

Supplementary Information

Kaemtakols A–D, Highly Oxidized Pimarane Diterpenoids with Potent Anti-inflammatory Activity from *Kaempferia takensis*

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Table of Contents

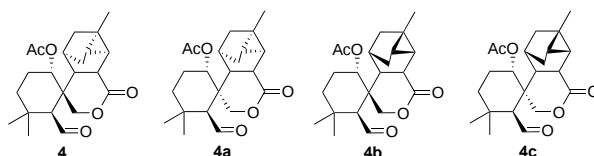
X-ray crystallographic data for compound 1	4
Table S1 DP4+ probability Excel sheets of compound 4	5
Table S2 Conformational analysis of 1	6
Table S3 Conformational analysis of 2	6
Table S4 Conformational analysis of 3	6
Table S5 Conformational analysis of 4	7
Table S6 Conformational analysis of 4a	7
Table S7 Conformational analysis of 4b	7
Table S8 Conformational analysis of 4c	7
Table S9 Coordinates of Compound 1	9
Table S10 Coordinates of Compound 2	10
Table S11 Coordinates of Compound 3	13
Table S12 Coordinates of Compound 4	15
Table S13 Coordinates of Compound 4a	16
Table S14 Coordinates of Compound 4b	17
Table S15 Coordinates of Compound 4c	18
Table S16 Summary of binding energies, amino acid residue involved in the hydrogen bond and hydrophobic interactions of 2 observed in molecular docking studies.....	19
Figure S1 ORTEP drawing of crystal structure of 1	20
Figure S2 ¹ H NMR spectrum (400 MHz) of compound 1 in CDCl ₃	21
Figure S3 ¹³ C NMR spectrum (100 MHz) of compound 1 in CDCl ₃	21
Figure S4 ¹ H– ¹ H COSY spectrum of compound 1 in CDCl ₃	22
Figure S5 HSQC spectrum of compound 1 in CDCl ₃	22
Figure S6 HMBC spectrum of compound 1 in CDCl ₃	23
Figure S7 NOESY spectrum of compound 1 in CDCl ₃	23
Figure S8 HREI (+) MS spectrum of compound 1	24
Figure S9 CD spectrum of compound 1	24
Figure S10 IR spectrum of compound 1	25
Figure S11 ¹ H NMR spectrum (400 MHz) of compound 2 in CDCl ₃	26
Figure S12 ¹³ C NMR spectrum (100 MHz) of compound 2 in CDCl ₃	26
Figure S13 ¹ H– ¹ H COSY spectrum of compound 2 in CDCl ₃	27
Figure S14 HSQC spectrum of compound 2 in CDCl ₃	27

Figure S15 HMBC spectrum of compound 2 in CDCl ₃	28
Figure S16 NOESY spectrum of compound 2 in CDCl ₃	28
Figure S17 HREI (+) MS spectrum of compound 2	29
Figure S18 CD spectrum of compound 2	29
Figure S19 IR spectrum of compound 2	30
Figure S20 ¹ H NMR spectrum (400 MHz) of compound 3 in CDCl ₃	31
Figure S21 ¹³ C NMR spectrum (100 MHz) of compound 3 in CDCl ₃	31
Figure S22 ¹ H– ¹ H COSY spectrum of compound 3 in CDCl ₃	32
Figure S23 HSQC spectrum of compound 3 in CDCl ₃	32
Figure S24 HMBC spectrum of compound 3 in CDCl ₃	33
Figure S25 NOESY spectrum of compound 3 in CDCl ₃	33
Figure S26 HREI (+) MS spectrum of compound 3	34
Figure S27 CD spectrum of compound 3	34
Figure S28 IR spectrum of compound 3	35
Figure S29 ¹ H NMR spectrum (400 MHz) of compound 4 in CDCl ₃	36
Figure S30 ¹³ C NMR spectrum (100 MHz) of compound 4 in CDCl ₃	36
Figure S31 ¹ H– ¹ H COSY spectrum of compound 4 in CDCl ₃	37
Figure S32 HSQC spectrum of compound 4 in CDCl ₃	37
Figure S33 HMBC spectrum of compound 4 in CDCl ₃	38
Figure S34 NOESY spectrum of compound 4 in CDCl ₃	38
Figure S35 HREI (+) MS spectrum of compound 4	39
Figure S36 CD spectrum of compound 4	39
Figure S37 IR spectrum of compound 4	40

X-ray crystallographic data for compound 1. From a solution of MeOH/EtOH (1:1) and MeOH using the vapor diffusion method, colorless crystals were obtained for kaemtakol A (**1**), respectively. X-ray crystallographic analyses were performed on a Bruker APEX-II CCD diffractometer with Mo K α radiation at 150 K. Crystallographic data have been deposited in the Cambridge Crystallographic Data Center (Deposition number: CCDC 2247367 for **1**). The data can be obtained free of charge via www.ccdc.cam.ac.uk/data_request/cif, or by emailing data_request@ccdc.cam.ac.uk, or by contacting The Cambridge Crystallographic Data Centre, 12 Union Road, Cambridge CB2 IEZ, UK, fax: +44 1223 336033.

Crystal Data and structure refinement for 1.

Empirical formula	C ₂₄ H ₃₄ O ₇
Formula weight	434.51
Temperature/K	296
Crystal system	hexagonal
Space group	<i>P</i> 6 ₁
<i>a</i> /Å	24.4225(6)
<i>b</i> /Å	24.4225(6)
<i>c</i> /Å	7.0814(3)
α /°	90
β /°	90
γ /°	120
Volume/Å ³	3657.9(2)
<i>Z</i>	6
ρ_{calc} g/cm ³	1.184
μ /mm ⁻¹	0.086
<i>F</i> (000)	1404.0
Crystal size/mm ³	0.18 × 0.1 × 0.08
Radiation	MoK α (λ = 0.71073 Å)
2 θ range for data collection/°	6.068 to 50.77
Index ranges	-29 ≤ <i>h</i> ≤ 29, -29 ≤ <i>k</i> ≤ 29, -8 ≤ <i>l</i> ≤ 8
Reflections collected	101126
Independent reflections	4471 [<i>R</i> _{int} = 0.0996, <i>R</i> _{sigma} = 0.0298]
Data/restraints/parameters	4471/152/350
Goodness-of-fit on <i>F</i> ²	1.241
Final <i>R</i> indexes [<i>I</i> ≥ 2 σ (<i>I</i>)]	<i>R</i> ₁ = 0.0695, <i>wR</i> ₂ = 0.1416
Final <i>R</i> indexes [all data]	<i>R</i> ₁ = 0.0743, <i>wR</i> ₂ = 0.1438
Largest diff. peak/hole / e Å ⁻³	0.19/-0.18
Flack parameter	-0.1(4)
CCDC No.	2247367



Isomer	Unscaled DP4+ (%)			Scaled DP4+ (%)			DP4+ (%)		
	¹ H	¹³ C	¹ H+ ¹³ C	¹ H	¹³ C	¹ H+ ¹³ C	¹ H	¹³ C	¹ H+ ¹³ C
4	99.77	11.85	100.00	100.00	10.83	100.00	100.00	1.61	100.00
4a	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4b	0.00	88.15	0.00	0.00	89.17	0.00	0.00	98.39	0.00
4b	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table S1. DP4+ probability Excel sheets of compound 4

Settings			Type of data (shifts)				TMS 1H	31.560	TMS 13C	196.609
Default			Shielding tensors				Default	μ	σ	ν
							13Cu,sp2	-0.920	1.748	5.364
							13Cu,sp3	2.909	1.600	6.269
							1Hu,sp2	0.347	0.118	4.911
							1Hu,sp3	-0.018	0.112	✚3.651
							13Cs	-	1.557	6.227
							1Hs	-	0.104	3.893
Isomer N ^o			1	2	3	4	5	6	7	8
DP4+ (%)		H data	100.00%	0.00%	0.00%	0.00%	-	-	-	-
		C data	1.61%	0.00%	98.39%	0.00%	-	-	-	-
		All data	100.00%	0.00%	0.00%	0.00%	-	-	-	-
Type	sp2?	Exp	1	2	3	4	5	6	7	8
C		23.6	170.6247149	166.0710363	170.2803407	166.1648133				
C		34	159.6326916	158.7326665	159.5833846	158.6731829				
C		33.1	162.3857055	165.3667183	162.1938087	165.3556622				
C		34.8	159.4585931	161.4534847	159.2441987	161.5564827				
C		22.9	170.9776921	170.2452721	170.9176461	170.0406355				
C		73.8	121.2870154	125.9502986	121.2986244	125.9837441				
C	x	169.4	30.00567633	29.50233659	29.94643676	29.5232917				
C		21.6	173.1791204	173.3596637	173.0619562	173.2549048				
C		43.5	150.3058609	150.7436402	150.4972178	149.6114323				
C		69.7	127.2923689	125.7732972	127.1125409	126.0997097				
C	x	163.7	37.58403402	36.54194245	37.56537018	36.5265967				
C	x	122.7	73.79334	72.18400054	73.84737816	72.19256535				
C	x	154.6	39.35147054	39.41982371	39.31841577	38.88412405				
C		28.6	158.1969576	159.9276331	159.4091554	159.1315829				
C		17.6	176.634643	176.5119774	176.3068669	176.4159361				
C		20.9	171.9107406	171.2955118	171.5179898	171.1305489				
C		56.2	136.9179855	135.4693969	136.7051155	135.8655984				
C	x	202.9	-6.033386469	-8.52153859	-6.00279668	-8.74188649				
C		23.5	168.2978489	167.9089731	168.7279557	168.5331785				
C		21.6	170.4182378	169.6712606	170.2269731	169.1635508				
C		34.8	164.7061369	164.3018649	163.5504723	164.8702899				
C		35.3	157.0964555	158.016251	156.5687877	157.6556703				
H		5.13	26.3956594	25.12242106	26.43924485	25.03879107				
H		2.17	29.18979415	29.2794193	29.12170571	29.27478807				
H		3.24	28.17063527	28.25612714	28.09744689	28.23263248				
H		1.53	30.2478995	29.61722731	30.24846699	29.61319196				
H		1.63	29.68430051	30.11062334	29.66112114	30.15307149				
H		1.97	29.50667621	29.66704999	29.53082974	29.67073423				
H		1.97	29.51724894	29.77219468	29.4965086	29.77183989				
H		4.83	26.25486691	27.17309897	26.16407482	27.10886389				
H		4.59	26.86488788	26.7618616	26.90755485	26.81057884				
H		0.64	30.97449963	31.048232	30.04327428	29.99615495				
H		1.77	29.91653175	30.03283627	30.81530795	30.89007355				
H	x	9.93	21.20024172	21.25913544	21.15872619	21.30482538				
H		1.3	30.22775554	30.29404829	30.18502727	30.18727246				
H		0.53	30.84150798	30.8786278	29.59963209	29.72533874				
H		1.54	29.74282353	29.65612347	30.90177494	31.08462943				
H		2.84	28.85042375	28.81829948	28.87810566	28.82935975				
H		1.05	30.41044685	30.5082347	30.40293008	30.49165934				
H		1.28	30.12671668	30.09052347	30.06135083	30.09520624				
H		2.05	29.39710183	29.46202128	29.39387589	29.44727568				
H		1.32	30.18183034	30.1908	30.16492085	30.20592977				

Table S2 Conformational analysis of **1**

Conformers of 1	Gibbs Free Energy (Hartree)	Gibbs Free Energy (kcal/mol)	Relative Gibbs Free Energy (kcal/mol)	Population (%)
I	-1460.769971	-916633.156803	2.294767	1.3
II	-1460.773628	-916635.451570	0.000000	61.0
III	-1460.772798	-916634.930745	0.520825	25.6
IV	-1460.771421	-916634.066678	1.384893	6.0
V	-1460.771241	-916633.953728	1.497842	5.0
VI	-1460.769776	-916633.034440	2.417130	1.1

Table S3 Conformational analysis of **2**

Conformers of 2	Gibbs Free Energy (Hartree)	Gibbs Free Energy (kcal/mol)	Relative Gibbs Free Energy (kcal/mol)	Population (%)
I	-1308.178343	-820881.910233	0.080947	18.1
II	-1308.178305	-820881.886388	0.104793	17.4
III	-1308.177672	-820881.489180	0.502000	9.0
IV	-1308.177386	-820881.309715	0.681465	6.6
V	-1308.177650	-820881.475375	0.515805	8.7
VI	-1308.178472	-820881.991180	0.000000	20.7
VII	-1308.178413	-820881.954158	0.037022	19.5

Table S4 Conformational analysis of **3**

Conformers of 3	Gibbs Free Energy (Hartree)	Gibbs Free Energy (kcal/mol)	Relative Gibbs Free Energy (kcal/mol)	Population (%)
I	-1308.189066	-820888.638915	0.919915	9.3
II	-1308.189359	-820888.822773	0.736058	12.6
III	-1308.188057	-820888.005768	1.553062	3.2
IV	-1308.190192	-820889.345480	0.213350	30.2
V	-1308.190532	-820889.558830	0.000000	43.1
VI	-1308.187383	-820887.582833	1.975998	1.6

Table S5 Conformational analysis of **4**

Conformers of 4	Gibbs Free Energy (Hartree)	Gibbs Free Energy (kcal/mol)	Relative Gibbs Free Energy (kcal/mol)	Population (%)
I	-1230.634197	-772222.958618	0.000000	77.8
II	-1230.632999	-772222.206873	0.751745	22.2

Table S6 Conformational analysis of **4a**

Conformers of 4a	Gibbs Free Energy (Hartree)	Gibbs Free Energy (kcal/mol)	Relative Gibbs Free Energy (kcal/mol)	Population (%)
I	-1230.633733	-772222.667458	0.000000	86.3
II	-1230.631981	-772221.568078	1.099380	13.7

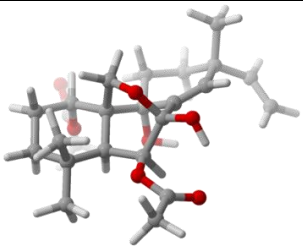
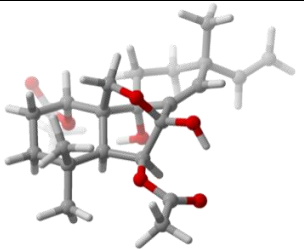
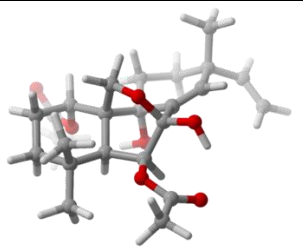
Table S7 Conformational analysis of **4b**

Conformers of 4b	Gibbs Free Energy (Hartree)	Gibbs Free Energy (kcal/mol)	Relative Gibbs Free Energy (kcal/mol)	Population (%)
I	-1230.633964	-772222.812410	0.000000	84.6
II	-1230.632153	-772221.676008	1.136402	12.7
II	-1230.630646	-772220.730365	2.082045	2.6

Table S8 Conformational analysis of **4c**

Conformers of 4c	Gibbs Free Energy (Hartree)	Gibbs Free Energy (kcal/mol)	Relative Gibbs Free Energy (kcal/mol)	Population (%)
I	-1230.634108	-772222.902770	0.000000	93.9
II	-1230.631497	-772221.264368	1.638402	6.1

Table S9 Coordinates of Compound **1**

									
	conformer 1-I			conformer 1-II			conformer 1-III		
C	4.166741	-1.665773	1.713068	4.442720	-0.827211	1.539081	4.291352	-1.304017	1.699550
C	3.525316	-1.501101	0.318281	3.747164	-0.819612	0.169477	3.654599	-1.256774	0.293482
C	4.313423	-2.328892	-0.676259	4.561351	-1.532726	-0.893417	4.523669	-2.063040	-0.650294
C	3.822437	-3.224284	-1.532195	5.750301	-2.115370	-0.745443	4.111705	-3.004924	-1.496987
C	2.095437	-1.973887	0.428526	2.435975	-1.564979	0.321267	2.267314	-1.837980	0.412537
C	1.026174	-1.191027	0.294982	1.232164	-1.014621	0.186294	1.142205	-1.147129	0.248880
C	-0.381759	-1.637974	0.647902	-0.050085	-1.735071	0.567049	-0.222933	-1.698611	0.622719
O	-0.503157	-3.002294	0.832076	0.100682	-3.098829	0.730725	-0.240619	-3.067114	0.814117
C	-1.347406	-1.058020	-0.415072	-1.142813	-1.345524	-0.456824	-1.246280	-1.200795	-0.425559
H	-0.969115	-1.321036	-1.412224	-0.749217	-1.513730	-1.468170	-0.862067	-1.436085	-1.427019
O	-2.646827	-1.650259	-0.275580	-2.297421	-2.178543	-0.283396	-2.496359	-1.884162	-0.256708
C	-2.873713	-2.818127	-0.887248	-2.313579	-3.365867	-0.902568	-2.647696	-0.372322	-0.854943
C	-4.317644	-3.212904	-0.776926	-3.640463	-4.045669	-0.724255	-4.053364	-3.576664	-0.699418
O	-2.017308	-3.460645	-1.458548	-1.376512	-3.818685	-1.524155	-1.761299	-3.651208	-1.445892
C	-1.405425	0.494579	-0.265214	-1.499846	0.163382	-0.275542	-1.420591	0.343460	-0.277603
H	-1.196124	0.899925	-1.262396	-1.407726	0.605855	-1.275258	-1.265018	0.751971	-1.283832
C	-2.767276	1.150040	0.144328	-2.951753	0.545671	0.161697	-2.820725	0.905726	0.133085
C	-3.397656	0.640096	1.455377	-3.443484	-0.073407	1.483641	-3.396528	0.377400	1.460869
C	-3.781416	0.951497	-0.998841	-3.934324	0.154933	-0.958765	-3.831303	0.613222	-0.992537
C	-2.538417	2.676363	0.250567	-3.006382	2.088094	0.261165	-2.690748	2.445408	0.201824
C	-1.383719	3.083666	1.158917	-1.942174	2.703415	1.161494	-1.570205	2.947727	1.104015
C	-0.079747	2.444857	0.700556	-0.540125	2.318134	0.711391	-0.219747	2.386131	0.682460
H	0.745387	2.741716	1.362631	0.205763	2.735413	1.402988	0.562529	2.725316	1.376615
O	0.203325	2.941095	-0.621416	-0.284794	2.898613	-0.598680	0.120439	2.903821	-0.634586
C	1.193794	3.835638	-0.777429	0.150018	4.180299	-0.629731	0.709924	4.121454	-0.683259
C	1.413921	4.106919	-2.238702	0.427370	4.610395	-2.043772	1.056185	4.484996	-2.100753
O	1.824387	4.316169	0.133423	0.303549	4.853680	0.355972	0.932402	4.791160	0.291804
C	1.109106	0.280920	-0.062198	1.011045	0.446545	-0.148800	1.104792	0.323169	-0.117364
O	1.030190	0.433804	-1.486959	0.895285	0.548499	-1.568275	1.020893	0.408438	-1.539489
C	2.452418	0.836917	0.429560	2.235504	1.252976	0.309080	2.411021	0.986670	0.344945
C	3.593294	-0.016932	-0.123369	3.493379	0.632402	-0.298840	3.594419	0.201353	-0.220981
H	4.081260	-2.704828	2.065174	4.577401	-1.852484	1.915749	4.300284	-2.332238	2.091955
H	3.672668	-1.015510	2.450936	3.839932	-0.279568	2.278956	3.731207	-0.676849	2.409812
H	5.235518	-1.401405	1.680991	5.431745	-0.347253	1.479900	5.331299	-0.942008	1.665625
H	5.391825	-2.125351	-0.680258	4.079330	-1.555766	-1.878461	5.589133	-1.801326	-0.621396
H	2.755800	-3.461229	-1.572971	6.281022	-2.133392	0.209166	3.059296	-3.290011	-1.574116
H	4.476415	-3.755448	-2.226834	6.240787	-2.603762	-1.590174	4.817399	-3.518277	-2.153459
H	1.935375	-3.017071	0.718736	2.496966	-2.615964	0.619917	2.188310	-2.880454	0.736315
H	-0.693003	-3.394349	-0.035454	-0.000502	-3.505366	-0.144729	-0.386003	-3.476065	-0.054012
H	-4.632382	-3.173348	0.274709	-3.874374	-4.117981	0.346830	-4.746497	-2.907999	-1.230779
H	-4.455289	-4.220666	-1.181874	-3.605677	-5.042480	-1.175557	-4.332423	-3.569268	0.363063
H	-4.937752	-2.497715	-1.337250	-4.431621	-3.446565	-1.198261	-4.127385	-4.589577	-1.108173
H	-3.330132	-0.448278	1.552598	-3.186014	-1.134998	1.558775	-3.247406	-0.701703	1.571917
H	-4.460436	0.929228	1.482055	-4.538662	0.028251	1.546642	-4.476954	0.589110	1.498529
H	-2.931644	1.081704	2.346714	-3.030063	0.430992	2.367265	-2.950978	0.865024	2.338448
H	-4.135314	-0.083896	-1.059756	-4.083653	-0.929132	-1.013380	-3.421645	0.892528	-1.976901
H	-3.340602	1.225020	-1.971030	-3.576150	0.504058	-1.940922	-4.747465	1.204393	-0.833452
H	-4.657508	1.599812	-0.836352	-4.914239	0.624411	-0.775782	-4.113439	-0.444903	-1.025634
H	-3.472342	3.146345	0.599298	-4.007323	2.383426	0.615114	-3.652777	2.865823	0.536719
H	-2.341197	3.075428	-0.757681	-2.896388	2.511324	-0.751722	-2.519880	2.830946	-0.817678
H	-1.580242	2.803999	2.205071	-2.074373	2.381796	2.205788	-1.752357	2.668074	2.152859
H	-1.254334	4.176471	1.153419	-2.019133	3.799956	1.172025	-1.514228	4.045492	1.090566
H	1.677340	3.157561	-2.727090	-0.439698	4.397197	-2.683790	0.176841	4.369661	-2.749087
H	2.213122	4.844446	-2.365635	1.281830	4.039014	-2.437271	1.836360	3.802940	-2.471605
O	0.483610	4.467004	-2.699635	0.663690	5.679325	-2.062118	1.425181	5.515266	-2.135260
H	1.477302	-0.330088	-1.868789	0.580156	1.448049	-1.733007	0.819518	1.335721	-1.726908
H	2.482170	0.842926	1.529996	2.300312	1.272862	1.407982	2.459402	1.029434	1.444045
H	2.583805	1.875256	0.101192	2.148965	2.297998	-0.024222	2.457747	2.024837	-0.016540
H	4.563866	0.407733	0.175686	4.378494	1.244148	-0.067357	4.541438	0.711882	0.014229
H	3.563938	0.035665	-1.223313	3.367979	0.641966	-1.391720	3.490445	0.183908	-1.315387
C	-0.170266	0.918487	0.590856	-0.348826	0.808169	0.562111	-0.210792	0.861303	0.565269
C	-0.268128	0.276415	1.991963	-0.277548	0.138529	1.950967	-0.241252	0.217201	1.967556
H	0.715344	0.306415	2.495619	0.700102	0.351830	2.421573	0.747650	0.321611	2.451197
H	-0.978213	0.802006	2.638270	-1.051571	0.508895	2.631810	-0.975868	0.691629	2.627232
O	-0.726367	-1.062031	1.896611	-0.473492	-1.257939	1.836670	-0.601929	-1.148005	1.876648

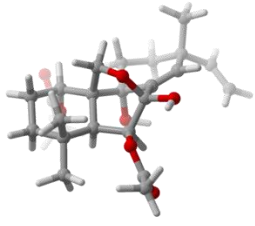
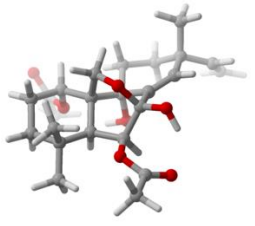
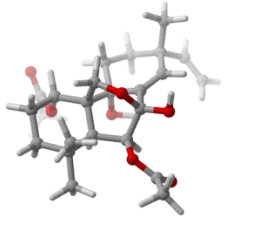
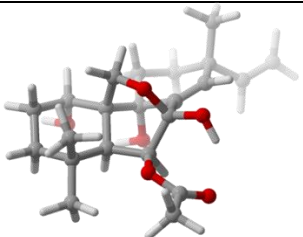
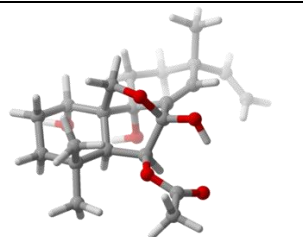
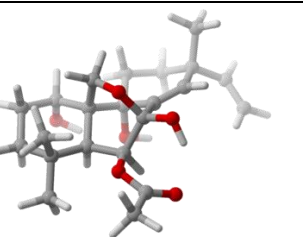
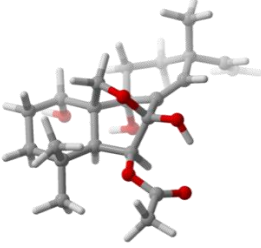
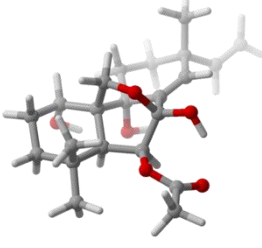
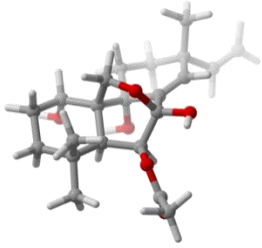
			
	conformer 1-IV	conformer 1-V	conformer 1-VI
C	-4.332524	-1.533869	-1.628234
C	-3.633455	-1.402137	-0.257834
C	-4.418813	-2.199010	0.763808
C	-3.934824	-3.119664	1.596688
C	-2.231221	-1.938135	-0.421684
C	-1.125731	-1.201851	-0.325241
C	0.246053	-1.687500	-0.716868
O	0.276132	-3.057337	-0.846283
C	1.270282	-1.164009	0.308990
H	0.926643	-1.417877	1.317766
O	2.480069	-1.899262	0.076386
C	3.038573	-2.535220	1.136413
C	4.259531	-3.295453	0.697379
O	2.612838	-2.478230	2.259434
C	1.402099	0.383081	0.173482
H	1.246170	0.877208	1.180982
C	2.776690	0.980010	-0.275045
C	3.344860	0.457956	-1.608260
C	3.822642	0.716881	0.825412
C	2.612686	2.516088	-0.352412
C	1.445156	2.987707	-1.212654
C	0.129052	2.400380	-0.719219
H	-0.703441	2.745488	-1.347947
O	-0.085065	2.887048	0.618723
C	-1.042694	3.806168	0.827970
C	-1.193688	4.056865	2.300806
O	-1.693753	4.320087	-0.049861
C	-1.128677	0.271888	0.045228
O	-1.004782	0.408346	1.467567
C	-2.462108	0.887127	-0.401501
C	-3.619445	0.081836	0.188795
H	-4.306026	-2.574456	-1.985415
H	-3.838468	-0.902678	-2.382552
H	-5.386803	-1.223418	-1.555723
H	-5.486049	-1.947510	0.810418
H	-2.878899	-3.403692	1.595216
H	-4.584514	-3.624321	2.314765
H	-2.131708	-2.988224	-0.711947
H	1.192069	-3.282055	-1.056391
H	4.991893	-2.598818	0.264085
H	3.991721	-4.017966	-0.086546
H	4.696632	-3.815380	1.555991
H	3.268537	-0.631907	-1.686009
H	4.407529	0.740417	-1.681912
H	2.844993	0.890664	-2.484998
H	3.412695	0.911368	1.828488
H	4.689888	1.380979	0.680525
H	4.200096	-0.312432	0.805375
H	3.552904	2.951448	-0.728411
H	2.469456	2.906598	0.668260
H	1.593598	2.716496	-2.269028
H	1.365367	4.084958	-1.186493
H	-0.239232	4.367514	2.735579
H	-1.485667	3.108883	2.779053
H	-1.962326	4.823586	2.470477
H	-1.423513	-0.366881	1.858404
H	-2.527770	0.898629	-1.500365
H	-2.538146	1.928673	-0.066371
H	-4.580149	0.549983	-0.075237
H	-3.547215	0.128996	1.286626
C	0.157776	0.869768	-0.637049
C	0.185948	0.250551	-2.050389
H	-0.808736	0.335292	-2.524972
O	0.900715	0.753852	-2.709139
O	0.577415	-1.110675	-1.983971
C	4.090731	-1.651015	1.763502
C	3.505098	-1.569940	0.333704
C	4.291912	-2.539322	-0.527468
C	5.087837	-2.249008	-1.555139
C	2.071286	-2.049630	0.415686
C	1.005755	-1.273611	0.236562
C	-0.403835	-1.722000	0.581283
O	-0.532244	-3.088086	0.746405
C	-1.373422	-1.125027	-0.465963
H	-0.999272	-1.371495	-1.468560
O	-2.675601	-1.708640	-0.318859
C	-2.917180	-2.870710	-0.938700
C	-4.359604	-3.263720	-0.798515
O	-2.076168	-3.508446	-1.534975
C	-1.425784	0.425317	-0.290011
H	1.180982	0.838164	-1.286971
C	-2.780740	1.090798	0.118604
C	-3.411636	0.586497	1.430599
C	-3.799448	0.900364	-1.021507
C	-2.528761	2.613578	0.217476
C	-1.380490	3.008449	1.138058
C	-0.075361	2.347948	0.717240
H	0.725284	2.611197	1.423276
O	0.316637	2.858442	-0.588195
C	0.999368	4.027040	-0.612606
C	1.384425	4.384800	-1.520768
O	1.265018	4.662137	0.374718
C	1.088238	0.199728	-0.107516
O	1.022853	0.311646	-1.529202
C	2.439694	0.751321	0.371001
C	3.559671	-0.126187	-0.190175
H	4.017067	-2.674233	2.163382
H	3.545955	-0.986926	2.451965
H	5.152819	-1.361841	1.756776
H	4.193249	-3.589131	-0.222822
H	5.239026	-1.227699	-1.911393
H	5.623038	-3.039496	-2.085231
H	1.905625	-3.088598	0.718962
H	-0.697611	-3.468110	-0.131337
H	-4.512755	-4.257959	-1.230443
H	-4.994892	-2.529640	-1.315577
H	-4.641381	-3.258383	0.263304
H	-0.503220	1.520592	3.384179
H	0.886067	1.462956	4.455614
H	1.018399	2.321859	2.928909
H	-0.131251	-1.077331	4.112031
H	1.164122	-1.996652	3.292772
H	1.559538	-0.859485	4.620568
H	3.103491	0.552303	3.428919
H	3.002727	-0.793085	2.282277
H	2.726107	2.180126	1.563963
H	1.462956	4.455614	0.383926
H	1.018399	2.321859	2.928909
H	-0.131251	-1.077331	4.112031
H	1.164122	-1.996652	3.292772
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H	1.559538	-0.859485	4.620568
H	3.103491	0.552303	3.428919
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H	-0.131251	-1.077331	4.112031
H	1.164122	-1.996652	3.292772
H	1.559538	-0.859485	4.620568
H	3.103491	0.552303	3.428919
H	3.002727	-0.793085	2.282277
H	2.726107	2.180126	1.563963
H	1.462956	4.455614	0.383926
H	1.018399	2.321859	2.928909
H	-0.131251	-1.077331	4.112031
H	1.164122	-1.996652	3.292772
H	1.559538	-0.859485	4.620568
H	3.103491	0.552303	3.428919
H	3.002727	-0.793085	2.282277
H	2.726107	2.180126	1.563963
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H	1.018399	2.321859	2.928909
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H	1.559538	-0.859485	4.620568
H	3.103491	0.552303	3.428919
H	3.002727	-0.793085	2.282277
H	2.726107	2.180126	1.563963
H	1.462956	4.455614	0.383926
H	1.018399	2.321859	2.928909
H	-0.131251	-1.077331	4.112031
H	1.164122	-1.996652	3.292772
H	1.559538	-0.859485	4.620568
H	3.103491	0.552303	3.428919
H	3.002727	-0.793085	2.282277
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H	3.002727	-0.793085	2.282277
H	2.726107	2.180126	1.563963
H	1.462956	4.455614	0.383926
H	1.018399	2.321859	2.928909
H	-0.131251	-1.077331	4.112031
H	1.164122	-1.996652	3.292772
H	1.559538	-0.859485	4.620568
H	3.103491	0.552303	3.428919
H	3.002727	-0.793085	2.282277
H	2.726107	2.180126	1.563963
H	1.462956	4.455614	0.383926
H	1.018399	2.321859	2.928909
H	-0.131251	-1.077331	4.112031
H	1.164122	-1.996652	3.292772
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H	3.002727	-0.793085	2.282277
H	2.726107	2.180126	1.563963
H	1.462956	4.455614	0.383926
H	1.018399	2.321859	2.928909
H	-0.131251	-1.077331	4.112031
H	1.164122	-1.996652	3.292772
H	1.559538	-0.859485	4.620568
H	3.103491	0.552303	3.428919
H	3.002727	-0.793085	2.282277
H	2.726107	2.180126	1.563963
H	1.462956	4.455614	0.383926
H	1.018399	2.321859	2.928909
H	-0.131251	-1.077331	4.112031
H	1.164122	-1.996652	3.292772
H	1.559538	-0.85948	

Table S10 Coordinates of Compound 2

	 conformer 2-I			 conformer 2-II			 conformer 2-III		
C	-4.496983	-0.107572	1.431198	-4.481440	-0.187234	1.563594	-4.499818	-0.107093	1.570559
C	-3.795006	0.134034	0.086405	-3.833784	0.107068	0.192993	-3.835316	0.126632	0.196426
C	-4.639358	0.963895	-0.861800	-4.819250	0.904277	-0.637200	-4.799664	0.898150	-0.681651
C	-5.856438	1.458322	-0.639253	-4.566380	2.029911	-1.302603	-4.532844	2.009496	-1.366396
C	-2.524257	0.910704	0.370451	-2.566185	0.882576	0.456215	-2.563204	0.901719	0.445888
C	-1.293529	0.449223	0.163480	-1.339219	0.425923	0.219351	-1.334916	0.432457	0.235360
C	-0.051590	1.160760	0.671828	-0.089916	1.123590	0.728579	-0.079370	1.123907	0.740813
O	-0.271257	2.471305	1.053043	-0.304733	2.423328	1.147924	-0.296934	2.422363	1.160257
C	1.062683	0.996983	-0.388591	1.008042	0.989289	-0.352730	1.016668	0.987170	-0.343067
H	0.665570	1.309413	-1.363647	0.595229	1.326324	-1.313007	0.609526	1.343267	-1.299585
O	2.173782	1.846243	-0.066882	2.124273	1.831091	-0.027384	2.139862	1.817128	-0.012432
C	2.133197	3.118157	-0.482563	2.076884	3.112923	-0.409211	2.107509	3.099664	-0.389865
C	3.422788	3.823708	-0.174855	3.376044	3.807837	-0.118204	3.423249	3.772662	-0.128030
O	1.179072	3.621506	-1.035519	1.110540	3.632255	-0.925506	1.137646	3.635036	-0.885774
C	1.492936	-0.502010	-0.452062	1.438443	-0.507009	-0.462212	1.433820	-0.511960	-0.468582
H	1.418122	-0.781994	-1.509455	1.349570	-0.758617	-1.525605	1.342316	-0.755557	-1.533269
C	2.962131	-0.877904	-0.071966	2.912838	-0.892076	-0.112207	2.908238	-0.911617	-0.129408
C	3.421685	-0.462534	1.338611	3.391786	-0.514775	1.302604	3.401439	-0.543541	1.283776
C	3.924264	-0.260240	-1.104677	3.861106	-0.247037	-1.141035	3.851072	-0.266544	-1.163567
C	3.094788	-2.410600	-0.229479	3.043475	-2.420086	-0.312280	3.024223	-2.439794	-0.337297
C	2.059436	-3.214611	0.548103	2.018611	-3.244984	0.457194	2.002402	-3.265082	0.434792
C	0.639313	-2.833834	0.141737	0.593322	-2.854426	0.079516	0.579291	-2.870113	0.054397
H	-0.084443	-3.371006	0.783481	-0.121807	-3.409304	0.715861	-0.126092	-3.414180	0.713648
O	0.401232	-3.182406	-1.227491	0.337470	-3.165654	-1.295365	0.363136	-3.285532	-1.285198
C	-0.997854	-0.928038	-0.395476	-1.051473	-0.935100	-0.382688	-1.056861	-0.937715	-0.341794
O	-0.871732	-0.811146	-1.810190	-0.944542	-0.777091	-1.794269	-0.892822	-0.860481	-1.772959
C	-2.180132	-1.857490	-0.081727	-2.227733	-1.875731	-0.078933	-2.229671	-1.875493	-0.028893
C	-3.465393	-1.212438	-0.600064	-3.523347	-1.214774	-0.549863	-3.541334	-1.234735	-0.484660
H	-4.687132	0.838046	1.961293	-4.666973	0.744825	2.118830	-4.671440	0.847386	2.090289
H	-3.869547	-0.732522	2.084325	-3.829144	-0.823520	2.181118	-3.862602	-0.732984	2.213700
H	-5.459271	-0.622296	1.285328	-5.445239	-0.704925	1.433083	-5.471630	-0.611398	1.450162
H	-4.154953	1.163156	-1.825524	-5.824825	0.467722	-0.691384	-5.800453	0.454010	-0.756094
H	-6.391178	1.301607	0.300354	-3.576868	2.494183	-1.293245	-3.550706	2.488613	-1.330183
H	-6.367071	2.048086	-1.403564	-5.343189	2.521063	-1.892436	-5.294274	2.481404	-1.990765
H	-2.640578	1.895774	0.832766	-2.667948	1.853216	0.951731	-2.663422	1.886294	0.913332
H	-0.193978	3.018144	0.255153	-0.227191	2.992601	0.365742	-0.163204	3.000813	0.391764
H	3.641841	3.734971	0.898178	3.639988	3.667666	0.938950	3.736962	3.584414	0.907535
H	3.342433	4.877114	-0.461963	3.282797	4.873411	-0.351602	3.330176	4.847555	-0.313851
H	4.247915	3.346803	-0.723704	4.178098	3.361221	-0.724063	4.190133	3.345705	-0.791254
H	4.521478	-0.503832	1.390426	4.492267	-0.555260	1.337709	4.502770	-0.563634	1.300512
H	3.045109	-1.134811	2.121495	3.027435	-1.209267	2.071773	3.065487	-1.259899	2.045728
H	3.097418	0.552430	1.591232	3.069461	0.491951	1.588334	3.067127	0.452366	1.593576
H	4.018999	0.823985	-0.978838	3.959459	0.833135	-0.986553	3.960205	0.812763	-1.007097
H	3.583067	-0.460300	-2.133292	3.505136	-0.418200	-2.169862	3.487121	-0.433754	-2.190254
H	4.926778	-0.704118	-0.993494	4.864425	-0.694949	-1.056332	4.851360	-0.722343	-1.088491
H	4.109708	-2.711585	0.077171	4.062426	-2.728583	-0.027221	4.045776	-2.752705	-0.065815
H	2.998003	-2.663172	-1.298436	2.932529	-2.644124	-1.386195	2.895810	-2.662281	-1.408995
H	2.177854	-3.072064	1.633352	2.150817	-3.130863	1.544231	2.142944	-3.164006	1.522571
H	2.204948	-4.294909	0.374409	2.162318	-4.320233	0.253284	2.128828	-4.333079	0.202255
H	-0.545787	-1.677479	-2.099777	-0.624741	-1.634870	-2.114038	-1.670757	-0.421460	-2.135853
H	-2.249747	-2.052114	1.000148	-2.276605	-2.108311	0.966621	-2.267948	-2.084144	1.050573
H	-2.024539	-2.824835	-0.581491	-2.080167	-2.825025	-0.614531	-2.080344	-2.833830	-0.545737
H	-4.320300	-1.895206	-0.479000	-4.372783	-1.906572	-0.435040	-4.381257	-1.922903	-0.303485
H	-3.333792	-1.044347	-1.679084	-3.415343	-0.998471	-1.622276	-3.511278	-1.091224	-1.578148
C	0.377033	-1.330094	0.262529	0.332557	-1.354706	0.244960	0.332645	-1.363388	0.242506
C	0.272666	-0.899314	1.738817	0.249143	-0.964605	1.733836	0.269801	-0.976469	1.732896
H	-0.690768	-1.237644	2.163845	-0.708574	-1.314026	2.162866	-0.672538	-1.339394	2.183235
H	1.068087	-1.330678	2.356902	1.052745	-1.413379	2.328531	1.091881	-1.418124	2.304787
O	0.390928	0.506709	1.853387	0.370178	0.437698	1.885266	0.372403	0.430230	1.892406
H	0.555257	-4.126948	-1.333254	0.490075	-4.106943	-1.428656	-0.110955	-2.587507	-1.760406

									
	conformer 2-IV			conformer 2-V			conformer 2-VI		
C	-4.395080	0.100971	1.667863	-4.460860	-0.078920	1.454982	-4.601049	-0.022283	1.353706
C	-3.785351	0.357604	0.269247	-3.796626	0.150417	0.088316	-3.852444	0.271113	0.044785
C	-4.730768	1.288419	-0.465756	-4.672951	0.963659	-0.845512	-4.649899	1.165011	-0.885625
C	-5.441852	1.023545	-1.560374	-5.887558	1.450852	-0.597643	-5.865707	1.668728	-0.677518
C	-2.470170	1.076529	0.486580	-2.521563	0.934496	0.336286	-2.576273	1.006068	0.406508
C	-1.274433	0.552169	0.231462	-1.290034	0.463909	0.144803	-1.350777	0.523803	0.218870
C	0.019998	1.191525	0.702902	-0.044123	1.168350	0.658143	-0.107595	1.162959	0.784342
O	-0.115302	2.511018	1.092783	-0.266000	2.479755	1.032032	-0.333326	2.466670	1.159963
C	1.093312	0.969141	-0.388150	1.081613	0.993919	-0.388874	1.032104	1.029204	-0.242548
H	0.687257	1.306747	-1.351078	0.703660	1.320574	-1.367539	0.680704	1.397478	-1.212530
O	2.260466	1.752083	-0.096499	2.197509	1.830321	-0.051188	2.076270	1.905739	0.208233
C	2.282755	3.025396	-0.508498	2.180875	3.100871	-0.469111	2.598209	2.772941	-0.694175
C	3.624701	3.648772	-0.251143	3.487999	3.780100	-0.181037	3.603981	3.669862	-0.025492
O	1.341546	3.588523	-1.024872	1.230338	3.621517	-1.015010	2.298339	2.799452	-1.857832
C	1.436758	-0.551393	-0.466163	1.496240	-0.509671	-0.454747	1.442756	-0.468603	-0.373948
H	1.320504	-0.822922	-1.521893	1.434598	-0.785994	-1.513642	1.400825	-0.689104	-1.447243
C	2.891770	-1.010813	-0.124973	2.958109	-0.903566	-0.059886	2.888874	-0.897236	0.033338
C	3.410889	-0.627941	1.274129	3.410822	-0.493329	1.355114	3.312954	-0.572564	1.477412
C	3.860689	-0.445161	-1.181005	3.933724	-0.293672	-1.084929	3.905391	-0.239728	-0.920061
C	2.933365	-2.548139	-0.289309	3.073630	-2.437773	-0.217076	2.992743	-2.420144	-0.213516
C	1.874333	-3.295258	0.512839	2.025973	-3.235514	0.549404	1.913293	-3.244930	0.478292
C	0.468287	-2.833690	0.142958	0.616325	-2.847485	0.114932	0.514402	-2.807418	0.054004
H	-0.268618	-3.332279	0.800714	-0.110855	-3.369079	0.768505	-0.239313	-3.365180	0.641698
O	0.177204	-3.161449	-1.221073	0.437844	-3.303008	-1.217356	0.309460	-3.067007	-1.339458
C	-1.072234	-0.835338	-0.343341	-0.998965	-0.921719	-0.388789	-1.063800	-0.829732	-0.405670
O	-0.975724	-0.714631	-1.759844	-0.785504	-0.883524	-1.815761	-0.898047	-0.634111	-1.806578
C	-2.296548	-1.700235	-0.006406	-2.183582	-1.849080	-0.092397	-2.274953	-1.746602	-0.176221
C	-3.557557	-0.970171	-0.471133	-3.482530	-1.207926	-0.583727	-3.529286	-1.046277	-0.698803
H	-4.522636	1.043376	2.222949	-4.640158	0.872971	1.976780	-4.787848	0.899295	1.925788
H	-3.742785	-0.551123	2.268819	-3.812554	-0.691657	2.098592	-4.007727	-0.694003	1.992167
H	-5.382761	-0.375530	1.571178	-5.424061	-0.599566	1.341302	-5.569140	-0.506655	1.152601
H	-4.838635	2.275899	0.001270	-4.219614	1.161319	-1.825527	-4.129426	1.405618	-1.820565
H	-5.389331	0.062717	-2.076947	-6.396964	1.300020	0.356601	-6.434482	1.472531	0.234311
H	-6.110167	1.775320	-1.985402	-6.421353	2.028926	-1.354701	-6.340571	2.306677	-1.426031
H	-2.509918	2.063983	0.958137	-2.633393	1.930978	0.774624	-2.690570	1.974401	0.902303
H	-0.019919	3.055530	0.295004	-0.120210	3.032586	0.247178	0.524522	2.810427	1.442000
H	3.897968	3.513397	0.804237	3.757557	3.632780	0.873487	3.112426	4.260953	0.760604
H	3.589698	4.713309	-0.504455	3.407087	4.847026	-0.412765	4.051740	4.337131	-0.769116
H	4.389130	3.144847	-0.860739	4.280001	3.324830	-0.793902	4.381670	3.061930	0.458760
H	3.019856	-1.283295	2.064264	3.046373	-1.182309	2.129109	4.407108	-0.670857	1.565134
H	3.148704	0.401486	1.539788	3.074875	0.514395	1.621875	2.875907	-1.256075	2.217433
H	4.507859	-0.728585	1.295937	4.510952	-0.520271	1.406108	3.029800	0.447520	1.759911
H	3.481446	-0.620081	-2.200850	4.041547	0.789762	-0.958998	4.116285	0.801467	-0.649302
H	4.838185	-0.947250	-1.097947	3.600057	-0.492012	-2.116349	3.555455	-0.255806	-1.963612
H	4.021900	0.631073	-1.054128	4.929745	-0.749392	-0.965716	4.863075	-0.782913	-0.874457
H	3.937139	-2.907011	-0.009454	4.085383	-2.745710	0.093928	3.988923	-2.765265	0.108036
H	2.795157	-2.790925	-1.355949	2.975884	-2.692807	-1.284782	2.928406	-2.602990	-1.299038
H	2.027673	-3.162018	1.594956	2.135099	-3.101763	1.637230	1.999823	-3.171825	1.573575
H	1.954654	-4.381524	0.334111	2.154426	-4.310540	0.353229	2.041159	-4.315686	0.242652
H	-0.706575	-1.595452	-2.063353	-1.564993	-0.485919	-2.219484	-0.576492	-1.486408	-2.139113
H	-2.341348	-1.913898	1.073199	-2.247496	-2.044964	0.988197	-2.382229	-1.996532	0.891115
H	-2.212964	-2.664463	-0.528448	-2.025698	-2.814707	-0.592701	-2.124376	-2.689166	-0.722682
H	-4.441894	-1.615665	-0.354622	-4.330094	-1.891762	-0.427036	-4.401962	-1.714519	-0.638763
H	-3.432286	-0.766979	-1.544317	-3.423280	-1.070161	-1.678214	-3.359896	-0.826741	-1.763120
C	0.294924	-1.318167	0.275522	0.370797	-1.334841	0.249670	0.284995	-1.307666	0.259399
C	0.255361	-0.888524	1.755292	0.265415	-0.901509	1.724722	0.151598	-0.967033	1.755838
H	-0.714243	-1.173092	2.205163	-0.692753	-1.245229	2.156689	-0.829600	-1.310481	2.135350
H	1.041212	-1.367639	2.350074	1.066850	-1.329163	2.335184	0.921309	-1.452813	2.366119
O	0.457184	0.508131	1.870520	0.372371	0.508803	1.843064	0.288782	0.427705	1.952832
H	0.273844	-4.112793	-1.333593	-0.009462	-2.613470	-1.729367	0.445014	-4.006836	-1.498780

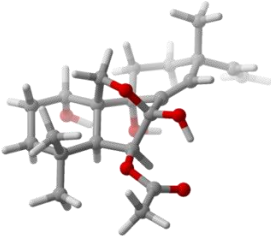
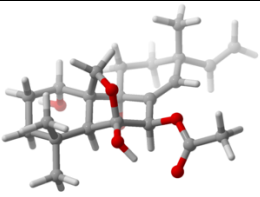
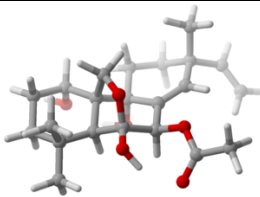
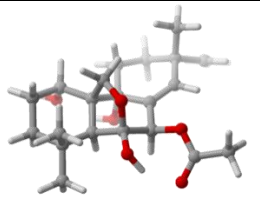
 conformer 2-VII			
C	-4.385029	0.179564	1.679243
C	-3.784666	0.381708	0.267257
C	-4.728391	1.288836	-0.499177
C	-5.477354	0.974829	-1.555402
C	-2.465077	1.103620	0.456028
C	-1.268241	0.565443	0.229501
C	0.031639	1.198769	0.697725
O	-0.105851	2.519675	1.079069
C	1.109333	0.965338	-0.387490
H	0.719228	1.319782	-1.351655
O	2.283428	1.733308	-0.084146
C	2.329083	3.004595	-0.496496
C	3.686653	3.599832	-0.260986
O	1.391380	3.586499	-1.001581
C	1.434794	-0.559247	-0.472316
H	1.319545	-0.827487	-1.528680
C	2.885521	-1.035805	-0.131021
C	3.409344	-0.658946	1.269290
C	3.856915	-0.477087	-1.188788
C	2.909833	-2.573467	-0.296399
C	1.847619	-3.315107	0.505661
C	0.447363	-2.846362	0.124382
H	-0.283741	-3.329388	0.802849
O	0.196453	-3.284412	-1.202047
C	-1.075894	-0.832684	-0.312632
O	-0.919928	-0.801275	-1.746880
C	-2.298467	-1.693213	0.030228
C	-3.575522	-0.980224	-0.418183
H	-4.500586	1.142451	2.199959
H	-3.730735	-0.454988	2.296288
H	-5.376474	-0.292776	1.607314
H	-4.800751	2.304981	-0.091307
H	-5.471735	-0.019190	-2.008763
H	-6.140672	1.715341	-2.006839
H	-2.502180	2.107021	0.892849
H	0.061262	3.066048	0.293582
H	4.000223	3.412420	0.774724
H	3.658185	4.674552	-0.467746
H	4.417895	3.113527	-0.923685
H	4.509149	-0.720913	1.275291
H	3.054866	-1.347745	2.048265
H	3.116407	0.354502	1.563802
H	4.032699	0.597360	-1.062753
H	3.474959	-0.649460	-2.208062
H	4.828370	-0.990668	-1.108001
H	3.913423	-2.938199	-0.022579
H	2.759896	-2.817929	-1.360463
H	2.003405	-3.192256	1.589165
H	1.908490	-4.394746	0.302378
H	-1.661592	-0.307127	-2.114285
H	-2.332402	-1.886908	1.112599
H	-2.213329	-2.665246	-0.475020
H	-4.450619	-1.623331	-0.240257
H	-3.530471	-0.838172	-1.511056
C	0.292262	-1.322974	0.271874
C	0.267585	-0.889378	1.750532
H	-0.689427	-1.183872	2.219670
H	1.069285	-1.360135	2.328143
O	0.452510	0.513538	1.866846
H	-0.242327	-2.574341	-1.692804

Table S11 Coordinates of Compound 3

	 conformer 3-I			 conformer 3-II			 conformer 3-III		
O	1.613090	2.480084	0.368250	1.405491	2.561241	0.362683	1.720187	2.430916	0.304233
C	0.995366	1.240805	0.317107	0.881101	1.279037	0.326774	1.043167	1.221890	0.294782
C	-0.384281	1.334564	-0.384727	-0.524213	1.269492	-0.328562	-0.353965	1.369844	-0.363014
H	-0.215393	1.542453	-1.453419	-0.406617	1.488144	-1.401916	-0.213172	1.546258	-1.441261
O	-1.171839	2.399414	0.168489	-1.371305	2.273012	0.251086	-1.070016	2.483842	0.191712
C	-1.039834	3.624776	-0.347738	-1.347321	3.504682	-0.266432	-0.893291	3.690452	-0.354272
C	-2.085122	4.556139	0.191908	-2.440964	4.355901	0.308842	-1.874368	4.684009	0.195334
O	-0.180749	3.932550	-1.148554	-0.539522	3.875507	-1.093390	-0.045111	3.939169	-1.186499
C	1.810418	0.104785	-0.337852	1.755996	0.208272	-0.360278	1.781172	0.037708	-0.366238
H	1.656128	0.109555	-1.424970	1.565463	0.203504	-1.441536	1.591189	0.032534	-1.447569
C	3.353219	0.166074	-0.098792	3.297235	0.384280	-0.173168	3.332346	0.028969	-0.178583
C	3.785590	0.677901	1.289018	3.737235	0.924223	1.201536	3.833835	0.541371	1.185656
C	3.964800	1.096260	-1.157968	3.801085	1.359799	-1.248151	3.951398	0.912698	-1.272681
C	3.930546	-1.245133	-0.316408	3.970539	-0.979304	-0.416908	3.835171	-1.411224	-0.391252
C	3.276431	-2.288341	0.580124	3.427261	-2.070728	0.496008	3.162160	-2.409409	0.541815
C	1.798231	-2.435605	0.235197	1.953048	-2.326877	0.201460	1.667818	-2.489786	0.248360
H	1.315459	-3.125724	0.952288	1.548307	-3.052452	0.931655	1.177425	-3.146433	0.991218
O	1.677751	-2.984187	-1.084515	1.827952	-2.880407	-1.115664	1.476003	-3.048744	-1.058464
C	1.038329	-1.098142	0.257775	1.096466	-1.050047	0.255767	0.973962	-1.117235	0.275983
C	0.787333	-0.599207	1.700428	0.858929	-0.573865	1.708175	0.798648	-0.584217	1.717336
O	0.810431	0.817647	1.658093	0.774045	0.840838	1.671337	0.883972	0.829424	1.648493
C	-0.350286	-1.216162	-0.494321	-0.304819	-1.271044	-0.449078	-0.445007	-1.178695	-0.424381
O	-0.165656	-1.252511	-1.904168	-0.167126	-1.290762	-1.863991	-0.313218	-1.241438	-1.839113
C	-1.157790	0.047634	-0.232650	-1.194513	-0.071266	-0.153671	-1.180900	0.125658	-0.152779
C	-2.451837	0.034992	0.092576	-2.471308	-0.179159	0.217490	-2.458569	0.178925	0.226632
C	-3.325396	-1.200804	0.182529	-3.237099	-1.471625	0.351577	-3.374590	-1.016146	0.387739
C	-4.575361	-0.916850	-0.629741	-4.597090	-1.374080	-0.312794	-4.718492	-0.650096	-0.215328
C	-5.836307	-0.902119	-0.199364	-5.007809	-0.436719	-1.165585	-5.398040	-1.317876	-1.146014
C	-3.649102	-1.481316	1.656326	-3.457951	-1.768196	1.849158	-3.608674	-1.266041	1.894418
C	-2.588543	-2.386939	-0.467443	-2.448906	-2.604662	-0.335436	-2.737875	-2.233078	-0.290806
C	-1.131841	-2.459092	-0.034255	-0.973372	-2.570418	0.034347	-1.268513	-2.377165	0.079365
H	1.247616	3.036566	-0.339706	0.978334	3.088937	-0.332661	1.361598	2.990997	-0.404511
H	-2.078892	4.517748	1.289696	-2.386524	4.329436	1.405720	-1.844700	4.661088	1.293126
H	-3.078157	4.226892	-0.146670	-3.418016	3.946026	0.014843	-2.891006	4.404150	-0.116714
H	-1.888250	5.574246	-0.158805	-2.339488	5.382883	-0.056250	-1.632126	5.684983	-0.175731
H	3.456450	1.709785	1.449665	3.337441	1.928197	1.377865	3.551711	1.587792	1.342204
H	4.885705	0.646172	1.352537	4.838161	0.974881	1.227729	4.933306	0.465553	1.211601
H	3.391214	0.076771	2.118954	3.417269	0.293752	2.041672	3.444896	-0.032140	2.037525
H	3.579925	2.18303	-1.048782	3.345296	2.350056	-1.120814	3.621011	1.953961	-1.166710
H	3.733193	0.742703	-2.175693	3.561355	0.992351	-2.259047	3.667463	0.556596	-2.276164
H	5.061427	1.128483	-1.054323	4.895202	1.473343	-1.181973	5.051233	0.892117	-1.207017
H	5.018390	-1.219449	-0.143376	5.058729	-0.872742	-0.280812	4.928055	-1.434798	-0.252982
H	3.779723	-1.543247	-1.367329	3.806560	-1.285463	-1.463549	3.636808	-1.716964	-1.432039
H	3.390850	-2.026278	1.642534	3.558924	-1.804257	1.555291	3.324580	-2.138934	1.595843
H	3.763156	-3.272013	0.460185	3.981301	-3.015058	0.353861	3.597180	-3.416872	0.420753
H	2.193637	-3.795985	-1.125381	2.400419	-3.651938	-1.177626	1.949620	-3.885638	-1.104499
H	1.566951	-0.948843	2.397427	1.686023	-0.865277	2.376574	1.586280	-0.957854	2.392484
H	-0.185622	-0.935639	2.091999	-0.071880	-0.982924	2.131626	-0.173645	-0.869008	2.149278
H	0.474109	-1.965376	-2.058196	0.518133	-1.953516	-2.043657	0.285902	-1.986003	-2.005610
H	-2.949148	0.984494	0.302822	-3.020970	0.733960	0.456251	-2.897484	1.157486	0.436289
H	-4.377324	-0.701962	-1.687197	-5.278549	-2.197962	-0.065257	-5.164759	0.261412	0.203697
H	-6.105148	-1.104378	0.839907	-4.365001	0.395356	-1.464072	-5.019840	-2.233367	-1.605961
H	-6.657295	-0.685413	-0.886267	-6.004958	-0.479443	-1.608699	-6.372952	-0.962510	-1.486231
H	-2.731220	-1.693553	2.223591	-2.502275	-1.894150	2.379334	-2.666680	-1.499428	2.412916
H	-4.321649	-2.347695	1.755501	-4.049444	-2.688654	1.981354	-4.310230	-2.102106	2.040572
H	-4.132288	-0.612855	2.129415	-4.001014	-0.941777	2.332696	-4.035960	-0.373450	2.377536
H	-2.609027	-2.267068	-1.562264	-2.534660	-2.480242	-1.425606	-2.796120	-2.107319	-1.382943
H	-3.115148	-3.324180	-0.229542	-2.890794	-3.580149	-0.076391	-3.292931	-3.147467	-0.028640
H	-0.654383	-3.344162	-0.475270	-0.450614	-3.415533	-0.433100	-0.855822	-3.287219	-0.375627
H	-1.066593	-2.569654	1.059565	-0.853560	-2.680906	1.123576	-1.159724	-2.486111	1.169834

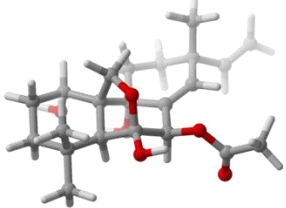
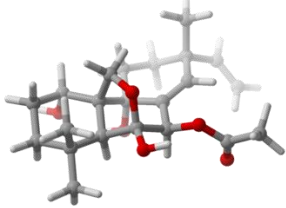
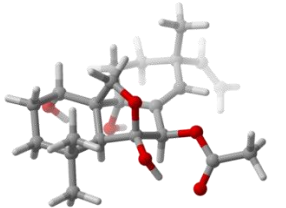
									
		conformer 3-IV			conformer 3-V			conformer 3-VI	
O	1.47155	2.63433	0.42722	1.28298	2.72360	0.34416	1.42934	2.55059	0.37606
C	0.96887	1.34705	0.38277	0.87454	1.40273	0.35330	0.89845	1.27044	0.33158
C	-0.40968	1.35083	-0.31051	-0.52840	1.28709	-0.27714	-0.50797	1.28079	-0.32603
H	-0.27071	1.58360	-1.37549	-0.45663	1.49767	-1.35394	-0.38179	1.50291	-1.39791
O	-1.17854	2.39938	0.28774	-1.33632	2.30136	0.33162	-1.34412	2.29106	0.25069
C	-1.92833	3.17130	-0.54221	-2.30742	2.85898	-0.43324	-1.29718	3.52398	-0.26923
C	-2.72736	4.16491	0.25520	-3.08685	3.86850	0.36334	-2.33734	4.41111	0.34857
O	-1.94974	3.04940	-1.73730	-2.51525	2.55526	-1.57850	-0.50815	3.86513	-1.12515
C	1.88119	0.33573	-0.32173	1.82876	0.44034	-0.36495	1.75791	0.19352	-0.36322
H	1.71811	0.37772	-1.40608	1.62033	0.44221	-1.44226	1.57089	0.20010	-1.44453
C	3.41362	0.52073	-0.08453	3.35204	0.74098	-0.19577	3.30466	0.34566	-0.18577
C	3.80896	0.99192	1.32816	3.76762	1.27677	1.18771	3.76092	0.87940	1.18583
C	3.92425	1.56248	-1.09280	3.74616	1.78877	-1.24908	3.81230	1.31832	-1.26183
C	4.11013	-0.81964	-0.38357	4.13202	-0.55366	-0.49110	3.95075	-1.02923	-0.43837
C	3.55711	-1.96623	0.45330	3.69767	-1.71403	0.39530	3.41160	-2.11455	0.48245
C	2.09251	-2.22191	0.11125	2.24326	-2.08324	0.11984	1.93343	-2.36531	0.19288
H	1.68165	-2.99148	0.79109	1.91585	-2.86151	0.83428	1.53463	-3.05415	0.96275
O	2.00194	-2.70119	-1.23691	2.13556	-2.60406	-1.21147	1.85350	-3.03108	-1.05730
C	1.21787	-0.96126	0.21849	1.28396	-0.88642	0.23256	1.09216	-1.06543	0.25506
C	0.94515	-0.56634	1.68793	1.04221	-0.47268	1.70248	0.87296	-0.58460	1.70749
O	0.83023	0.84664	1.71267	0.82681	0.92905	1.69921	0.78340	0.83127	1.67164
C	-0.17278	-1.16432	-0.52000	-0.11579	-1.20856	-0.44479	-0.31085	-1.26456	-0.41463
O	-0.01295	-1.10962	-1.93034	-0.01360	-1.17750	-1.86067	-0.06762	-1.32928	-1.83855
C	-1.07855	0.01023	-0.17414	-1.08917	-0.09505	-0.08377	-1.19301	-0.05371	-1.05294
C	-2.34536	-0.12553	0.21737	-2.32523	-0.31397	0.36083	-2.47946	-0.15150	0.19241
C	-3.11021	-1.43311	0.27560	-2.99455	-1.66083	0.46004	-3.25187	-1.43739	0.35253
C	-4.41740	-1.20863	-0.46184	-4.37184	-1.61275	-0.17673	-4.60878	-1.35312	-0.31950
C	-5.65251	-1.33567	0.02174	-4.83062	-0.67356	-1.00366	-5.02397	-0.42190	-1.17709
C	-3.33653	-1.82701	1.74132	-3.15784	-2.04275	1.94423	-3.47517	-1.69458	1.85740
C	-2.31021	-2.51130	-0.48145	-2.14691	-2.70256	-0.29958	-2.46707	-2.59681	-0.29734
O	-0.83354	-2.49305	-0.11236	-0.66403	-2.57007	0.01967	-0.98879	-2.55875	0.05783
H	0.75657	3.18322	0.77745	0.53631	3.23118	0.69086	1.04873	3.06765	-0.35181
H	-2.10379	4.64005	1.02396	-2.41217	4.52891	0.92396	-2.19463	4.43056	1.43796
H	-3.54097	3.63364	0.77153	-3.71288	3.33643	1.09527	-3.33916	4.00346	0.15229
H	-3.15454	4.91574	-0.41779	-3.72741	4.44882	-0.30890	-2.25193	5.42103	-0.06482
H	3.37687	1.97310	1.55180	3.27364	2.22936	1.40688	3.38768	1.89395	1.36188
H	4.90699	1.07062	1.38306	4.85816	1.43676	1.19461	4.86269	0.90263	1.20705
H	3.48849	0.30602	2.12349	3.53118	0.58981	2.01101	3.43155	0.25746	2.02817
H	3.42772	2.52963	-0.94028	3.18890	2.72256	-1.09878	3.36985	2.31506	-1.13269
H	3.73266	1.23500	2.12732	3.53688	1.42113	-2.26656	3.56680	0.95363	-2.27245
H	5.01105	1.70578	-0.98069	4.82367	2.01075	-1.18624	4.90765	1.41950	-1.19994
H	5.19304	-0.70864	-0.21346	5.20986	-0.36047	-0.36900	5.04331	-0.93518	-0.32878
H	3.97672	-1.06934	-1.44927	3.97469	-0.84109	-1.54395	3.76063	-1.34082	-1.47929
H	3.66130	-1.75950	1.52895	3.82900	-1.47136	1.46040	3.56480	-1.85149	1.54046
H	4.12527	-2.89502	0.27101	4.32446	-2.60410	0.21191	3.93864	-3.06443	0.31079
H	2.57266	-3.47138	-1.32593	2.75436	-3.33577	-1.30374	2.28300	-2.51677	-1.64767
H	1.76688	-0.87259	2.35642	1.91026	-0.70152	2.34279	1.71002	-0.87703	2.36033
H	0.01632	-1.01561	2.07280	0.16436	-0.97633	2.13637	-0.05098	-0.99258	2.14723
H	0.68129	-1.75567	-2.13379	0.71524	-1.77954	-2.07746	-0.91926	-1.45253	-2.27460
H	-2.90946	0.76651	0.50358	-2.93595	0.54027	0.66480	-3.02689	0.76932	0.40628
H	-4.28894	-0.90396	-1.50773	-5.01302	-2.47043	0.06350	-5.28404	-2.18187	-0.07216
H	-5.85247	-1.63137	1.05420	-4.22731	0.19084	-1.29542	-4.39175	0.41991	-1.47136
H	-6.52123	-1.14648	-0.61253	-5.83194	-0.75019	-1.43316	-6.01916	-0.47438	-1.62324
H	-2.37778	-1.99191	2.25421	-2.18253	-2.13591	2.44524	-2.52025	-1.81315	2.39014
H	-3.92821	-2.75284	1.81586	-3.68881	-3.00328	2.04381	-4.07338	-2.60674	2.01209
H	-3.86779	-1.03317	2.28835	-3.73761	-1.27669	2.48196	-4.01223	-0.85183	2.31807
H	-2.39031	-2.32363	-1.56397	-2.28166	-2.54245	-1.37993	-2.59526	-2.53202	-1.39246
H	-2.75006	-3.50160	-0.28598	-2.50434	-3.71834	-0.06677	-2.90676	-3.56228	0.00074
H	-0.30744	-3.30760	-0.62827	-0.09771	-3.35916	-0.49331	-0.45782	-3.40517	-0.39683
H	-0.71293	-2.66726	0.96838	-0.49628	-2.70439	1.10002	-0.87124	-2.65698	1.14616

Table S12 Coordinates of Compound **4**

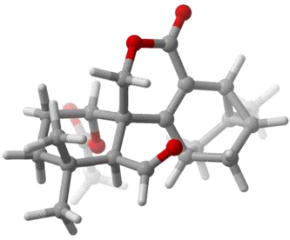
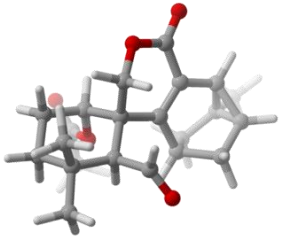
	 conformer 4-I			 conformer 4-II		
C	-3.900444	-1.544238	0.369116	-3.910974	-1.465707	0.645211
C	-3.248782	-0.466278	-0.514101	-3.243980	-0.525432	-0.374977
C	-4.012805	-0.438831	-1.852013	-3.984432	-0.695369	-1.712059
C	-3.402495	0.928608	0.125766	-3.389648	0.940418	0.078310
C	-2.470828	1.190168	1.303809	-2.464043	1.328916	1.227934
C	-1.012235	0.982724	0.915770	-1.000955	1.075483	0.880201
H	-0.356640	1.193230	1.770392	-0.353437	1.363155	1.719139
O	-0.669103	1.888761	-0.155240	-0.641366	1.870613	-0.267365
C	-0.335235	3.150717	0.191908	-0.290826	3.155208	-0.038120
C	-0.039820	3.976132	-1.030767	0.014255	3.858906	-1.331861
O	-0.298594	3.542032	1.330212	-0.248612	3.648690	1.059684
C	-0.730307	-0.439452	0.376195	-0.721274	-0.393644	0.484942
C	-0.834310	-1.455527	1.526820	-0.820842	-1.289470	1.730499
O	0.117686	-1.214216	2.563137	0.163608	-0.996386	2.715794
C	1.423161	-1.130944	2.208108	1.463015	-0.991780	2.323008
C	1.694413	-0.867513	0.778672	1.703857	-0.854898	0.870366
C	0.723577	-0.507055	-0.084682	0.722229	-0.524898	0.004057
C	2.340237	0.938195	-1.278531	2.342459	0.811299	-1.300039
C	4.858620	0.832773	-0.593361	4.871379	0.694810	-0.652192
C	3.091708	-0.889042	0.300707	3.089648	-0.937356	0.369152
H	3.839922	-1.191252	1.032556	3.846252	-1.210451	1.103745
O	2.275756	-1.215540	3.054922	2.332394	-1.038252	3.154202
C	-1.722668	-0.724889	-0.787665	-1.725054	-0.801285	-0.639441
H	-1.477206	0.018827	-1.567010	-1.473754	-0.163034	-1.497655
C	-1.510649	-2.051899	-1.483791	-1.488221	-2.214778	-1.130508
O	-0.772089	-2.938030	-1.125443	-1.129710	-2.478115	-2.252999
H	-3.617803	-1.465977	1.426403	-3.587607	-1.291301	1.679214
H	-3.645445	-2.561096	0.030836	-3.738449	-2.527371	0.413179
H	-4.995999	-1.444909	0.323733	-5.000047	-1.305122	0.623075
H	-3.515297	0.209094	-2.591203	-3.529858	-0.079307	-2.503076
H	-5.025414	-0.038928	-1.687014	-5.036426	-0.388886	-1.603835
H	-4.131789	-1.438707	-2.294687	-3.974119	-1.740882	-2.057043
H	-4.451527	1.061655	0.436277	-4.438958	1.127663	0.358202
H	-3.206597	1.687693	-0.649471	-3.172163	1.593899	-0.782347
H	-2.706392	0.534498	2.155769	-2.712115	0.775359	2.146613
H	-2.592120	2.218714	1.671925	-2.580363	2.392867	1.478444
H	-0.963072	4.101713	-1.615448	0.411144	4.857186	-1.120023
H	0.691021	3.463708	-1.671132	-0.909130	3.945530	-1.923305
H	0.339149	4.957220	-0.726033	0.732802	3.276139	-1.924047
H	-0.691285	-2.466348	1.122941	-0.725591	-2.348014	1.439118
H	-1.797385	-1.411602	2.040679	-1.769501	-1.169077	2.258714
H	2.019051	1.755693	-0.616243	2.051715	1.673144	-0.681089
H	2.606931	1.365189	-2.259526	2.598405	1.174664	-2.308952
H	4.806726	1.686132	0.101089	4.847536	1.586956	-0.006782
H	5.209251	1.207953	-1.568531	5.211272	1.007202	-1.652826
H	5.616125	0.134222	-0.208242	5.622382	0.004187	-0.240924
H	-2.097054	-2.173127	-2.426270	-1.675076	-3.040458	-0.400452
C	3.518029	0.161405	-0.723009	3.516161	0.044340	-0.722383
C	3.331628	-1.267922	-1.159353	3.294730	-1.402603	-1.072191
H	4.180413	-1.913673	-1.387707	4.127387	-2.077113	-1.275680
C	2.068103	-1.347197	-1.987989	2.015726	-1.501834	-1.872718
H	1.526773	-2.297343	-1.881958	1.459474	-2.436553	-1.719674
H	2.306253	-1.192119	-3.052417	2.233333	-1.409236	-2.948096
C	1.244863	-0.143139	-1.452660	1.222956	-0.255218	-1.393803
H	0.457610	0.174703	-2.144093	0.427398	0.025804	-2.088486

Table S13 Coordinates of Compound **4a**

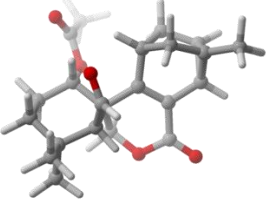
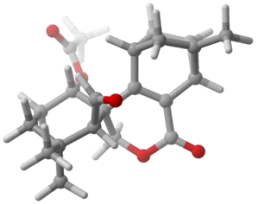
	 conformer 4a-I			 conformer 4a-II		
C	3.492657	-2.307392	-1.494308	3.508871	-2.272325	-1.434789
C	2.984699	-1.338382	-0.410082	3.018827	-1.268286	-0.376701
C	3.538439	-1.851396	0.932726	3.603504	-1.723160	0.973639
C	3.515726	0.075571	-0.710606	3.541596	0.136552	-0.735582
C	2.902391	1.158314	0.176748	2.916402	1.253434	0.097724
C	1.388744	1.168444	0.016815	1.404038	1.229251	-0.067248
H	1.165511	1.404120	-1.029596	1.188176	1.397792	-1.131154
O	0.798075	2.184534	0.848890	0.795244	2.302221	0.670352
C	0.629433	3.402705	0.289555	0.606330	3.463682	0.004606
C	-0.030703	4.348782	1.254218	-0.047676	4.489637	0.886513
O	0.954001	3.671060	-0.839761	0.911768	3.626824	-1.150507
C	0.723903	-0.167347	0.379408	0.753912	-0.086105	0.387307
C	0.794081	-0.422879	1.894242	0.844665	-0.237855	1.914194
O	0.172027	-1.654614	2.260708	0.215485	-1.430534	2.375917
C	-1.112340	-1.840909	1.861537	-1.080231	-1.624524	2.017694
C	-1.609922	-0.911843	0.822173	-1.579800	-0.782180	0.907364
C	-0.776162	-0.142146	0.091837	-0.746813	-0.086276	0.107763
C	-2.383617	-0.178091	-1.802359	-2.369733	-0.291905	-1.775038
C	-4.723229	-1.276702	-1.422876	-4.707713	-1.339760	-1.275255
C	-3.059169	-0.832477	0.552419	-3.029098	-0.720438	0.638006
H	-3.695097	-1.477168	1.158403	-3.664402	-1.302765	1.304584
O	-1.756838	-2.741689	2.335192	-1.732988	-2.464847	2.580606
C	1.412078	-1.323210	-0.422909	1.449361	-1.283649	-0.352884
C	1.073524	-2.271715	0.022414	1.120950	-2.212203	0.136515
C	0.937101	-1.343306	-1.868548	0.907741	-1.379158	-1.766418
O	0.860732	-0.373837	-2.586626	0.337325	-2.348099	-2.202249
H	3.203175	-1.996135	-2.509256	3.194908	-1.998339	-2.453414
H	3.118585	-3.330020	-1.324396	3.125261	-3.283625	-1.229707
H	4.592313	-2.347660	-1.471014	4.608762	-2.315143	-1.431323
H	3.524173	-1.094639	1.726695	3.575614	-0.943742	1.745643
H	4.590467	-2.149245	0.804480	4.661775	-1.997015	0.842621
H	2.979149	-2.727535	1.293895	3.070864	-2.602467	1.365280
H	3.300682	0.323256	-1.763061	3.340194	0.340562	-1.801847
H	4.612672	0.076015	-0.604109	4.637895	0.151050	-0.626087
H	3.284750	2.144260	-0.124459	3.286275	2.229576	-0.247986
H	3.176844	1.018463	1.234492	3.188605	1.165430	1.161034
H	-1.112315	4.145748	1.265162	-1.128808	4.287230	0.922512
H	0.131789	5.379842	0.921972	0.110297	5.487340	0.462938
H	0.351000	4.199424	2.272073	0.341454	4.430659	1.910619
H	0.297315	0.410240	2.413163	0.368211	0.636889	2.382265
H	1.814398	-0.504141	2.273470	1.871328	-0.307230	2.279049
H	-1.847648	-1.048844	-2.207583	-1.847978	-1.199854	-2.106615
H	-2.772585	0.404447	-2.652648	-2.768406	0.223116	-2.664099
H	-4.438281	-2.260917	-1.826804	-4.425396	-2.356620	-1.589220
H	-5.194554	-0.700084	-2.234906	-5.184351	-0.838689	-2.133055
H	-5.480010	-1.441647	-0.641584	-5.458327	-1.430454	-0.476089
H	0.668973	-2.352227	-2.267204	1.061720	-0.479680	-2.416790
C	-3.523418	-0.551507	-0.874854	-3.502290	-0.570444	-0.805690
C	-3.610136	0.540505	0.158354	-3.575975	0.613507	0.121291
H	-4.563180	0.852826	0.587253	-4.522931	0.971920	0.526808
C	-2.535737	1.561300	-0.149034	-2.499124	1.595043	-0.287667
H	-2.104163	2.030774	0.747983	-2.057862	2.142826	0.558560
H	-2.937069	2.351800	-0.802246	-2.900308	2.322545	-1.010420
C	-1.482247	0.722022	-0.923341	-1.455384	0.677229	-0.985462
H	-0.799809	1.336783	-1.516515	-0.776647	1.242760	-1.633780

Table S14 Coordinates of Compound **4b**

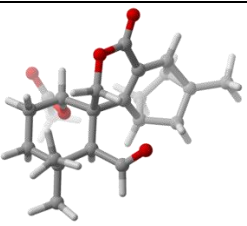
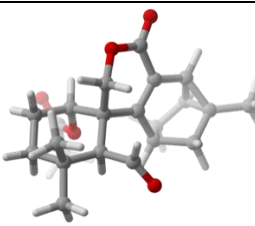
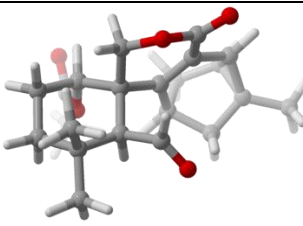
	 conformer 4b-I			 conformer 4b-II			 conformer 4b-III		
C	-3.476208	-2.224127	0.460861	-3.522085	-2.080558	0.811734	3.432203	-2.280159	-0.079672
C	-3.040429	-1.122850	-0.520981	-3.036566	-1.160946	-0.323394	2.902432	-1.091688	0.743943
C	-3.717902	-1.413881	-1.874099	-3.659614	-1.675148	-1.631965	3.310025	-1.328463	2.207431
C	-3.541133	0.257654	-0.049731	-3.526132	0.280877	-0.085148	3.560795	0.215787	0.262978
C	-2.757941	0.850827	1.116015	-2.762562	1.021860	1.009030	3.004377	0.738983	-1.058278
C	-1.271610	0.948202	0.794963	-1.265909	1.063489	0.718570	1.507314	1.009130	-0.946201
H	-0.727708	1.393967	1.637649	-0.736670	1.602672	1.515583	1.111744	1.411817	-1.887475
O	-1.086420	1.790587	-0.363379	-1.042977	1.755487	-0.526388	1.338919	2.026900	0.055274
C	-1.081585	3.125474	-0.156621	-1.010425	3.105531	-0.479820	1.005500	3.267233	-0.371645
C	-0.915656	3.862741	-1.457519	-0.818989	3.678272	-1.857236	0.812820	4.191933	0.796872
O	-1.208141	3.632832	0.928165	-1.135181	3.740224	0.536077	0.865232	3.565141	-1.530534
C	-0.645396	-0.418440	0.430520	-0.647448	-0.342841	0.539727	0.713421	-0.269359	-0.563222
C	-0.579001	-1.304519	1.686548	-0.599735	-1.061502	1.898142	0.739203	-1.123624	-1.850977
O	0.241392	-0.746809	2.713214	0.250725	-0.423741	2.844378	-0.182112	-2.202584	-1.889477
C	1.512391	-0.408433	2.385477	1.532656	-0.178664	2.470875	-1.488774	-1.891780	-1.680804
C	1.790317	-0.239034	0.943163	1.800439	-0.187996	1.016523	-1.740981	-0.673245	-0.881793
C	0.808598	-0.198957	0.019923	0.809005	-0.208215	0.100103	-0.751742	0.017640	-0.273401
C	2.409525	-0.896715	-1.732389	2.377388	-1.105070	-1.593849	-2.212767	0.255301	1.723180
C	4.937142	-1.086689	-1.102029	4.906148	-1.299722	-0.966748	-4.714452	-0.478139	1.537071
C	3.179642	0.008670	0.507273	3.190730	-0.021053	0.549338	-3.139084	-0.332517	-0.553615
H	3.936914	-0.028012	1.289594	3.954824	-0.003084	1.325590	-3.903162	-0.890846	-1.093028
O	2.318648	-0.211529	3.258552	2.353469	0.084121	3.311126	-2.345086	-2.650606	-2.052978
C	-1.483144	-1.047491	-0.720220	-1.484459	-1.117236	-0.527310	1.344161	-0.919457	0.711620
H	-1.371773	-0.353226	-1.572442	-1.343997	-0.561073	-1.464334	1.105093	-0.233500	1.539826
C	-0.937835	-2.354679	-1.253557	-0.915244	-2.492845	-0.808525	0.640230	-2.218037	1.063892
O	-0.036547	-3.002278	-0.776582	-0.441607	-2.813111	-1.872027	0.069284	-2.398775	2.113243
H	-3.273129	-1.974319	1.509776	-3.291870	-1.698904	1.814445	3.306974	-2.157491	-1.163530
H	-2.981102	-3.184411	0.245845	-3.107884	-3.097036	0.735254	2.958370	-3.230861	0.205467
H	-4.562074	-2.384905	0.375793	-4.617524	-2.175141	0.753246	4.512299	-2.390389	0.104313
H	-3.342019	-0.749303	-2.668313	-3.320351	-1.084318	-2.496685	2.961787	-0.509410	2.855309
H	-4.802255	-1.244756	-1.784171	-4.757357	-1.606039	-1.581828	4.406540	-1.386289	2.292057
H	-3.582435	-2.454825	-2.202678	-3.399054	-2.727454	-1.824800	2.890433	-2.266519	2.601220
H	-4.608080	0.175969	0.213992	-4.602120	0.260873	0.152100	4.648634	0.060310	0.181490
H	-3.481483	0.955550	-0.901230	-3.422042	0.843892	-1.027103	3.408458	0.991037	1.030704
H	-2.883336	0.251689	2.030592	-2.921036	0.556329	1.993942	3.192936	0.032442	-1.881365
H	-3.129440	1.855982	1.360157	-3.124644	2.055300	1.104433	3.502648	1.678211	-1.341322
H	-0.795574	4.932671	-1.257943	0.021236	3.186074	-2.365133	1.607398	4.050365	1.540764
H	-1.806635	3.700972	-2.082067	-0.646268	4.757054	-1.783418	-0.146700	3.952150	1.280410
H	-0.048821	3.474978	-2.009729	-1.723636	3.490208	-2.454322	0.787266	5.228360	0.444218
H	-0.194838	-2.293597	1.404630	-0.259063	-2.100492	1.760052	1.712496	-1.588754	-2.022804
H	-1.552776	-1.425367	2.166752	-1.573621	-1.088879	2.392367	0.529131	-0.457690	-2.705680
H	2.666960	-0.804901	-2.800460	2.621974	-1.115403	-2.668140	-2.446865	0.909126	2.579440
H	2.098822	-1.932143	-1.533255	2.046411	-2.115186	-1.314219	-1.775159	-0.676965	2.109554
H	4.901470	-2.165303	-0.882476	4.848895	-2.352296	-0.647677	-4.548719	-1.485091	1.950505
H	5.697932	-0.635775	-0.447624	5.684179	-0.807778	-0.364238	-5.539611	-0.543419	0.812376
H	5.271487	-0.963379	-2.144873	5.231126	-1.282322	-2.019429	-5.037541	0.178703	2.360715
H	-1.431030	-2.707314	-2.191165	-0.959641	-3.236857	0.024596	0.676666	-3.024770	0.295561
C	3.590052	-0.450050	-0.888990	3.575960	-0.614268	-0.804022	-3.461563	0.047495	0.890271
C	3.393695	1.018795	-0.620365	3.416843	0.876205	-0.669230	-3.449174	1.114569	-0.174112
H	4.233934	1.709104	-0.536928	4.273832	1.550474	-0.652221	-4.371203	1.554355	-0.556331
C	2.111222	1.452276	-1.291952	2.138061	1.277635	-1.367377	-2.223303	1.977709	0.037676
H	2.319539	1.821369	-2.309061	2.345489	1.545407	-2.415761	-2.472819	2.820491	0.702630
H	1.573175	2.234264	-0.737196	1.626135	2.122082	-0.883793	-1.794551	2.384952	-0.891011
C	1.305075	0.127432	-1.366550	1.299137	-0.027925	-1.315931	-1.258146	0.998926	0.759113
H	0.503905	0.175353	-2.111376	0.494055	-0.041218	-2.054778	-0.447392	1.499643	1.289807

Table S15 Coordinates of Compound **4c**

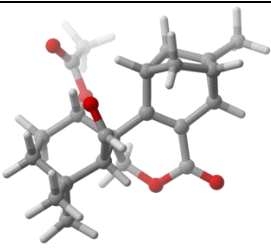
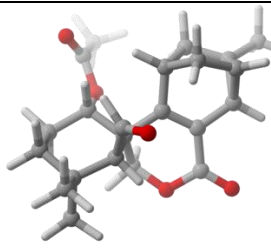
	 conformer 4c-I			 conformer 4c-II		
C	-4.048775	-1.571769	1.310189	4.089298	-1.429699	-1.259464
C	-3.252361	-0.808907	0.234833	3.290217	-0.640005	-0.207982
C	-3.751251	-1.322772	-1.129071	3.837409	-1.054177	1.170875
C	-3.528953	0.699239	0.379713	3.512226	0.868169	-0.436076
C	-2.628075	1.571360	-0.494474	2.578108	1.755269	0.384400
C	-1.166250	1.313853	-0.157342	1.131840	1.412118	0.059507
H	-1.011777	1.591358	0.891210	0.981493	1.609081	-1.010712
O	-0.306163	2.128487	-0.976171	0.231582	2.266446	0.784666
C	0.043263	3.333707	-0.475802	-0.160261	3.401300	0.163283
C	0.975429	4.052707	-1.411500	-1.109476	4.186144	1.024261
O	-0.335818	3.751535	0.589301	0.200221	3.713346	-0.944351
C	-0.738415	-0.147827	-0.353066	0.756544	-0.044396	0.372366
C	-0.699243	-0.513885	-1.846271	0.738719	-0.285099	1.890513
O	-0.292202	-1.865959	-2.057623	0.350193	-1.615685	2.221797
C	0.883419	-2.252009	-1.498455	-0.833203	-2.056389	1.721804
C	1.440975	-1.345416	-0.469853	-1.402603	-1.263955	0.608352
C	0.700938	-0.374851	0.105882	-0.674257	-0.350131	-0.064133
C	2.728347	0.975316	0.436999	-2.716981	0.923375	-0.559977
C	5.048876	-0.090287	-0.124029	-5.024005	-0.104080	0.111921
C	2.842640	-1.512711	-0.037336	-2.798273	-1.498050	0.190306
H	3.397148	-2.321337	-0.512694	-3.343874	-2.257165	0.749860
O	1.387530	-3.293071	-1.834853	-1.333817	-3.054397	2.171740
C	-1.716699	-1.083675	0.433978	1.769129	-1.002127	-0.350097
H	-1.522960	-2.112990	0.093907	1.616711	-2.013220	0.055018
C	-1.408726	-1.066689	1.924153	1.394318	-1.112417	-1.815633
O	-1.221607	-0.069682	2.581671	1.111486	-2.150941	-2.359217
H	-3.812202	-1.234848	2.330631	3.816453	-1.155281	-2.289714
H	-3.864032	-2.656608	1.250756	3.926608	-2.512981	-1.150292
H	-5.126842	-1.409432	1.159145	5.165332	-1.230301	-1.141189
H	-3.510386	-0.650397	-1.961659	3.562449	-0.360538	1.975616
H	-4.848324	-1.411475	-1.107251	4.937668	-1.076315	1.138353
H	-3.335183	-2.313446	-1.366347	3.485747	-2.056543	1.457024
H	-3.382238	0.991169	1.432550	3.367000	1.101618	-1.505441
H	-4.587717	0.893169	0.143024	4.562397	1.114914	-0.211774
H	-2.841471	2.632832	-0.302567	2.747831	2.811885	0.131441
H	-2.812549	1.397183	-1.566538	2.765316	1.649949	1.464352
H	1.990503	3.648646	-1.278464	-2.114643	3.747655	0.931498
H	0.985565	5.120326	-1.166619	-1.144326	5.223822	0.675198
H	0.682291	3.892124	-2.456605	-0.814372	4.135523	2.079708
H	-0.000100	0.165991	-2.355374	0.039843	0.429646	2.350825
H	-1.671178	-0.437440	-2.336987	1.717785	-0.158442	2.356746
H	3.212159	1.731663	1.075880	-3.207195	1.595768	-1.282345
H	2.500467	1.433656	-0.538050	-2.499294	1.490515	0.358235
H	5.097888	0.310106	-1.149147	-5.082381	0.407454	1.085870
H	5.576963	-1.055351	-0.116343	-5.538925	-1.071127	0.210841
H	5.597369	0.600446	0.536526	-5.579326	0.500686	-0.623086
H	-1.384381	-2.069502	2.416516	1.387879	-0.155076	-2.398171
C	3.621512	-0.247836	0.326626	-3.593174	-0.292541	-0.315397
C	3.186094	-1.190777	1.416696	-3.139569	-1.345024	-1.290954
H	3.896116	-1.843222	1.926574	-3.835856	-2.062743	-1.726158
C	2.060565	-0.535812	2.183661	-2.021435	-0.765268	-2.126449
H	2.462539	0.042531	3.029794	-2.436568	-0.282013	-3.024879
H	1.320673	-1.245259	2.580063	-1.275874	-1.505838	-2.444047
C	1.454585	0.432368	1.133902	-1.431768	0.320109	-1.185675
H	0.850378	1.219662	1.592844	-0.842009	1.070162	-1.724382

Table S16 Summary of binding energies, amino acid residue involved in the hydrogen bond and hydrophobic interactions of **2** observed in molecular docking studies.

compound	Binding energy (kcal/mol)	Residue involved in the interaction	
		Hydrogen bond	Hydrophobic interaction
2	−8.0	GLN257, ARG260	MET114, TRP84, TYR341, TYR367
AR-C118901	−9.2	GLU371, TRP366, TYR367	HEM901, VAL346, TYR367, PRO344

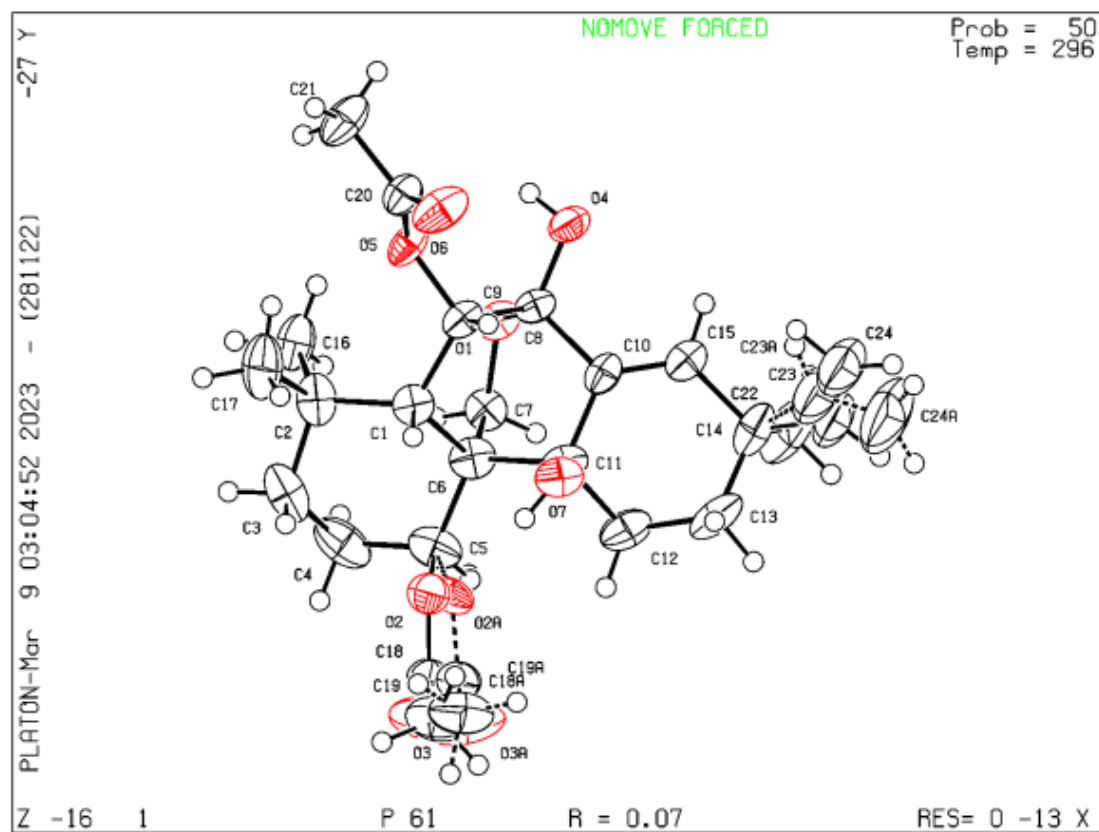


Figure S1 ORTEP drawing of crystal structure of **1**

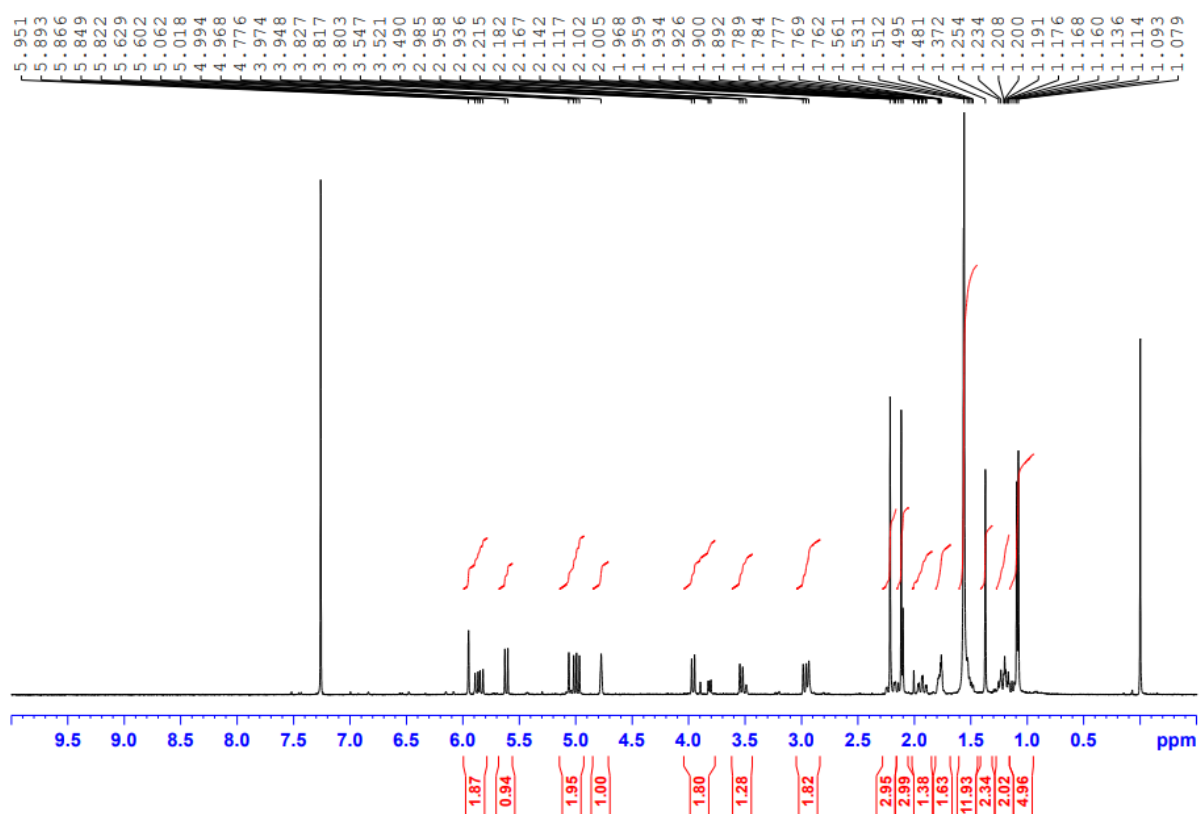


Figure S2 ^1H NMR spectrum (400 MHz) of compound **1** in CDCl_3

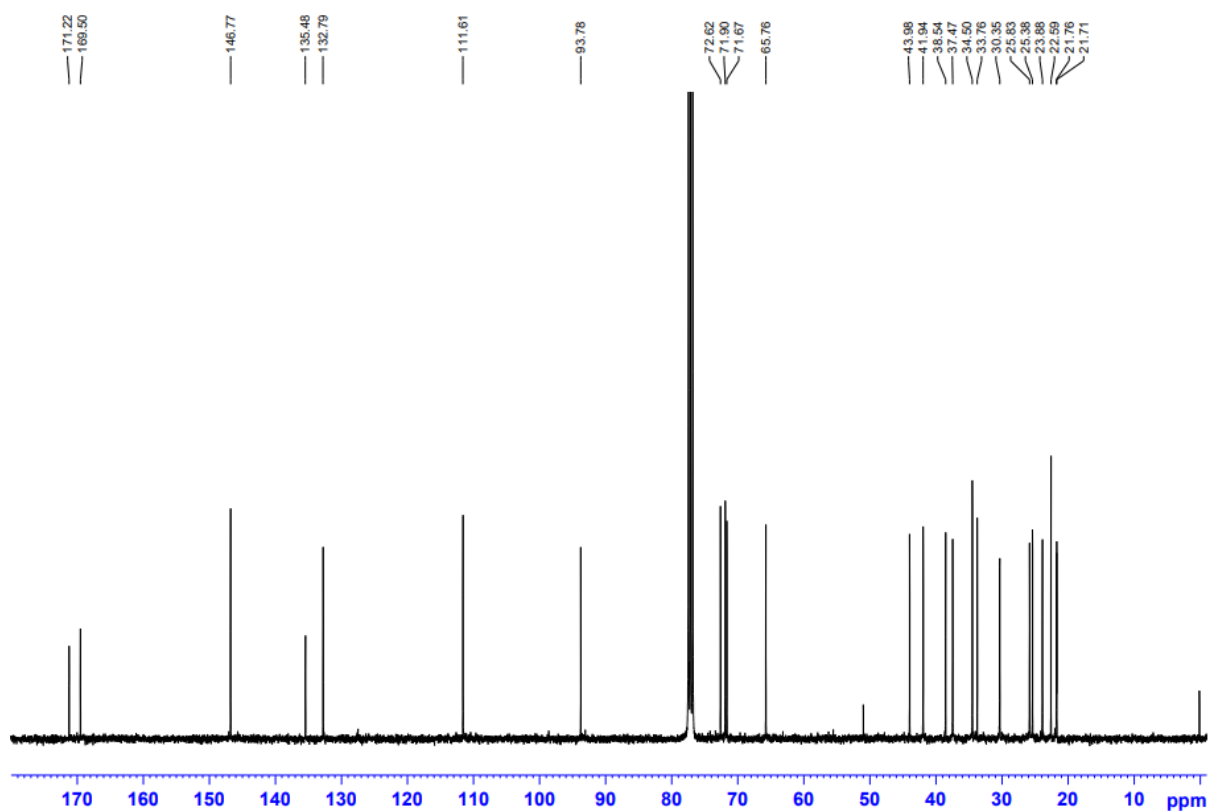


Figure S3 ^{13}C NMR spectrum (100 MHz) of compound **1** in CDCl_3

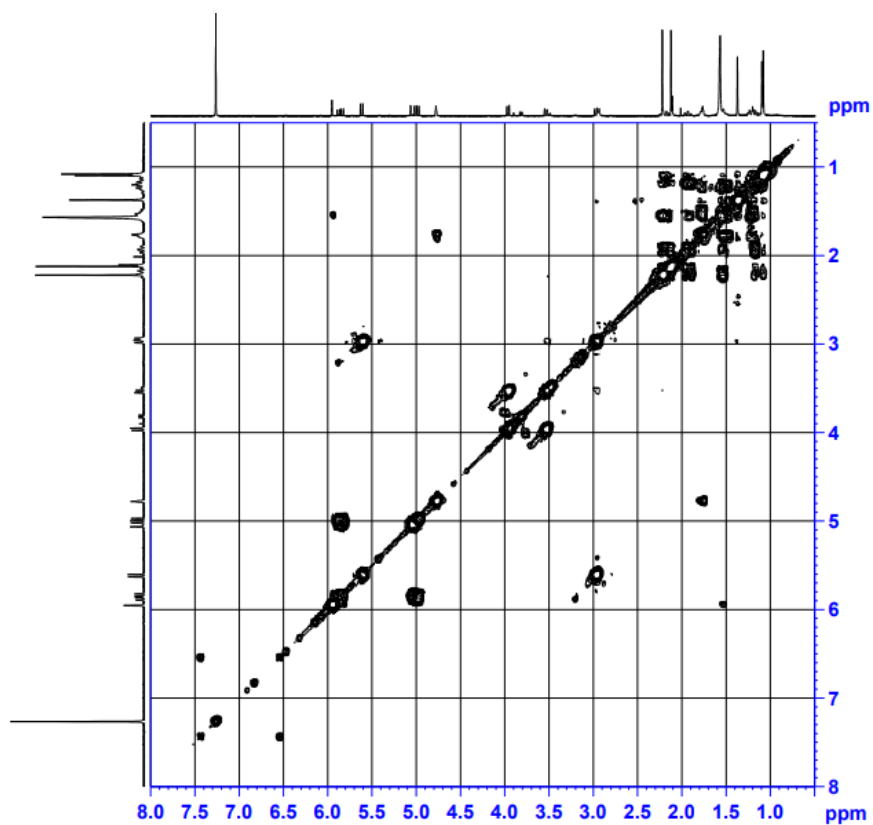


Figure S4 ^1H – ^1H COSY spectrum of compound **1** in CDCl_3

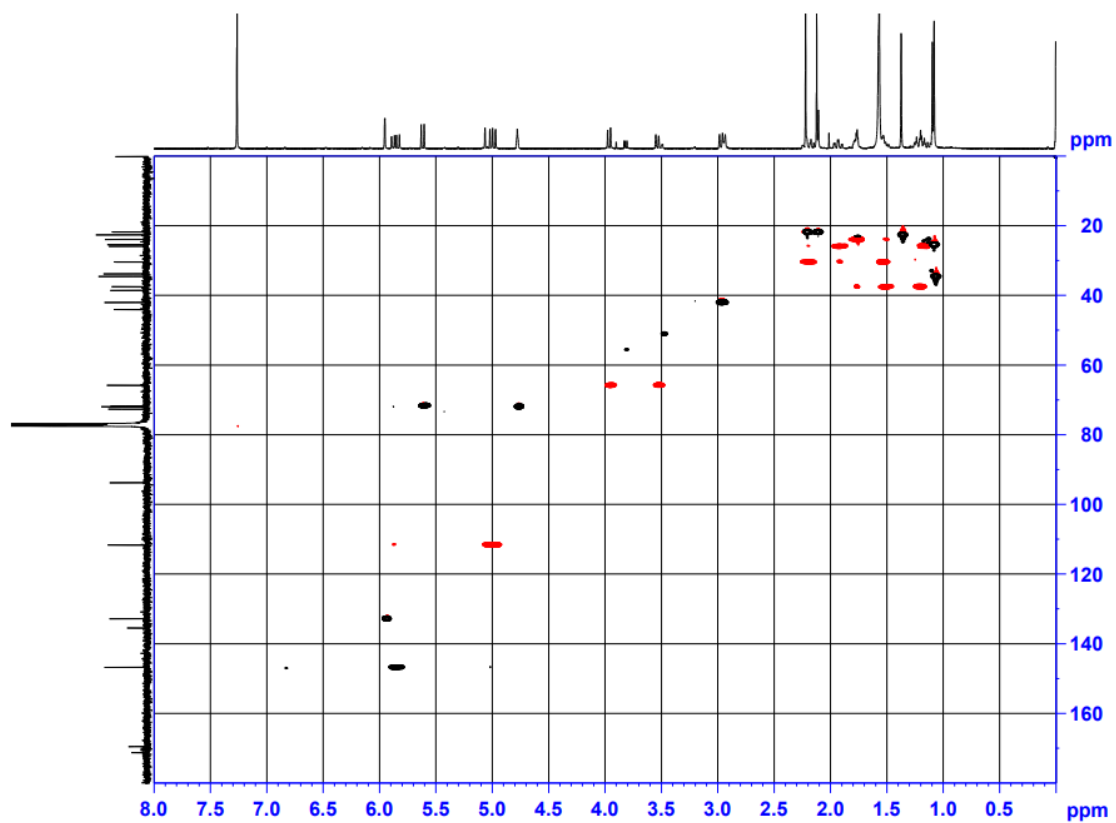


Figure S5 HSQC spectrum of compound **1** in CDCl_3

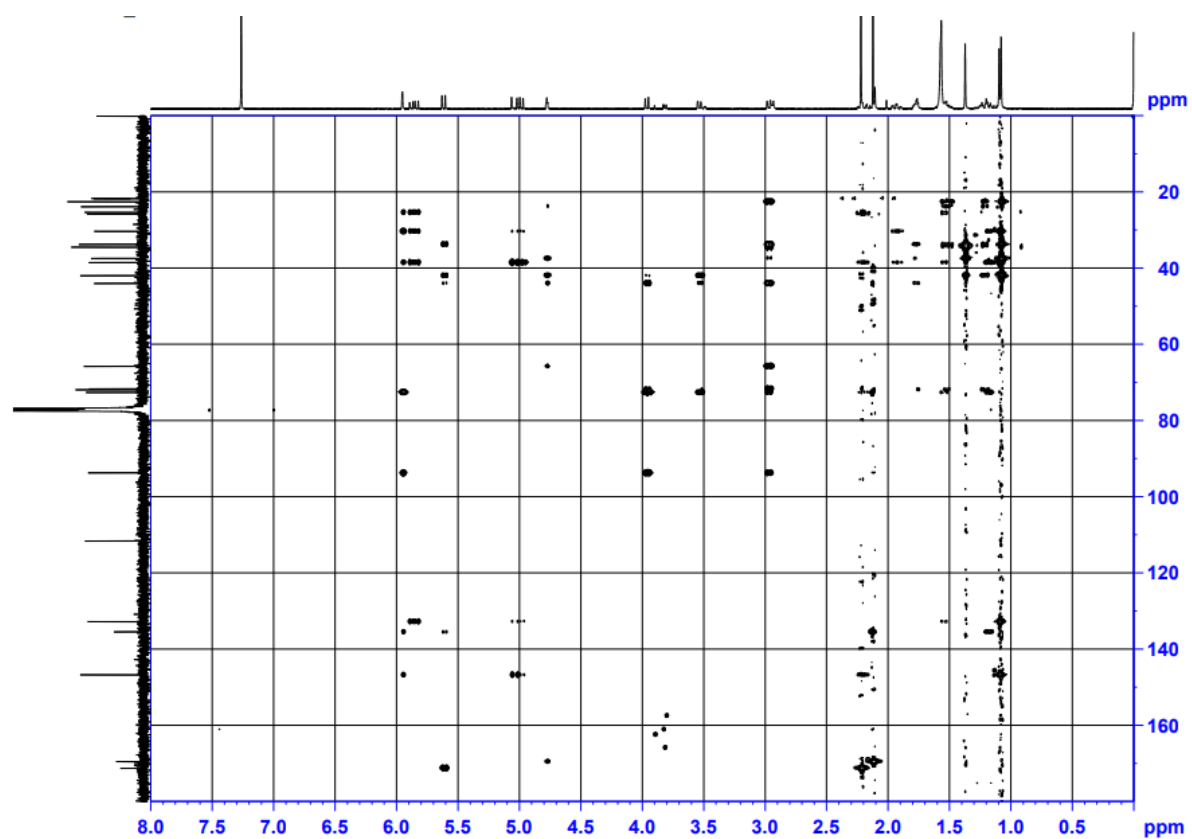


Figure S6 HMBC spectrum of compound **1** in CDCl_3

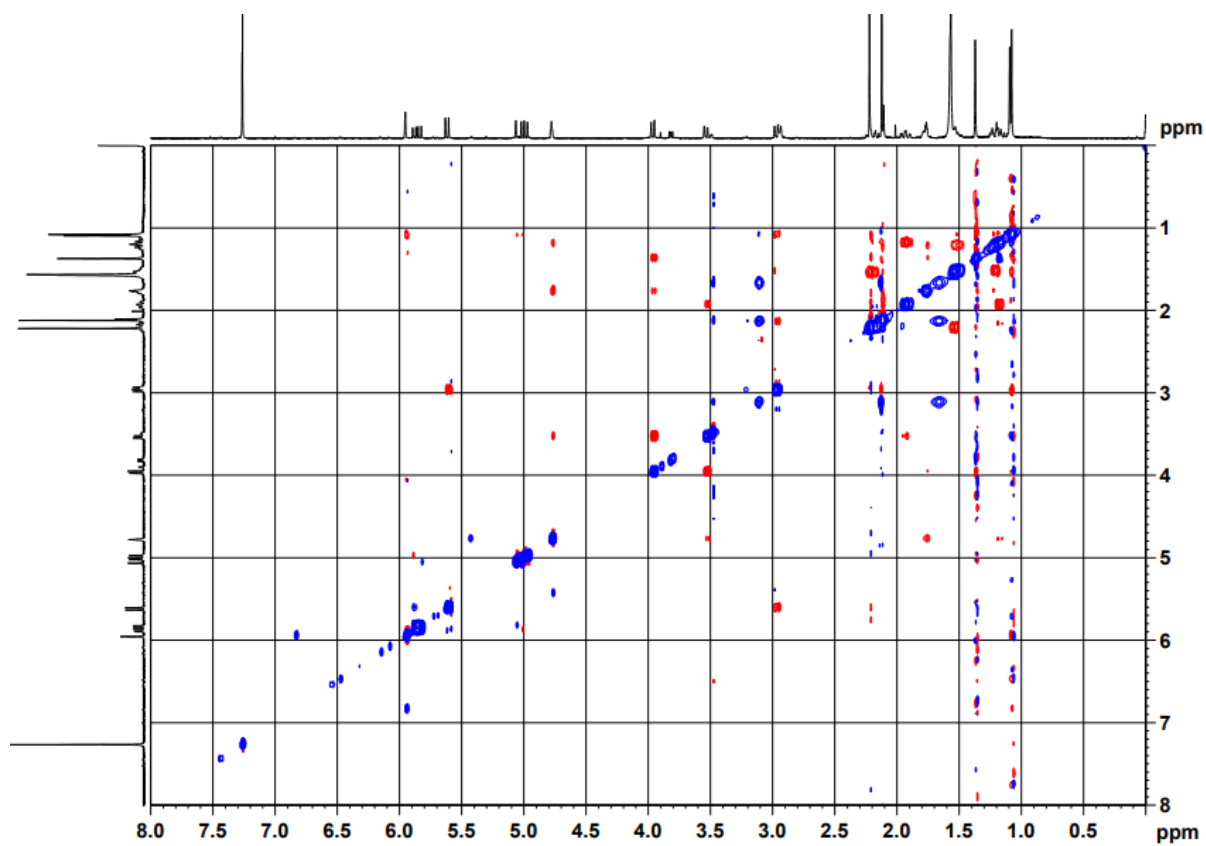


Figure S7 NOESY spectrum of compound **1** in CDCl_3

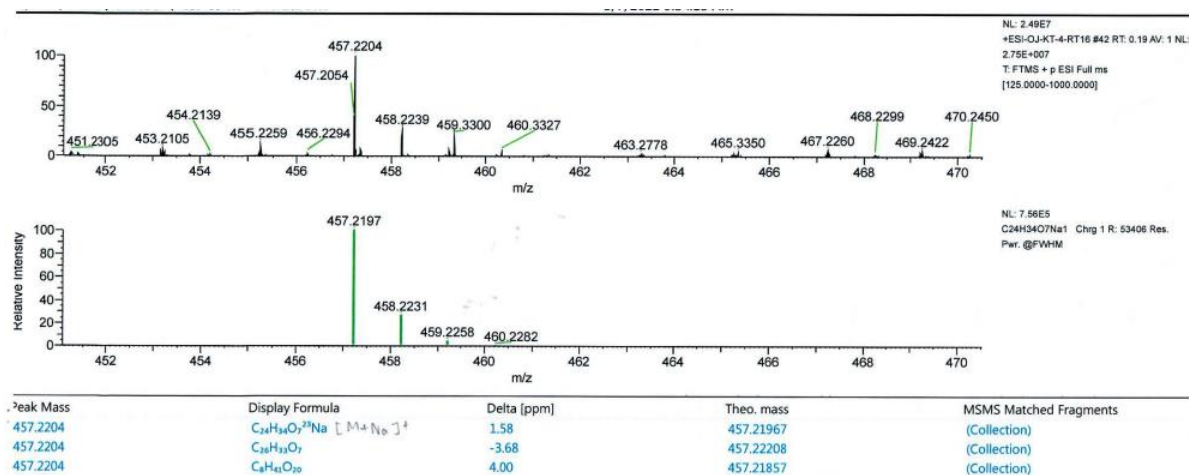


Figure S8 HREI (+) MS spectrum of compound **1**

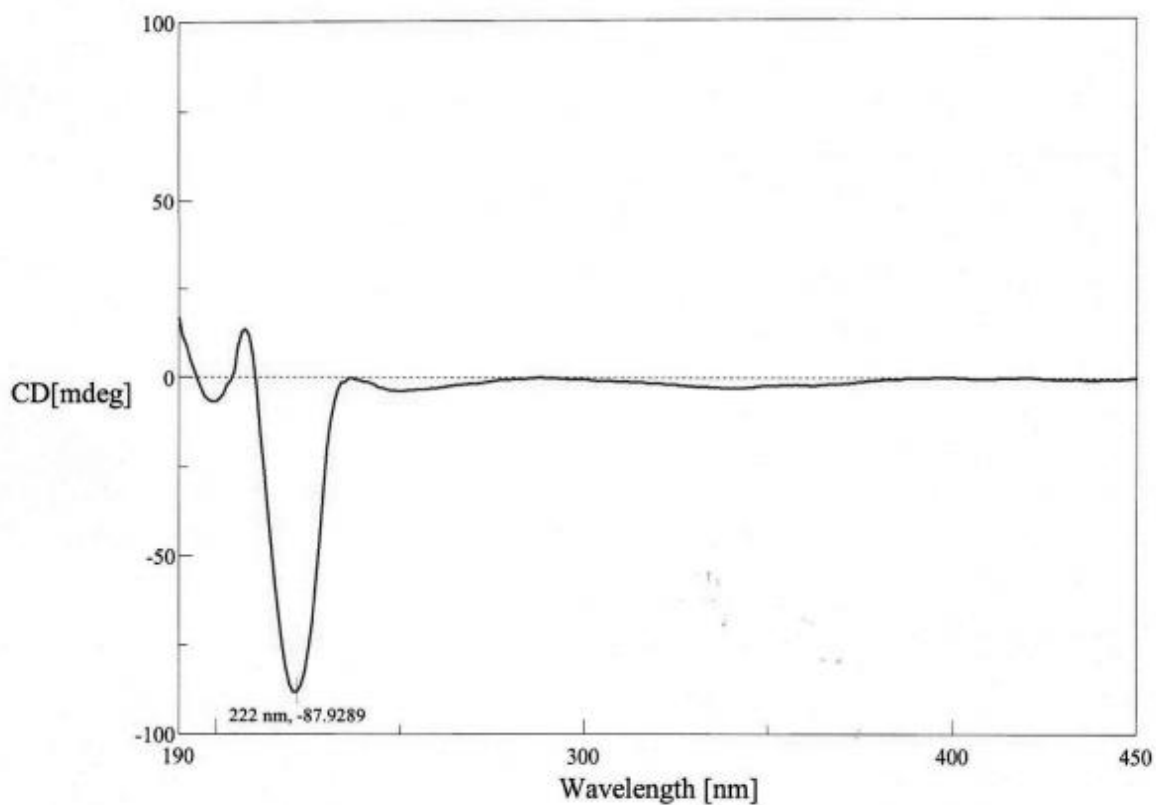


Figure S9 CD spectrum of compound **1**

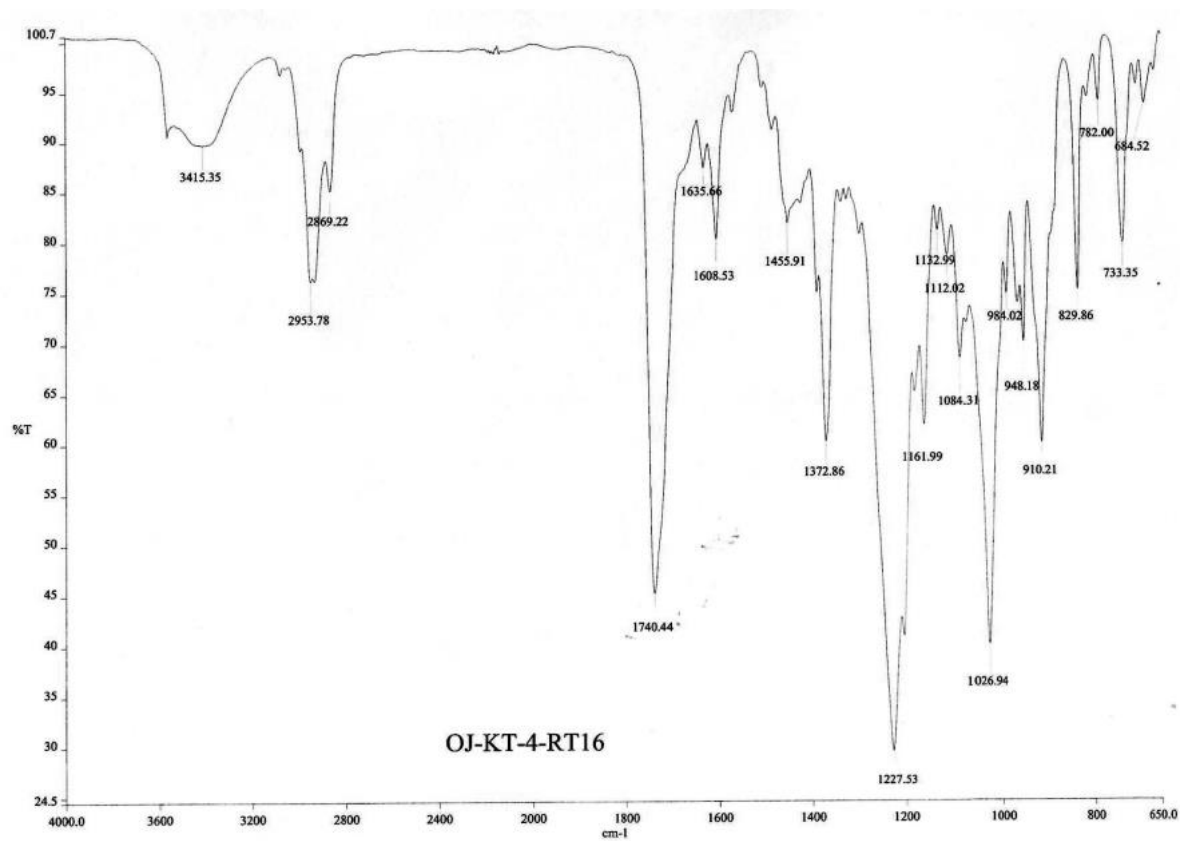


Figure S10 IR spectrum of compound **1**

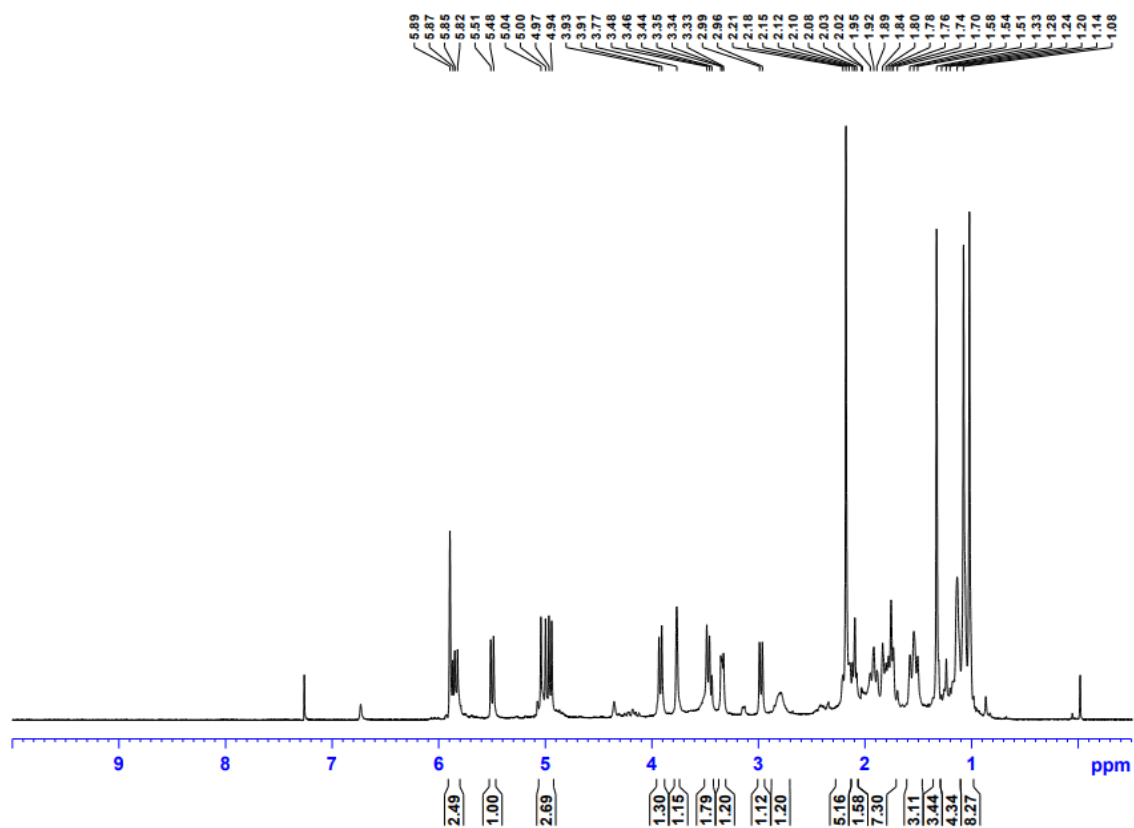


Figure S11 ^1H NMR spectrum (400 MHz) of compound **2** in CDCl_3

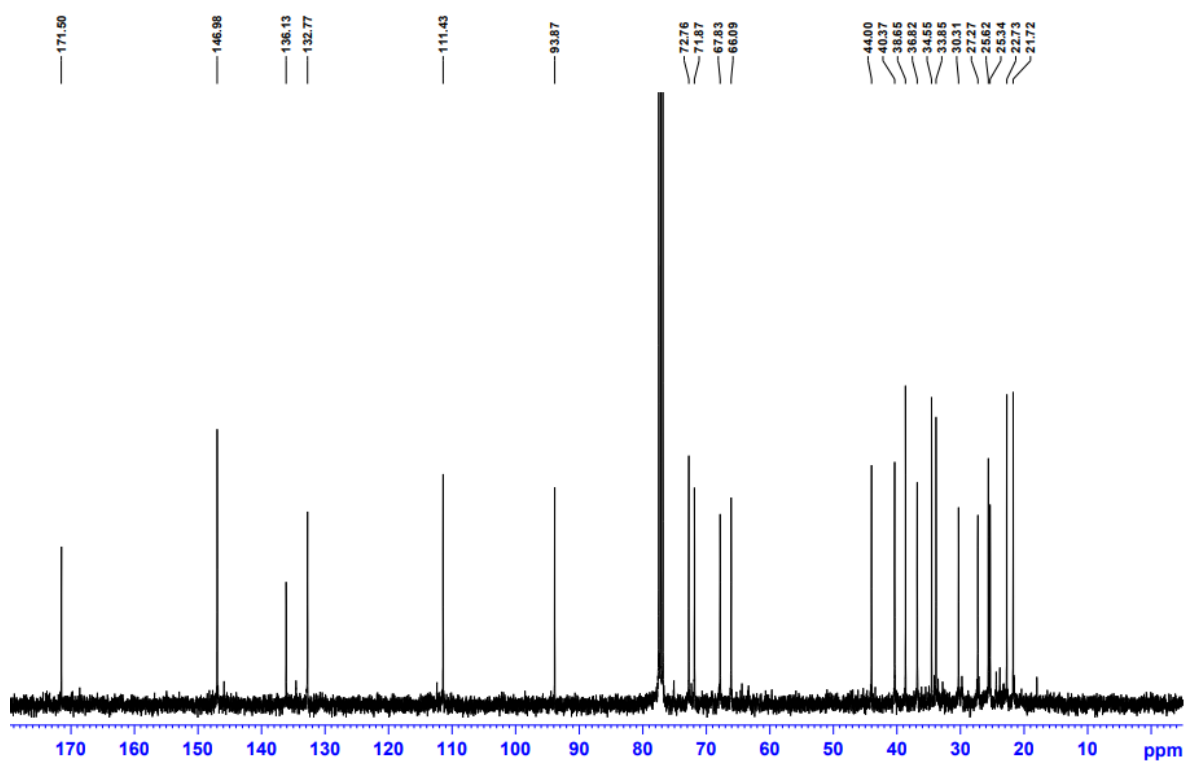


Figure S12 ^{13}C NMR spectrum (100 MHz) of compound **2** in CDCl_3

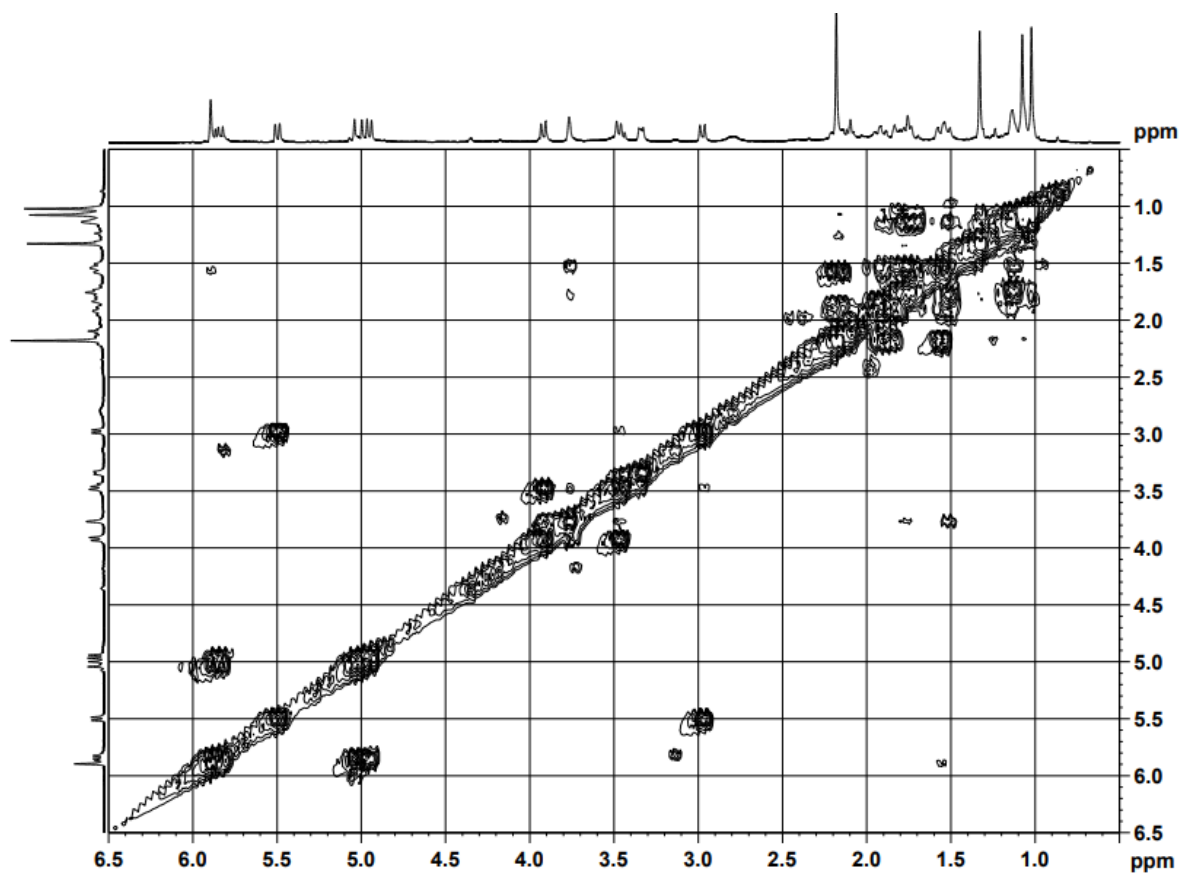


Figure S13 ^1H – ^1H COSY spectrum of compound **2** in CDCl_3

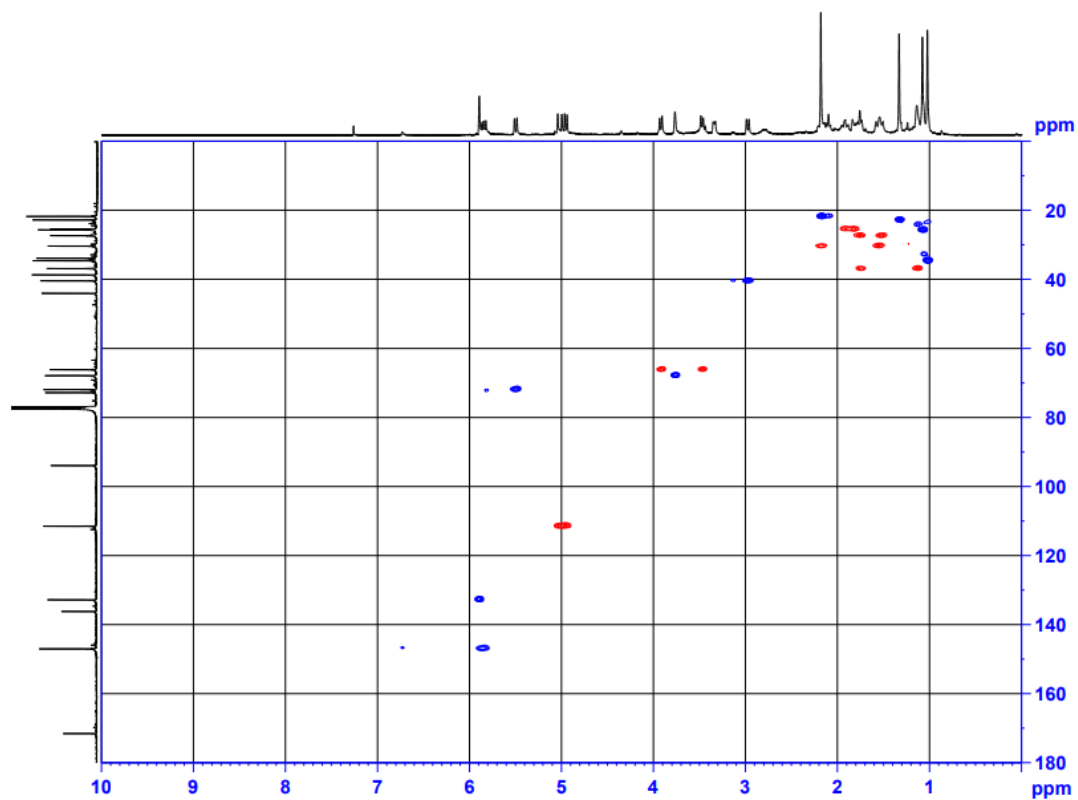


Figure S14 HSQC spectrum of compound **2** in CDCl_3

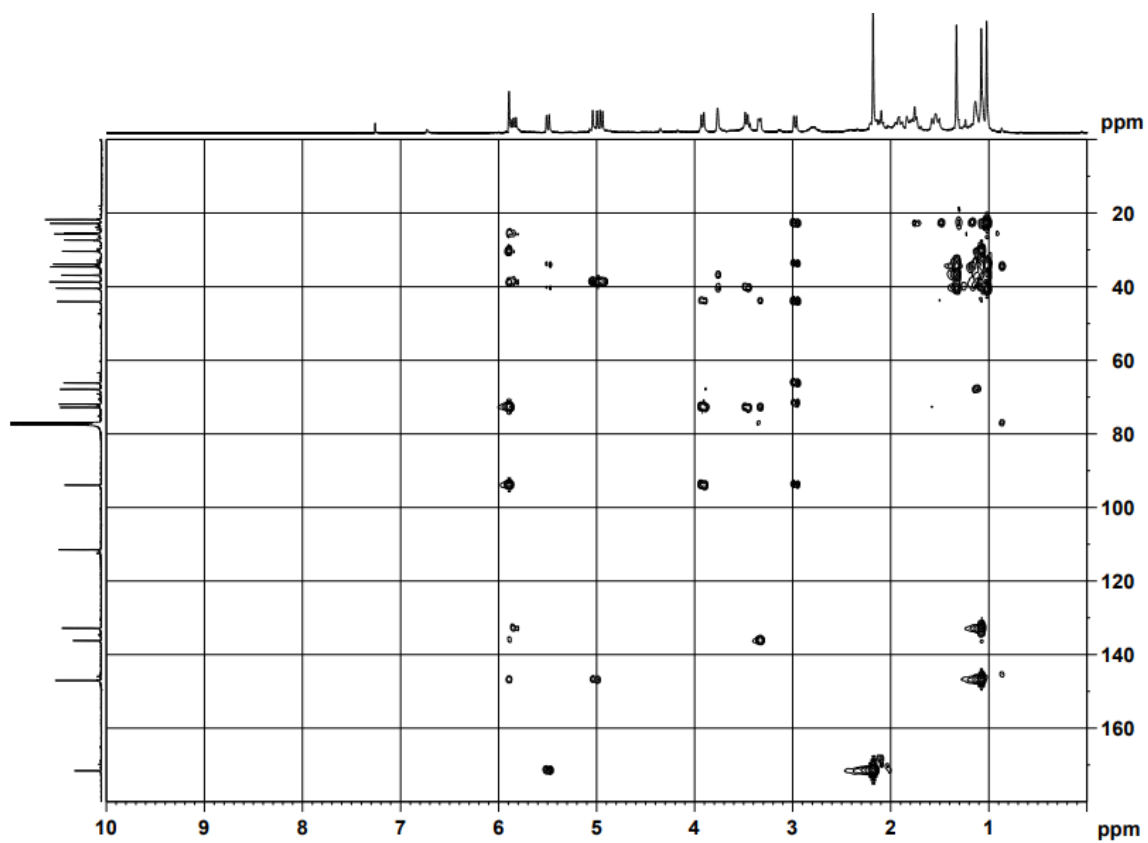


Figure S15 HMBC spectrum of compound **2** in CDCl_3

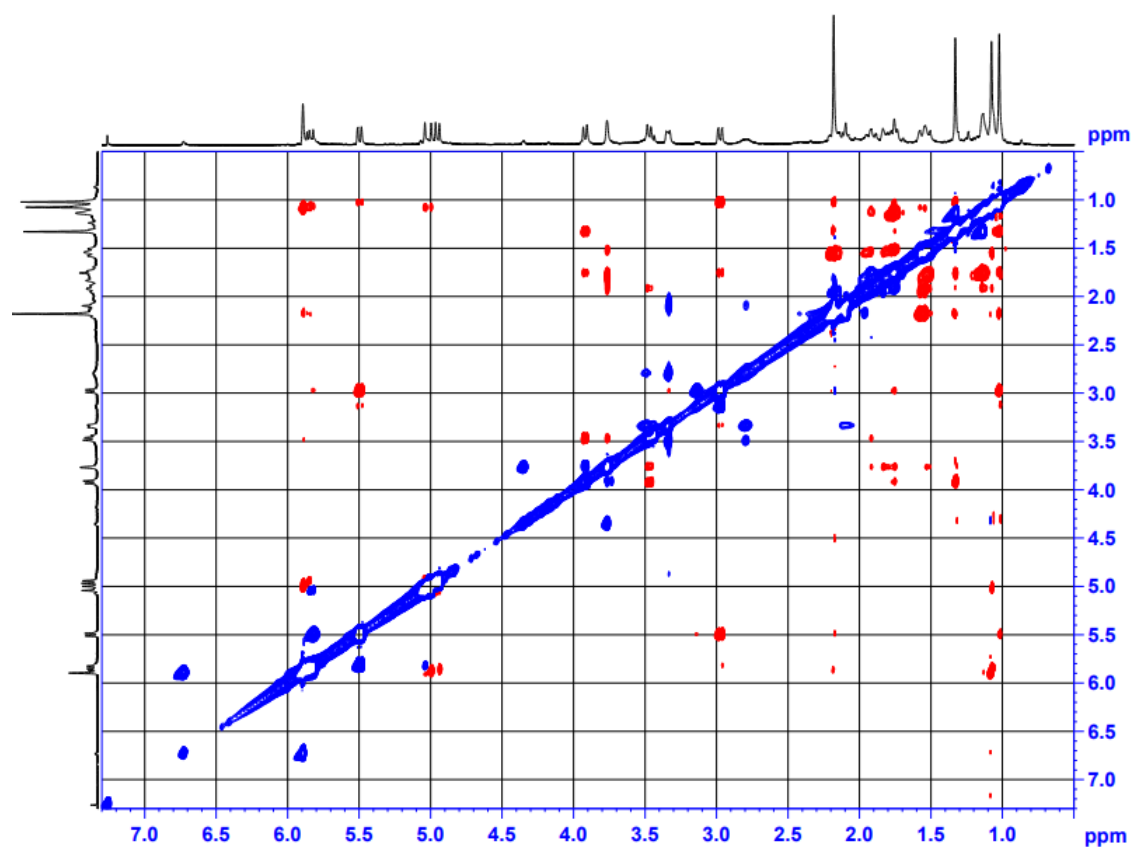


Figure S16 NOESY spectrum of compound **2** in CDCl_3

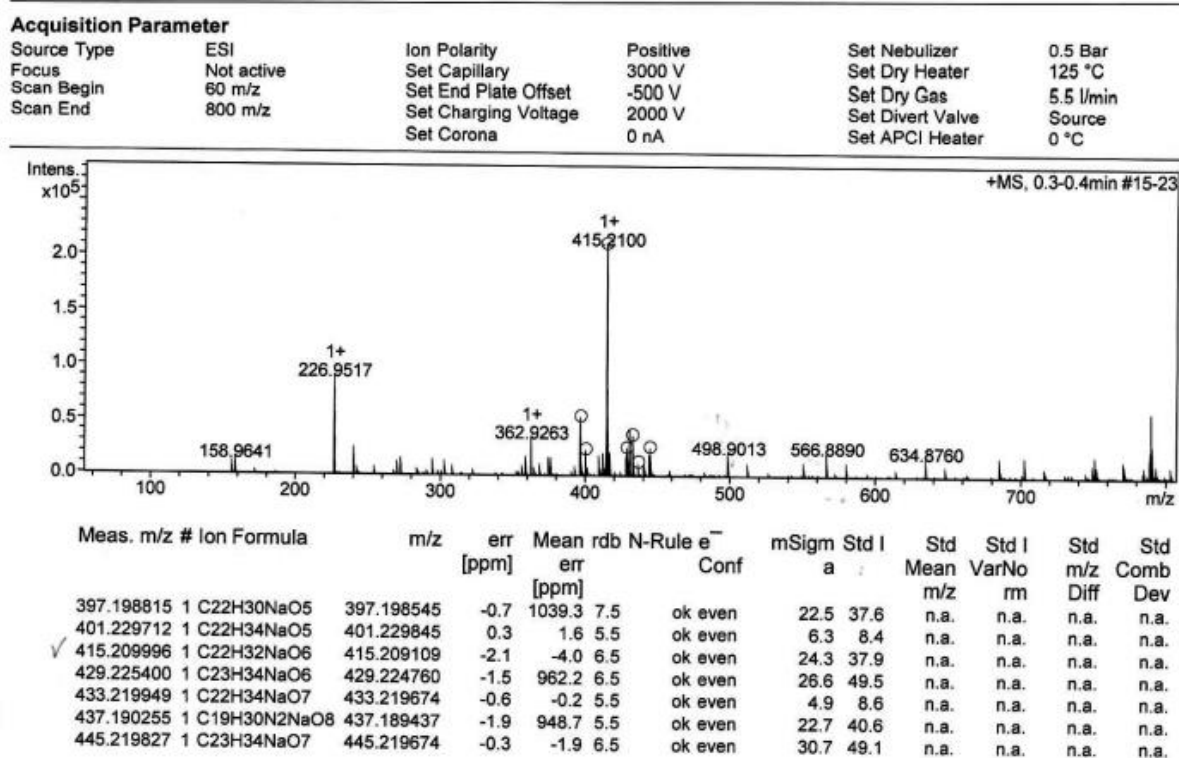


Figure S17 HREI (+) MS spectrum of compound 2

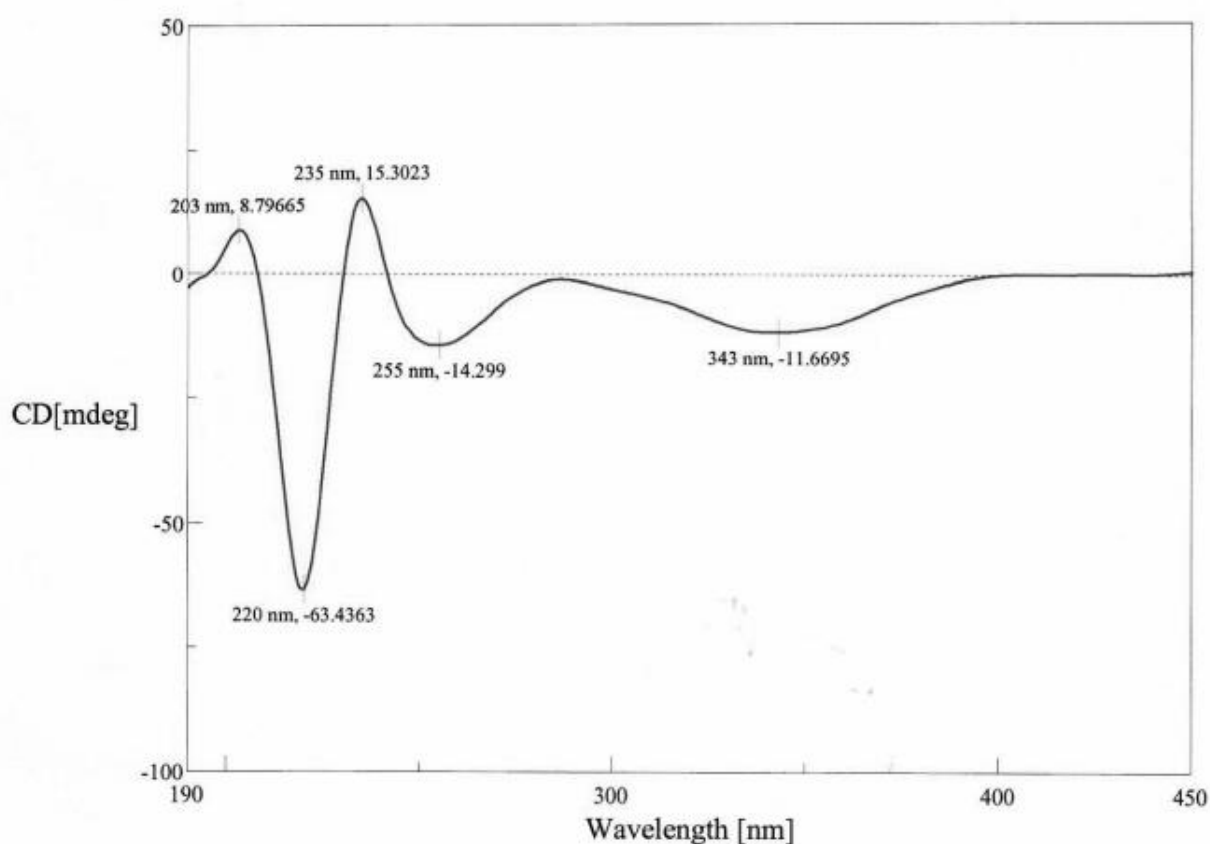


Figure S18 CD spectrum of compound 2

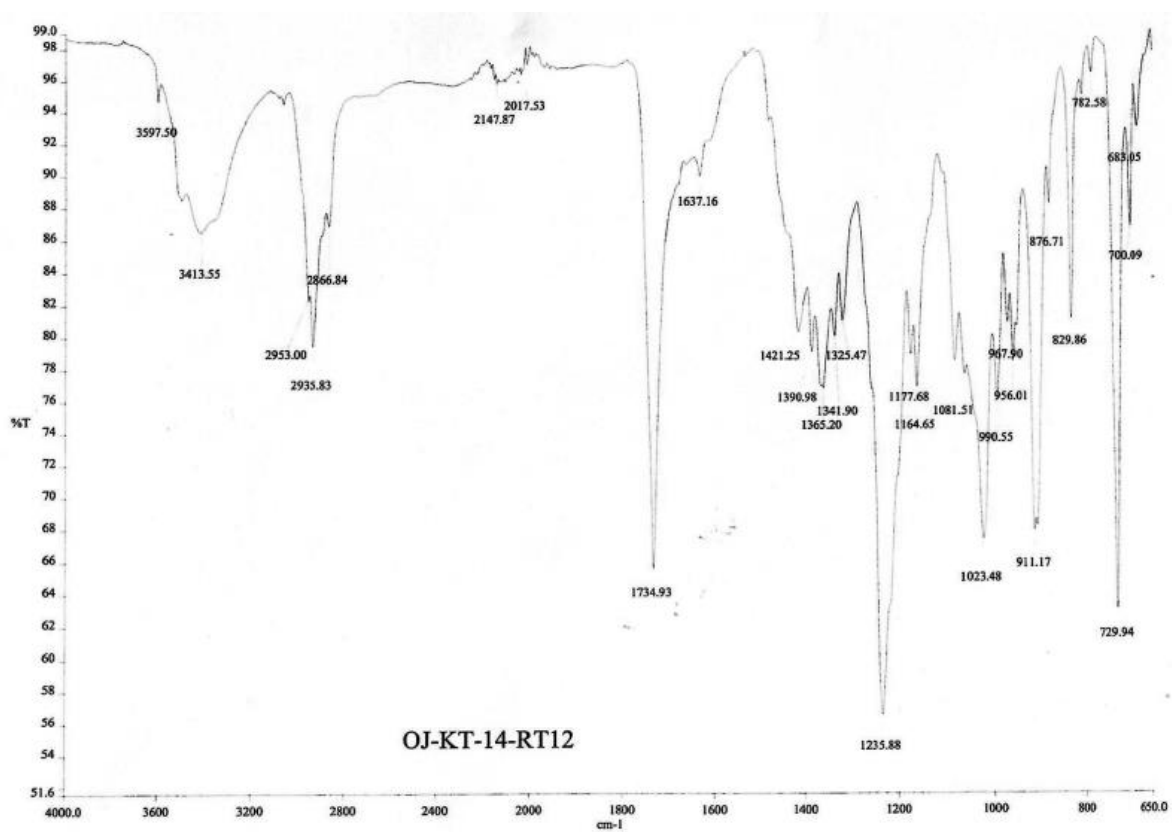


Figure S19 IR spectrum of compound 2

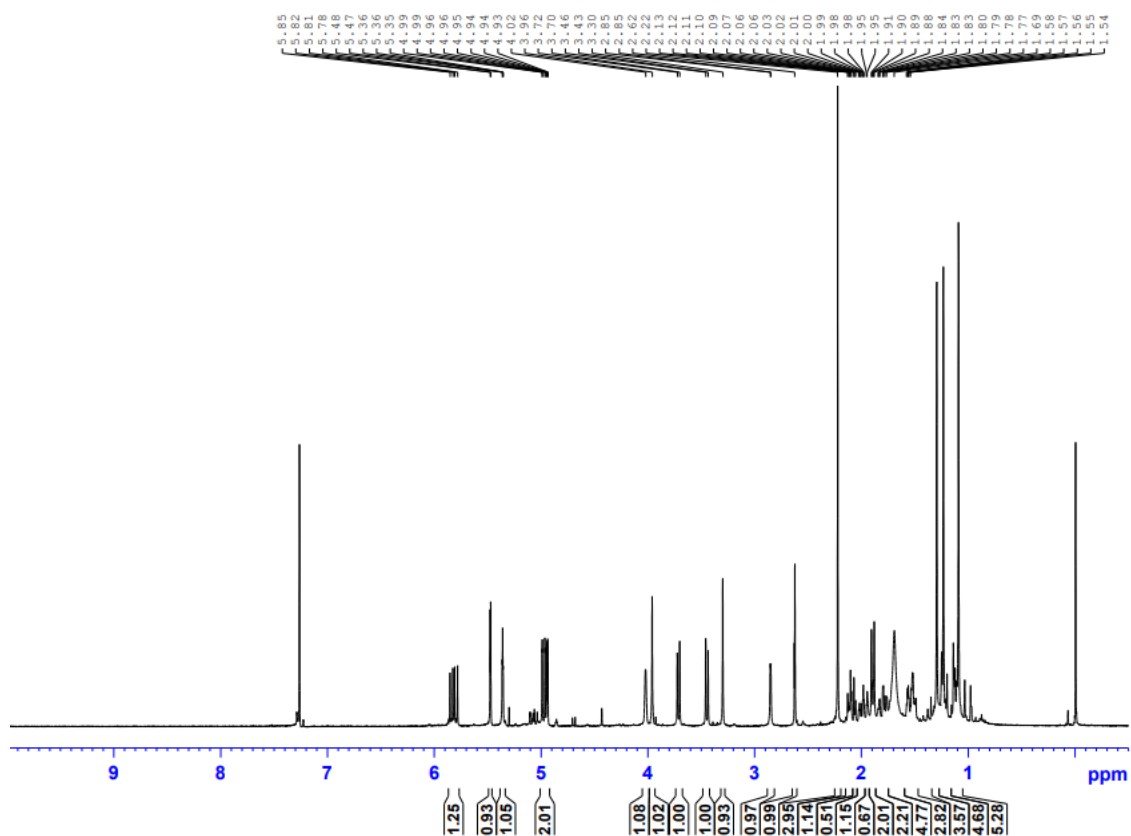


Figure S20 ^1H NMR spectrum (400 MHz) of compound **3** in CDCl_3

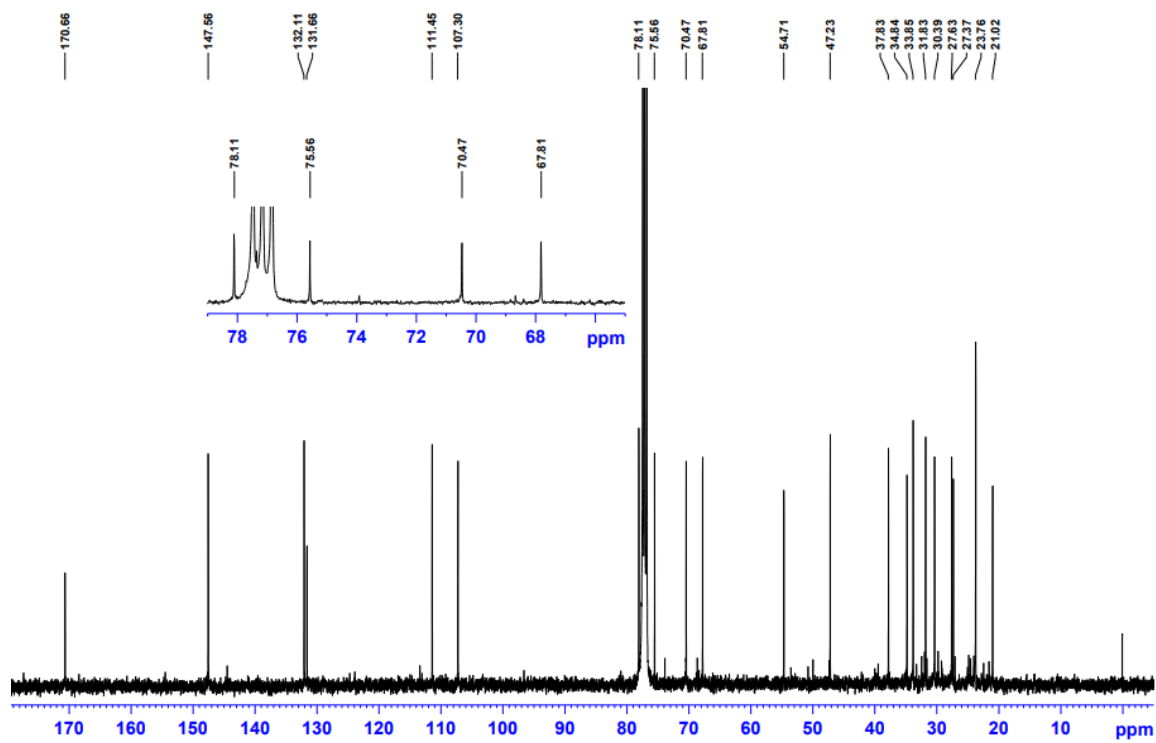


Figure S21 ^{13}C NMR spectrum (100 MHz) of compound **3** in CDCl_3

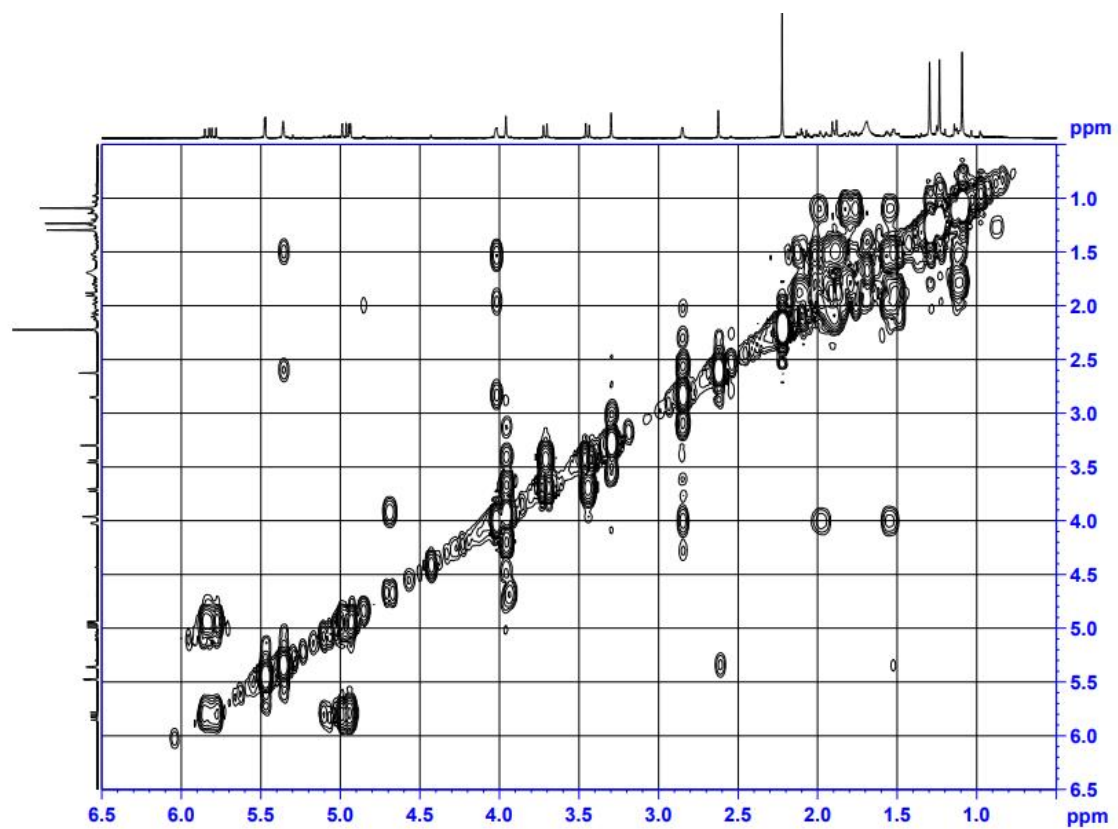


Figure S22 ^1H - ^1H COSY spectrum of compound **3** in CDCl_3

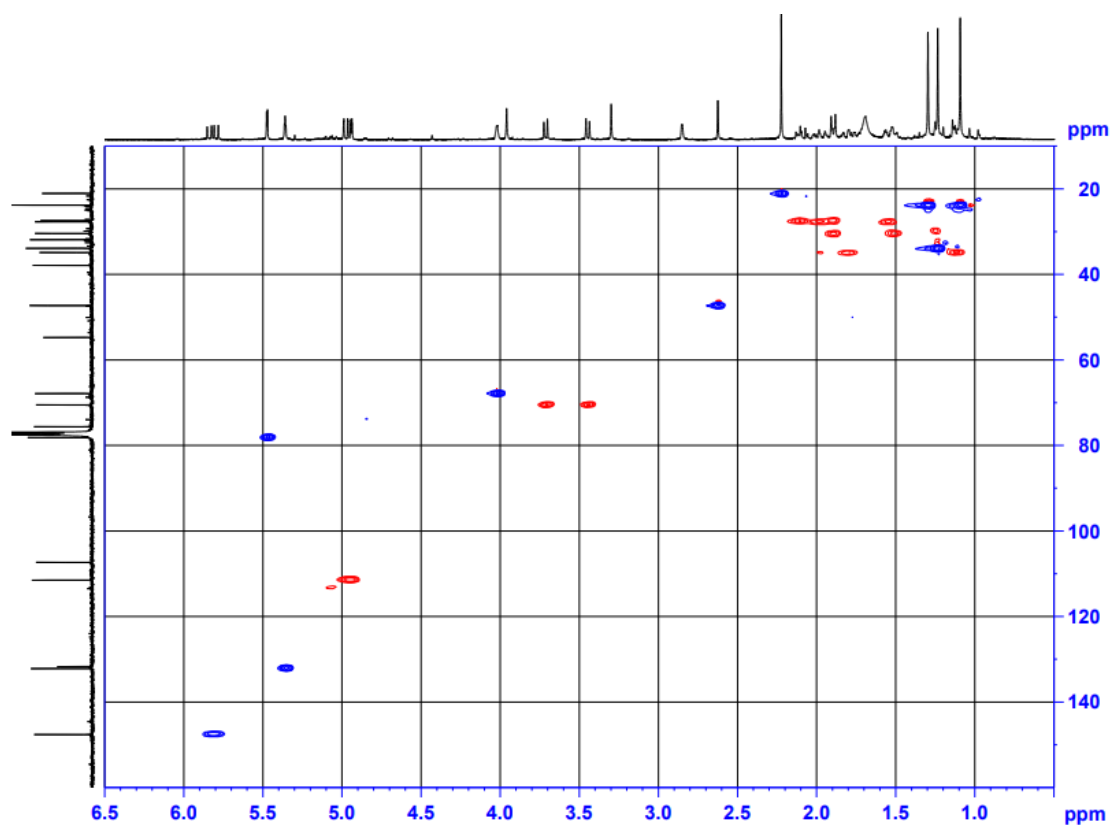


Figure S23 HSQC spectrum of compound **3** in CDCl_3

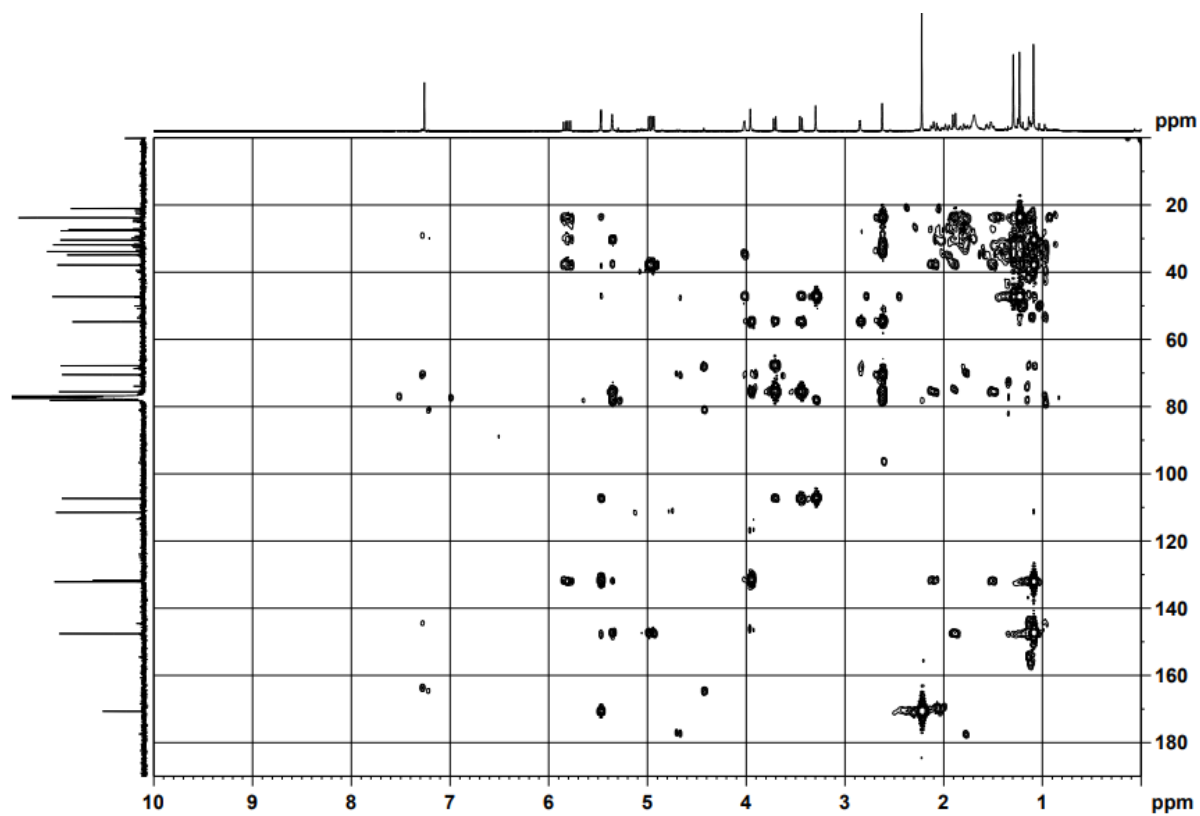


Figure S24 HMBC spectrum of compound **3** in CDCl_3

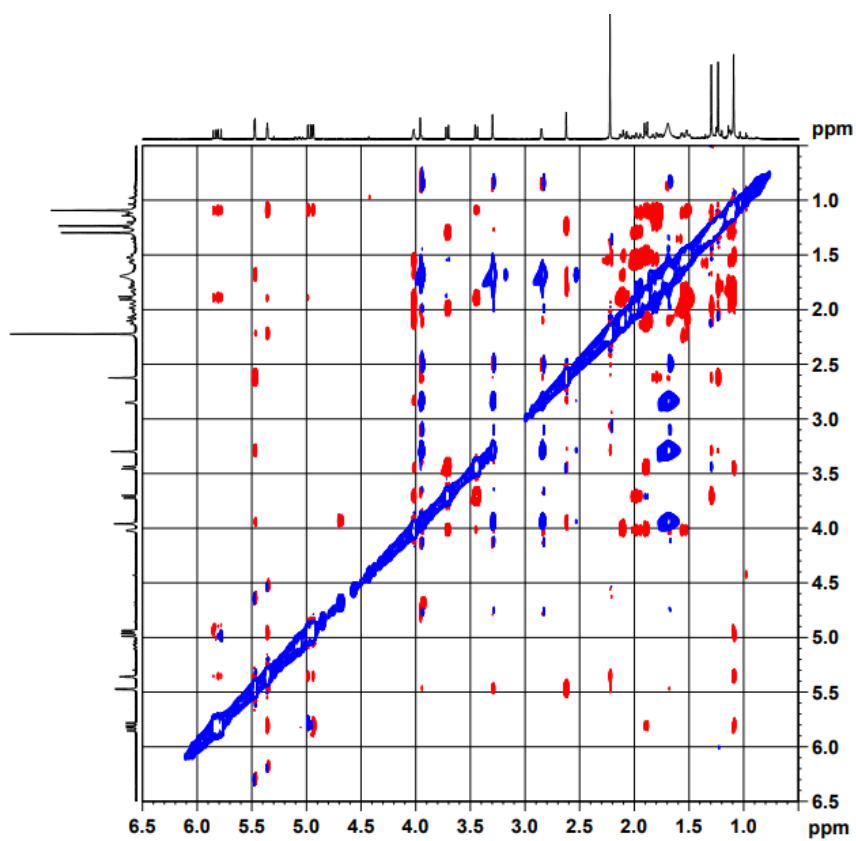


Figure S25 NOESY spectrum of compound **3** in CDCl_3

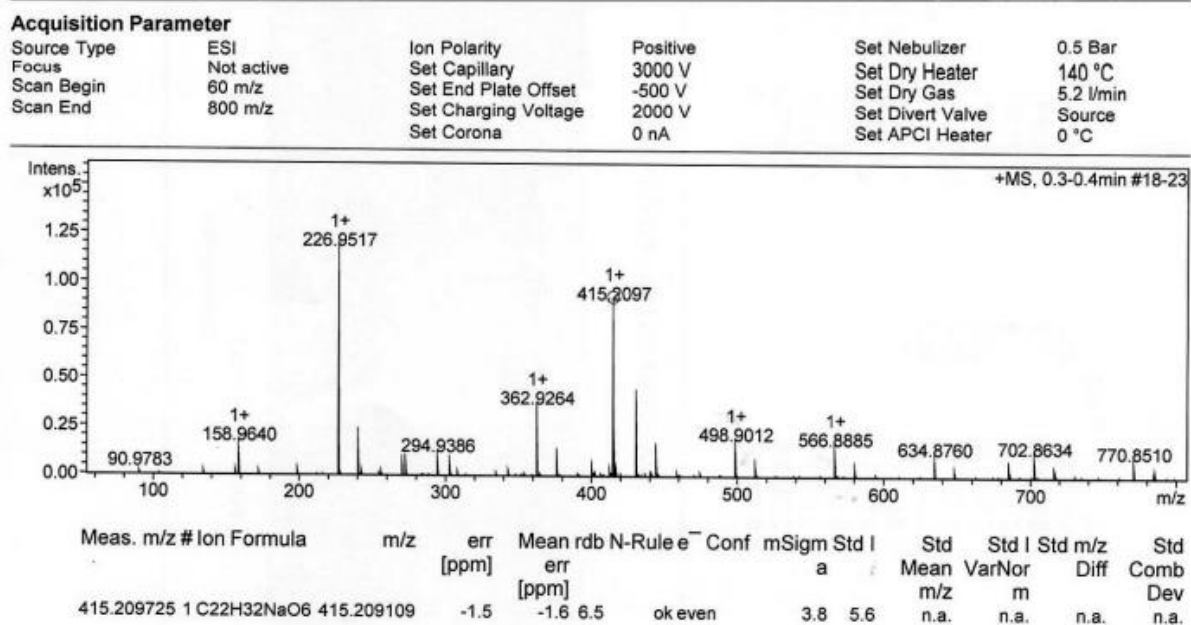


Figure S26 HREI (+) MS spectrum of compound 3

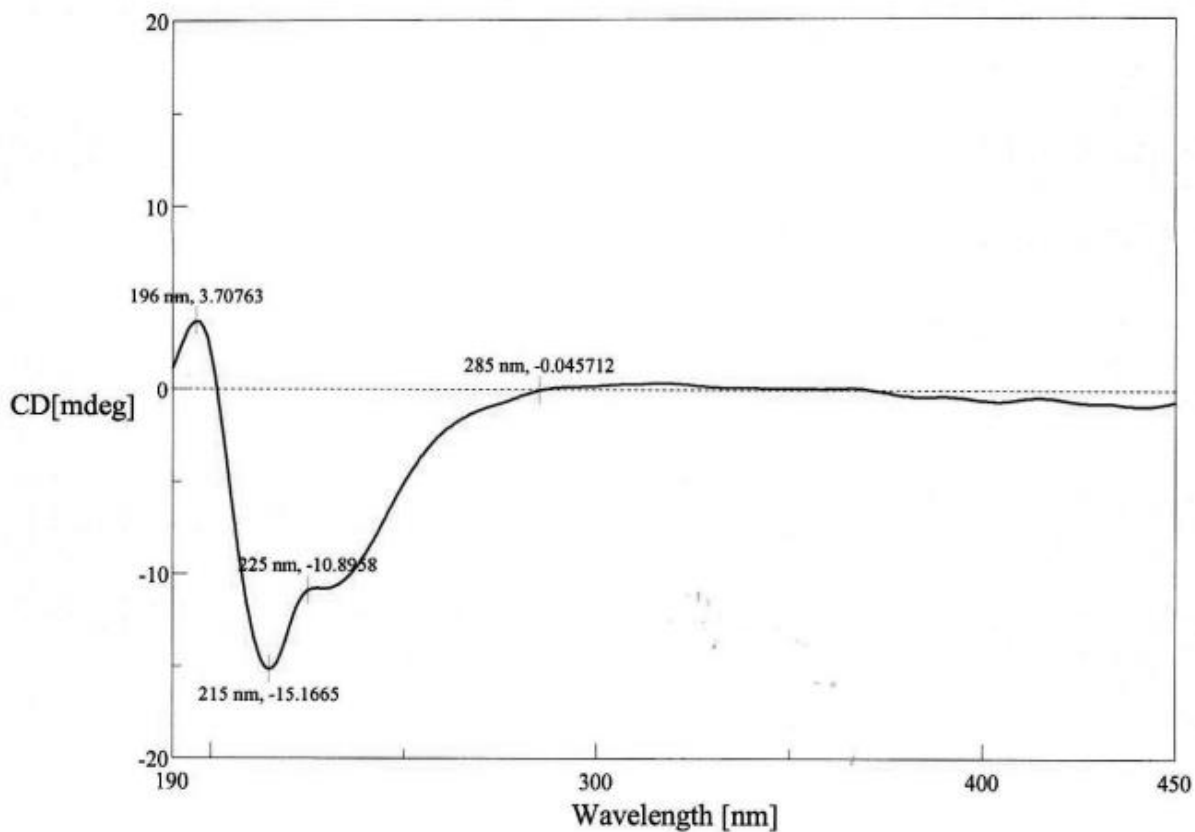


Figure S27 CD spectrum of compound 3

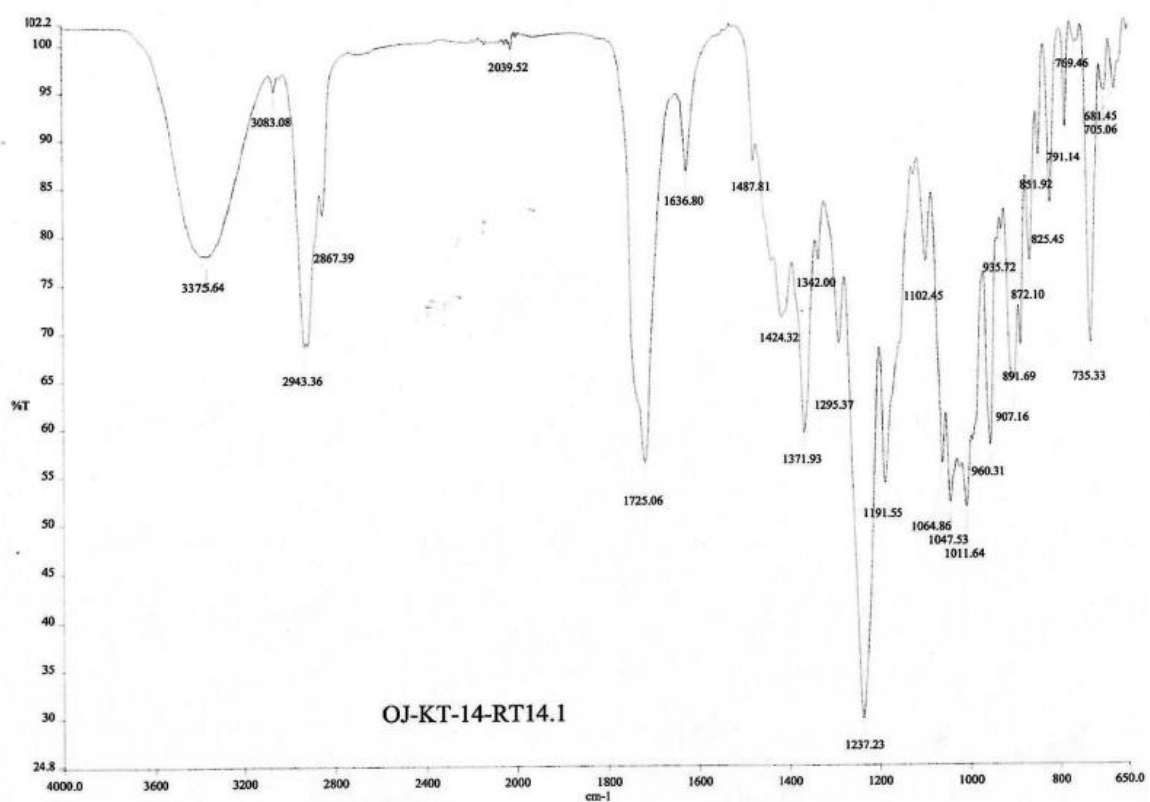


Figure S28 IR spectrum of compound 3

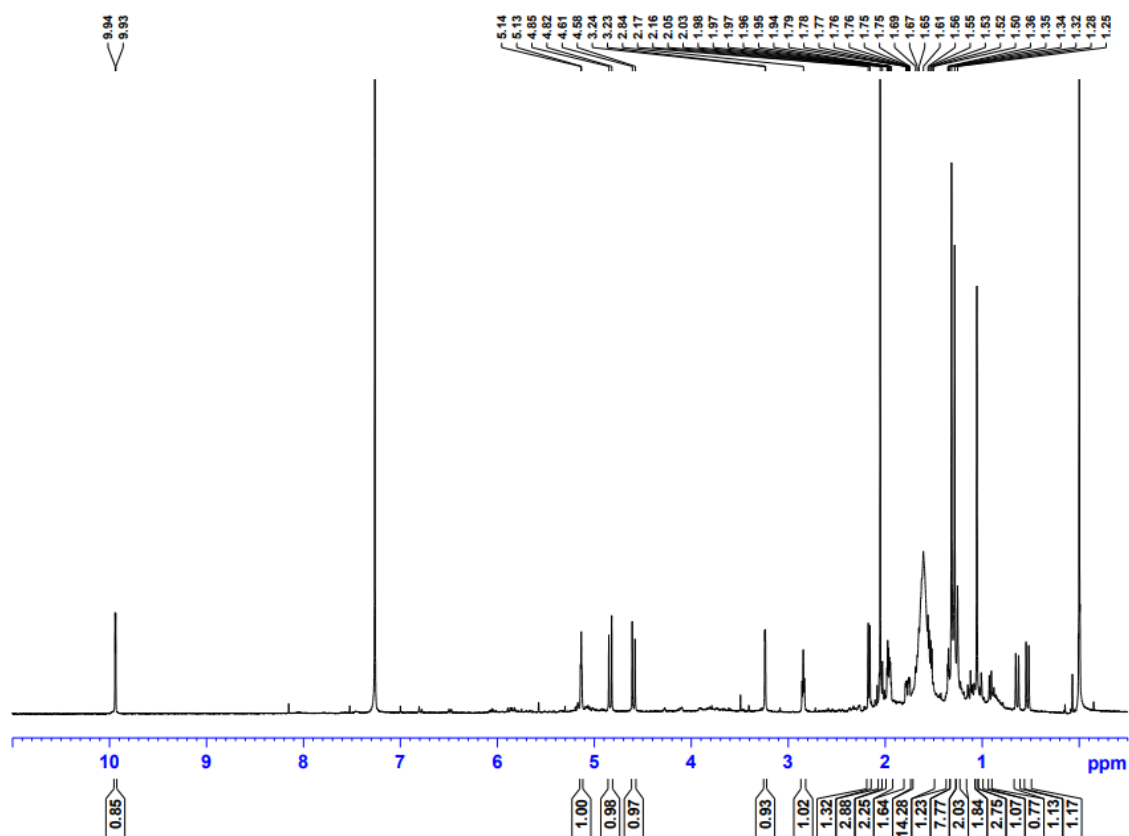


Figure S29 ¹H NMR spectrum (400 MHz) of compound 4 in CDCl₃

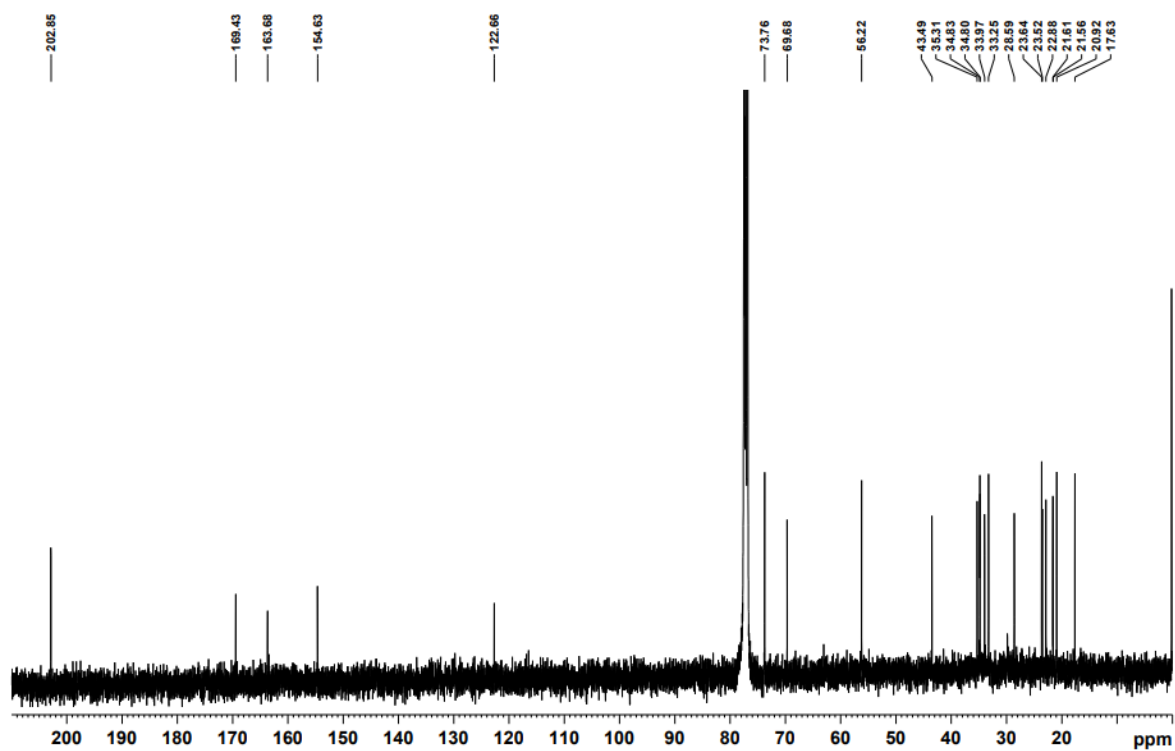


Figure S30 ¹³C NMR spectrum (100 MHz) of compound 4 in CDCl₃

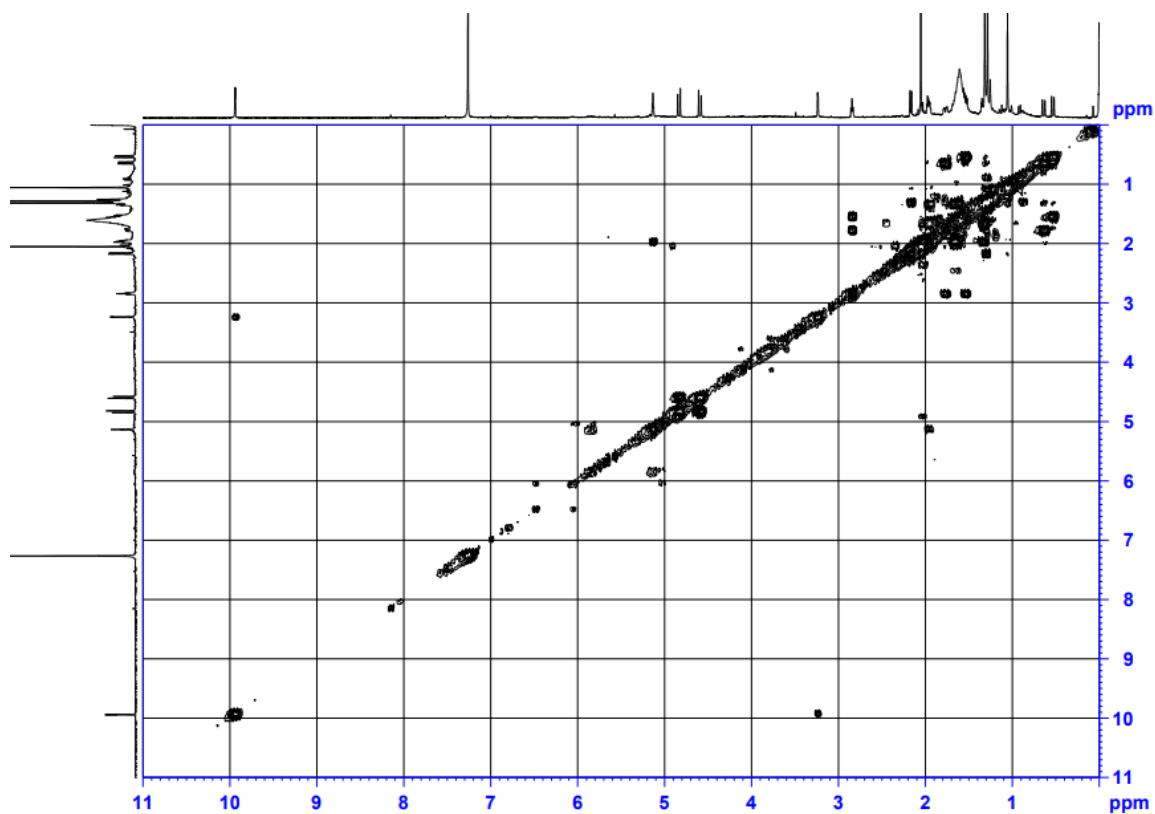


Figure S31 ^1H - ^1H COSY spectrum of compound **4** in CDCl_3

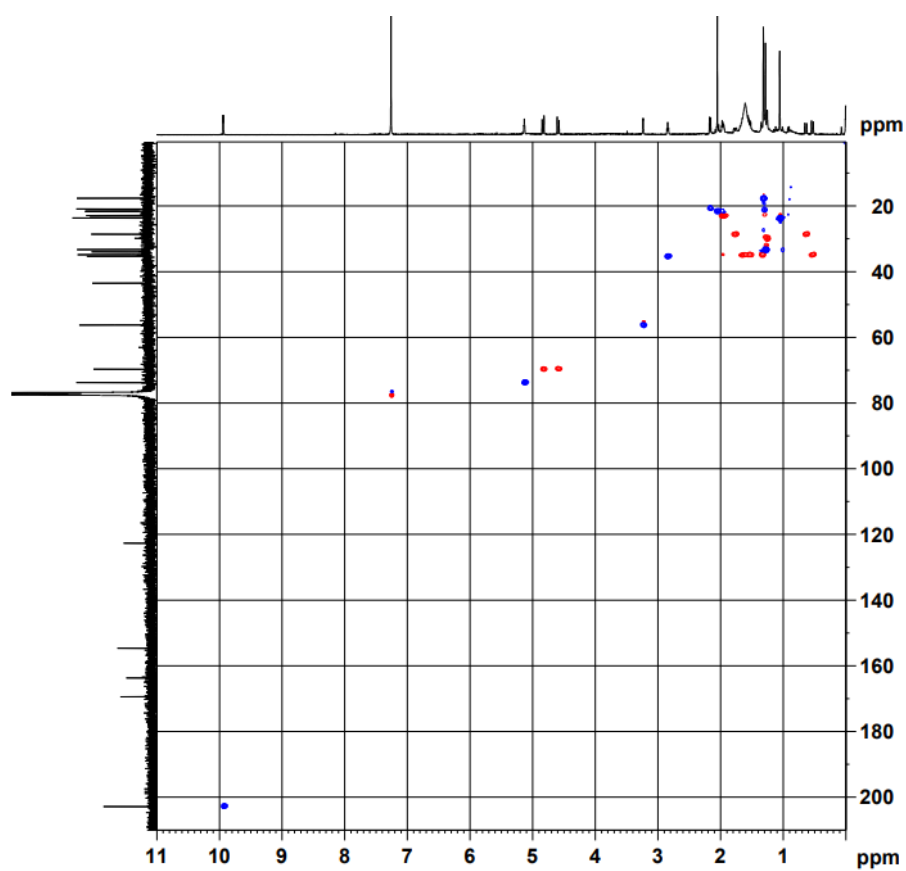


Figure S32 HSQC spectrum of compound **4** in CDCl_3

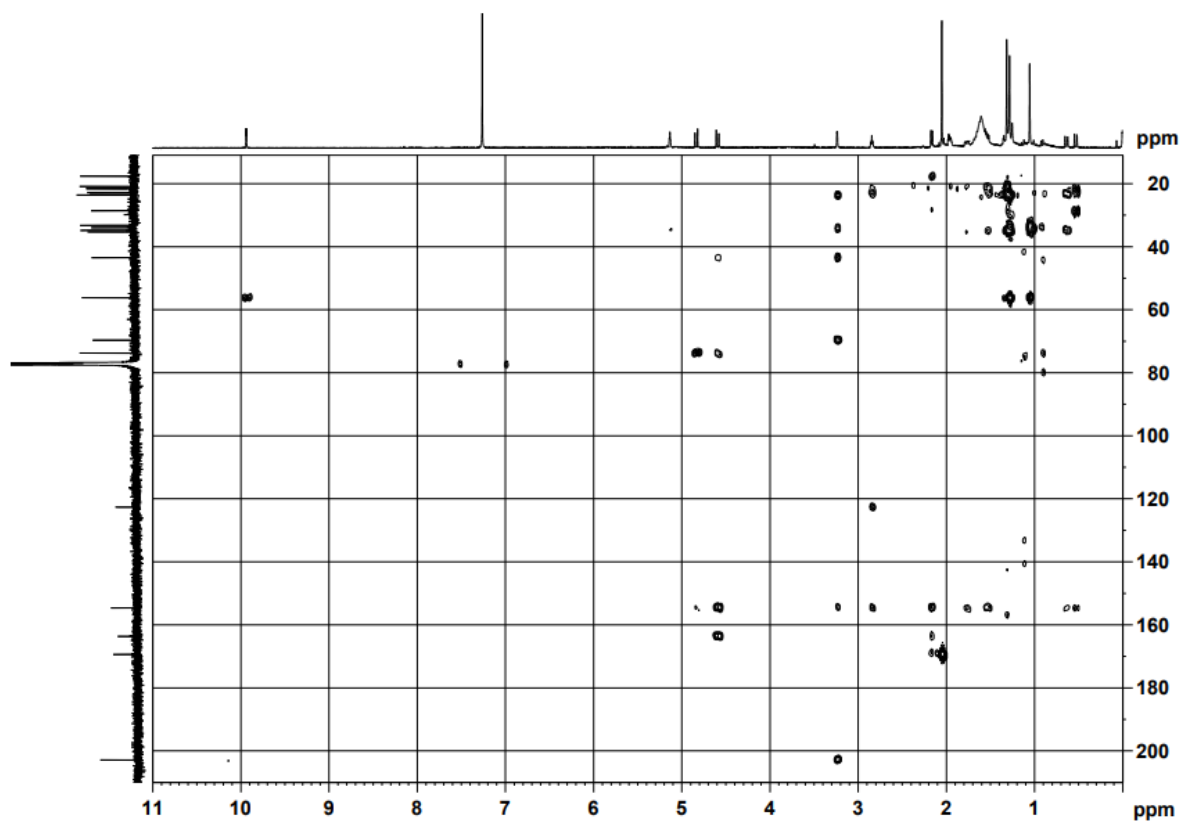


Figure S33 HMBC spectrum of compound **4** in CDCl₃

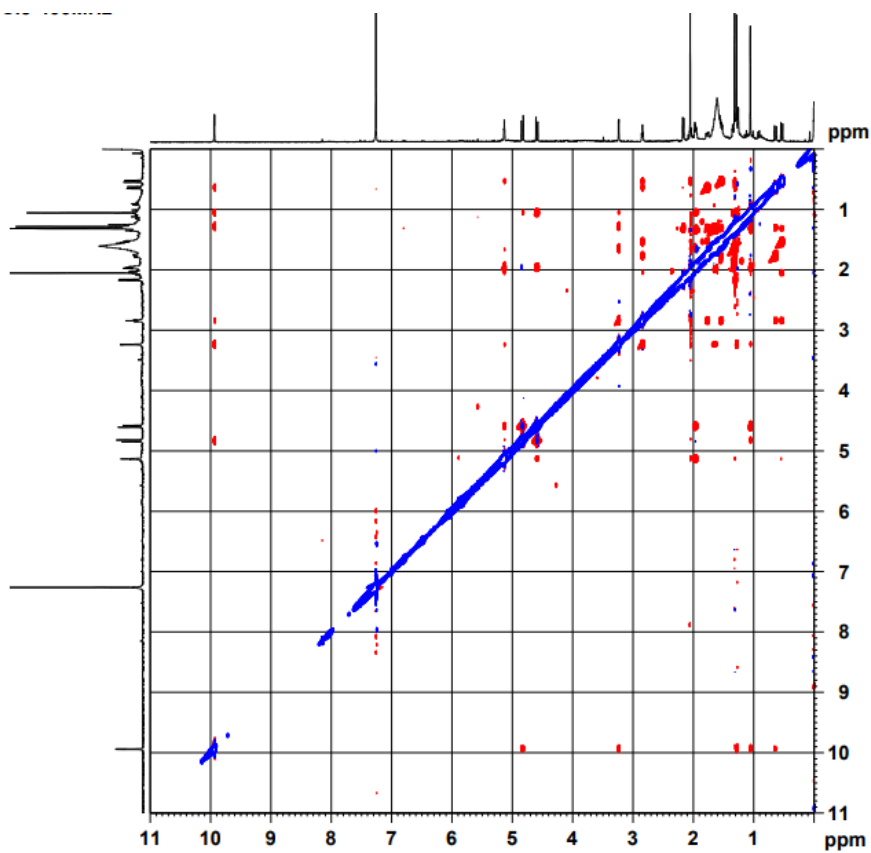


Figure S34 NOESY spectrum of compound **4** in CDCl₃

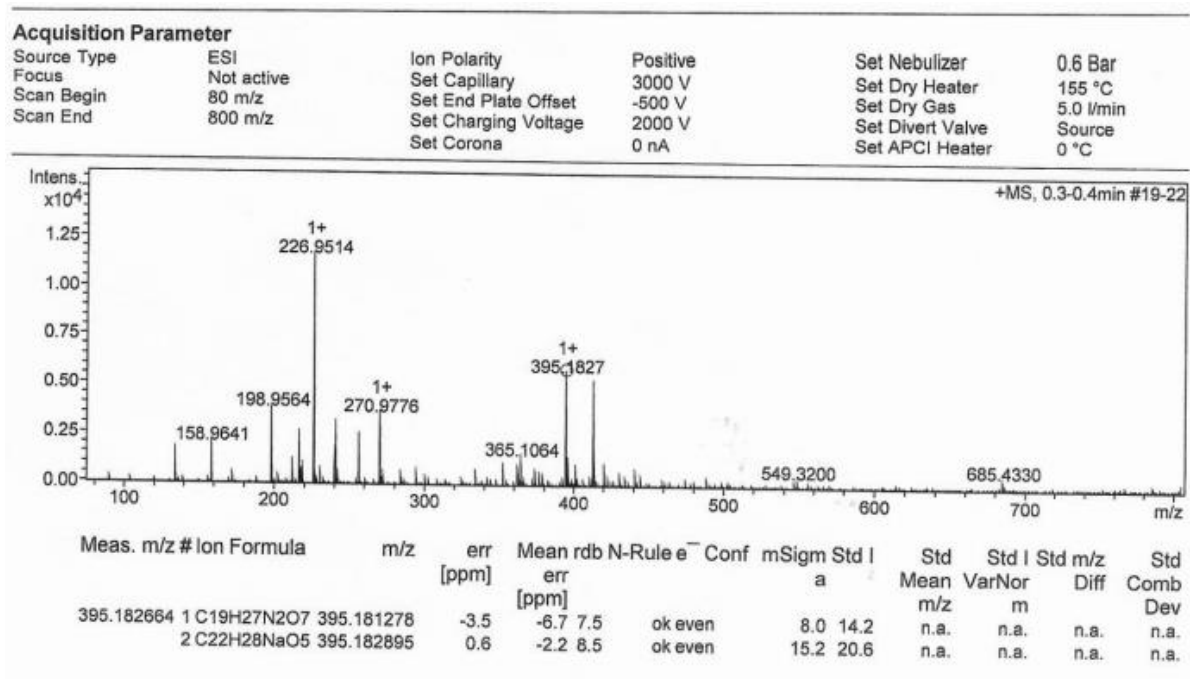


Figure S35 HREI (+) MS spectrum of compound **4**

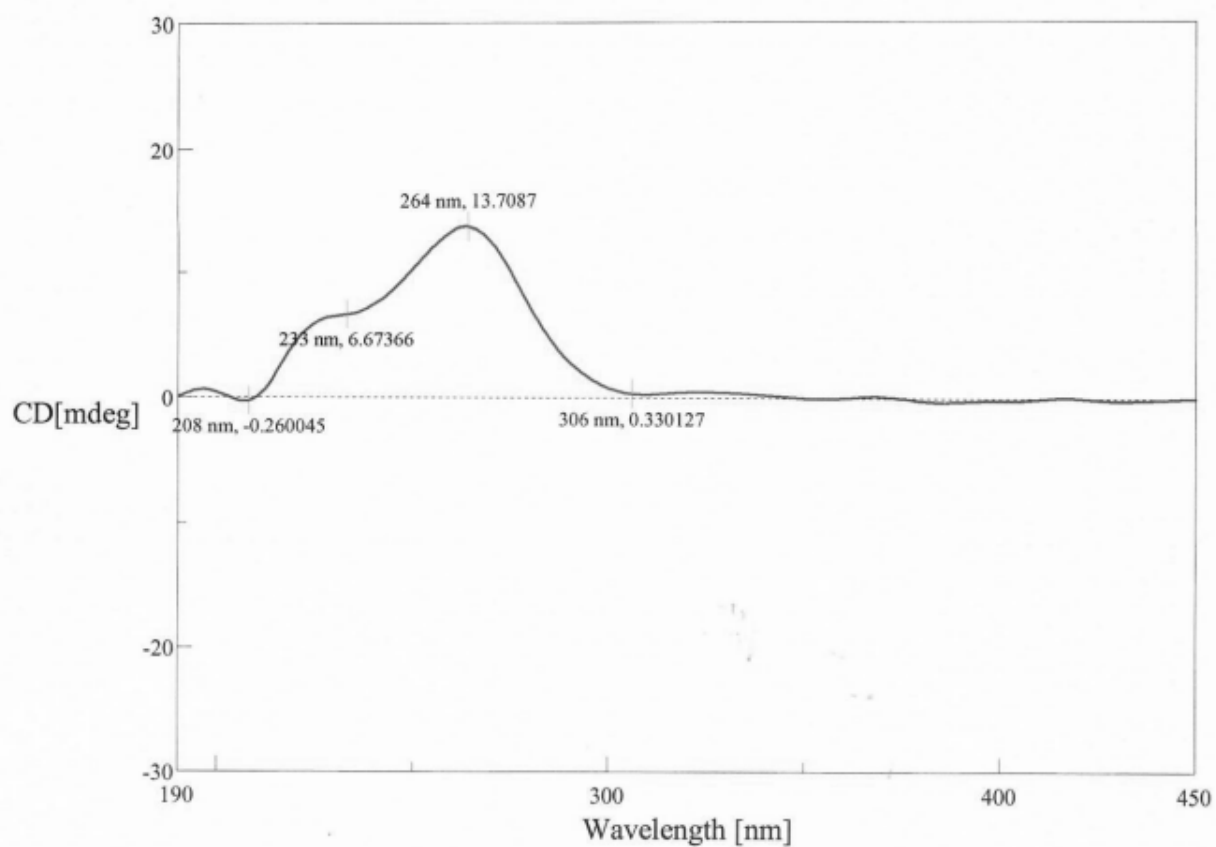


Figure S36 CD spectrum of compound **4**

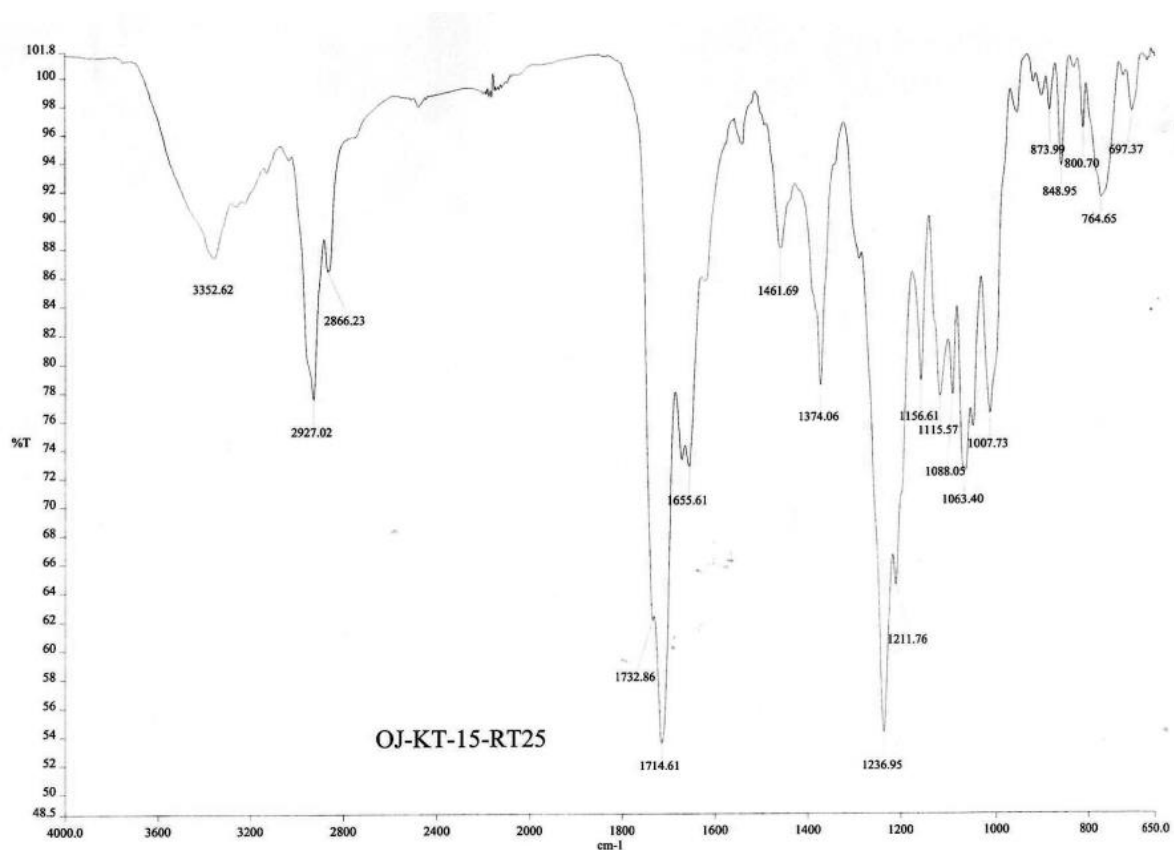


Figure S37 IR spectrum of compound **4**