

## Supplementary data

### Pimarane-type diterpenes with anti-inflammatory activity from Arctic-derived fungus *Eutypella* sp. D-1

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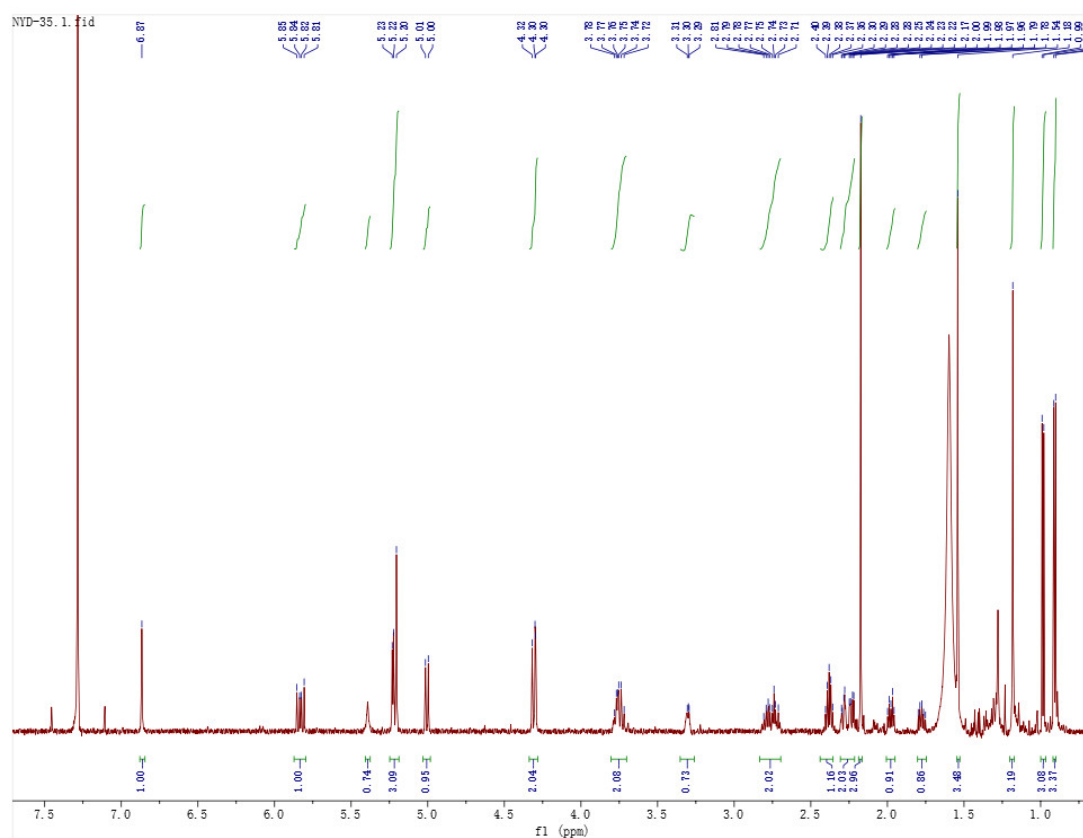
\* Correspondence: luxiaoling80@126.com

† These authors contributed equally to this work.

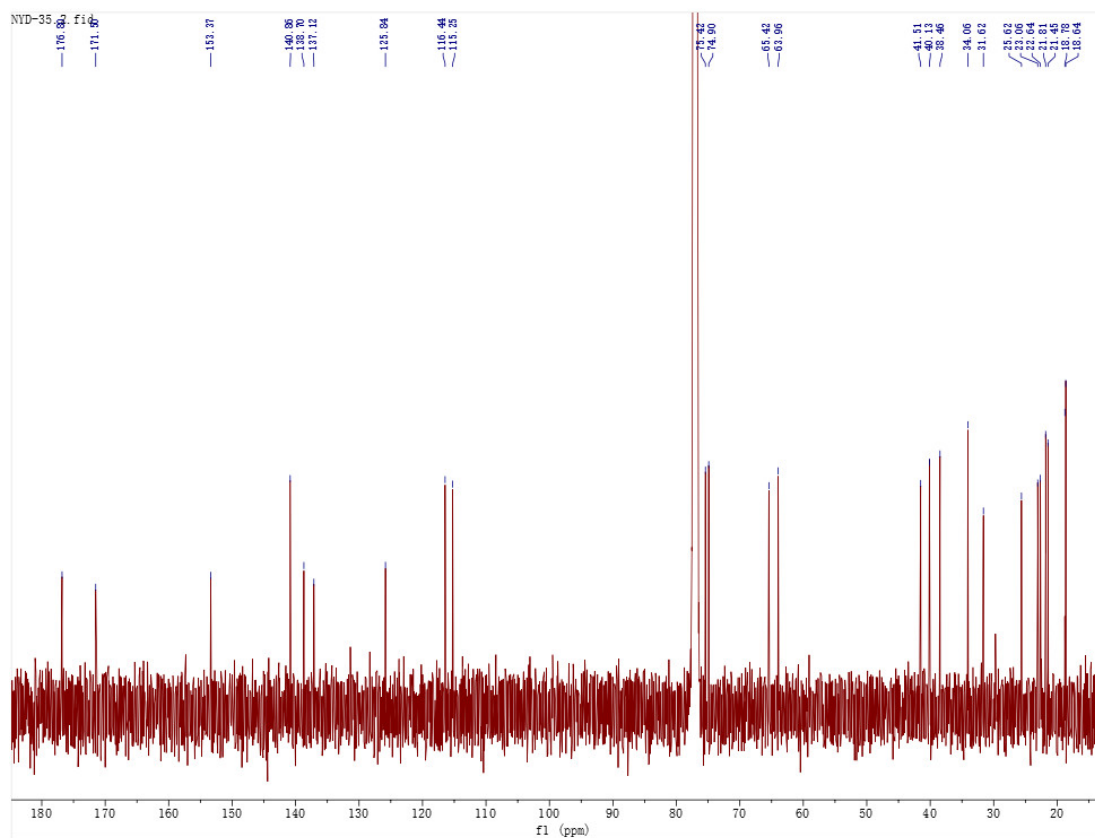
- S1. <sup>1</sup>H NMR spectrum of eutypellenone F (**1**) in CDCl<sub>3</sub>.
- S2. <sup>13</sup>C NMR spectrum of eutypellenone F (**1**) in CDCl<sub>3</sub>.
- S3. DEPT135 spectrum of eutypellenone F (**1**) in CDCl<sub>3</sub>.
- S4. HSQC spectrum of eutypellenone F (**1**) in CDCl<sub>3</sub>.
- S5. COSY spectrum of eutypellenone F (**1**) in CDCl<sub>3</sub>.
- S6. HMBC spectrum of eutypellenone F (**1**) in CDCl<sub>3</sub>.
- S7. NOESY spectrum of eutypellenone F (**1**) in CDCl<sub>3</sub>.
- S8. HRESIMS of eutypellenone F (**1**).
- S9. UV spectrum of eutypellenone F (**1**).
- S10. ORD result of eutypellenone F (**1**)
- S11. <sup>1</sup>H NMR spectrum of libertellenone Y (**2**) in CDCl<sub>3</sub>.
- S12. <sup>13</sup>C NMR spectrum of libertellenone Y (**2**) in CDCl<sub>3</sub>.
- S13. DEPT135 spectrum of libertellenone Y (**2**) in CDCl<sub>3</sub>.
- S14. HSQC spectrum of libertellenone Y (**2**) in CDCl<sub>3</sub>.
- S15. COSY spectrum of libertellenone Y (**2**) in CDCl<sub>3</sub>.
- S16. HMBC spectrum of libertellenone Y (**2**) in CDCl<sub>3</sub>.
- S17. NOESY spectrum of libertellenone Y (**2**) in CDCl<sub>3</sub>.
- S18. HRESIMS of libertellenone Y (**2**).
- S19. <sup>1</sup>H NMR spectrum of libertellenone Z (**3**) in CDCl<sub>3</sub>.
- S20. <sup>13</sup>C NMR spectrum of libertellenone Z (**3**) in CDCl<sub>3</sub>.
- S21. DEPT135 spectrum of libertellenone Z (**3**) in CDCl<sub>3</sub>.
- S22. HSQC spectrum of libertellenone Z (**3**) in CDCl<sub>3</sub>.
- S23. COSY spectrum of libertellenone Z (**3**) in CDCl<sub>3</sub>.
- S24. HMBC spectrum of libertellenone Z (**3**) in CDCl<sub>3</sub>.

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- S26. HRESIMS of libertellenone Z (**3**).
- S27. UV spectrum of libertellenone Z (**3**).
- S28. ORD result of libertellenone Z (**3**)
- S29. <sup>1</sup>H NMR spectrum of **4** in CDCl<sub>3</sub>.
- S30. <sup>13</sup>C NMR spectrum of **4** in CDCl<sub>3</sub>.
- S31. <sup>1</sup>H NMR spectrum of **5** in CDCl<sub>3</sub>.
- S32. <sup>13</sup>C NMR spectrum of **5** in CDCl<sub>3</sub>.
- S33. <sup>1</sup>H NMR spectrum of **6** in CDCl<sub>3</sub>.
- S34. <sup>13</sup>C NMR spectrum of **6** in CDCl<sub>3</sub>.
- S35. <sup>1</sup>H NMR spectrum of **7** in CDCl<sub>3</sub>.
- S36. <sup>13</sup>C NMR spectrum of **7** in CDCl<sub>3</sub>.
- S37. The colony and mycelium characteristics of *Eutypella* sp. D-1.

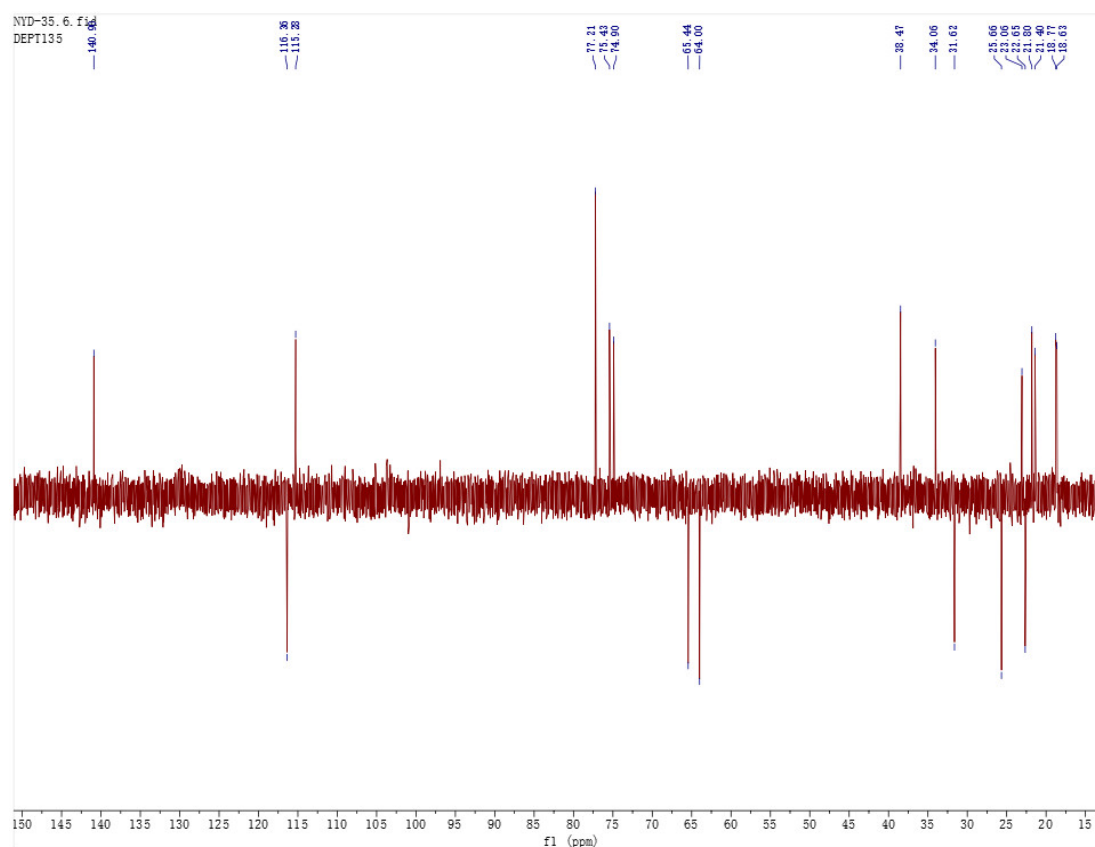
S1.  $^1\text{H}$  NMR spectrum of eutypellenone F (**1**) in  $\text{CDCl}_3$ .



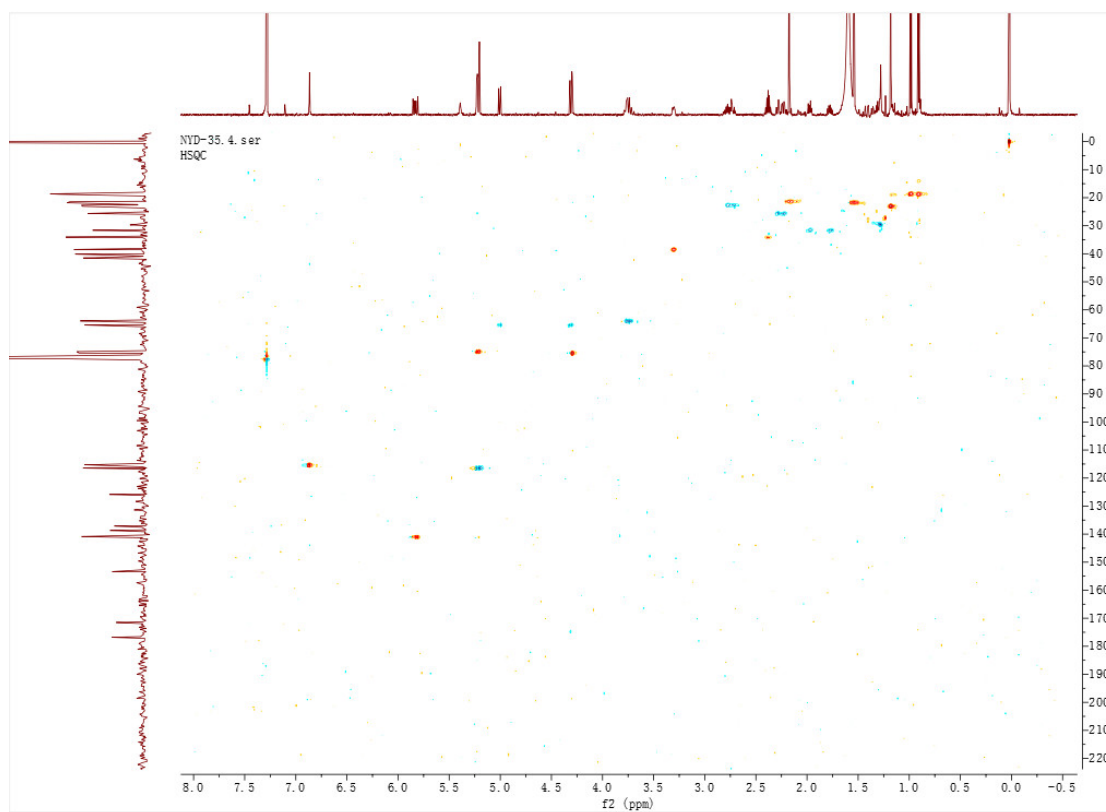
S2.  $^{13}\text{C}$  NMR spectrum of eutypellenone F (**1**) in  $\text{CDCl}_3$ .



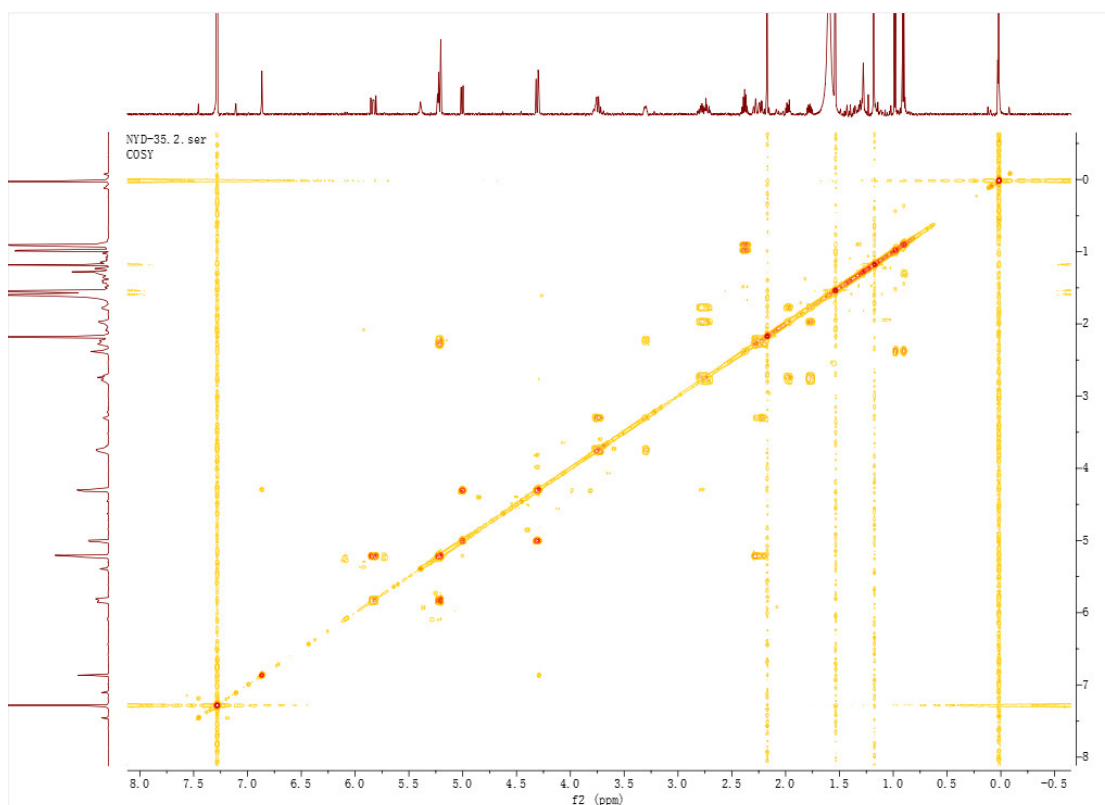
S3. DEPT135 spectrum of eutypellenone F (**1**) in CDCl<sub>3</sub>.



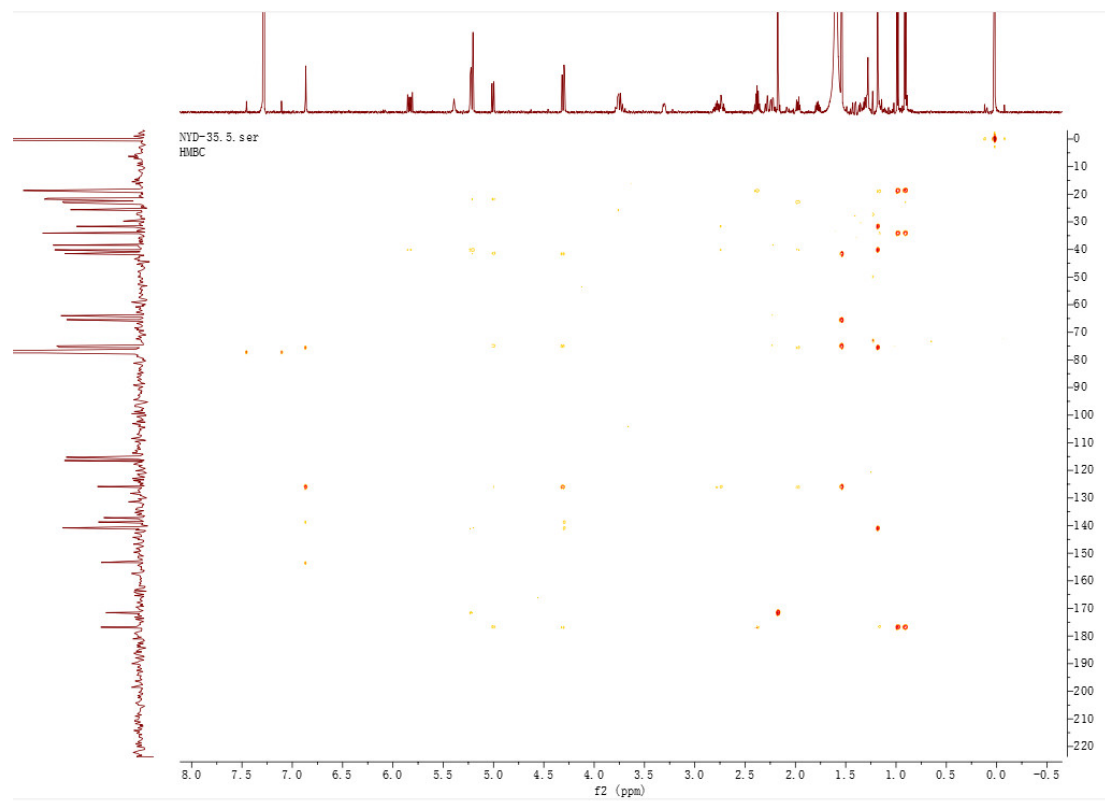
S4. HSQC spectrum of eutypellenone F (**1**) in CDCl<sub>3</sub>.



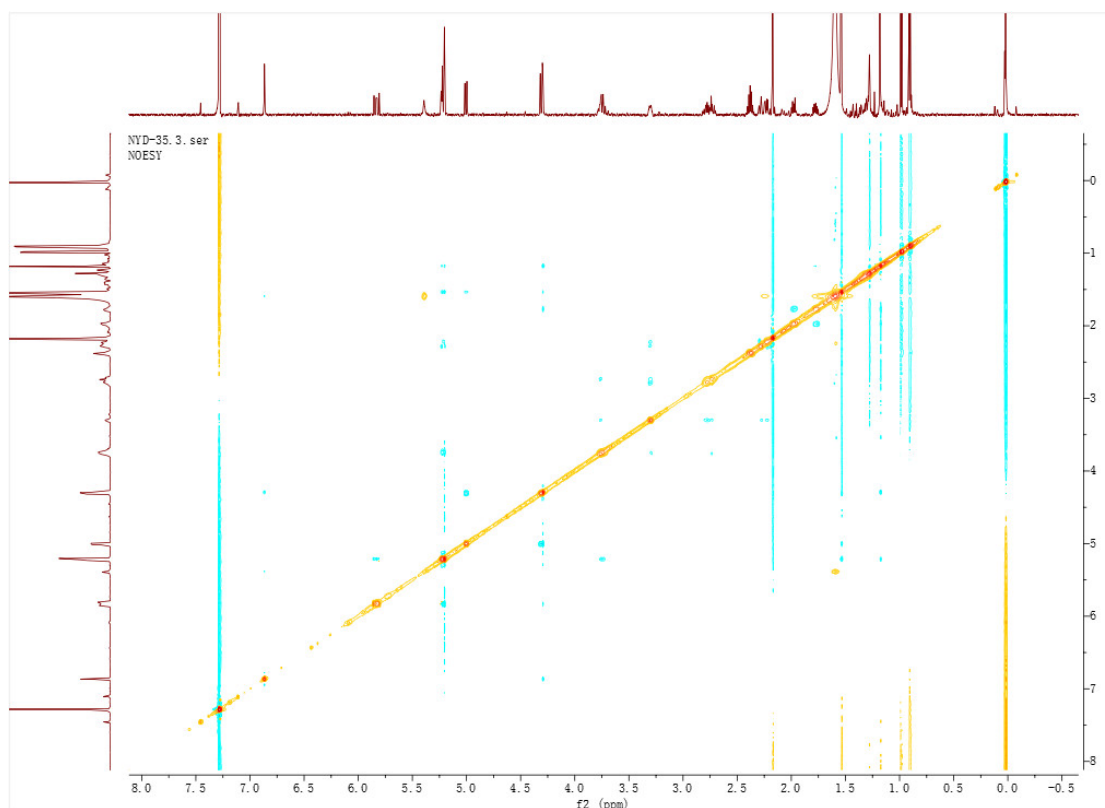
S5. COSY spectrum of eutypellenone F (**1**) in CDCl<sub>3</sub>.



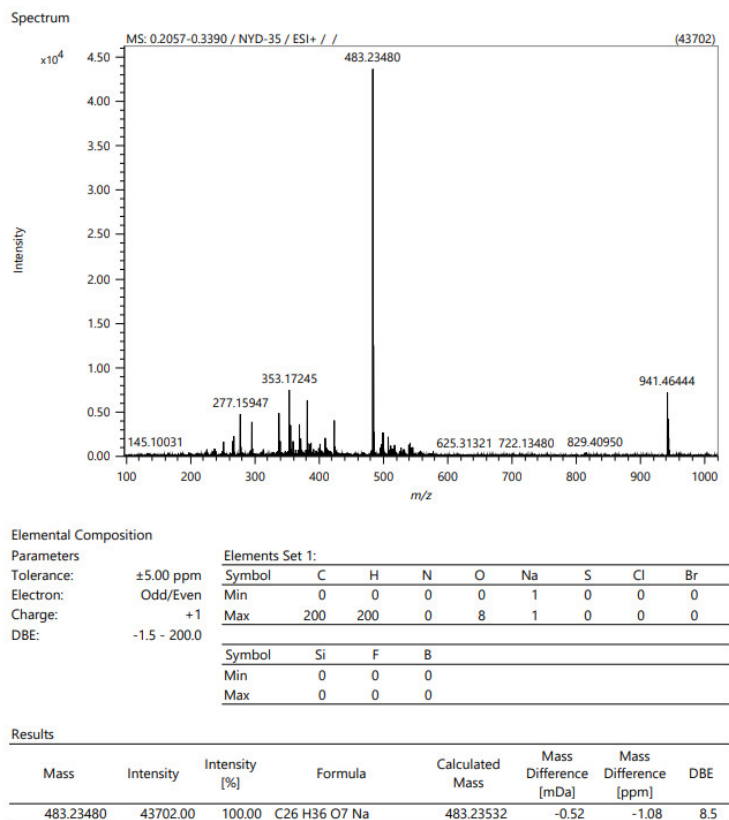
S6. HMBC spectrum of eutypellenone F (**1**) in CDCl<sub>3</sub>.



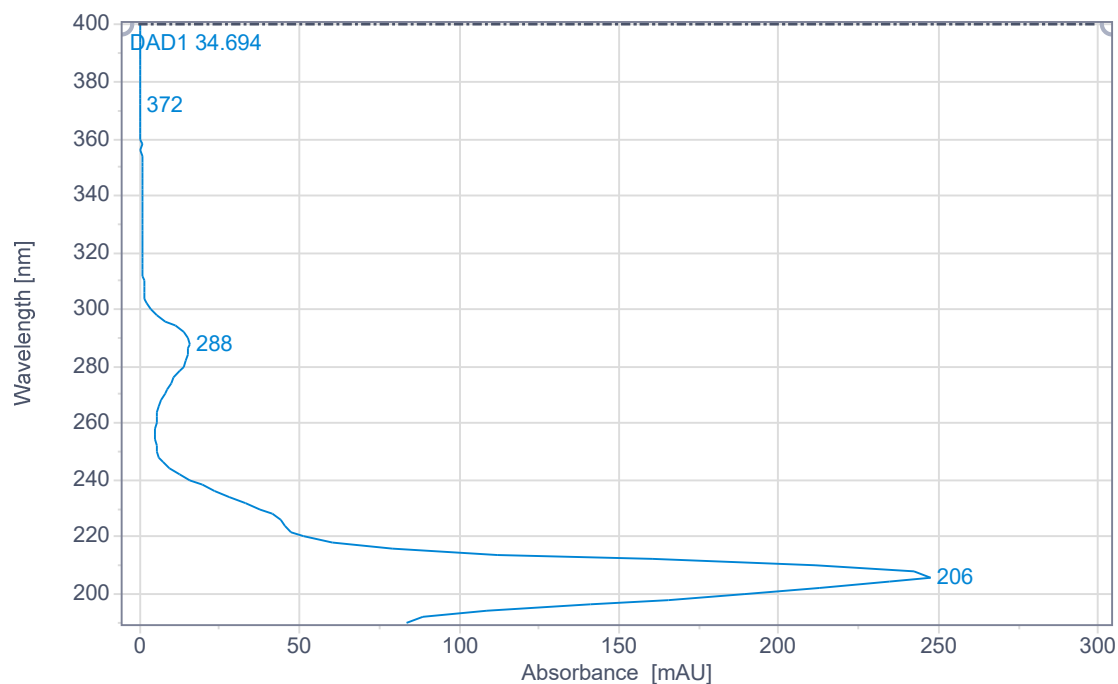
S7. NOESY spectrum of eutypellenone F (**1**) in CDCl<sub>3</sub>.



S8. HRESIMS of eutypellenone F (**1**).



S9. UV spectrum of eutypellenone F (1).



S10. ORD result of eutypellenone F (1)

## Anton Paar MCP 5500 - Measurement Results:

Software version: 4.00.11383.92

MCP serial number: 99030100

### Sample Information:

- Unique Sample Id: 51608
- Date: 2023-1-10
- Time: 15:24:32
- Method: Specific Rotation (25°C)
- Master Condition: valid
- Sample Name: NYD-35
- Concentration: 0.0500 g/100cm<sup>3</sup>
- User: student

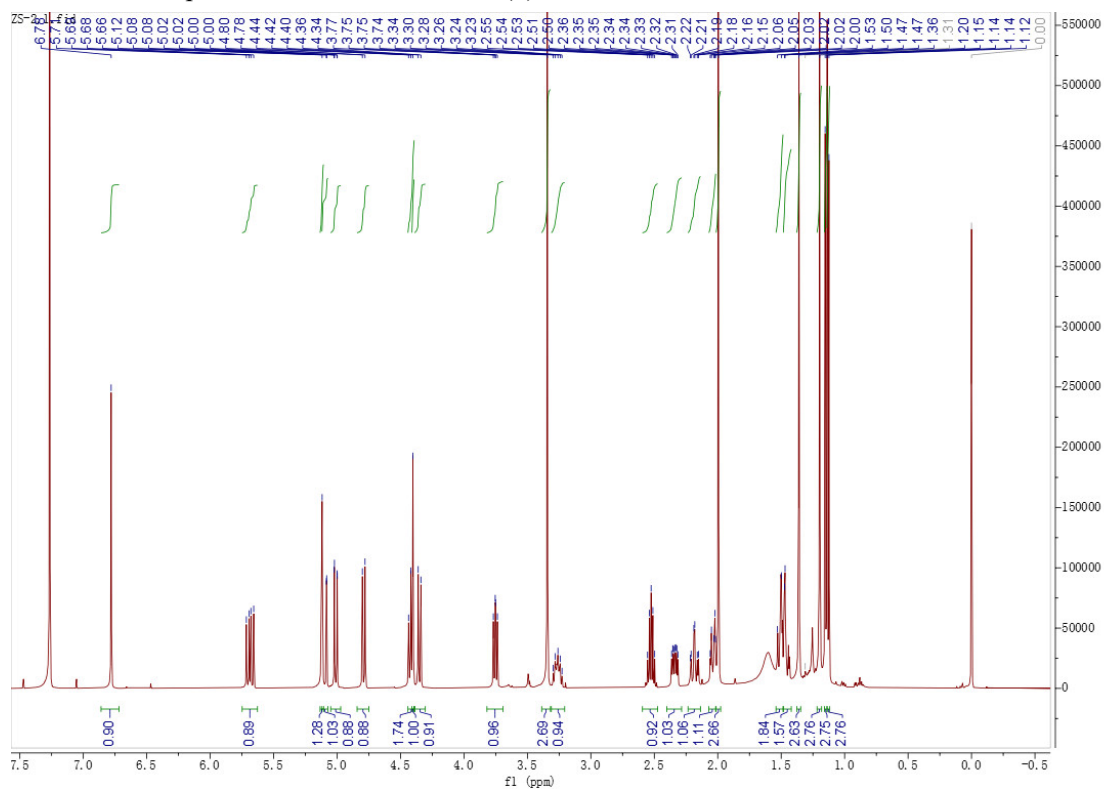
### Measurement Result:

Sub Measurement Number	Unique Sample Id	Time	Optical Rotation	Sample Cell Temperature	Specific Rotation (calc.)
			[°]	[°C]	[°]
1	51609	15:23:17	-0.0459	25.13	-91.7908
2	51610	15:23:35	-0.0451	25.06	-90.1910
3	51611	15:23:53	-0.0446	25.03	-89.1911
4	51612	15:24:12	-0.0451	25.00	-90.1910
5	51613	15:24:31	-0.0452	24.98	-90.3910
average	51608	15:24:32	-0.0452	25.04	-90.3510
std. dev.			0.000417	0.0525	0.833210

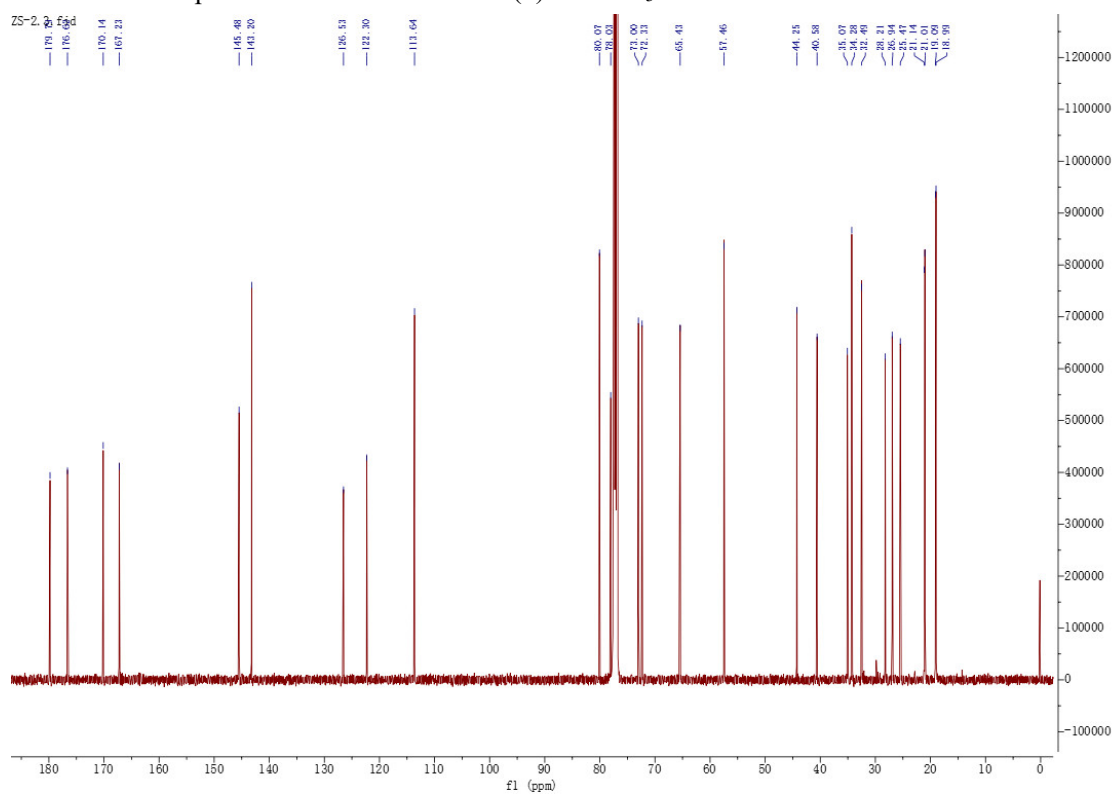
### GxP Information (at 589 nm):

- Last Quartz Adjustment: 2021-11-30 15:41:39 by Administrator

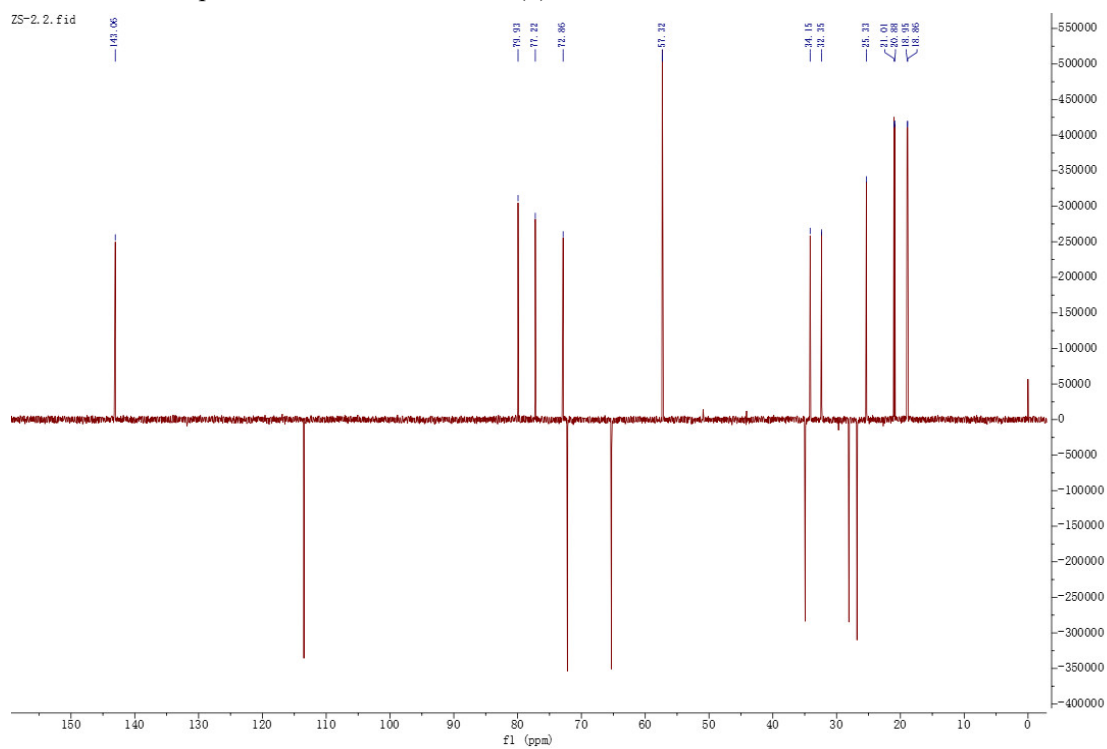
S11.  $^1\text{H}$  NMR spectrum of libertellenone Y (**2**) in  $\text{CDCl}_3$ .



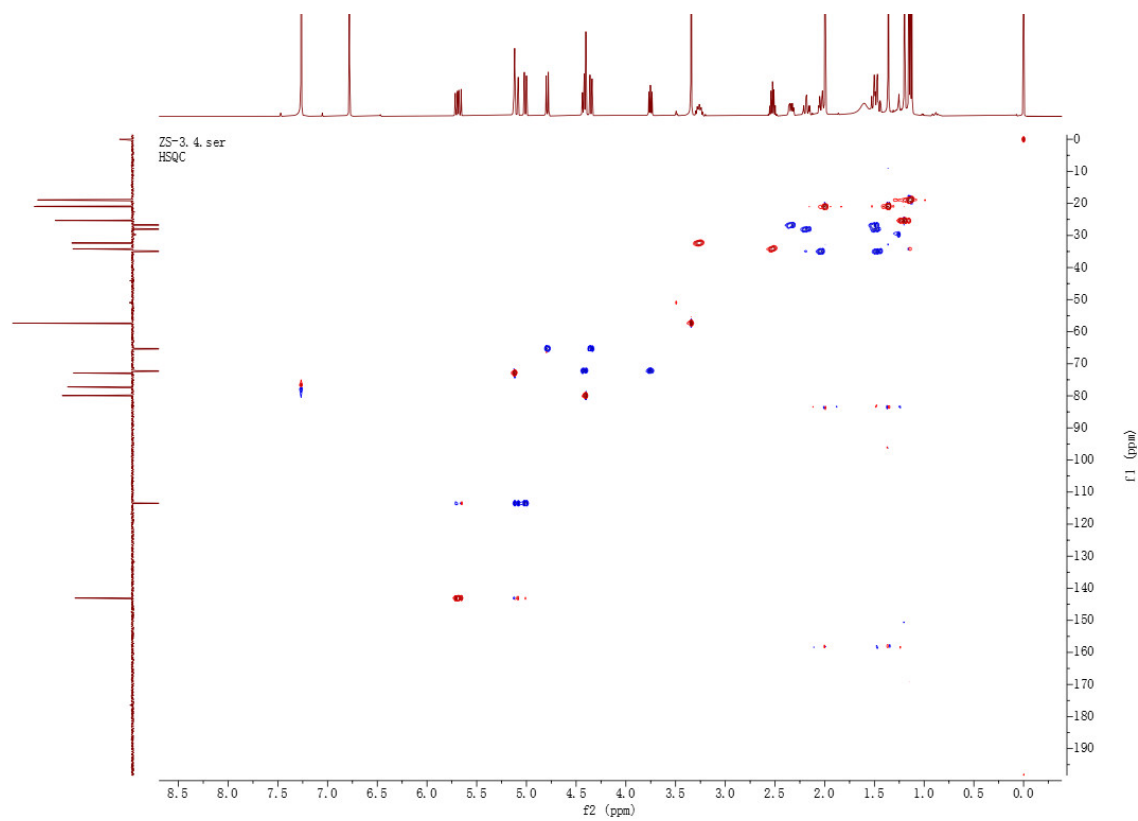
S12.  $^{13}\text{C}$  NMR spectrum of libertellenone Y (**2**) in  $\text{CDCl}_3$ .



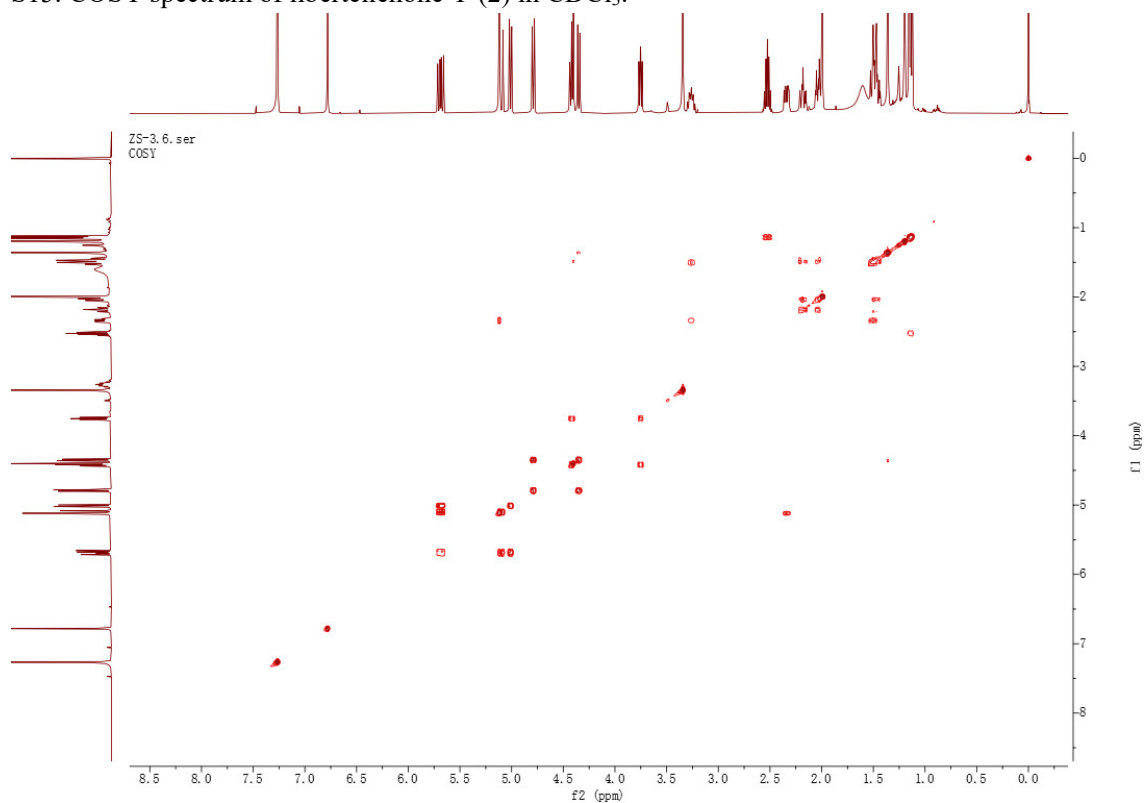
S13. DEPT135 spectrum of libertellenone Y (**2**) in CDCl<sub>3</sub>.



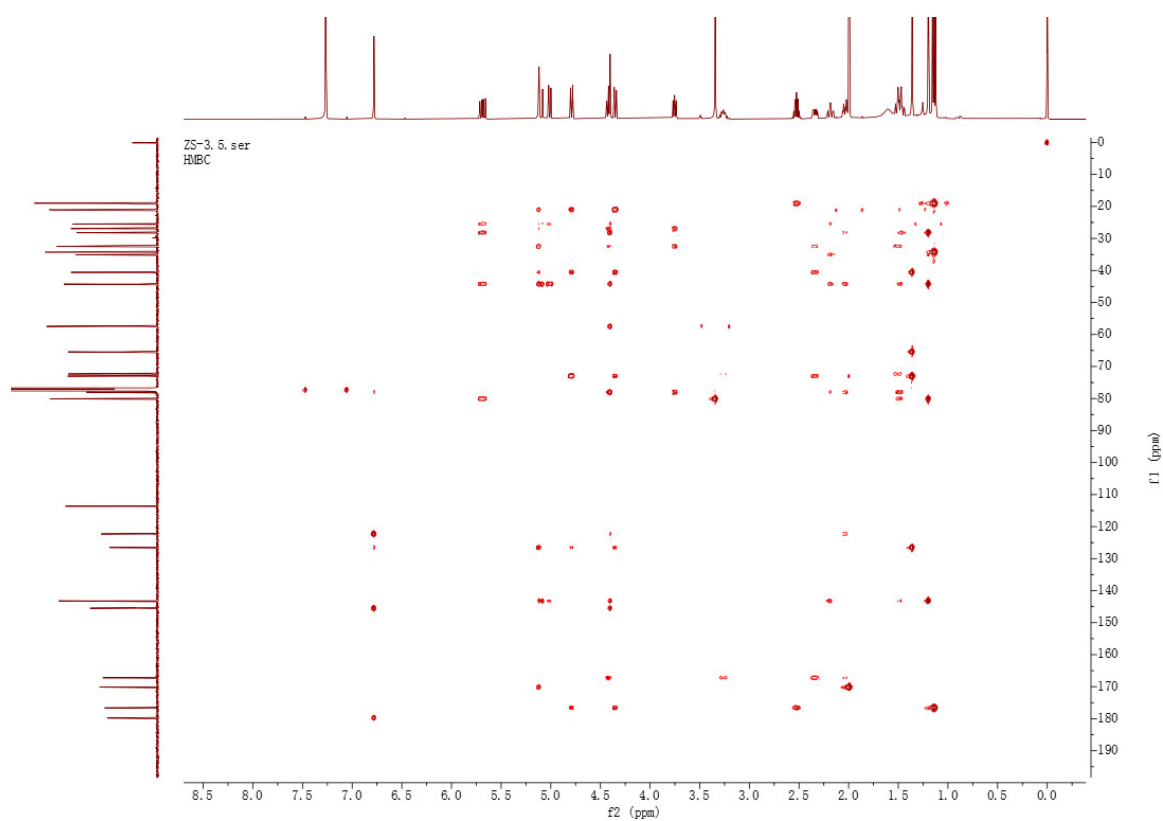
S14. HSQC spectrum of libertellenone Y (**2**) in CDCl<sub>3</sub>.



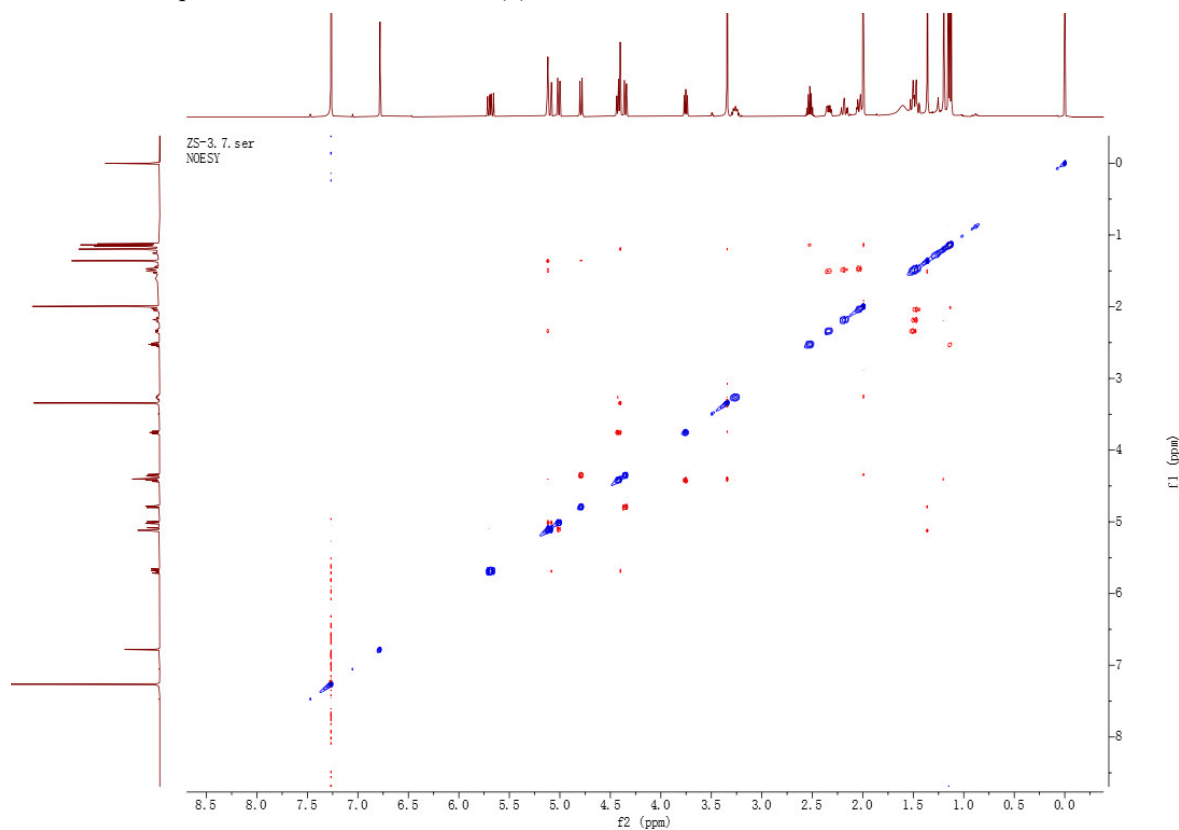
S15. COSY spectrum of libertellenone Y (**2**) in CDCl<sub>3</sub>.



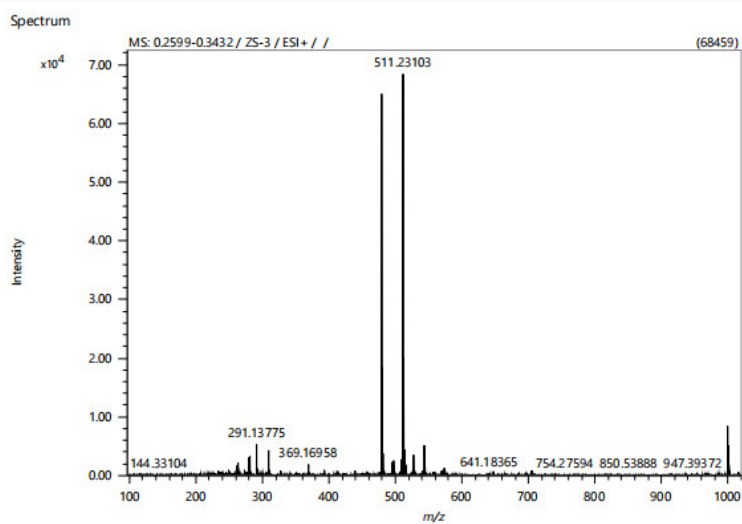
S16. HMBC spectrum of libertellenone Y (**2**) in CDCl<sub>3</sub>.



S17. NOESY spectrum of libertellenone Y (**2**) in CDCl<sub>3</sub>.



S18. HRESIMS of libertellenone Y (**2**).



#### Elemental Composition

##### Parameters

Tolerance:  $\pm 5.00$  ppm  
 Electron: Odd/Even  
 Charge: +1  
 DBE: -1.5 - 200.0

##### Elements Set 1:

Symbol	C	H	N	O	Na	S	Cl	Br
Min	0	0	0	0	1	0	0	0
Max	200	200	0	8	1	0	0	0

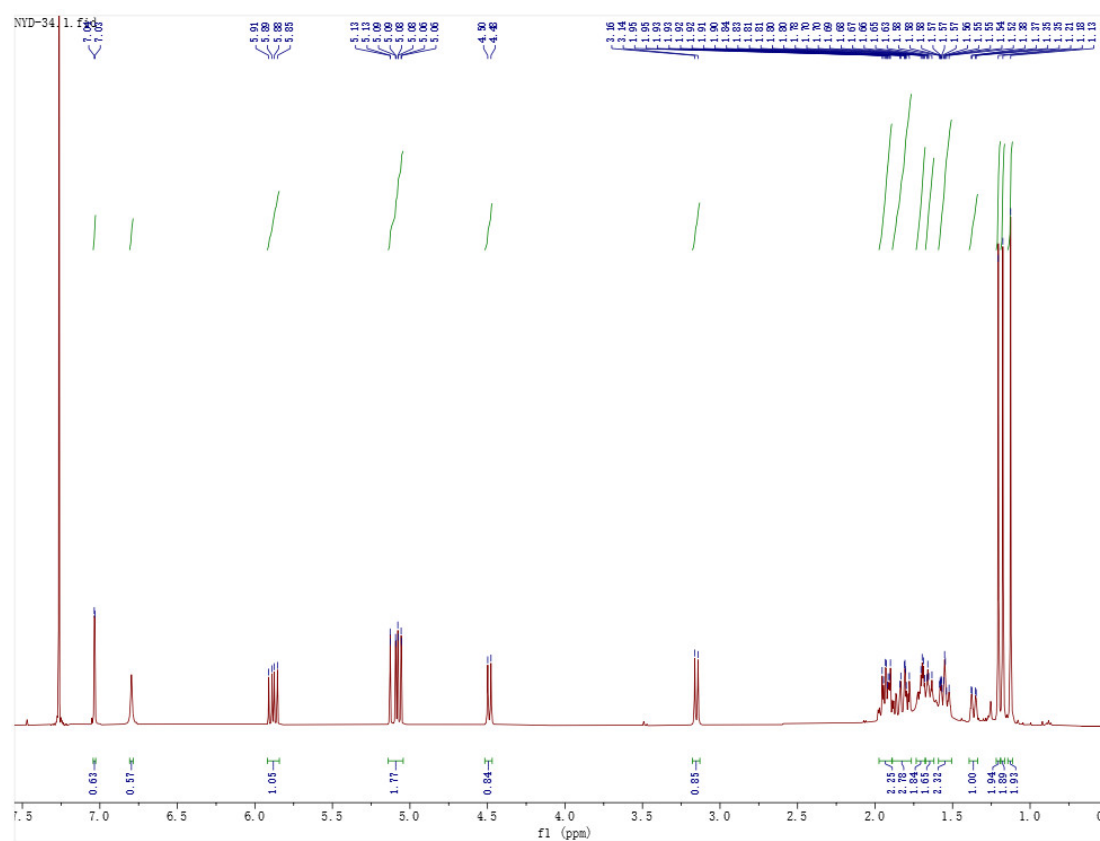
  

Symbol	Si	F	B	P
Min	0	0	0	0
Max	0	0	0	0

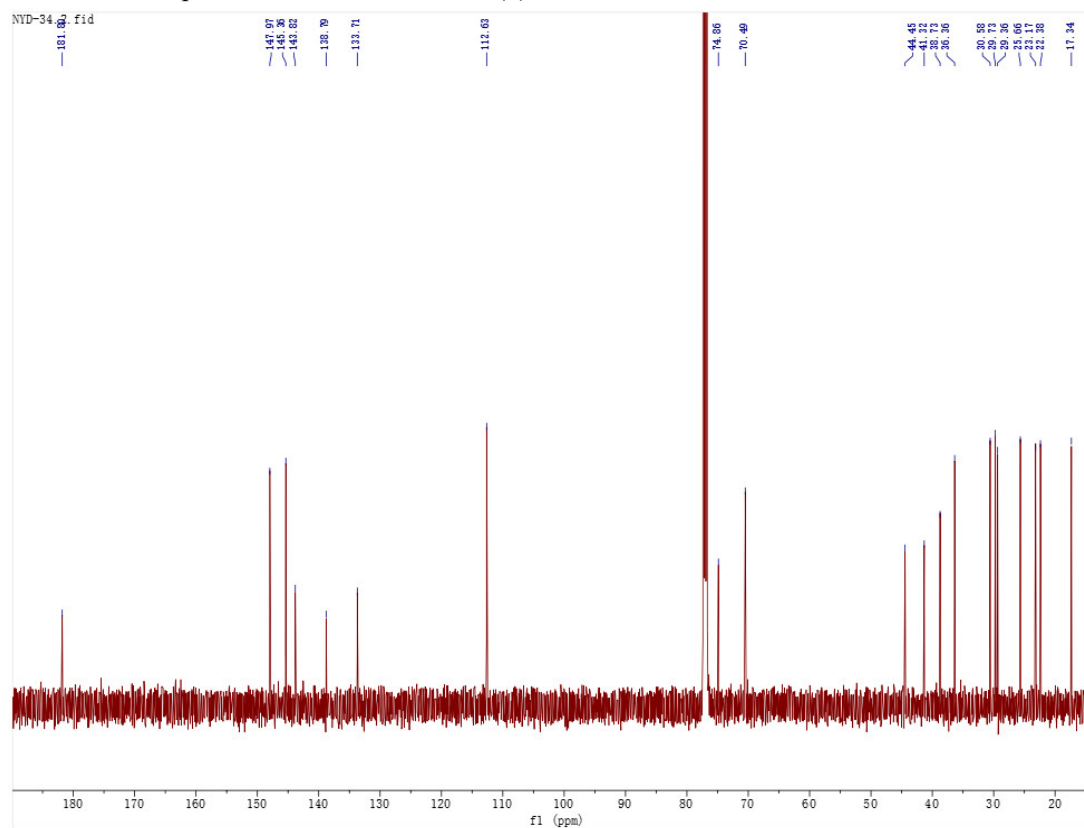
#### Results

Mass	Intensity	Intensity [%]	Formula	Calculated Mass	Mass Difference [mDa]	Mass Difference [ppm]	DBE
511.23103	68459.15	100.00	C27 H36 O8 Na	511.23024	0.79	1.55	9.5

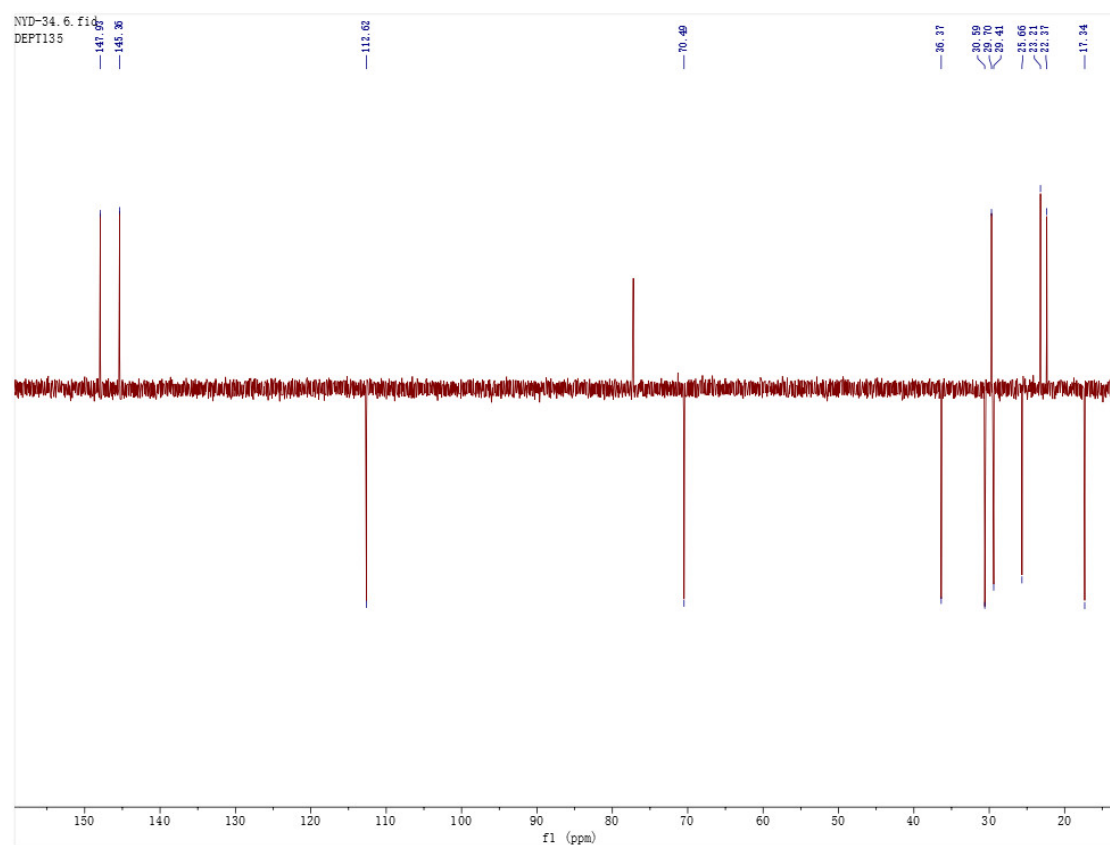
S19.  $^1\text{H}$  NMR spectrum of libertellenone Z (**3**) in  $\text{CDCl}_3$ .



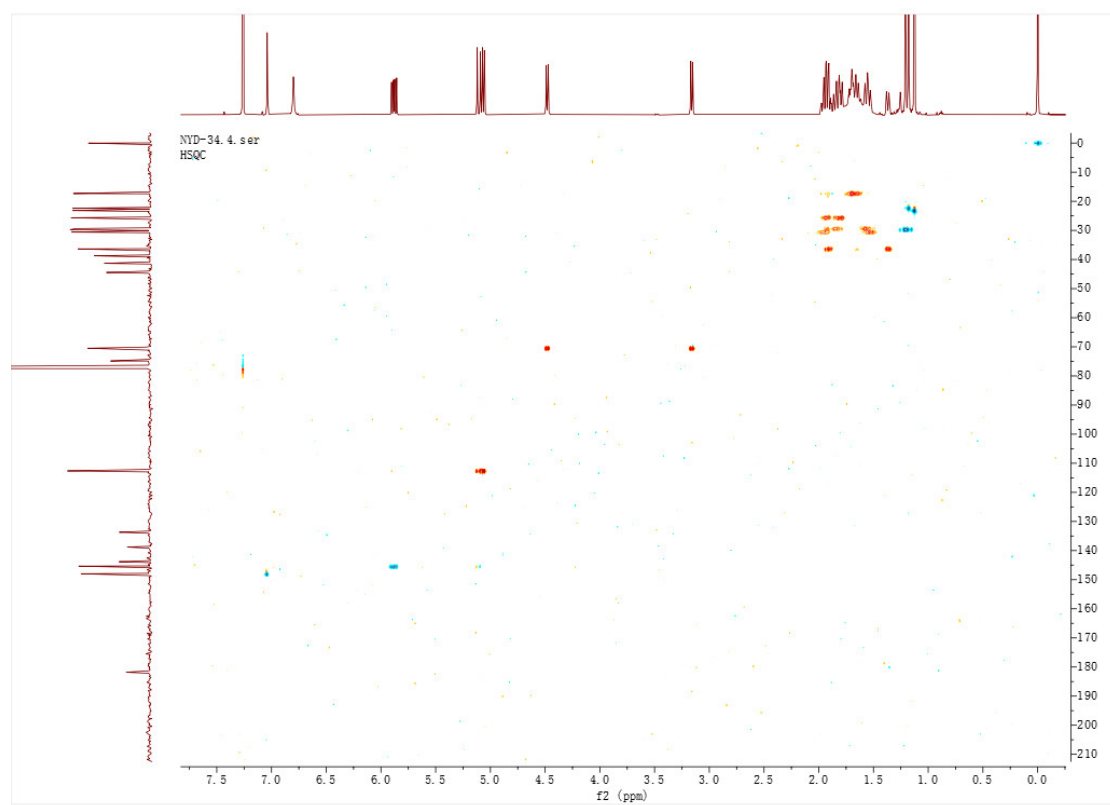
S20. <sup>13</sup>C NMR spectrum of libertellenone Z (**3**) in CDCl<sub>3</sub>.



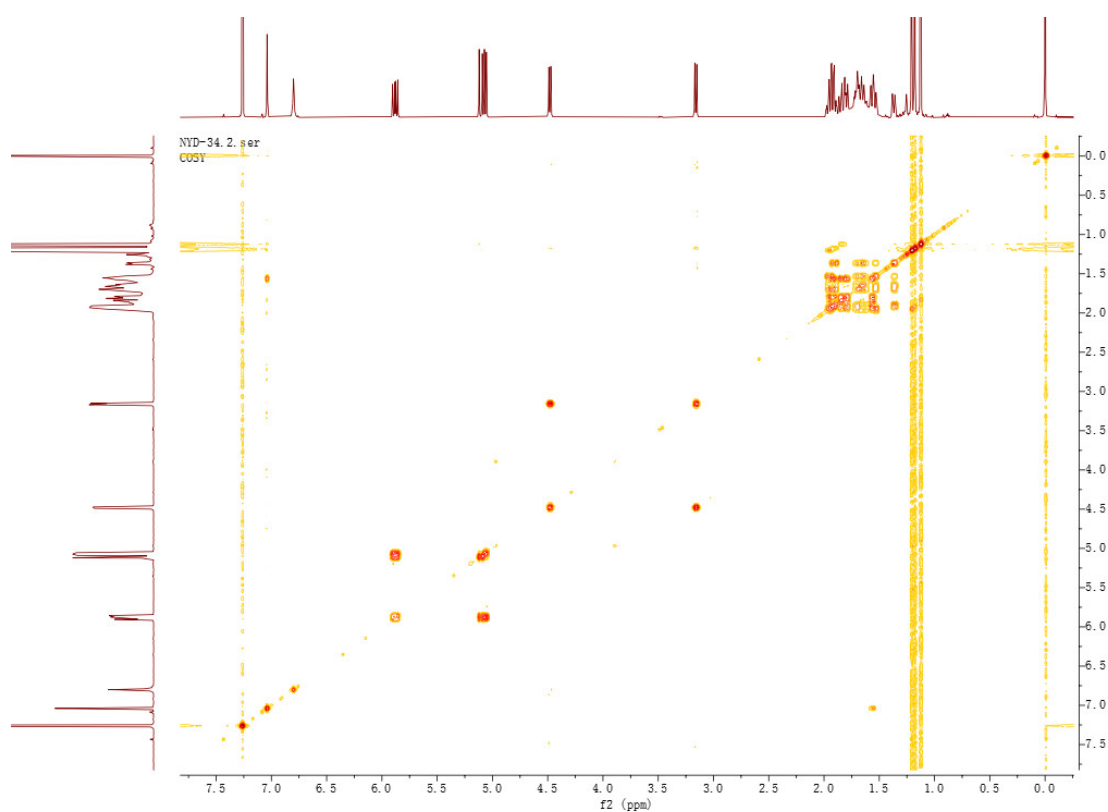
S21. DEPT135 spectrum of libertellenone Z (**3**) in CDCl<sub>3</sub>.



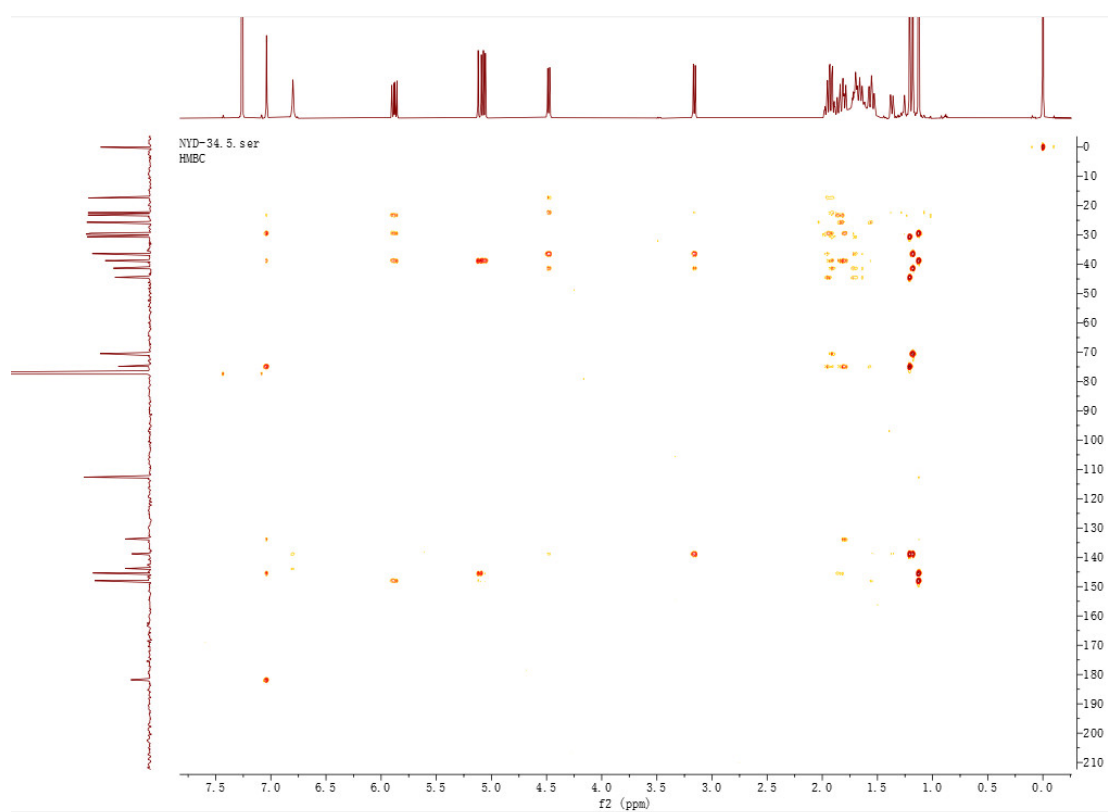
S22. HSQC spectrum of libertellenone Z (**3**) in CDCl<sub>3</sub>.



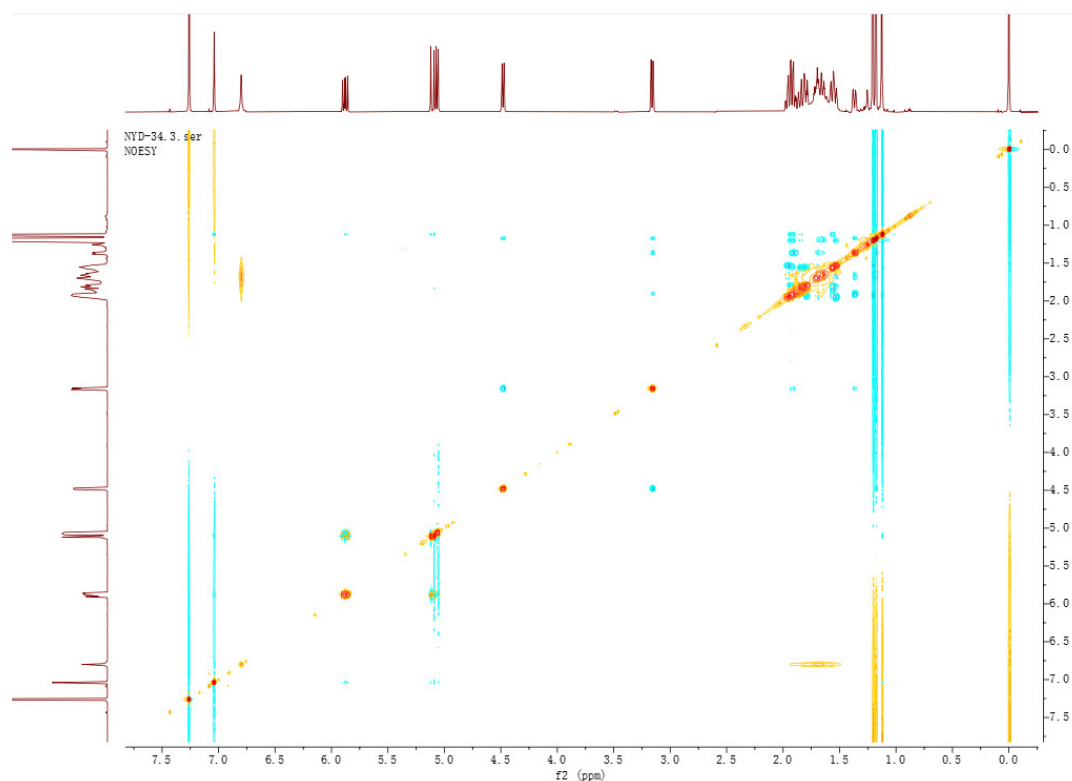
S23. COSY spectrum of libertellenone Z (**3**) in CDCl<sub>3</sub>.



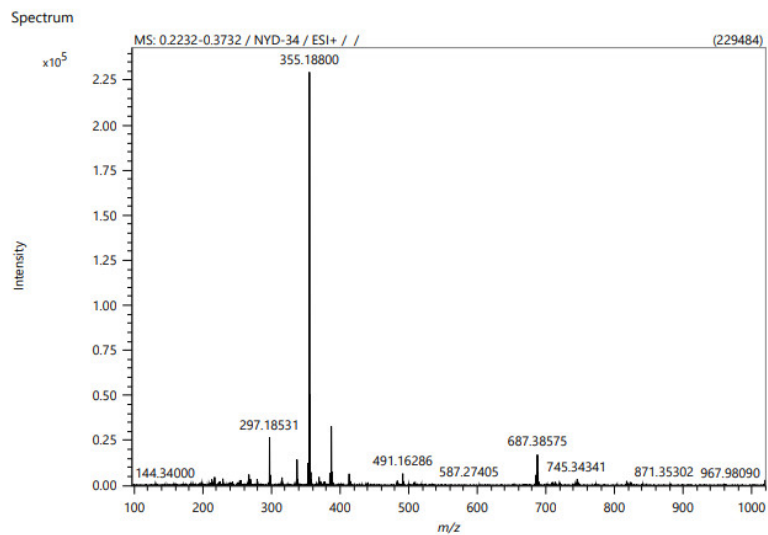
S24. HMBC spectrum of libertellenone Z (**3**) in CDCl<sub>3</sub>.



S25. NOESY spectrum of libertellenone **3** in CDCl<sub>3</sub>.



S26. HRESIMS of libertellenone **3**.



#### Elemental Composition

##### Parameters

Tolerance:  $\pm 5.00$  ppm  
 Electron: Odd/Even  
 Charge: +1  
 DBE: -1.5 - 200.0

##### Elements Set 1:

Symbol	C	H	N	O	Na	S	Cl	Br
Min	0	0	0	0	1	0	0	0
Max	200	200	3	8	1	0	0	0

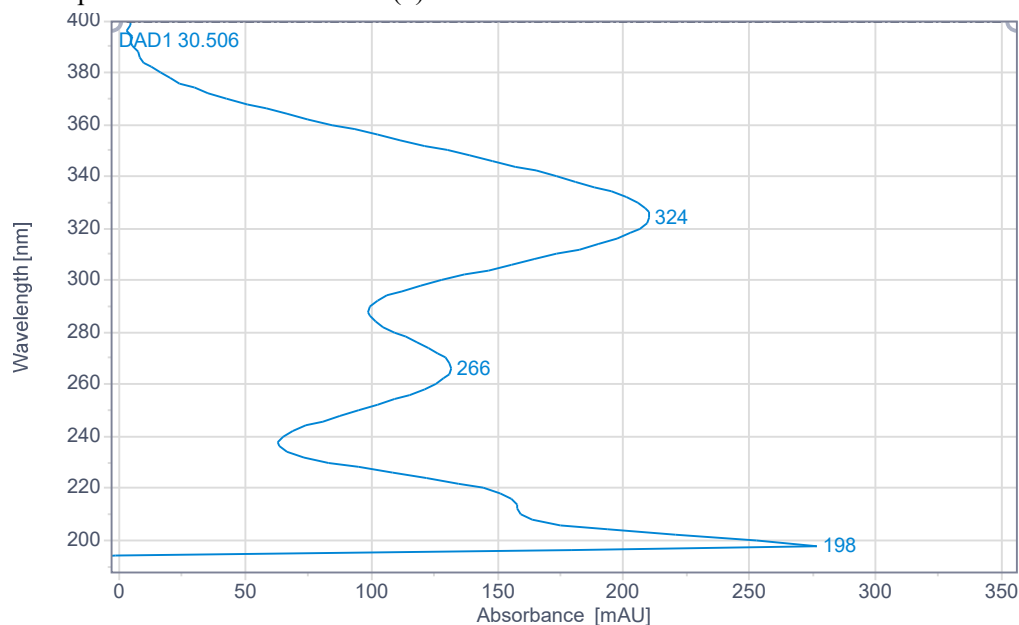
  

Symbol	Si	F
Min	0	0
Max	0	0

#### Results

Mass	Intensity	Intensity [%]	Formula	Calculated Mass	Mass Difference [mDa]	Mass Difference [ppm]	DBE
355.18800	229483.69	100.00	C <sub>20</sub> H <sub>28</sub> O <sub>4</sub> Na	355.18798	0.02	0.06	6.5
			C <sub>18</sub> H <sub>26</sub> N <sub>3</sub> O <sub>3</sub> Na	355.18664	1.36	3.84	7.0

S27. UV spectrum of libertellenone Z (3).



S28. ORD result of libertellenone Z (3)

### Anton Paar MCP 5500 - Measurement Results:

Software version: 4.00.11383.92

MCP serial number: 99030100

#### Sample Information:

► Unique Sample Id: 50966  
 ► Date: 2022-12-16  
 ► Time: 14:11:51  
 ► Method: Specific Rotation (25°C)  
 ► Master Condition: valid  
 ► Sample Name: NYD-34  
 ► Concentration: 0.0500 g/100cm<sup>3</sup>  
 ► User: student

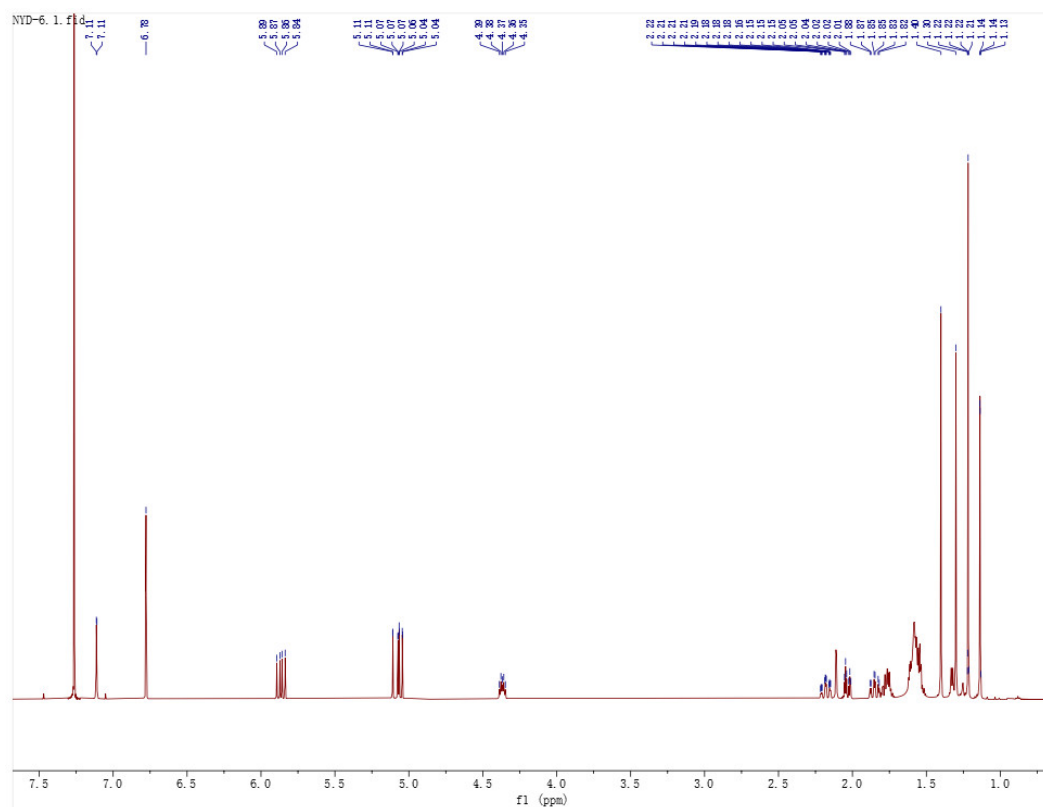
#### Measurement Result:

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			[°]	[°C]	[°]
1	50967	14:10:24	-0.0385	25.05	-76.9923
2	50968	14:10:42	-0.0390	24.97	-77.9922
3	50969	14:11:00	-0.0393	24.92	-78.5921
4	50970	14:11:32	-0.0397	24.89	-79.3921
5	50971	14:11:50	-0.0401	24.89	-80.1920
average	50966	14:11:51	-0.0393	24.94	-78.6321
std. dev.			0.000553	0.0605	1.105523

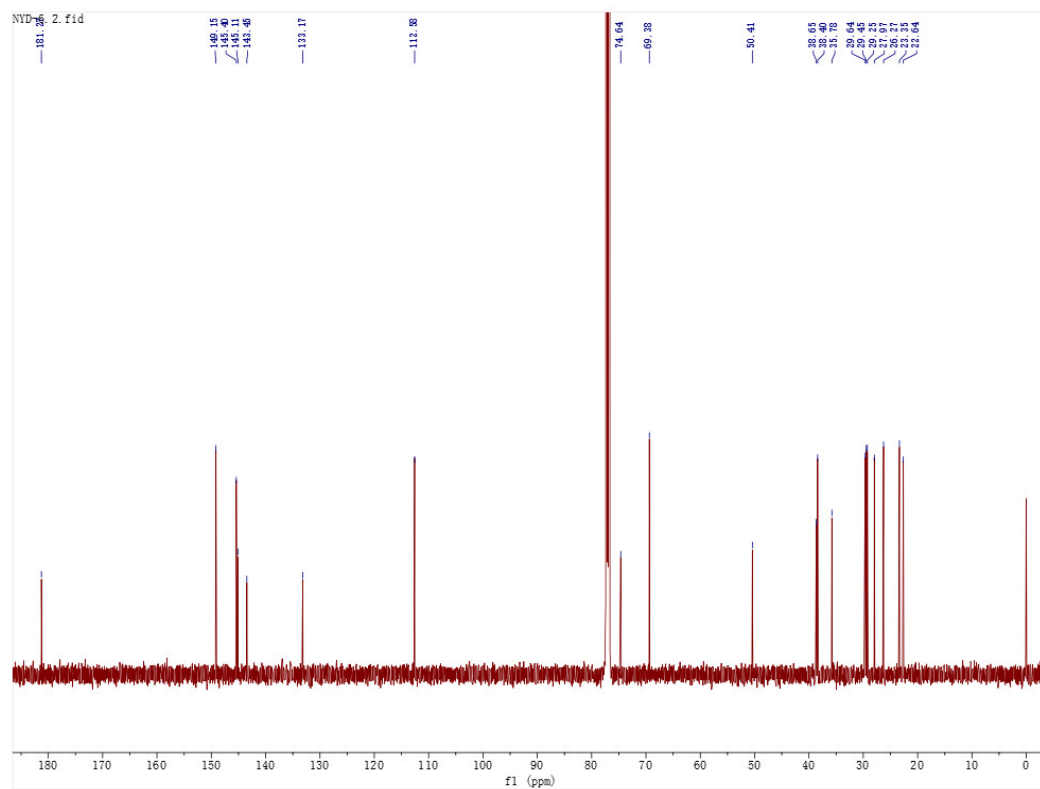
#### GxP Information (at 589 nm):

► Last Quartz Adjustment: 2021-11-30 15:41:39 by Administrator

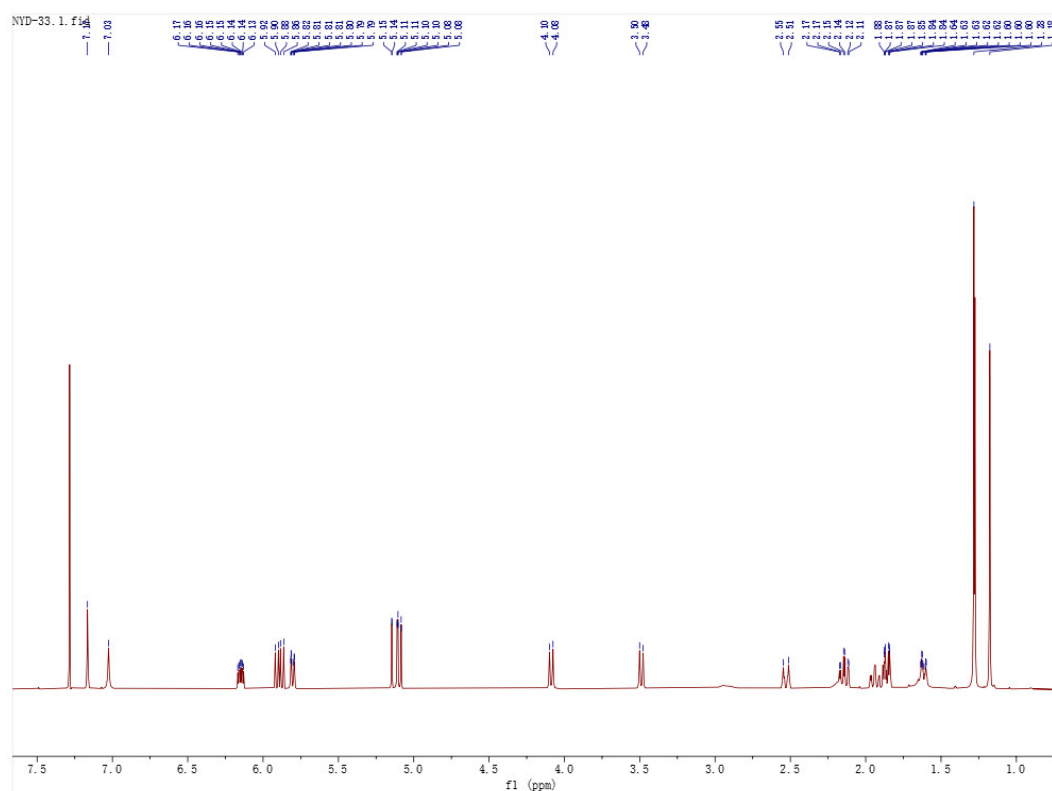
S29.  $^1\text{H}$  NMR spectrum of **4** in  $\text{CDCl}_3$ .



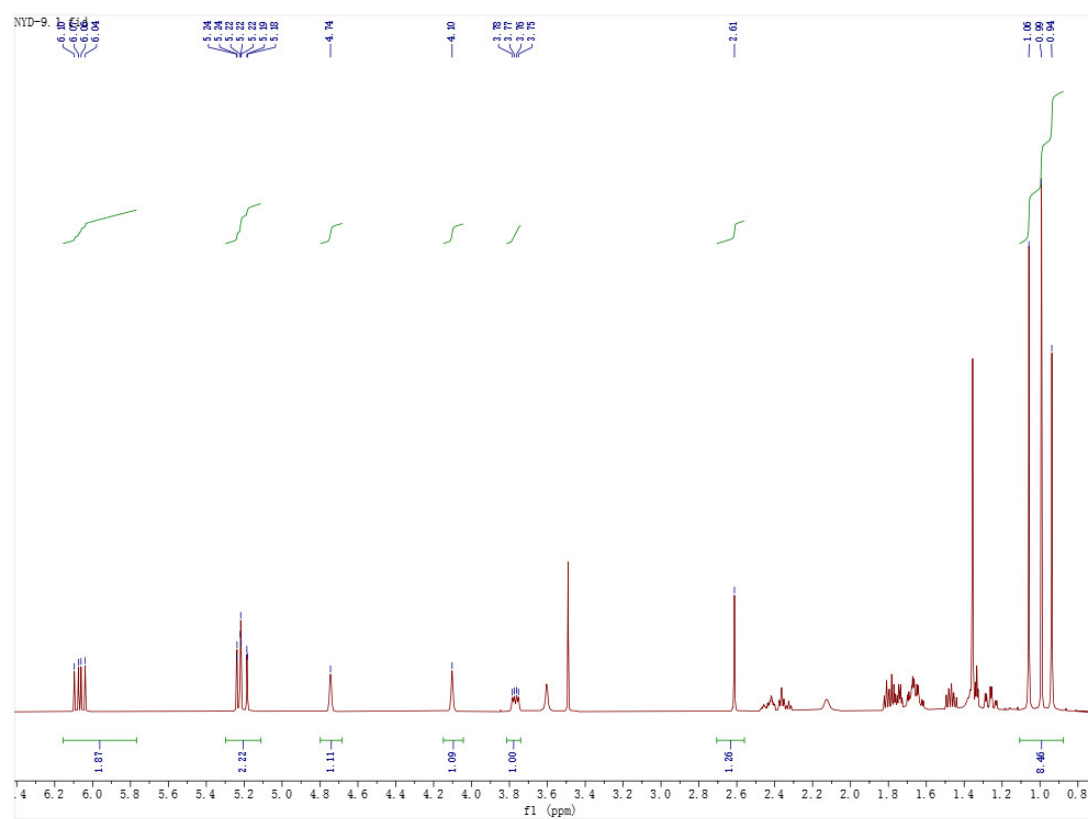
S30.  $^{13}\text{C}$  NMR spectrum of **4** in  $\text{CDCl}_3$ .



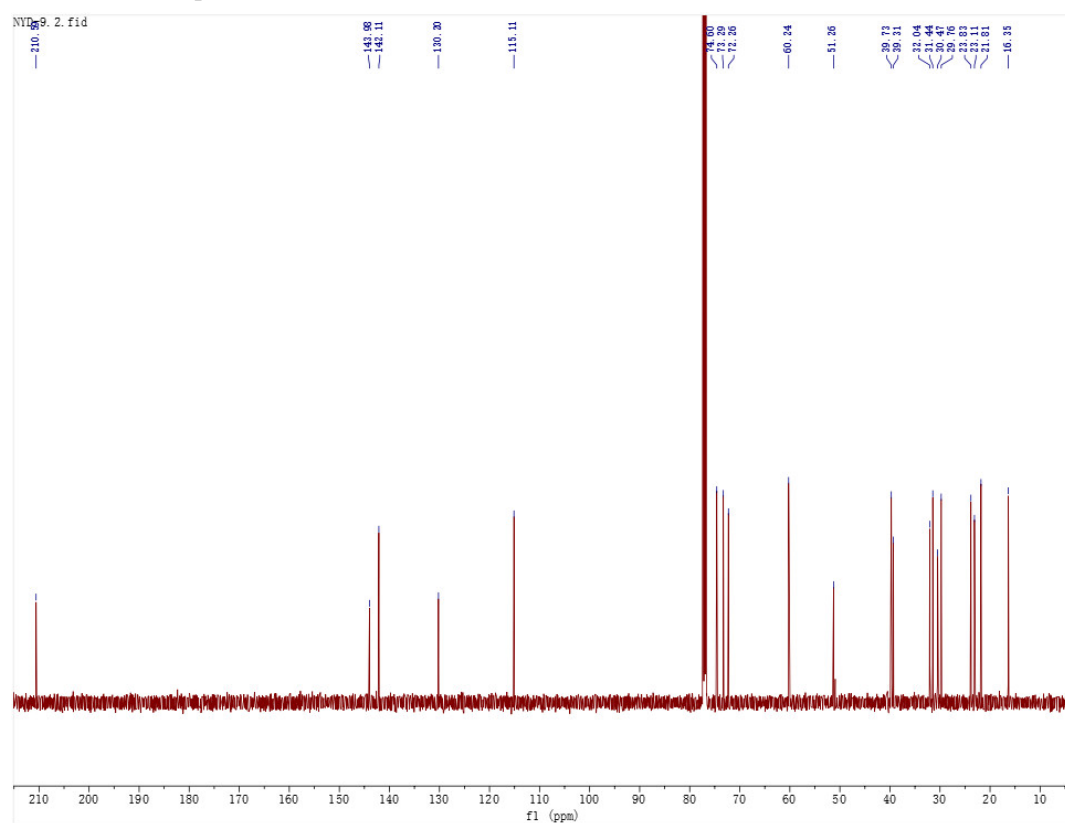
S31.  $^1\text{H}$  NMR spectrum of **5** in  $\text{CDCl}_3$ .



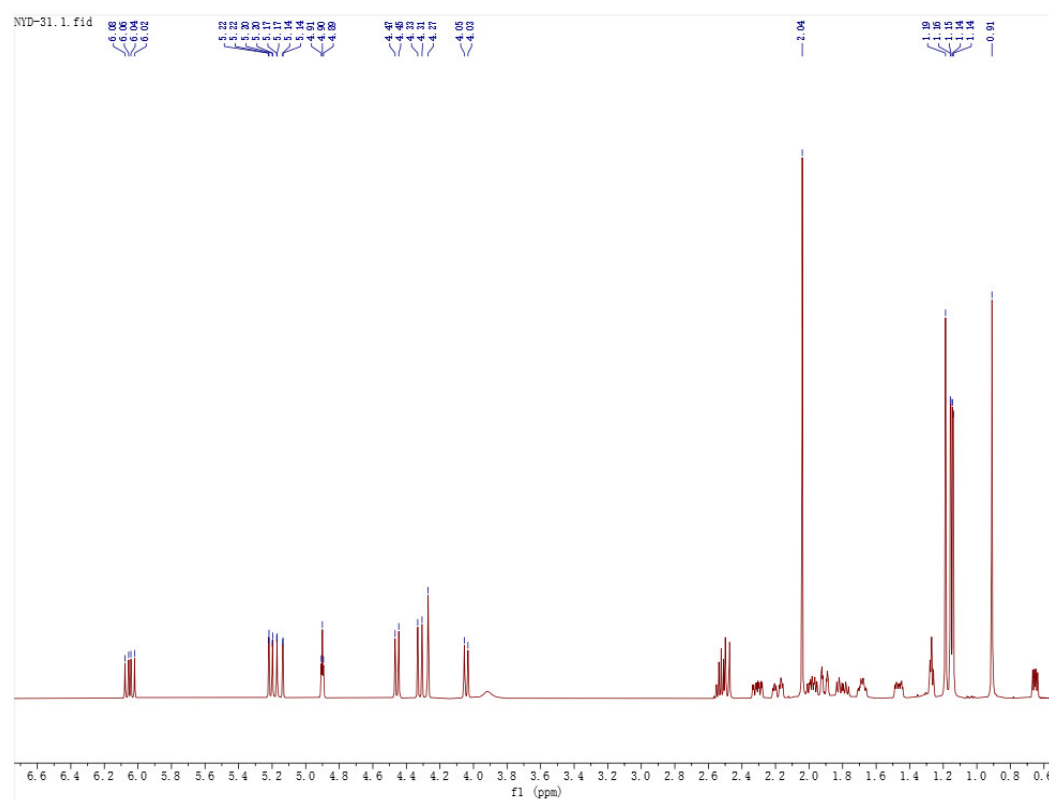
S33.  $^1\text{H}$  NMR spectrum of **6** in  $\text{CDCl}_3$ .



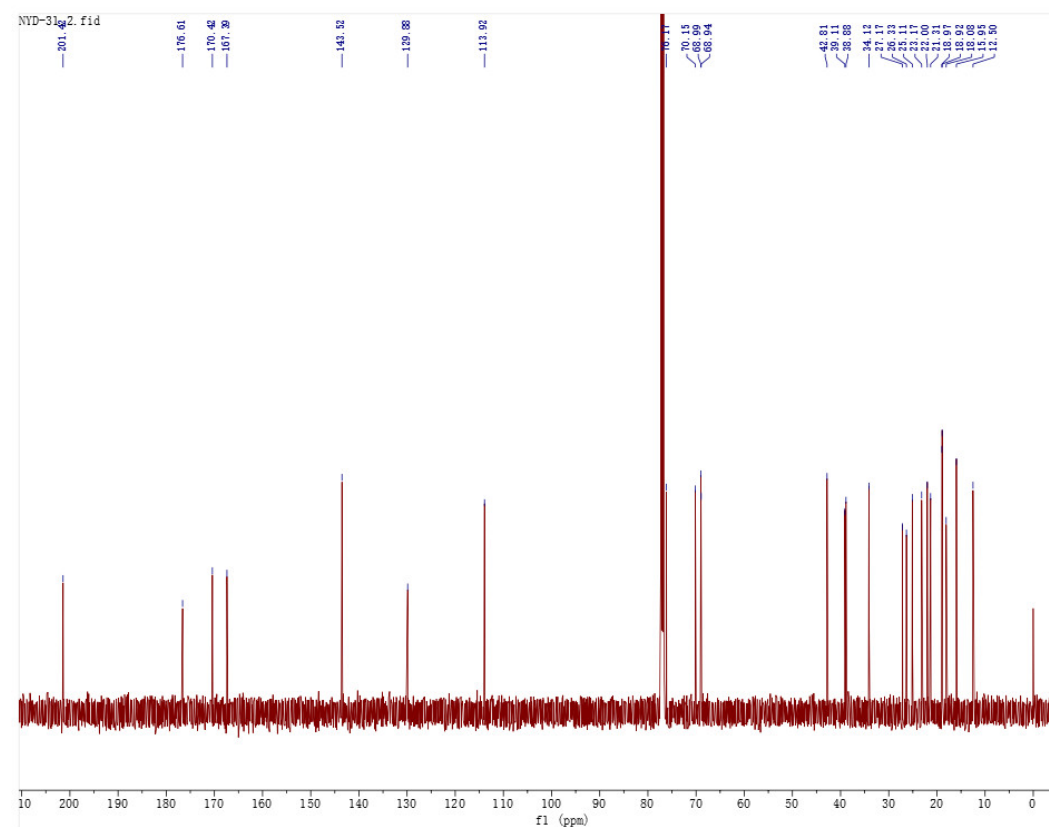
S34.  $^{13}\text{C}$  NMR spectrum of **6** in  $\text{CDCl}_3$ .



S35.  $^1\text{H}$  NMR spectrum of **7** in  $\text{CDCl}_3$ .



S36.  $^{13}\text{C}$  NMR spectrum of **7** in  $\text{CDCl}_3$ .



S37. The colony and mycelium characteristics of *Eutypella* sp. D-1 .

