

## Supplementary information

### Supplementary data: 1D and 2D NMR, FT-IR and MS spectra for the compound (2), (3) and (4)

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## 1D and 2D NMR spectra for compound (2)

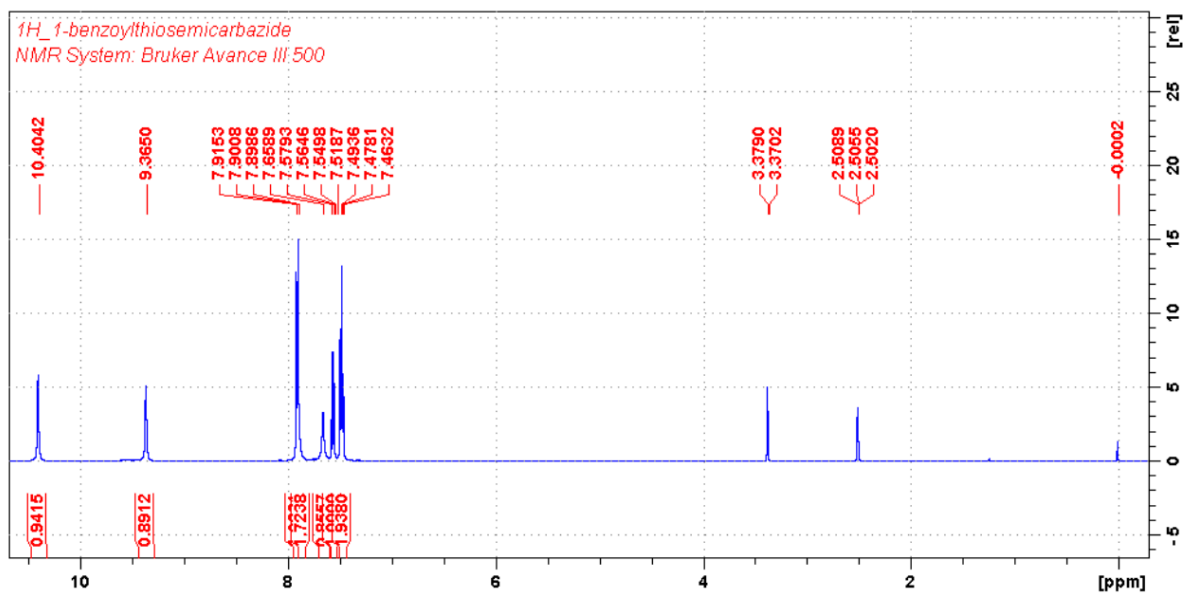


Figure S1  $^1\text{H}$  NMR spectrum of the compound (2)

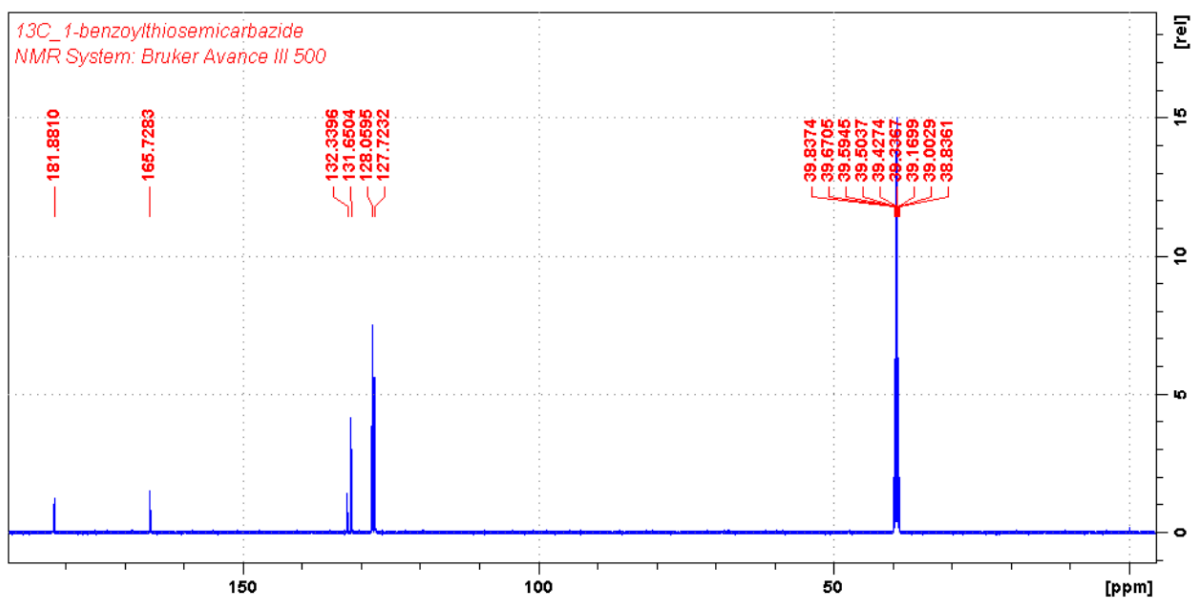


Figure S2  $^{13}\text{C}$  NMR spectrum of the compound (2)

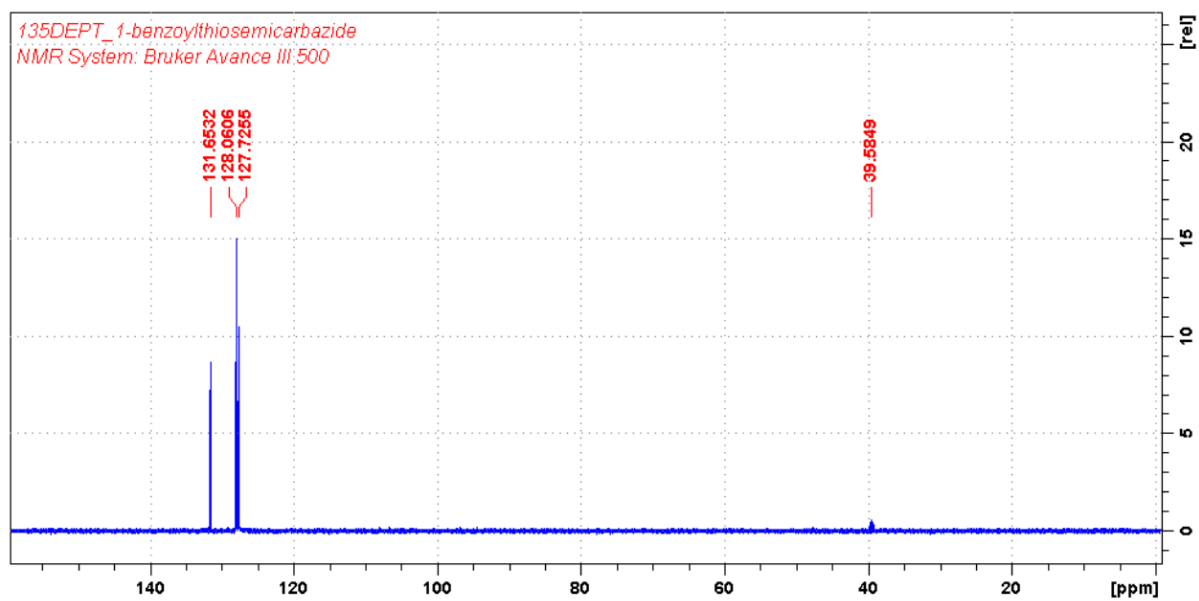


Figure S3  $^{13}\text{C}$  DEPT135 spectrum of the compound (2)

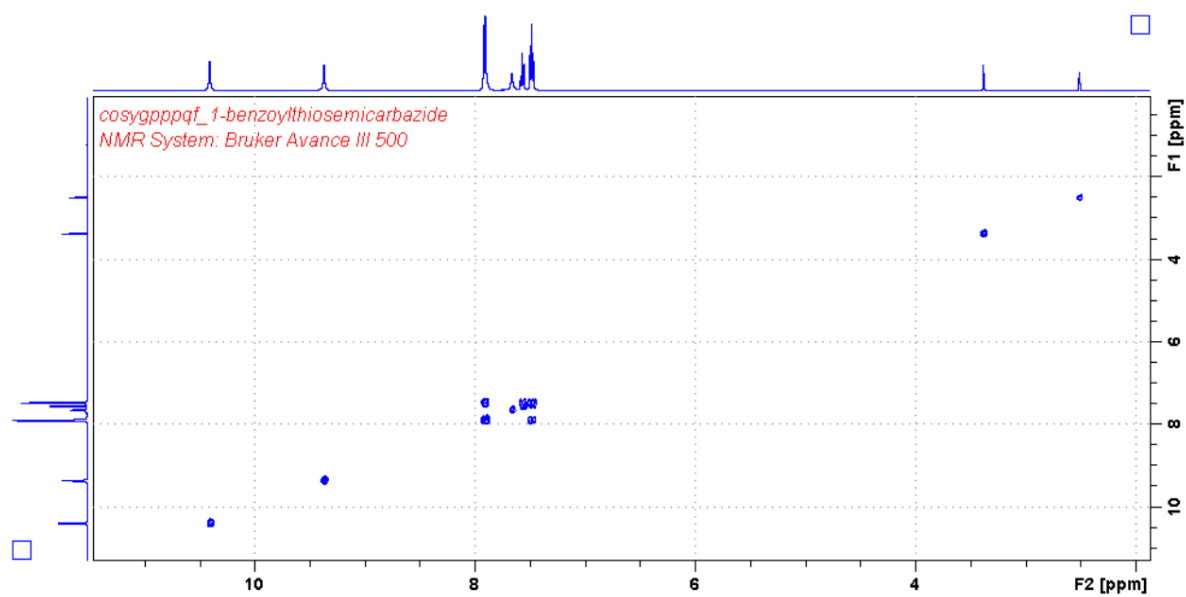


Figure S4 COSY  $^1\text{H}$ - $^1\text{H}$  spectrum of the compound (2)

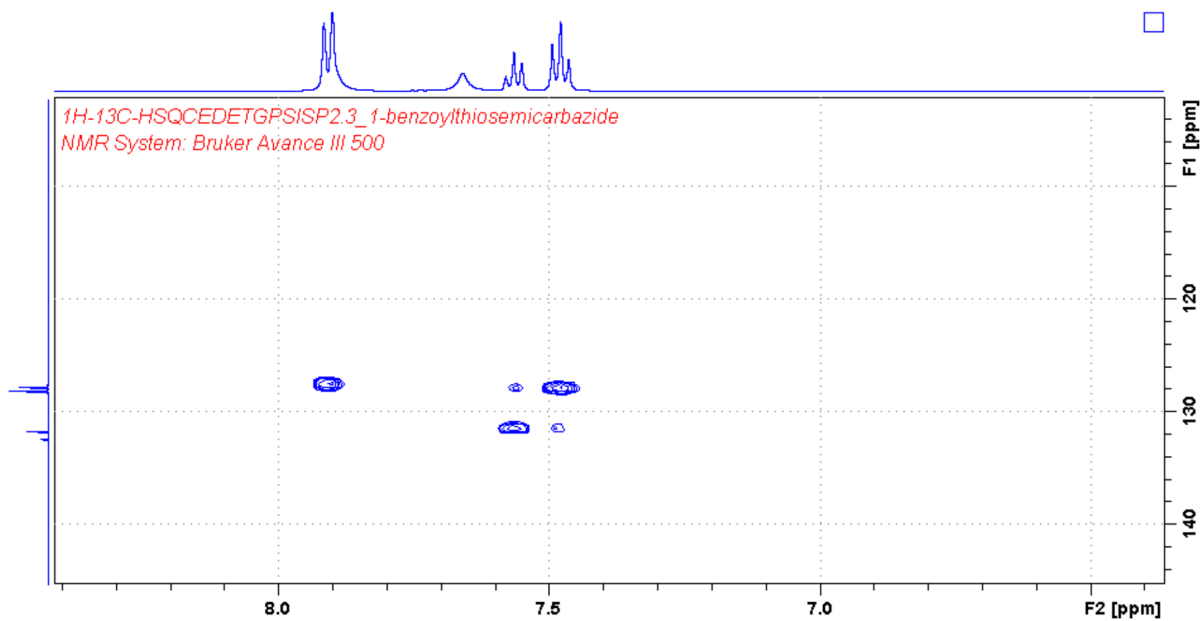


Figure S5 HSQC  $^1\text{H}$ - $^{13}\text{C}$  spectrum of the compound (2)

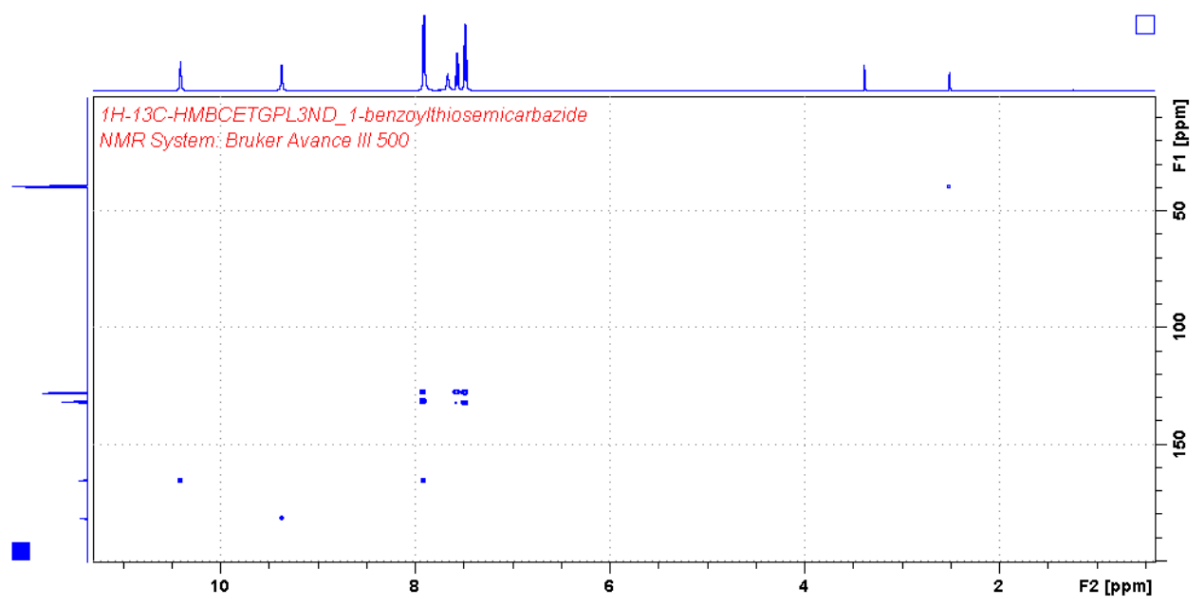


Figure S6 HMBC  $^1\text{H}$ - $^{13}\text{C}$  spectrum of the compound (2)

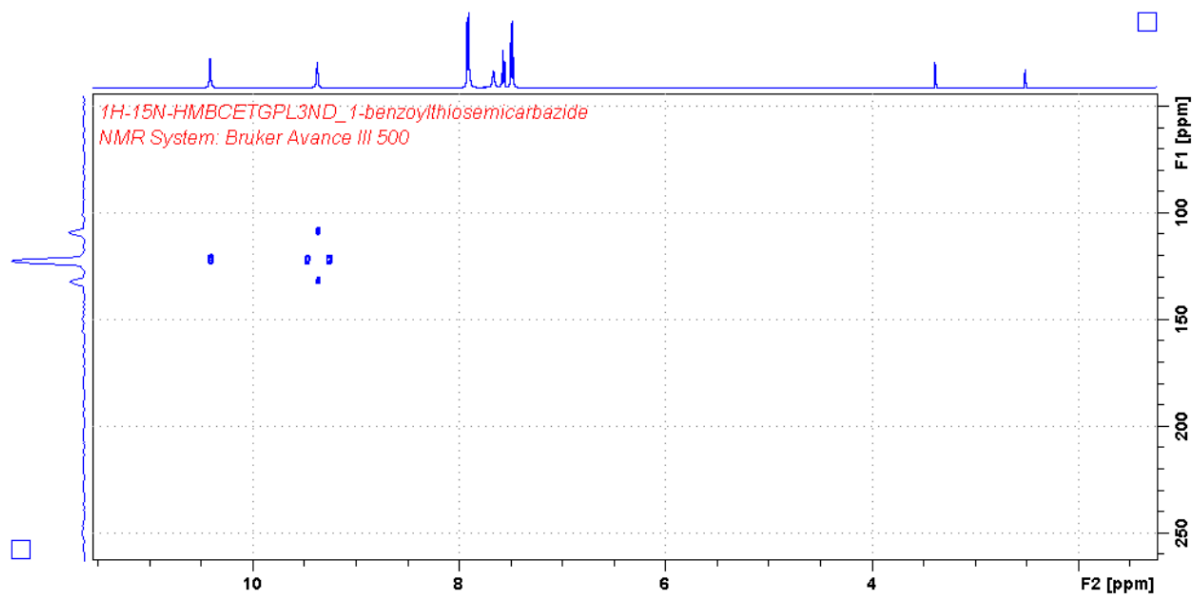


Figure S7 HMBC  $^1\text{H}$ - $^{15}\text{N}$  spectrum of the compound (2)

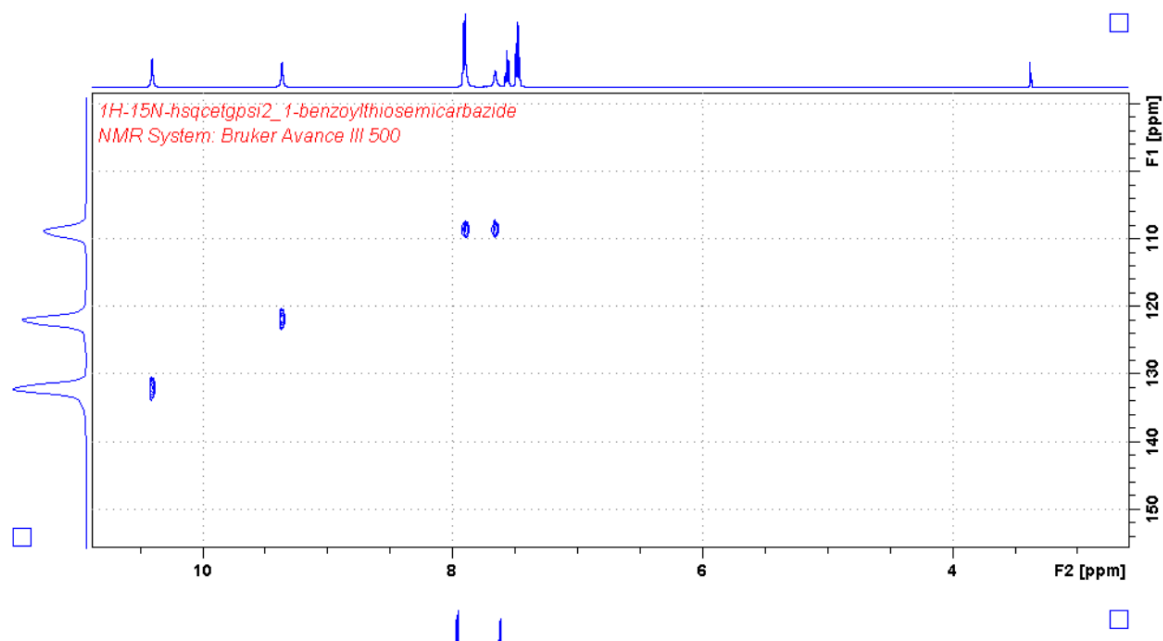
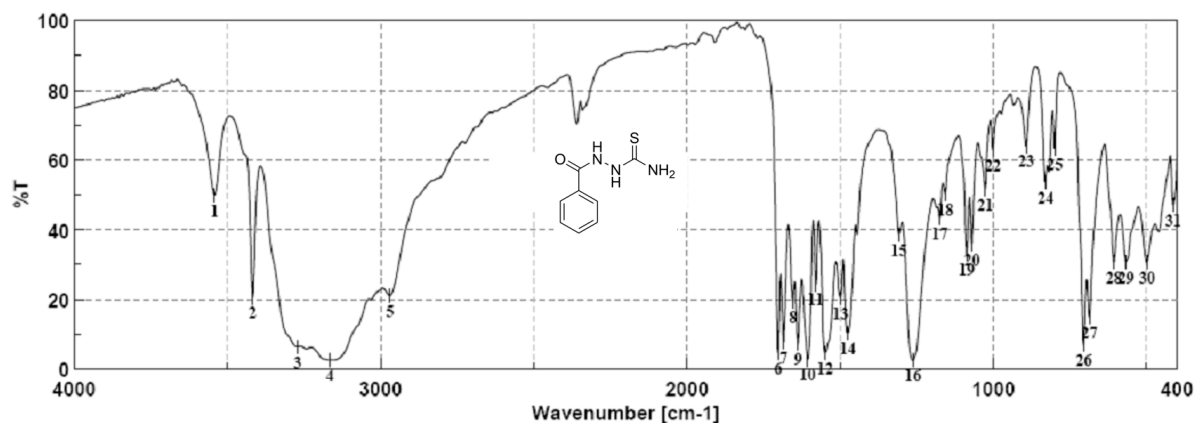


Figure S8 HSQC  $^1\text{H}$ - $^{15}\text{N}$  spectrum of the compound (2)

### IR spectrum for compound (2)



Result of Peak Picking											
No.	Position	Intensity	No.	Position	Intensity	No.	Position	Intensity	No.	Position	Intensity
1:	3542.59	49.9471	2:	3418.21	20.5314	3:	3272.61	6.4330	4:	3166.54	2.5796
5:	2969.84	21.0122	6:	1702.84	4.6859	7:	1685.48	7.8240	8:	1654.62	19.3558
9:	1638.23	7.2765	10:	1606.41	2.7346	11:	1579.41	24.2778	12:	1549.52	4.4708
13:	1499.38	20.3283	14:	1475.28	10.3908	15:	1308.46	38.6384	16:	1263.15	2.4941
17:	1175.40	43.4049	18:	1157.08	50.3257	19:	1086.69	33.0078	20:	1070.30	35.8351
21:	1025.94	51.6237	22:	1000.87	62.8457	23:	892.88	64.0658	24:	830.21	53.6314
25:	799.35	63.2580	26:	705.82	6.8841	27:	686.53	14.8366	28:	606.50	30.6020
29:	566.97	30.7801	30:	499.47	30.6686	31:	412.69	47.1359			

Figure S9 FT-IR spectrum of the compound (2)

### 1D and 2D NMR spectra for compound (3)

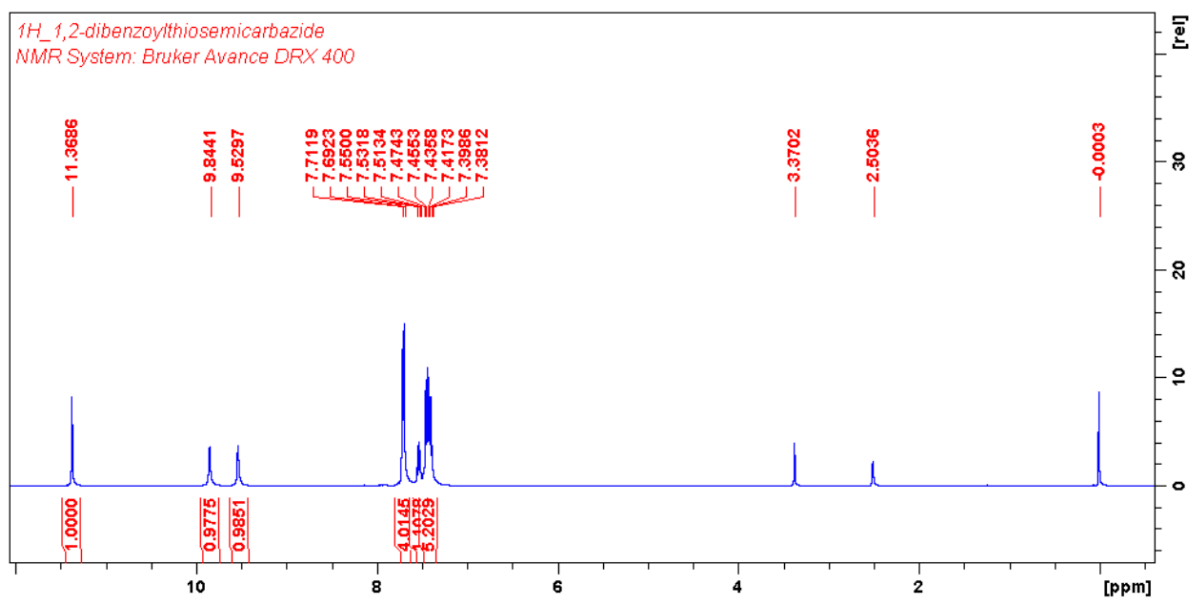


Figure S10 <sup>1</sup>H NMR spectrum of the compound (3)

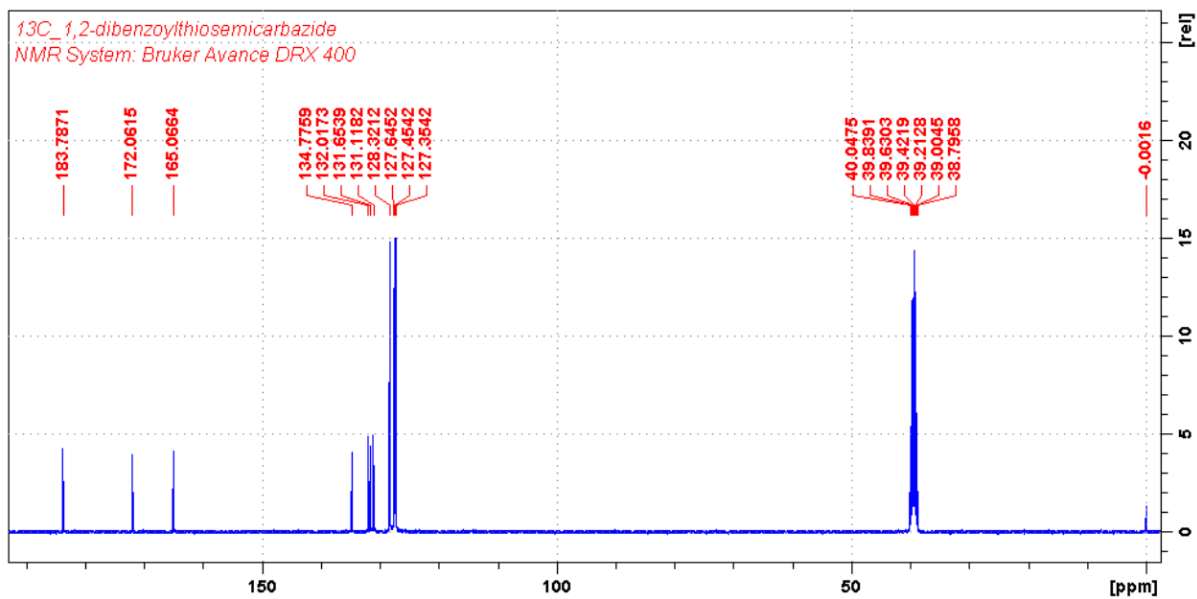


Figure S11 <sup>13</sup>C NMR spectrum of the compound (3)

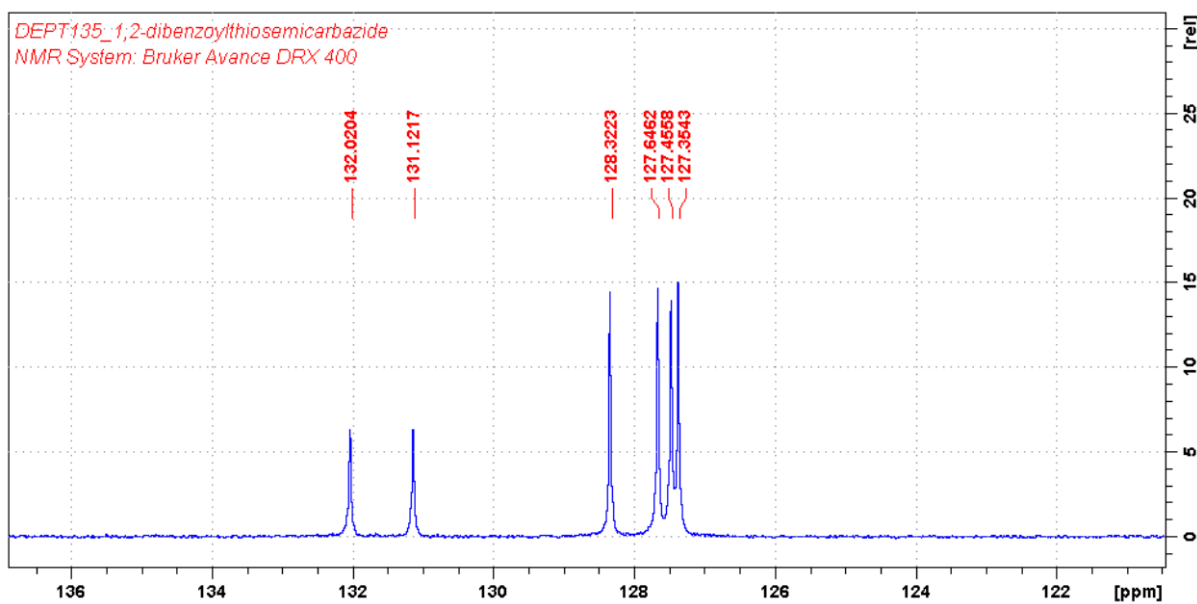


Figure S12 <sup>13</sup>C DEPT135 spectrum of the compound (3)

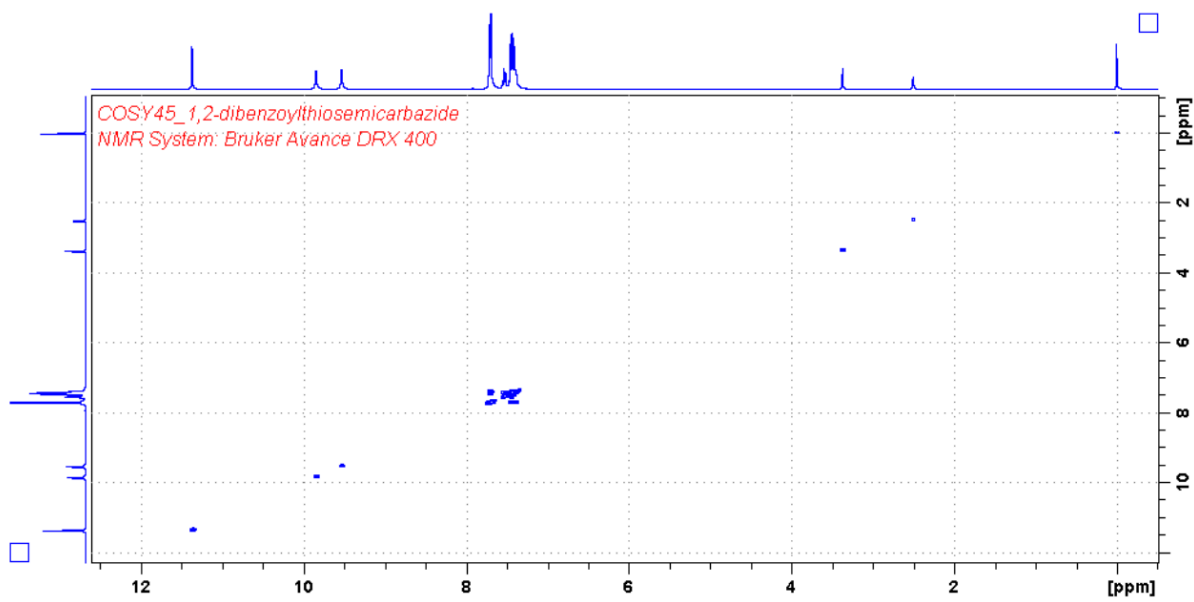


Figure S13 COSY  $^1\text{H}$ - $^1\text{H}$  spectrum of the compound (3)

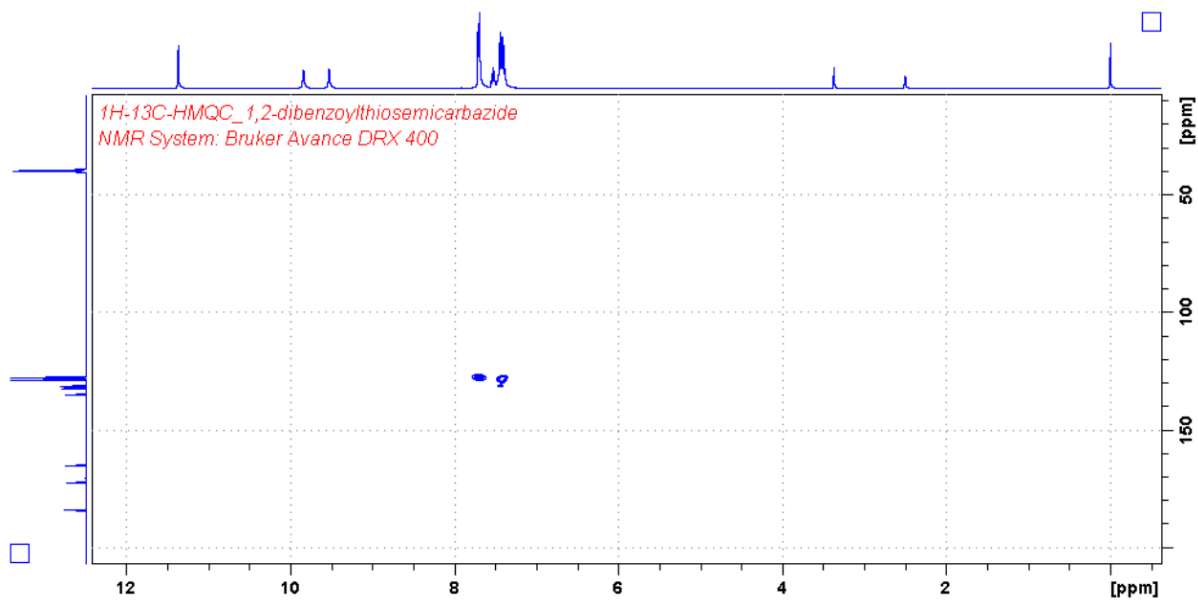


Figure S14 HMQC  $^1\text{H}$ - $^{13}\text{C}$  spectrum of the compound (3)



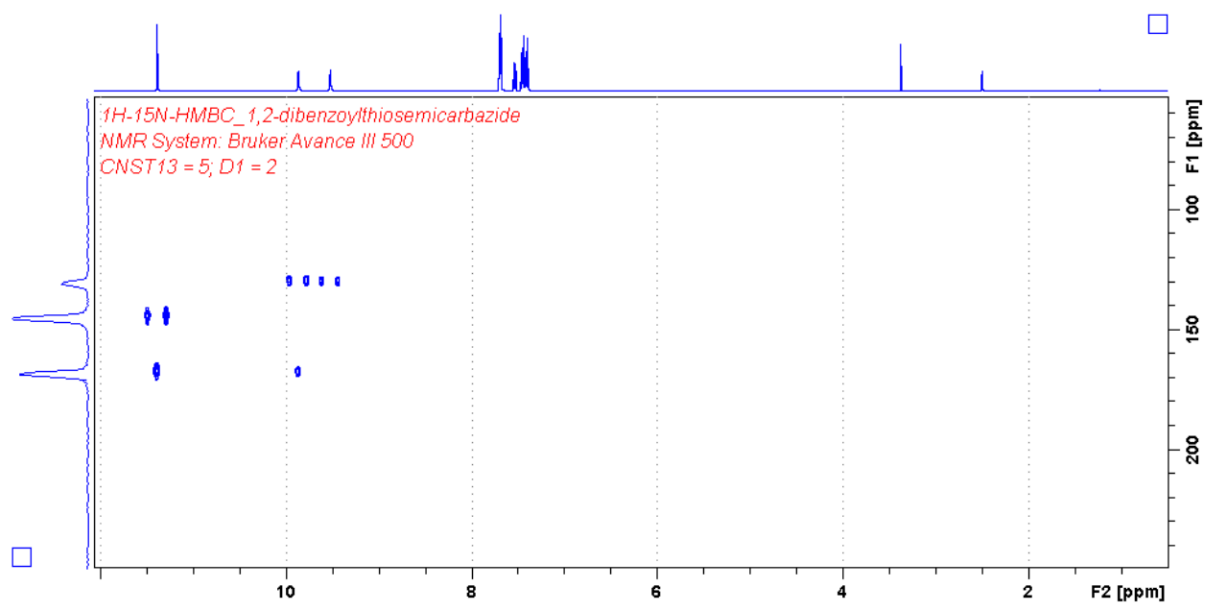


Figure S15 HMBC  $^1\text{H}$ - $^{15}\text{N}$  spectrum of the compound (3)

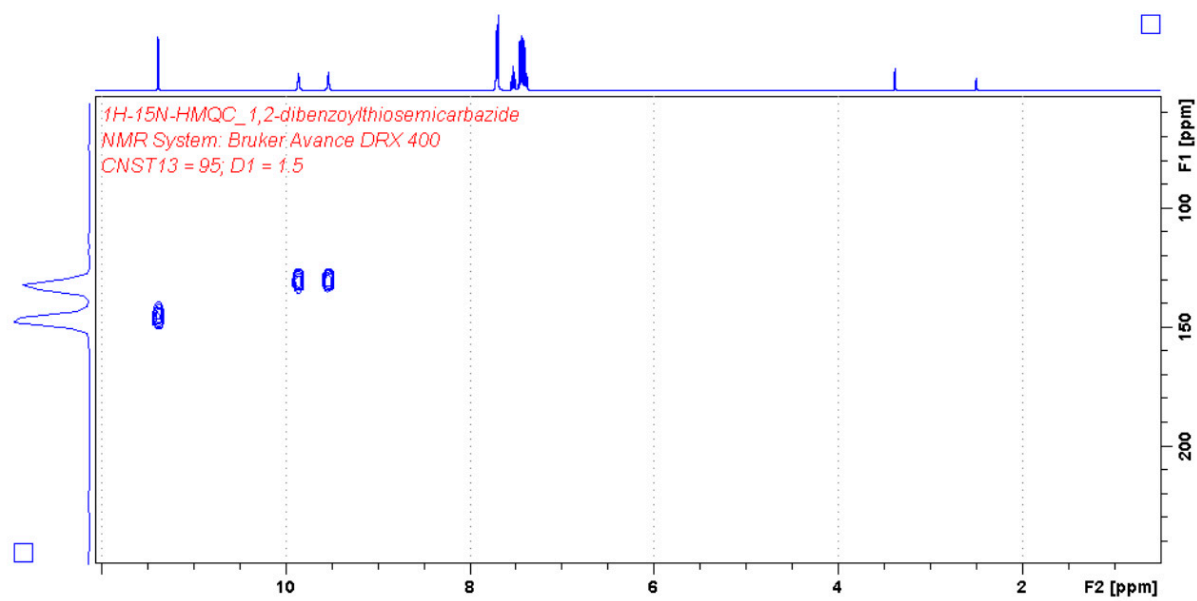
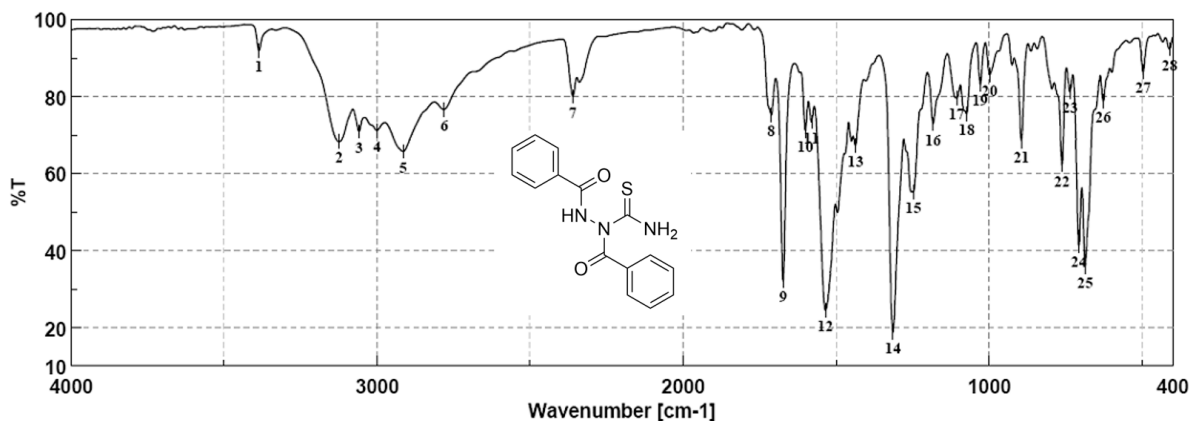


Figure S16 HMQC  $^1\text{H}$ - $^{15}\text{N}$  spectrum of the compound (3)

### IR spectrum for compound (3)



#### Result of Peak Picking

No.	Position	Intensity	No.	Position	Intensity	No.	Position	Intensity	No.	Position	Intensity
1:	3386.39	91.9934	2:	3124.12	68.3402	3:	3059.51	70.9760	4:	2999.73	71.2550
5:	2914.88	65.8077	6:	2780.85	76.6760	7:	2360.44	80.0917	8:	1711.51	75.2313
9:	1672.95	32.1196	10:	1600.63	71.2502	11:	1580.38	73.4287	12:	1535.06	24.5908
13:	1436.71	67.2995	14:	1314.25	18.8775	15:	1247.72	55.2071	16:	1183.11	72.9979
17:	1105.98	79.6136	18:	1073.19	75.5408	19:	1028.84	83.1844	20:	997.98	85.6903
21:	894.81	68.4743	22:	761.74	62.2979	23:	735.71	81.2563	24:	706.78	41.2346
25:	686.53	35.8535	26:	626.75	78.7812	27:	496.58	86.4624	28:	410.76	92.3878

Figure S17 FT-IR spectrum of the compound (3)

### MS spectrum for compound (3)

1,2DbzTSC #1277-1453 RT: 15.02-16.78 AV: 177 NL: 3.61E4  
T: + c Full ms [30.00-310.00]

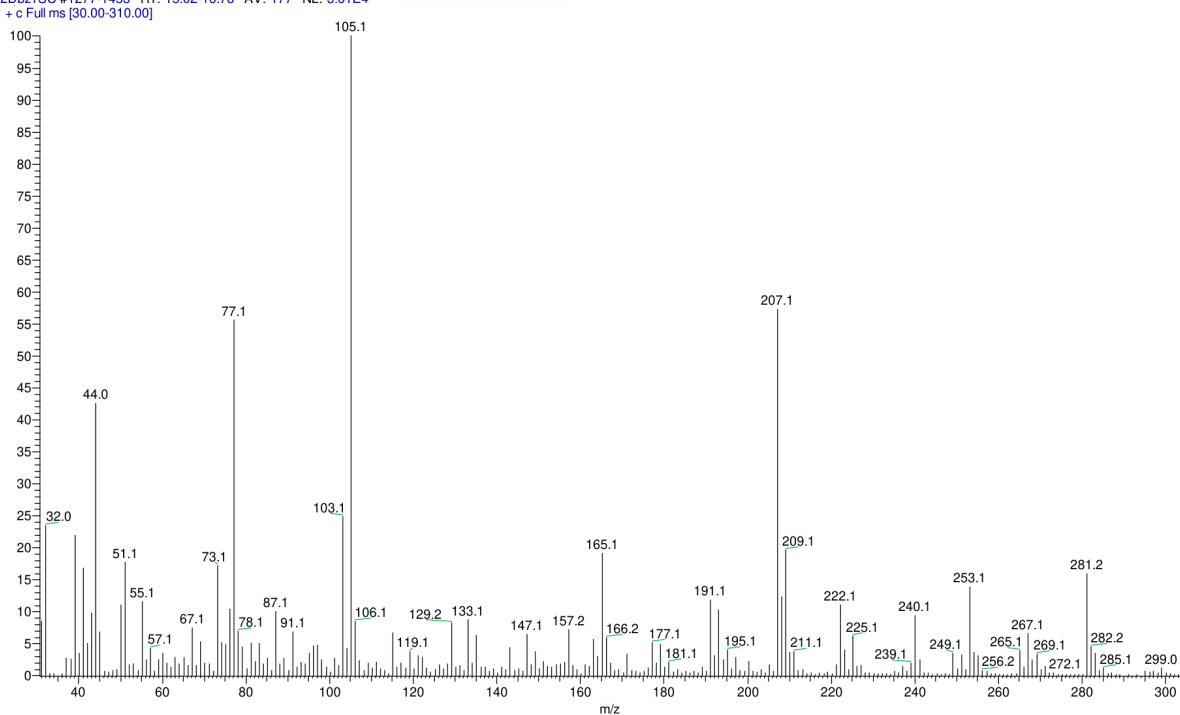


Figure S18 MS spectrum of the compound (3)

## 1D and 2D NMR spectra for compound (4)

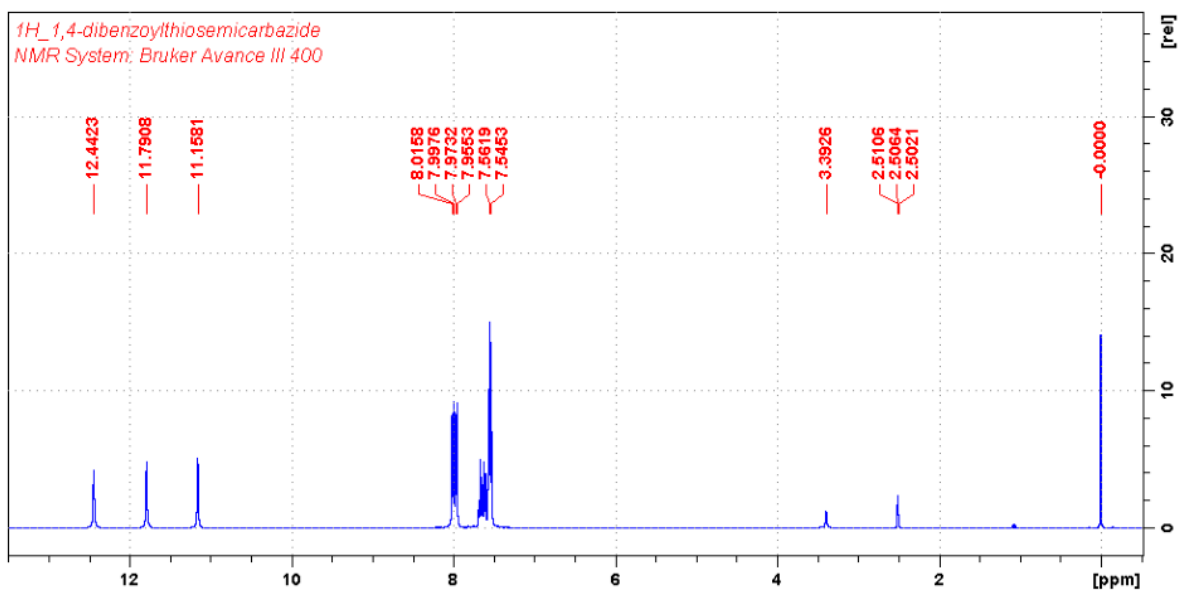


Figure S19  $^1\text{H}$  NMR spectrum of the compound (4)

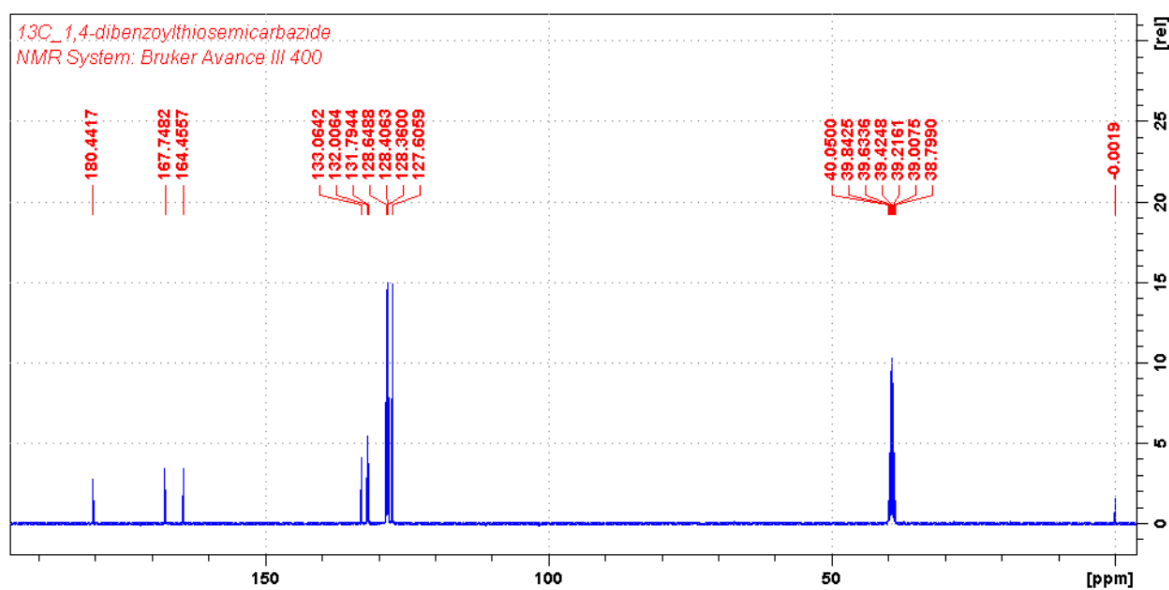


Figure S20  $^{13}\text{C}$  NMR spectrum of the compound (4)

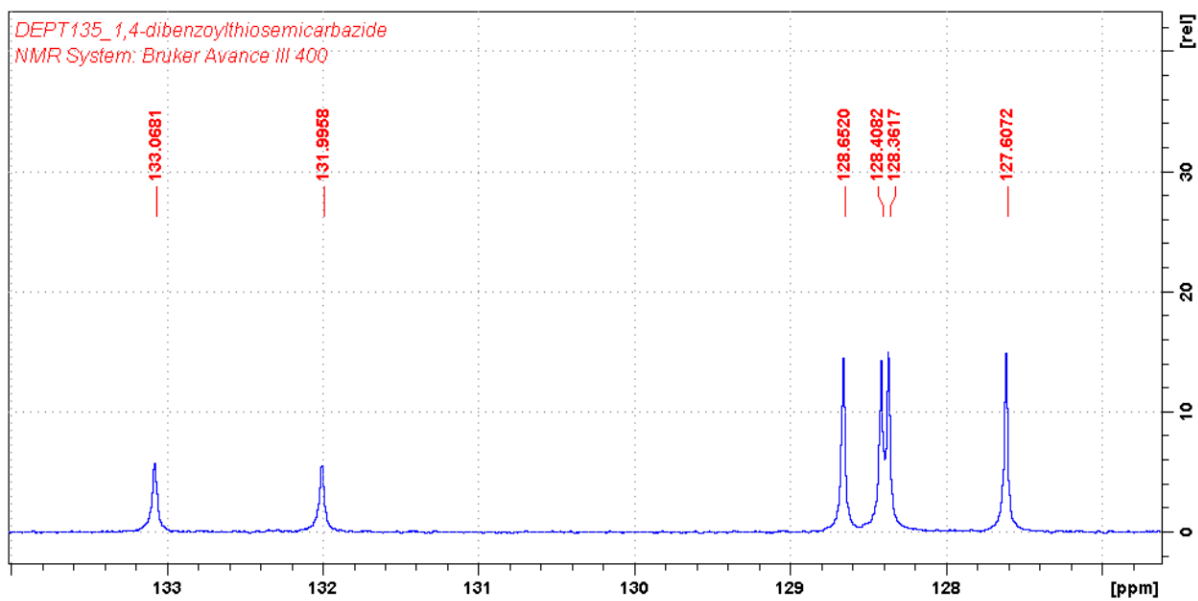


Figure S21  $^{13}\text{C}$  DEPT135 spectrum of the compound (4)

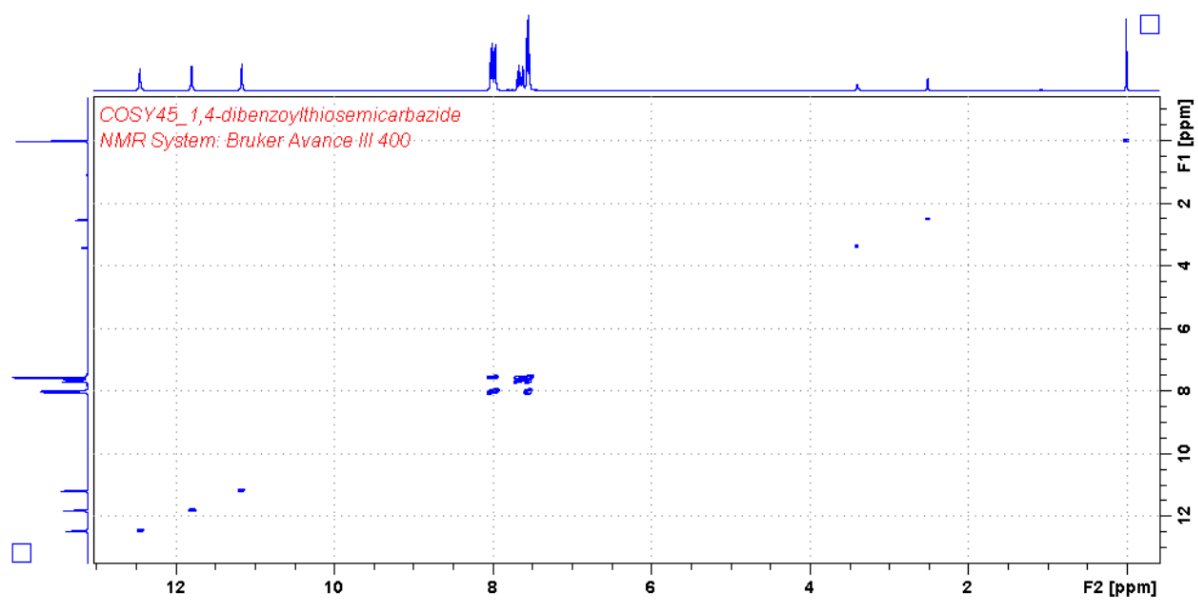


Figure S22 COSY  $^1\text{H}$ - $^1\text{H}$  spectrum of the compound (4)

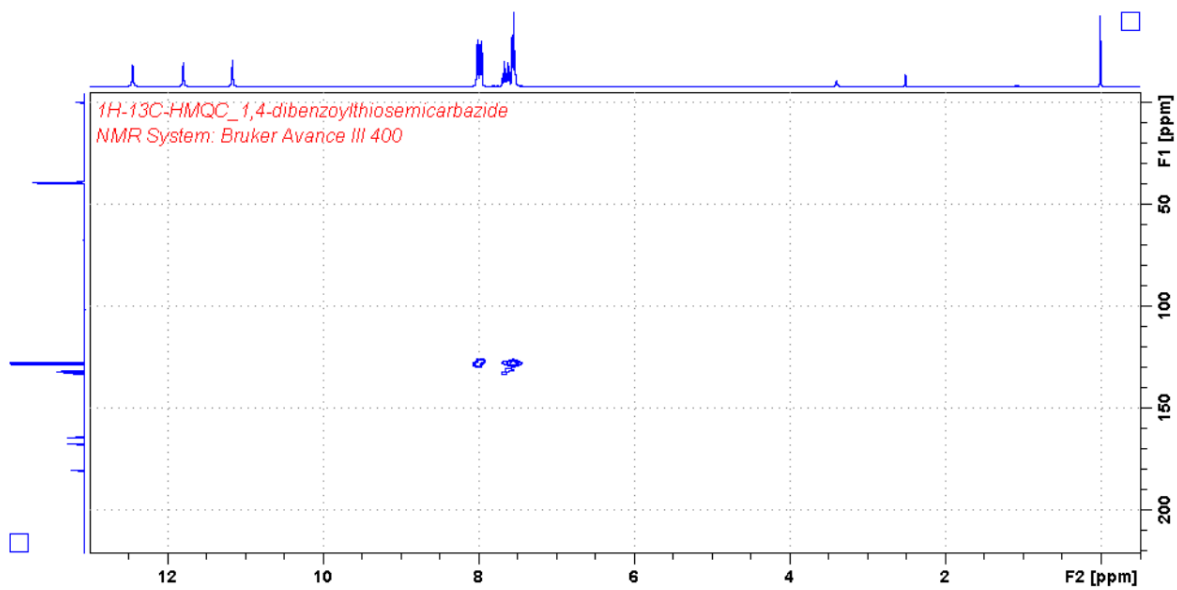


Figure S23 HMQC <sup>1</sup>H-<sup>13</sup>C spectrum of the compound (4)

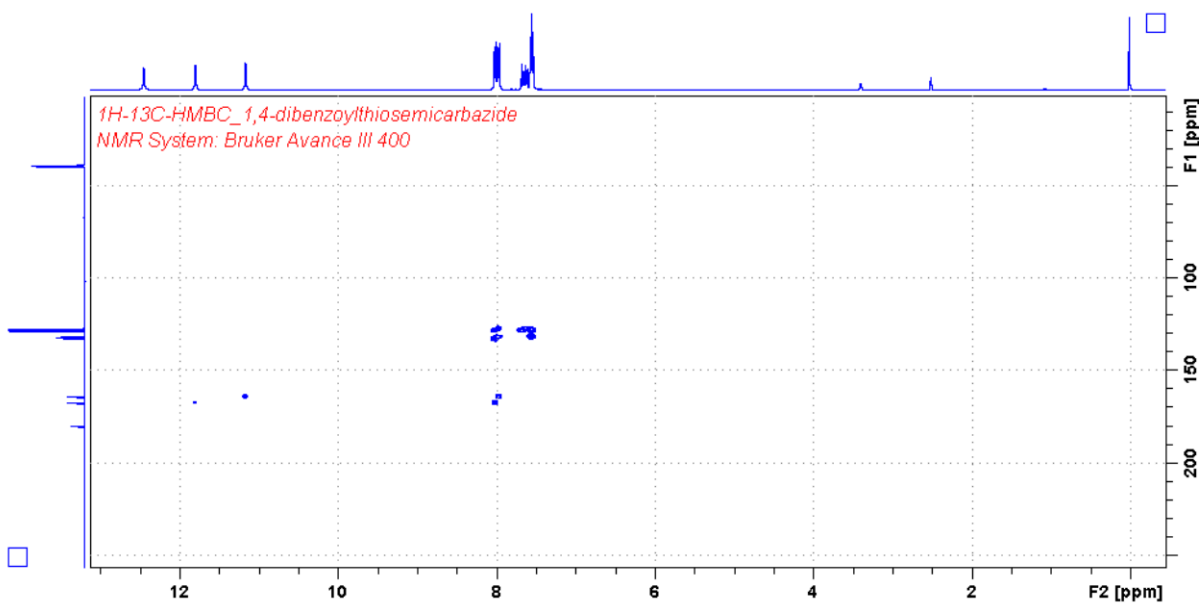


Figure S24 HMBC <sup>1</sup>H-<sup>13</sup>C spectrum of the compound (4)

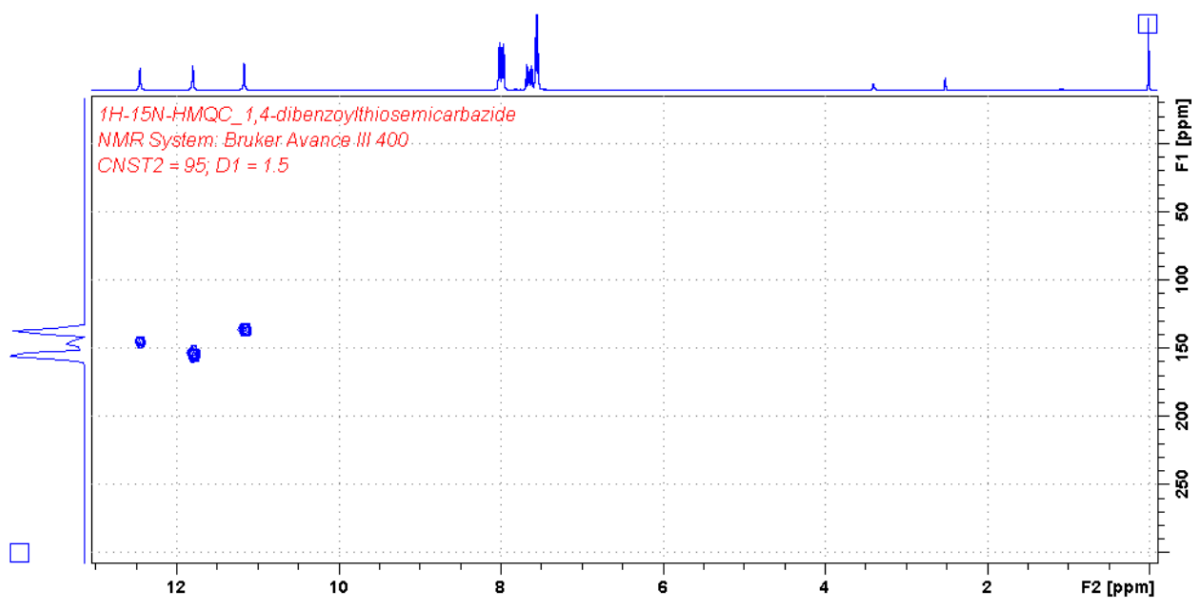
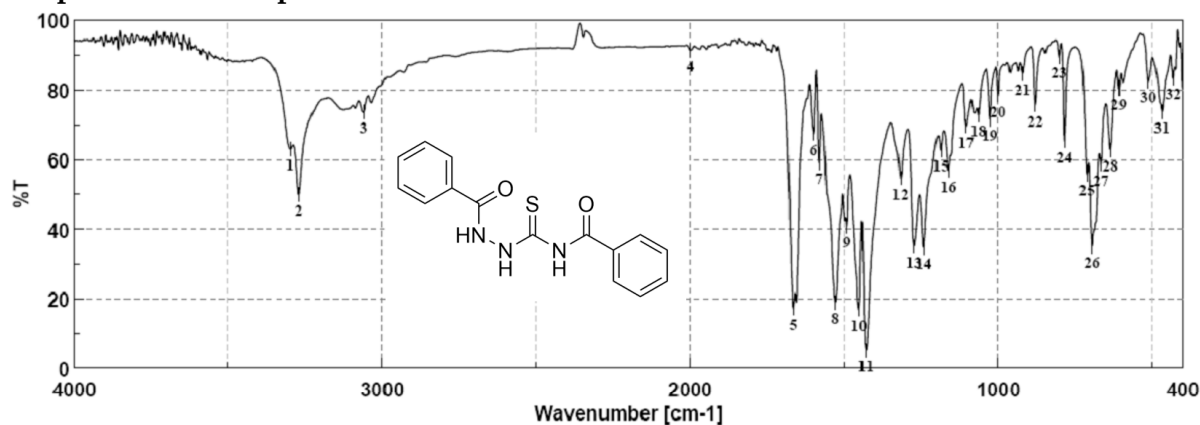


Figure S25 HMOC  $^1\text{H}$ - $^{15}\text{N}$  spectrum of the compound (4)

IR spectrum for compound (4)



Result of Peak Picking

No.	Position	Intensity	No.	Position	Intensity	No.	Position	Intensity	No.	Position	Intensity
1:	3299.61	63.0652	2:	3270.68	49.9310	3:	3060.48	73.6313	4:	1999.82	91.3639
5:	1666.20	17.2439	6:	1598.70	67.5038	7:	1579.41	59.1115	8:	1529.27	19.0090
9:	1490.70	40.8637	10:	1451.17	16.9312	11:	1428.99	5.3334	12:	1316.18	54.6553
13:	1272.79	35.2236	14:	1240.97	34.8482	15:	1186.01	62.7411	16:	1161.90	56.8436
17:	1103.08	69.5768	18:	1063.55	72.8113	19:	1025.94	71.6608	20:	998.95	78.4662
21:	920.84	84.7966	22:	878.42	75.7294	23:	801.28	89.5023	24:	783.92	65.2936
25:	711.60	55.7944	26:	695.21	35.1635	27:	665.32	58.6620	28:	635.43	62.7758
29:	607.47	80.3993	30:	512.01	82.5553	31:	467.65	73.7910	32:	431.01	83.3674

Figure S26 FT-IR spectrum of the compound (4)

# MS spectrum for compound (4)

1.4DBZ\_TSC\_130718172228 #1187-1340 RT: 15.22-16.99 AV: 154 NL: 1.45E5  
T: + c Full ms [30.00-400.00]

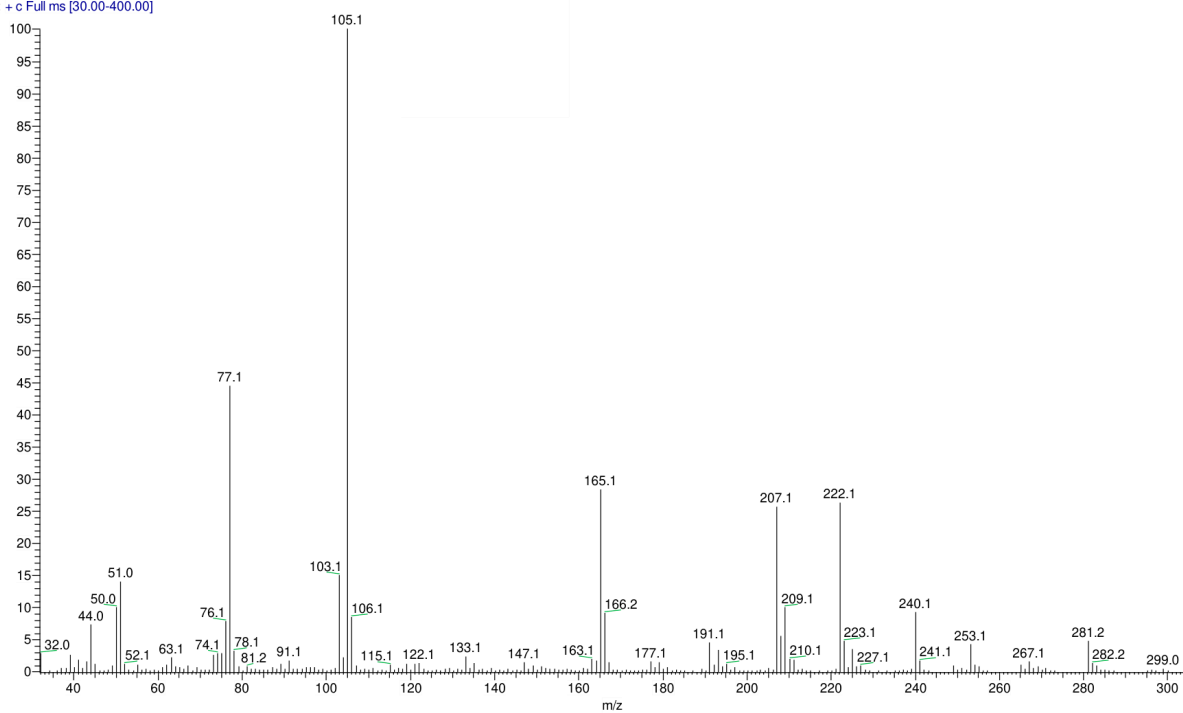


Figure S27 MS spectrum of the compound (4)