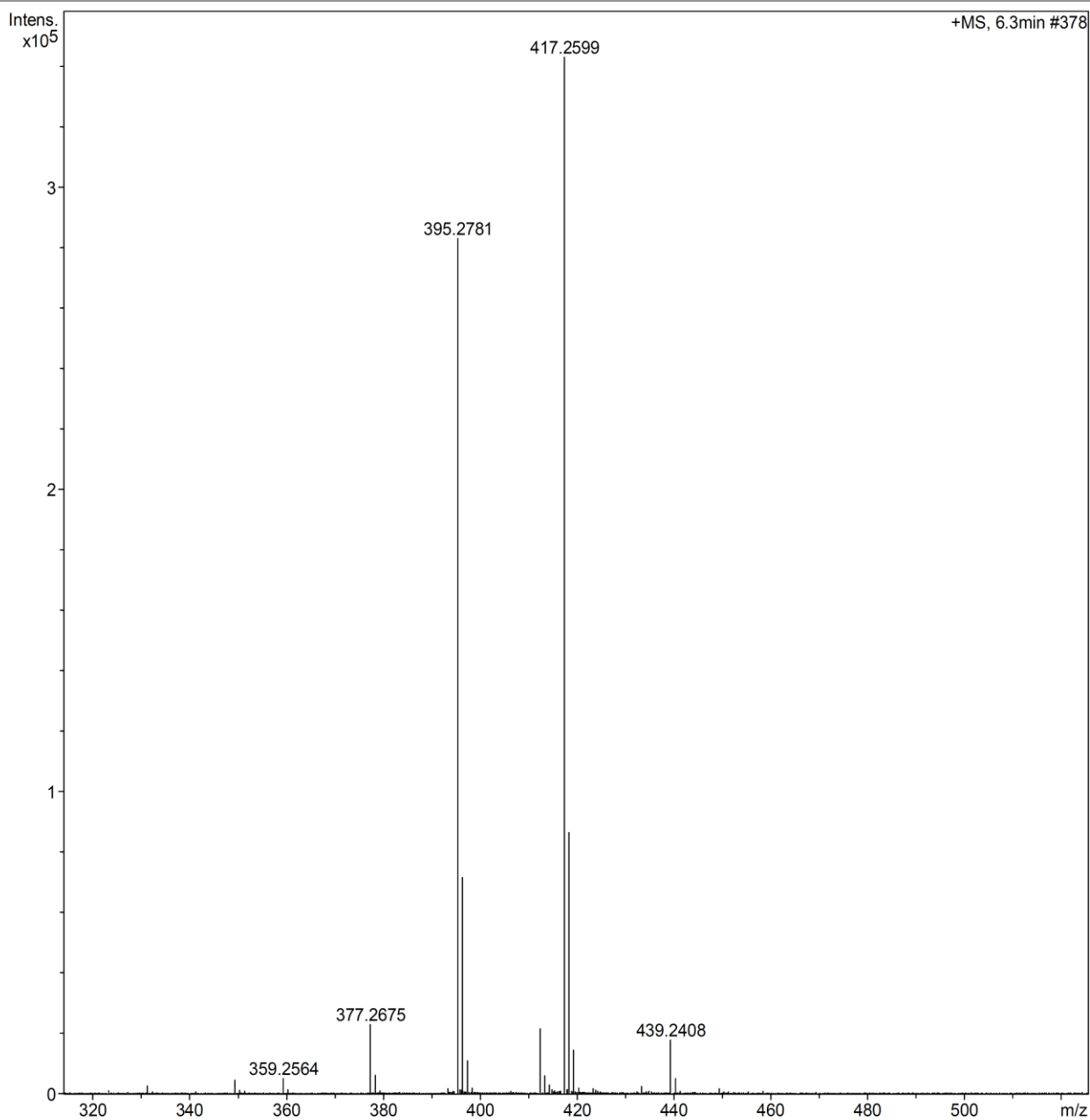
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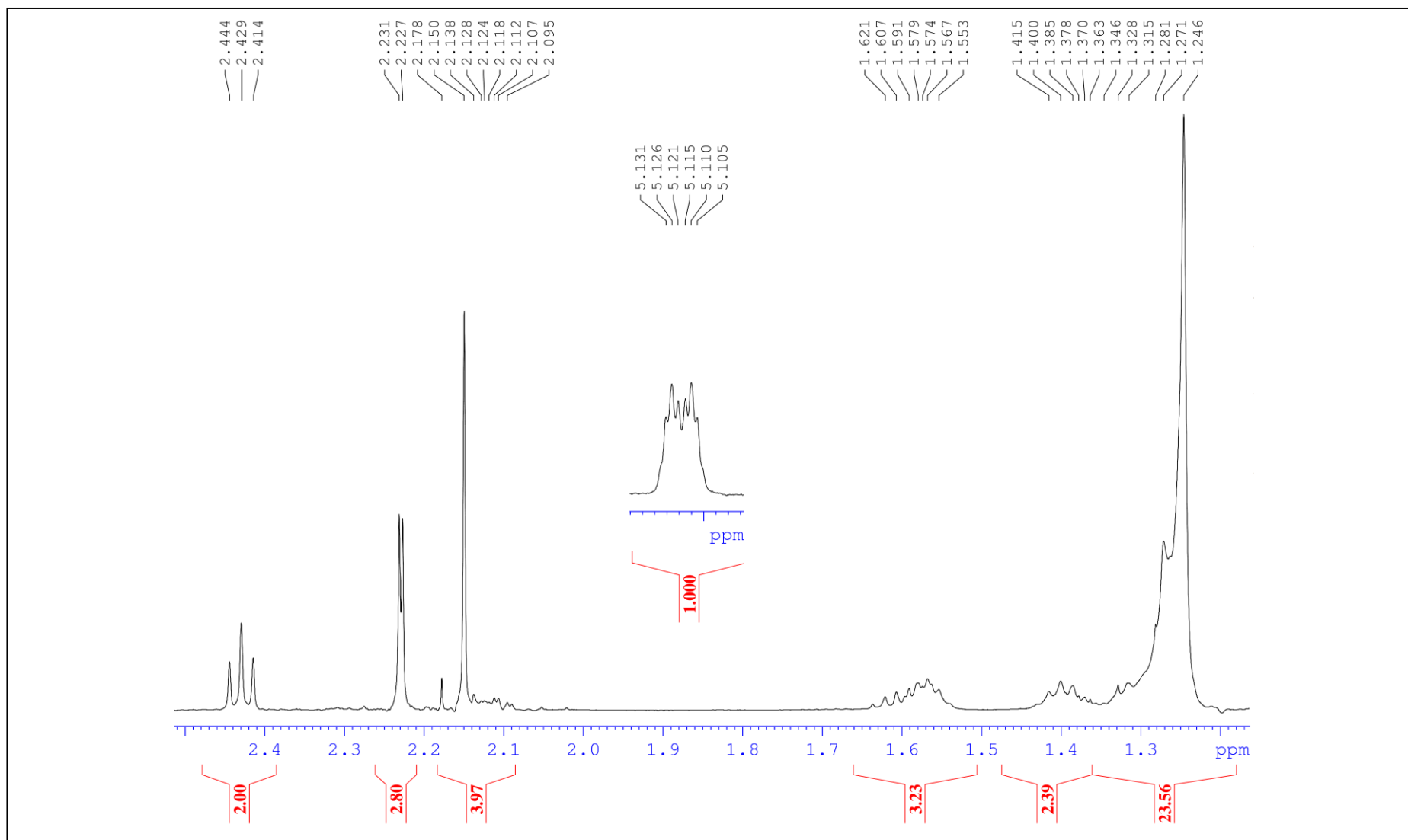
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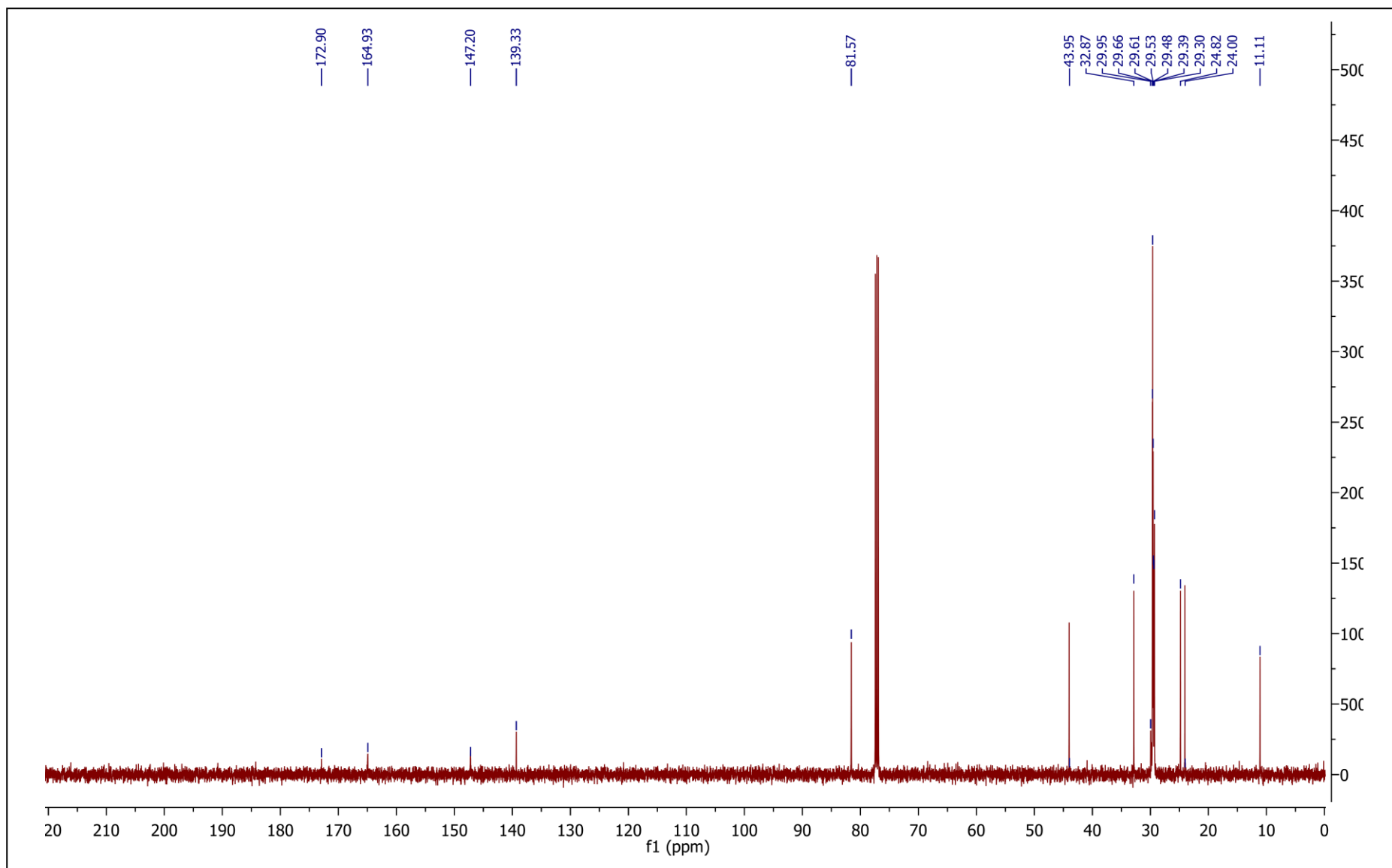
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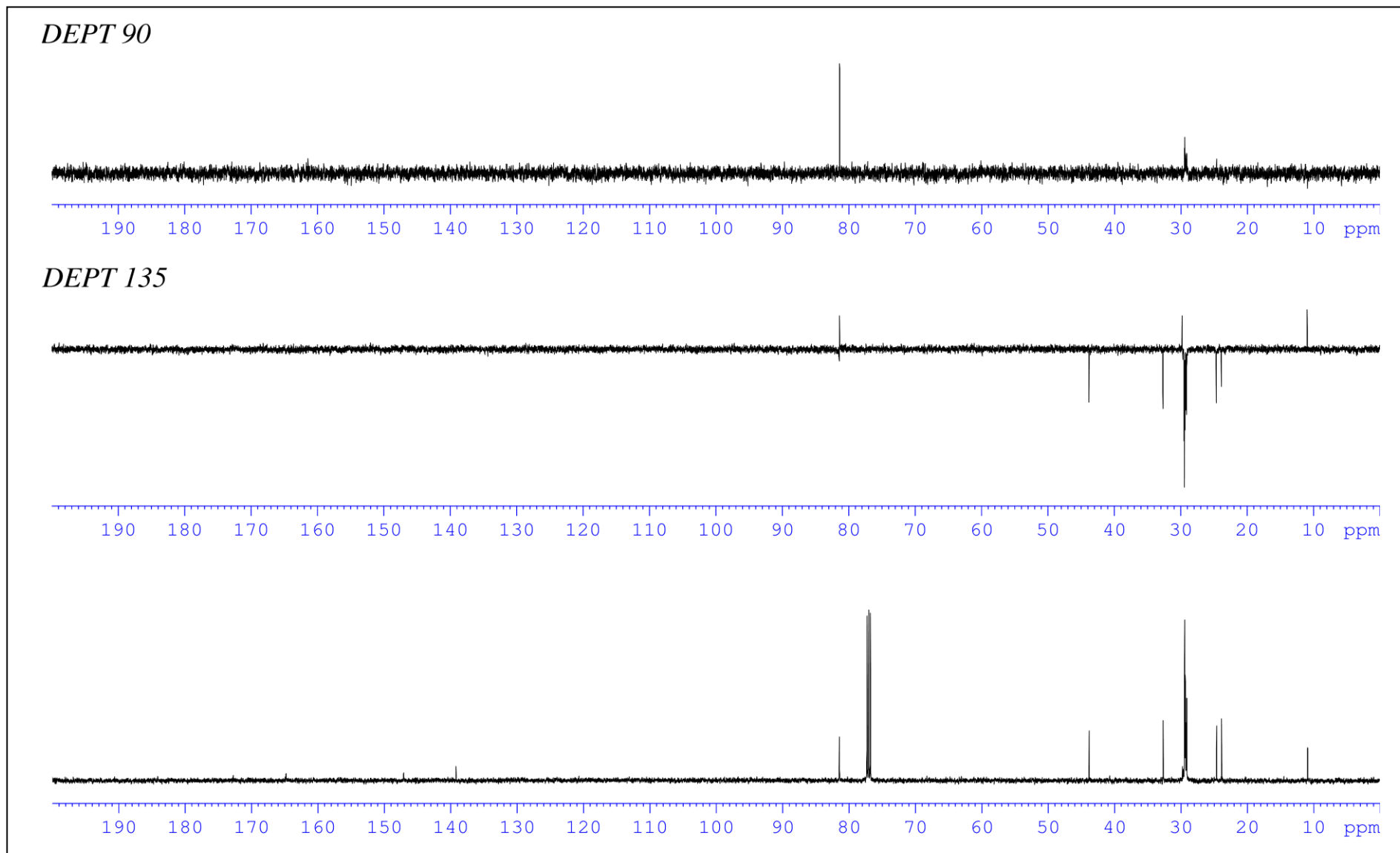
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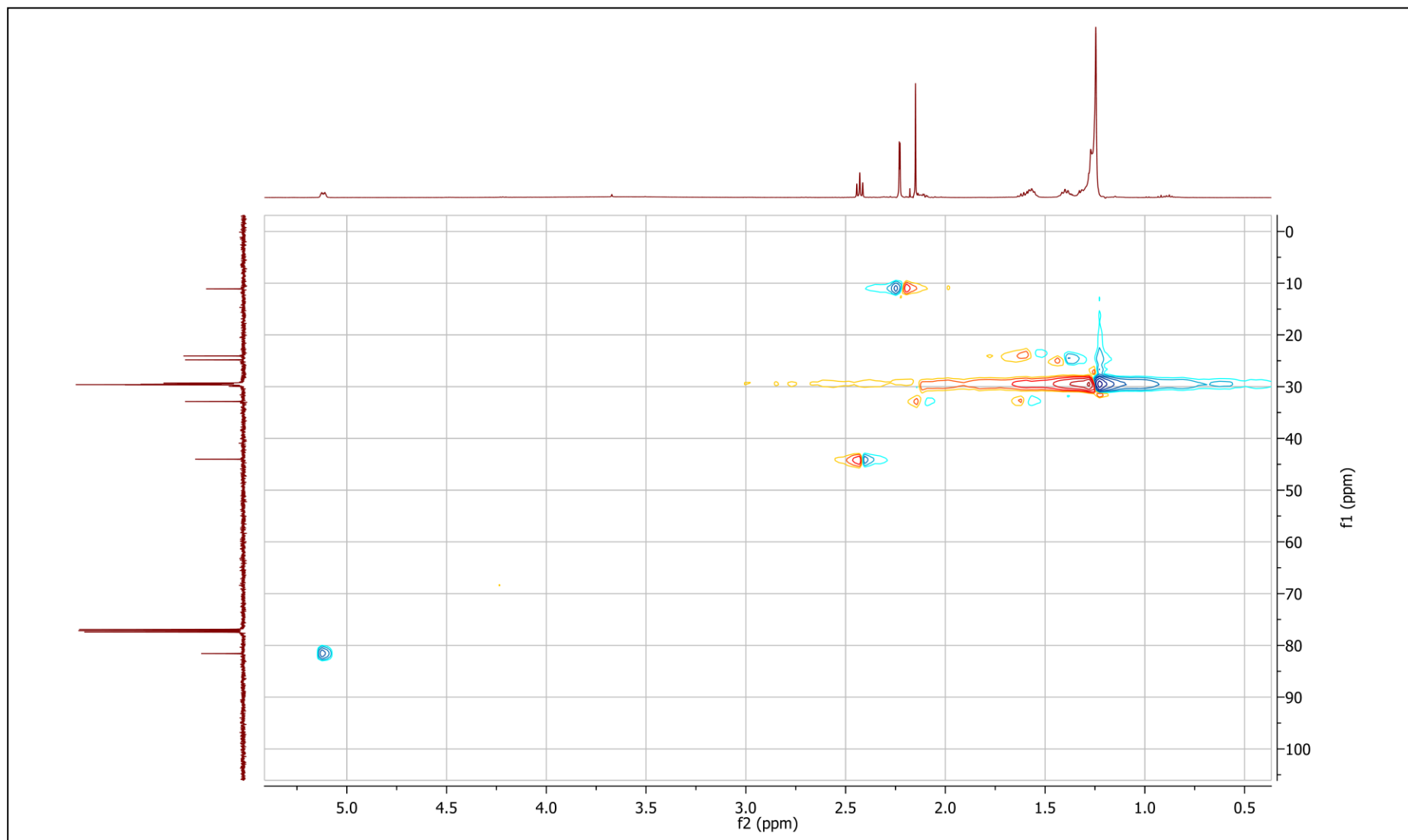
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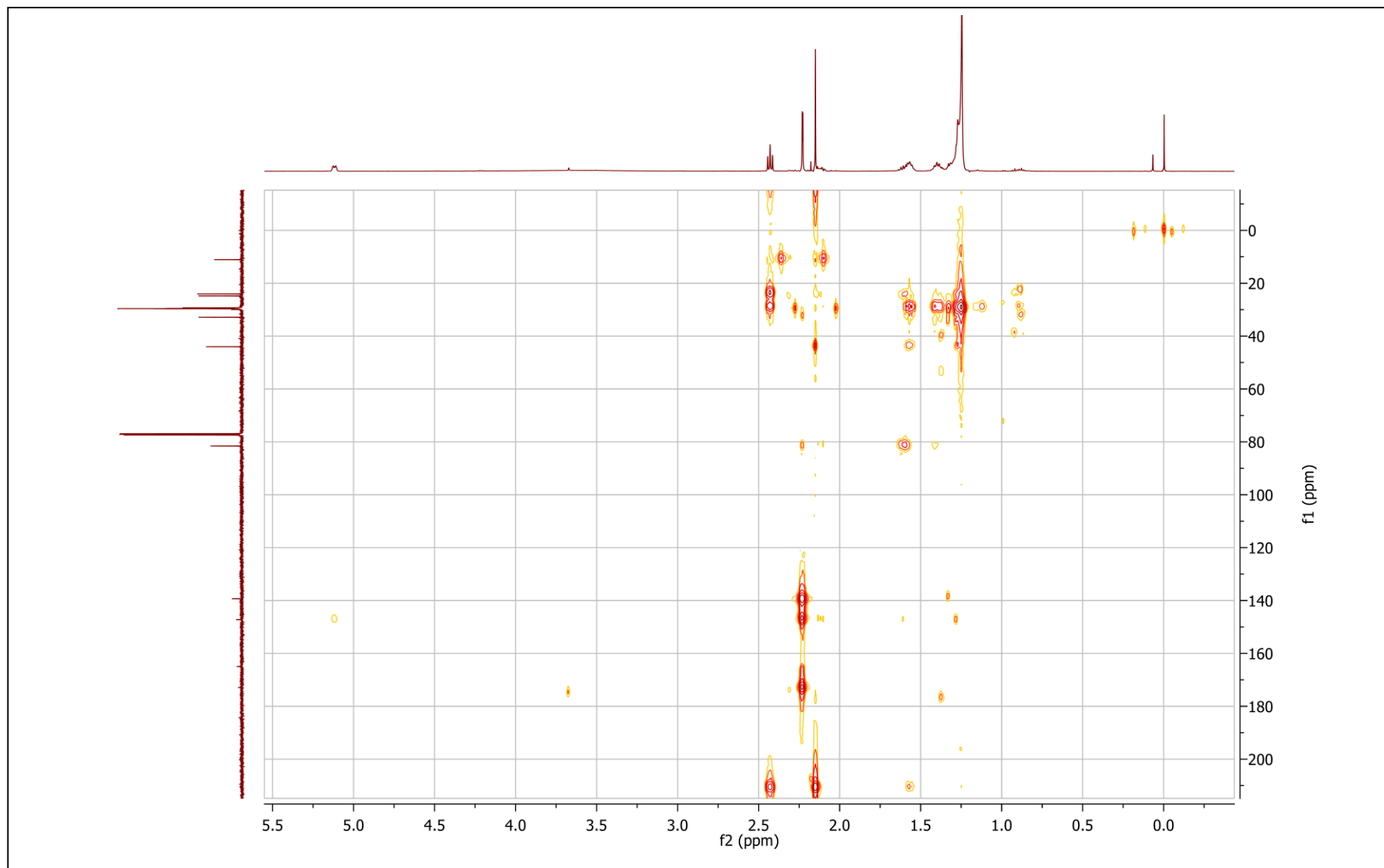
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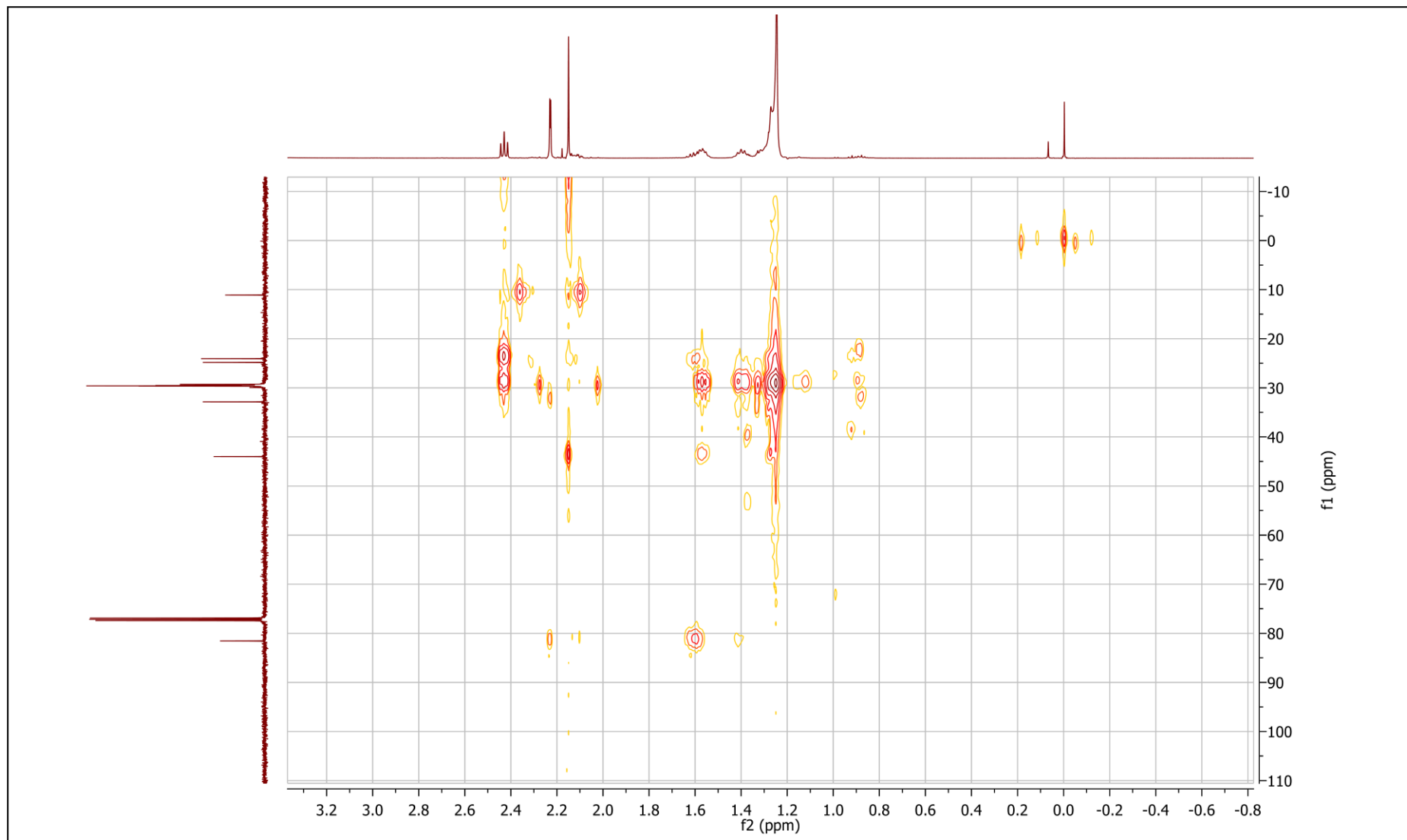
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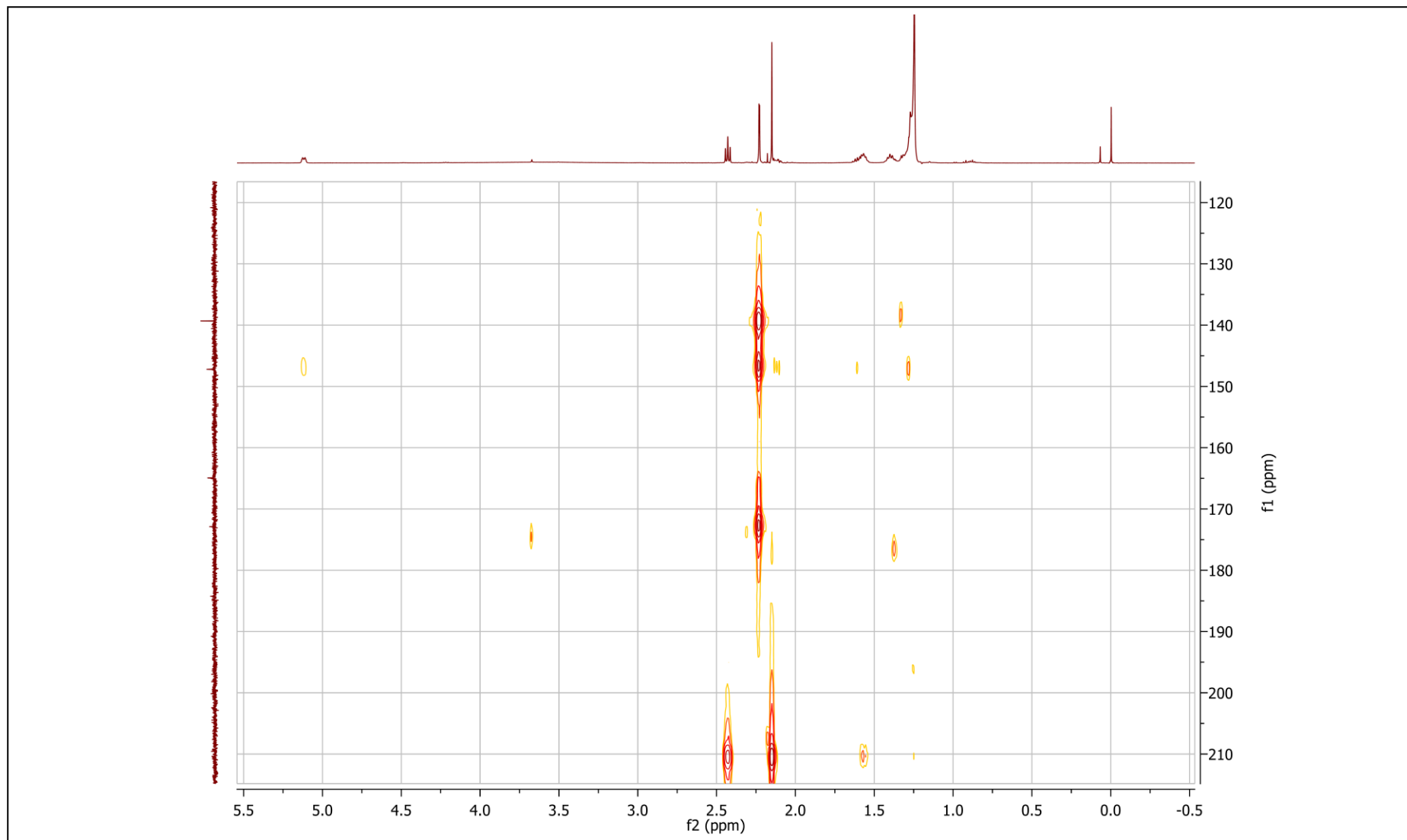
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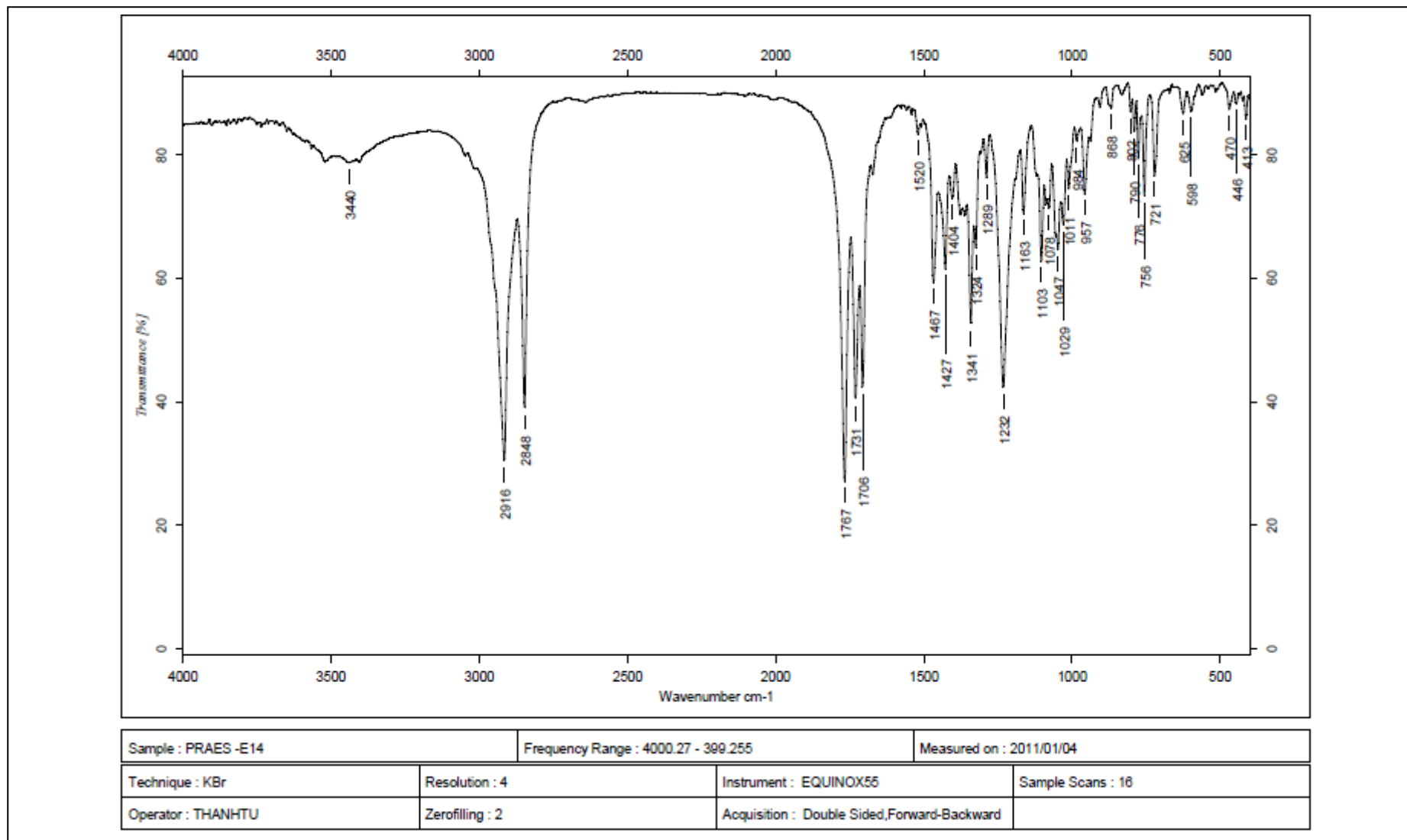
S1.8: Expansion HMBC spectrum for (+)-vinapraesorediosic acid **(1)** recorded in CDCl₃ at 500 MHz.



S1.8: Expansion HMBC spectrum for (+)-vinapraesorediosic acid **(1)** recorded in CDCl₃ at 500 MHz.



S2.1: IR spectrum for (+)-6-methyl vinapraesorediosate A (2).



S2.2: HRMS spectrum for (+)-6-methyl vinapraesorediosate A (2).

Display Report

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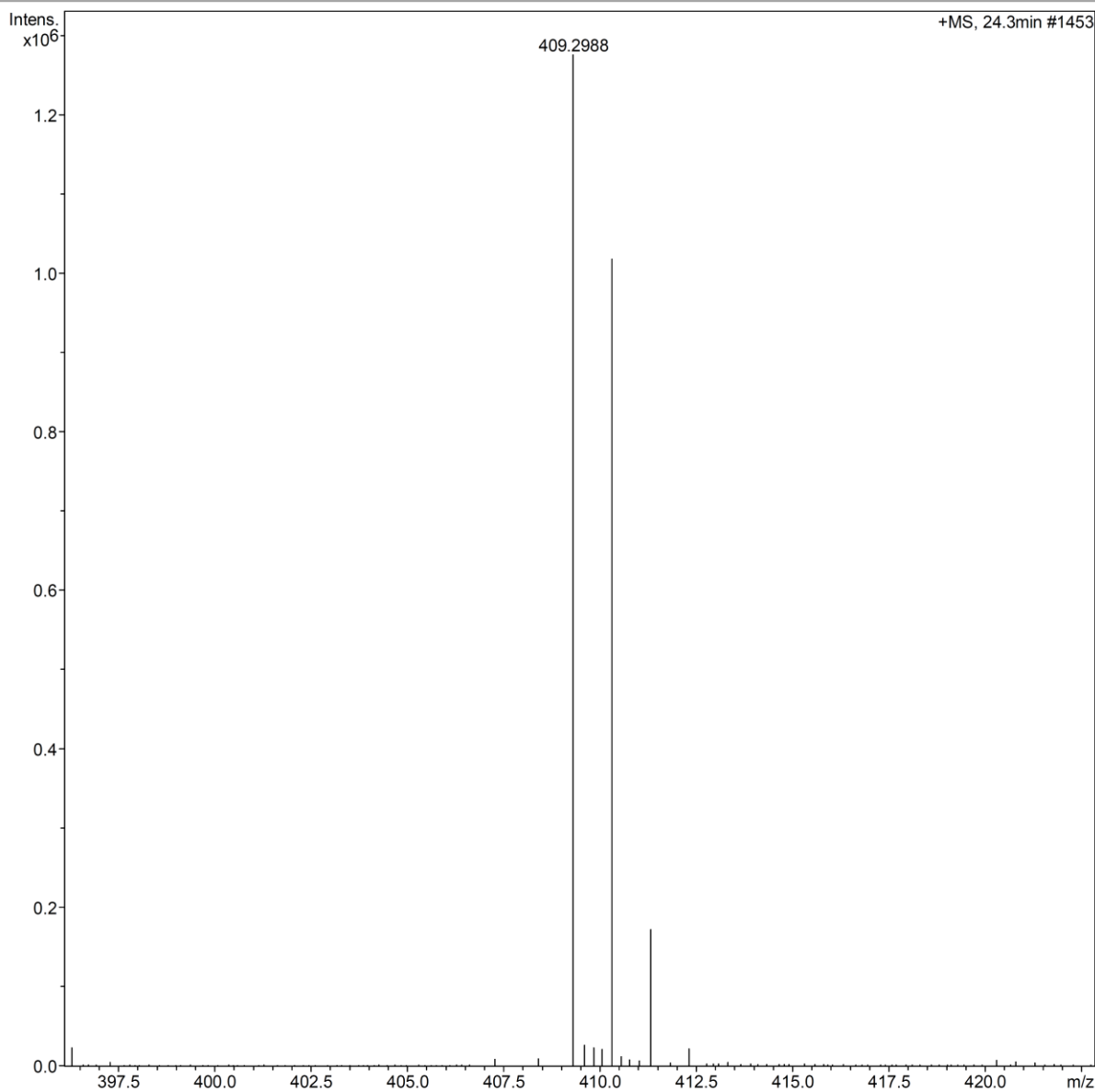
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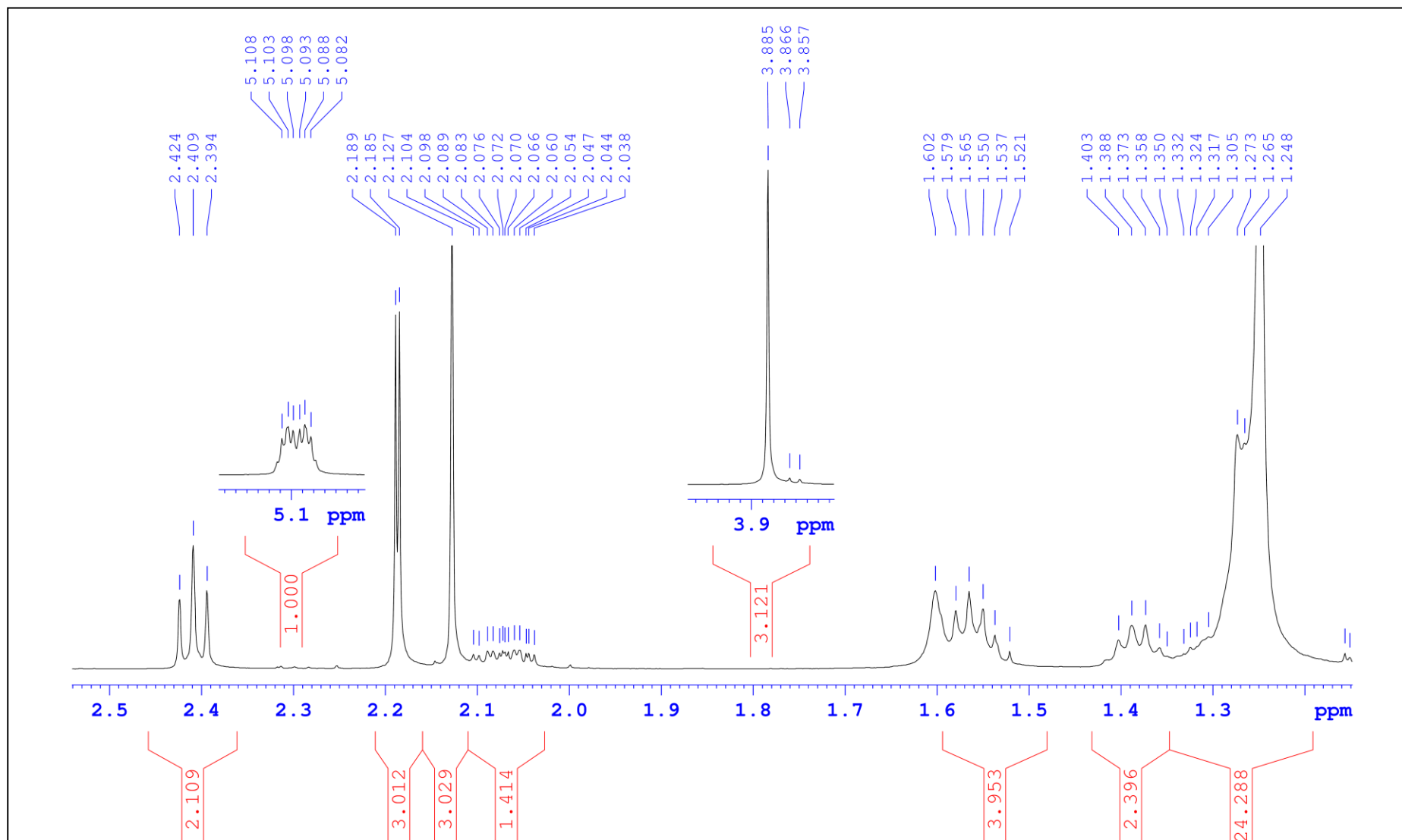
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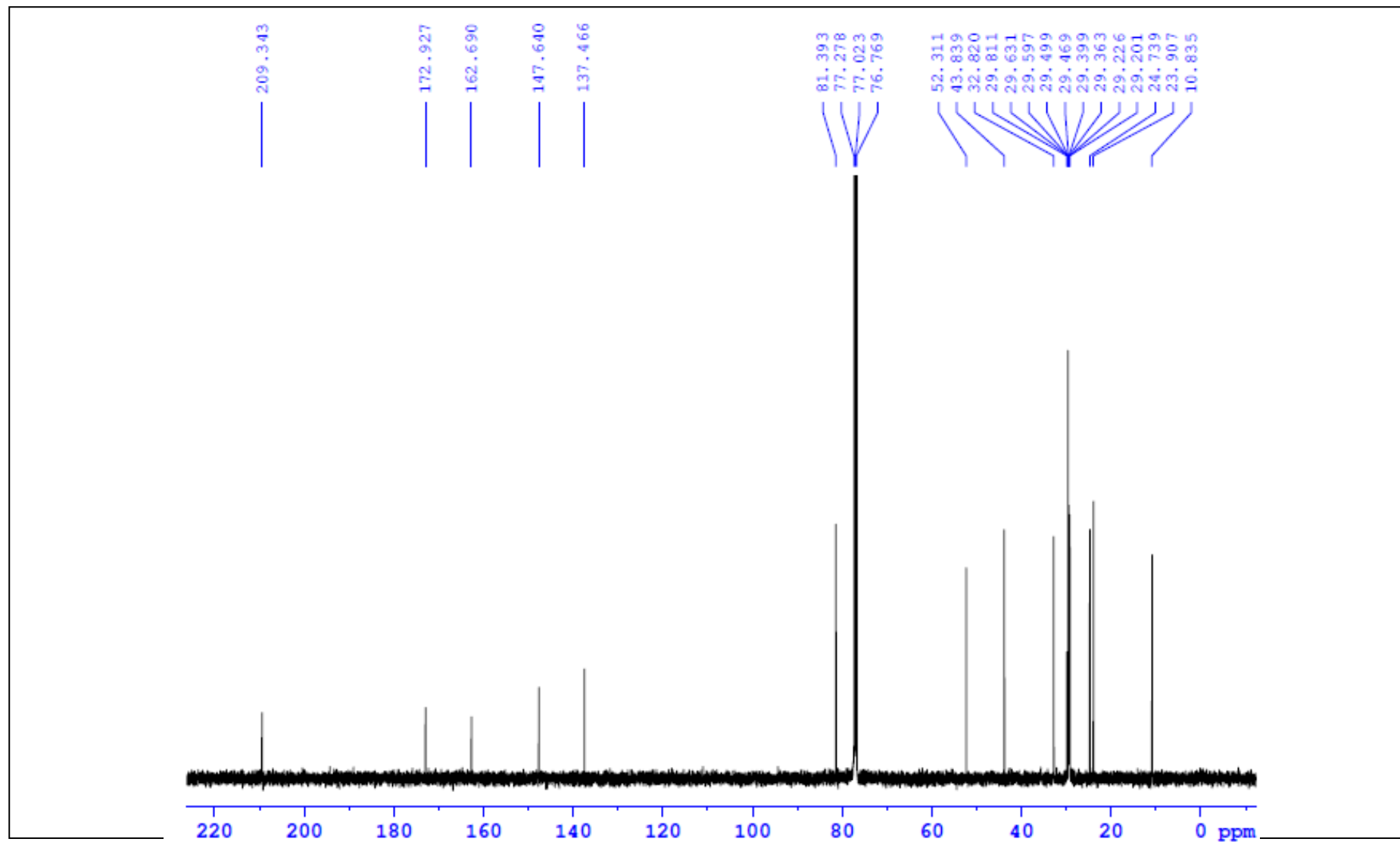
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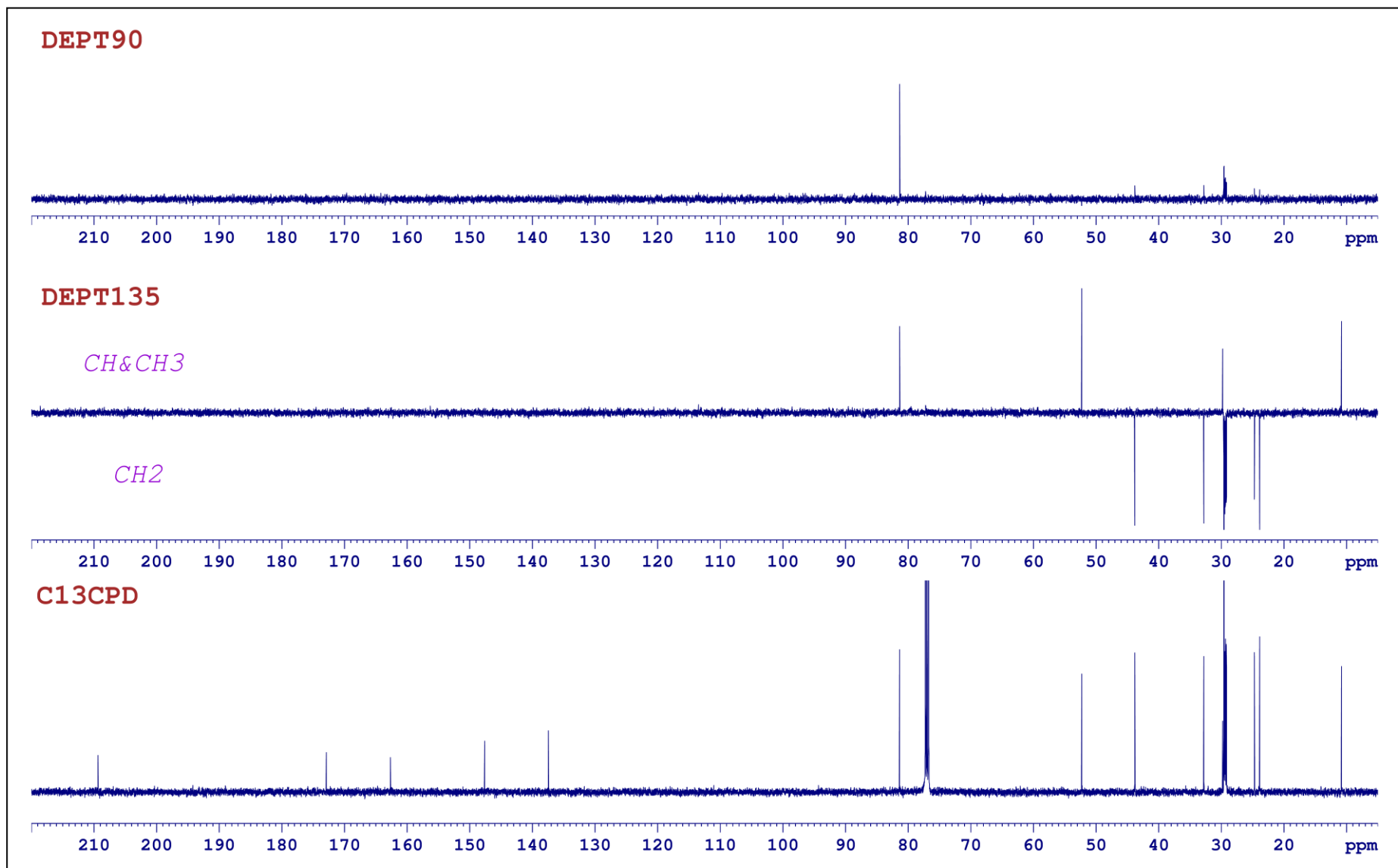
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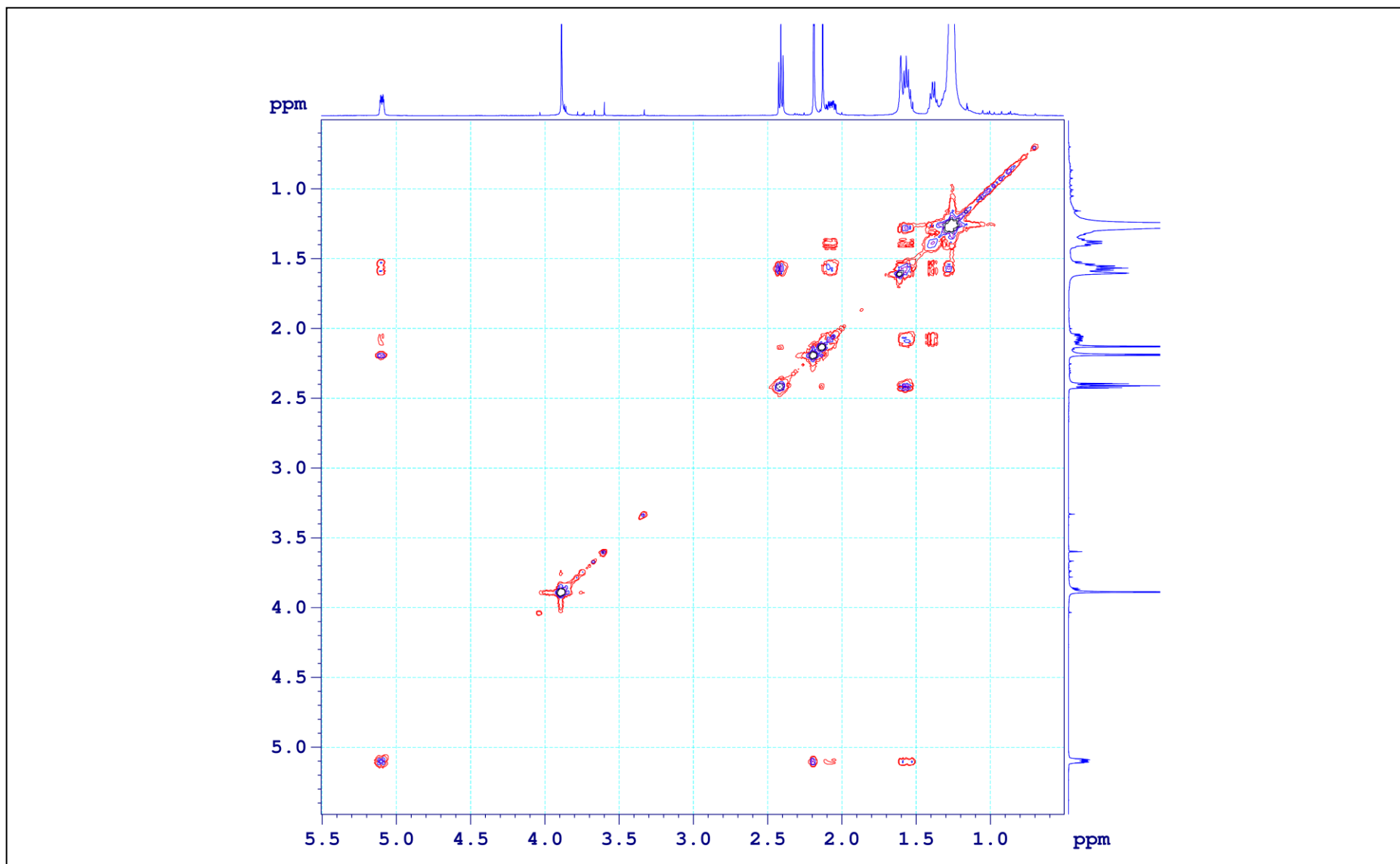
S2.4: ^{13}C NMR spectrum for (+)-6-methyl vinapraesorediosic acid A (**2**) recorded in CDCl_3 at 125 MHz.



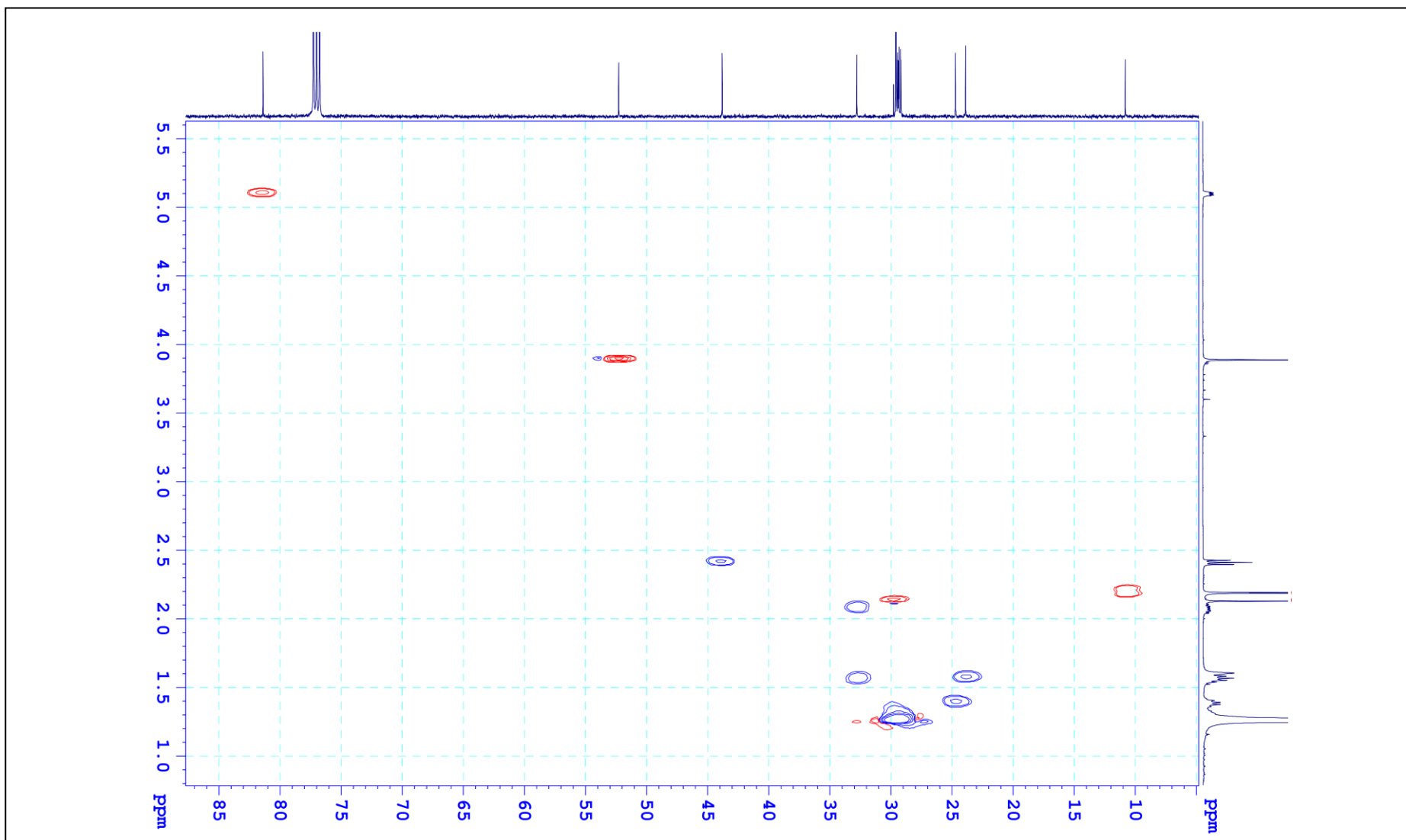
S2.5: DEPT spectrum for (+)-6-methyl vinapraesorediosate A (2).



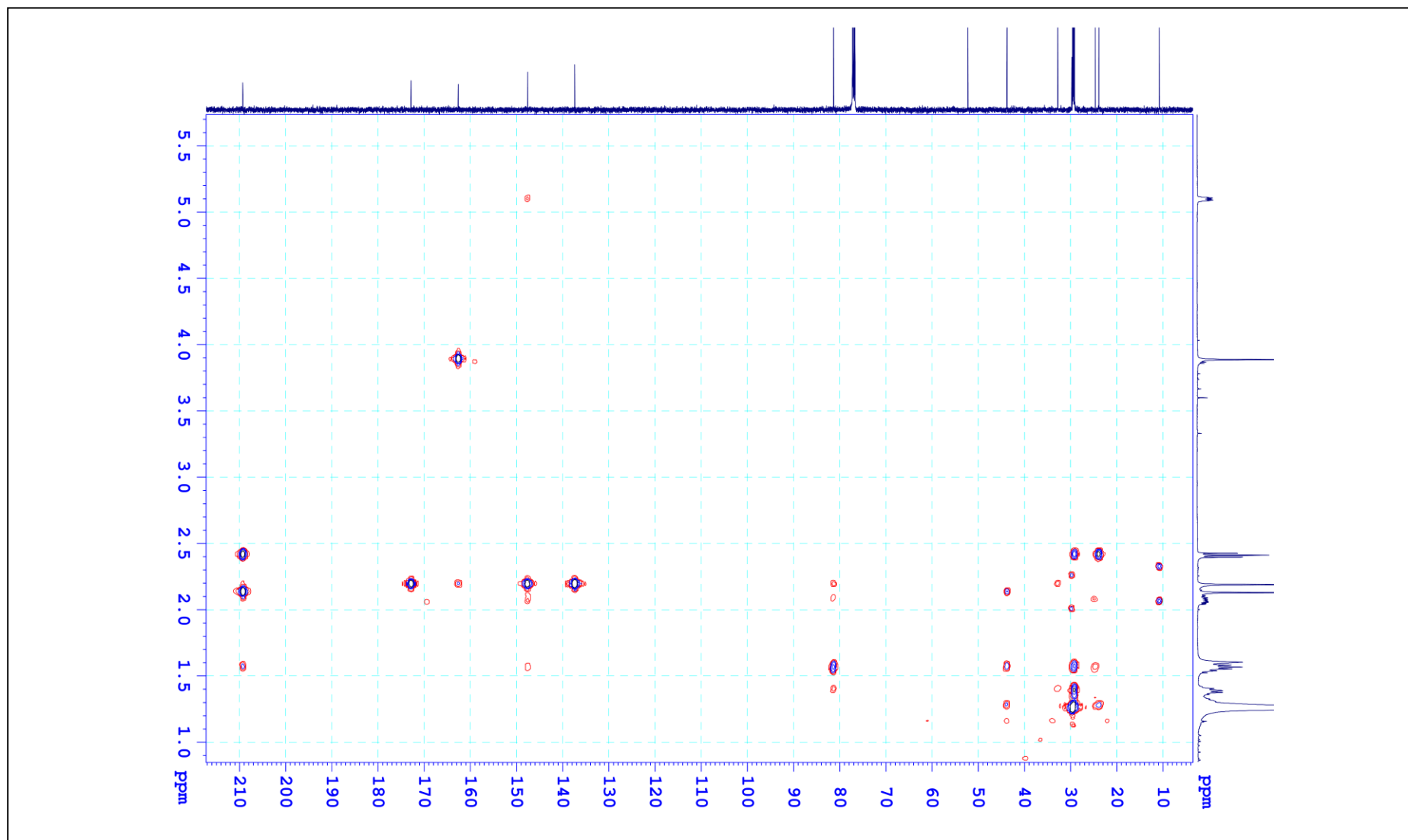
S2.6: COSY spectrum for (+)-6-methyl vinapraesorediosate A (**2**) recorded in CDCl₃ at 500 MHz.



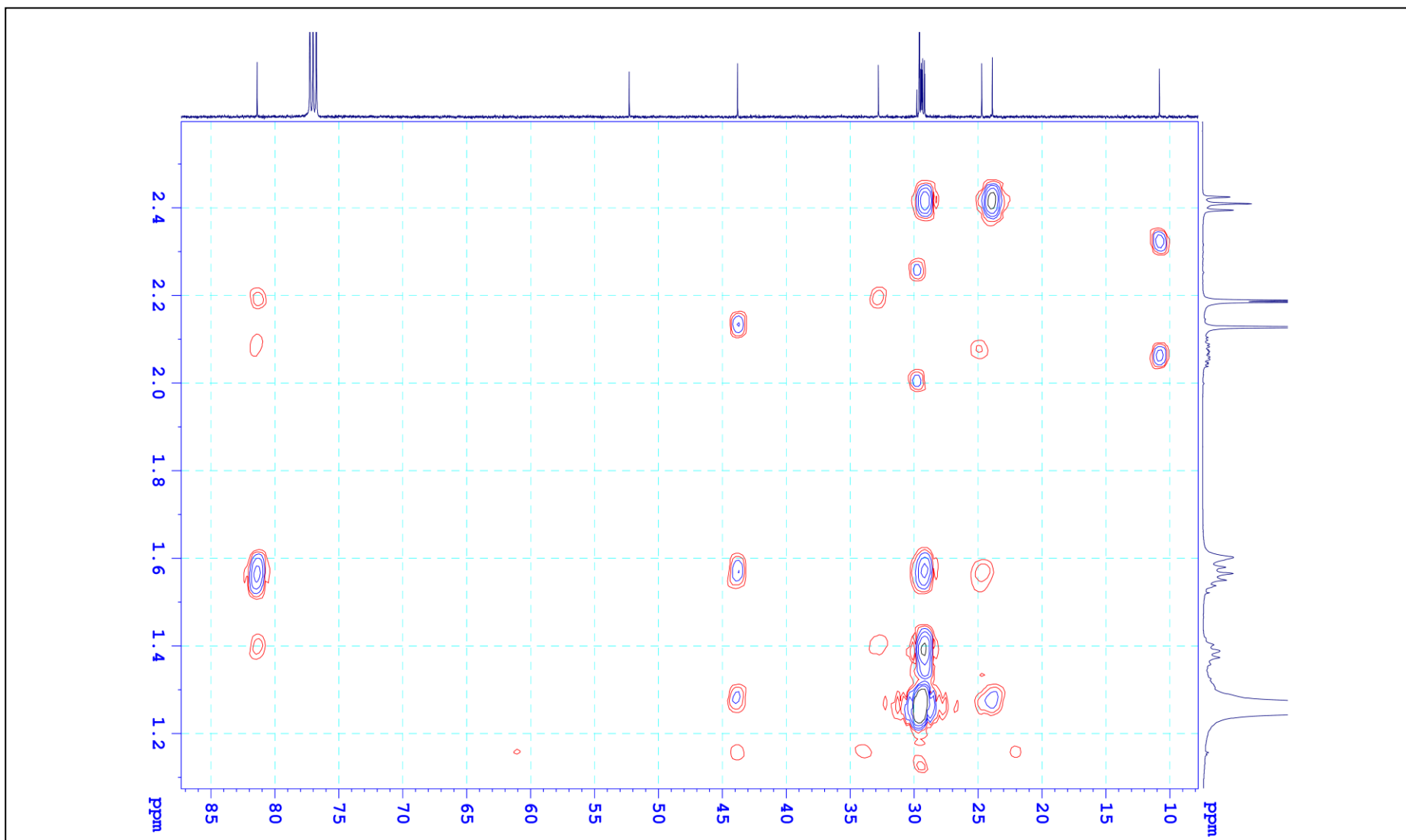
S2.7: HSQC spectrum for (+)-6-methyl vinapraesorediosate A (**2**) recorded in CDCl₃ at 500 MHz.



S2.8: HMBC spectrum for (+)-6-methyl vinapraesorediosate A (**2**) recorded in CDCl₃ at 500 MHz



S2.9: Expansion HMBC spectrum for (+)-6-methyl vinapraesorediosate A (**2**) recorded in CDCl₃ at 500 MHz



S3.1:HRMS spectrum for (+)-vinapraesorediosic acid B (3).

Display Report

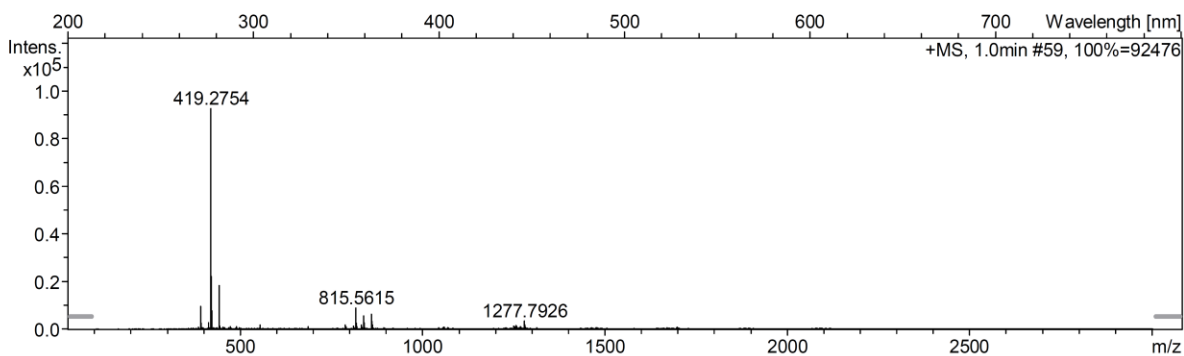
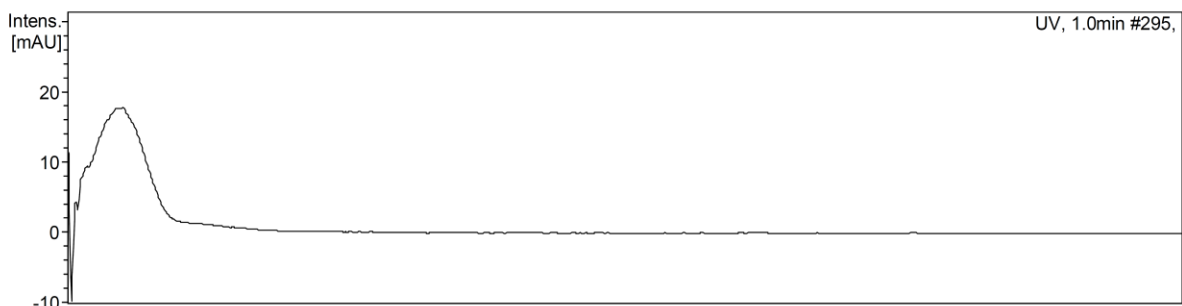
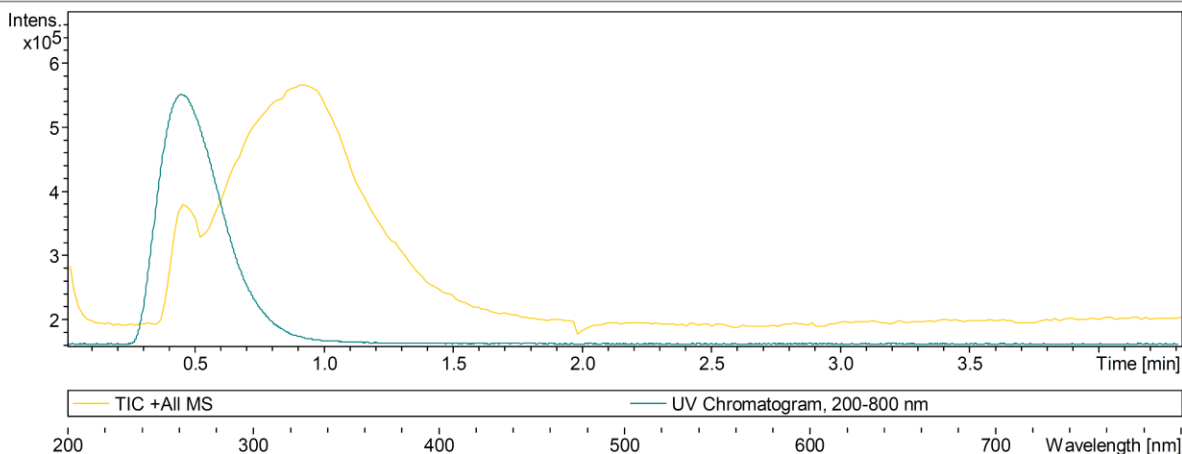
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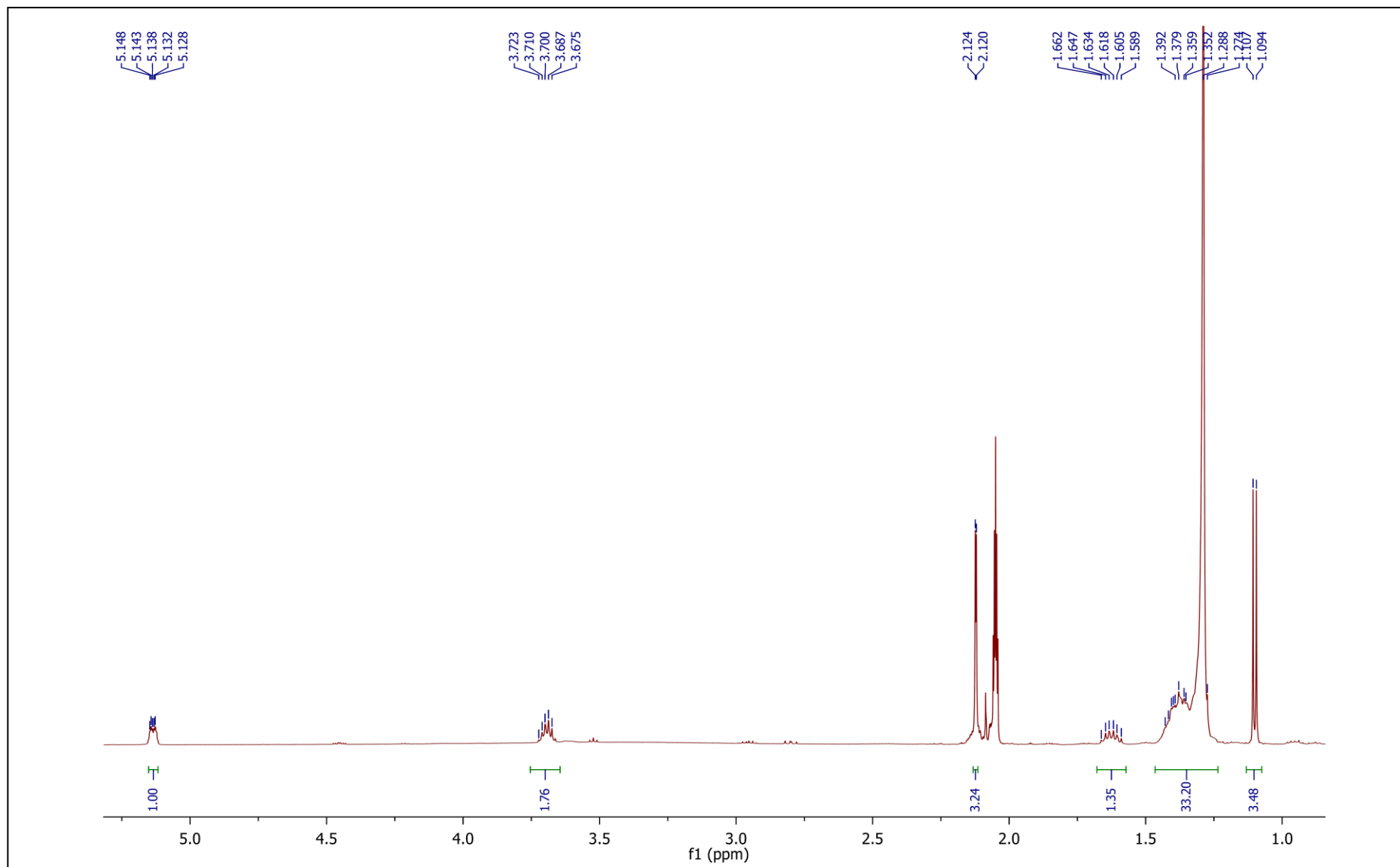
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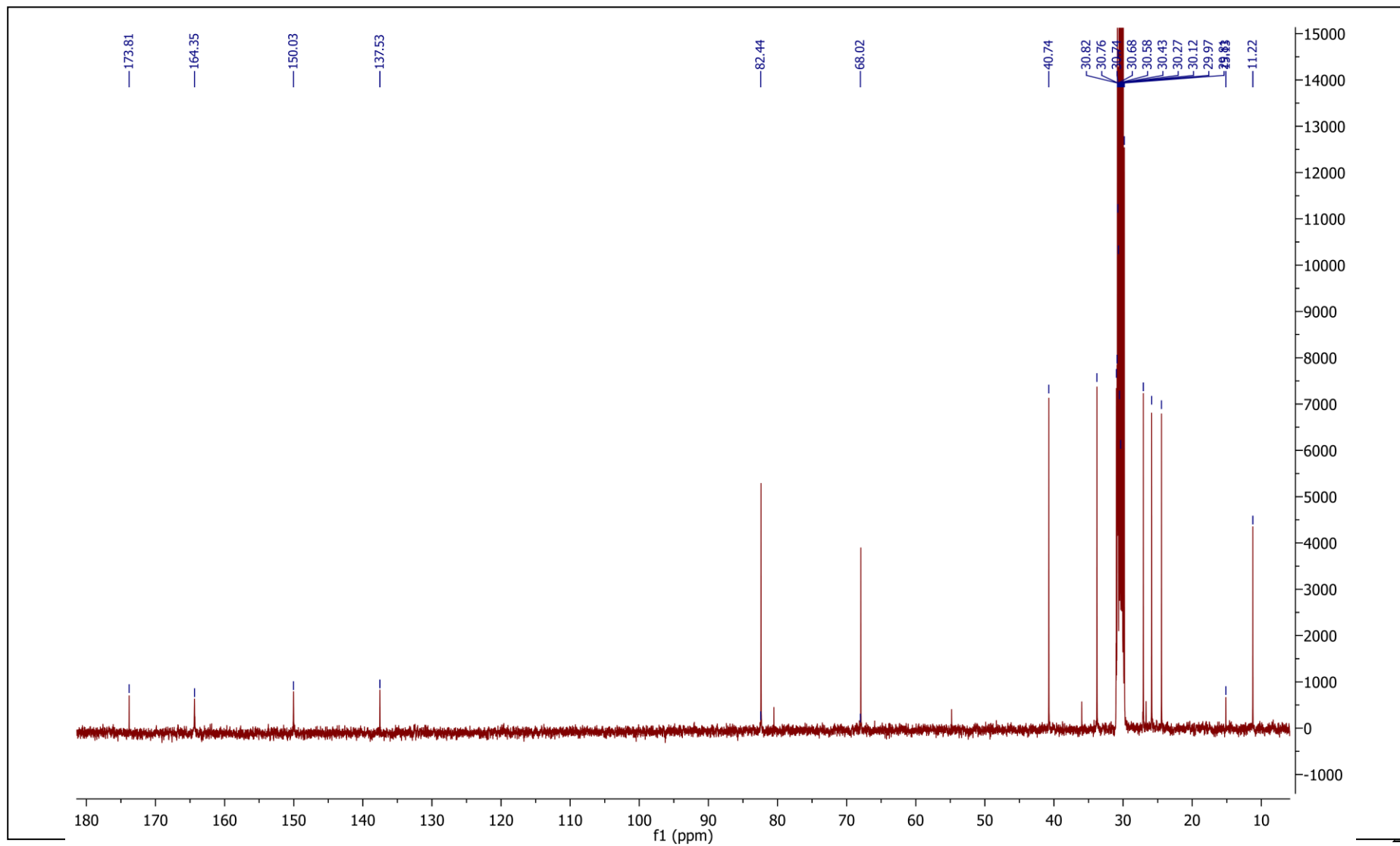
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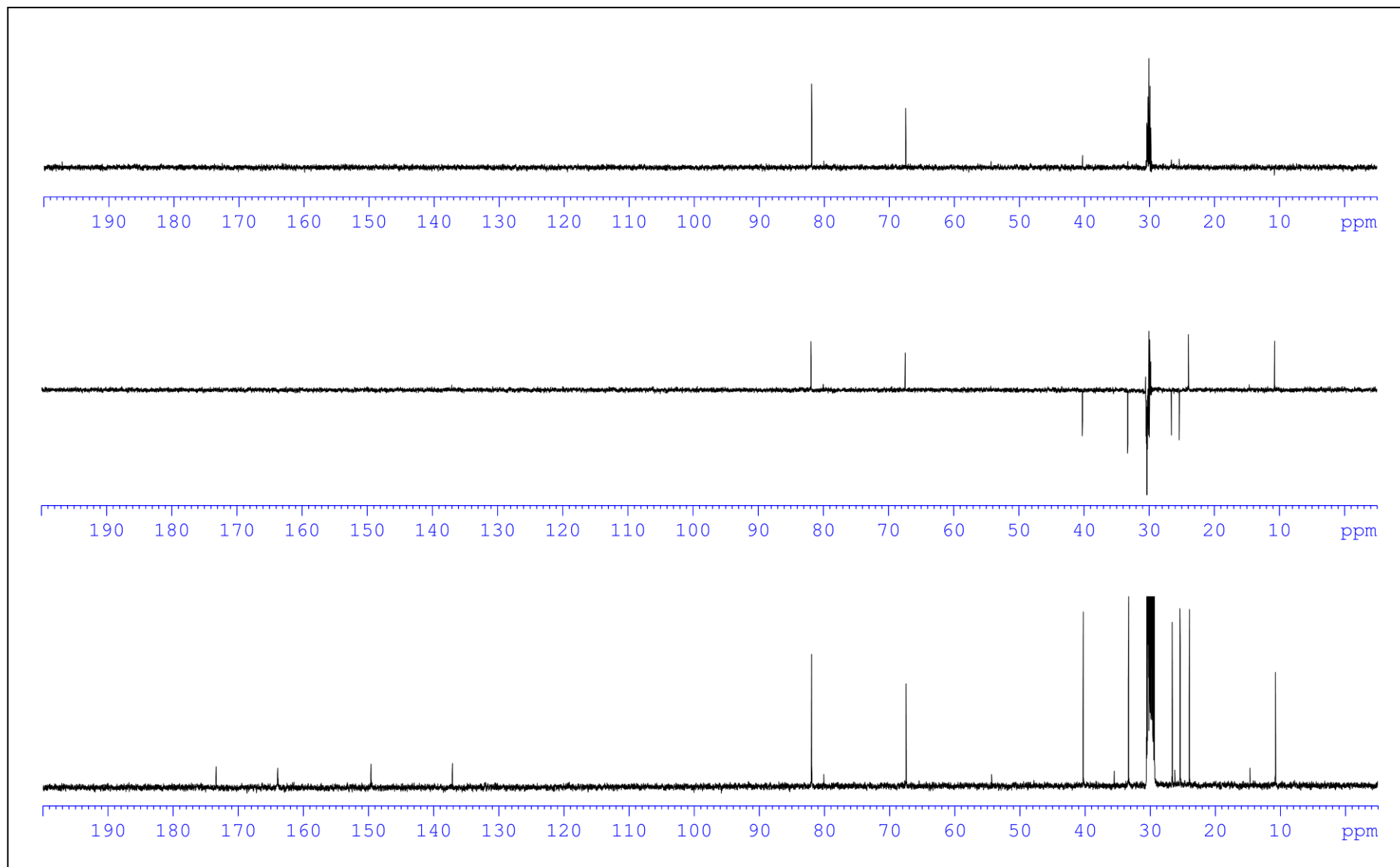
S3.2: ^1H NMR spectrum for (+)-vinapraesorediosic acid **3** recorded in $(\text{CD}_3)_2\text{CO}$ at 500 MHz.



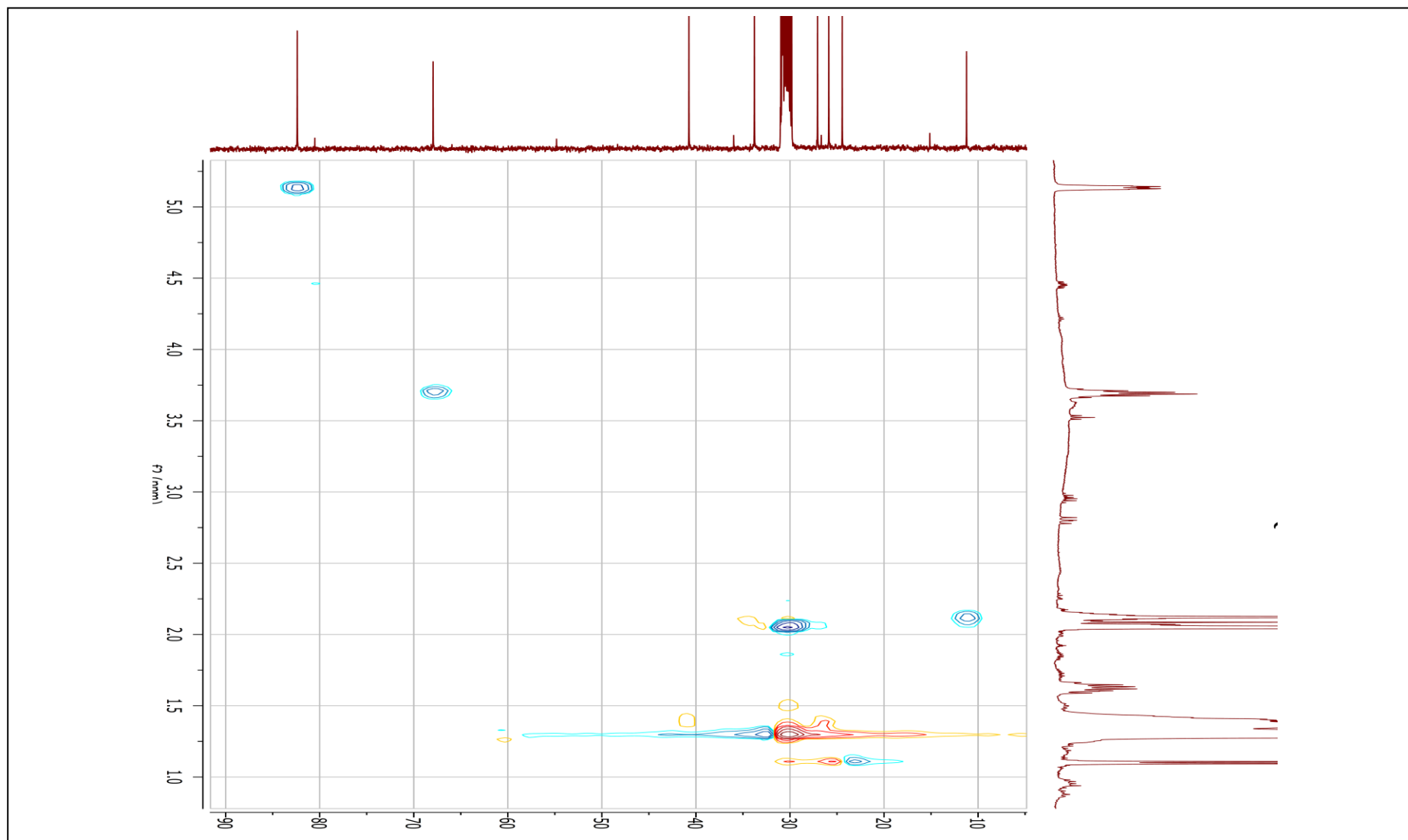
S3.3: ^{13}C NMR spectrum for (+)-vinapraesorediosic acid **(3)** recorded in $(\text{CD}_3)_2\text{CO}$ at 125 MHz.



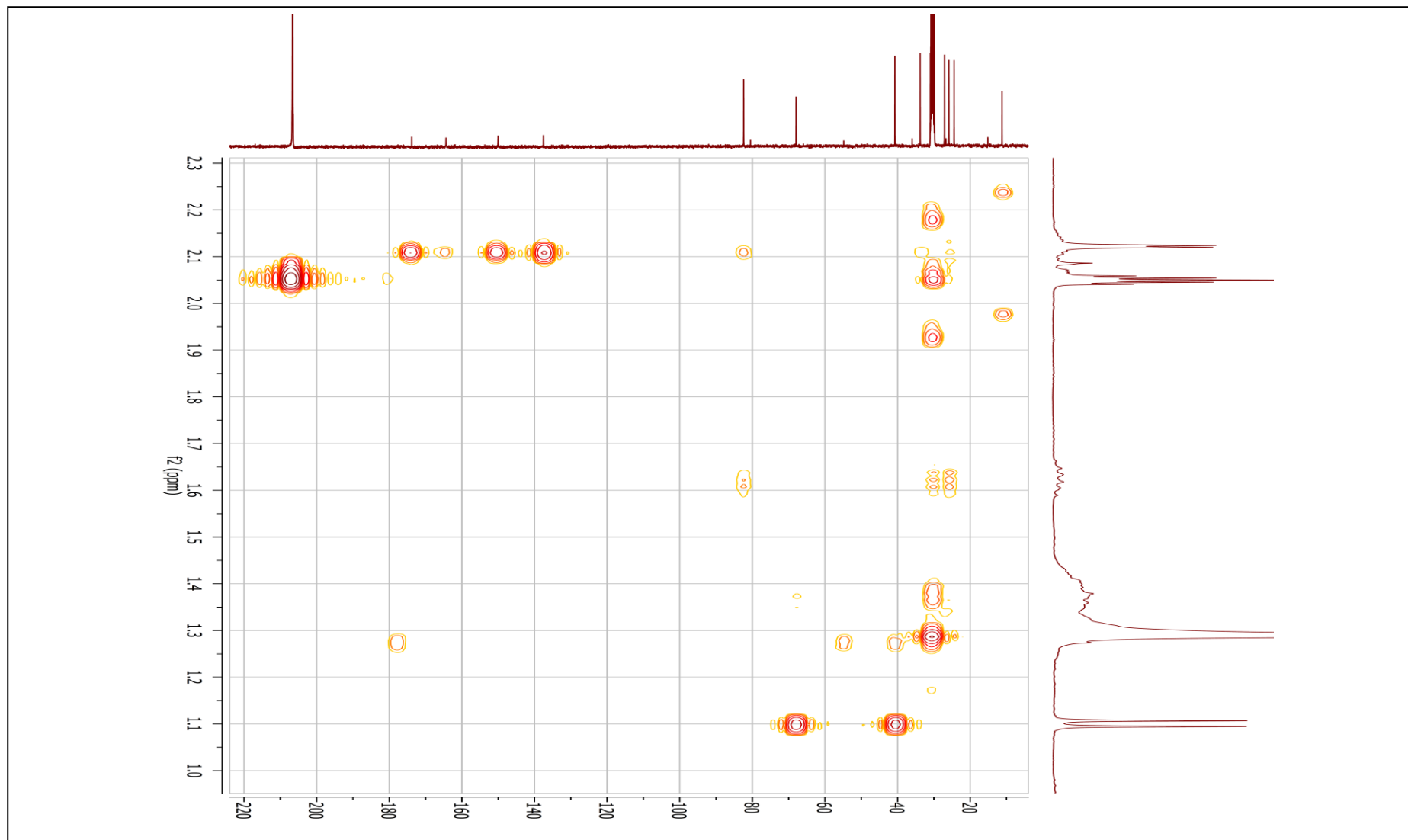
S3.4: DEPT spectrum for (+)-vinapraesorediosic acid B (3).



S3.5: HSQC spectrum for (+)-vinapraesorediosic acid B (**3**) recorded in $(\text{CD}_3)_2\text{CO}$ at 500 MHz.



S3.6: HMBC spectrum for (+)-vinapraesorediosic acid B (**3**) recorded in $(\text{CD}_3)_2\text{CO}$ at 500 MHz.



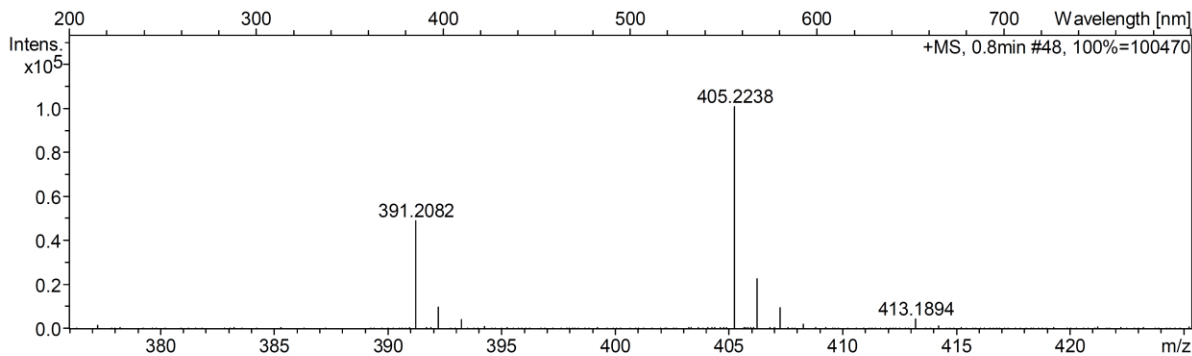
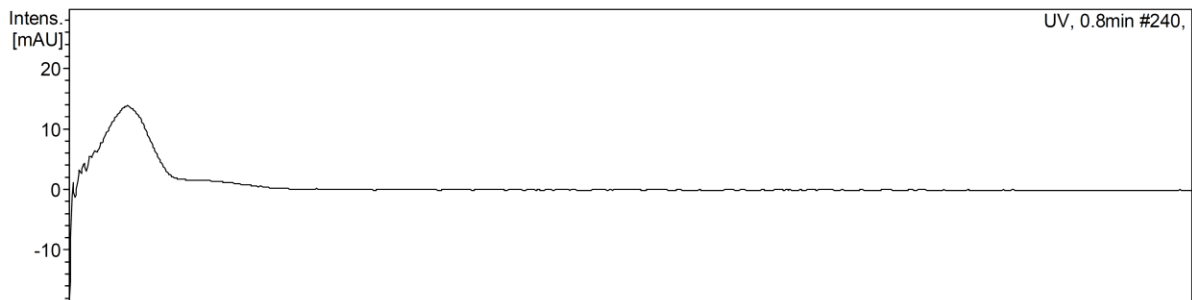
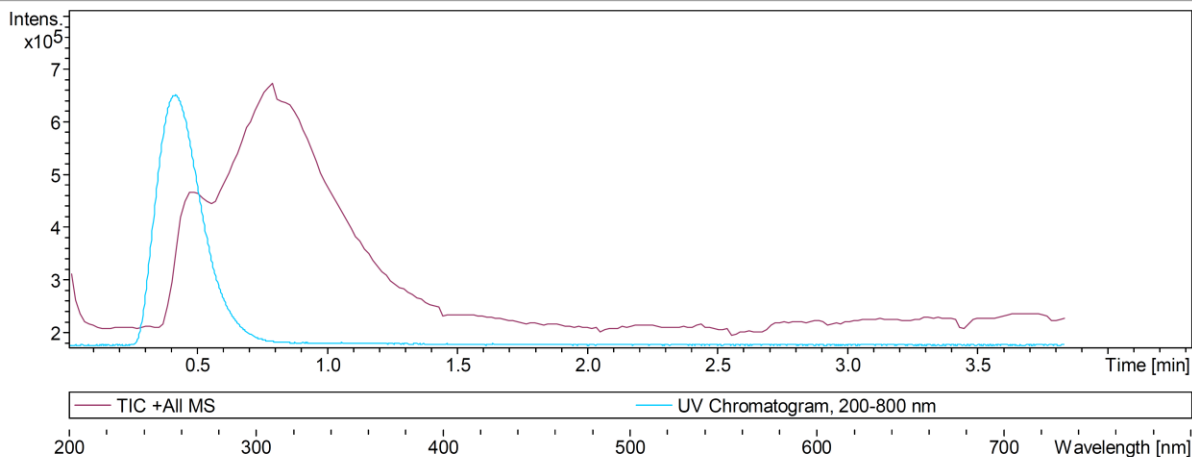
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Display Report

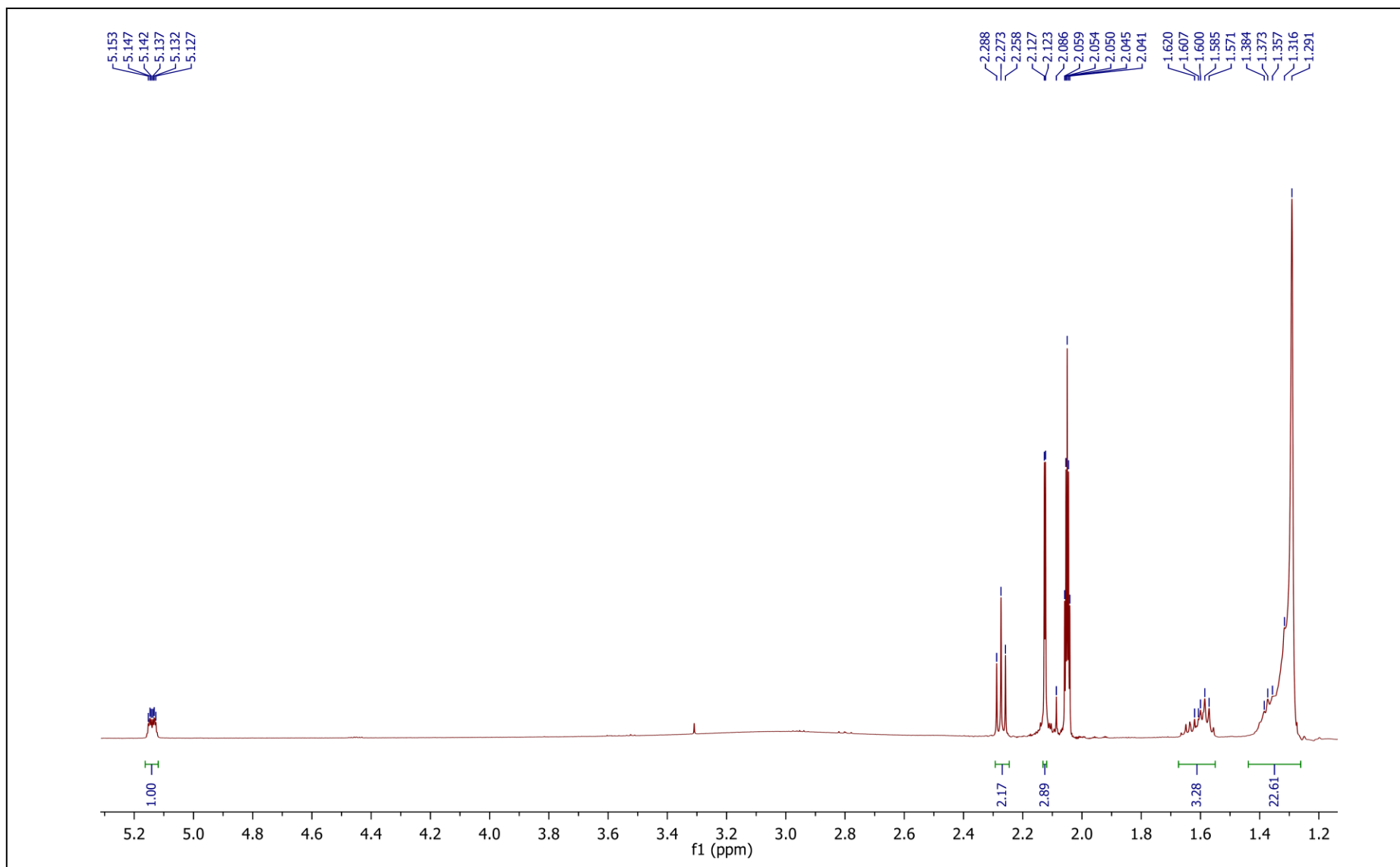
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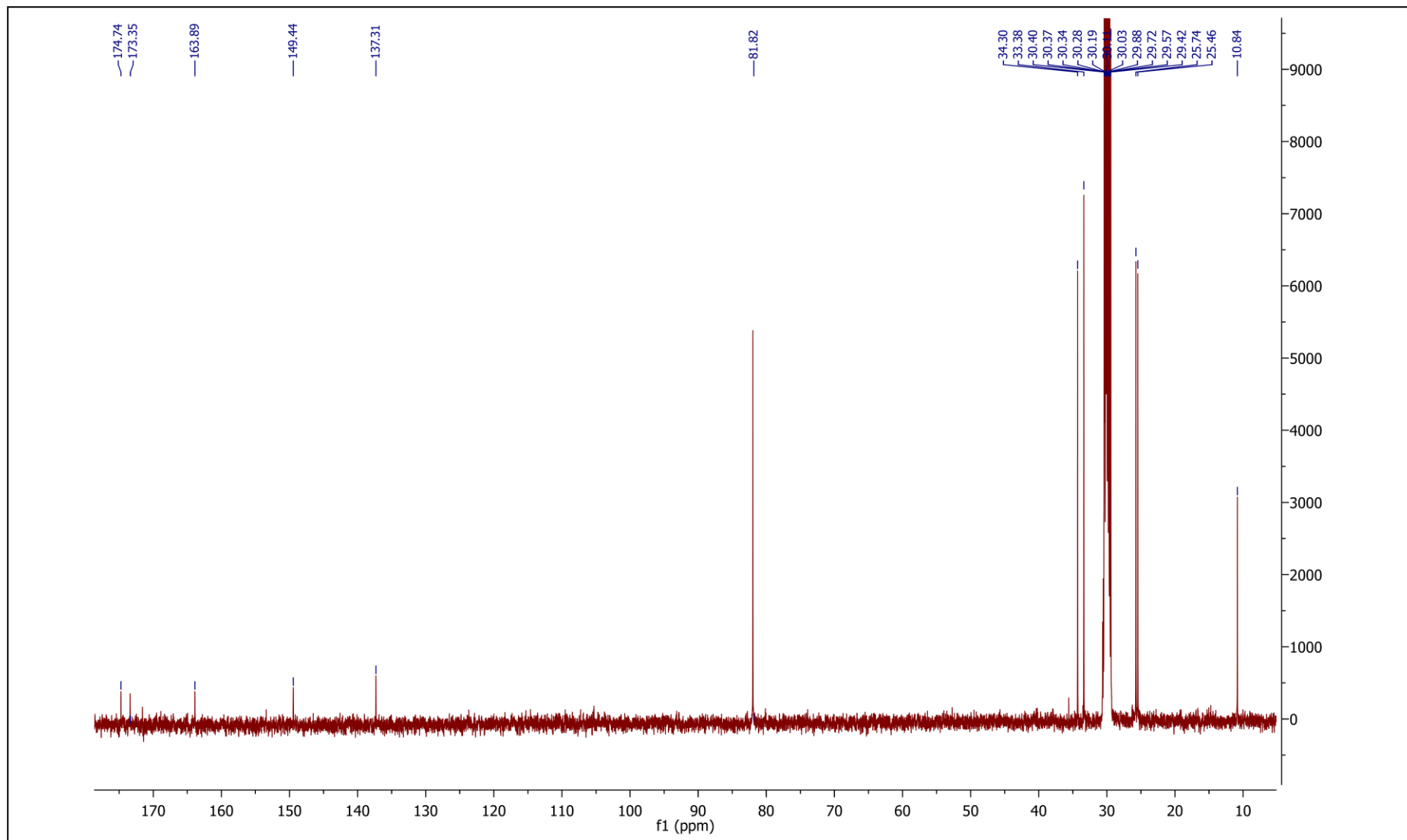
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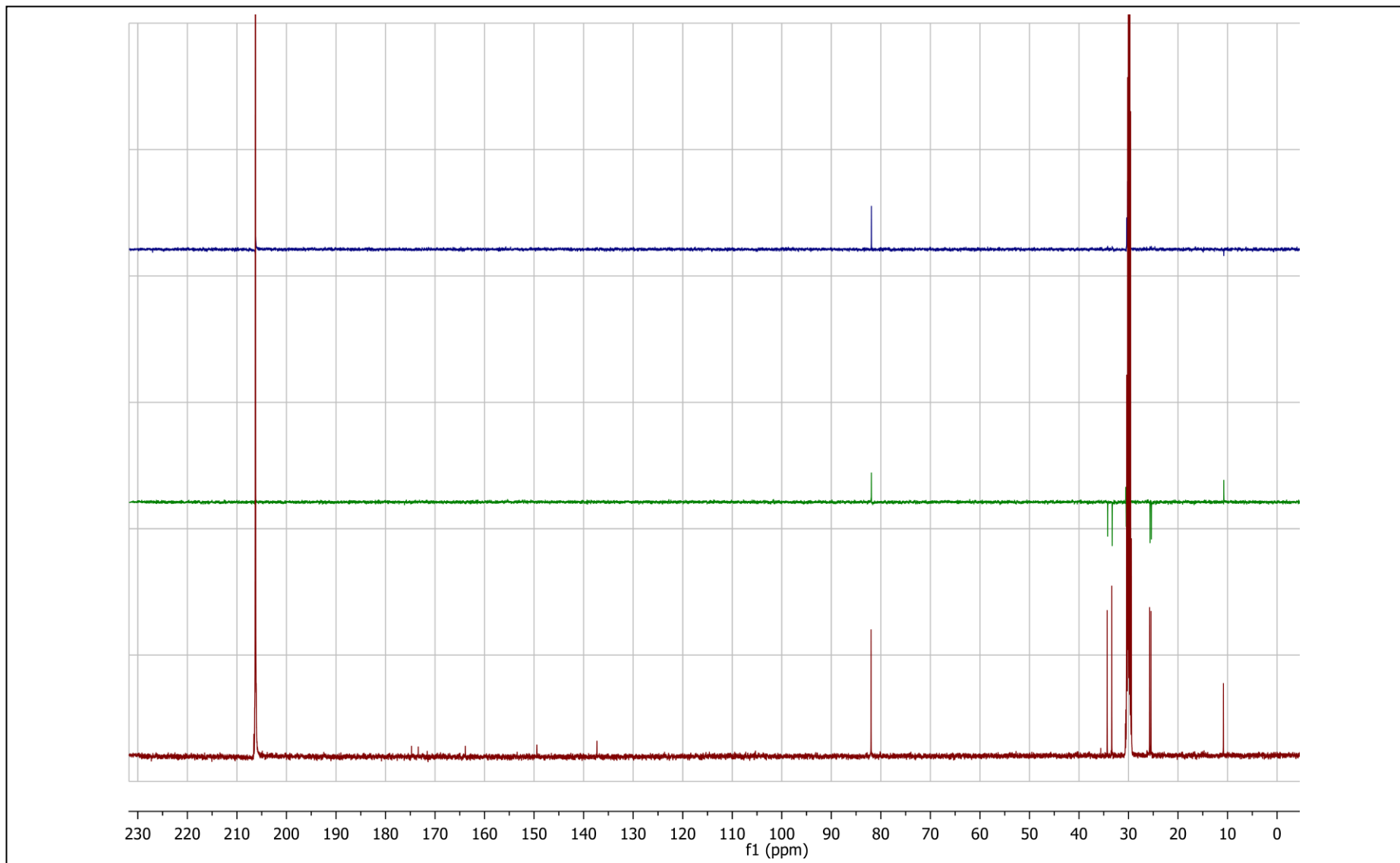
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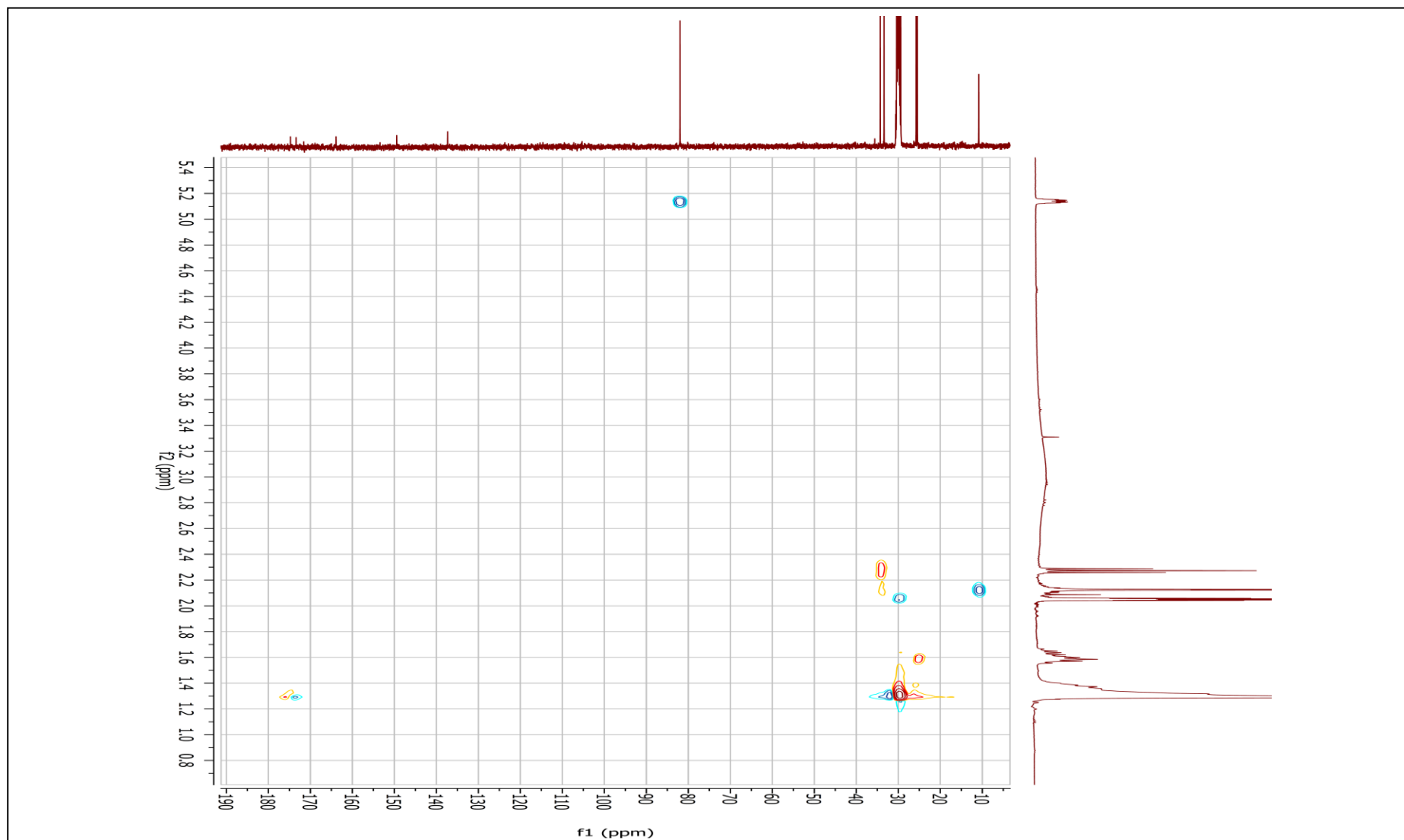
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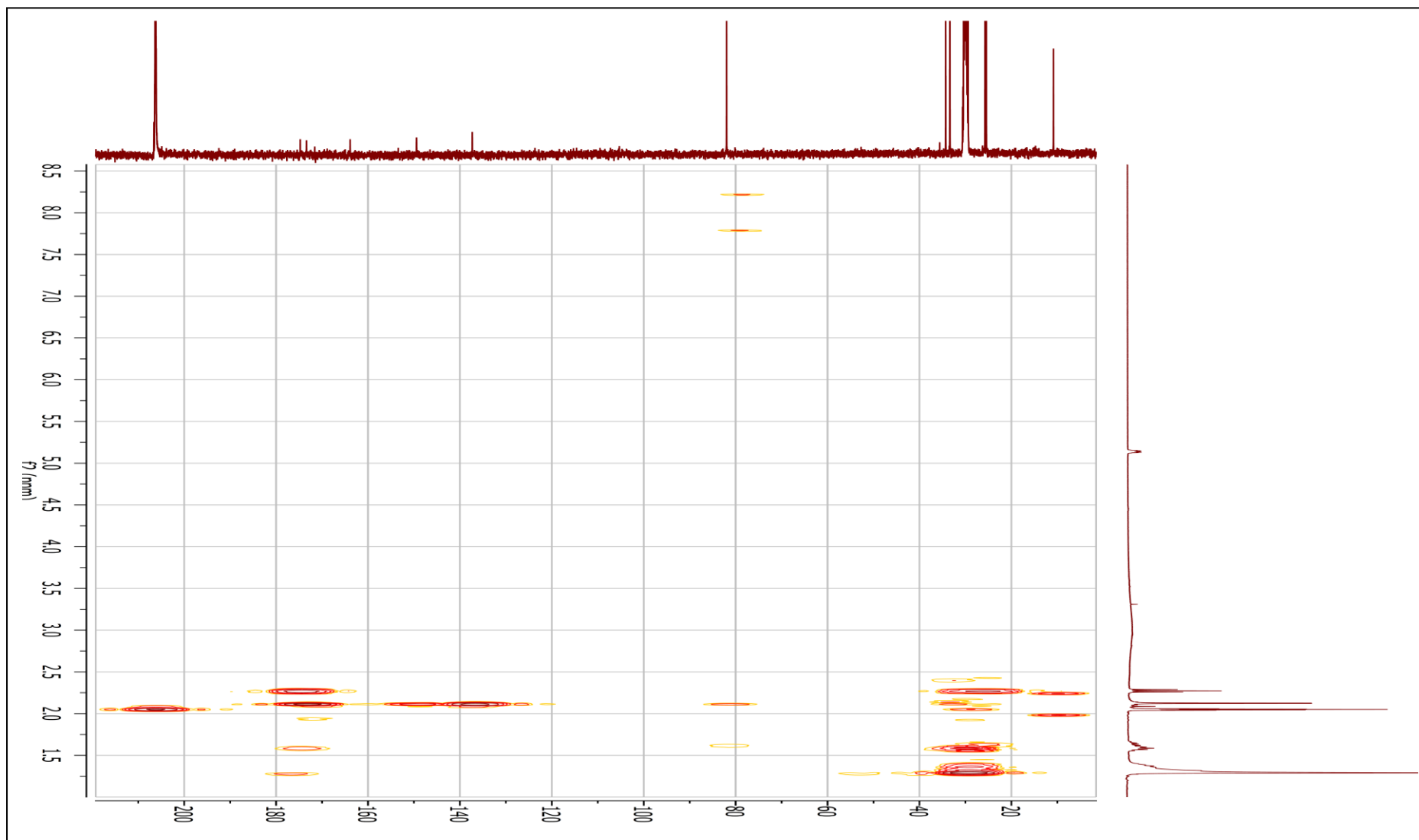
S4.4: DEPT spectrum for (+)-praesorediosic acid (**4**).



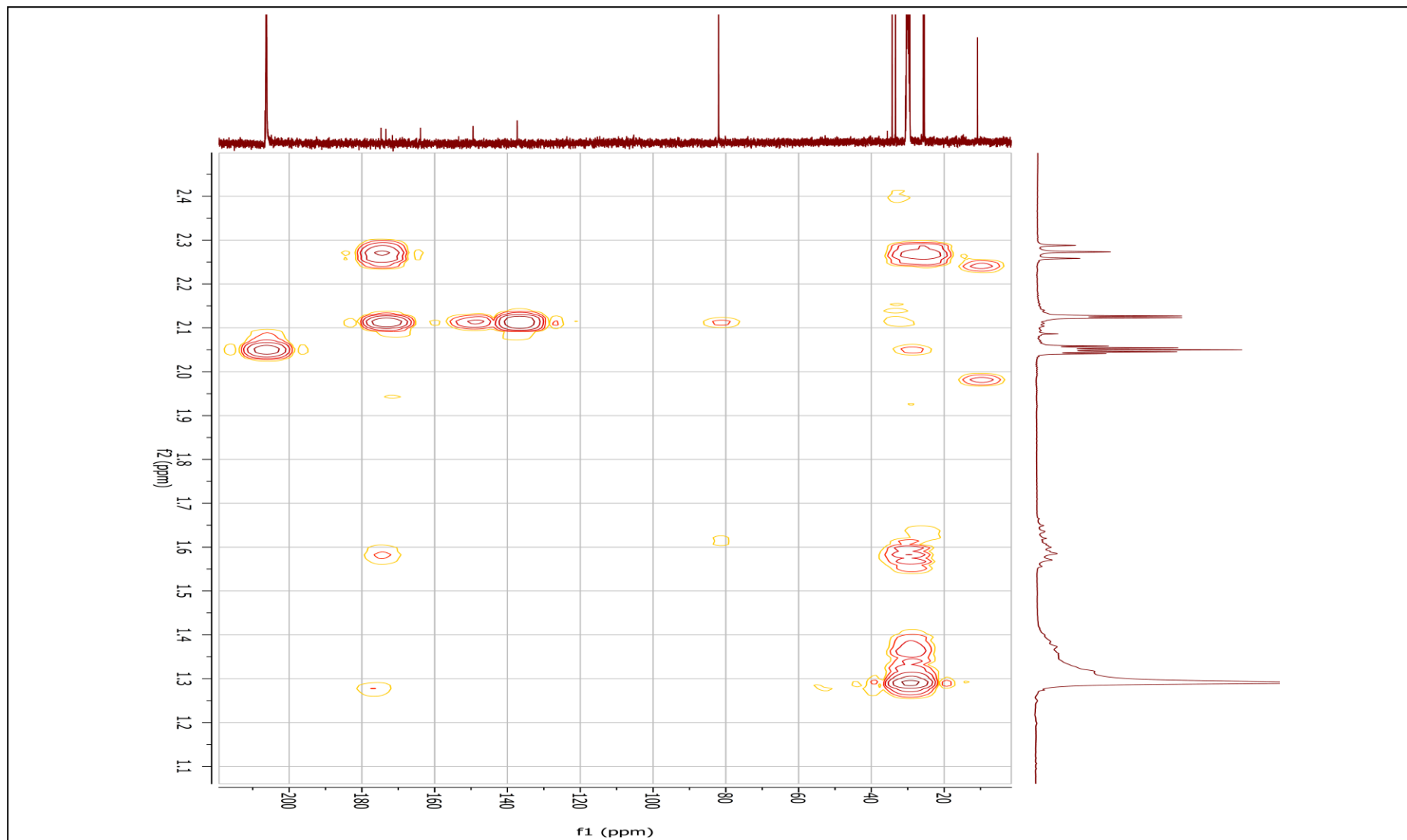
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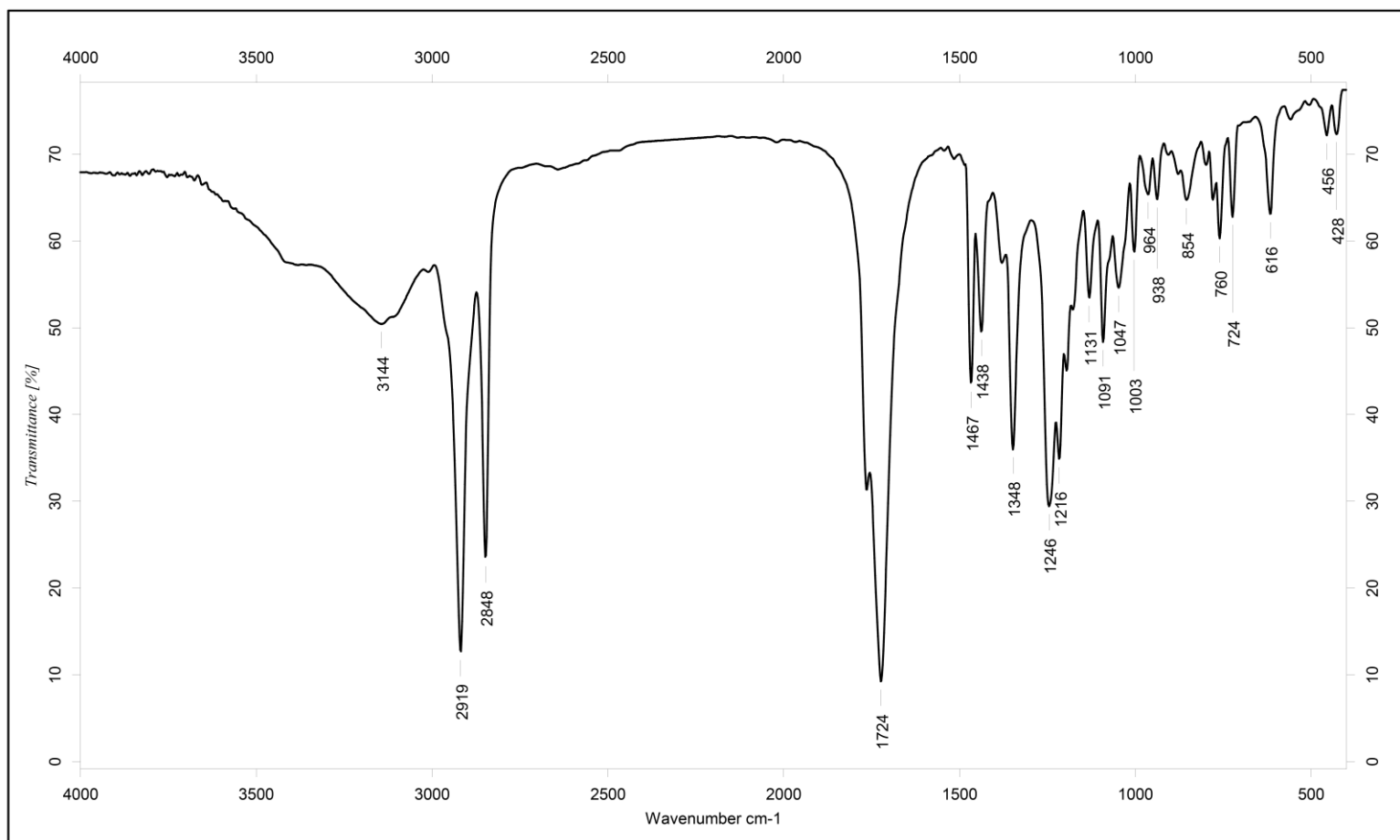
S4.6: HMBC spectrum for (+)-praesorediosic acid (**4**) recorded in $(\text{CD}_3)_2\text{CO}$ at 500 MHz.



S4.7: Expansion HMBC spectrum for (+)-praesorediosic acid (**4**) recorded in $(\text{CD}_3)_2\text{CO}$ at 500 MHz.



S5.1: IR spectrum for (+)-6-methyl praesorediosate (5).



Sample : E19 127425		Frequency Range : 4000.27 - 399.255		Measured on : 2011/01/04	
Technique : KBr		Resolution : 4		Instrument : EQUINOX55	
Operator : THANHTU		Zerofilling : 2		Sample Scans : 16	
				Acquisition : Double Sided, Forward-Backward	

S5.2: HRMS spectrum for (+)-6-methyl praesorediosate (5).

Display Report

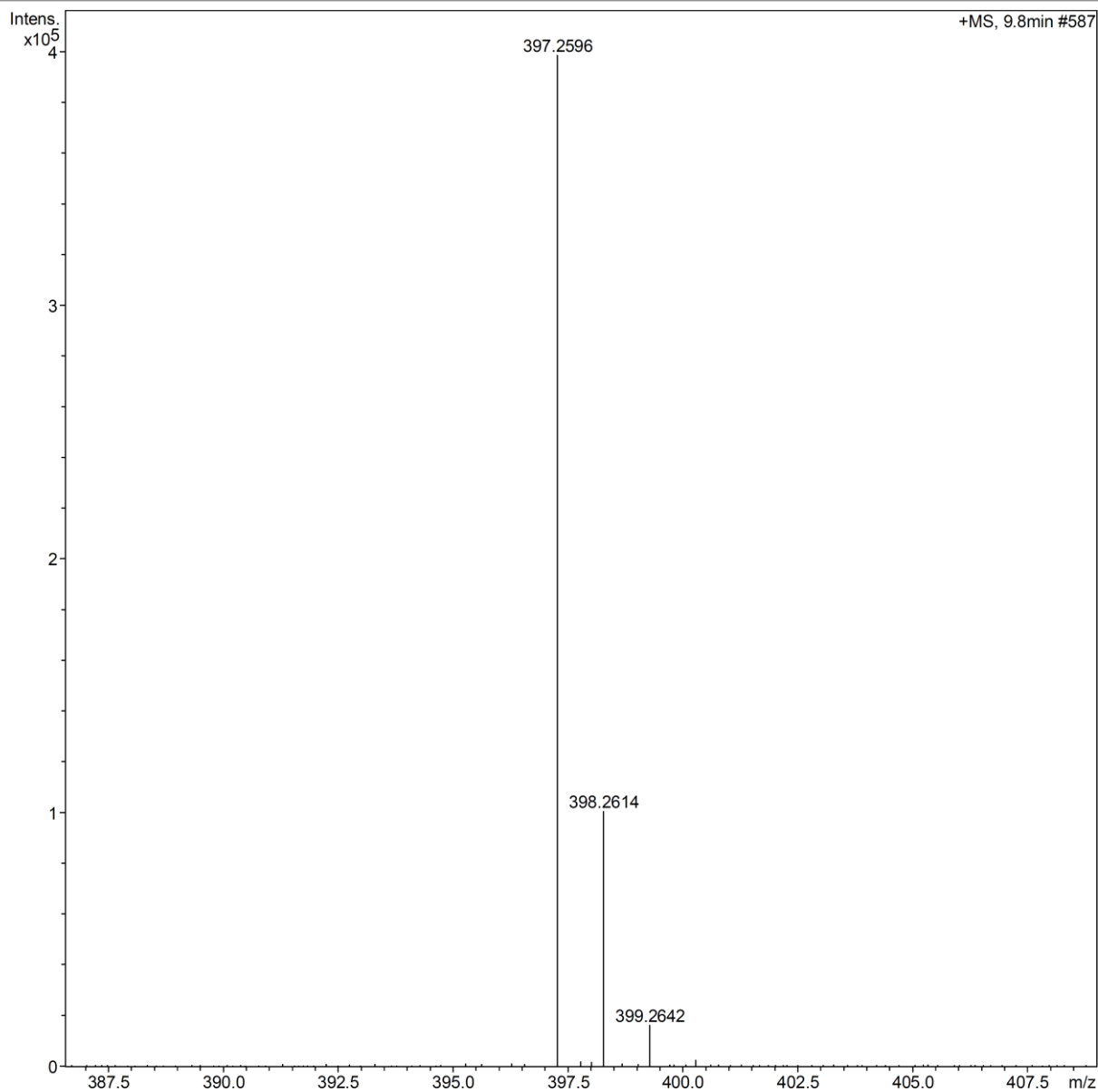
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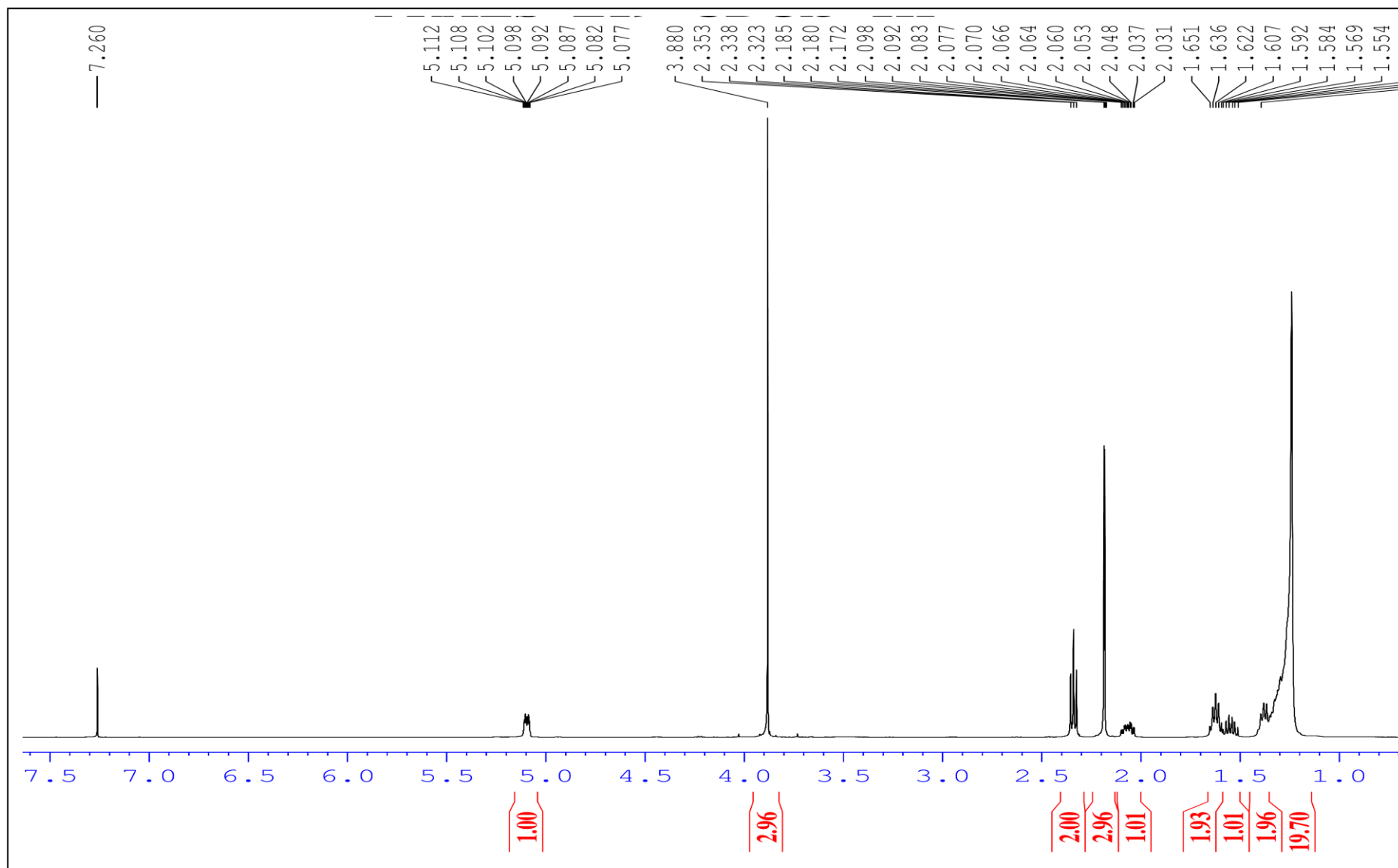
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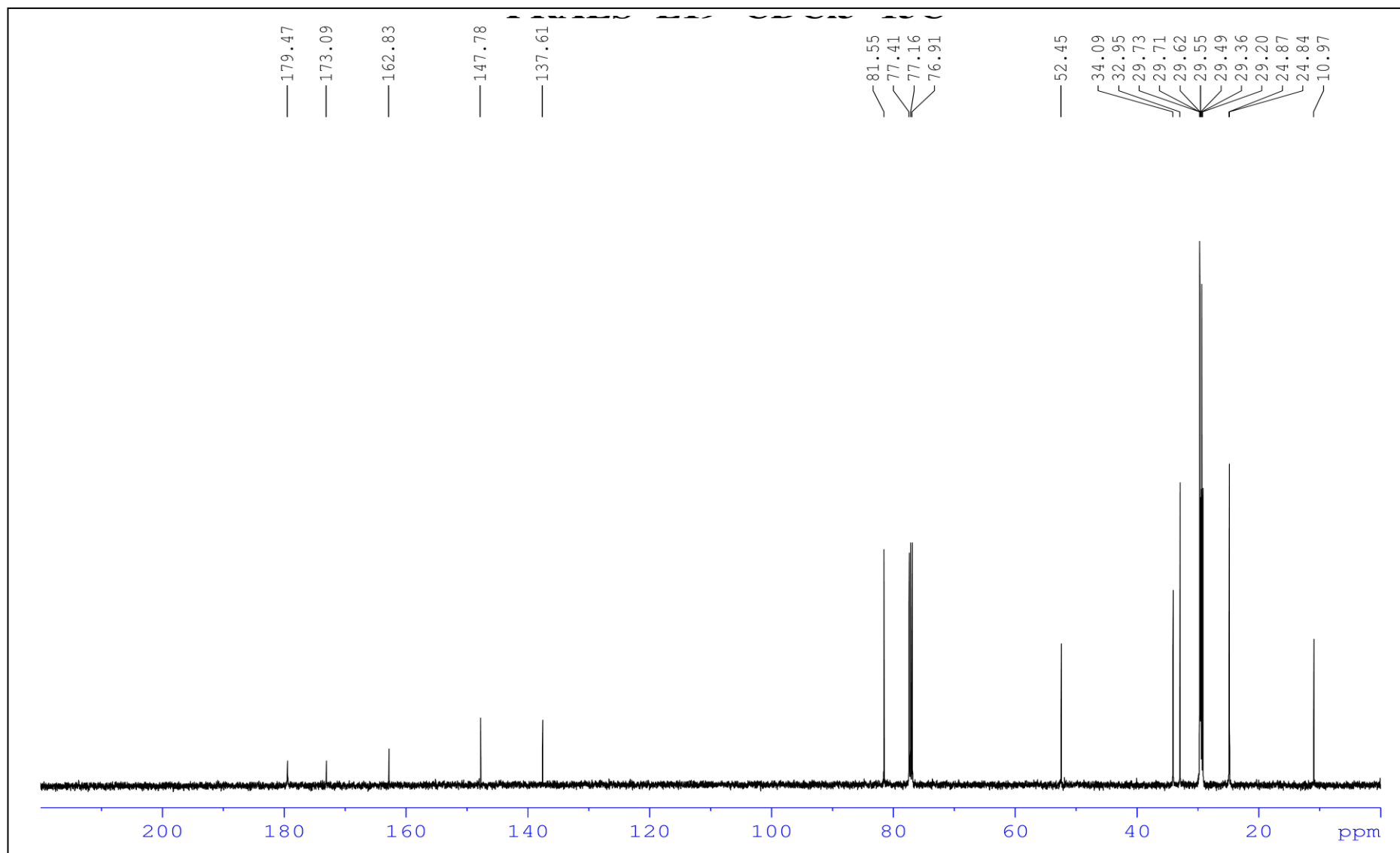
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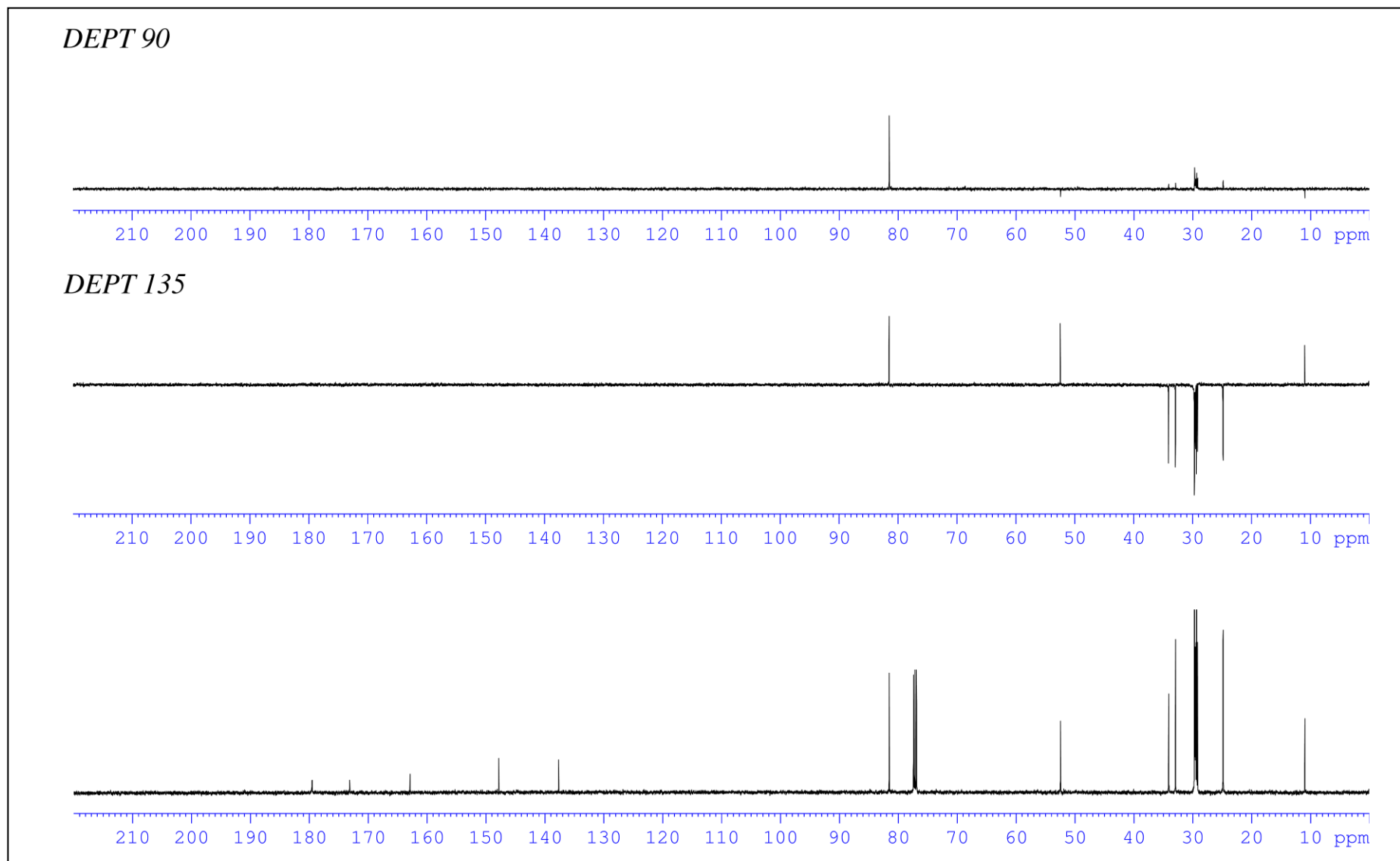
S5.3: ^1H NMR spectrum for (+)-6-methyl praesorediosate (**5**) recorded in CDCl_3 at 500 MHz.



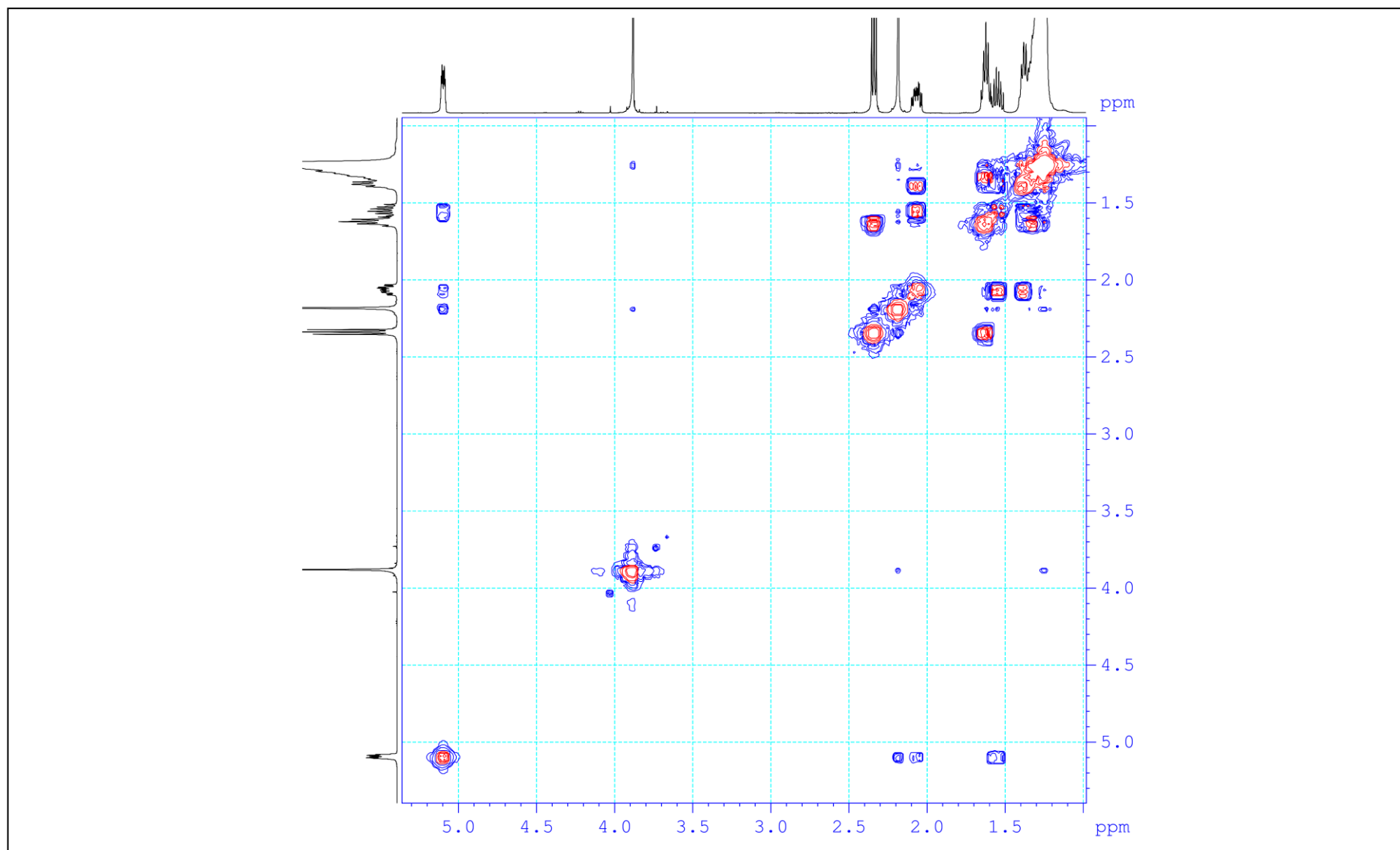
S5.4: ^{13}C NMR spectrum for (+)-6-methyl praesorediosate (**5**) recorded in CDCl_3 at 125 MHz.



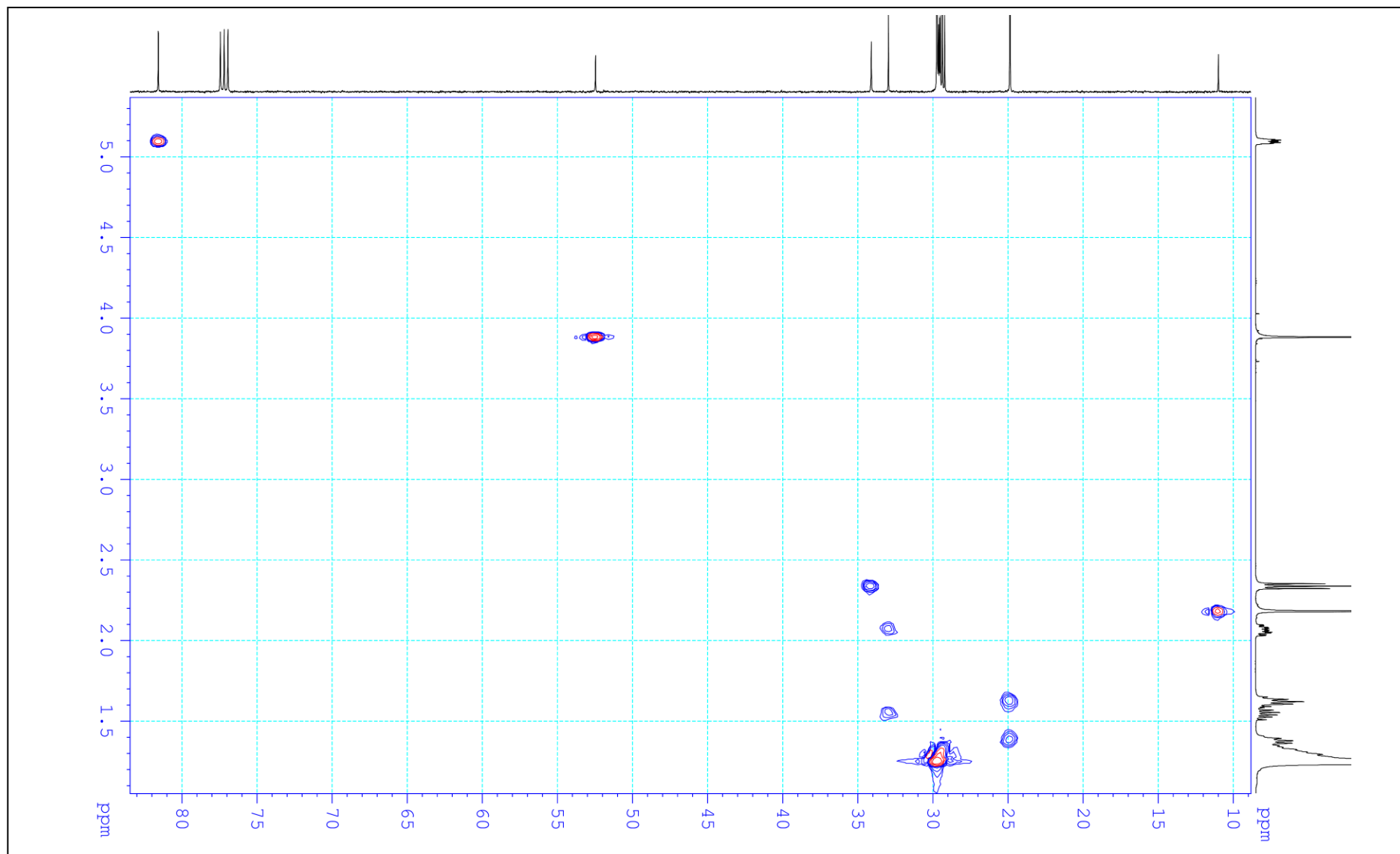
S5.5: DEPT spectrum for (+)-6-methyl praesorediosate (**5**).



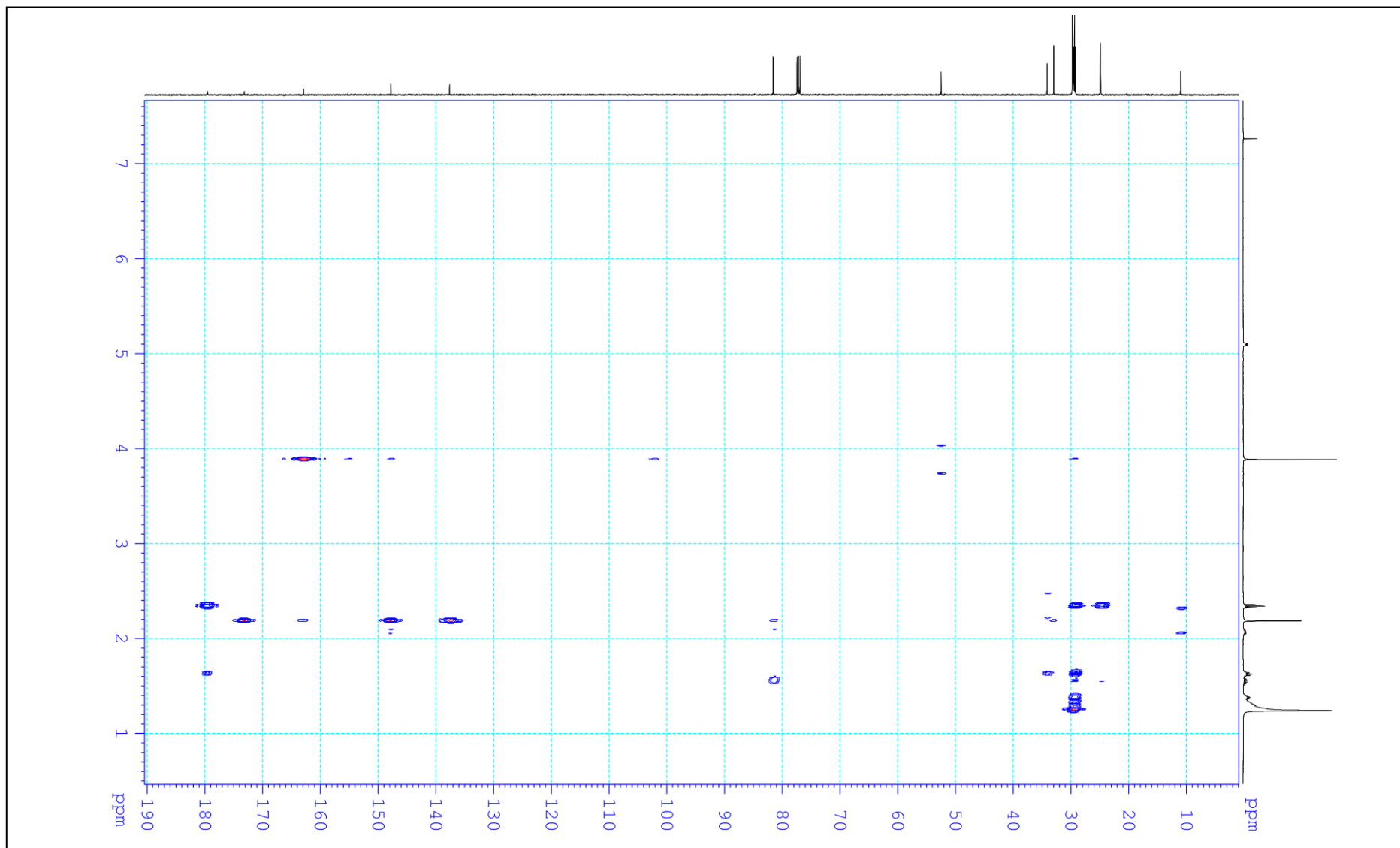
S5.6: COSY spectrum for (+)-6-methyl praesorediosate (**5**) recorded in CDCl₃ at 500 MHz.



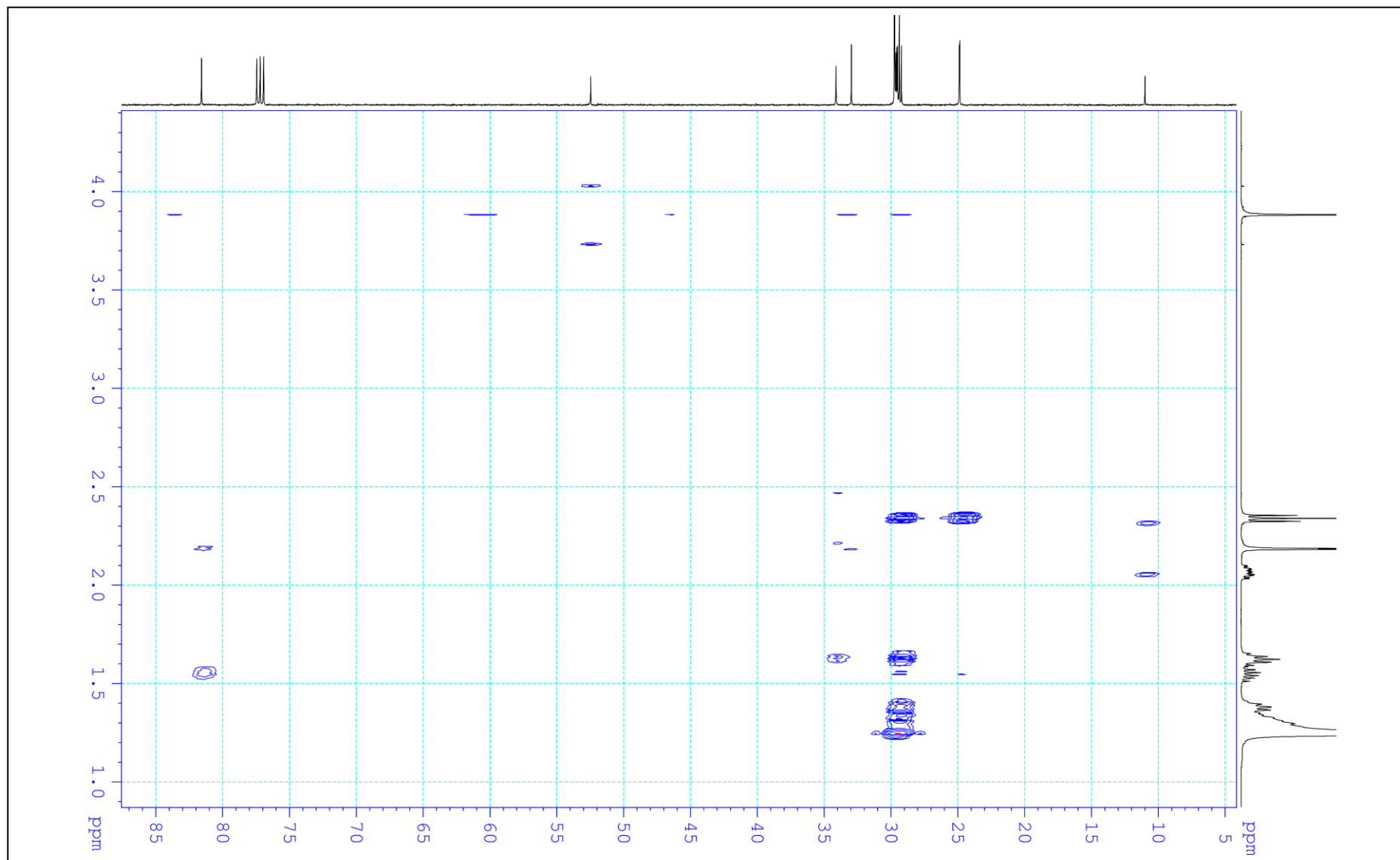
S5.7: HSQC spectrum for (+)-6-methyl praesorediosate (**5**) recorded in CDCl₃ at 500 MHz.



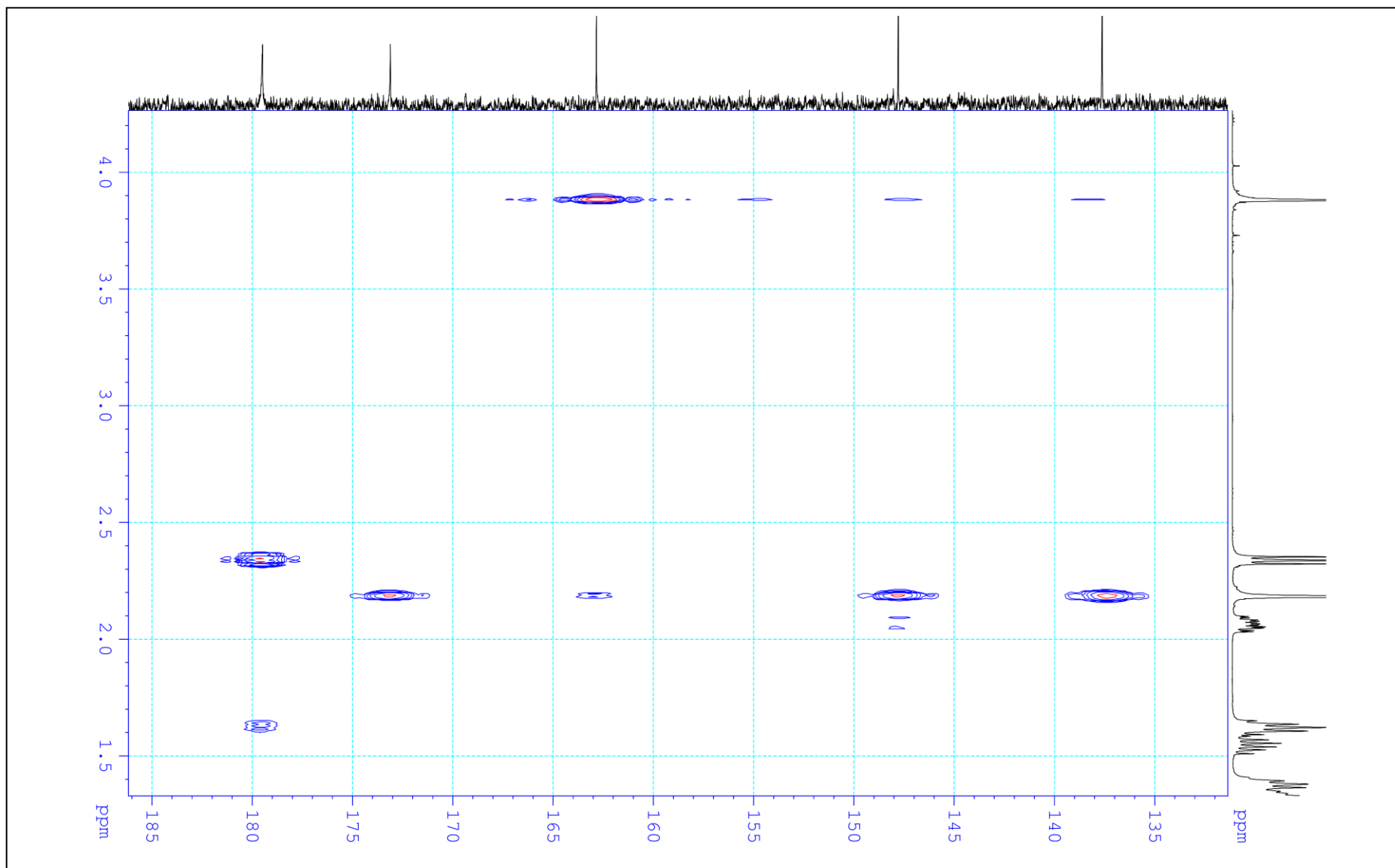
S5.8: HMBC spectrum for (+)-6-methyl praesorediosate (**5**) recorded in CDCl₃ at 500 MHz.



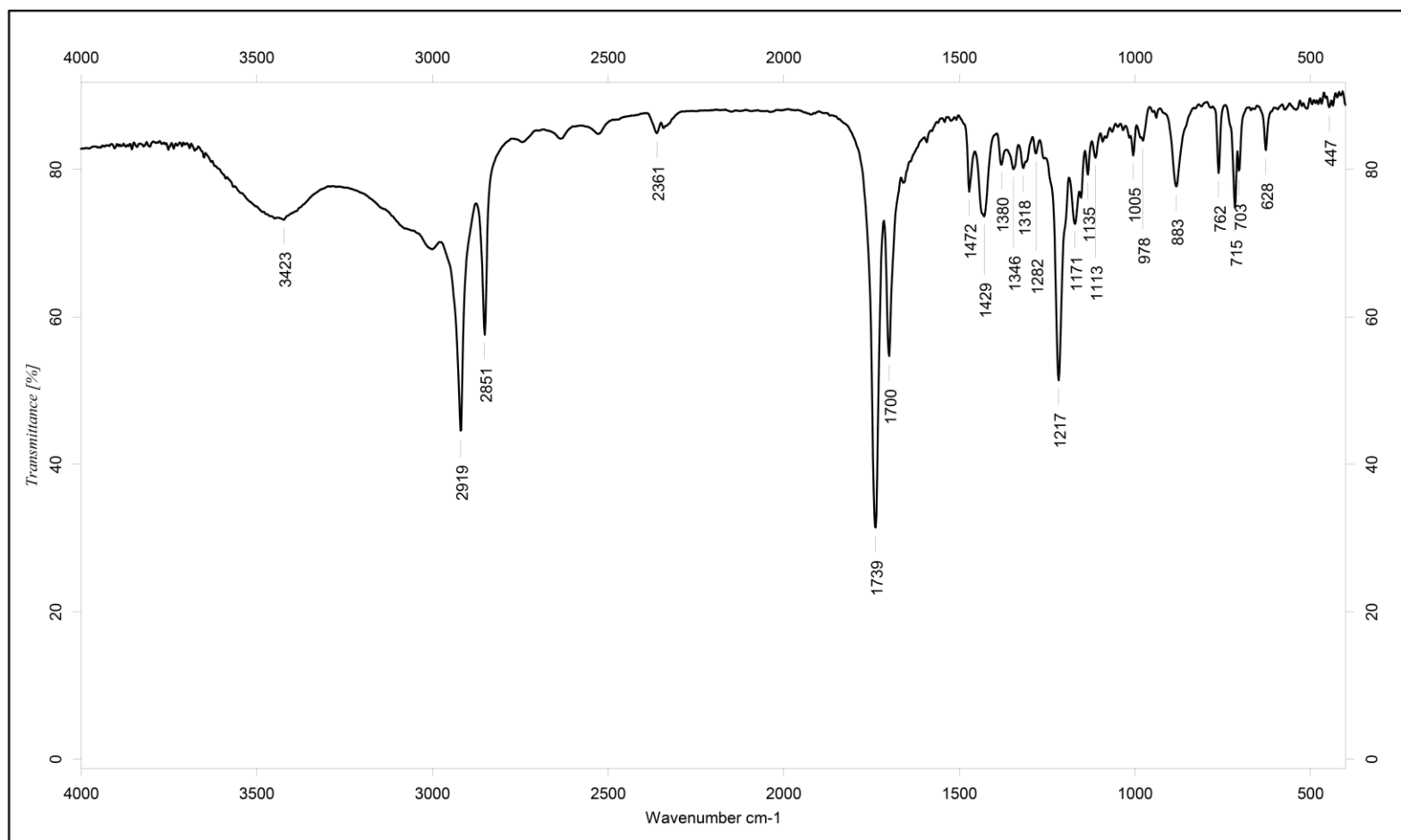
S5.9: Expansion HMBC spectrum for (+)-6-methyl praesorediosate (**5**) recorded in CDCl₃ at 500 MHz.



S5.10: Expansion HMBC spectrum for (+)-6-methyl praesorediosate (**5**) recorded in CDCl₃ at 500 MHz.



S6.1: IR spectrum for (+)-vinapraesorediosic acid C (6).



Sample : PRAES-C2		Frequency Range : 4000.27 - 399.255		Measured on : 2011/01/04	
Technique : KBr		Resolution : 4		Instrument : EQUINOX55	
Operator : THANHTU		Zerofilling : 2		Sample Scans : 16	
				Acquisition : Double Sided,Forward-Backward	

S6.2: HRMS spectrum for (+)-vinapraesorediosic acid C (6).

Display Report

Analysis Info

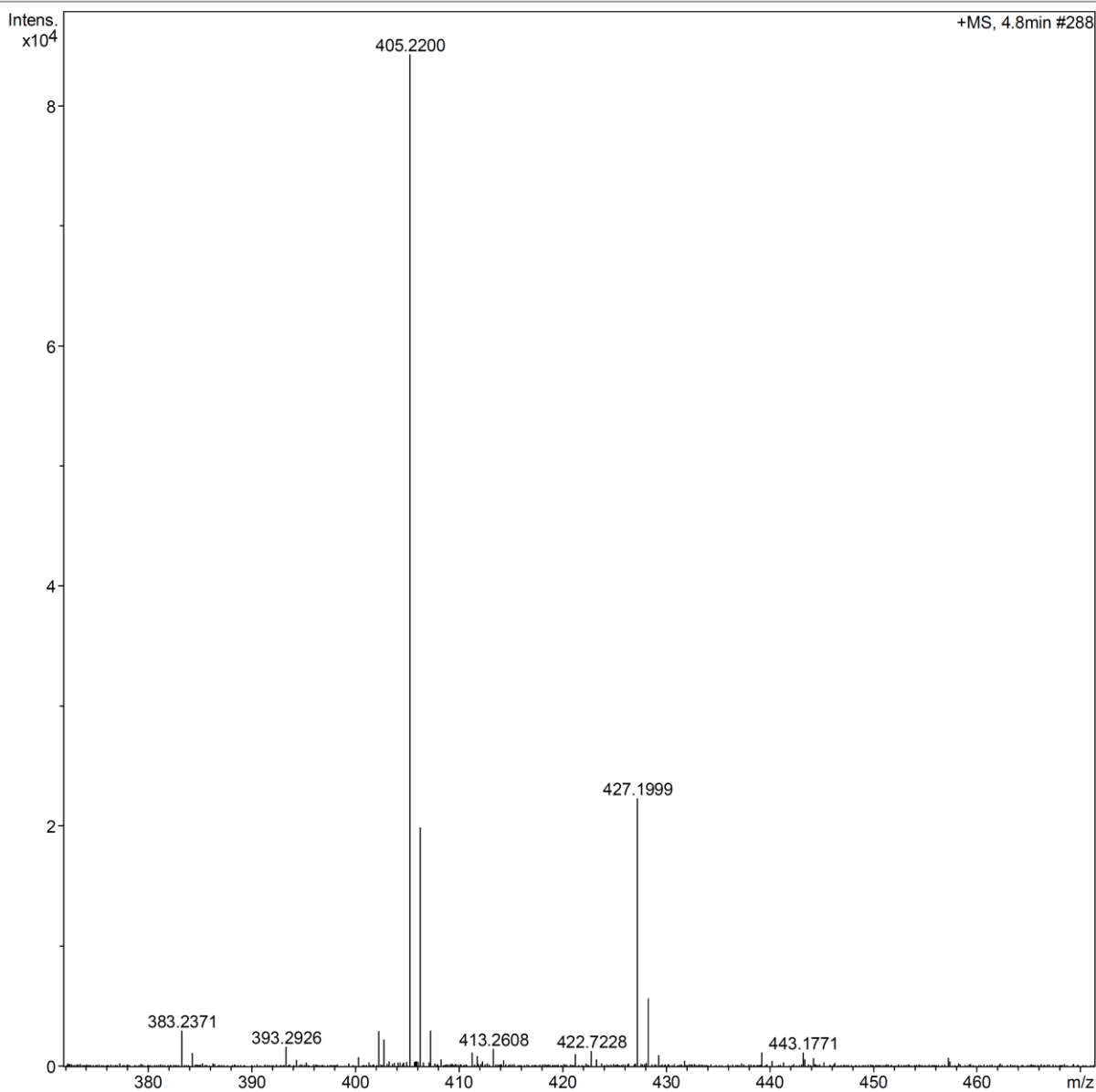
Analysis Name D:\Data\TU\PRAES-C2_2-C,3_01_1168.d
Method positive medium tu.m
Sample Name PRAES-C2
Comment

Acquisition Date 11/23/2010 12:55:31 PM

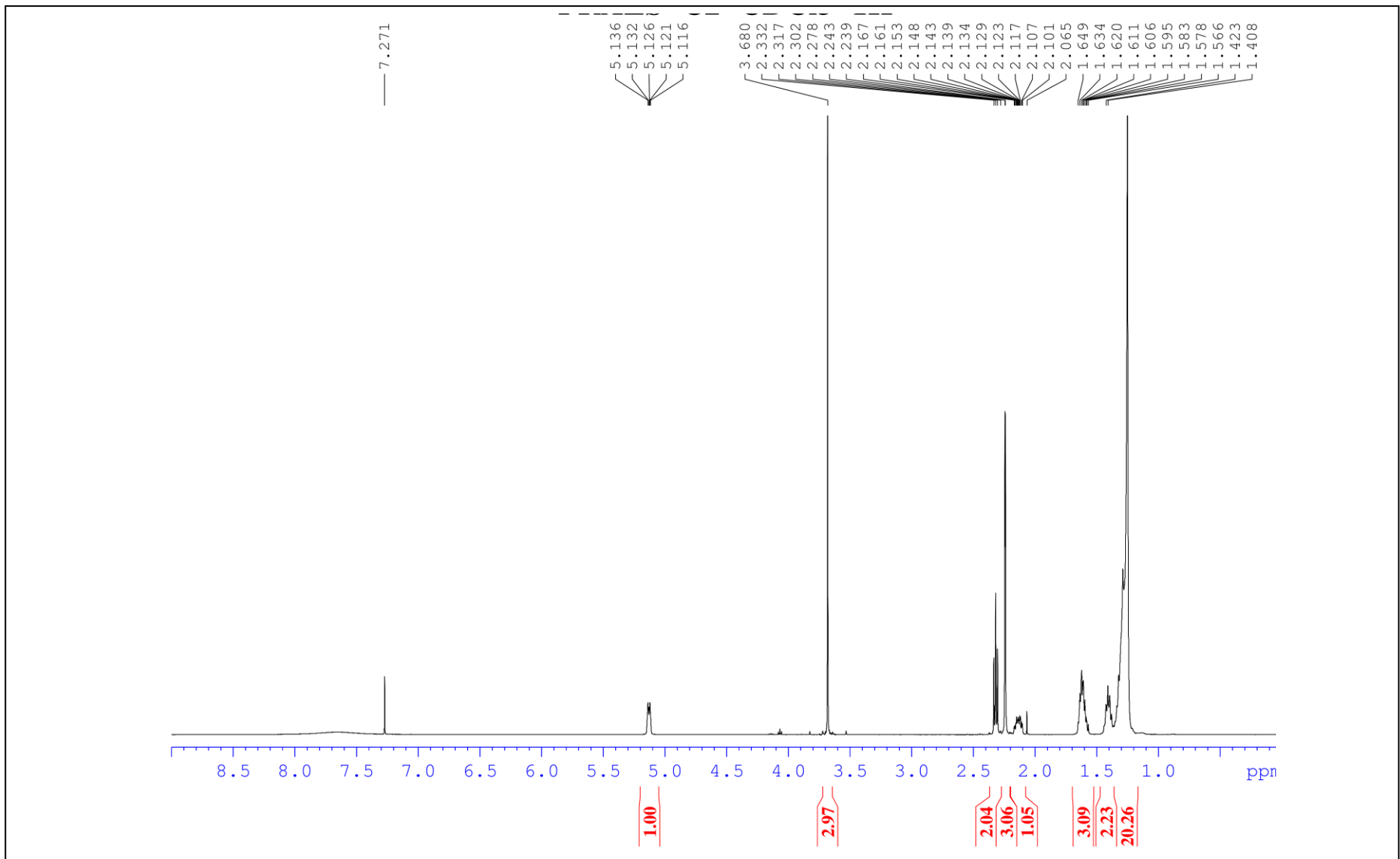
Operator THANHTU
Instrument micrOTOF-Q 10187

Acquisition Parameter

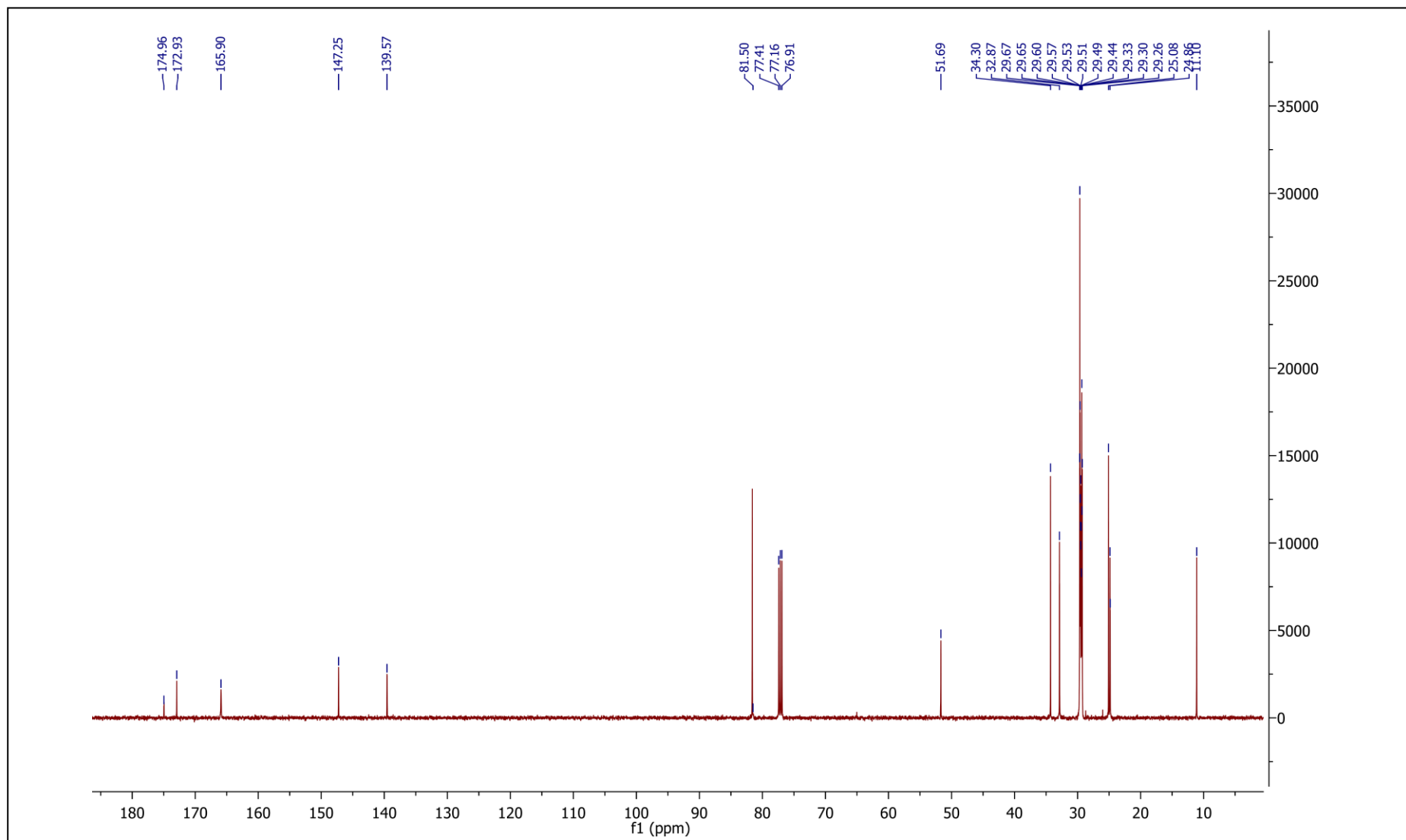
Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	4.0 Bar
Focus	Not active	Set Capillary	4000 V	Set Dry Heater	200 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	9.0 l/min
Scan End	1000 m/z	Set Collision Cell RF	400.0 Vpp	Set Divert Valve	Source



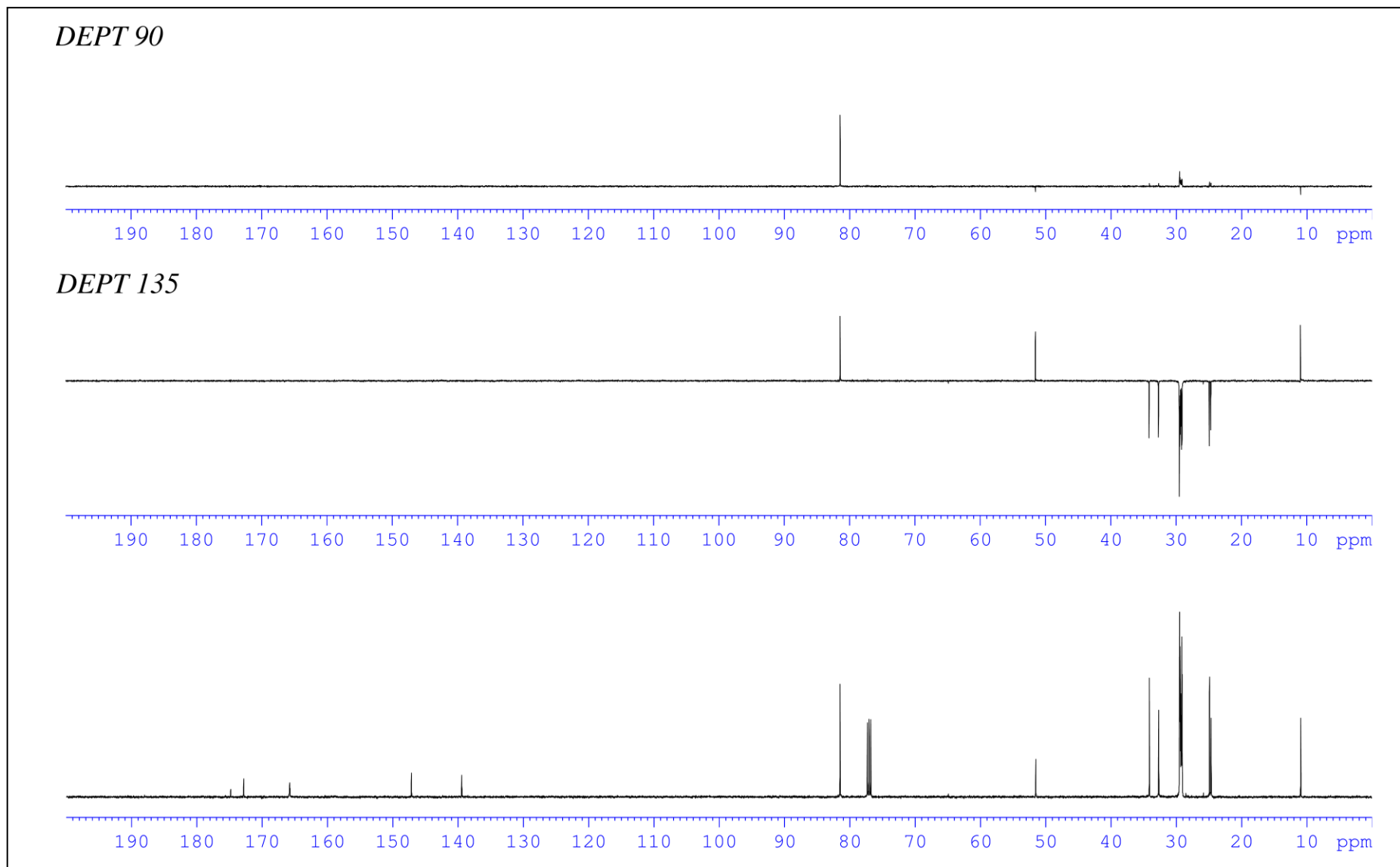
S6.3: ^1H NMR spectrum for (+)-vinapraesorediosic acid C (**6**) recorded in CDCl_3 at 500 MHz.



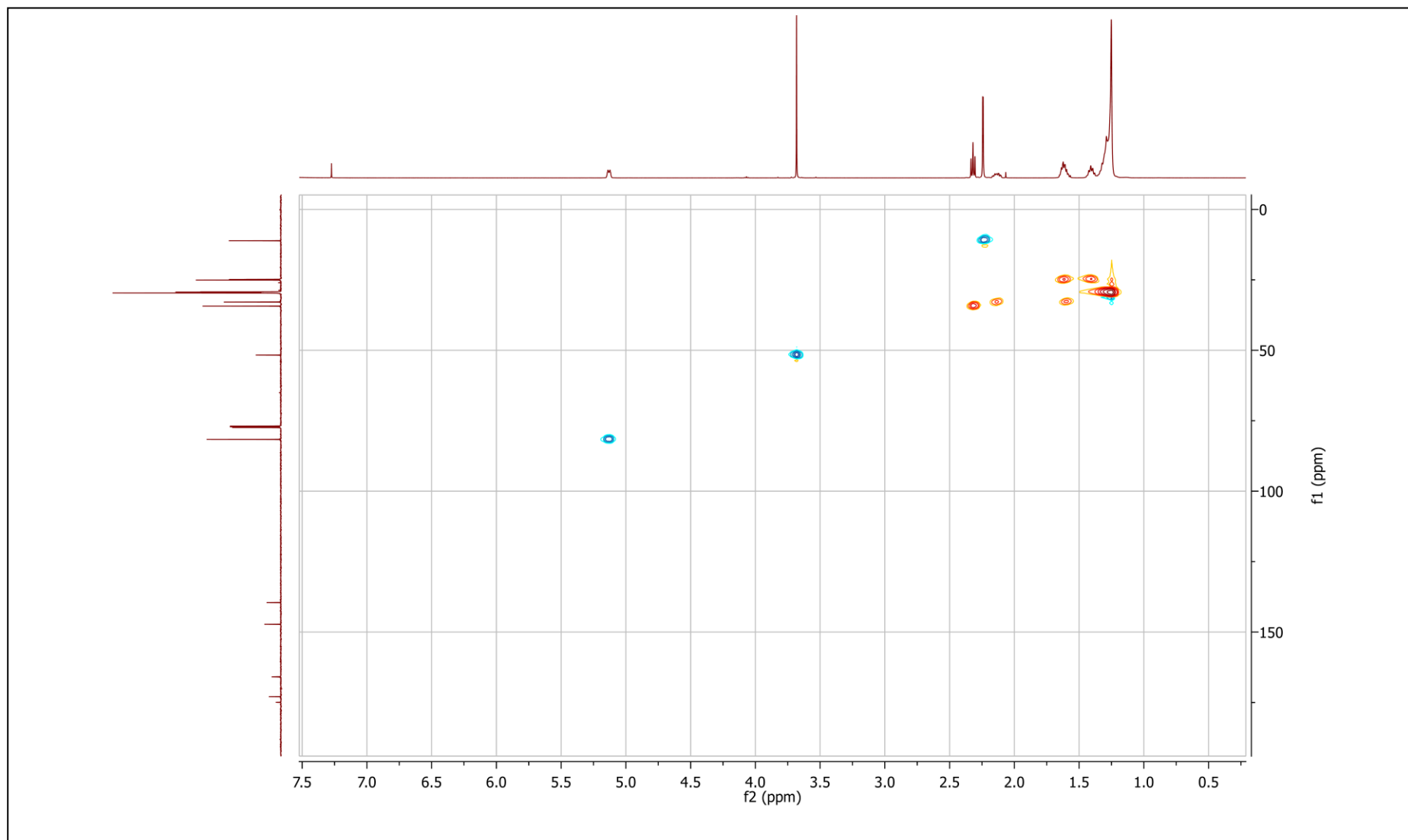
S6.4: ^{13}C NMR spectrum for (+)-vinapraesorediosic acid **(6)** recorded in CDCl_3 at 125 MHz.



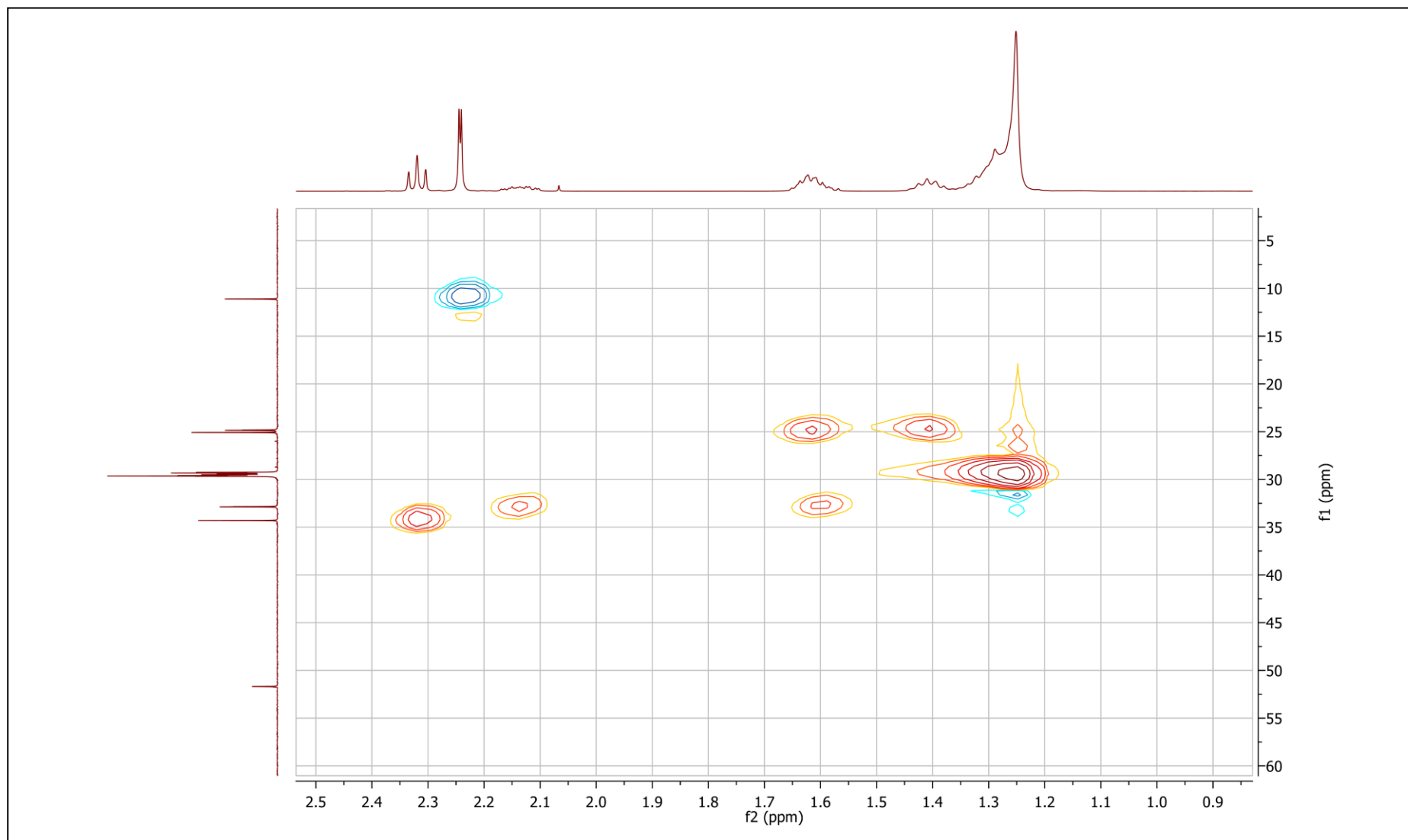
S6.5: DEPT spectrum for (+)-vinapraesorediosic acid C (6).



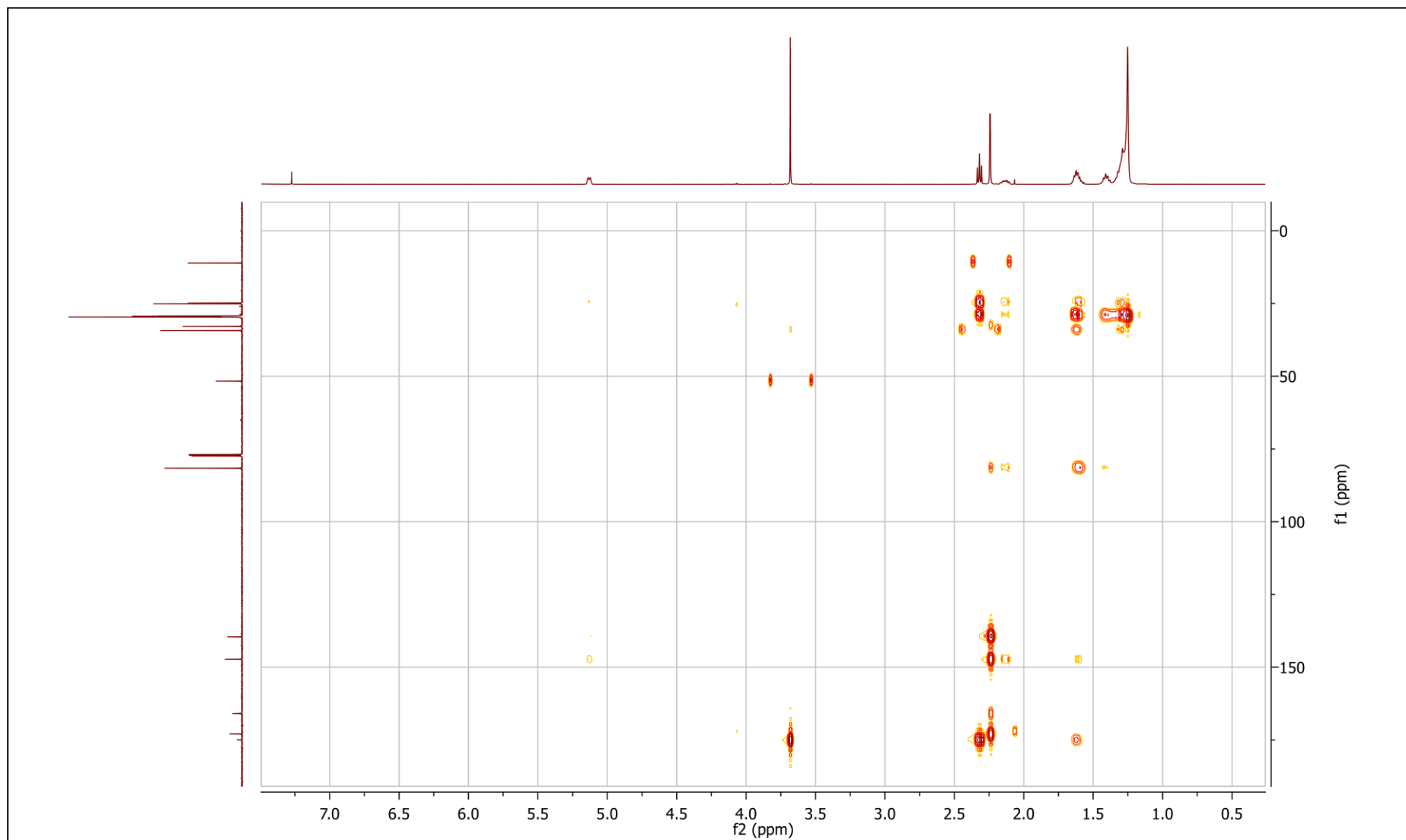
S6.6: HSQC spectrum for (+)-vinapraesorediosic acid **6** recorded in CDCl₃ at 500 MHz.



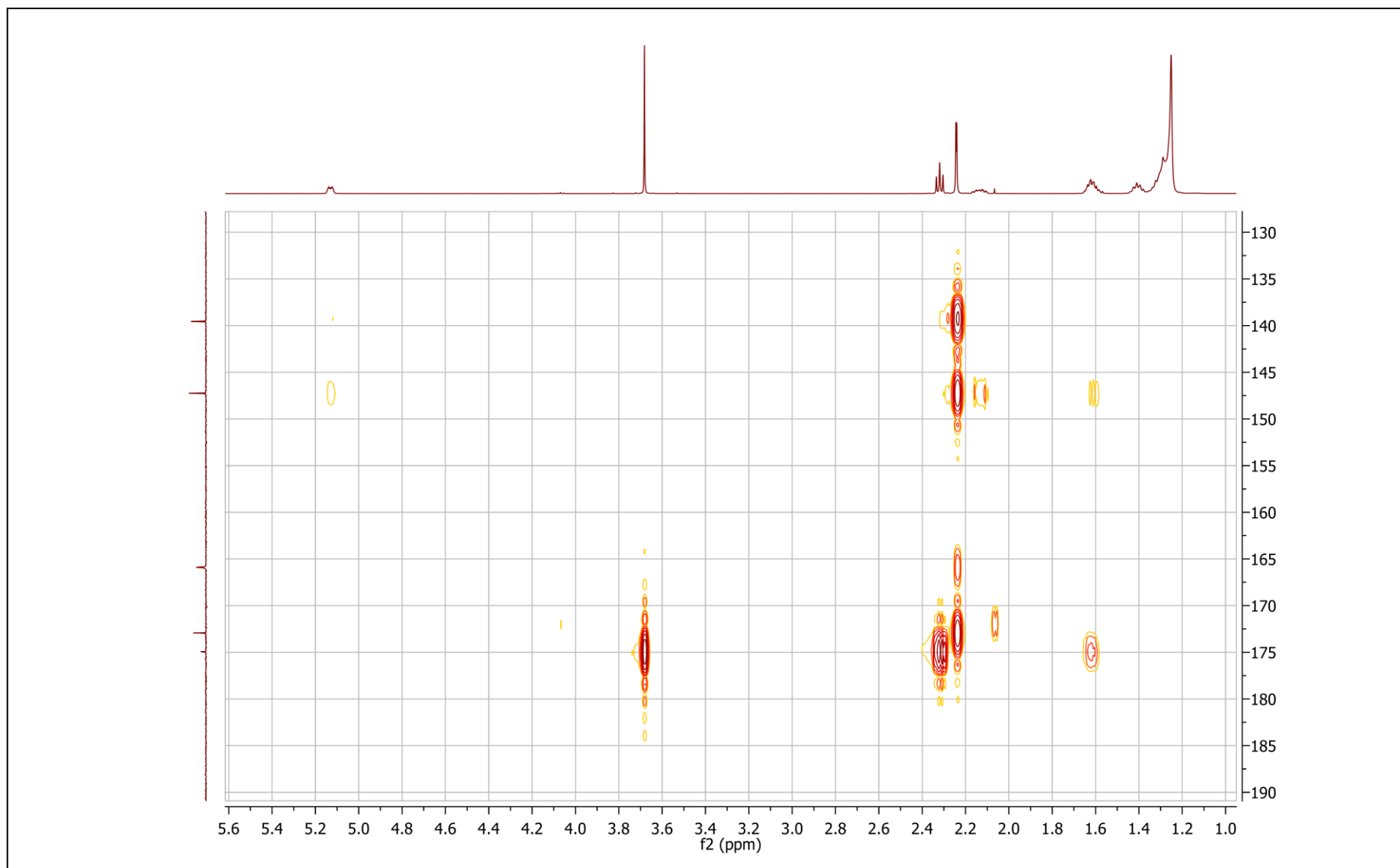
S6.7: Expansion HSQC spectrum for (+)-vinapraesorediosic acid **(6)** recorded in CDCl₃ at 500 MHz.



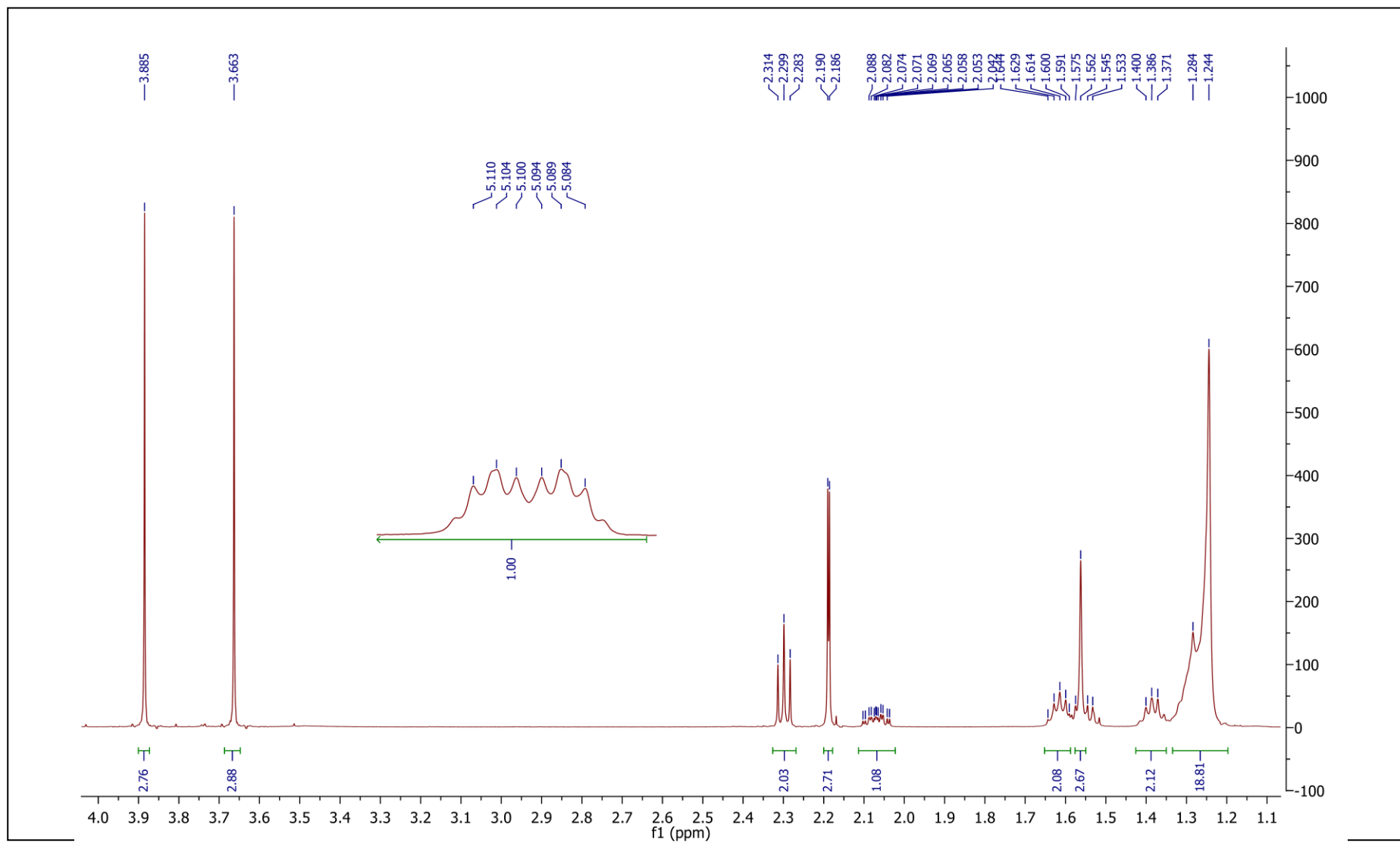
S6.8: HMBC spectrum for (+)-vinapraesorediosic acid **(6)** recorded in CDCl_3 at 500 MHz.



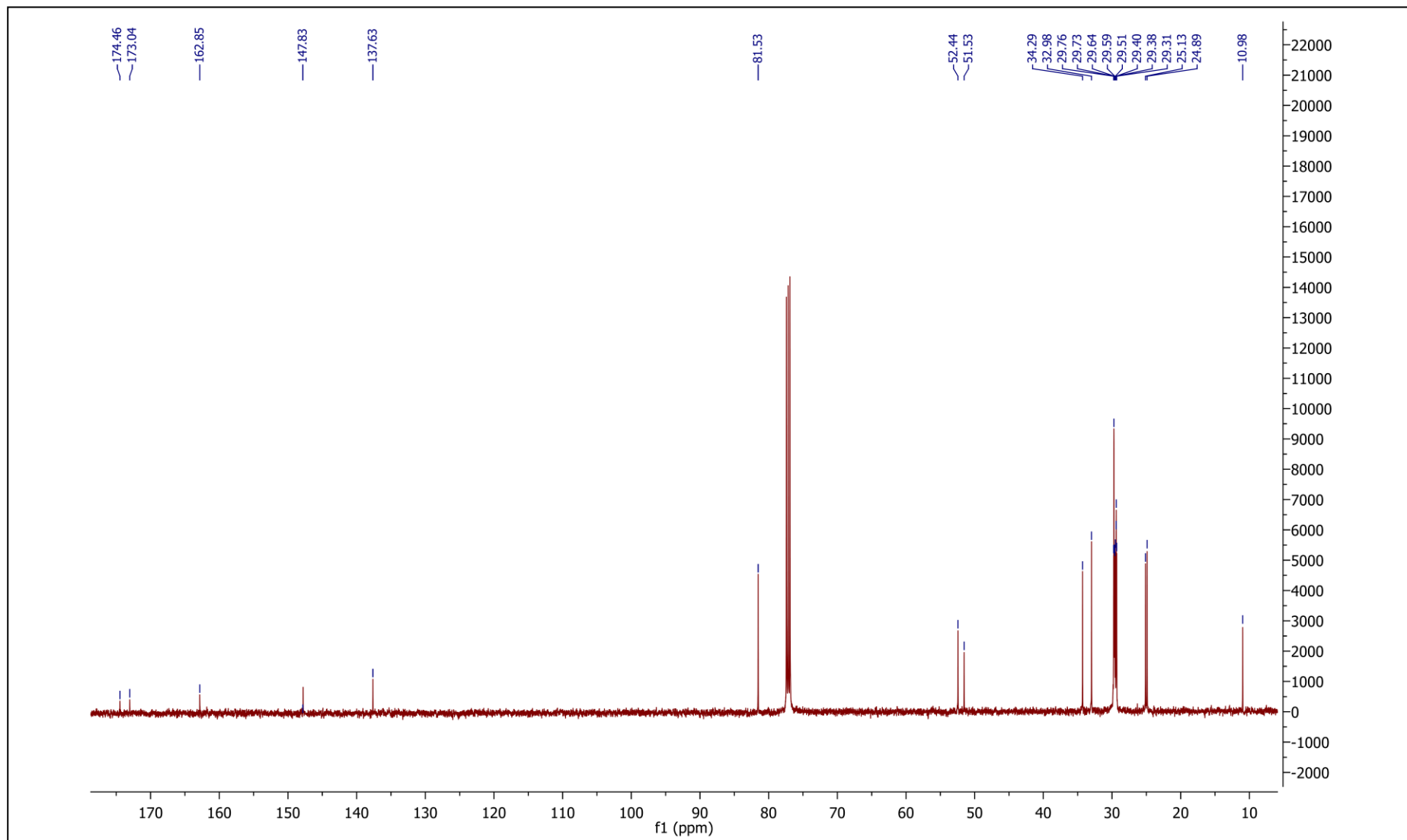
S6.9: Expansion HMBC spectrum for (+)-vinapraesorediosic acid C (**6**) recorded in CDCl₃ at 500 MHz.



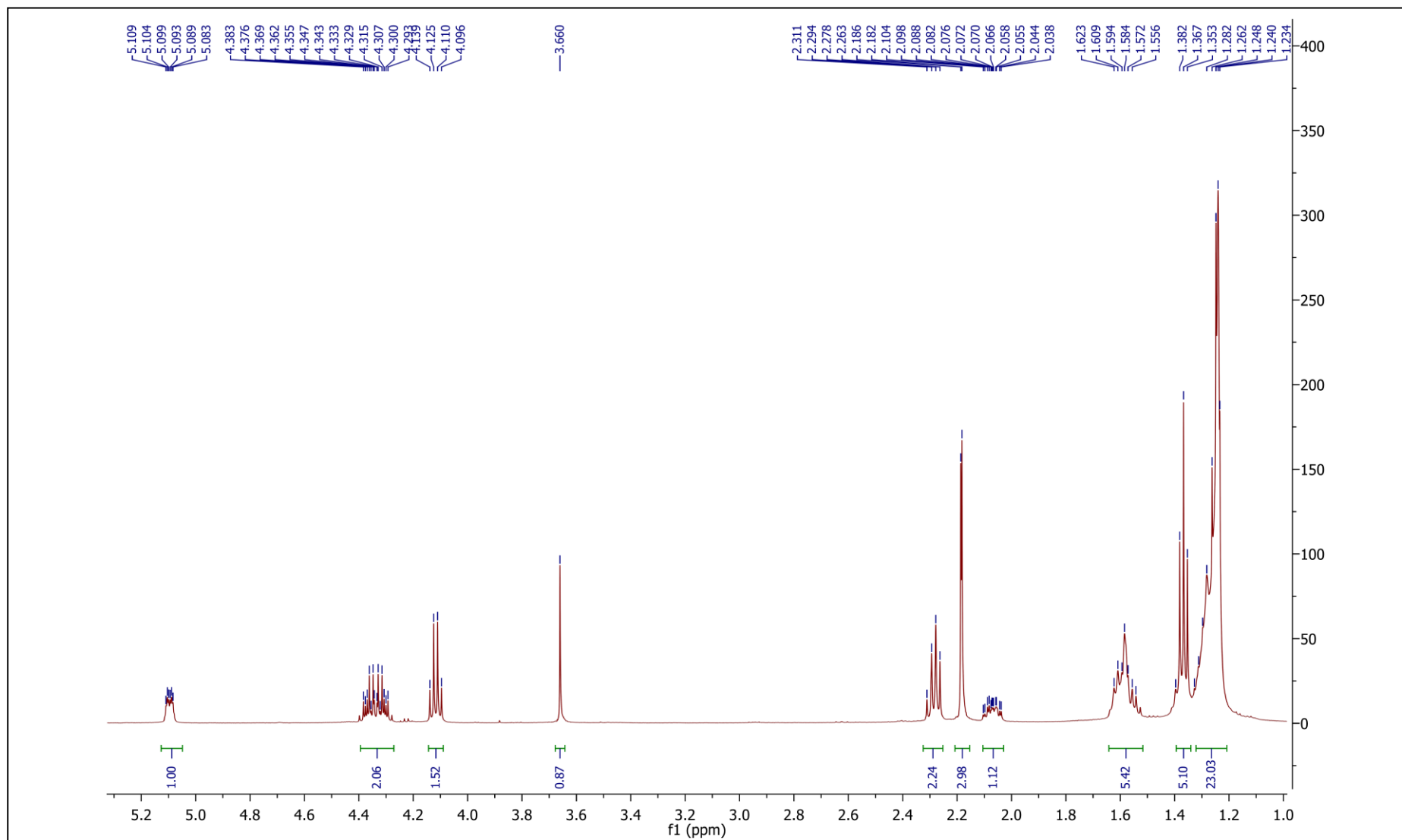
S7.1: ^1H NMR spectrum for (**7**) recorded in CDCl_3 at 500 MHz



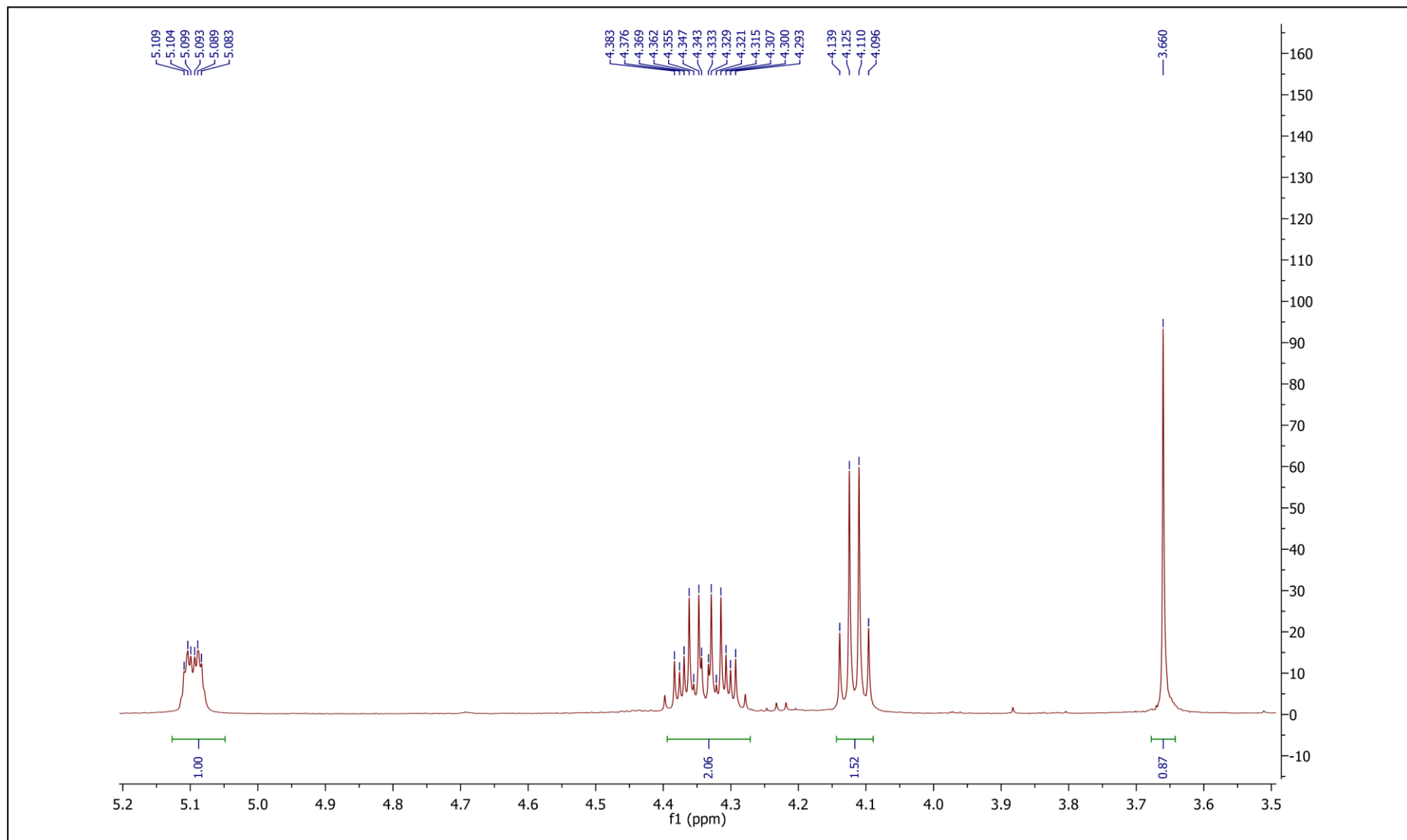
S7.2: ^{13}C NMR spectrum for (**7**) recorded in CDCl_3 at 125 MHz.



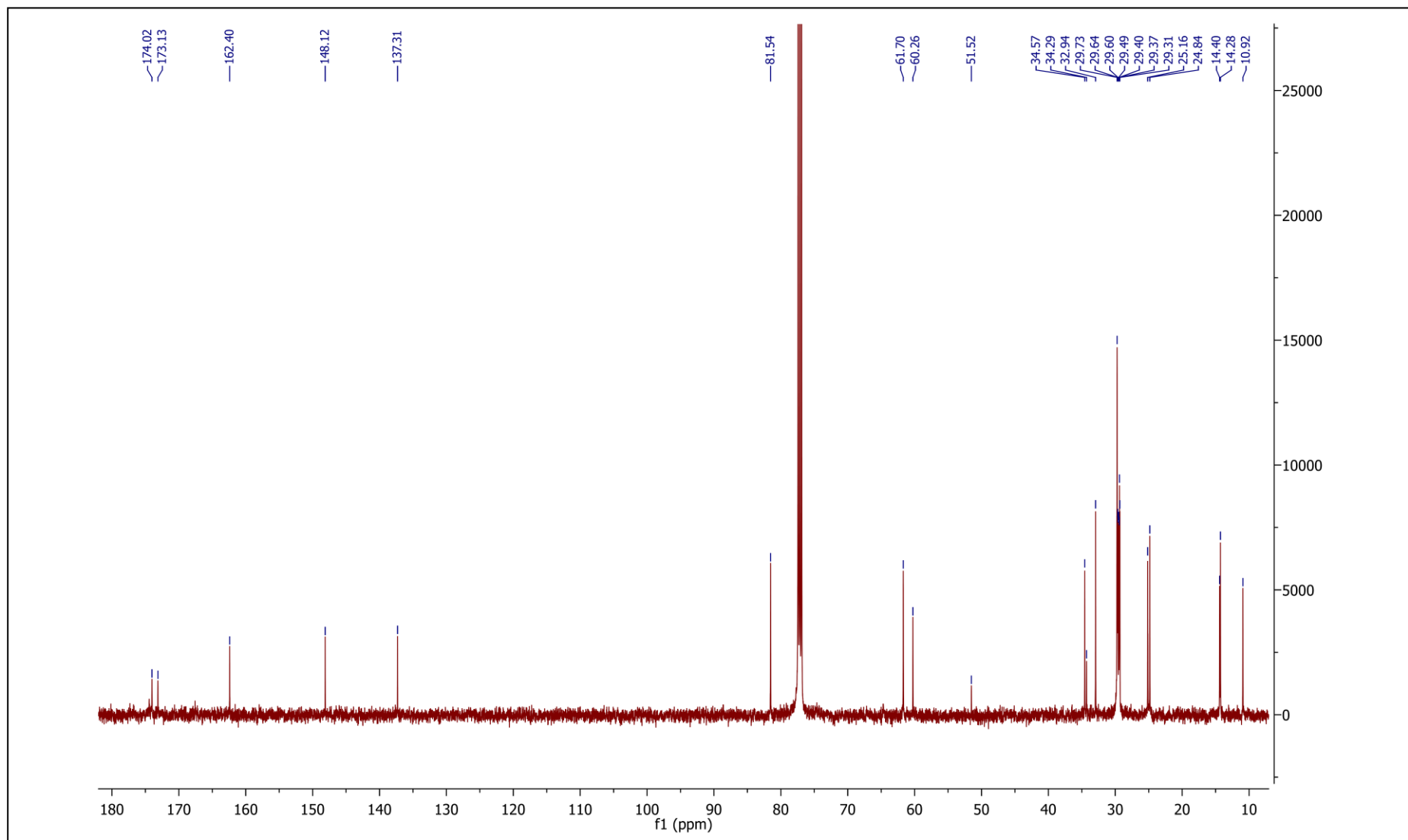
S8.1: ^1H NMR spectrum for (**8**) recorded in CDCl_3 at 500 MHz.



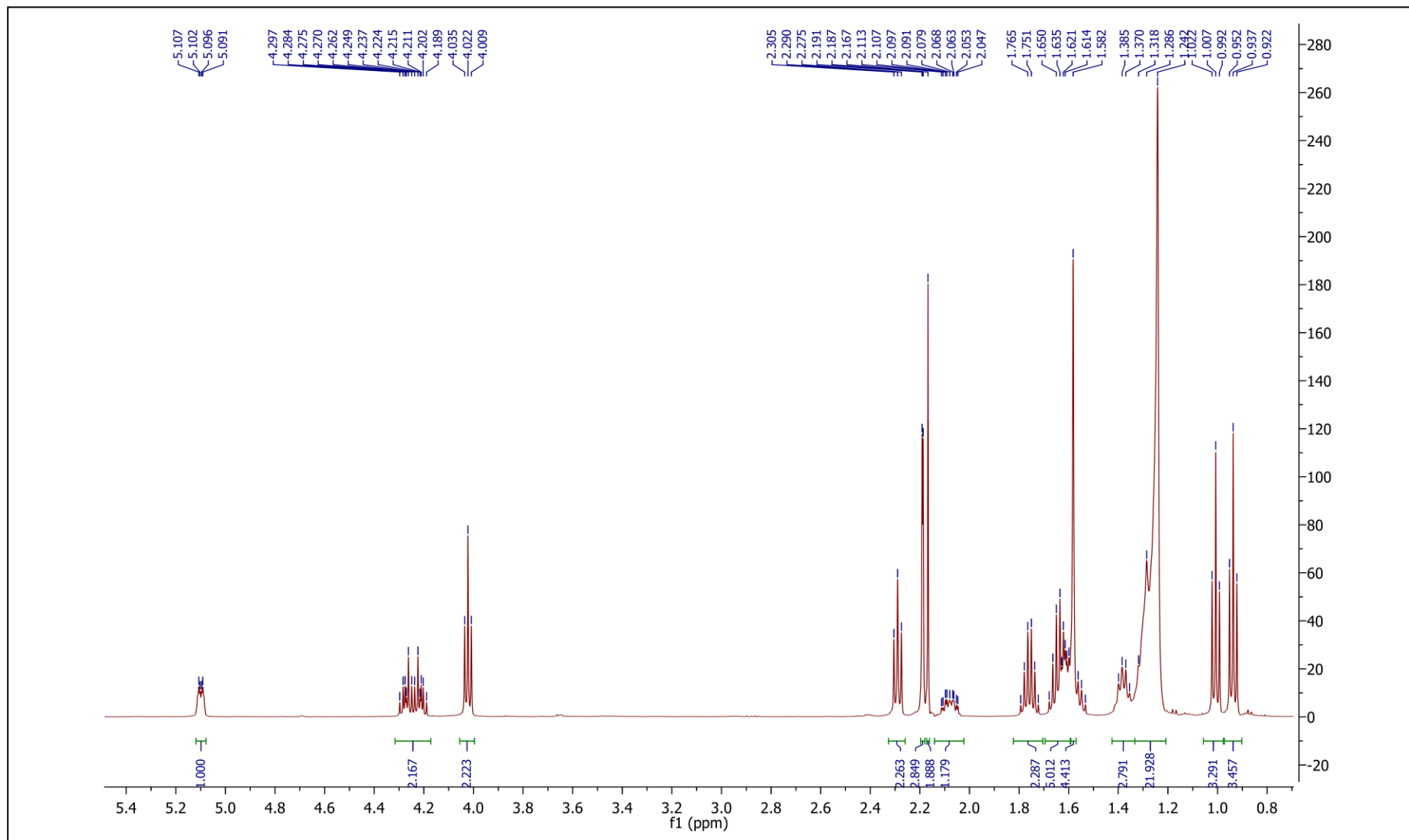
S8.2: Expansion ^1H NMR spectrum for **(8)** recorded in CDCl_3 at 500 MHz.



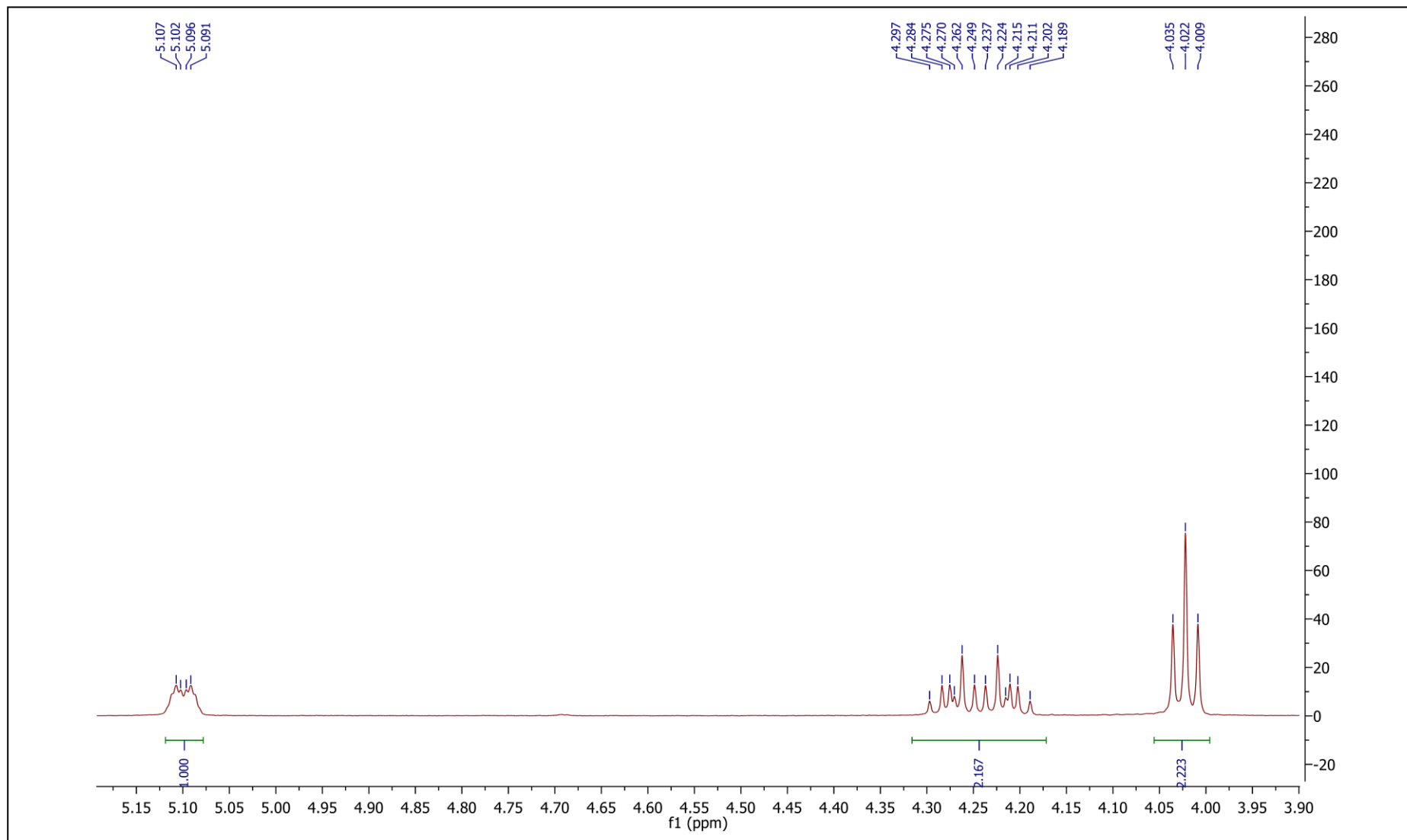
S8.3: ^{13}C NMR spectrum for (8) recorded in CDCl_3 at 125 MHz.



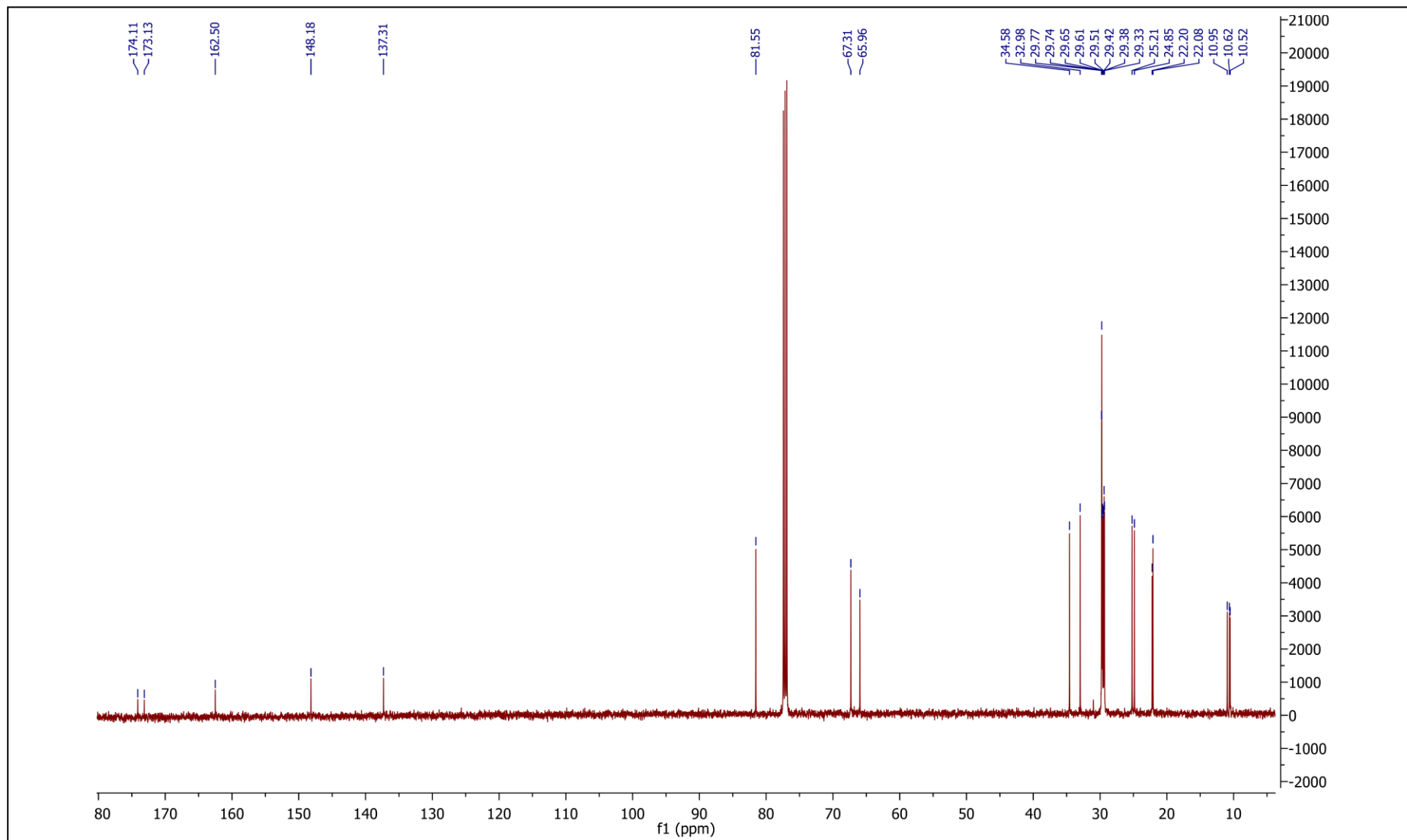
S9.1: ^1H NMR spectrum for (9) recorded in CDCl_3 at 500 MHz.



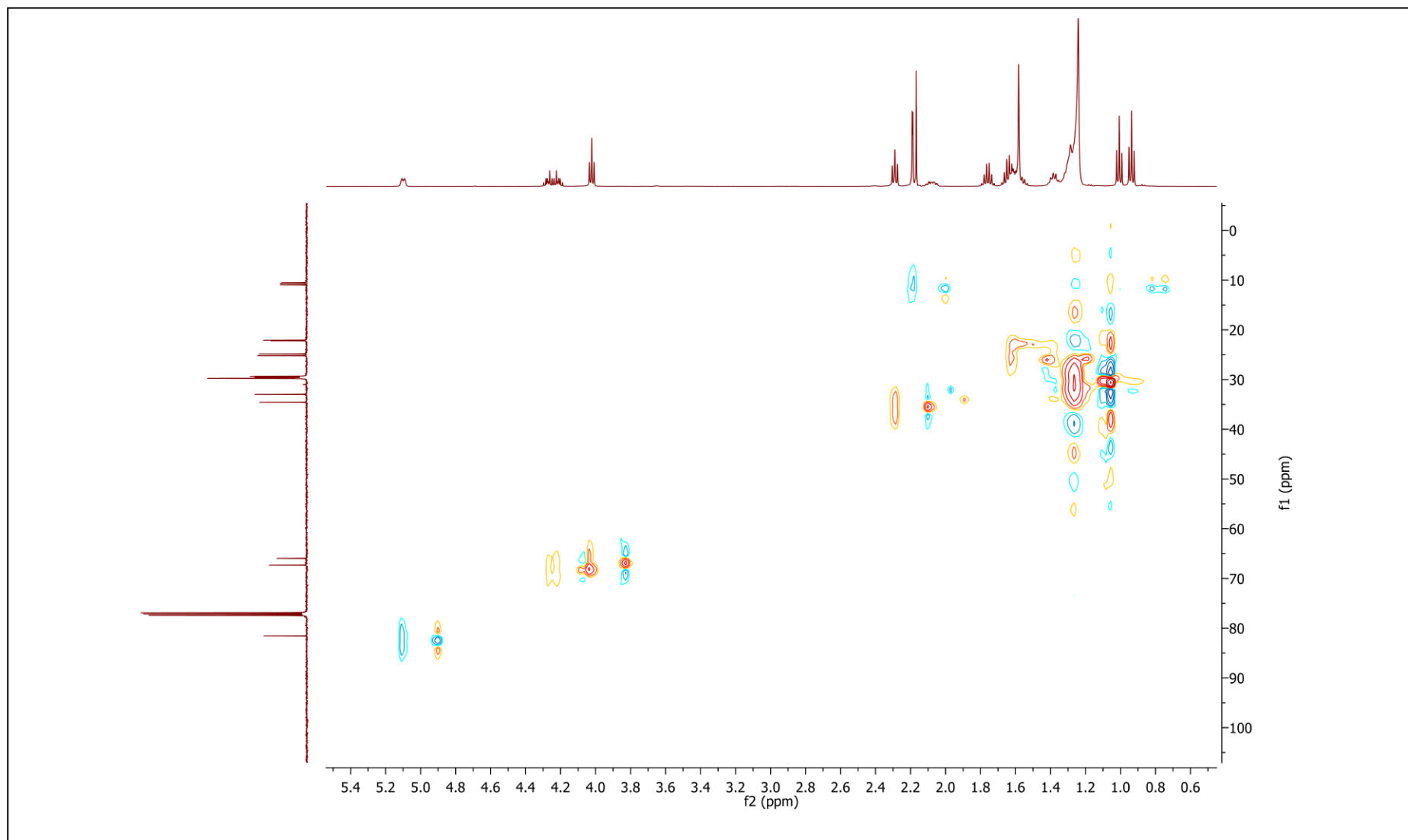
S9.2: Expansion ^1H NMR spectrum for (9) recorded in CDCl_3 at 500 MHz.



S9.3: ^{13}C NMR spectrum for (9) recorded in CDCl_3 at 125 MHz.



S9.4: HSQC spectrum for (9) recorded in CDCl₃ at 500 MHz.



S9.5: HMBC spectrum for (9) recorded in CDCl₃ at 500 MHz.

