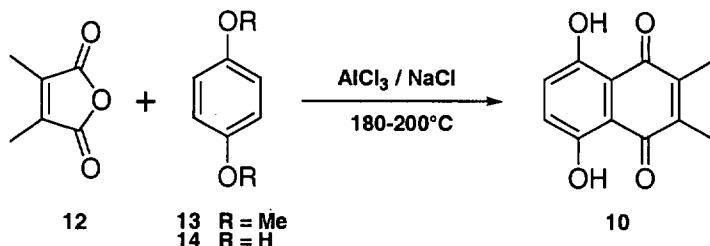
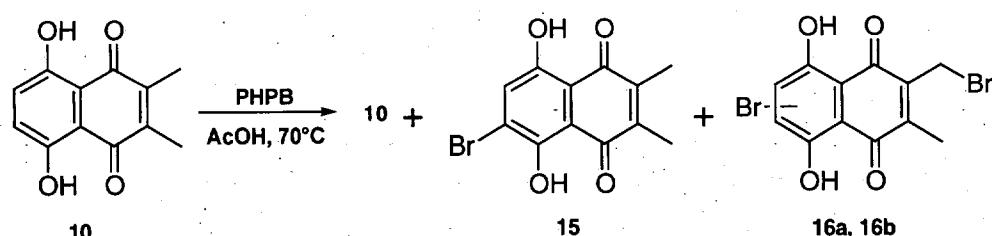


Table 1. Synthesis of 2,3-dimethyl-naphthazarin **10**

Entry	Quinone	Anhydride 12 equivalents	2,3-dimethyl-naphthazarin 10
1	13	1.5	32%
2	13	2	42%
3	13	3	60%
4	13	5	41%
5 ^a	13	5	11%
6	14	3	22%

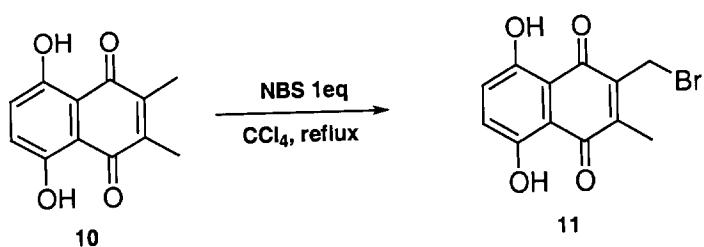
a : 15 eq of AlCl_3 and 7.5 eq of NaCl were used in order to increase the fluidity of the reaction mixture (instead of 9 eq of AlCl_3 and 4.5 eq of NaCl).

Table 2. Bromination of 2,3-dimethyl-naphthazarin **10** with PHPB.

Entry	PHPB equivalents, reaction time	Isolated yields (%)		
		10	15	16a, 16b
1	1.1, 1 hr	46	51	4
2	1.1, 3 hrs	37	40	10
3	1.1, 24 hrs	9	59	20
4	2 ^a , 24 hrs	3	40	30
5	4, 24 hrs	0	18	31

a : PHPB was added in two equal portions at 8hrs interval. nd : not detected.

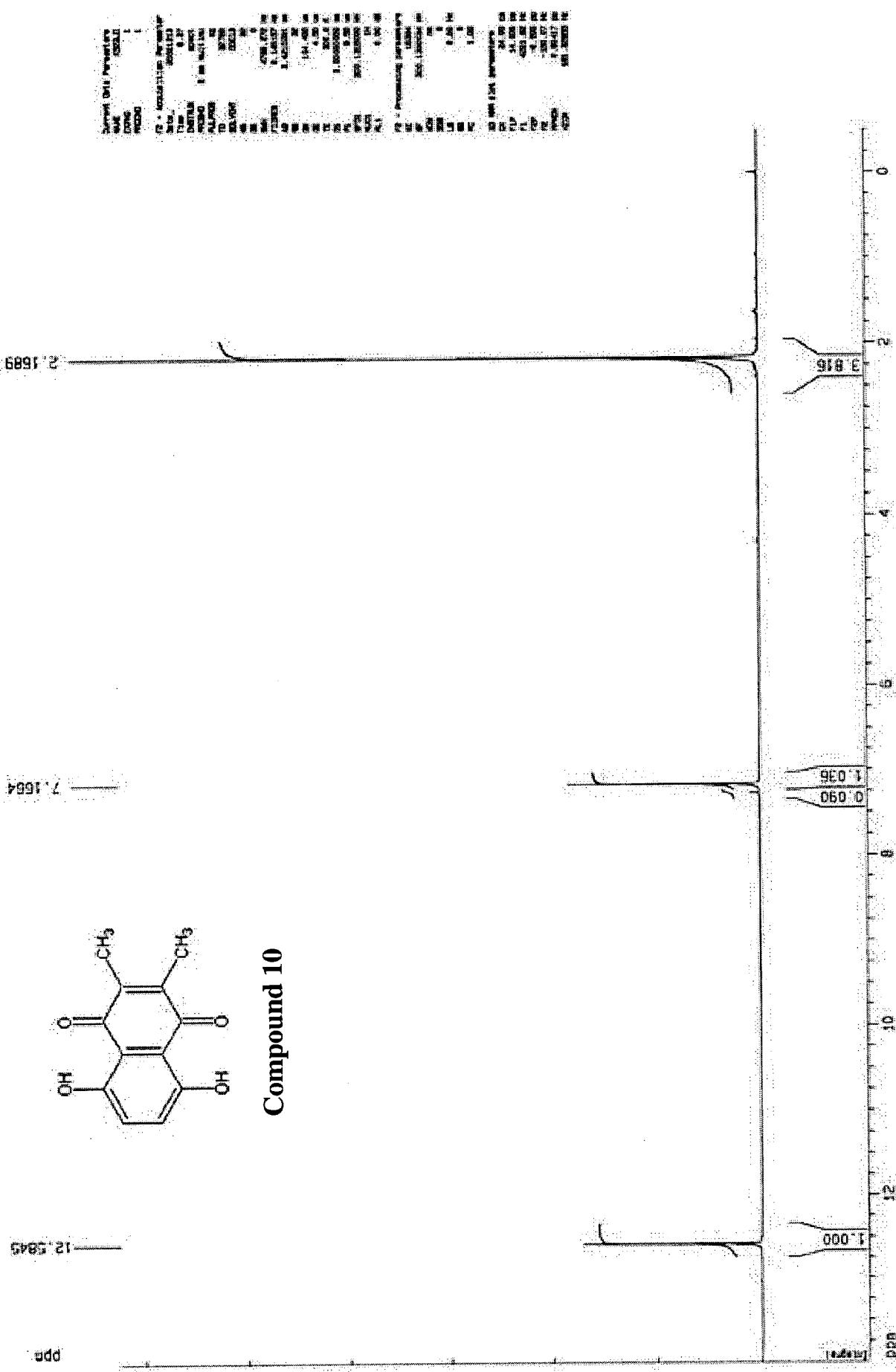
Table 3. Bromination of 2,3-dimethyl-naphthazarin **10** with NBS under irradiation (240W).



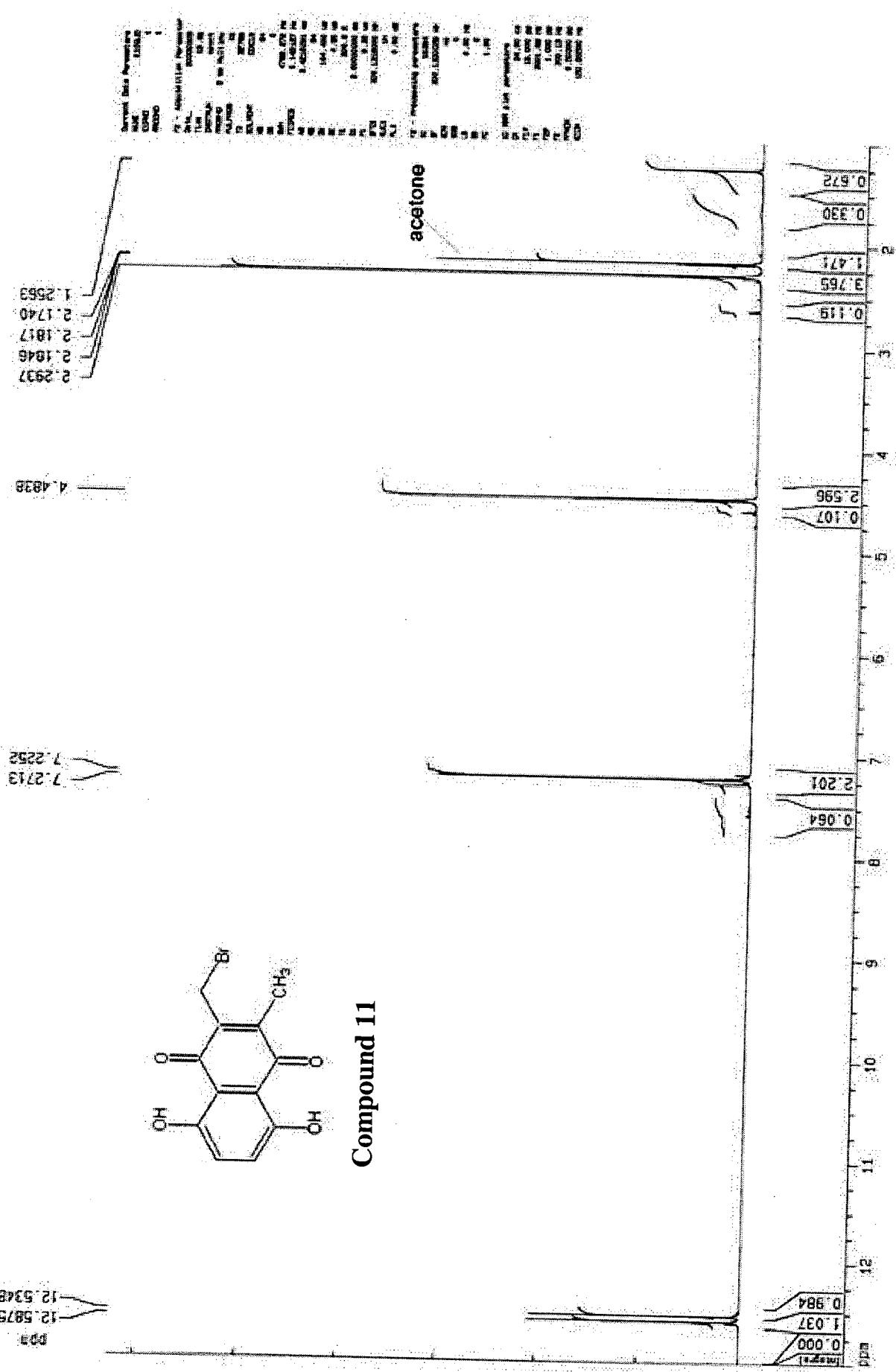
Entry	Reaction time	Isolated yields (%) compounds	
		10	11
1	0.5 hr	70	7
2	1 hr ^a	72	20
3	2 hrs	42	42
4	3 hrs	22	37
5	2 hrs ^b	50	15

a : 500mg scale. b : irradiation power was 340W.

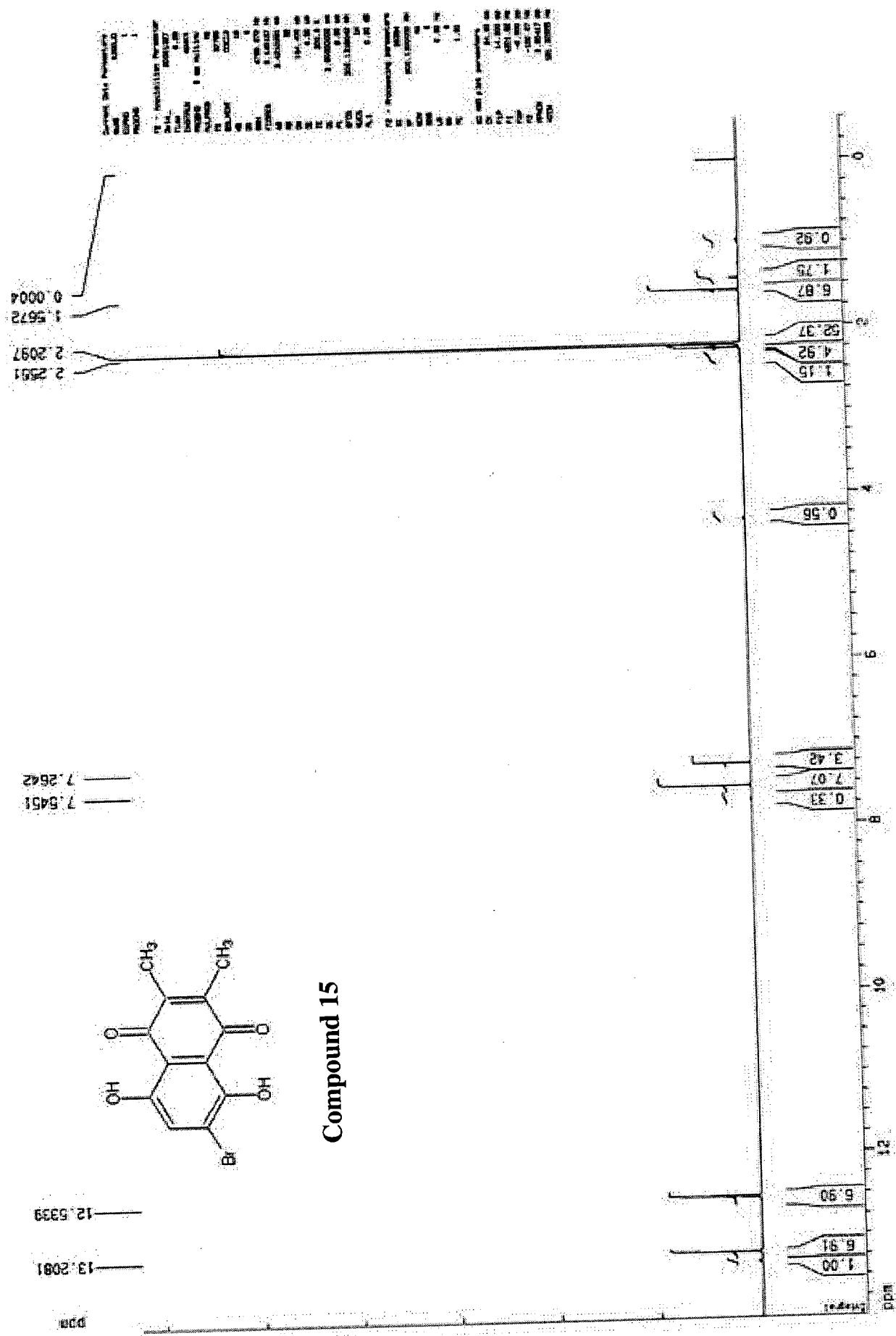
S4



55

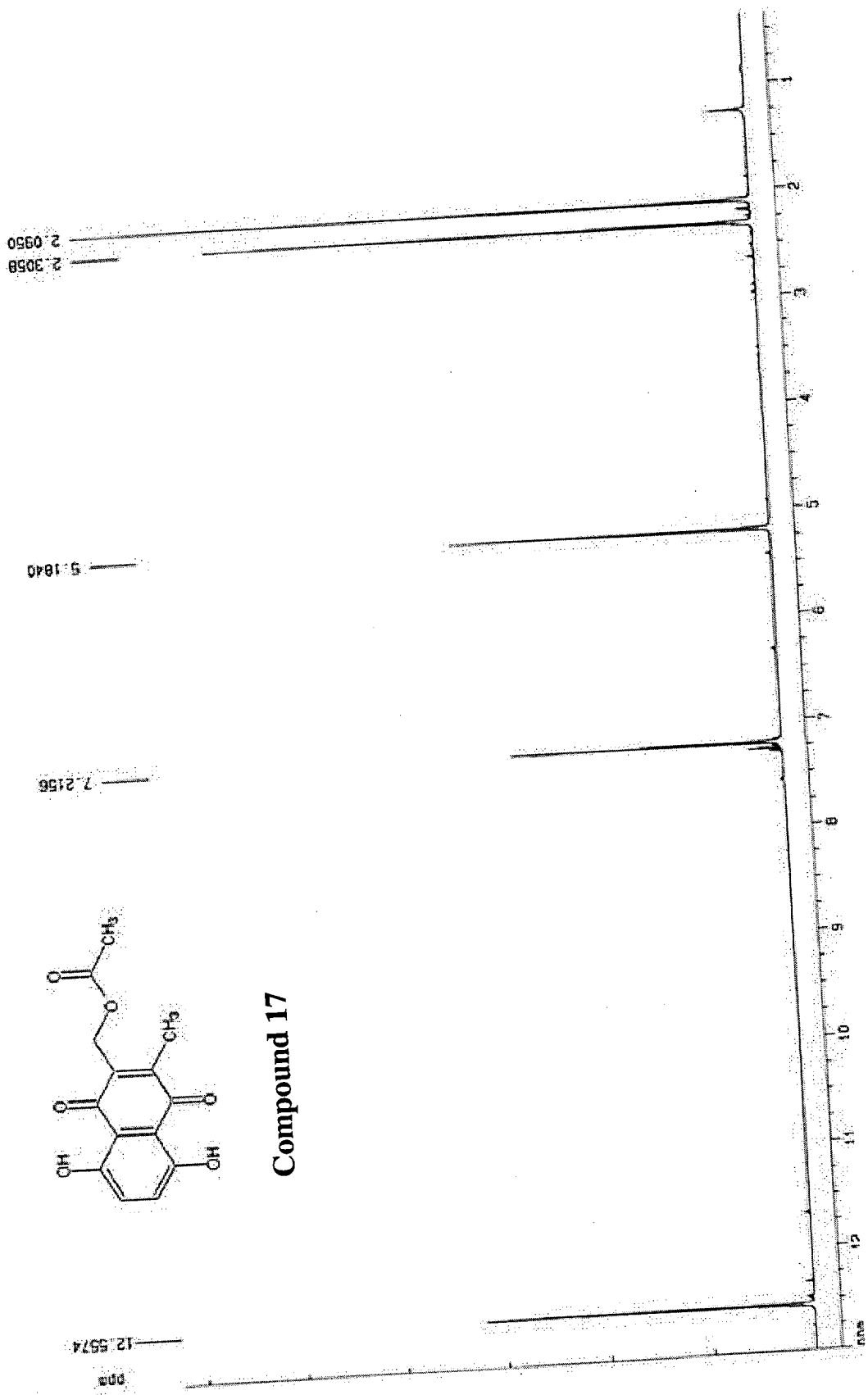


S6



Compound 15

S7



S8

