

FLAVONOIDES E TERPENÓIDES DE *Croton muscicarpa* (Euphorbiaceae)

Milena B. Barreto, Clérton L. Gomes, João Vito B. de Freitas, Francisco das Chagas L. Pinto, Edilberto R. Silveira e Nilce V. Gramosa*

Departamento de Química Orgânica e Inorgânica, Centro de Ciências, Universidade Federal do Ceará, CP 6021, 60455-760 Fortaleza – CE, Brasil

Daniela S. Carneiro Torres

Departamento de Ciências Biológicas Jequié, Universidade Estadual do Sudoeste da Bahia, 45200-000 Jequié – BA, Brasil

Tabela 1S. Dados de RMN ¹³C dos flavonoides isolados de *C. muscicarpa*

C	δ_c							
	3 ^a	4 ^b	5 ^c	6 ^a	8 ^d	9 ^a	10 ^a	13 ^a
2	156,0	156,2	147,9	156,2	148,2	155,6	156,2	156,1
3	139,2	139,2	138,7	139,1	137,3	139,0	138,9	139,0
4	178,9	179,1	177,6	179,0	177,5	179,0	179,1	179,1
5	162,2	162,3	162,0	162,3	162,7	152,7	153,0	152,5
6	98,0	98,1	98,3	98,1	99,4	132,2	132,5	132,5
7	165,6	165,7	165,9	165,7	165,7	158,8	159,0	159,0
8	92,4	92,4	92,3	92,4	94,6	90,3	90,5	90,5
9	157,0	157,0	157,2	157,0	158,4	152,3	152,5	153,0
10	106,2	106,4	105,6	106,3	104,7	106,6	106,8	106,8
1'	123,1	123,1	125,5	122,7	123,9	123,6	123,0	123,1
2'	111,5	130,4	116,5	111,2	130,9	114,3	130,3	111,5
3'	149,0	114,3	146,2	146,6	115,7	145,6	114,3	149,0
4'	151,6	162,0	150,6	148,6	160,7	148,7	161,9	151,6
5'	111,1	114,3	112,4	114,8	115,7	110,4	114,3	111,1
6'	122,4	130,4	120,8	122,9	130,9	121,6	130,3	122,4
3-OMe	60,4	60,4		60,0		60,1	60,3	60,4
6-OMe						60,9	61,0	61,1
7-OMe	56,0	56,0	56,2	56,1		56,3	56,5	56,2
3'-OMe	56,3			56,4				56,5
4'-OMe	56,2	55,7	56,1			56,0	55,6	56,3

^a 125 MHz, CDCl₃; ^b 75 MHz, CDCl₃; ^c 125 MHz, C₅D₅N; ^d 125 MHz, CD₃OD.

Tabela 2S. Dados de RMN ¹H dos flavonoides **3 a 6** isolados de *C. muscicarpa*

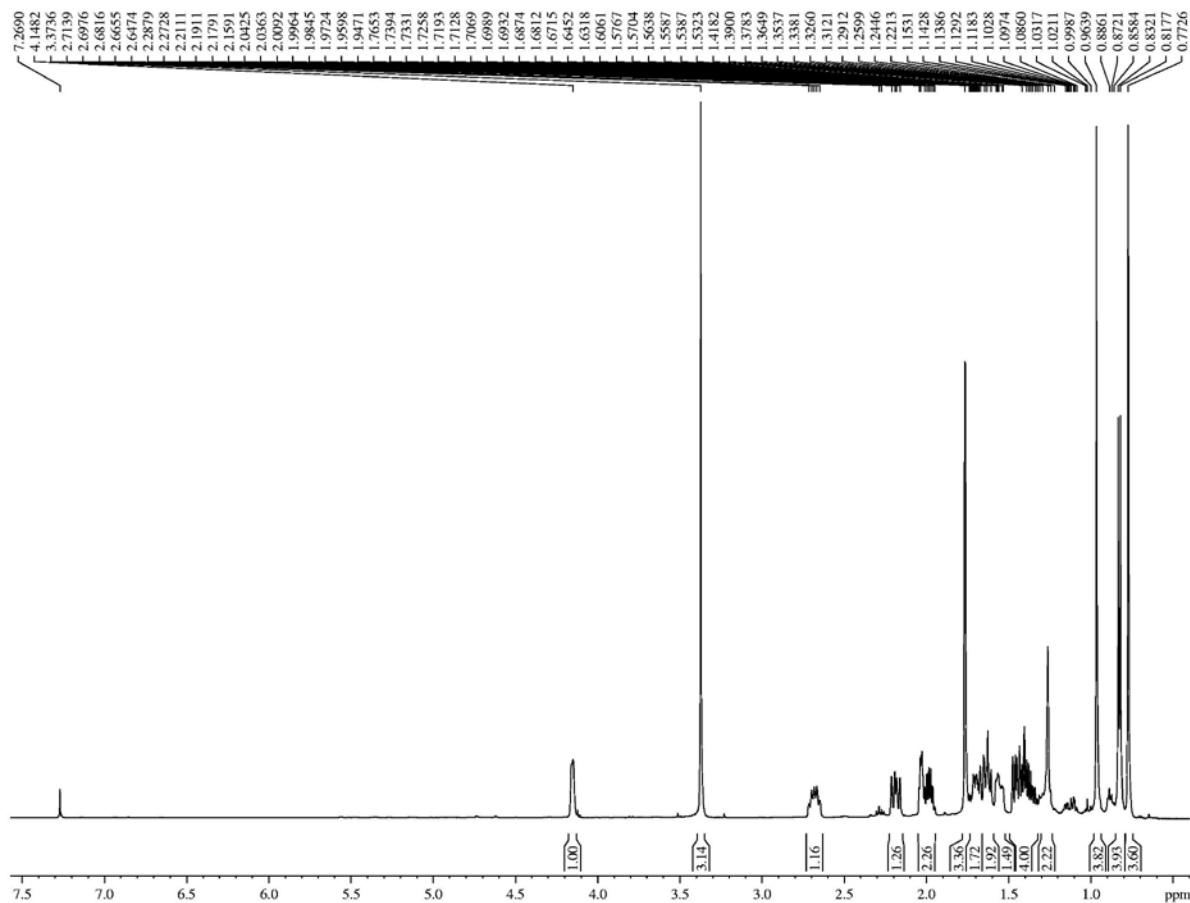
C	3 ^a	4 ^b	5 ^c	6 ^a
6	6,34 <i>d</i> (1,9)	6,36 <i>d</i> (2,2)	6,56 <i>d</i> (2,0)	6,37 <i>d</i> (2,1)
8	6,43 <i>d</i> (1,9)	6,45 <i>d</i> (2,2)	6,61 <i>d</i> (2,0)	6,45 <i>d</i> (2,1)
2'	7,68 <i>d</i> (1,6)	8,08 <i>d</i> (9,1)	8,50 <i>d</i> (2,0)	7,71 <i>d</i> (1,8)
3'		7,03 <i>d</i> (9,1)		
5'	6,98 <i>d</i> (8,6)	7,03 <i>d</i> (9,1)	7,17 <i>d</i> (8,6)	7,05 <i>d</i> (8,4)
6'	7,72 <i>dd</i> (8,6; 1,6)	8,08 <i>d</i> (9,1)	8,15 <i>dd</i> (8,6; 2,0)	7,68 <i>dd</i> (8,4; 1,8)
3-Ome	3,86 <i>s</i>	3,87 <i>s</i>		3,87 <i>s</i>
7-Ome	3,87 <i>s</i>	3,88 <i>s</i>	3,78 <i>s</i>	3,88 <i>s</i>
3'-Ome	3,96 <i>s</i>			3,99 <i>s</i>
4'-Ome	3,97 <i>s</i>	3,91 <i>s</i>	3,85 <i>s</i>	
5-OH		12,67 <i>bl</i>	13,13 <i>bl</i>	12,63 <i>bl</i>

^a 500 MHz, CDCl₃; ^b 300 MHz, CDCl₃; ^c 500 MHz, C₅D₅N.

Tabela 3S. Dados de RMN ¹H dos flavonoides **8 a 10 e 13** isolados de *C. muscicarpa*

C	8 ^d	9 ^a	10 ^a	13 ^a
6	6,17 <i>d</i> (2,0)			
8	6,39 <i>d</i> (2,0)	6,52 <i>s</i>	6,50 <i>s</i>	6,50 <i>s</i>
2'	8,09 <i>d</i> (9,0)	7,69 <i>d</i> (2,0)	8,06 <i>d</i> (9,0)	7,68 <i>d</i> (1,8)
3'	6,90 <i>d</i> (9,0)		7,02 <i>d</i> (9,0)	
5'	6,90 <i>d</i> (9,0)	6,98 <i>d</i> (8,5)	7,02 <i>d</i> (9,0)	6,99 <i>d</i> (8,5)
6'	8,10 <i>d</i> (9,0)	7,74 <i>dd</i> (8,5; 2,0)	8,06 <i>d</i> (9,0)	7,73 <i>dd</i> (8,5; 1,8)
3-Ome		3,87 <i>s</i>	3,86 <i>s</i>	3,86 <i>s</i>
6-Ome		3,91 <i>s</i>	3,90 <i>s</i>	3,92 <i>s</i>
7-Ome		3,93 <i>s</i>	3,92 <i>s</i>	3,96 <i>s</i>
3'-Ome				3,96 <i>s</i>
4'-Ome		4,00 <i>s</i>	3,96 <i>s</i>	3,96 <i>s</i>
5-OH				12,60 <i>s</i>

^a 500 MHz, CDCl₃; ^d 500 MHz, CD₃OD.

**Figura 1S.** Espectro de RMN ¹H do 6 α -metoxi-cipereno (**1**) (500 MHz, CDCl₃)

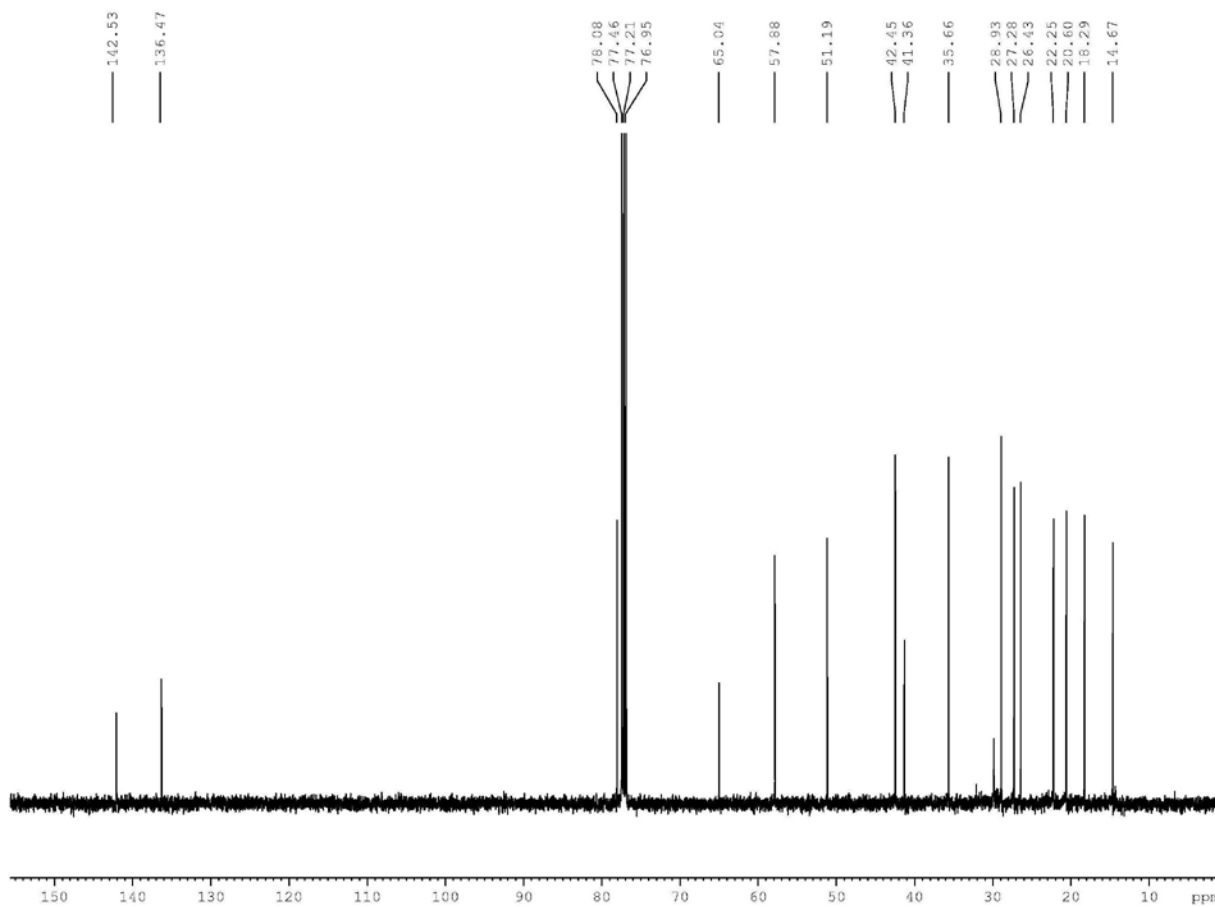


Figura 2S. Espectro de RMN ¹³C-CPD do 6α-metoxi-cipereno (**1**) (125 MHz, CDCl₃)

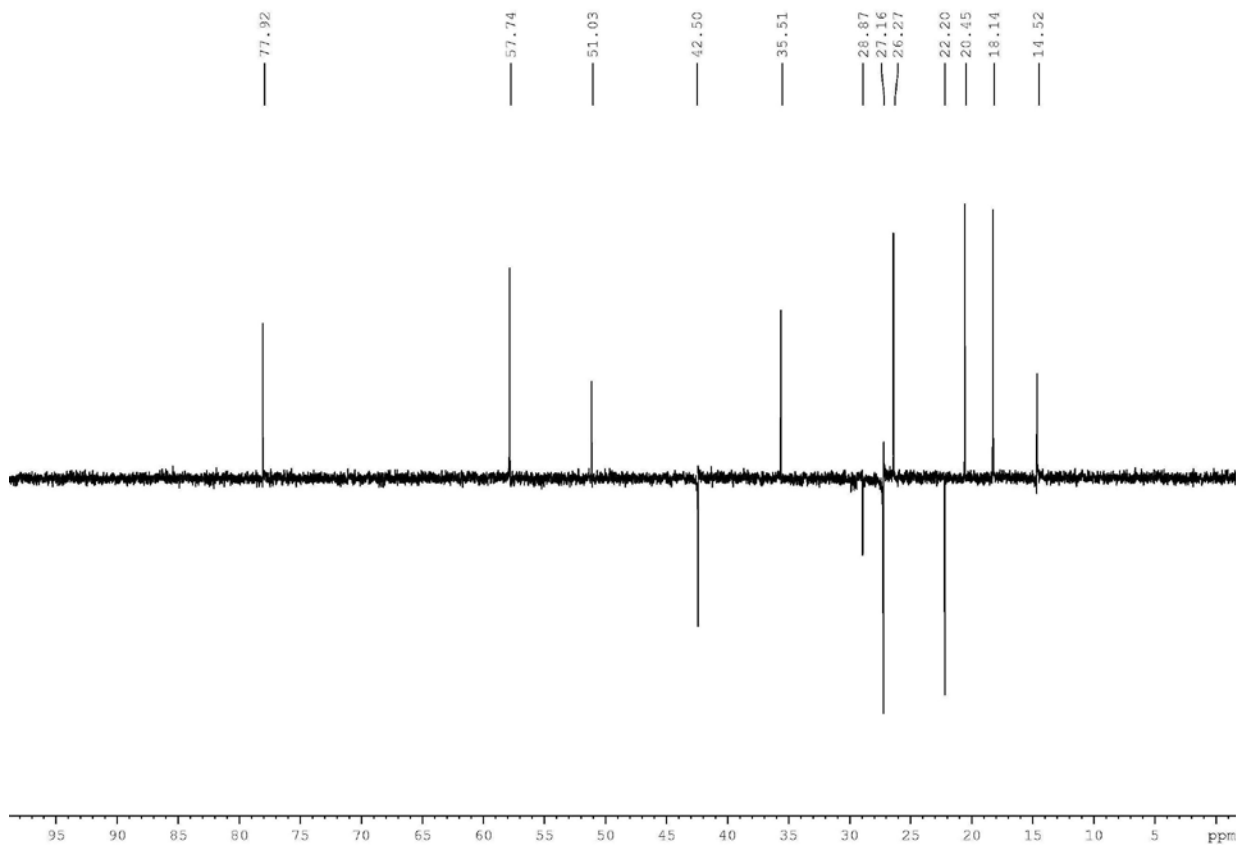


Figura 3S. Espectro de RMN ¹³C-DEPT (θ = 135) do 6α-metoxi-cipereno (**1**) (125 MHz, CDCl₃)

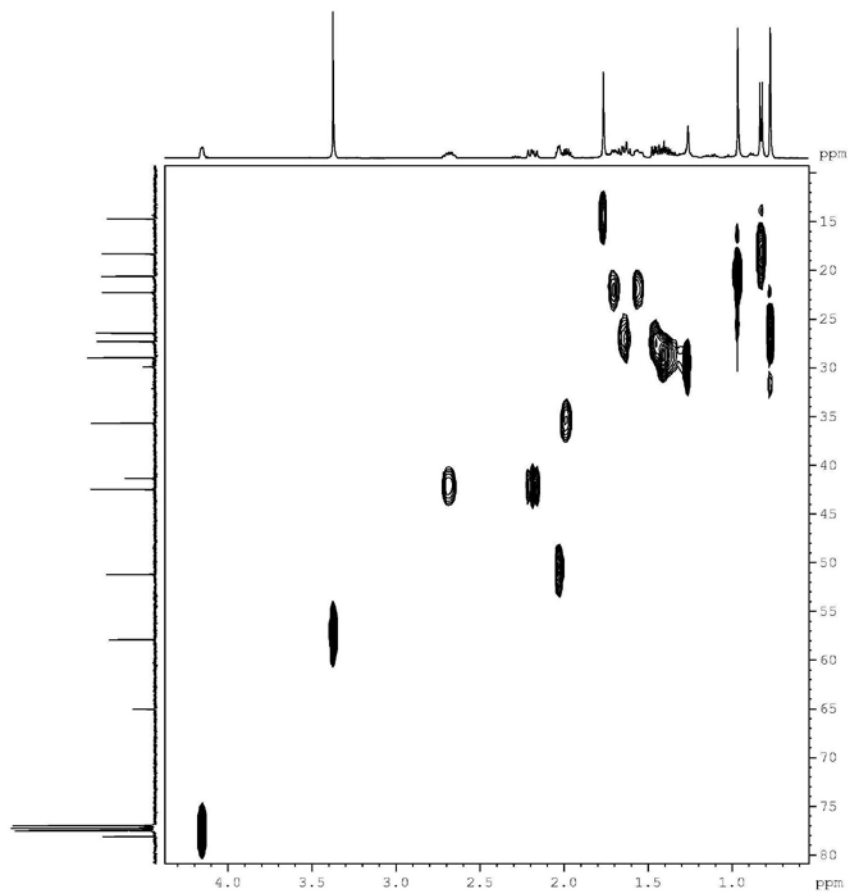


Figura 4S. Mapa de contorno do espectro de RMN HSQC do 6 α -metoxi-cipereno (1) (500 x 125 MHz, CDCl₃)

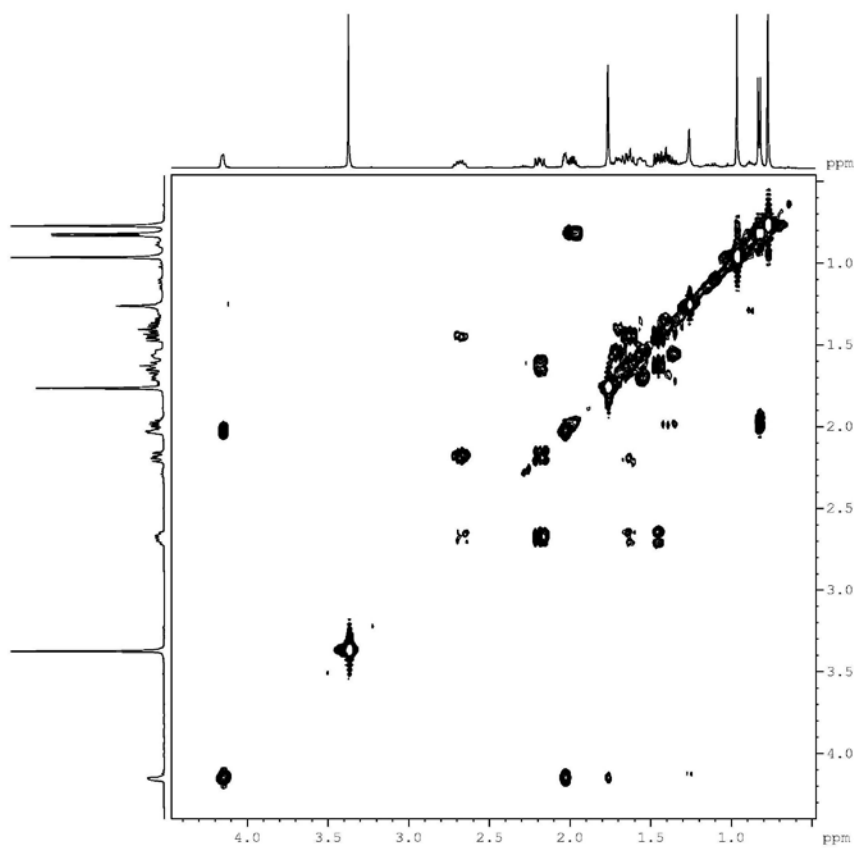


Figura 5S. Mapa de contorno do espectro de RMN ¹H, ¹H-COSY do 6 α -metoxi-cipereno (1) (500 x 500 MHz, CDCl₃)

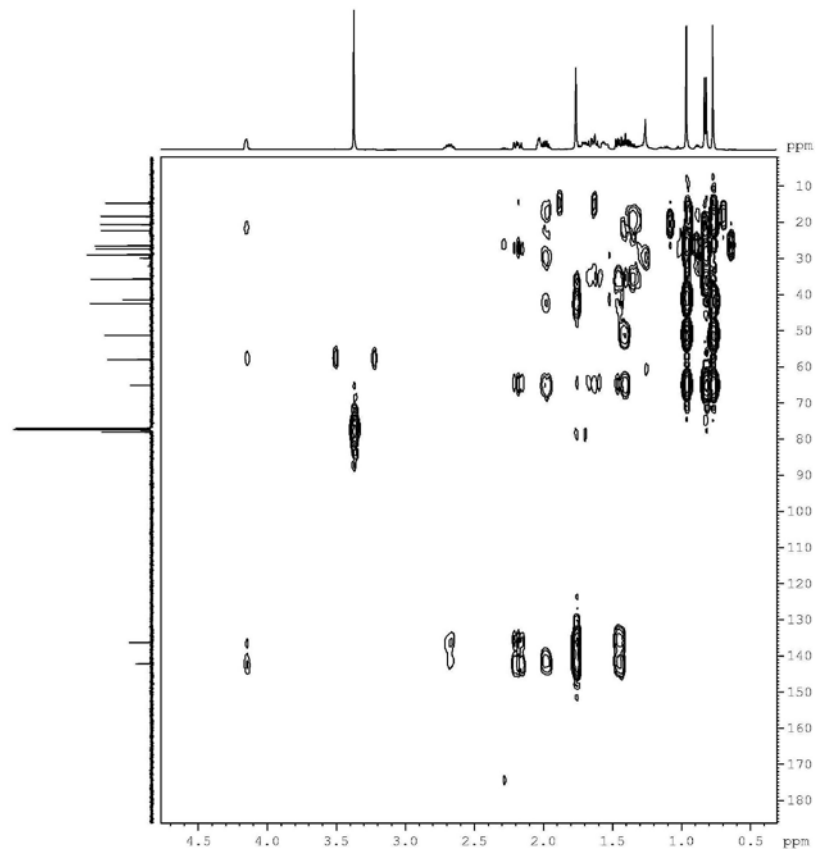


Figura 6S. Mapa de contorno do espectro de RMN HMBC do 6 α -metoxi-cipereno (1) (500 x 125 MHz, CDCl₃)

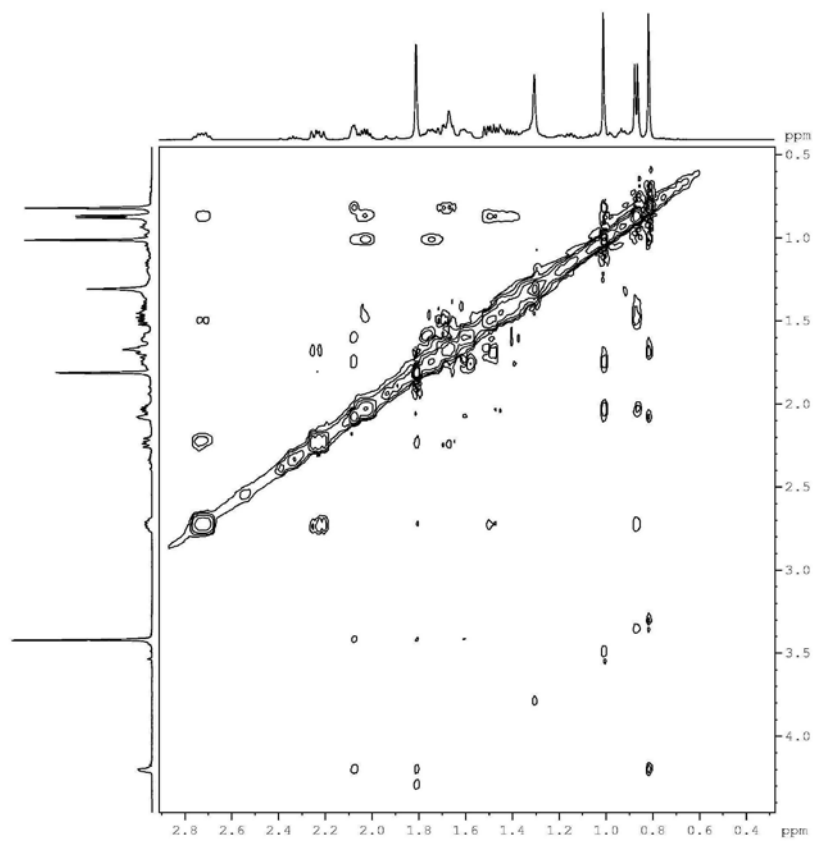


Figura 7S. Mapa de contorno do espectro de RMN do espectro de RMN ¹H, ¹H-NOESY do 6 α -metoxi-cipereno (1) (500 x 500 MHz, CDCl₃)

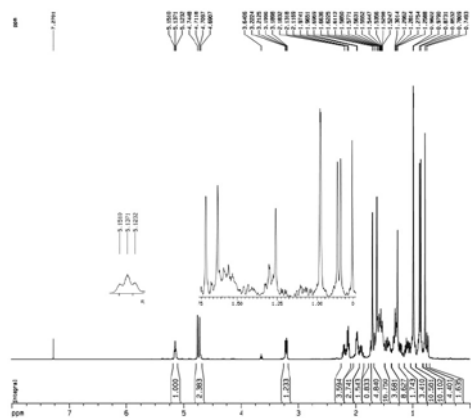


Figura 8S. Espectro de RMN ^1H do damaradienol (2) (CDCl_3 , 500 MHz)

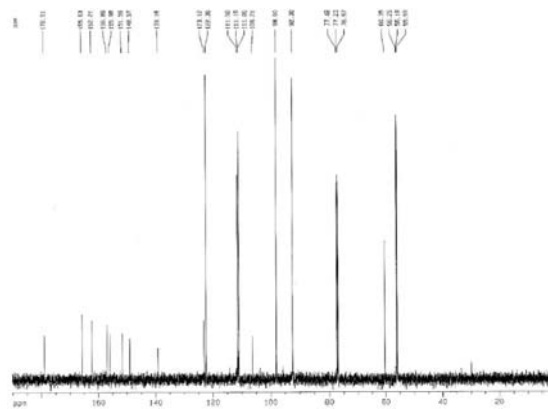


Figura 11S. Espectro de RMN ^{13}C -CPD da retusina (3) (125 MHz, CDCl_3)

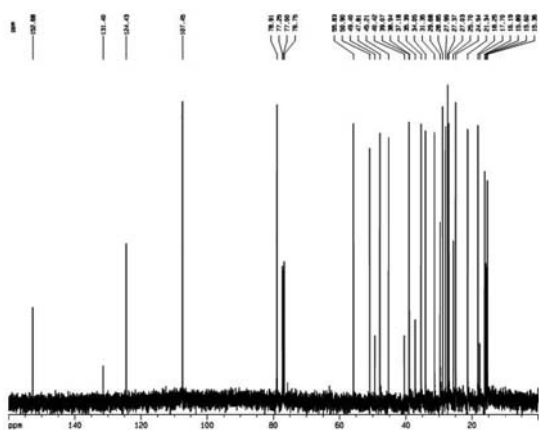


Figura 9S. Espectro de RMN ^{13}C -CPD do damaradienol (2) (125 MHz, CDCl_3)

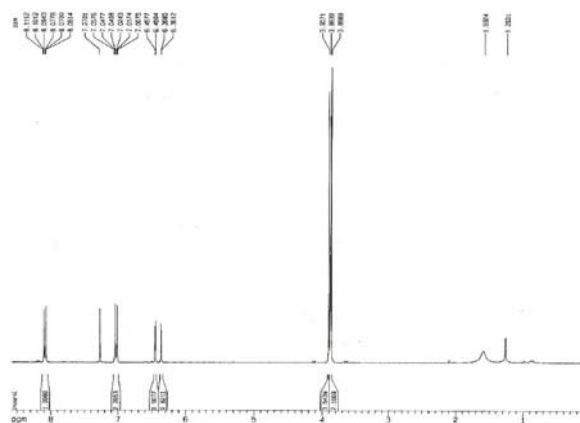


Figura 12S. Espectro de RMN ^1H do 3,7,4'-trimetoxicanferol (4) (300 MHz, CDCl_3)

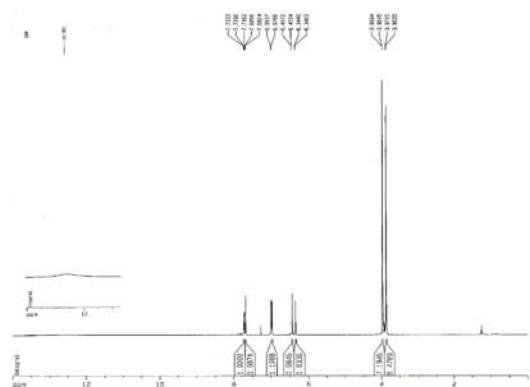


Figura 10S. Espectro de RMN ^1H da retusina (3) (CDCl_3 , 500 MHz)

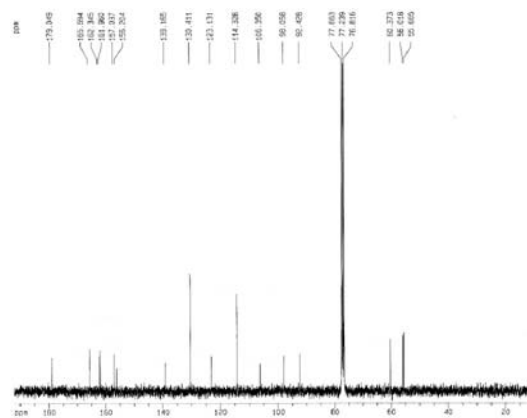


Figura 13S. Espectro de RMN ^{13}C -CPD do 3,7,4'-trimetoxicanferol (4) (75 MHz, CDCl_3)

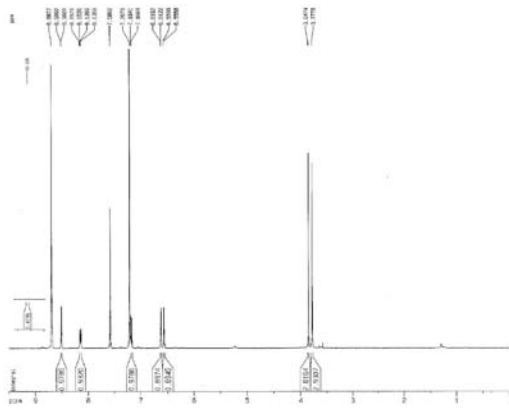


Figura 14S. Espectro de RMN ¹H da ombuína (5) (500 MHz, C₃D₂N)

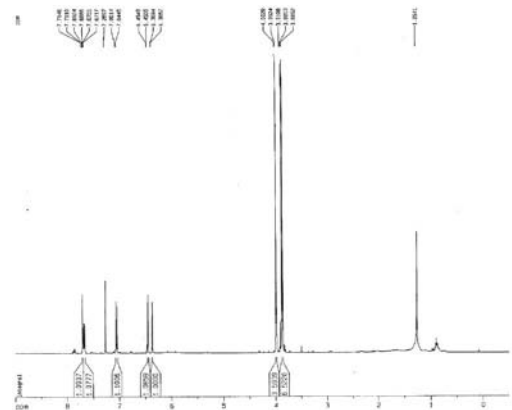


Figura 16S. Espectro de RMN ¹H do pachipodol (6) (500 MHz, CDCl₃)

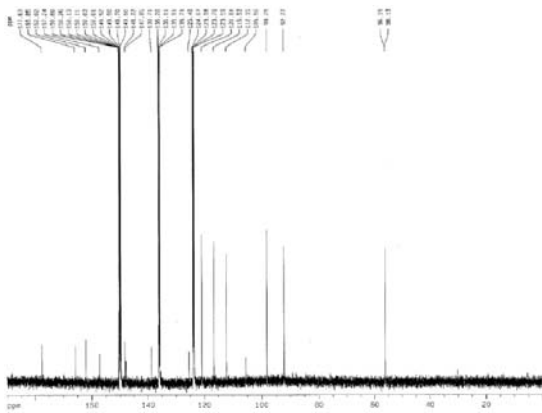


Figura 15S. Espectro de RMN ¹³C-CPD da ombuína (5) (125 MHz, C₃D₂N)

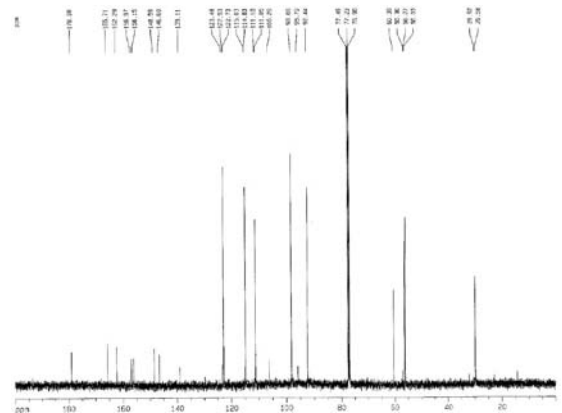


Figura 17S. Espectro de RMN ¹³C-CPD do pachipodol (6) (125 MHz, CDCl₃)

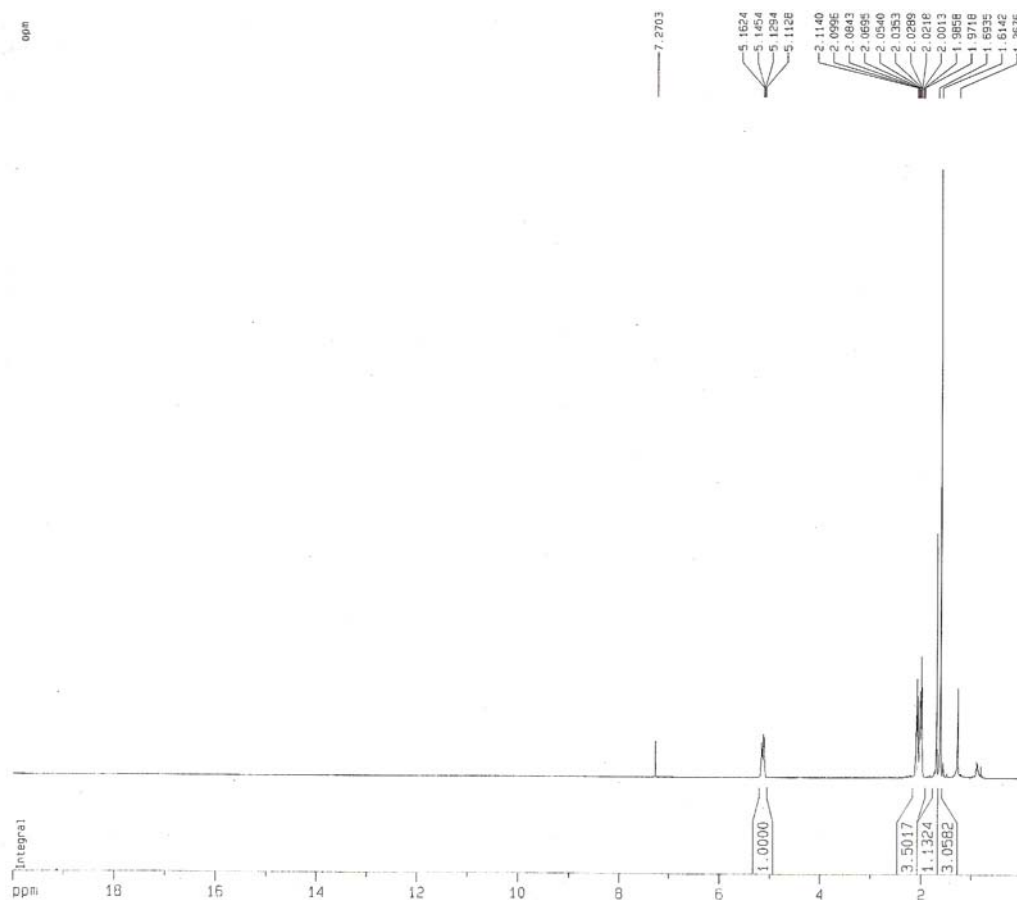


Figura 18S. Espectro de RMN^1H do esqualeno (7) (500 MHz, CDCl_3)

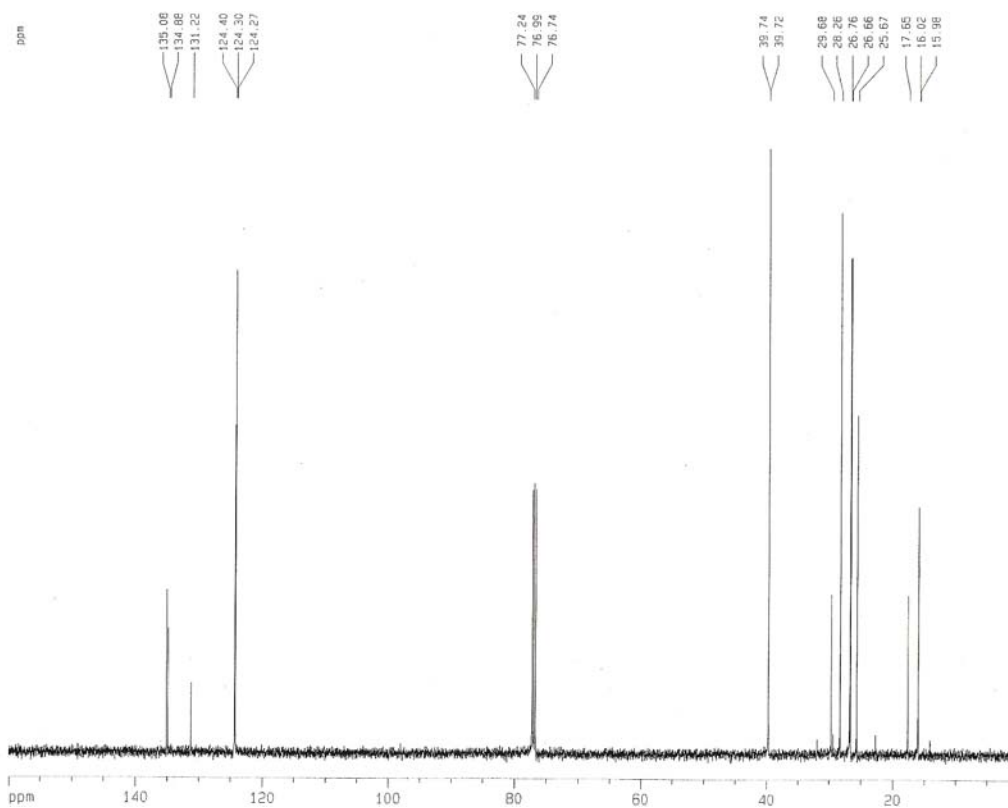


Figura 19S. Espectro de RMN^{13}C -CPD do esqualeno (7) (125 MHz, CDCl_3)

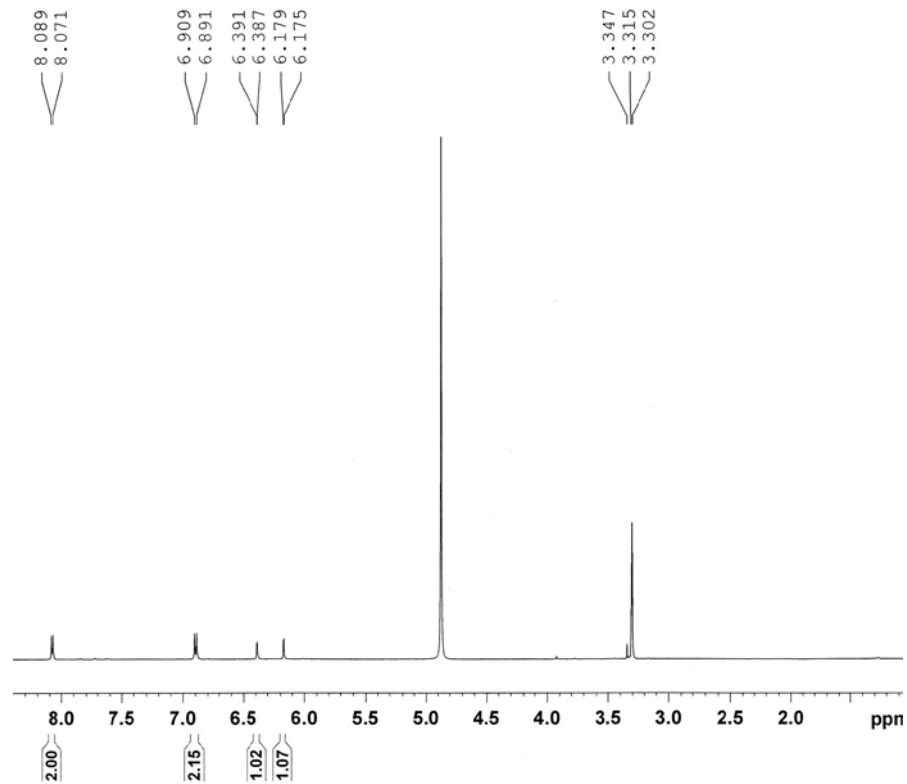


Figura 20S. Espectro de RMN ^1H do canferol (8) (500 MHz, CD_3OD)

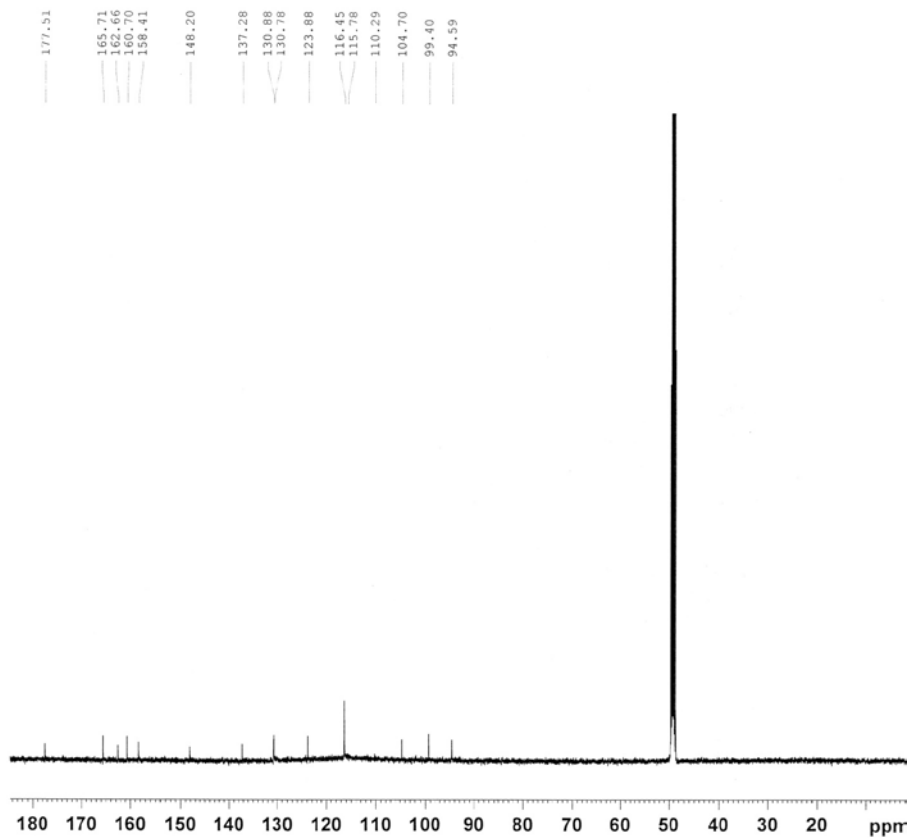


Figura 21S. Espectro de RMN ^{13}C -CPD do canferol (8) (125 MHz, CD_3OD)

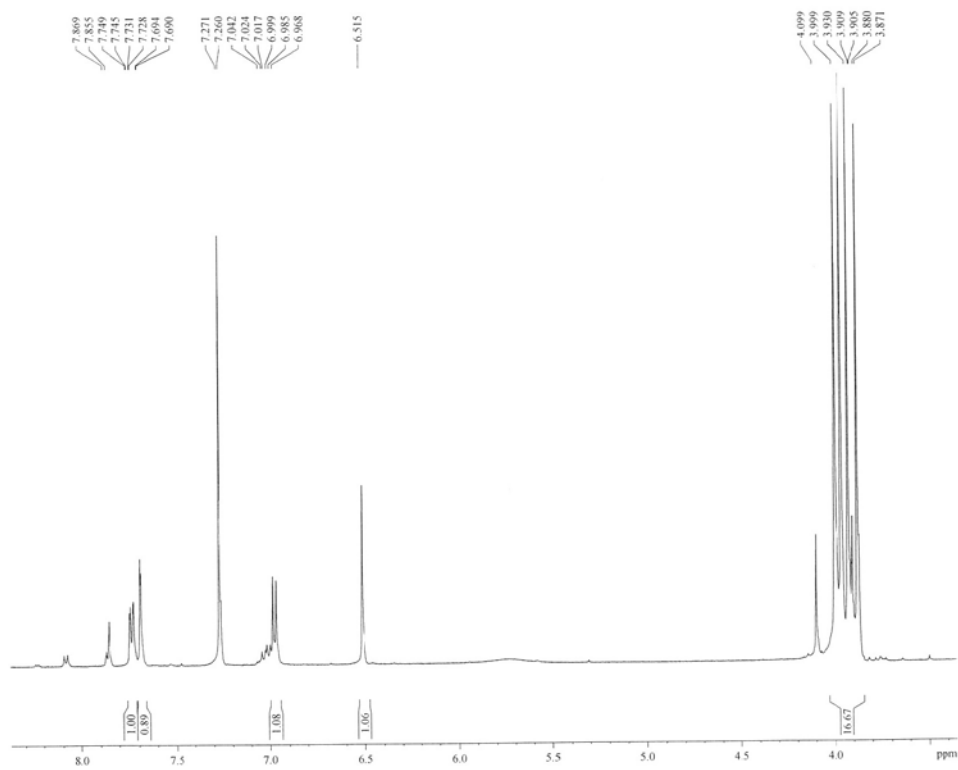


Figura 22S. Espectro de RMN ^1H da casticina (**9**) (500 MHz, CDCl_3)

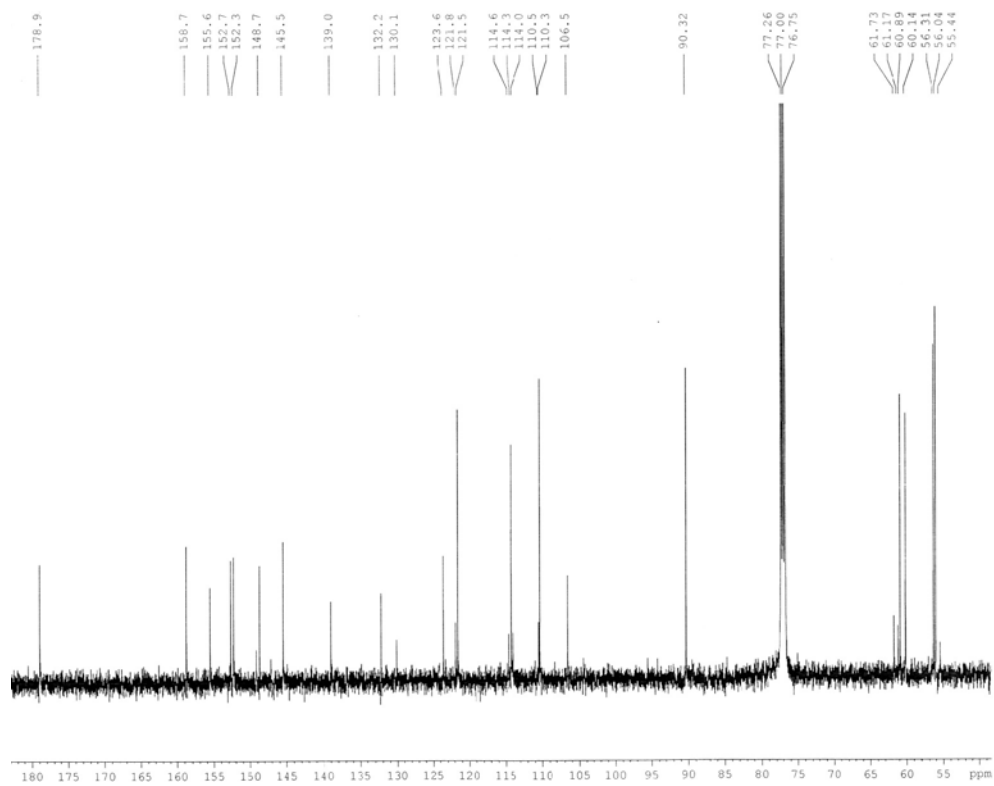


Figura 23S. Espectro de RMN ^{13}C -CPD da casticina (**9**) (125 MHz, CDCl_3)

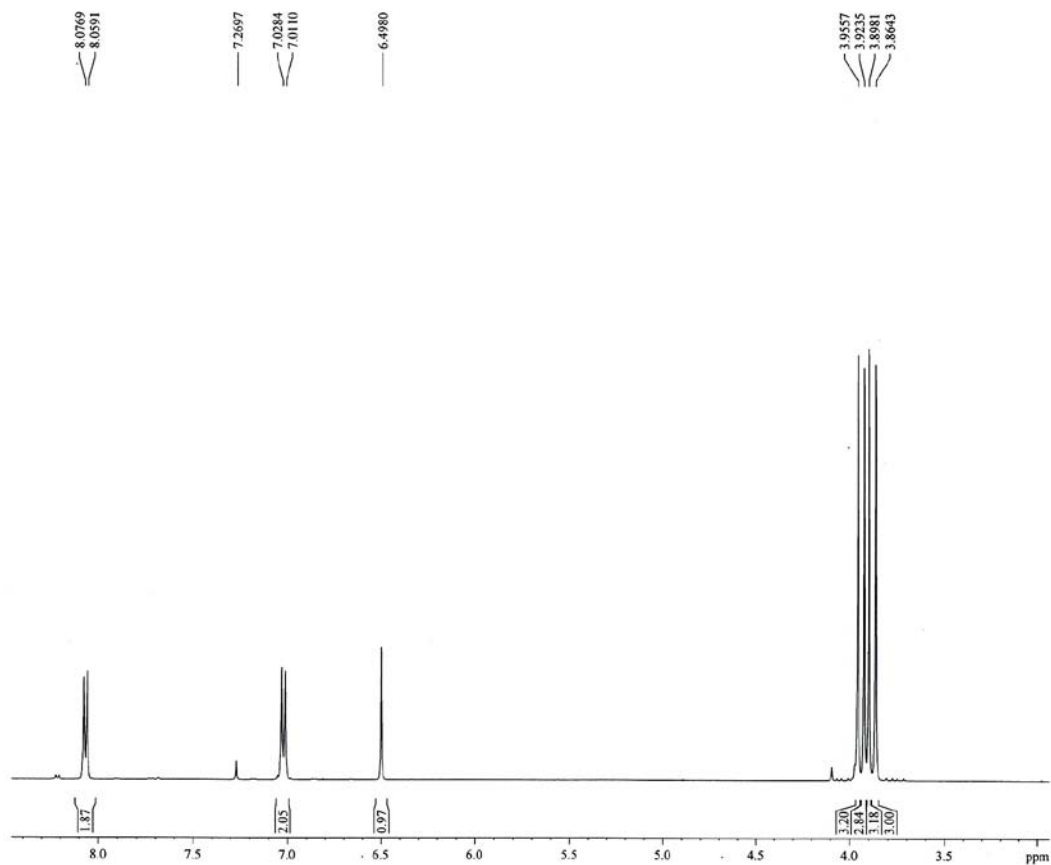


Figura 24S. Espectro de RMN ¹H do 5-hidroxi-3,6,7,4'-tetrametoxiflavona (10) (500 MHz, CDCl₃)

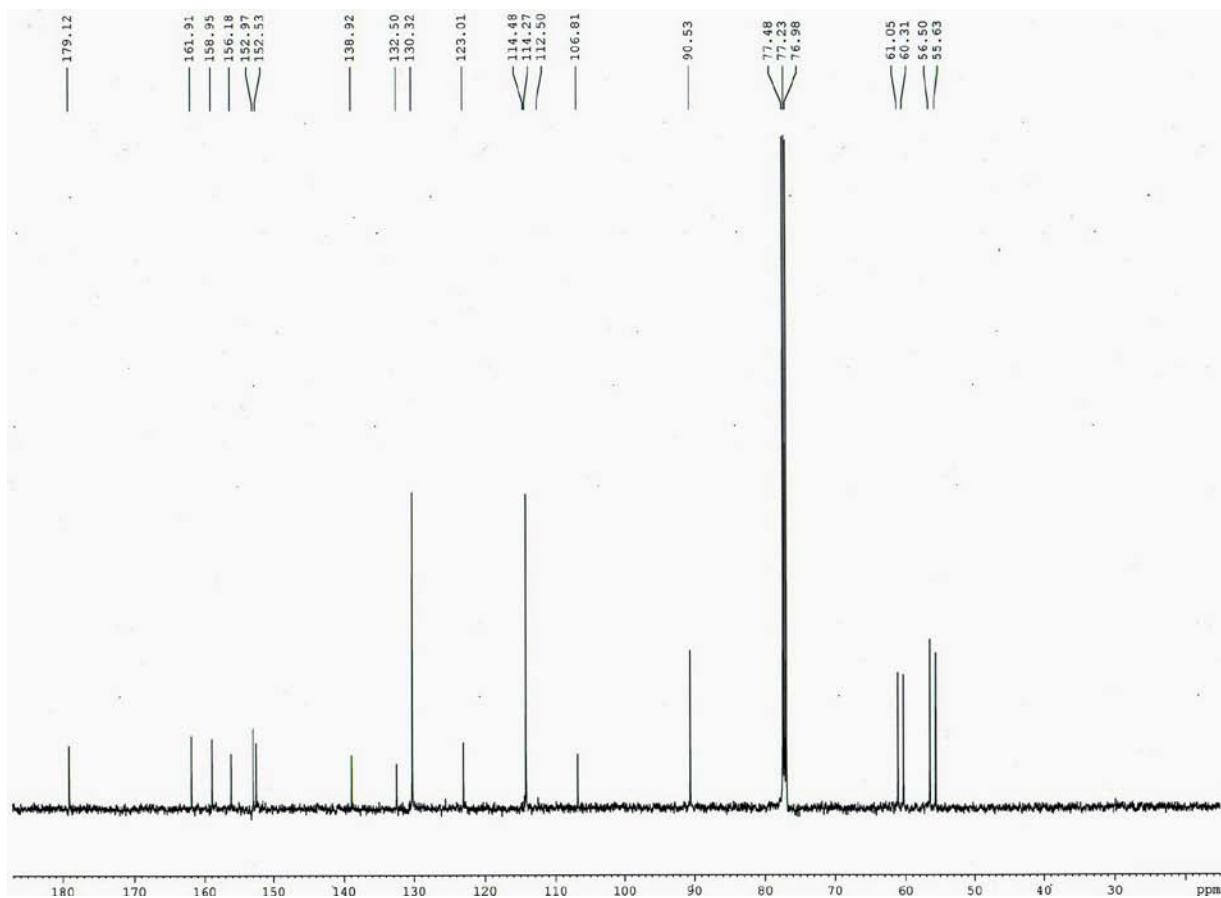


Figura 25S. Espectro de RMN ¹³C-CPD do 5-hidroxi-3,6,7,4'-tetrametoxiflavona (10) (125 MHz, CDCl₃)

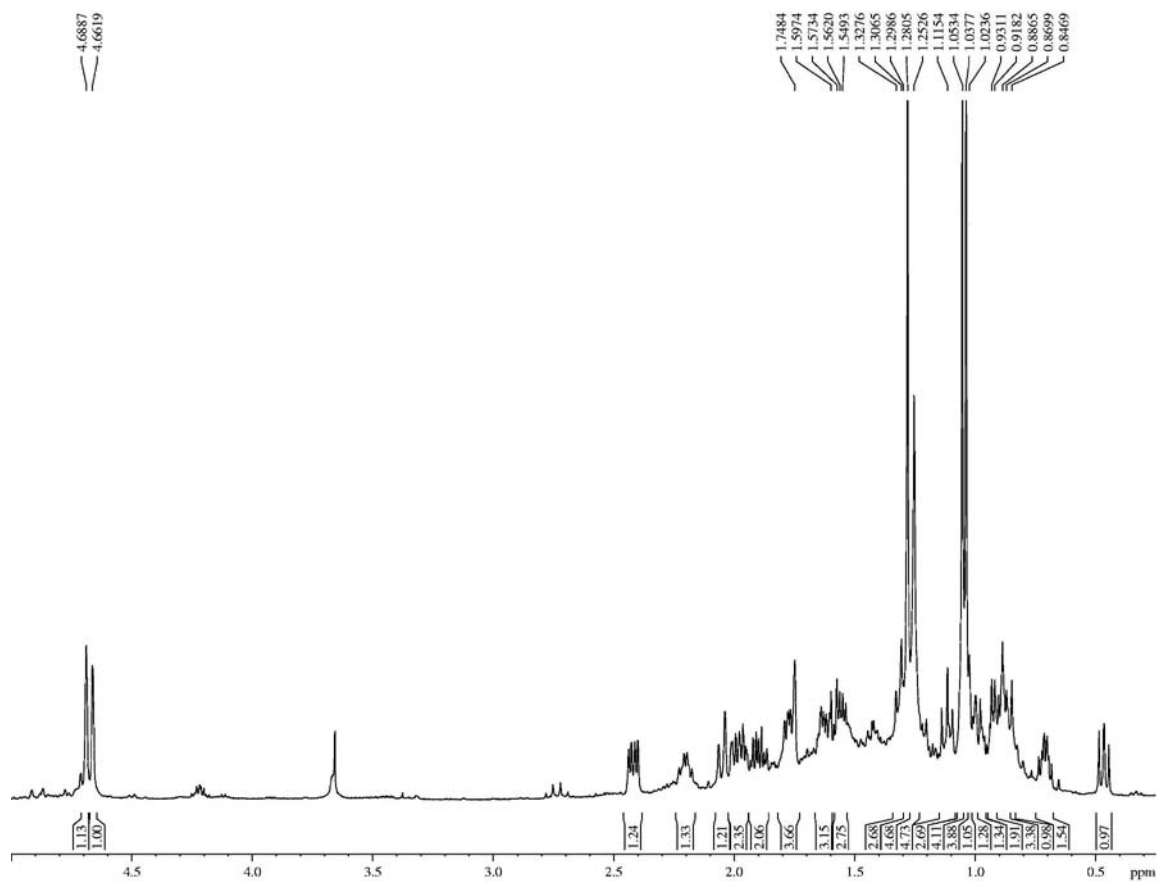


Figura 26S. Espectro de RMN ^1H do espatulenol (**II**) (500 MHz, CDCl_3)

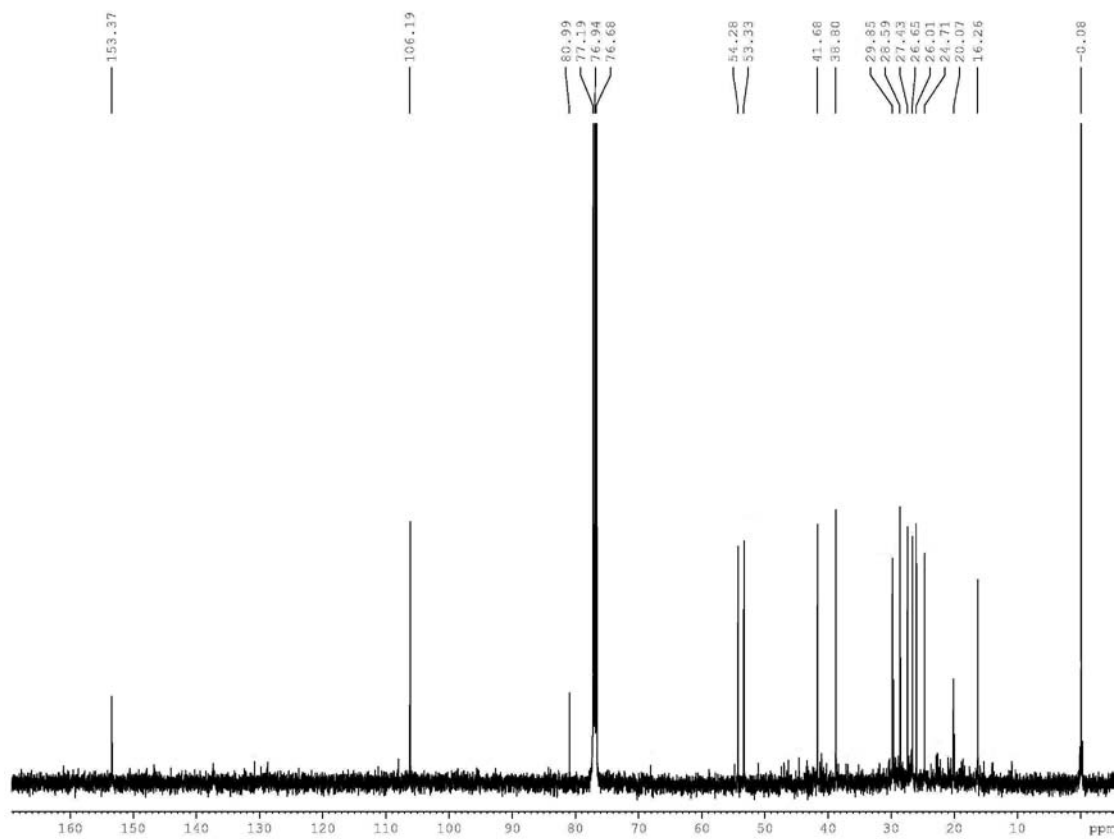


Figura 27S. Espectro de RMN ^{13}C -CPD do espatulenol (**II**) (125 MHz, CDCl_3)

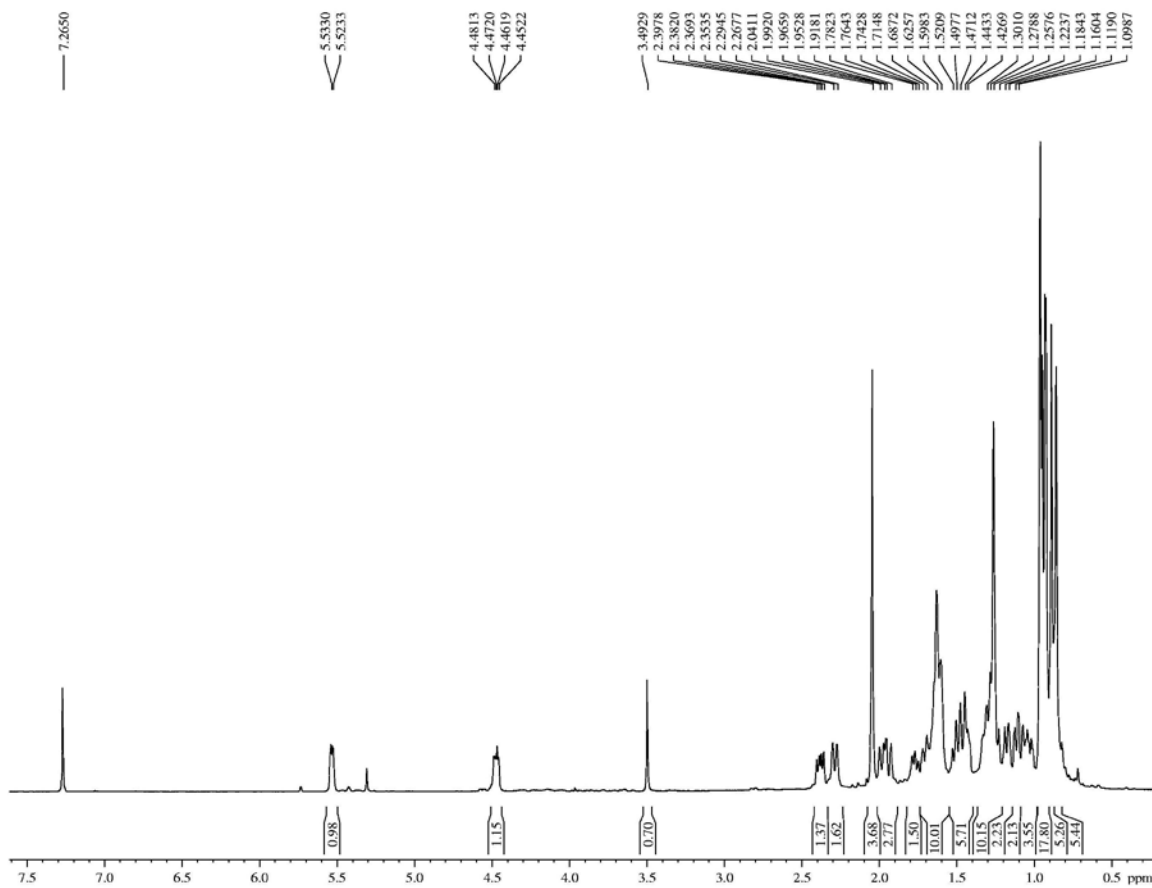


Figura 28S. Espectro de RMN ¹H do ácido acetil aleuritólico (12) (500 MHz, CDCl₃)

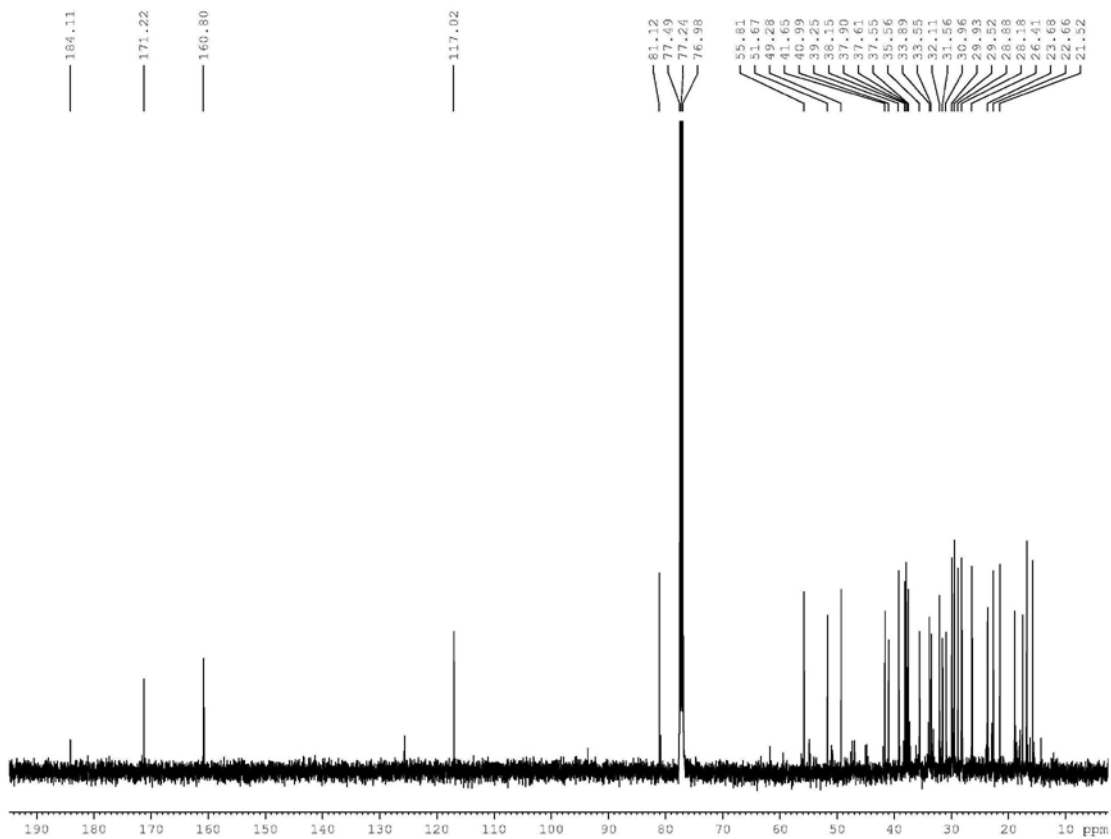


Figura 29S. Espectro de RMN ¹³C-CPD do ácido acetil aleuritólico (12) (125 MHz, CDCl₃)

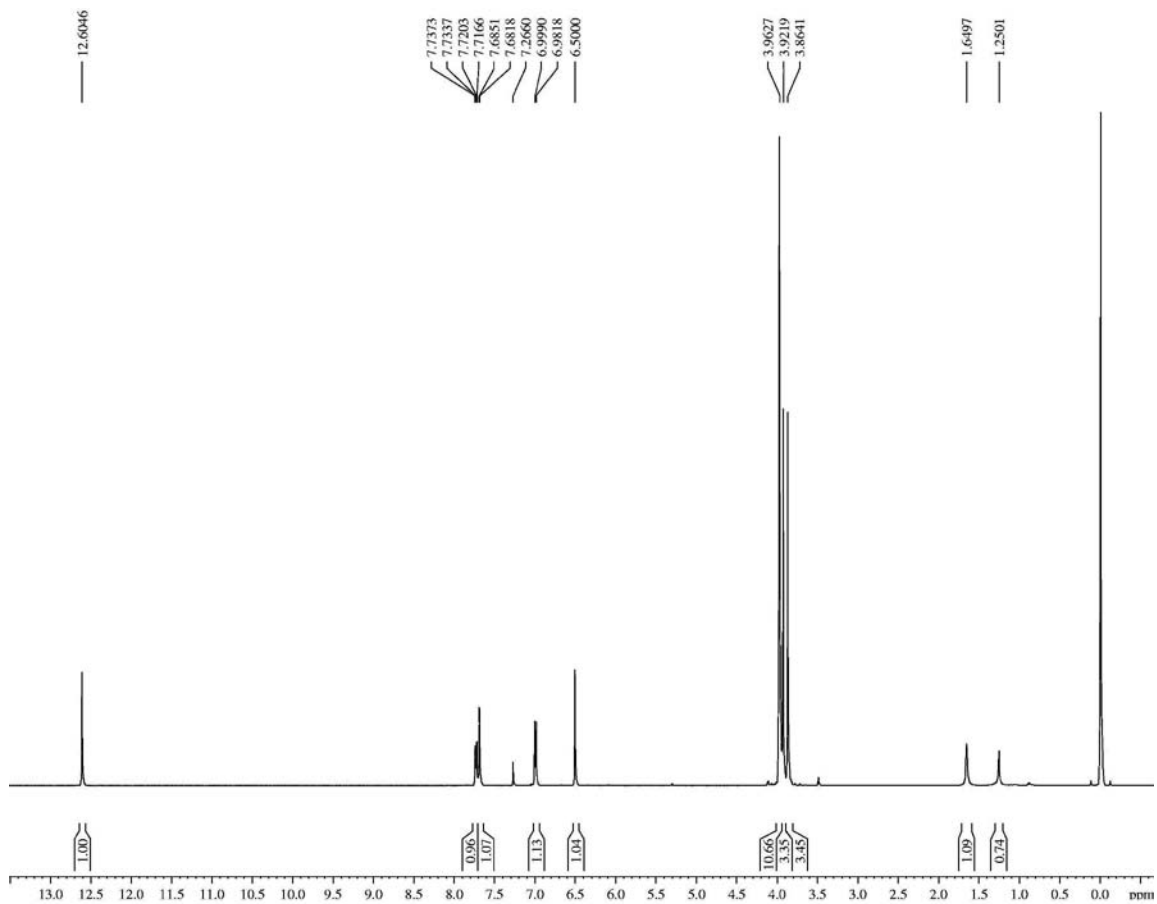


Figura 30S. Espectro de RMN ^1H da artemetina (13) (500 MHz, CDCl_3)

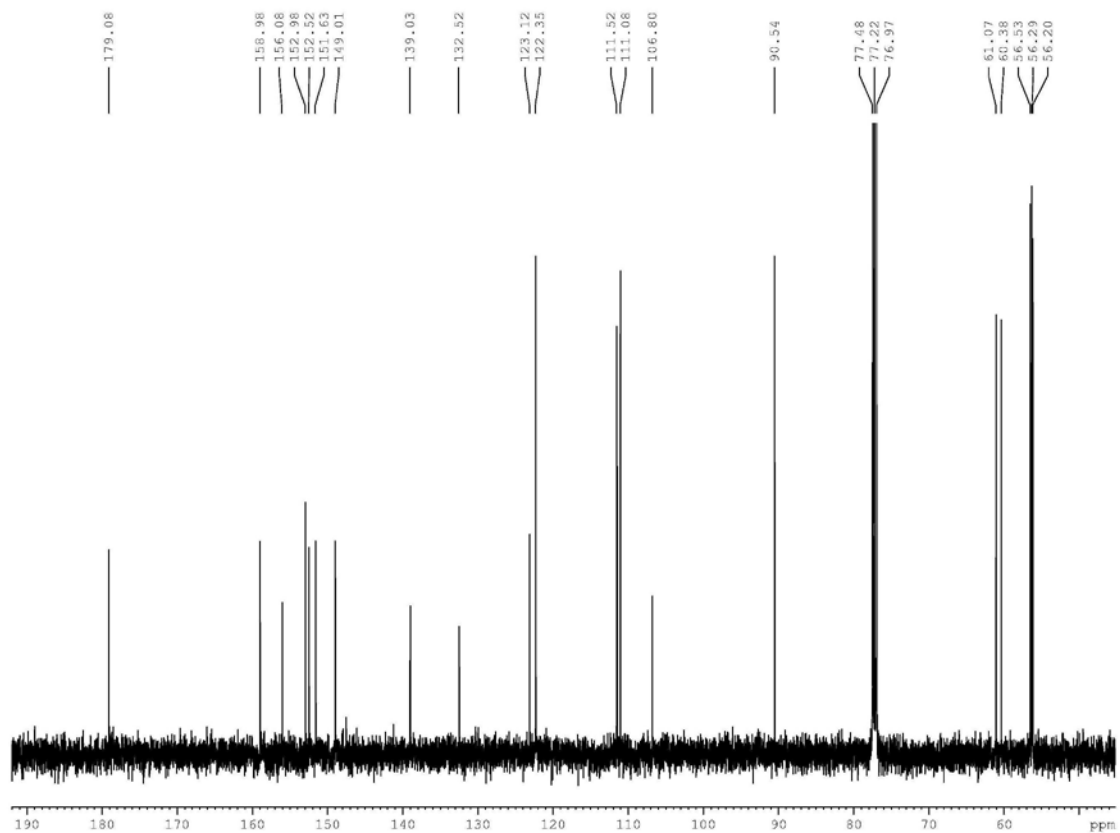


Figura 31S. Espectro de RMN ^{13}C -CPD da artemetina (13) (125 MHz, CDCl_3)