Identification of Antiadipogenic Constituents of the Rhizomes of *Anemarrhena asphodeloides*

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Running title: Phenolic compounds from *Anemarrhena asphodeloides*

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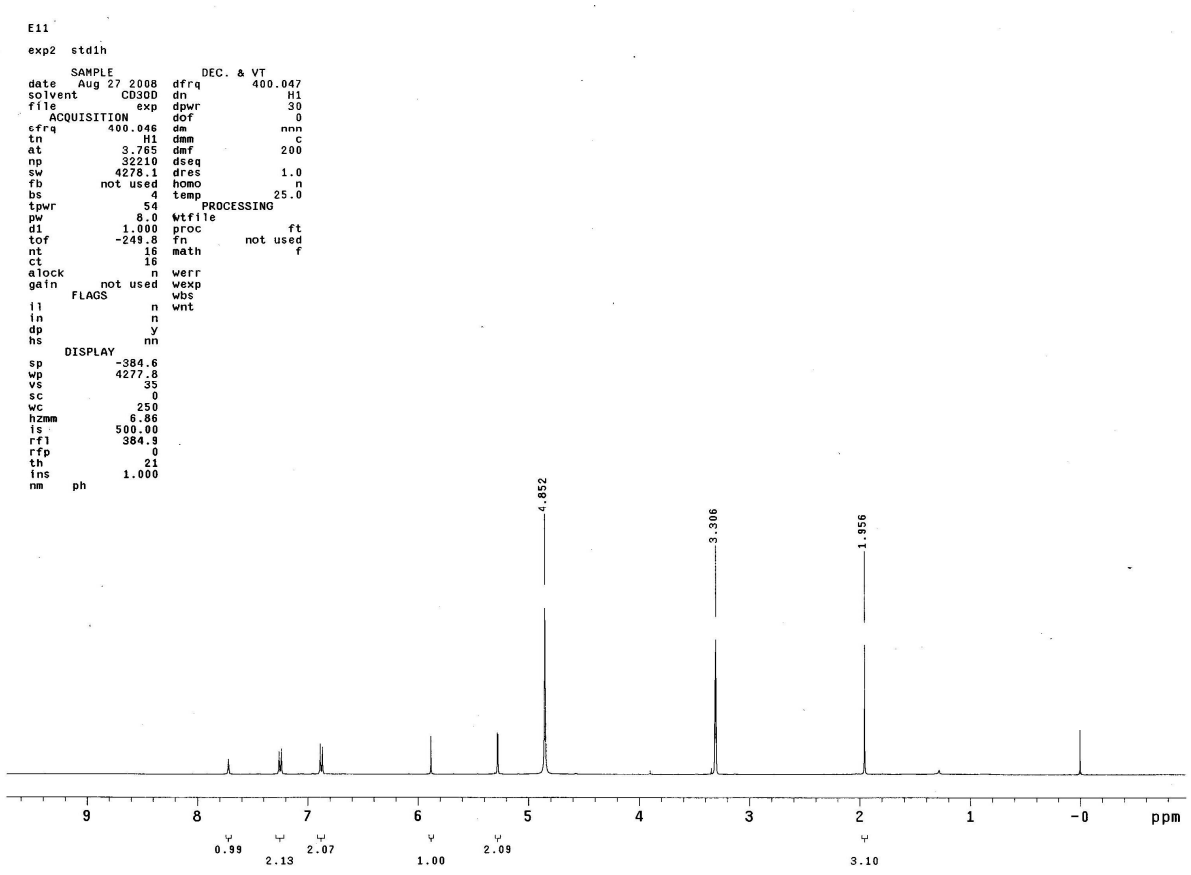
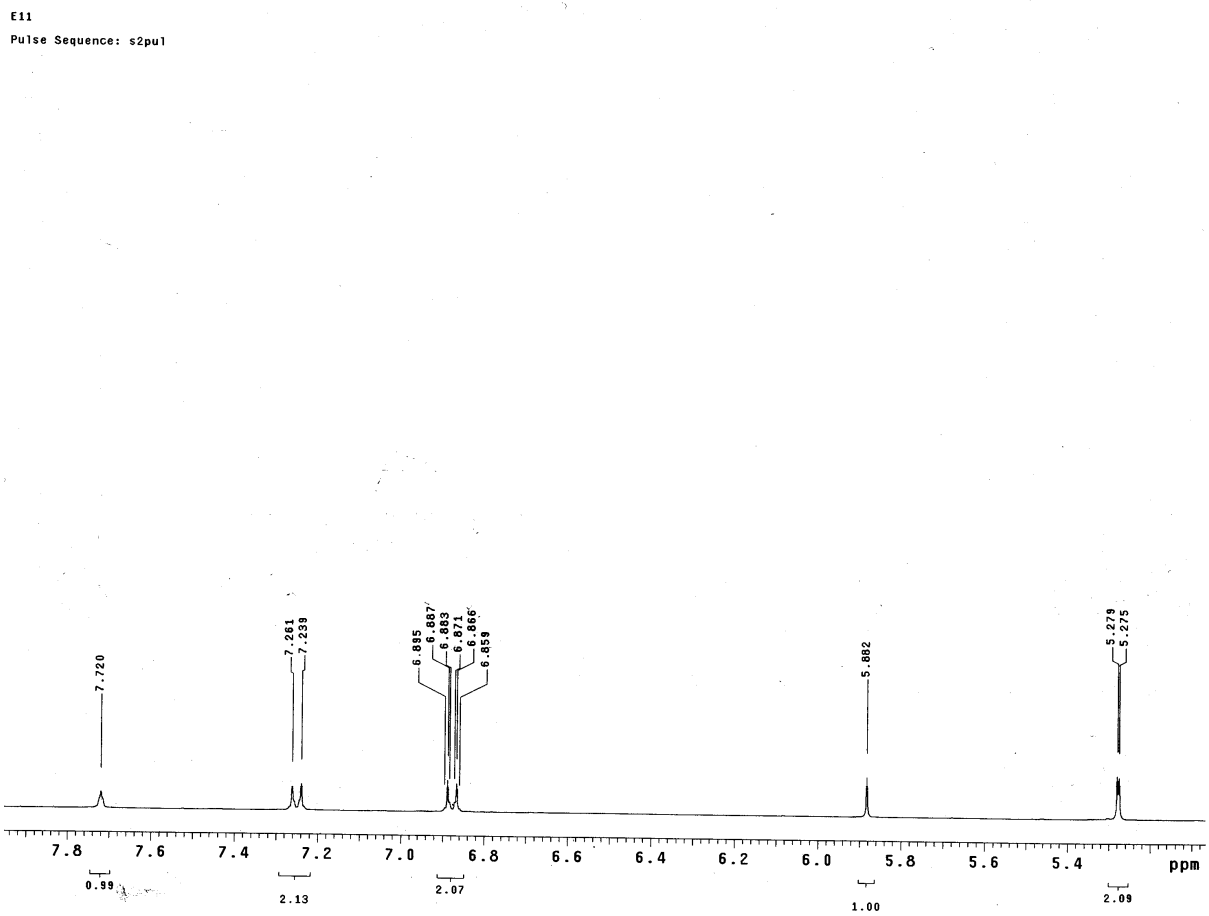
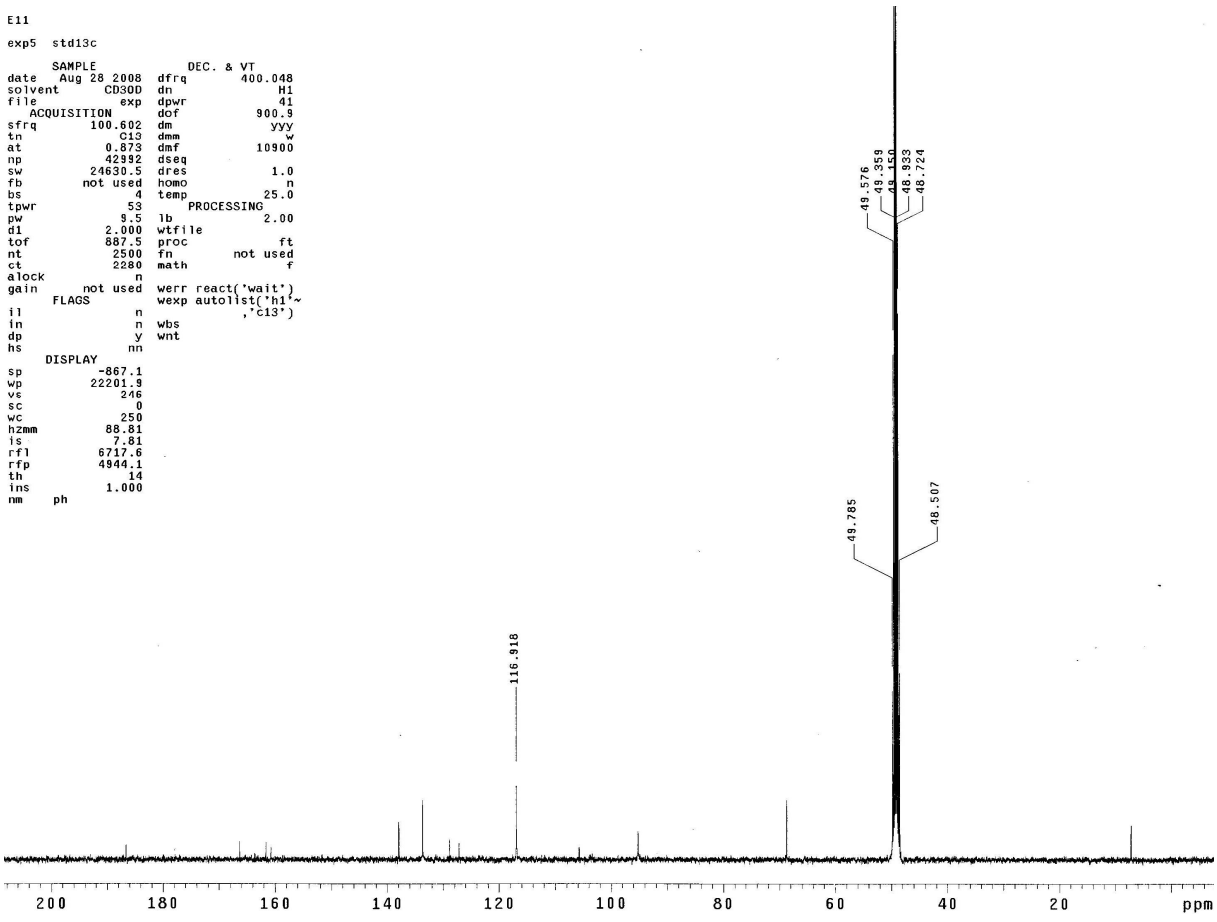
S1. ^{1}H NMR (400 MHz, CD_3OD) spectrum of the new compound **1**.



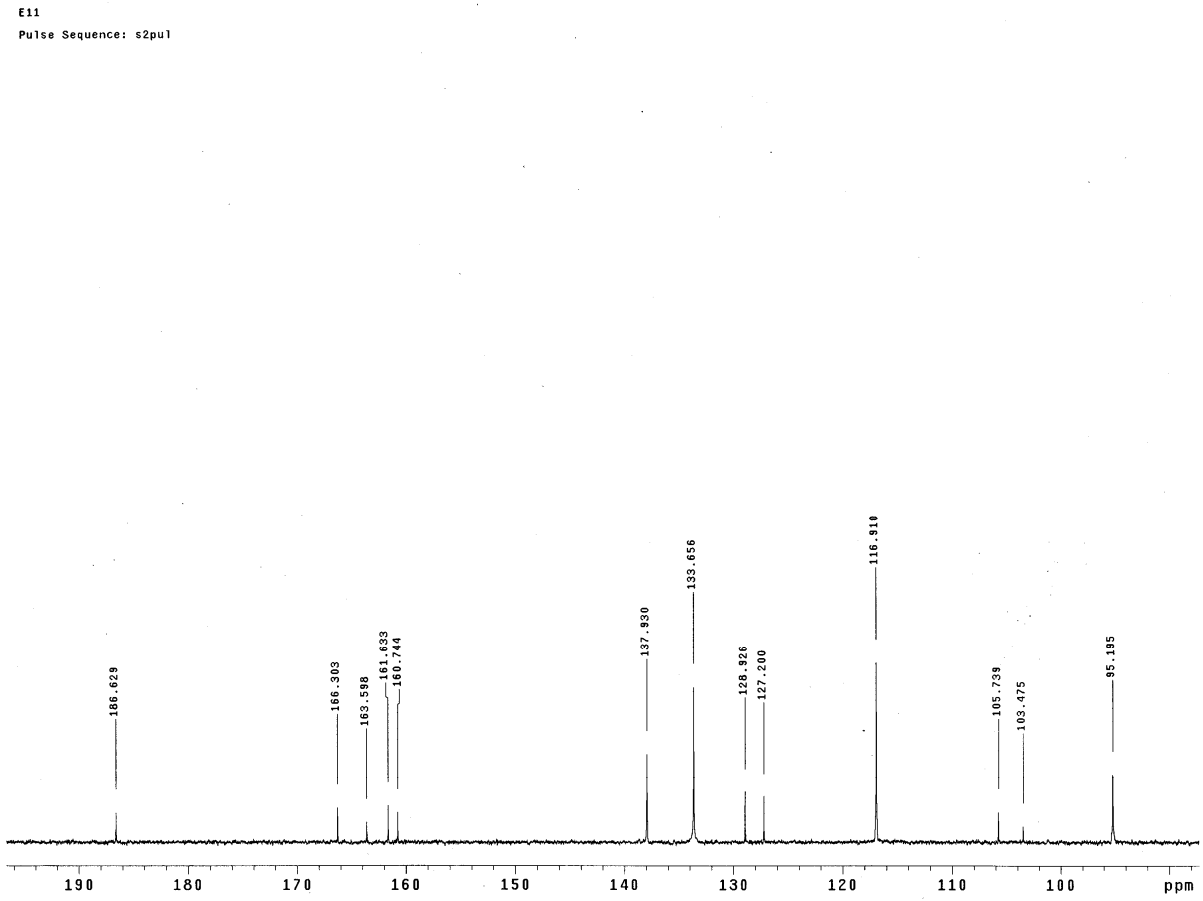
S1-1. Expanded ^{1}H NMR (400 MHz, CD_3OD) spectrum of the new compound **1**.



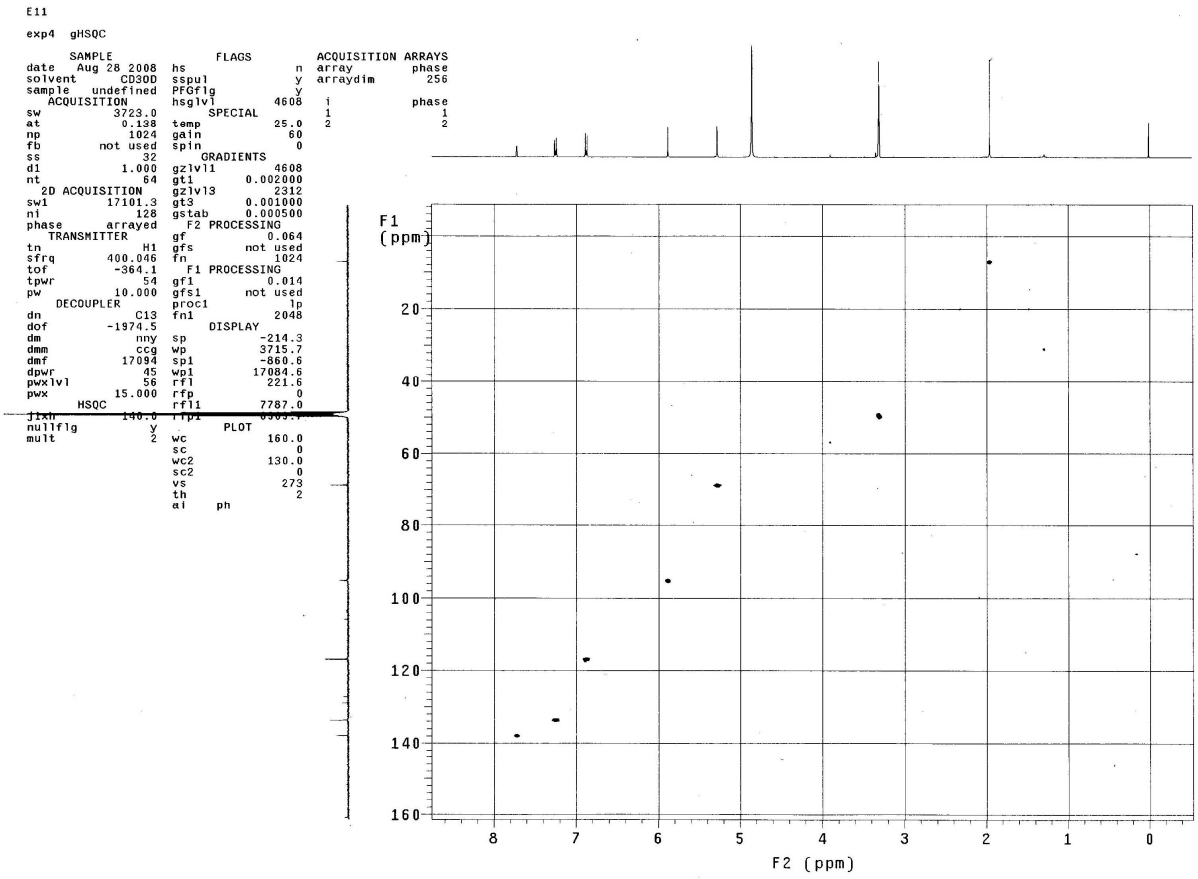
S2. ^{13}C NMR (100 MHz, CD_3OD) spectrum of the new compound **1**.



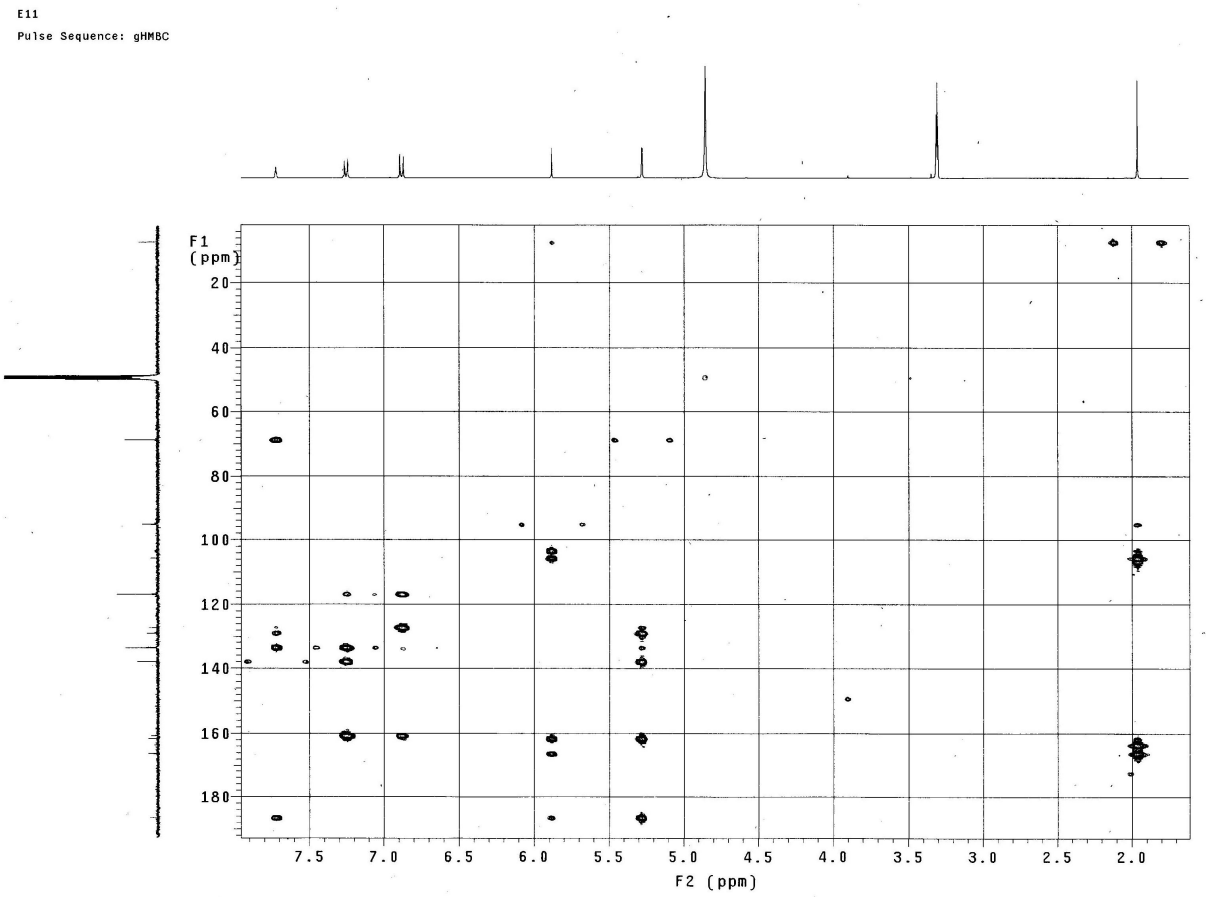
S2-1. Expanded ^{13}C NMR (100 MHz, CD_3OD) spectrum of the new compound **1**.



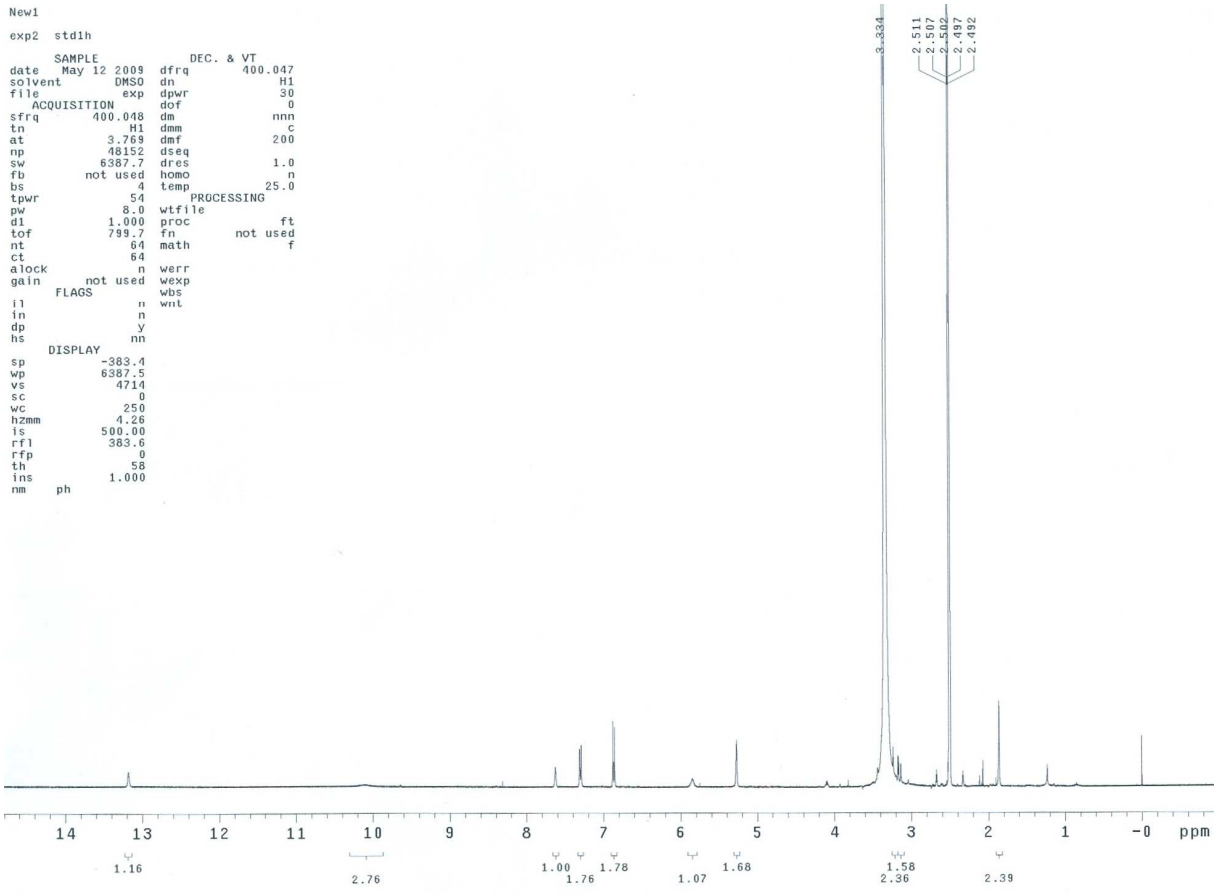
S3. HSQC spectrum (400 MHz, CD_3OD) of the new compound **1**.



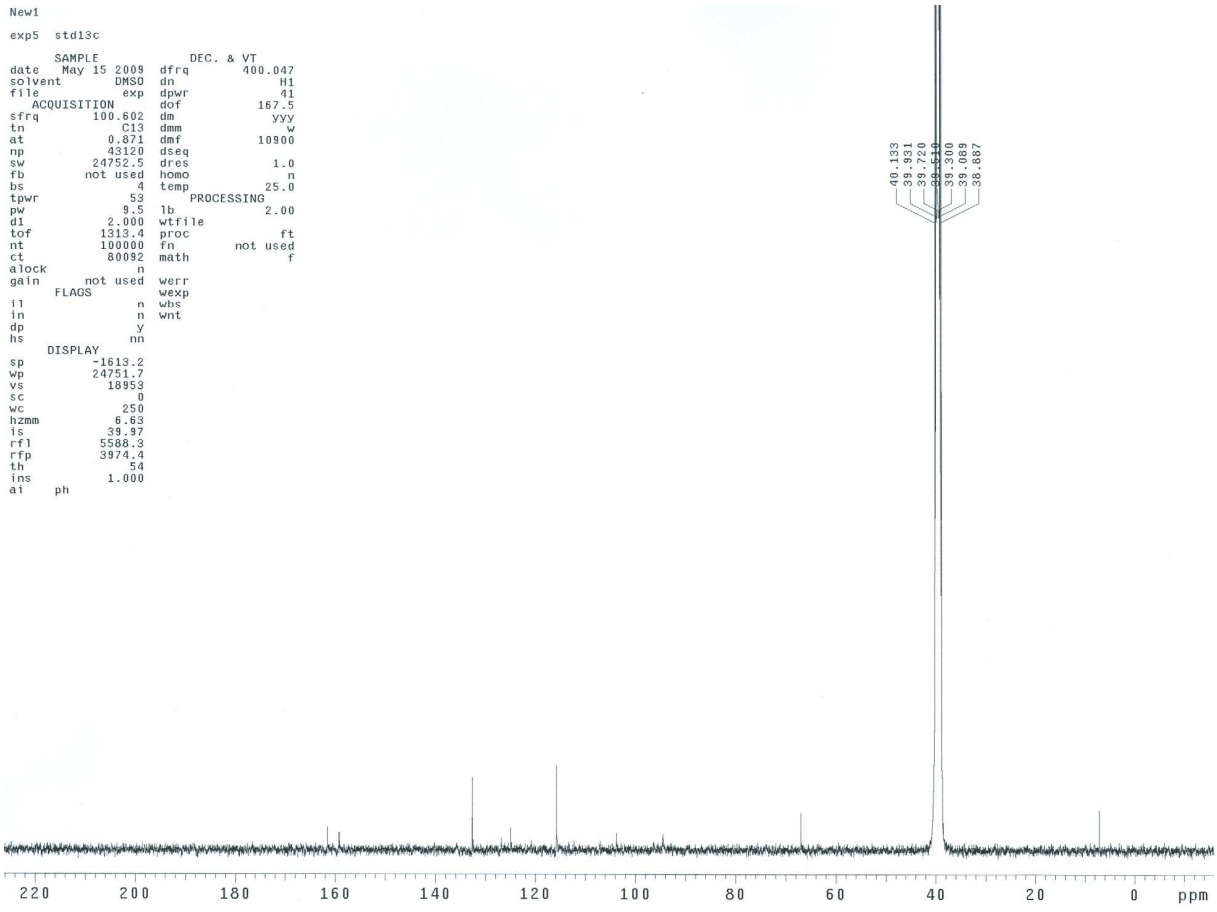
S4. HMBC spectrum (400 MHz, CD_3OD) of the new compound **1**.



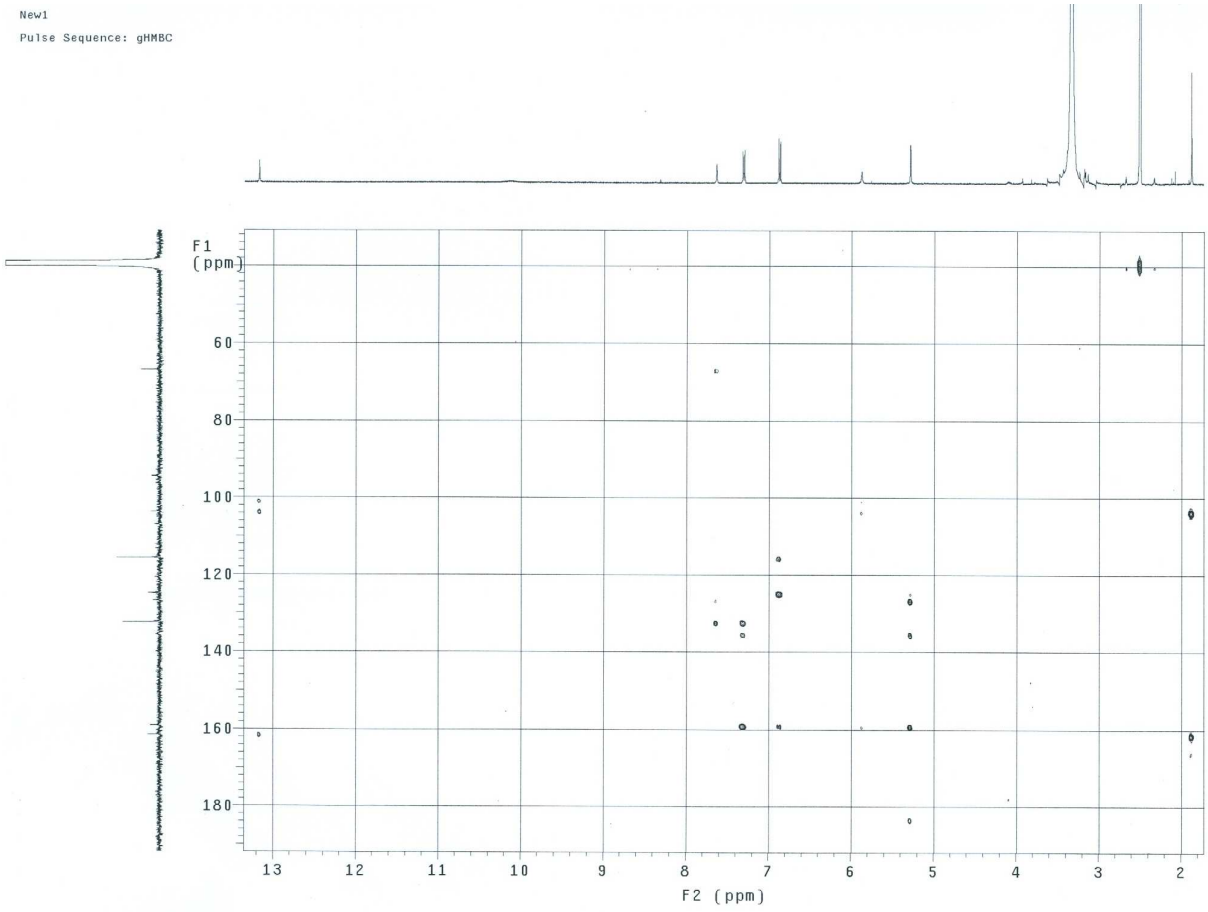
S5. ^{1}H NMR (400 MHz, DMSO-d_6) spectrum of the new compound **1**.



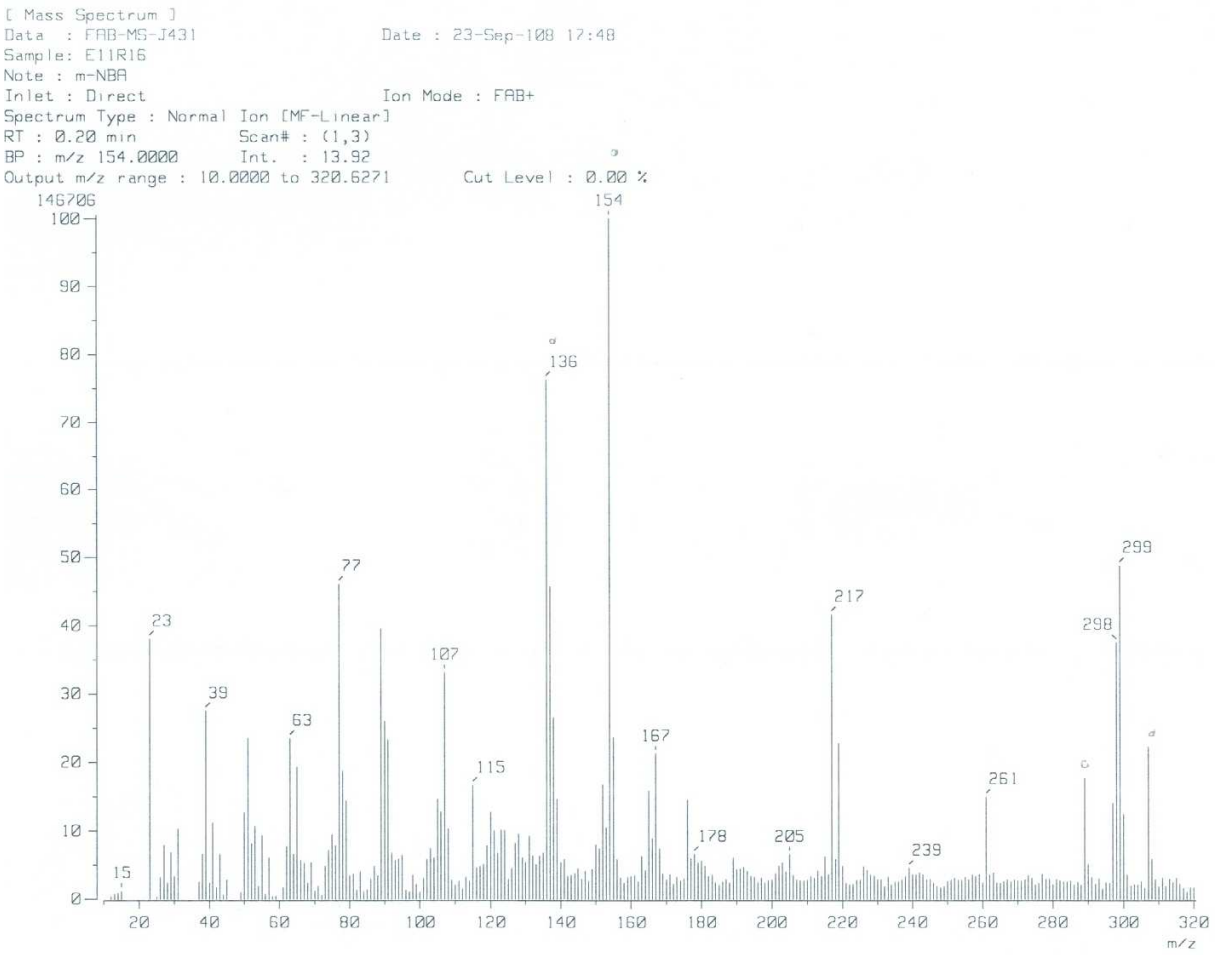
S6. ^{13}C NMR (100 MHz, DMSO-d_6) spectrum of the new compound **1**.



S7. HMBC spectrum (400 MHz, DMSO-d_6) of the new compound **1**.



S8. HRFABMS spectrum of the new compound **1**.




```
[ Elemental Composition ]
Data  : FAB-MS-J392                    Date : 19-Sep-108 13:32
Sample: E11R16
Note : m-NBA
Inlet : Direct                         Ion Mode : FAB+
RT : 3.21 min                          Scan#: (270,280)
Elements : C 100/0, H 100/0, O 10/0
Mass Tolerance      : 10ppm, 10mmu if m/z < 1000, 20mmu if m/z > 2000
Unsaturation (U.S.) : 0.0 - 100.0

Observed m/z Int%   Err[ppm / mmu]    U.S.  Composition
  299.0922   100.0    +20.4 /  +6.1   19.5  C 24 H 11
                     √+0.7 /  +0.2   10.5  C 17 H 15 O 5
                      -18.9 /  -5.7    1.5  C 10 H 19 O 10
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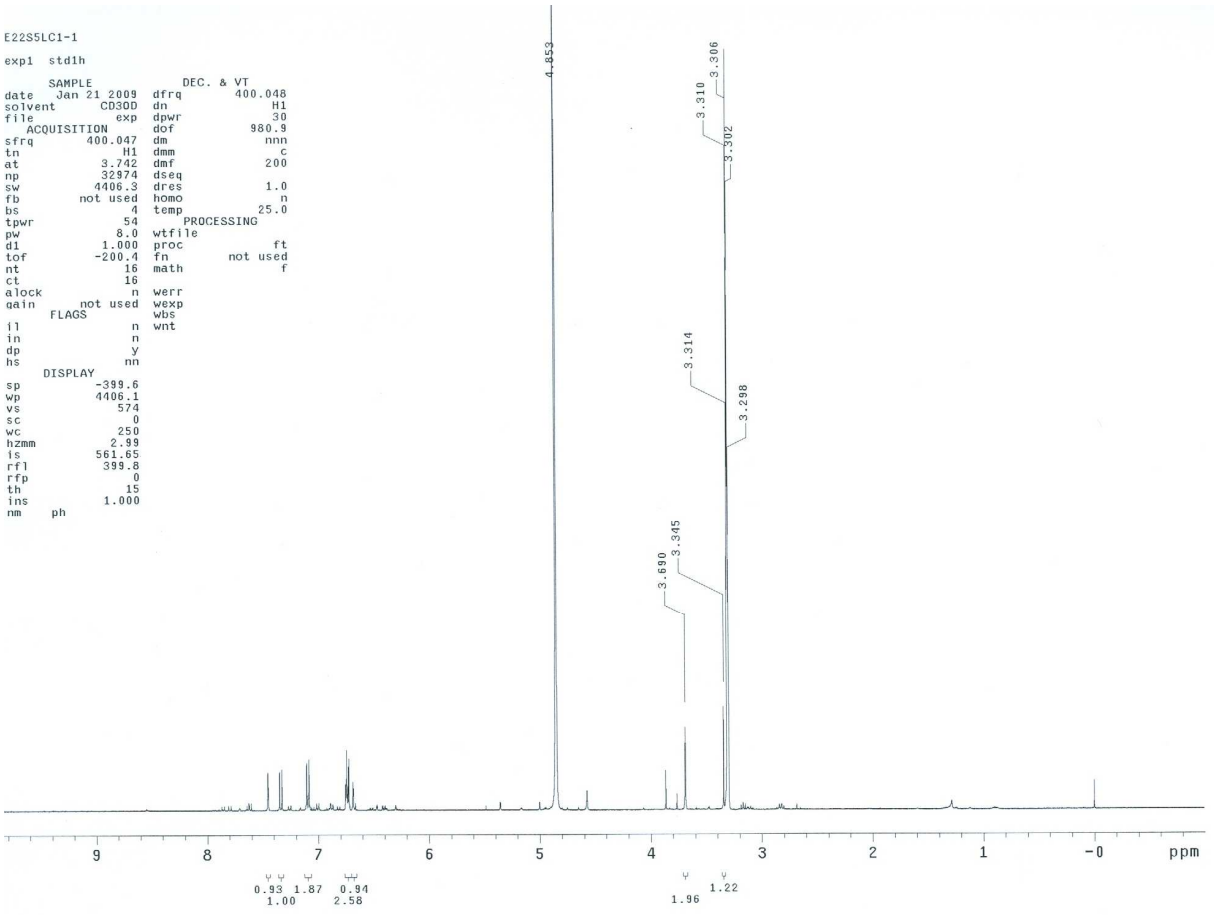
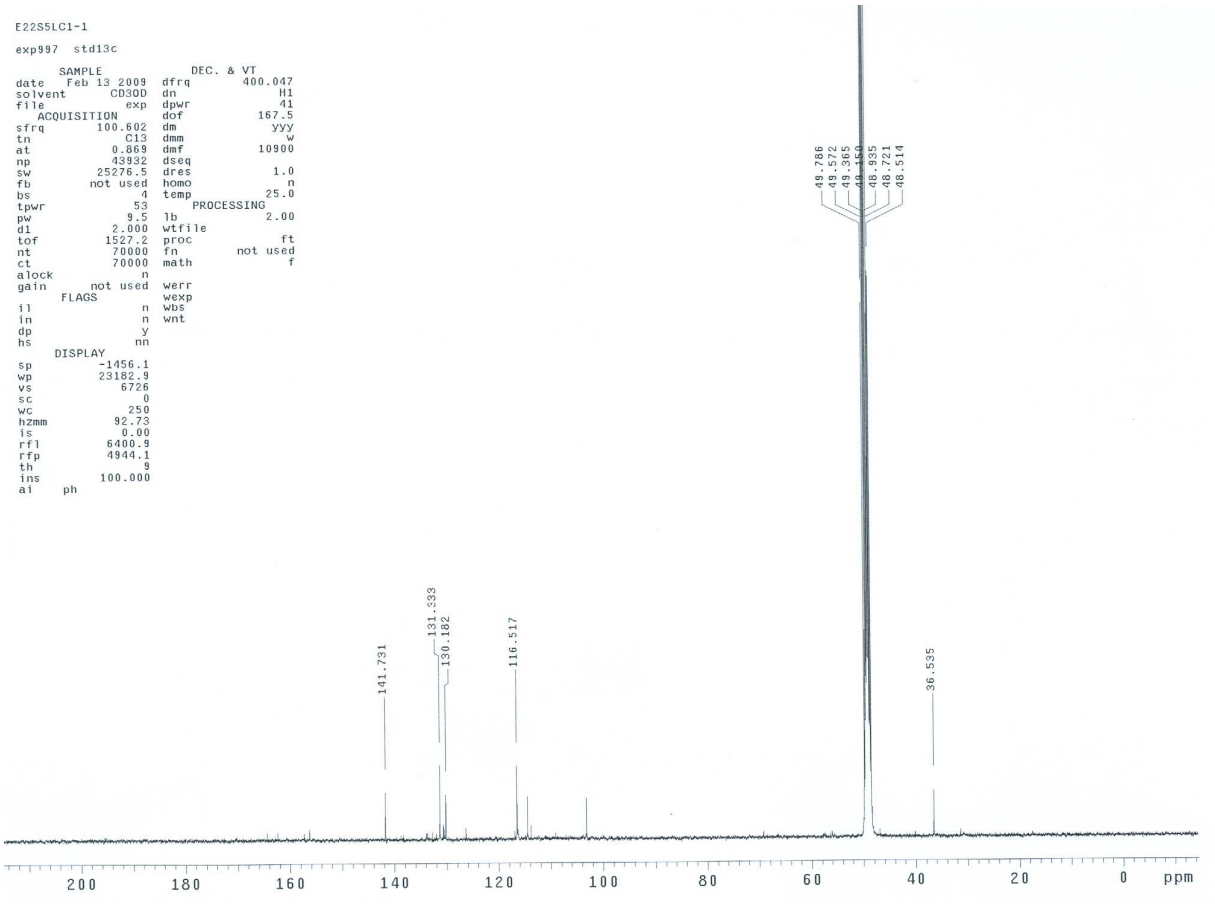
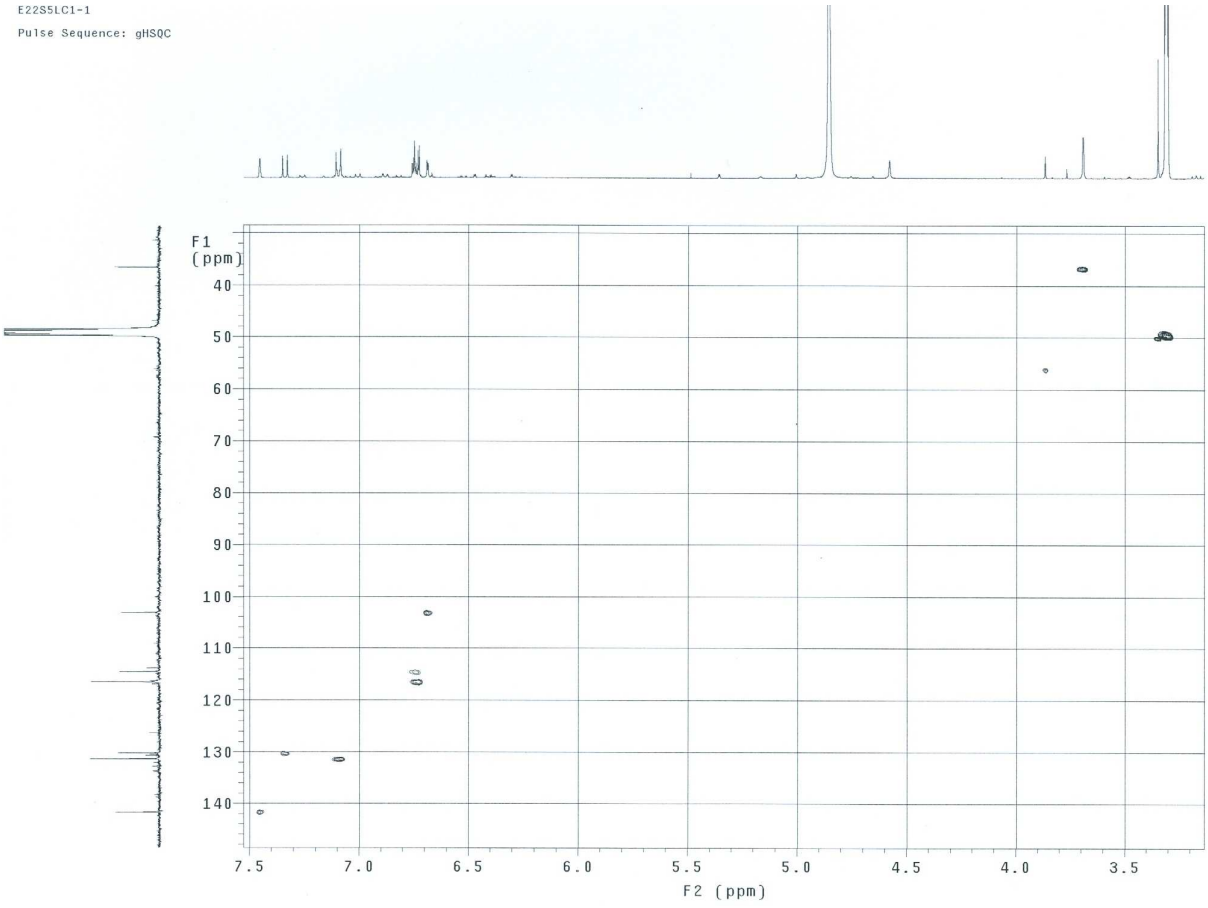
S9. ^{1}H NMR (400 MHz, CD_3OD) spectrum of the new compound **2**.



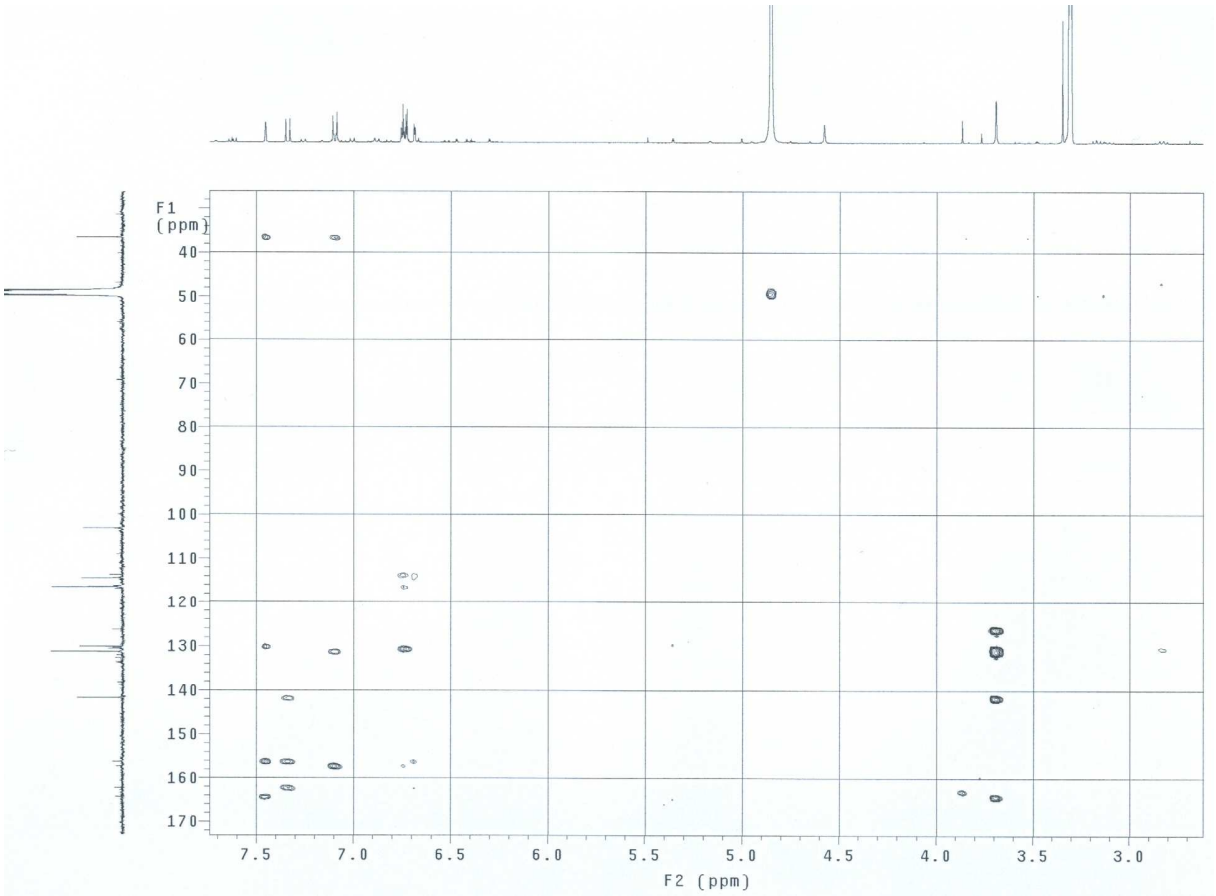
S10. ^{13}C NMR (100 MHz, CD_3OD) spectrum of the new compound **2**.



S11. HSQC spectrum (400 MHz, CD_3OD) of the new compound **2**.



S12. HMBC spectrum (400 MHz, CD_3OD) of the new compound **2**.



S13. HREIMS spectrum of the new compound **2**.

File: 4272
Sample: E22S5LC1-1

Date Run: 02-18-2009

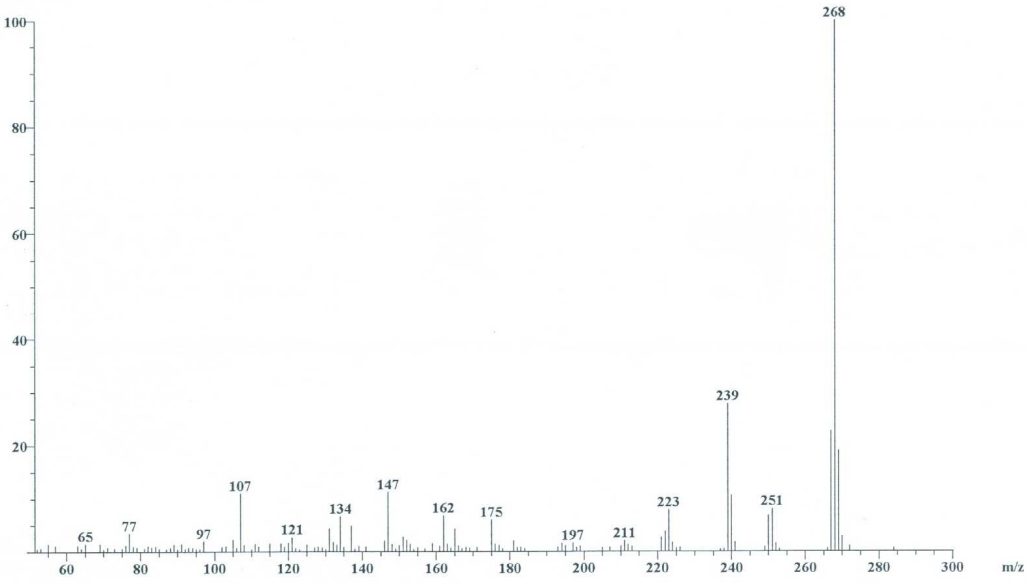
Time Run: 1

Instrument: JEOL JMS600
Inlet: Direct Probe

Ionization mode: EI+

Scan: 86
Base: m/z 268; 75.6%FS TIC: 3051268

R.T.: 4:16.1



File: 4273
Sample: E22S5LC1-1

Date Run: 02-18-2009

Time Run:

Instrument: JEOL JMS600
Inlet: Direct Probe

Ionization mode: EI+

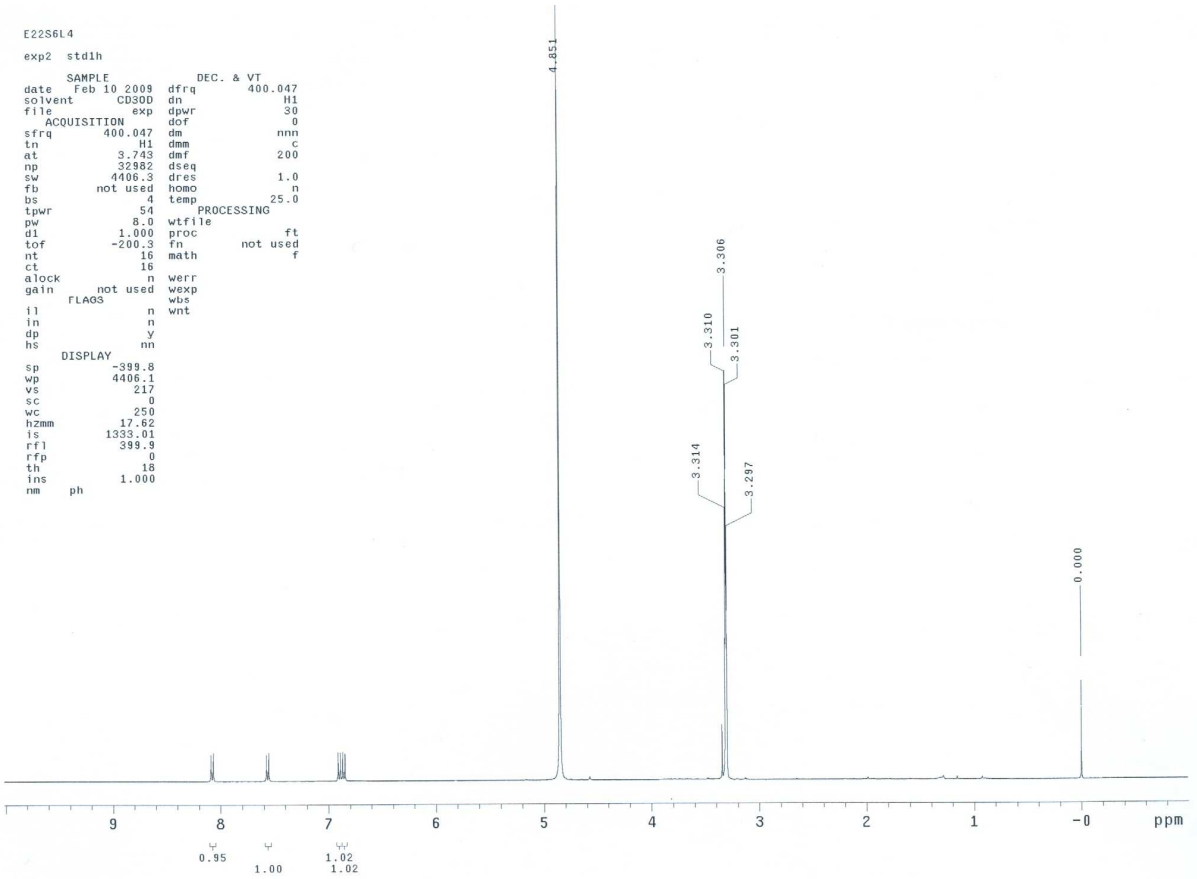
Scan: 22
Base: m/z 268; 26.1%FS TIC: 1575909

R.T.: 0:14.9

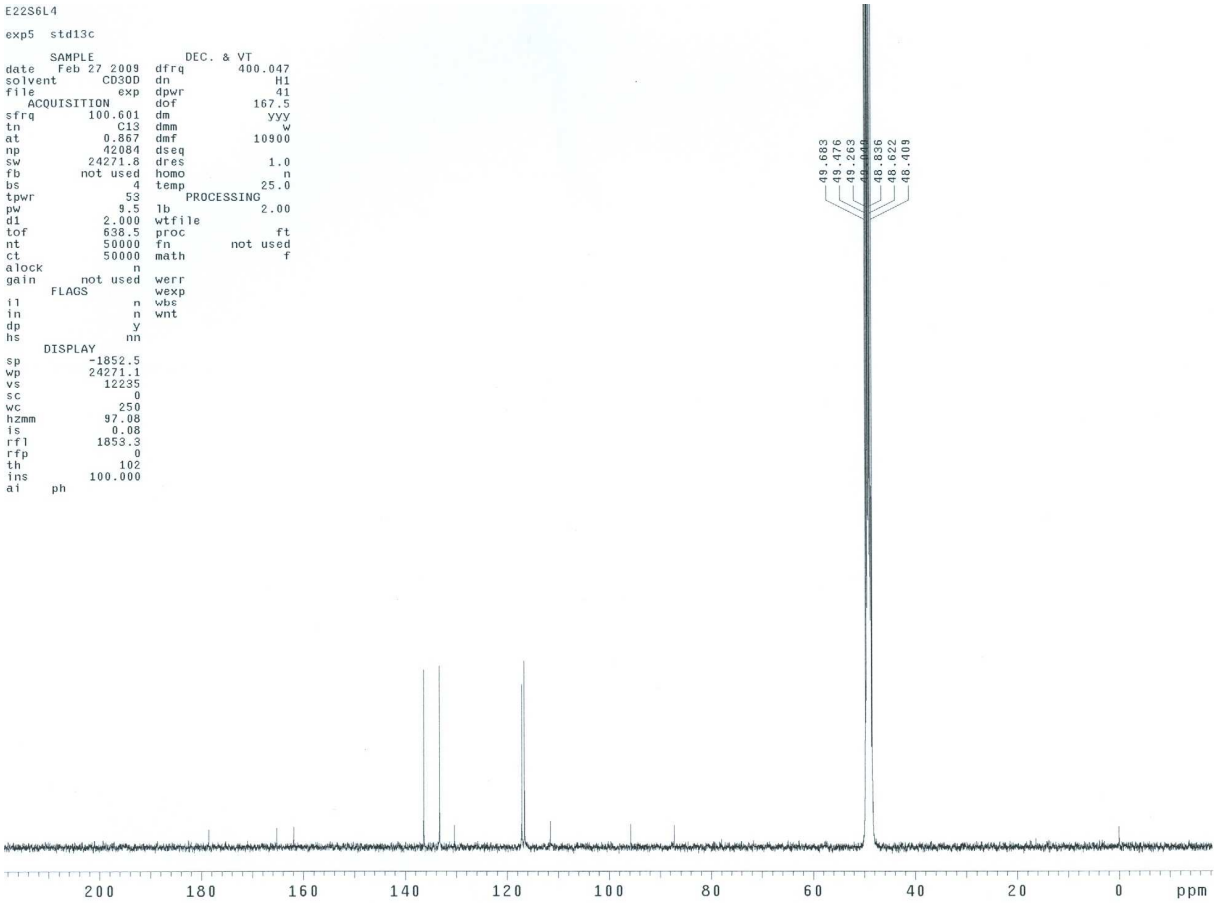
Selected Isotopes : $C_{0-50}H_{0-100}O_{0-10}$ **Error Limit : 20 ppm**

Measured Mass	*% Base*	*Formula*	*Calculated Mass*	*Error*
268.0738	**100.0%**	**$C_{16}H_{12}O_4$**	**268.0735**	**-1.0**

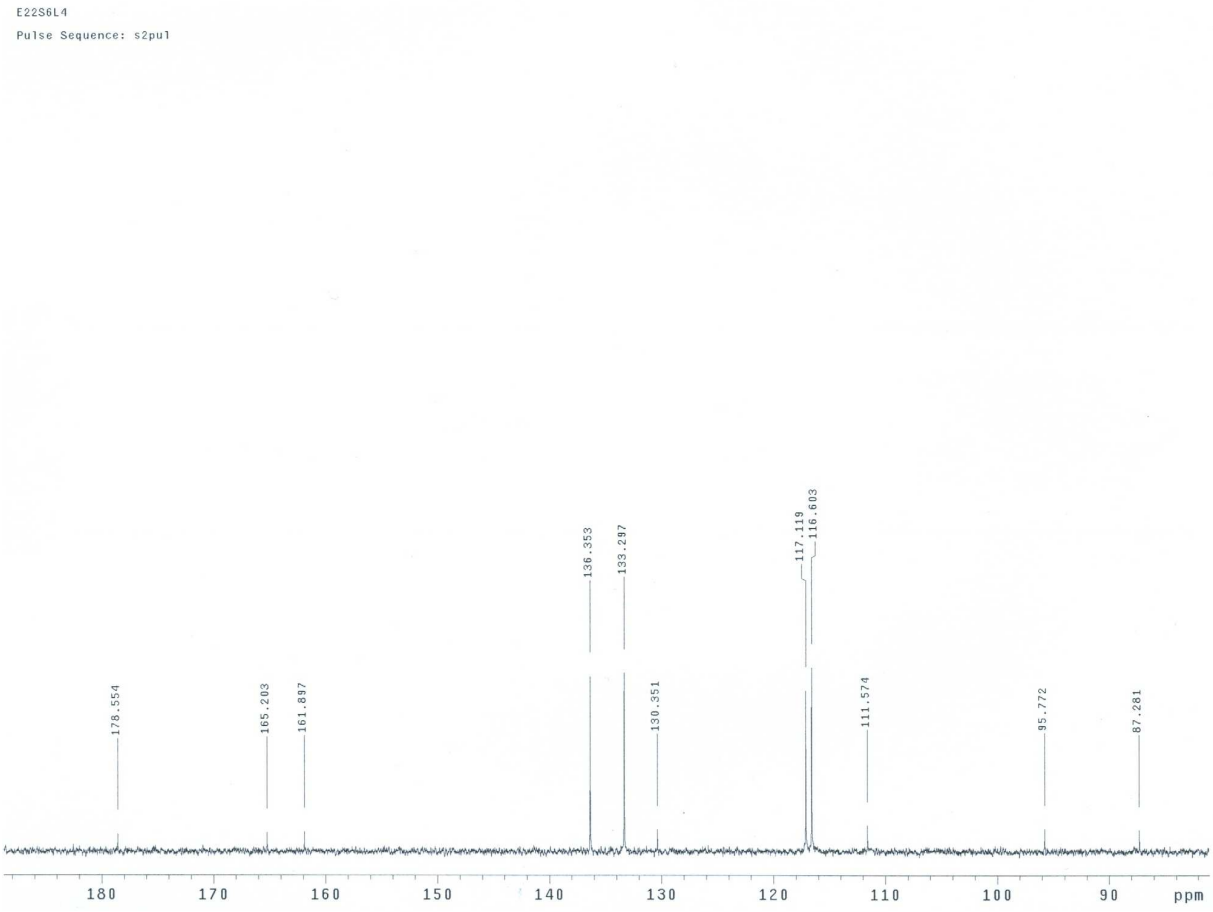
S14. ^{1}H NMR (400 MHz, CD_3OD) spectrum of the new compound **3**.



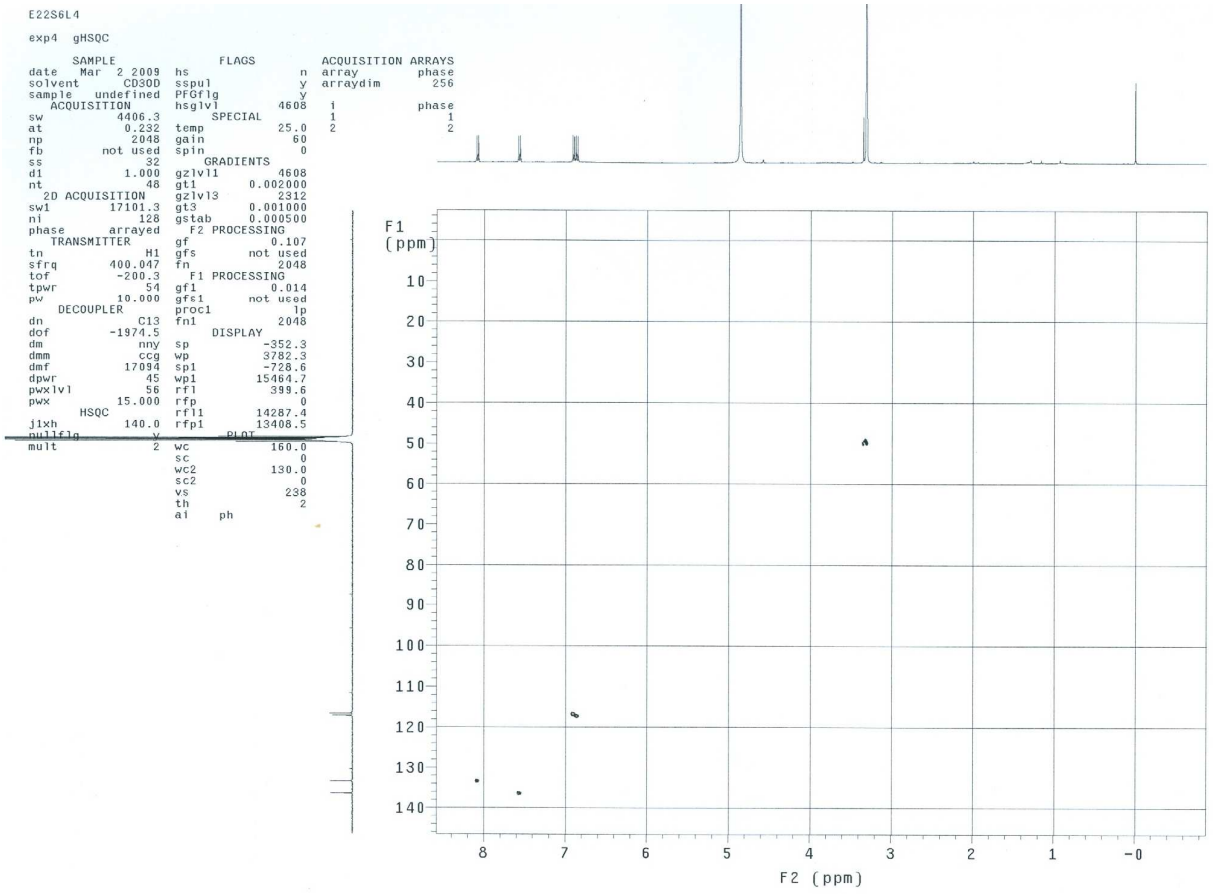
S15. ^{13}C NMR (100 MHz, CD_3OD) spectrum of the new compound **3**.



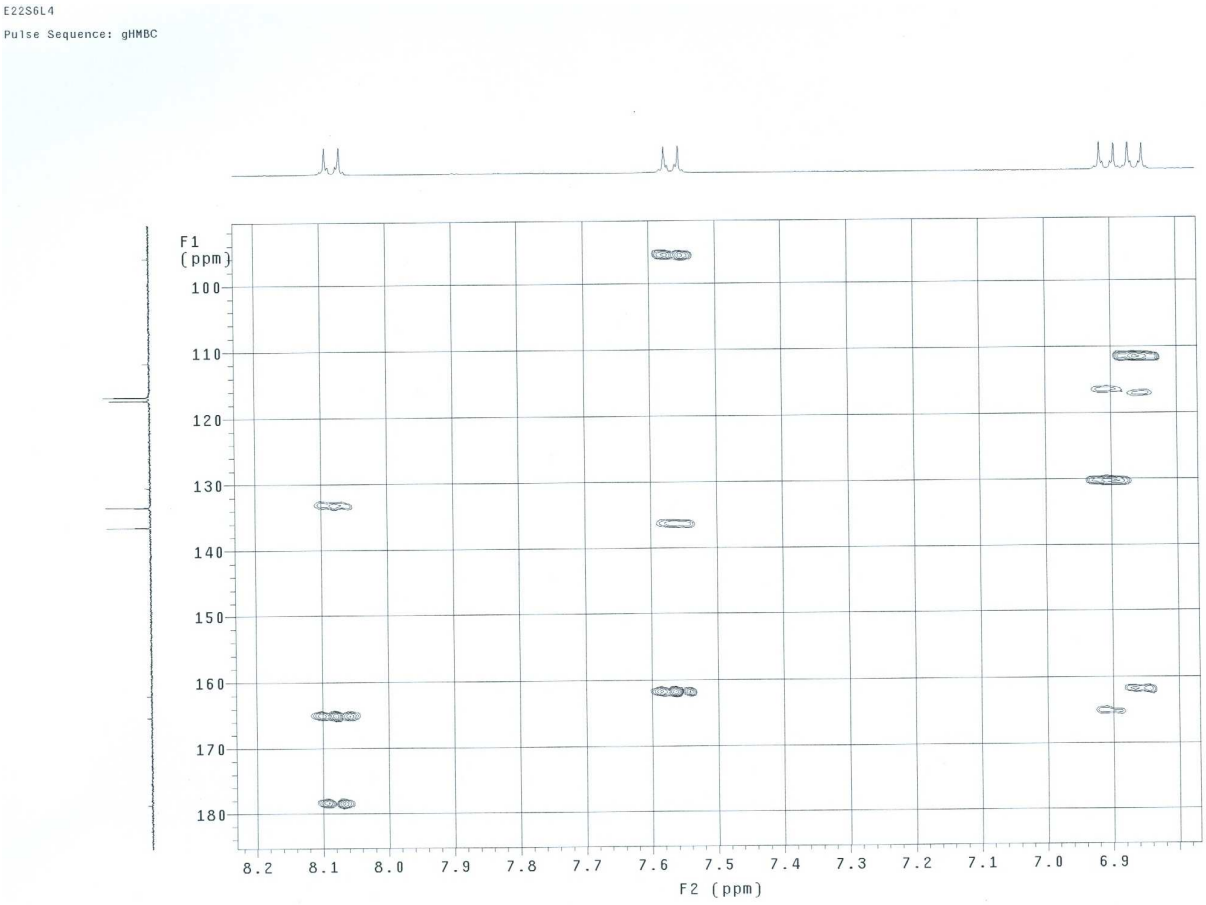
S16. Expanded ^{13}C NMR (100 MHz, CD_3OD) spectrum of the new compound **3**.



S17. HSQC spectrum (400 MHz, CD_3OD) of the new compound **3**.



S18. HMBC spectrum (400 MHz, CD_3OD) of the new compound **3**.



S19. HREIMS spectrum of the new compound **3**.

File: 4302
Sample: E22SUL4

Date Run: 03-04-2009

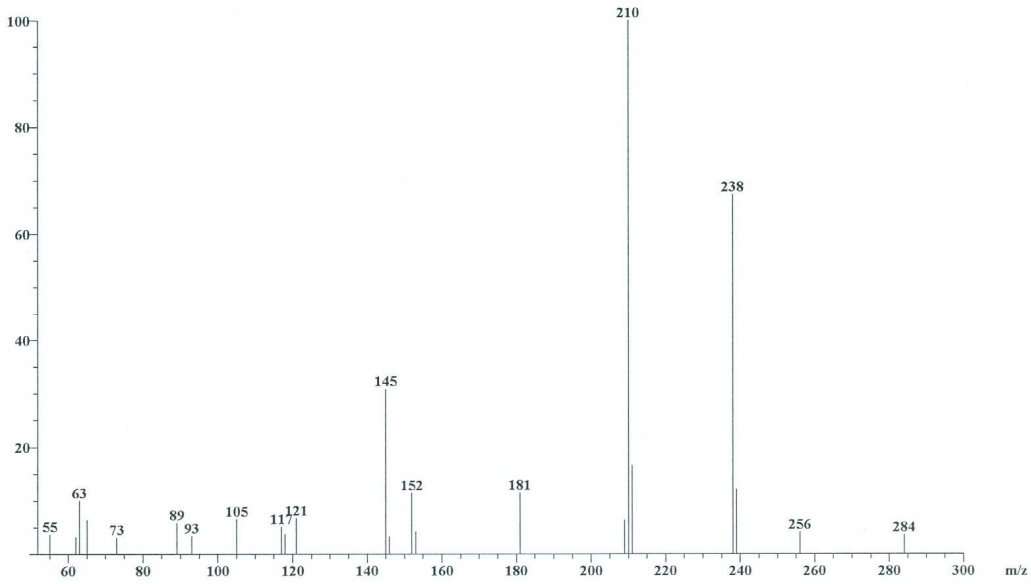
Time Run:

Instrument: JEOL JMS600
Inlet: Direct Probe

Ionization mode: EI+

Scan: 49
Base: m/z 210; 10.5%FS TIC: 360859

R.T.: 2:25.1



File: 4303
Sample: E22SUL4

Date Run: 03-04-2009

Time Run:

Instrument: JEOL JMS600
Inlet: Direct Probe

Ionization mode: EI+

Scan: 129
Base: m/z 238; 26.6%FS TIC: 4001921

R.T.: 2:09.4

Selected Isotopes : $C_{0-50}H_{0-100}O_{0-10}$ **Error Limit : 20 ppm**

Measured Mass	*% Base*	*Formula*	*Calculated Mass*	*Error*
238.0630	**100.0%**	**$C_{15}H_{10}O_3$**	**238.0630**	**-0.1**

Table 1. ^{1}H and ^{13}C NMR Spectroscopic Data for (*E*)-4′-Demethyl-6-methyleucomin (**1**), Anemarcoumarin A (**2**), and Anemarchalconyn (**3**)

position	**1**[a]		**2**[a]		**3**[a]	
	δ_C, mult.	δ_H, (*J* in Hz)	δ_C, mult.	δ_H, (*J* in Hz)	δ_C, mult.	δ_H, (*J* in Hz)
1					178.5, qC	
2	68.6, CH_2	5.27, d (1.6)	164.3, qC		87.2, qC	
3	128.9, qC		126.2, qC		95.7, qC	
4	186.6, qC		141.7, CH	7.45, s		
4a	103.4, qC		113.8, qC			
5	163.5, qC		130.1, CH	7.32, d (8.4)		
6	105.7, qC		114.5, CH	6.75, dd (8.4, 2.0)		
7	166.3, qC		162.3, qC			
8	95.1, CH	5.88, s	103.1, CH	6.68, d (2.0)		
8a	161.6, qC		156.2, qC			
1′	127.2, qC		130.6, qC		130.3, qC	
2′	133.6, CH	7.23, d (8.4)	131.3, CH	7.10, d (8.8)	133.2, CH	8.07, d (8.8)
3′	116.9, CH	6.87, d (8.4)	116.5, CH	6.73, d (8.8)	116.6, CH	6.90, d (8.8)
4′	160.7, qC		157.3, qC		165.2, qC	
5′	116.9, CH	6.87, d (8.4)	116.5, CH	6.73, d (8.8)	116.6, CH	6.90, d (8.8)
6′	133.6, CH	7.23, d (8.4)	131.3, CH	7.10, d (8.8)	133.2, CH	8.07, d (8.8)
7′	137.9, CH	7.72, s	36.5, CH_2	3.69, s		
1″					111.5, qC	
2″					136.3, CH	7.55, d (8.8)
3″					117.1, CH	6.85, d (8.8)
4″					161.8, qC	
5″					117.1, CH	6.85, d (8.8)
6″					136.3, CH	7.55, d (8.8)
CH_3-6	7.1, CH_3	1.95, s				

[a] Spectrum recorded at ^{1}H (400 MHz) and ^{13}C NMR (100 MHz) in CD_3OD.