SUPPLEMENTARY MATERIAL

Isolaurenidificin and Bromlaurenidificin, two new C_{15}-acetogenins from the red alga *Laurencia obtusa*

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Isolaurenidificin and Bromlaurenidificin, two new C_{15}-acetogenins from the red alga *Laurencia obtusa*

Abstract

Chromatographic investigation of the CH_2Cl_2/MeOH extract of the Red Sea red alga *Laurencia obtusa* gave two new hexahydrofuro[3,2-b]furan-based C_{15}-acetogenin, namely, isolaurenidificin (**1**) and bromlaurenidificin (**2**). Their chemical structures were elucidated based on extensive analyses of their spectral data. The apoptosis-inducing or inhibiting effect of both compounds on apoptosis of peripheral blood neutrophils was studied.

***Keywords*:** Marine algae; Fatty acids; halogenations; spectroscopy; Anti-inflammatory.

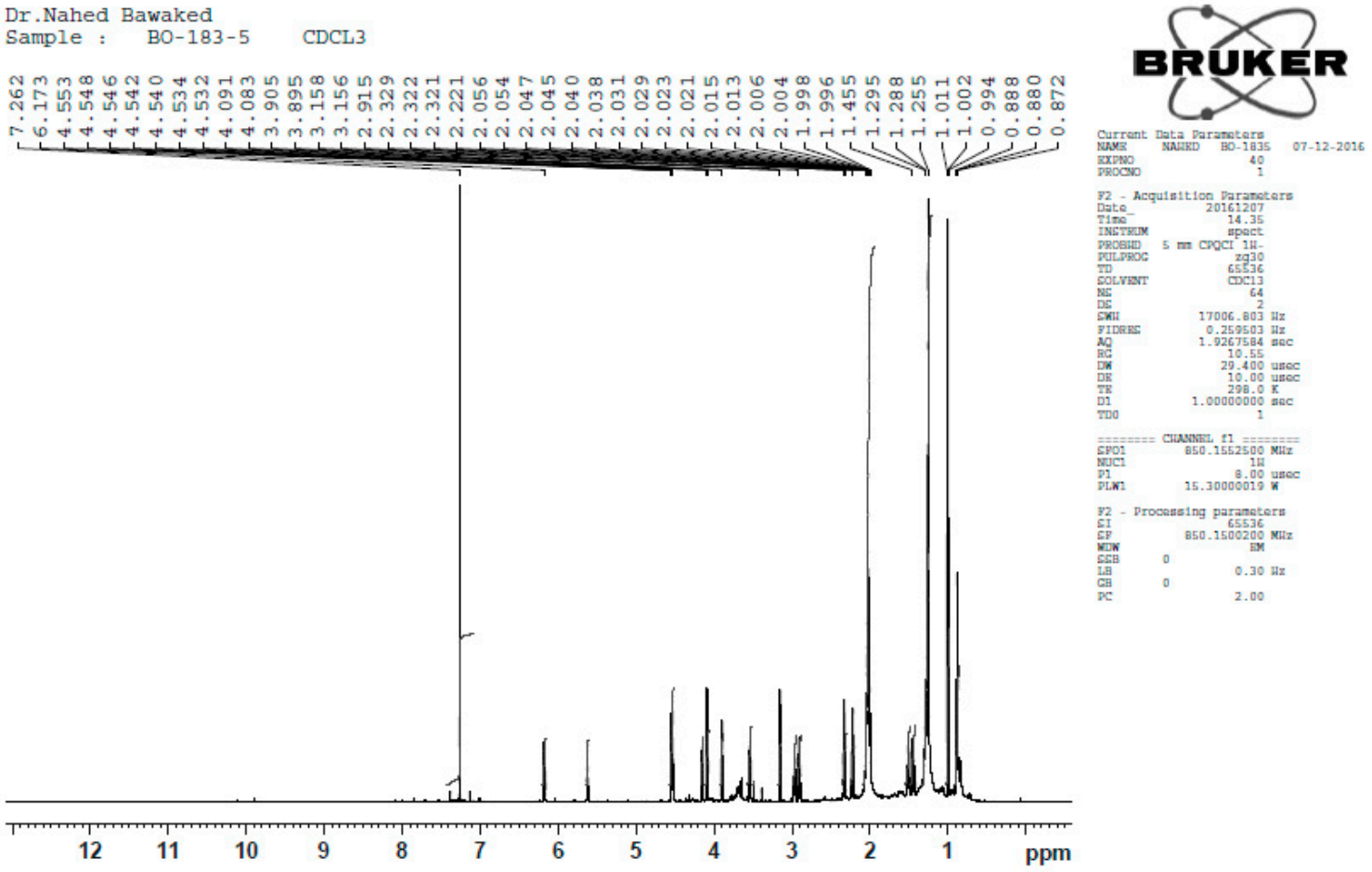


Figure S1a: [1]HNMR of compound 1

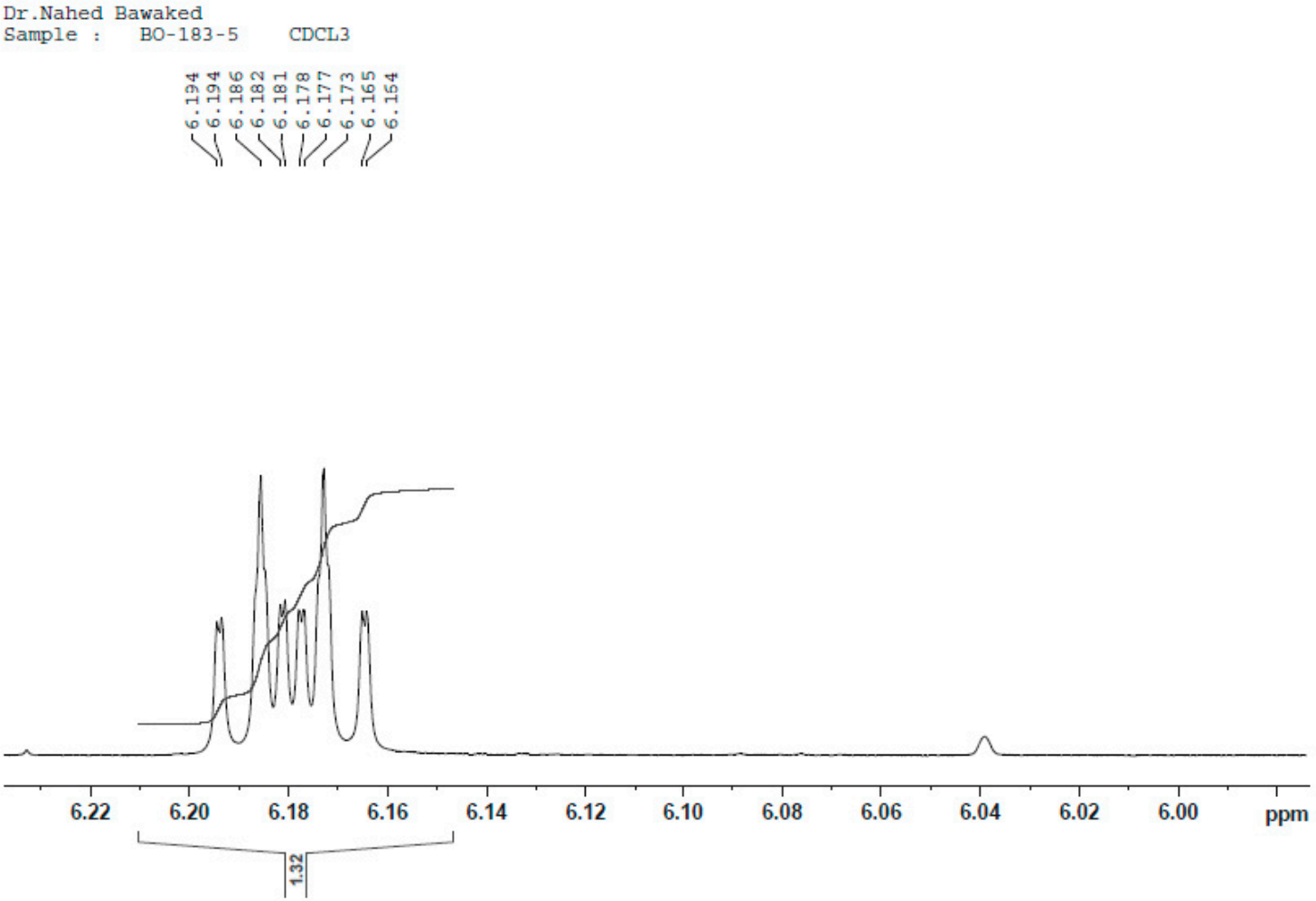


Figure S1b: ^{1}HNMR of compound 1

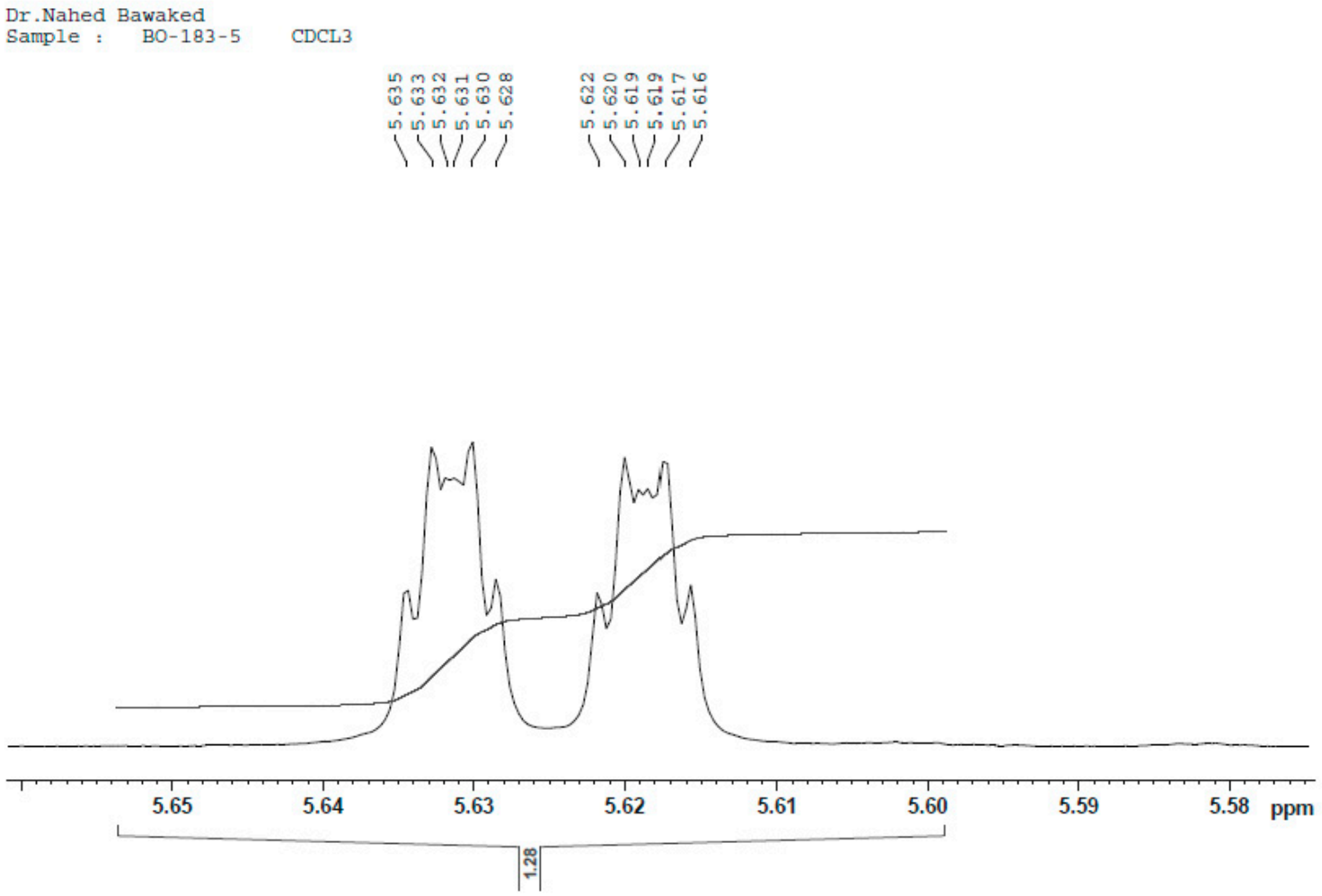


Figure S1c: ^{1}HNMR of compound 1

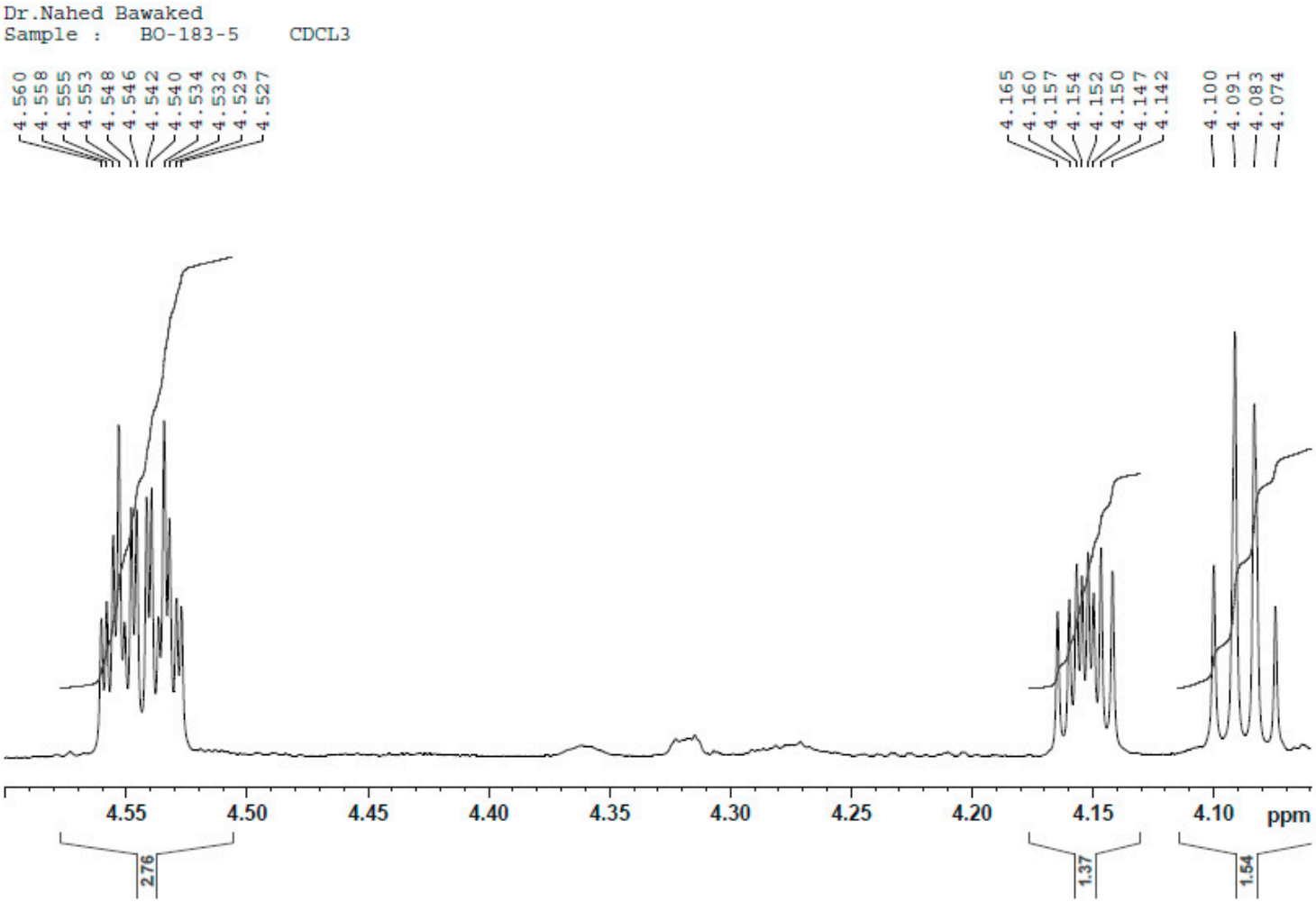


Figure S1d: ^{1}HNMR of compound 1

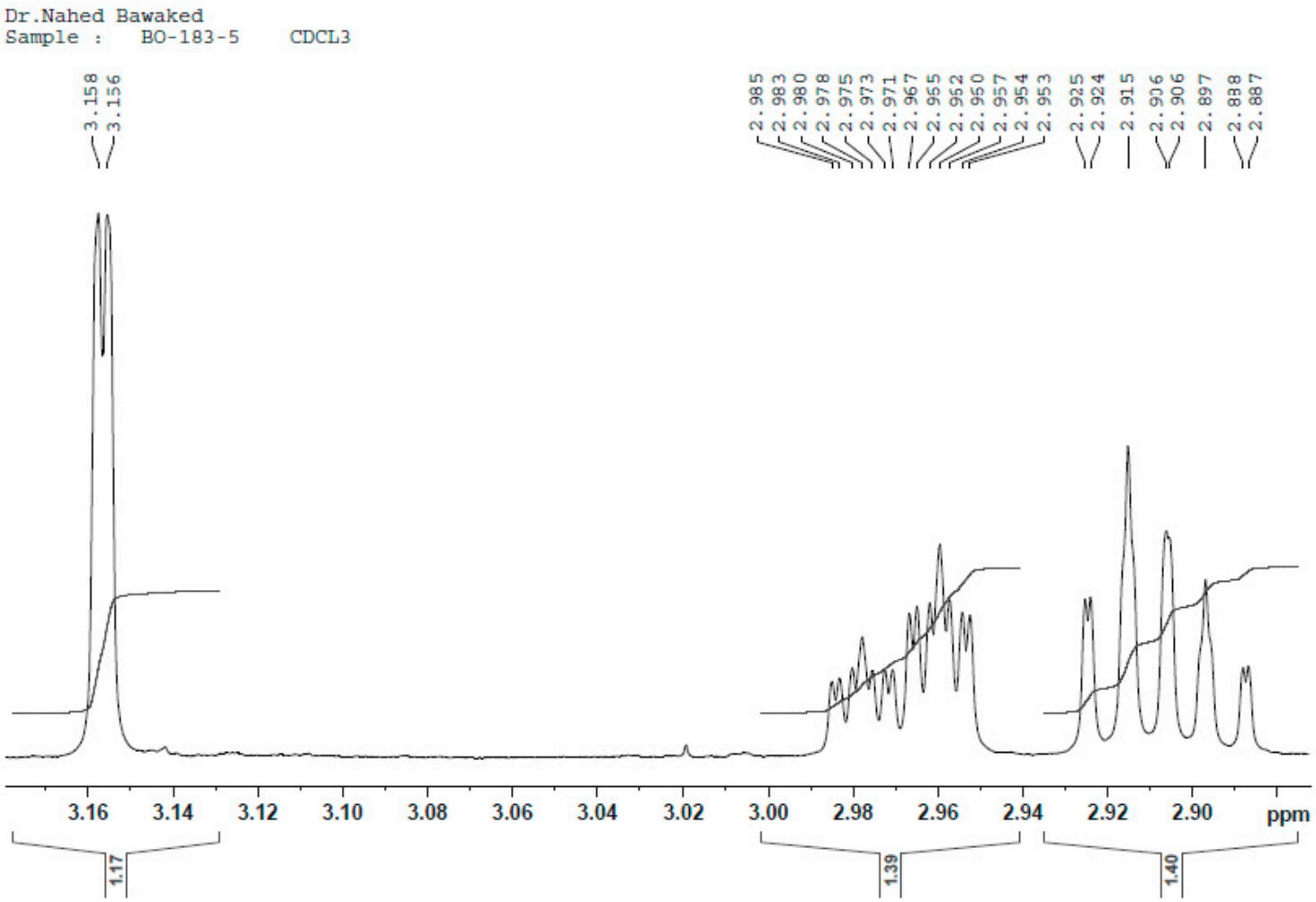


Figure S1e: [1]HNMR of compound 1

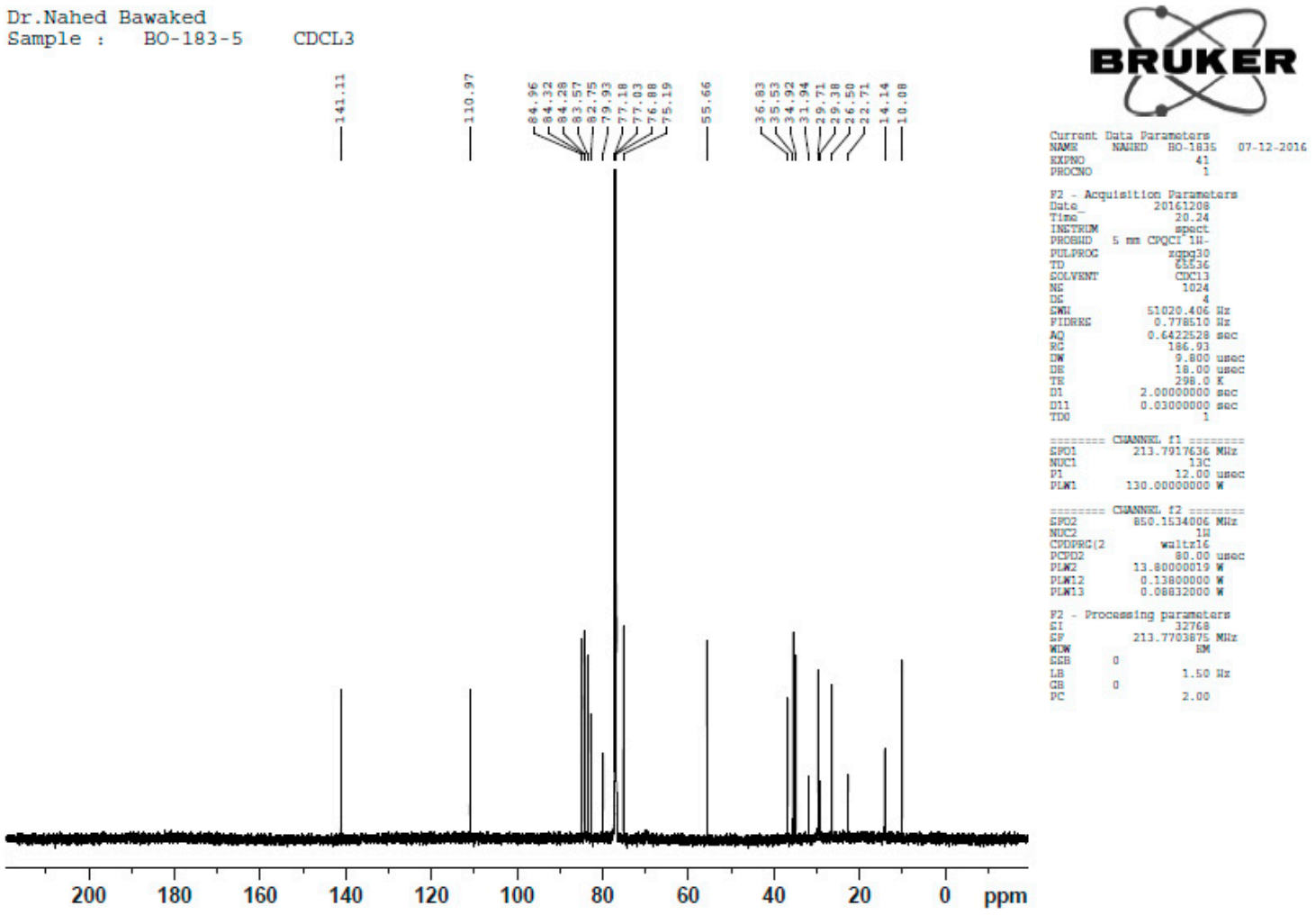


Figure S1f: ^{13}CNMR of compound 1

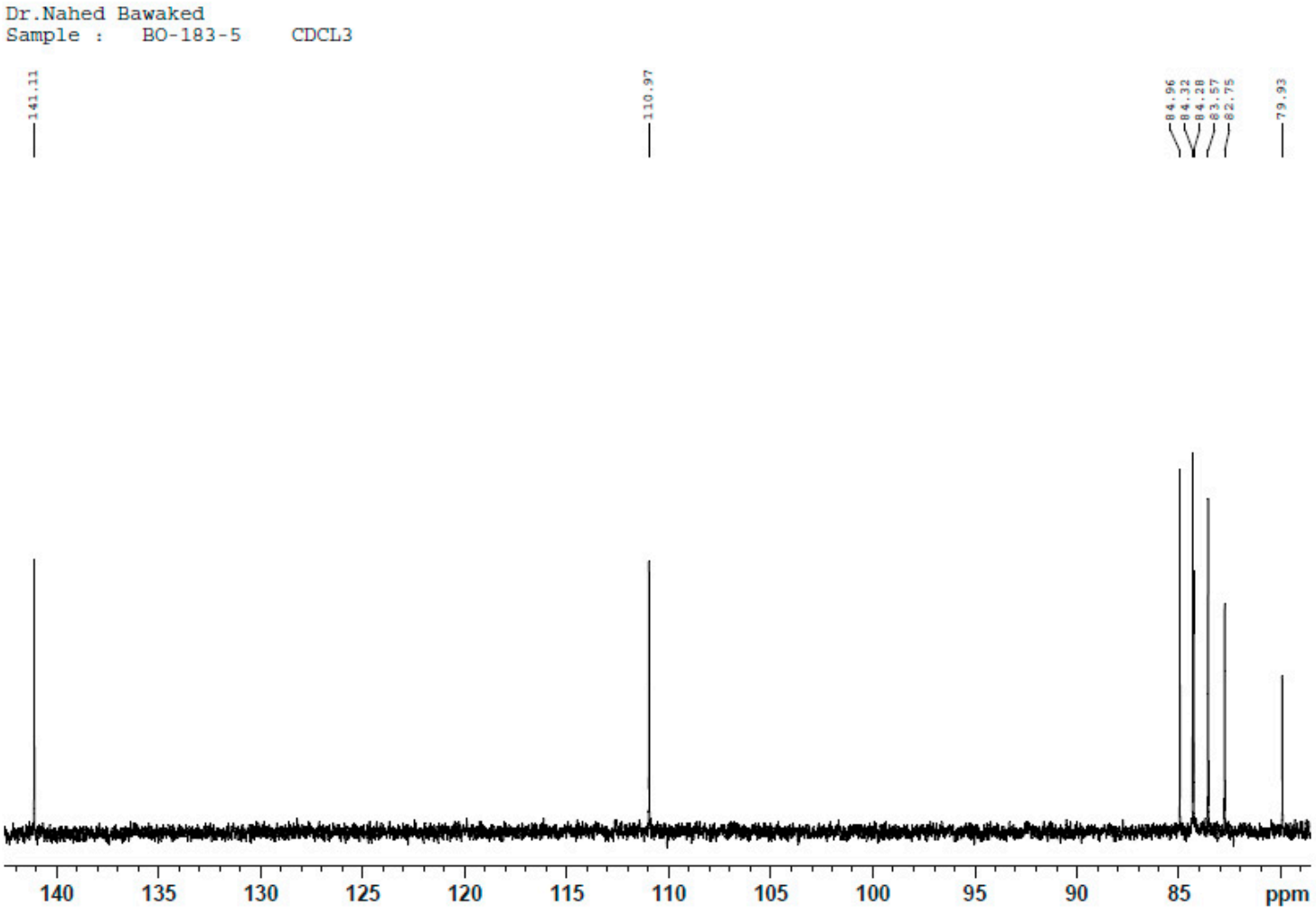


Figure S1g: ^{13}CNMR of compound 1

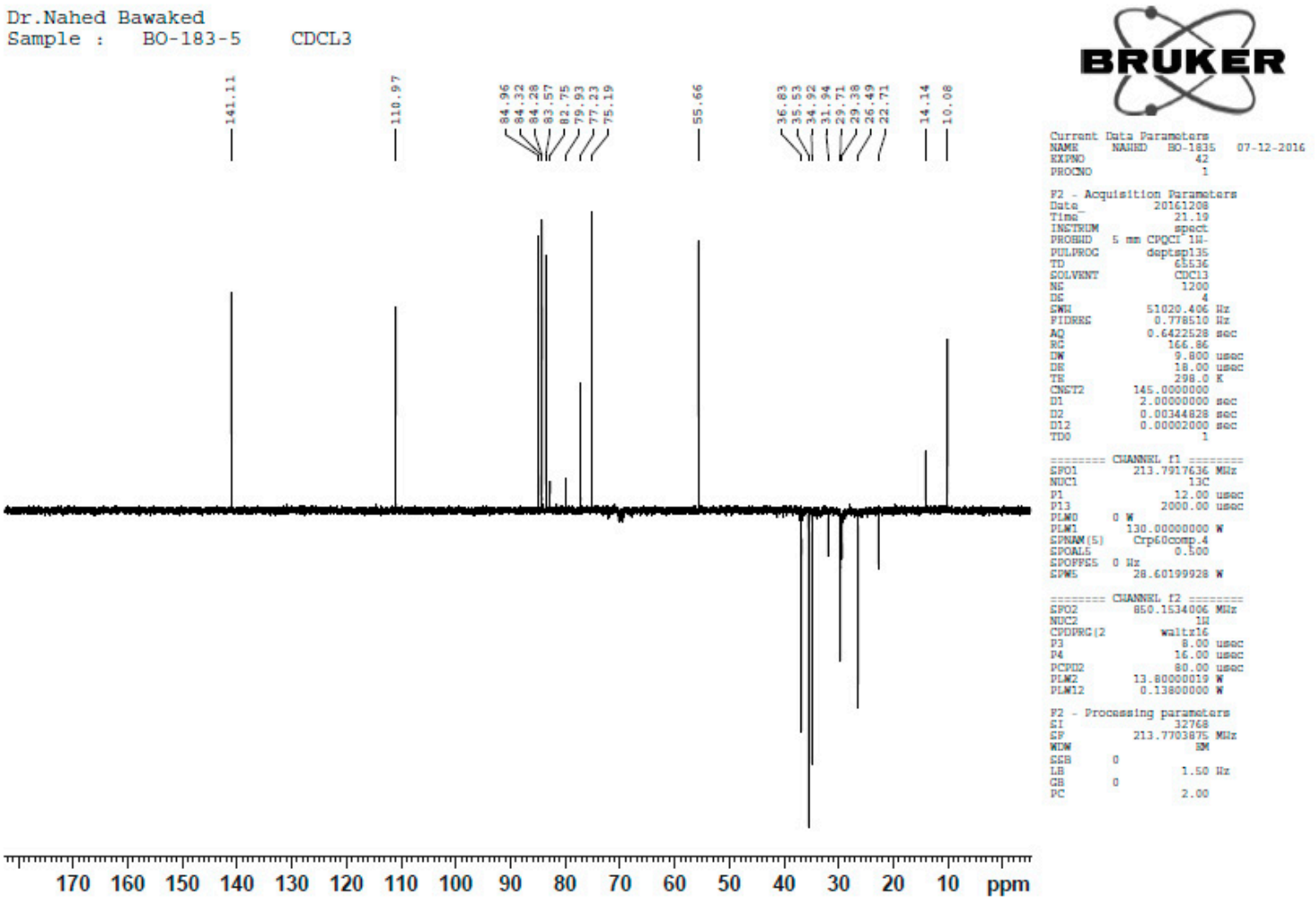


Figure S1h: DEPT NMR of compound 1

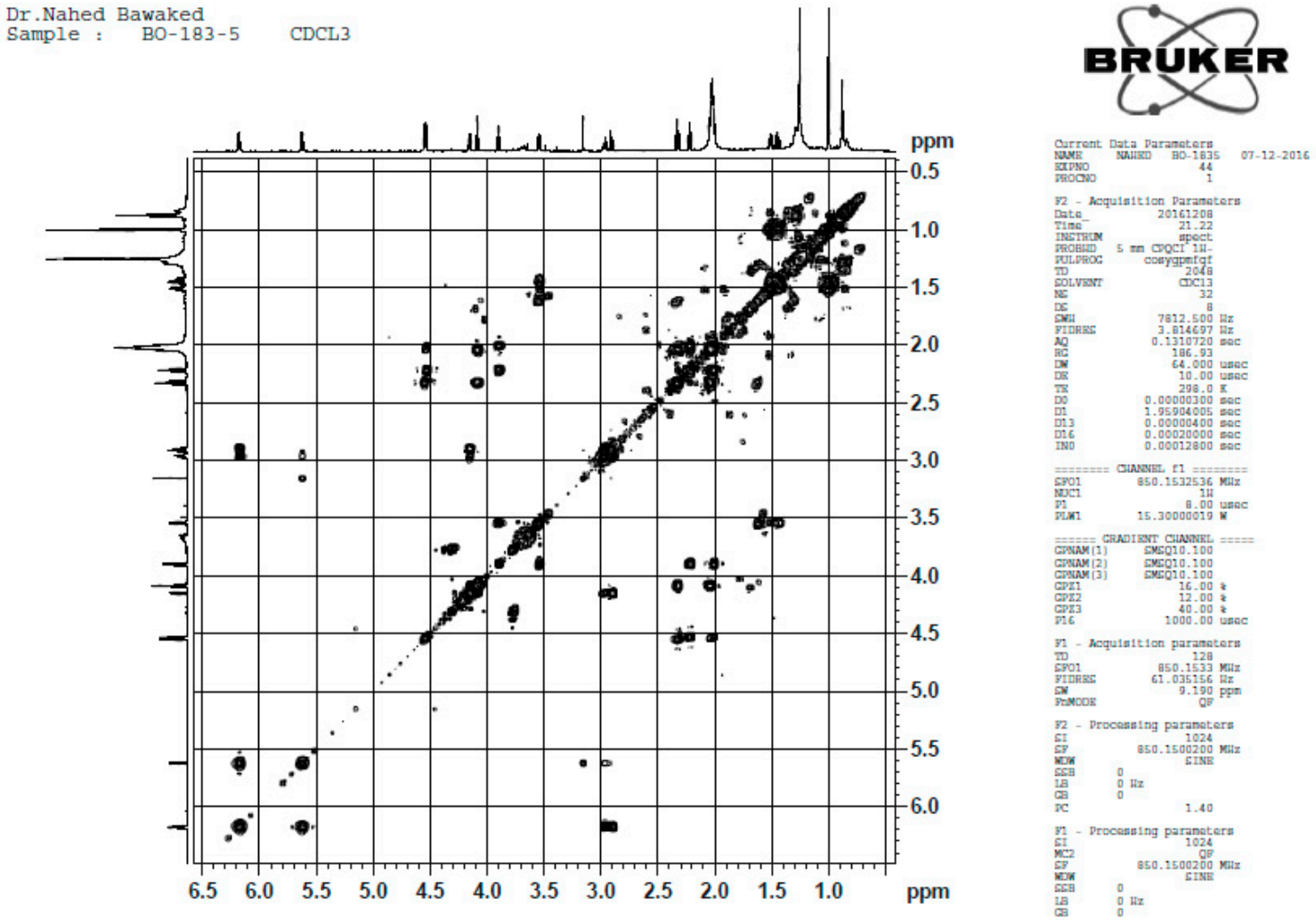


Figure S1i: COSY NMR of compound 1

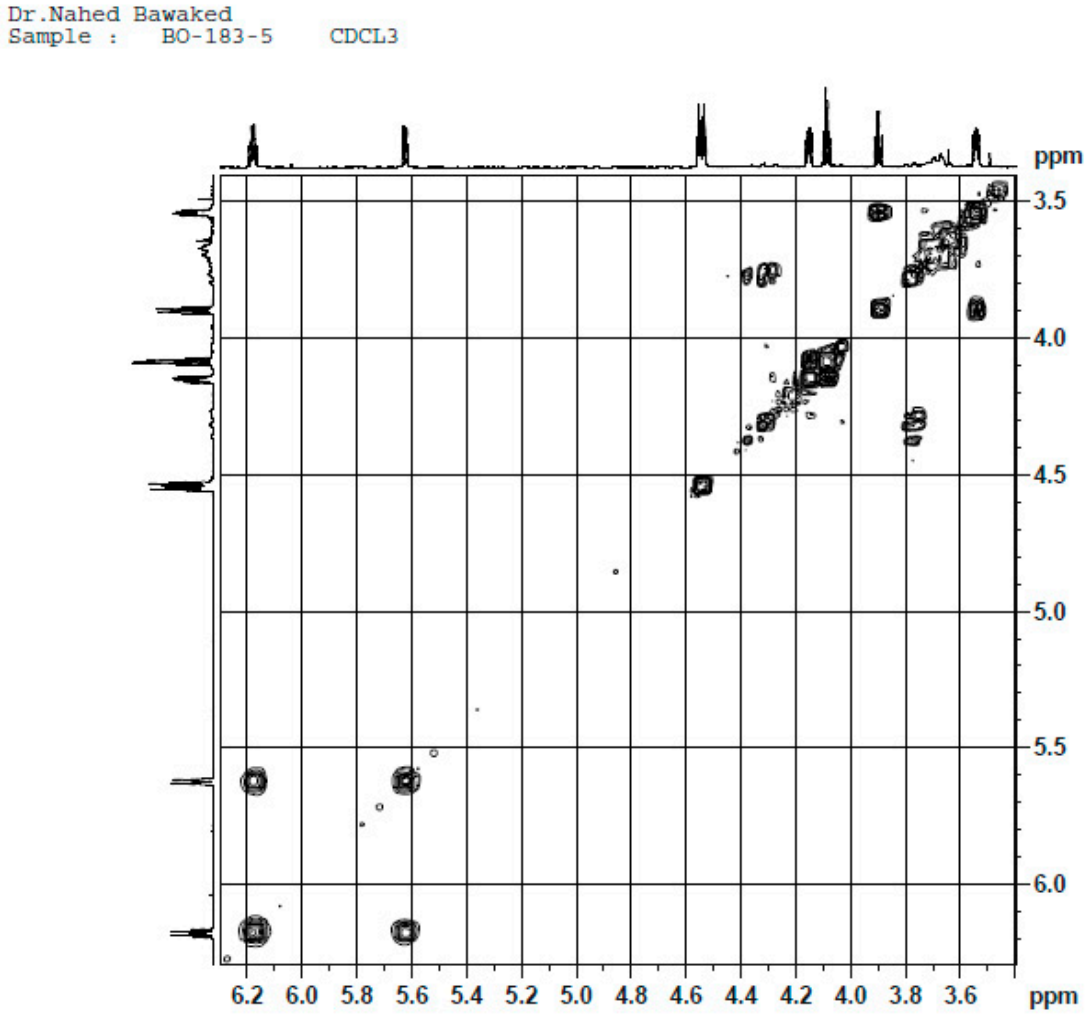


Figure S1j: COSY NMR of compound 1

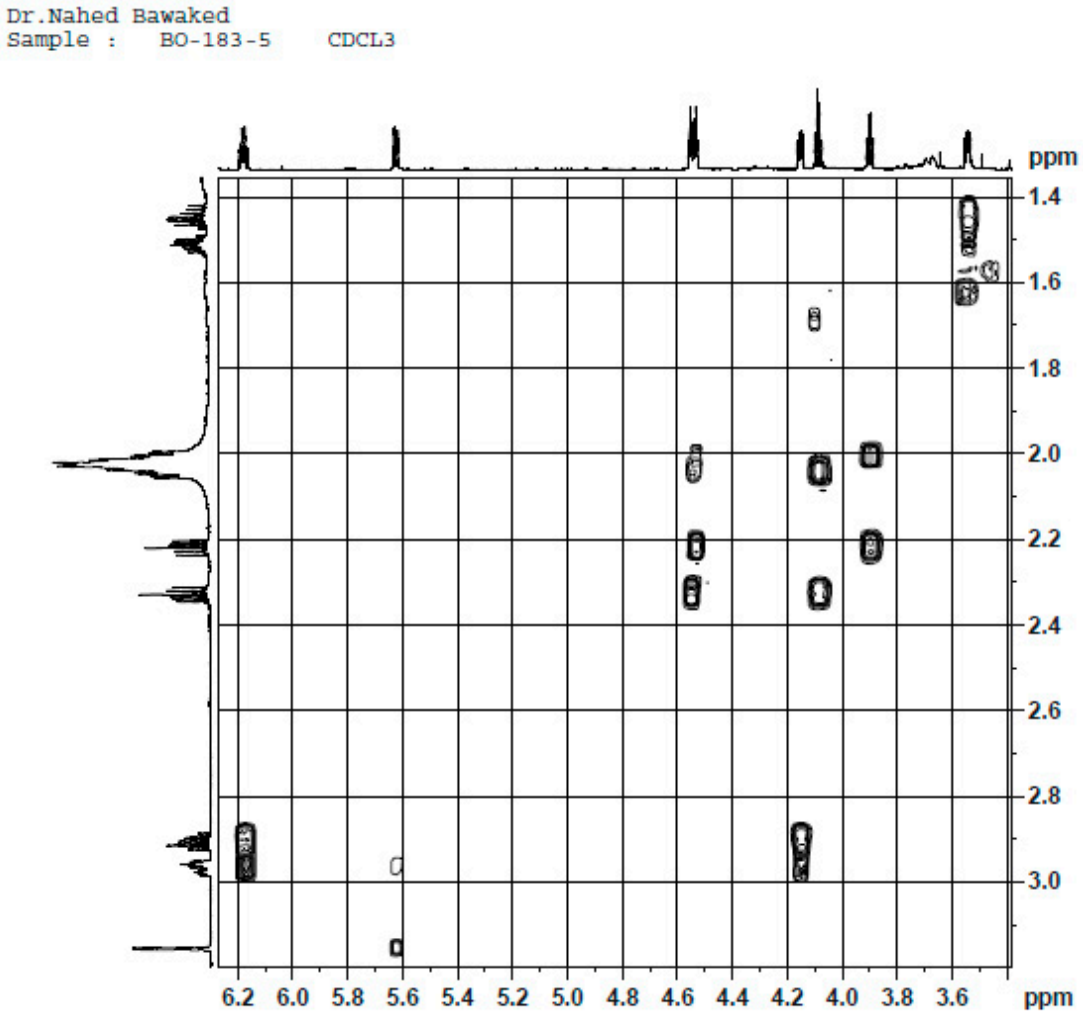


Figure S1k: COSY NMR of compound 1

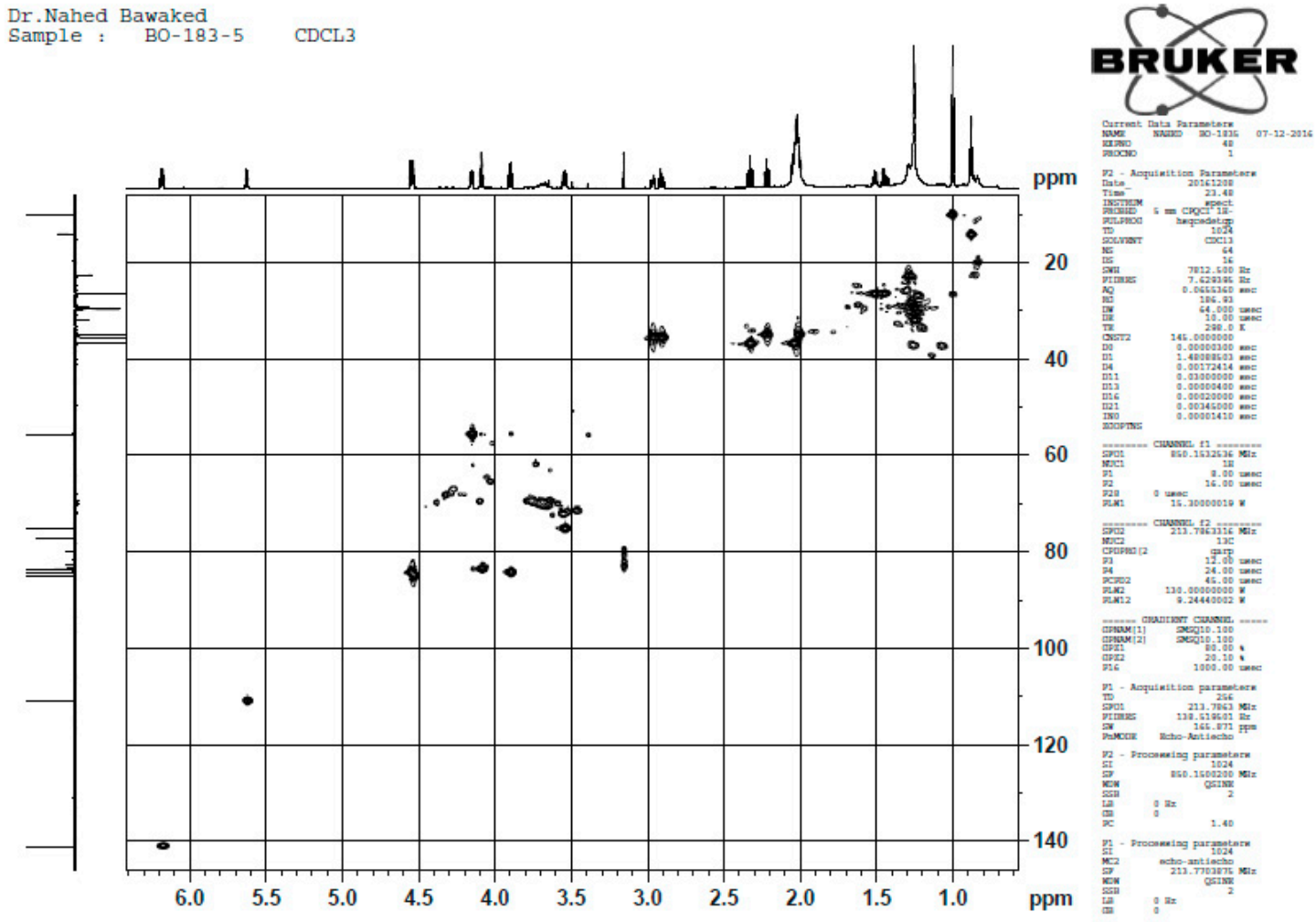


Figure S1l: HSQC NMR of compound 1

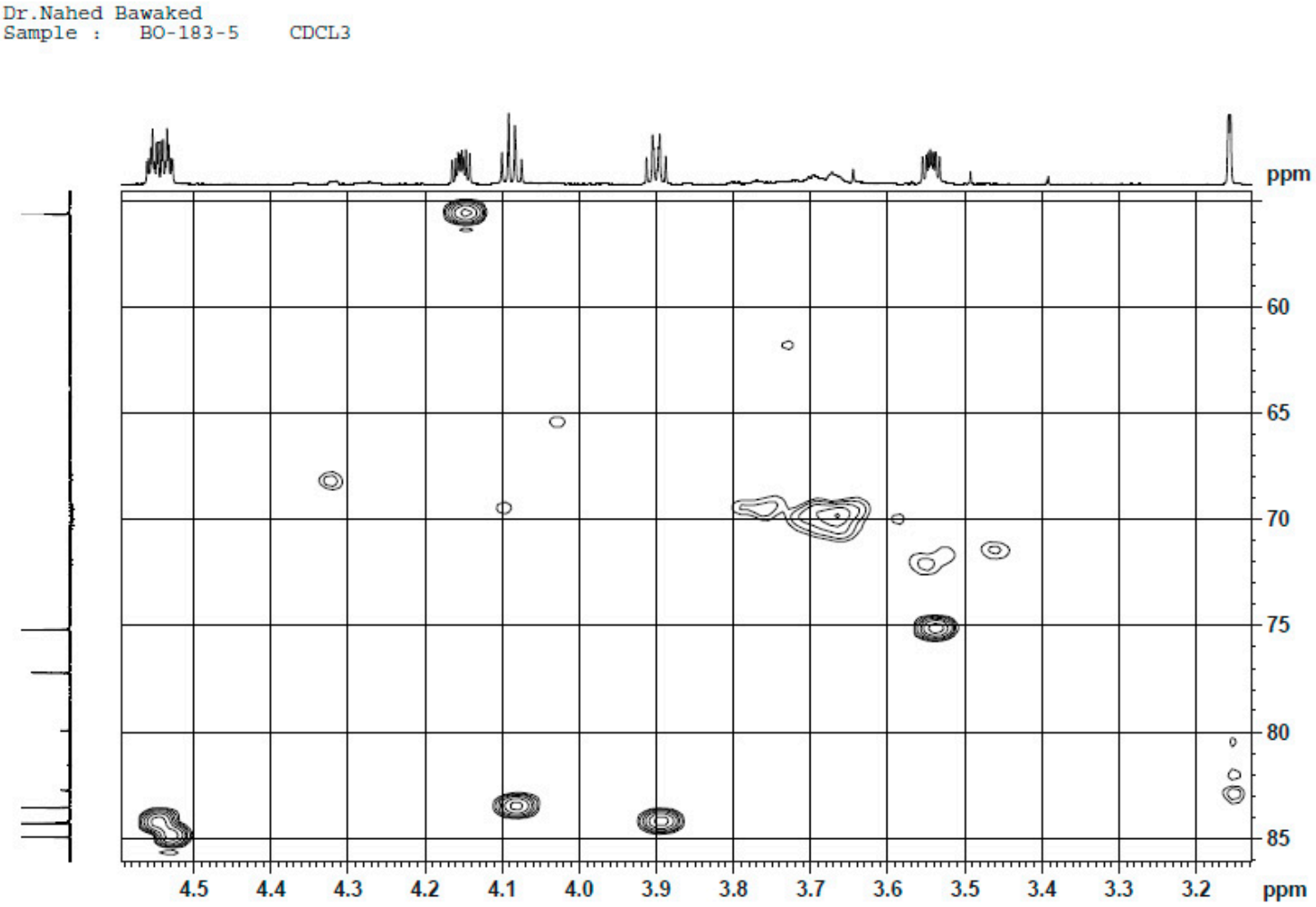


Figure S1m: HSQC NMR of compound 1

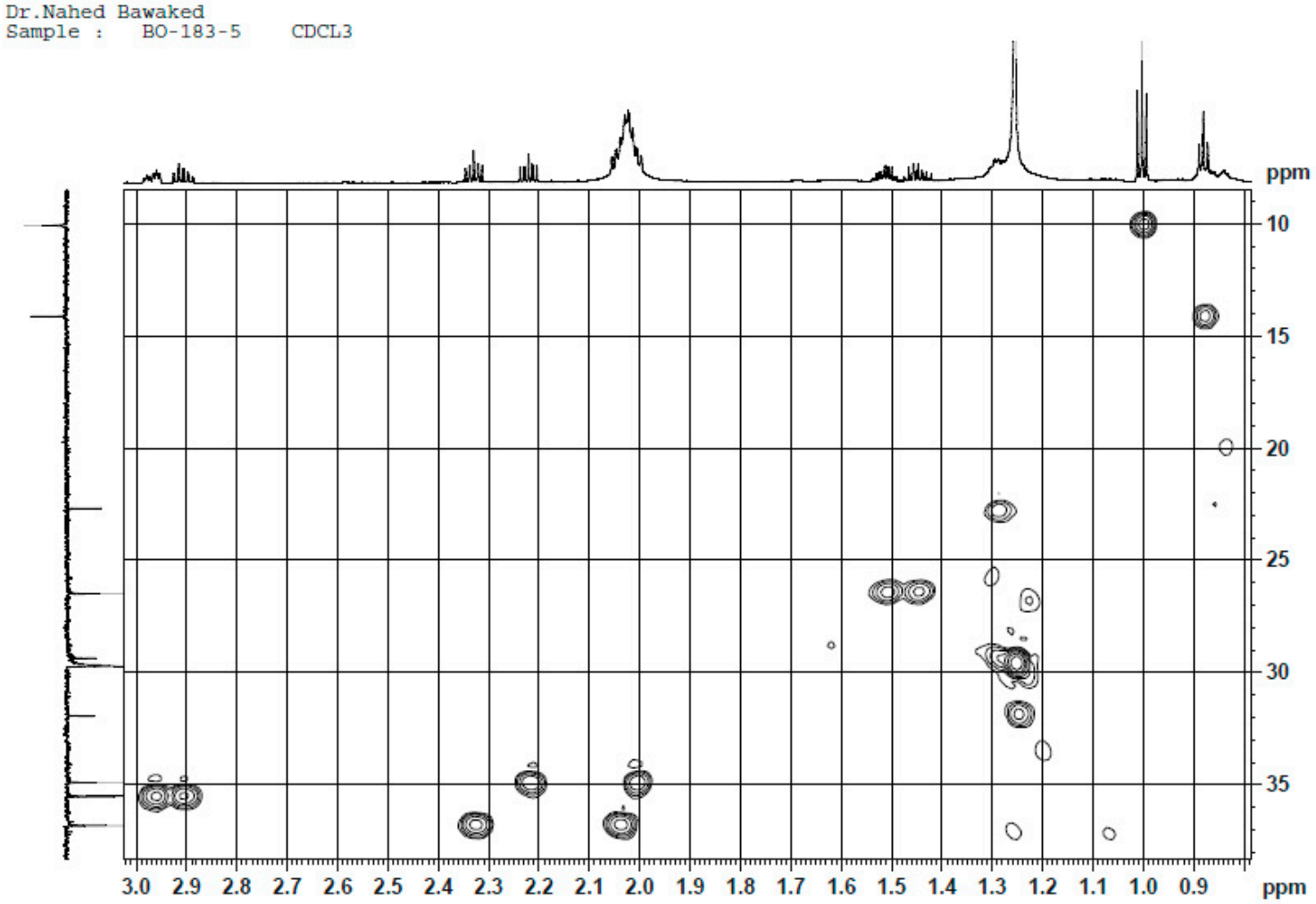


Figure S1n: HSQC NMR of compound 1

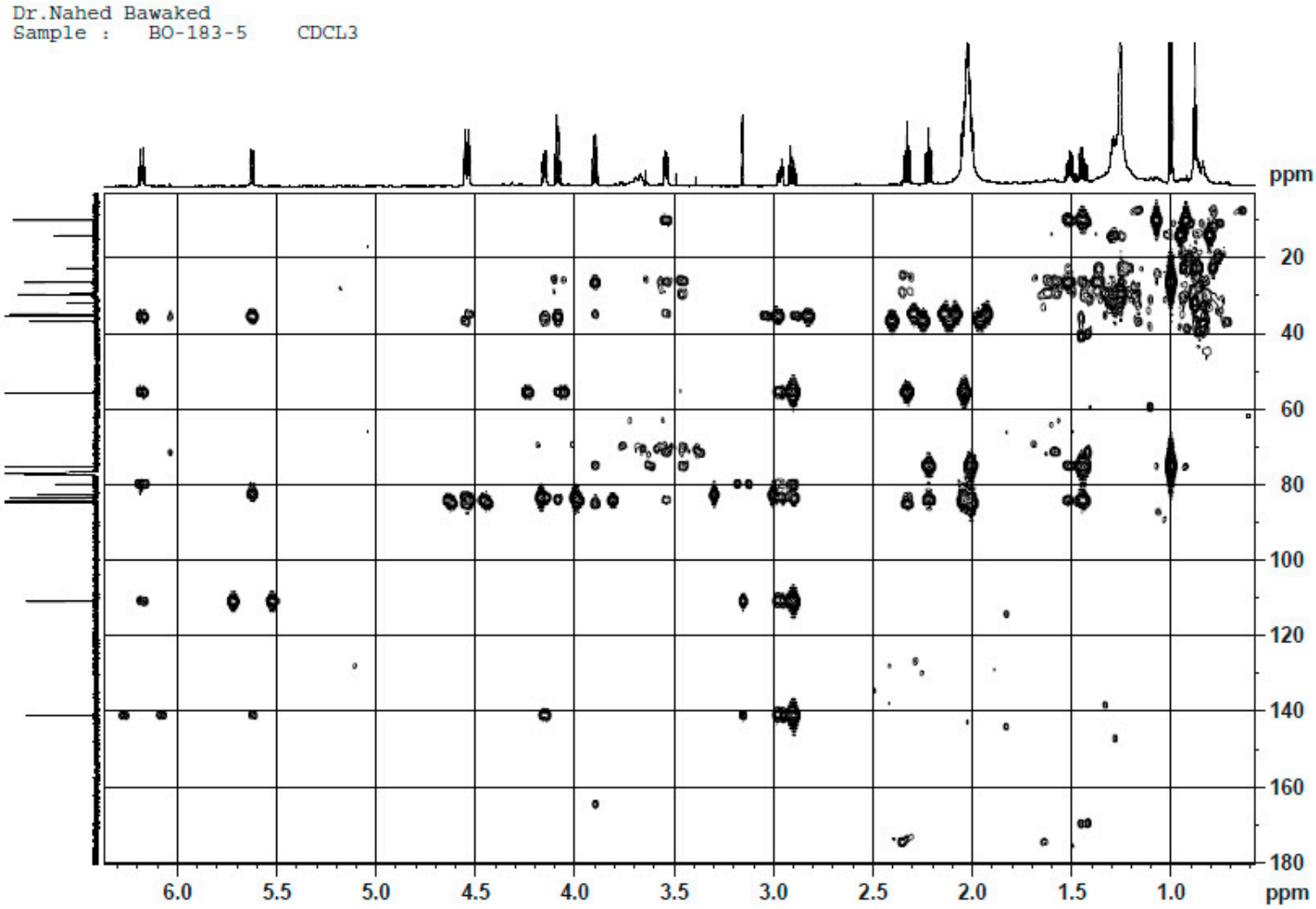


Figure S1o: HMBC NMR of compound 1

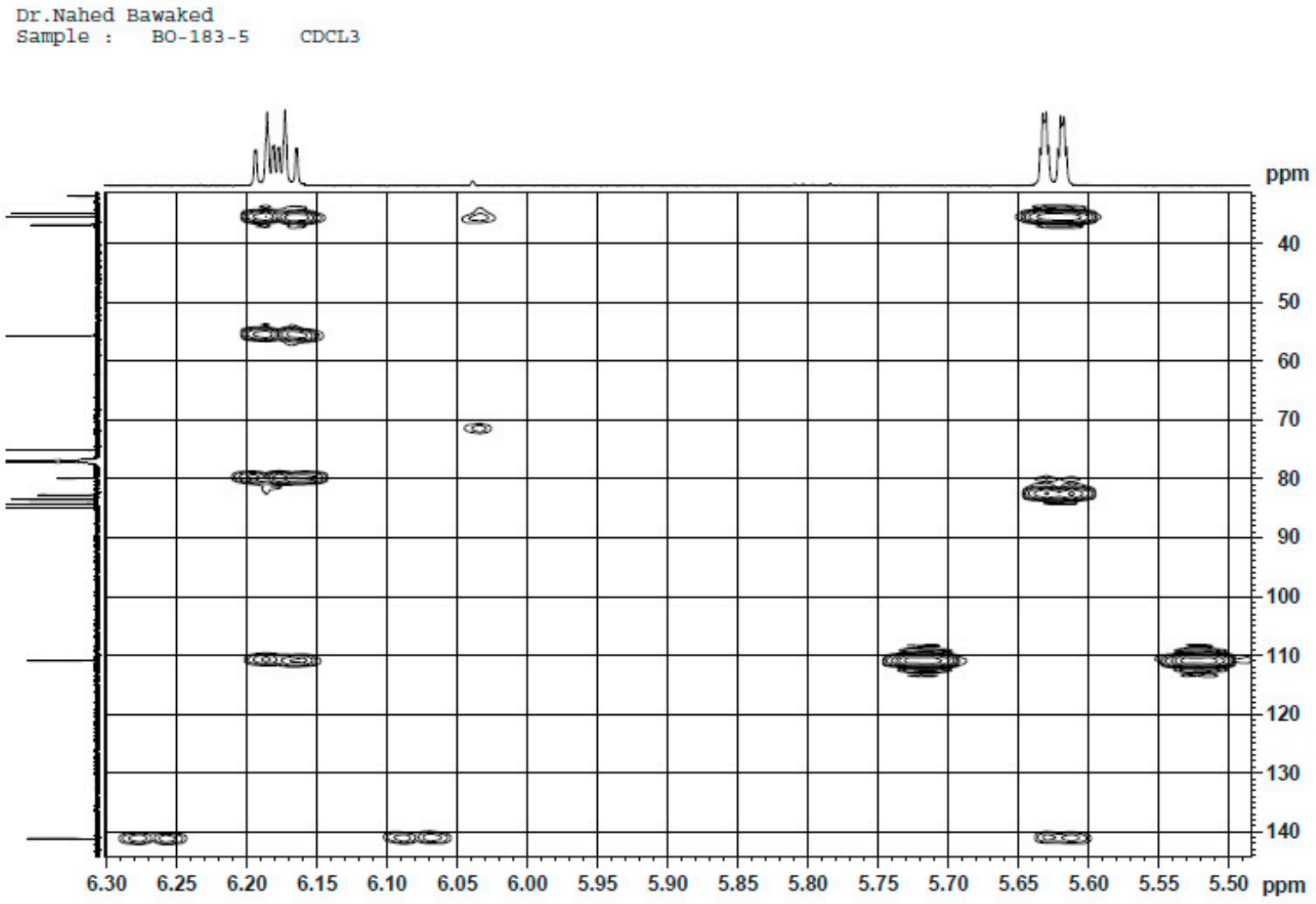


Figure S1p: HMBC NMR of compound 1

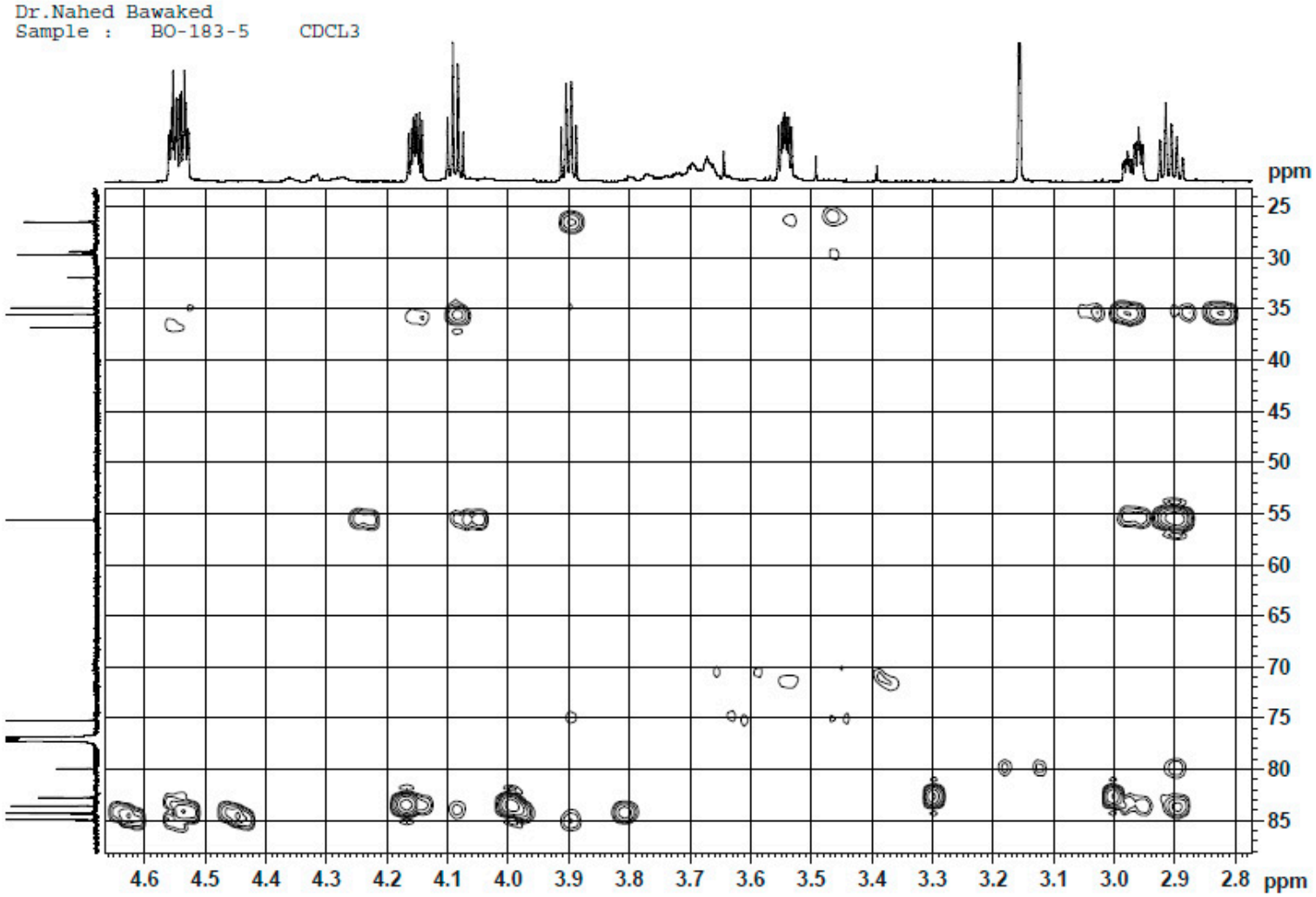


Figure S1q: HMBC NMR of compound 1

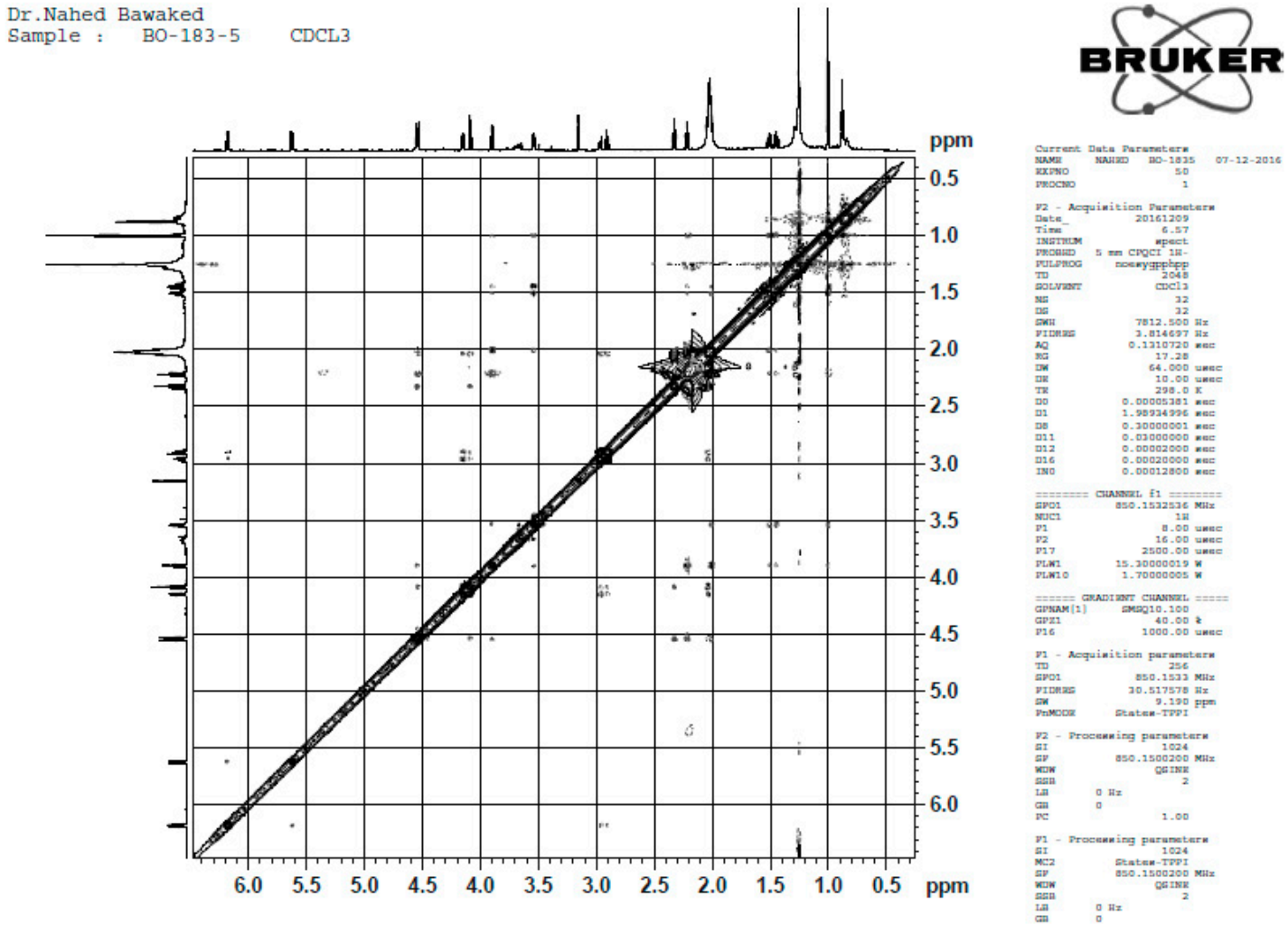


Figure S1r: NOESY NMR of compound 1

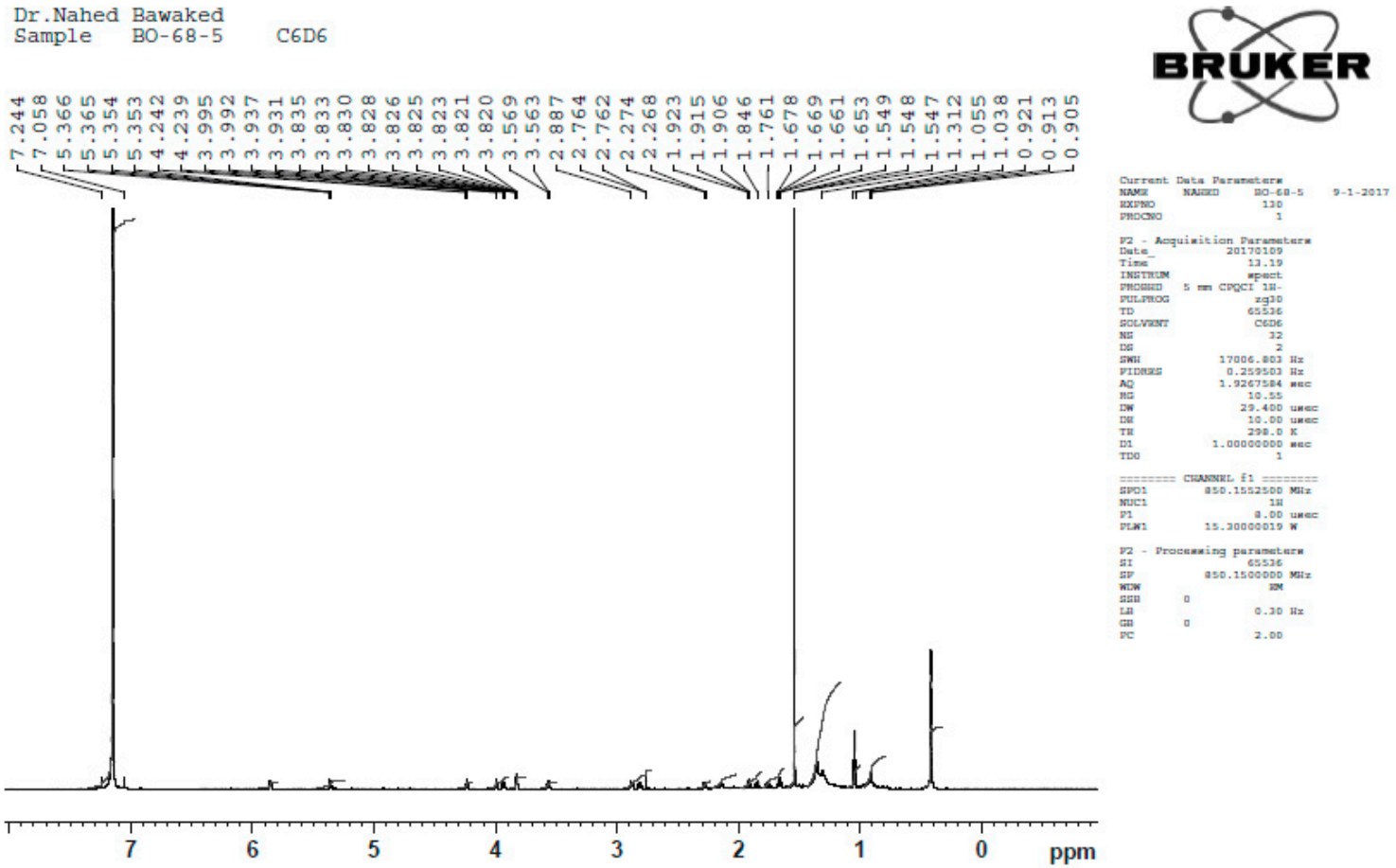


Figure S2a: ^{1}HNMR of compound 2

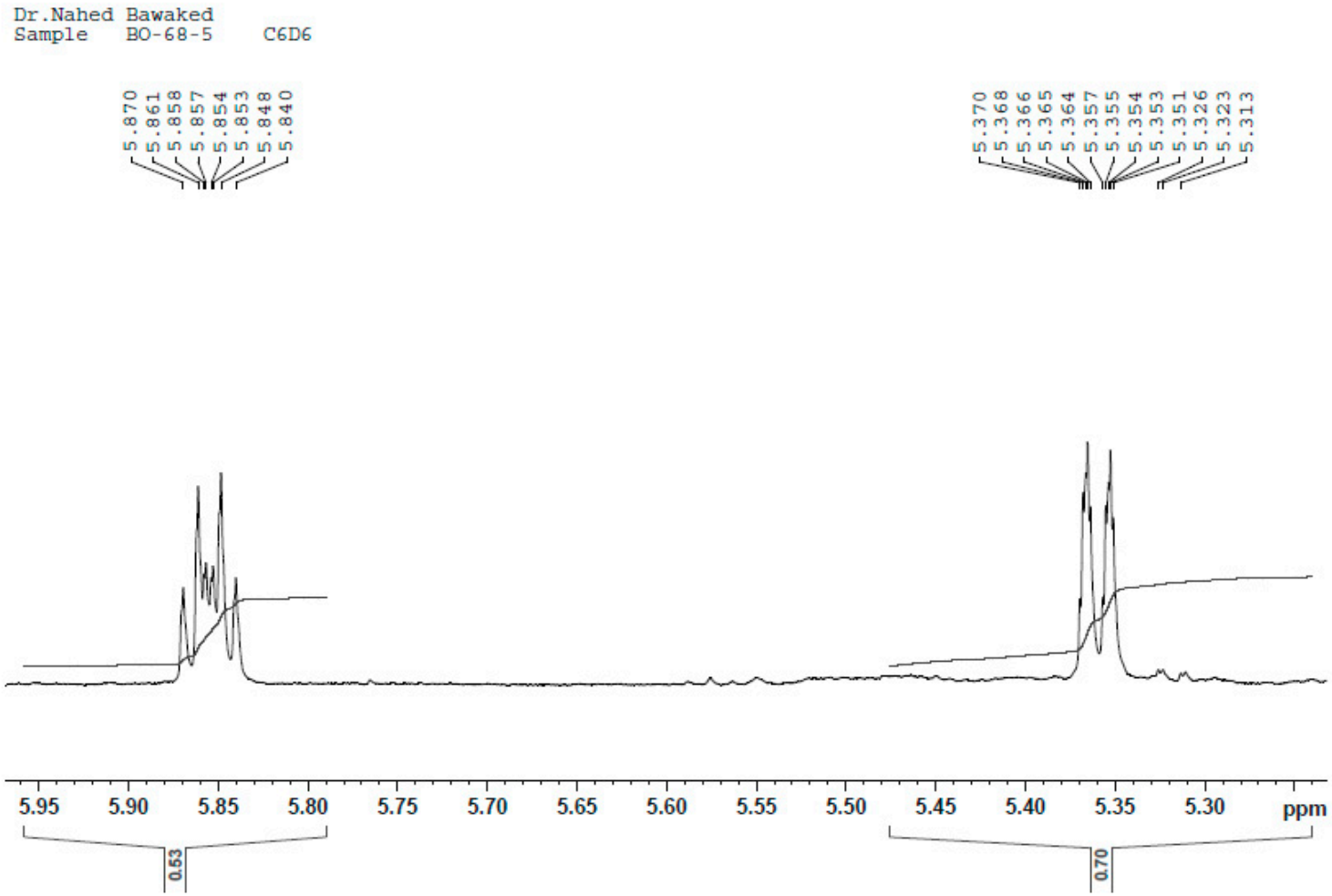


Figure S2b: ^{1}HNMR of compound 2

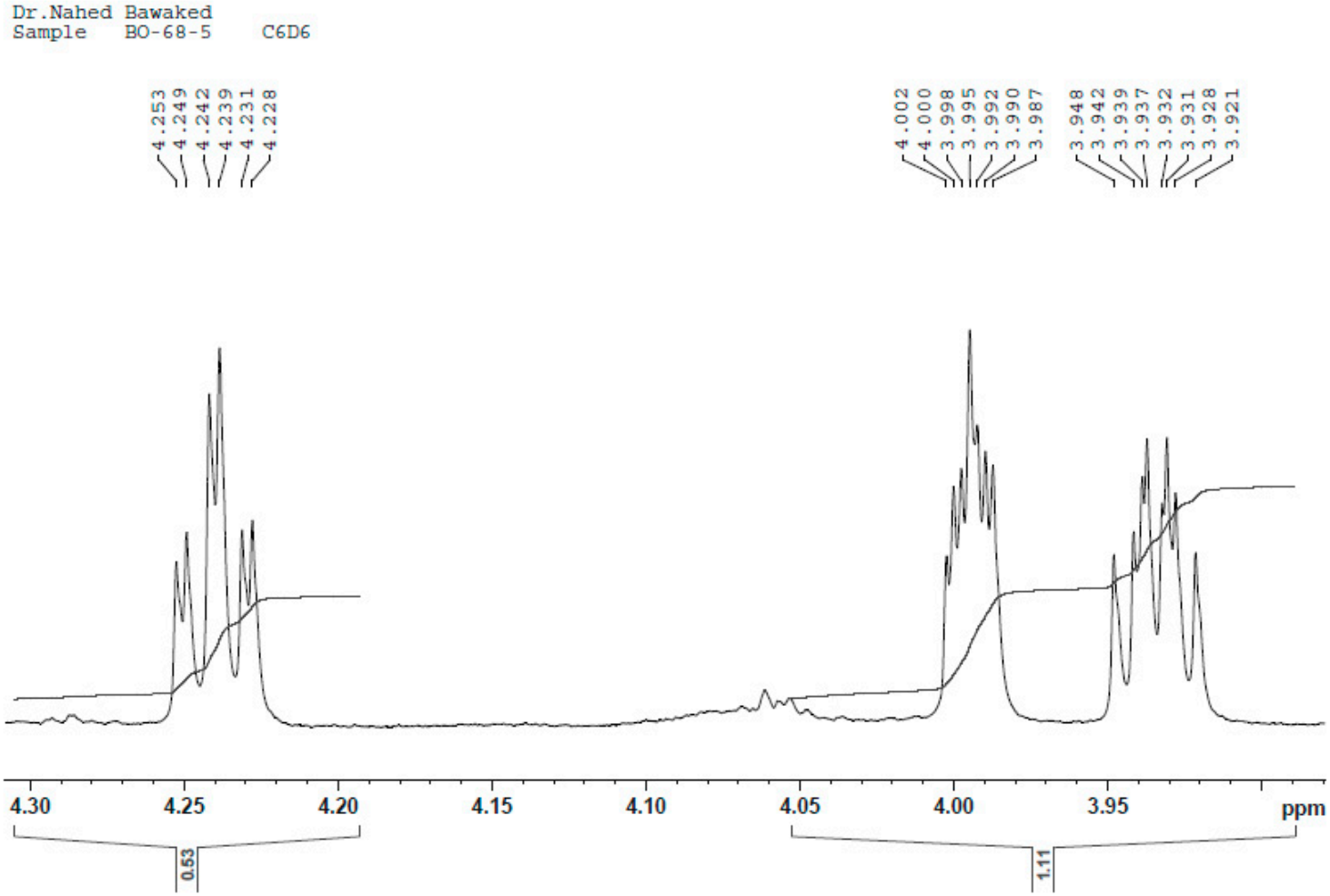


Figure S2c: ^{1}HNMR of compound 2

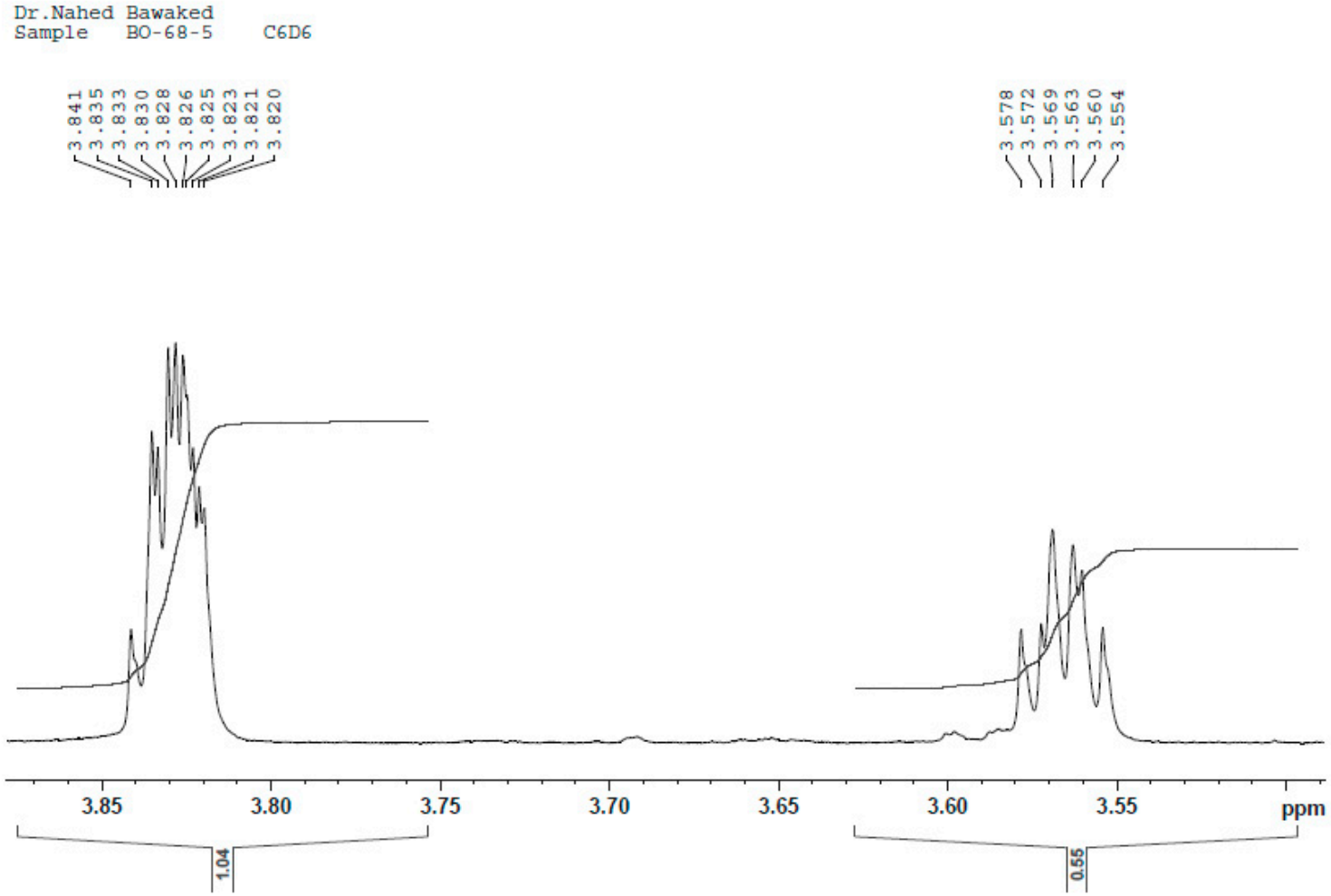


Figure S2d: ^{1}HNMR of compound 2

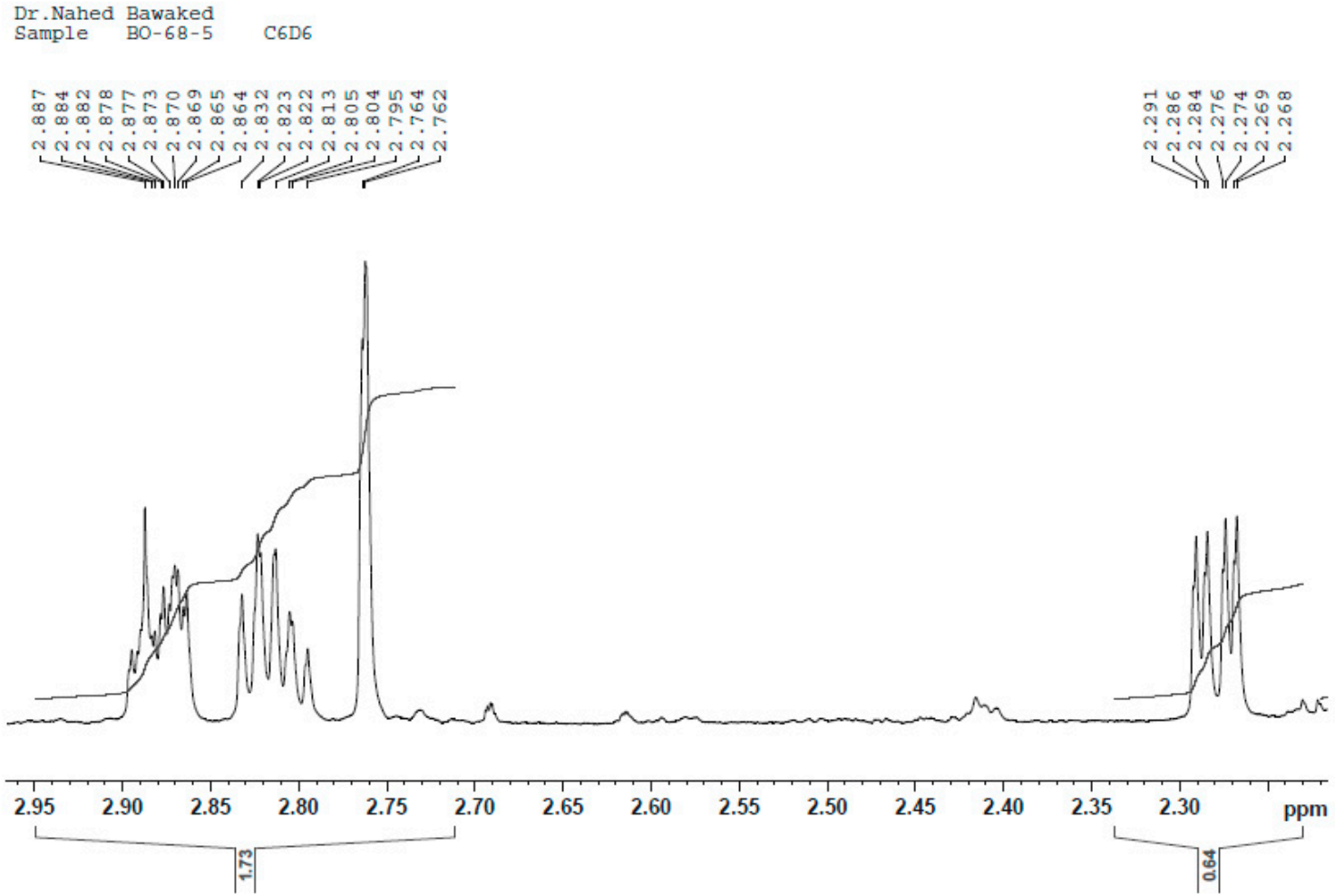


Figure S2e: ^{1}HNMR of compound 2

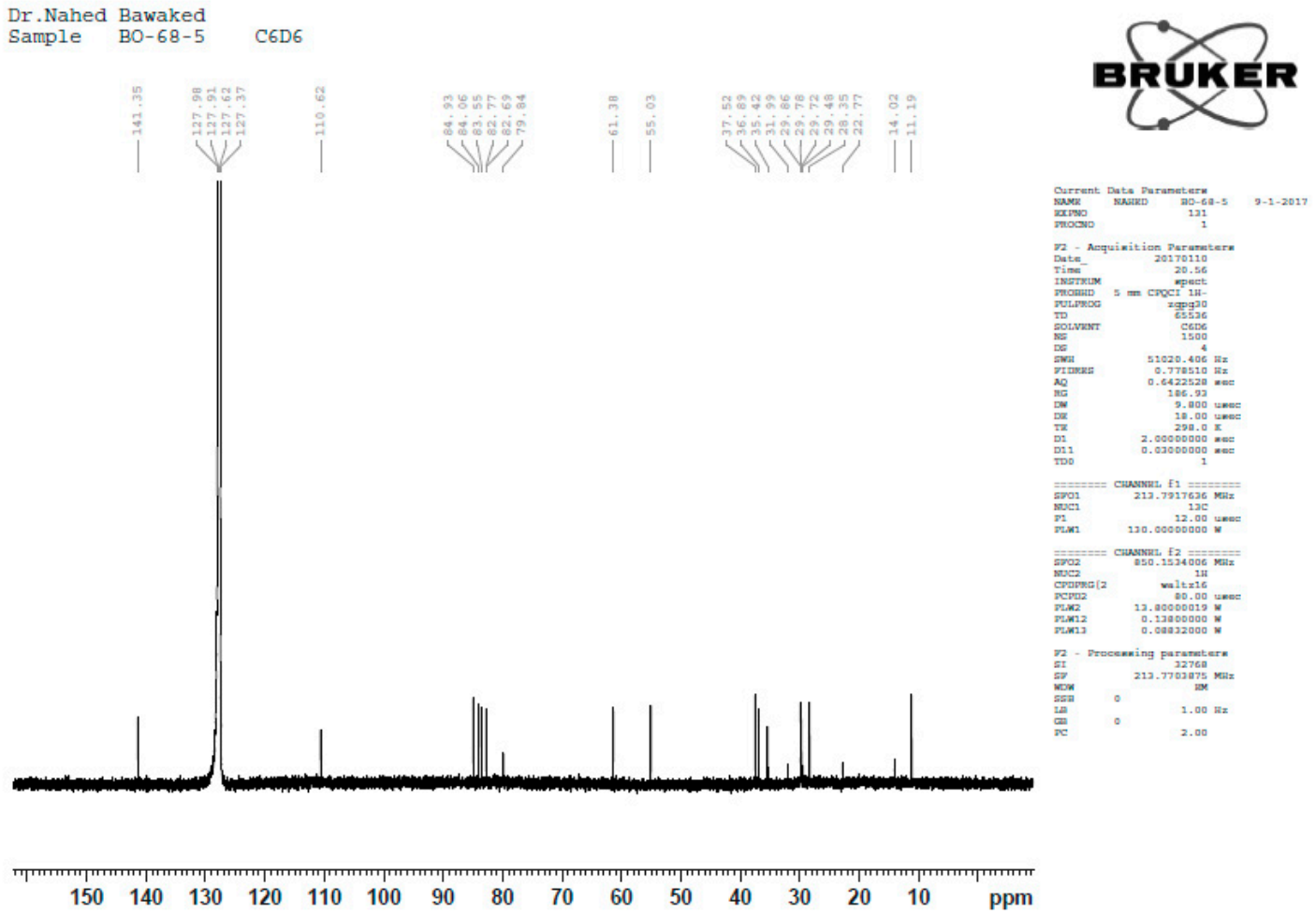


Figure S2f: ^{13}CNMR of compound 2

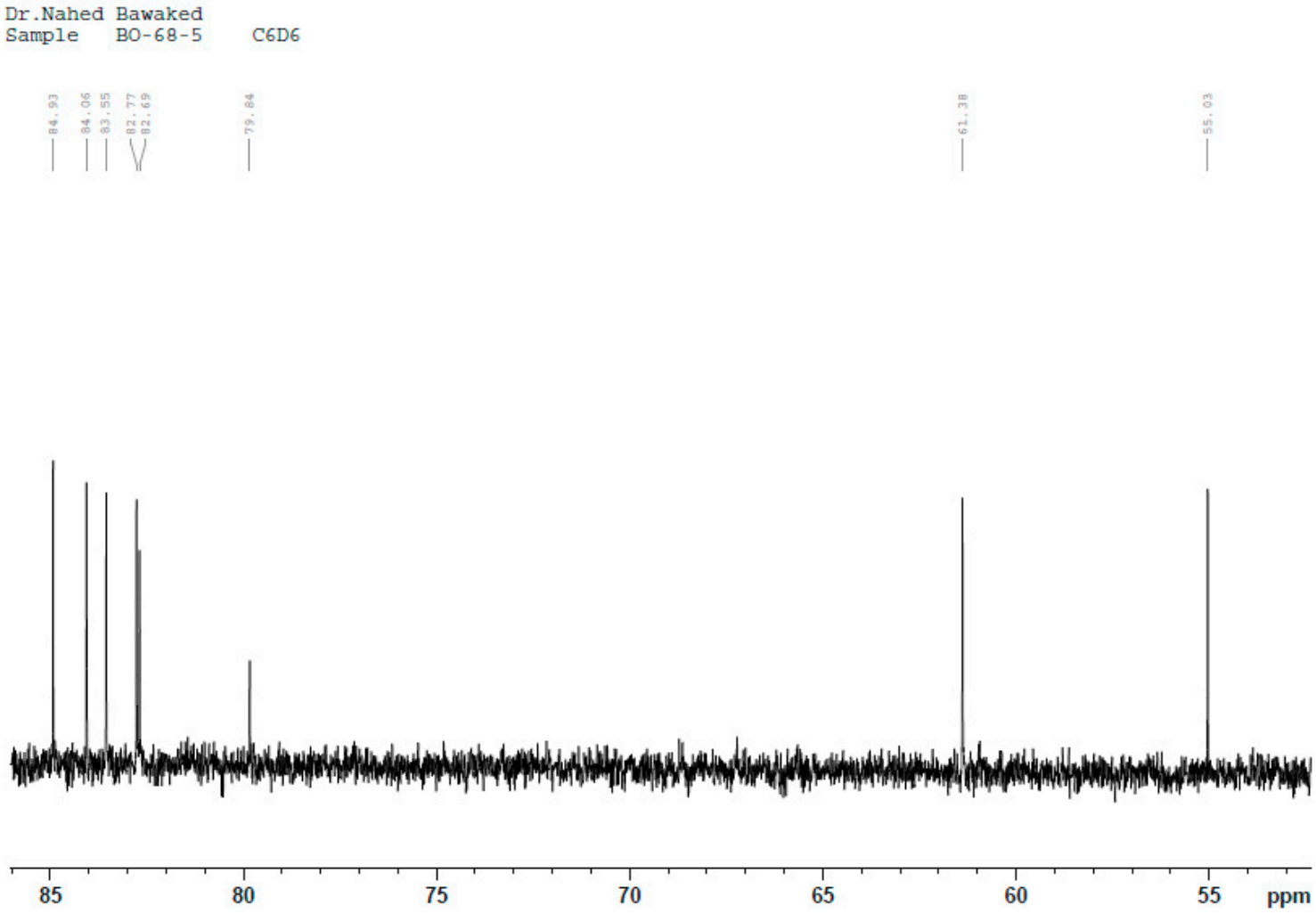


Figure S2g: ^{13}CNMR of compound 2

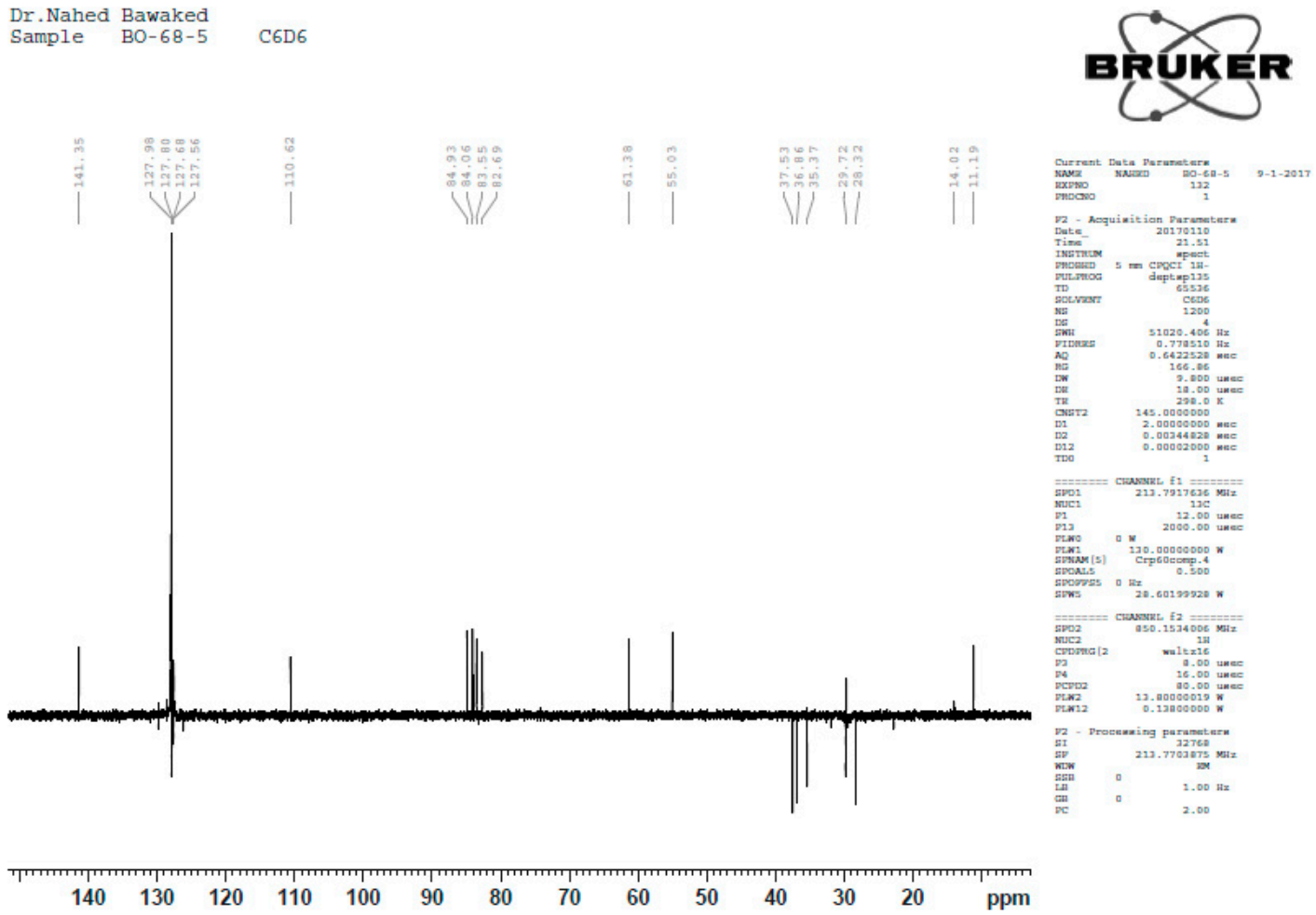


Figure S2h: DEPT NMR of compound 2

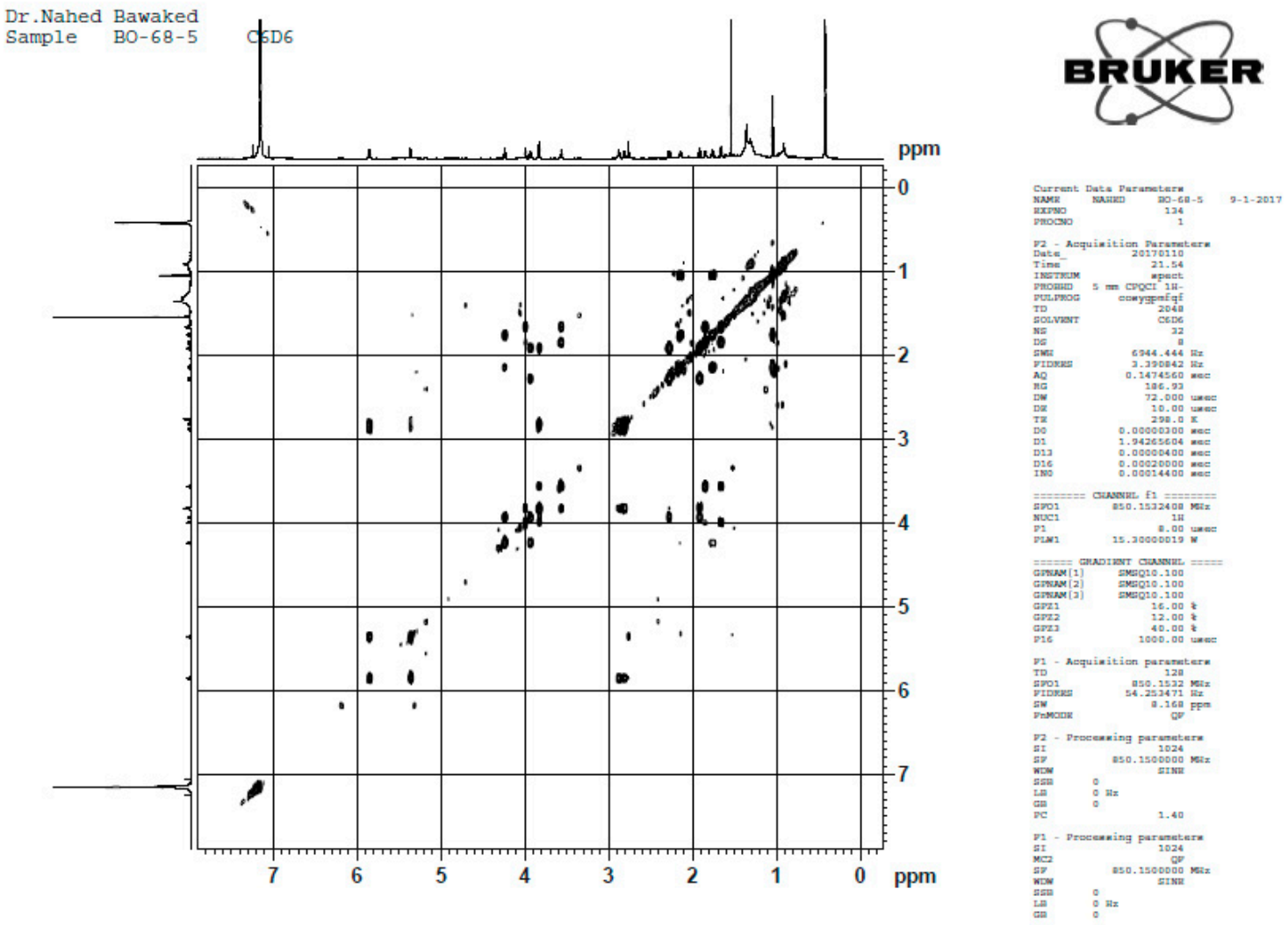


Figure S2i: COSY NMR of compound 2

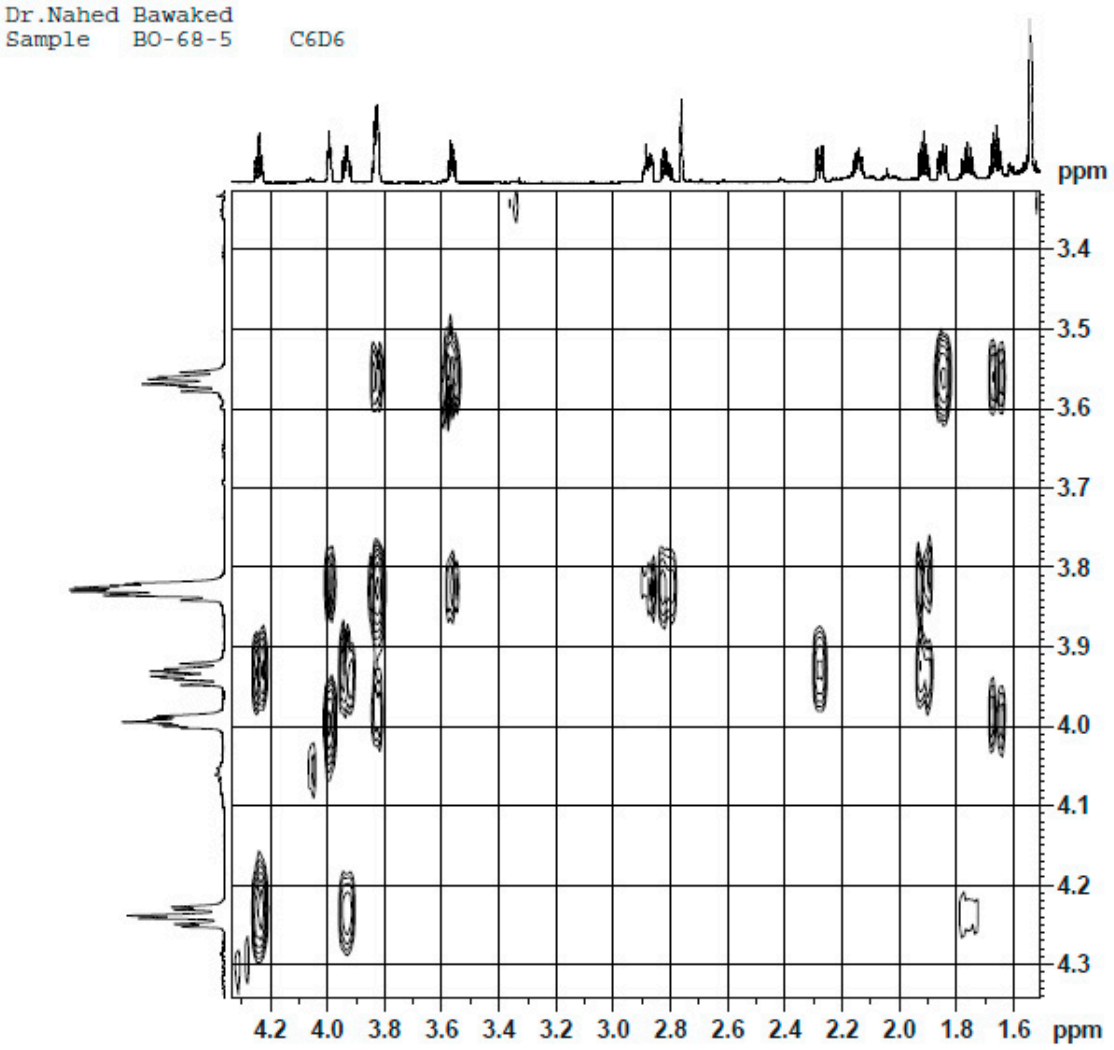


Figure S2j: COSY NMR of compound 2

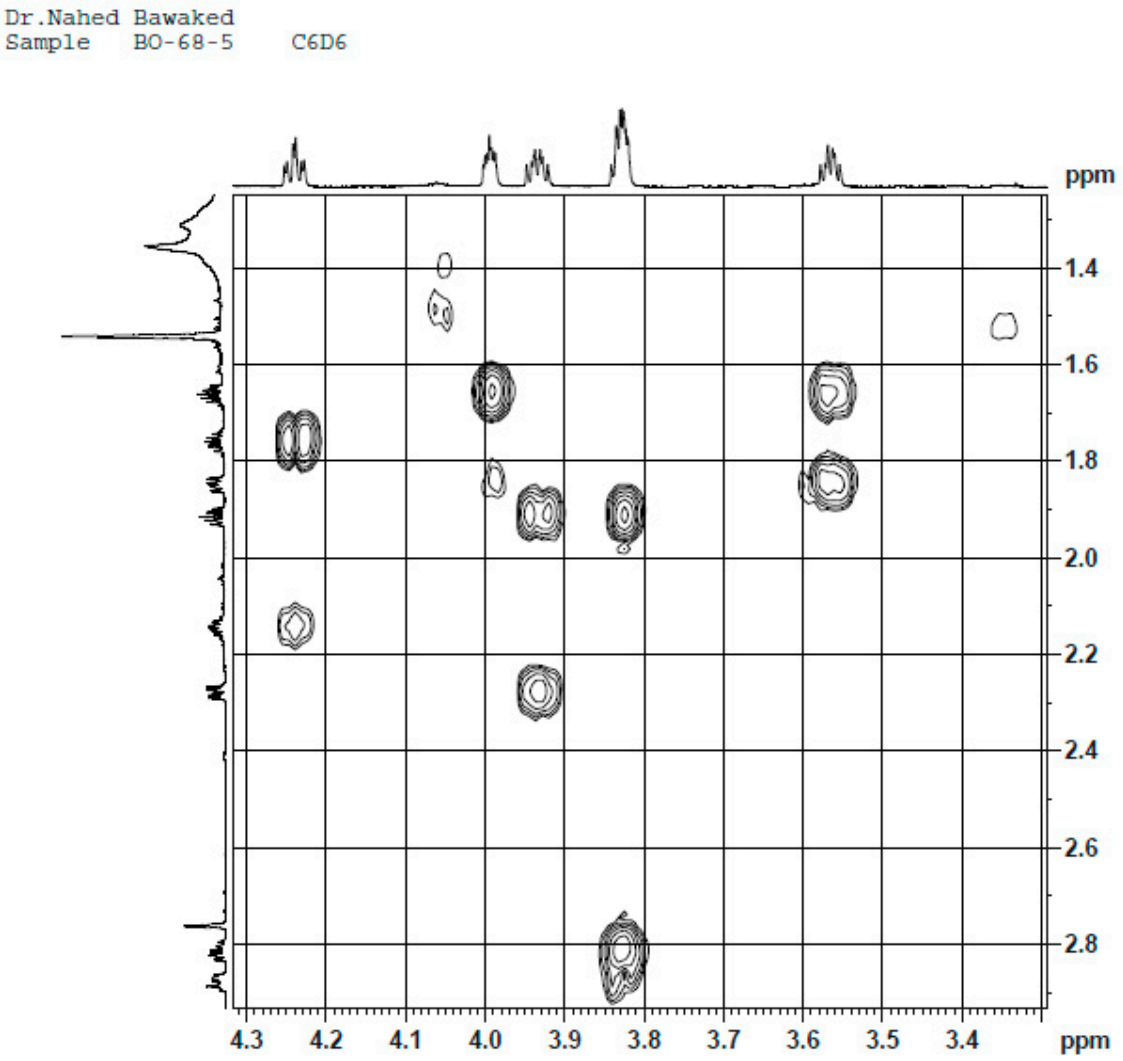
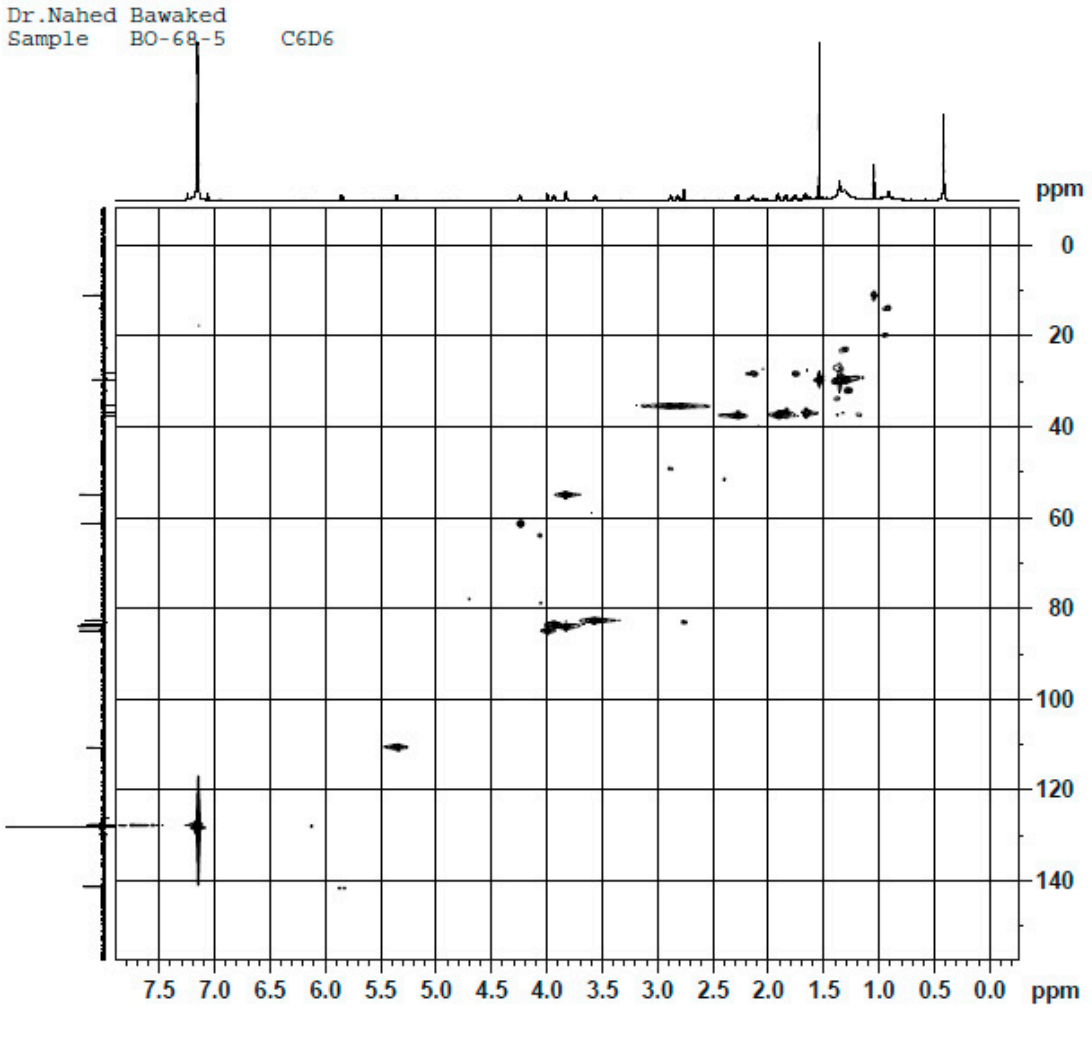
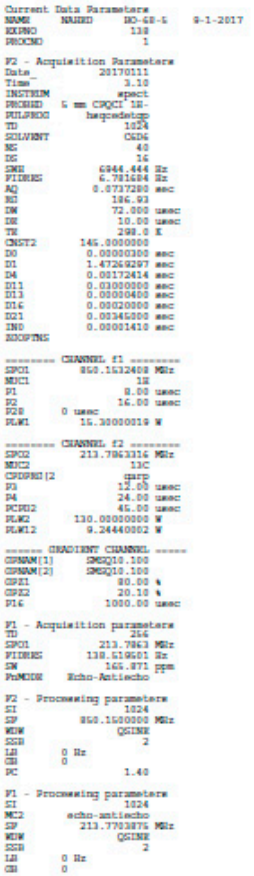


Figure S2k: COSY NMR of compound 2





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TE                    298.0 K
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D4                 0.00172414 sec
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NUCFTNS

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P2                    16.00 usec
PCPD0      0 usec
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NUC2                      13C
CPDPRG[2                  garp
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GPZ2                  20.10 %
P16                 1000.00 usec

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FIDRES         138.619601 Hz
SW                 165.871 ppm
FnMODE     Echo-Antiecho

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WDW                   QSINE
SSB                       2
LB          0 Hz
GB          0
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F1 - Processing parameters
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Figure S2l: HSQC NMR of compound 2

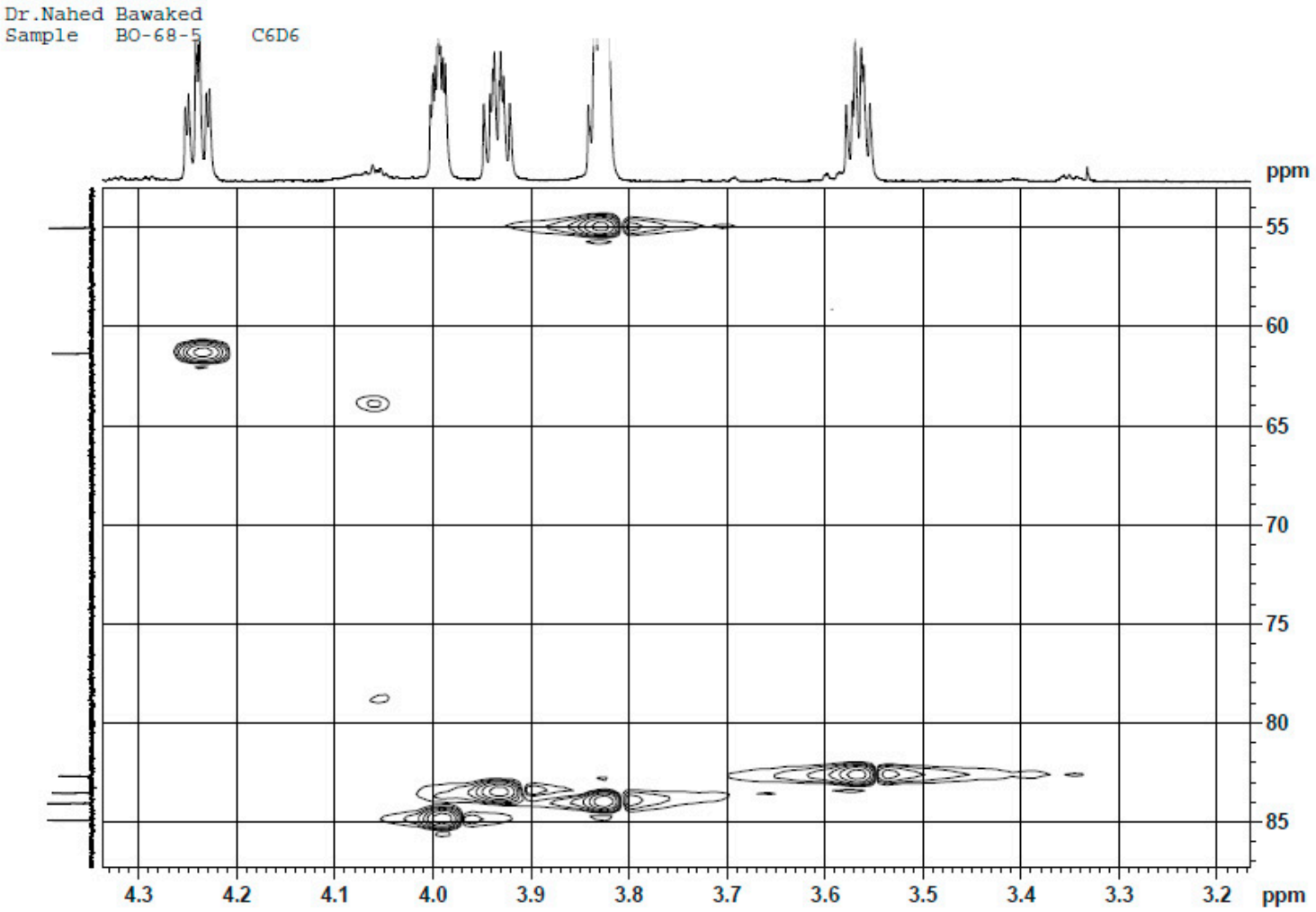
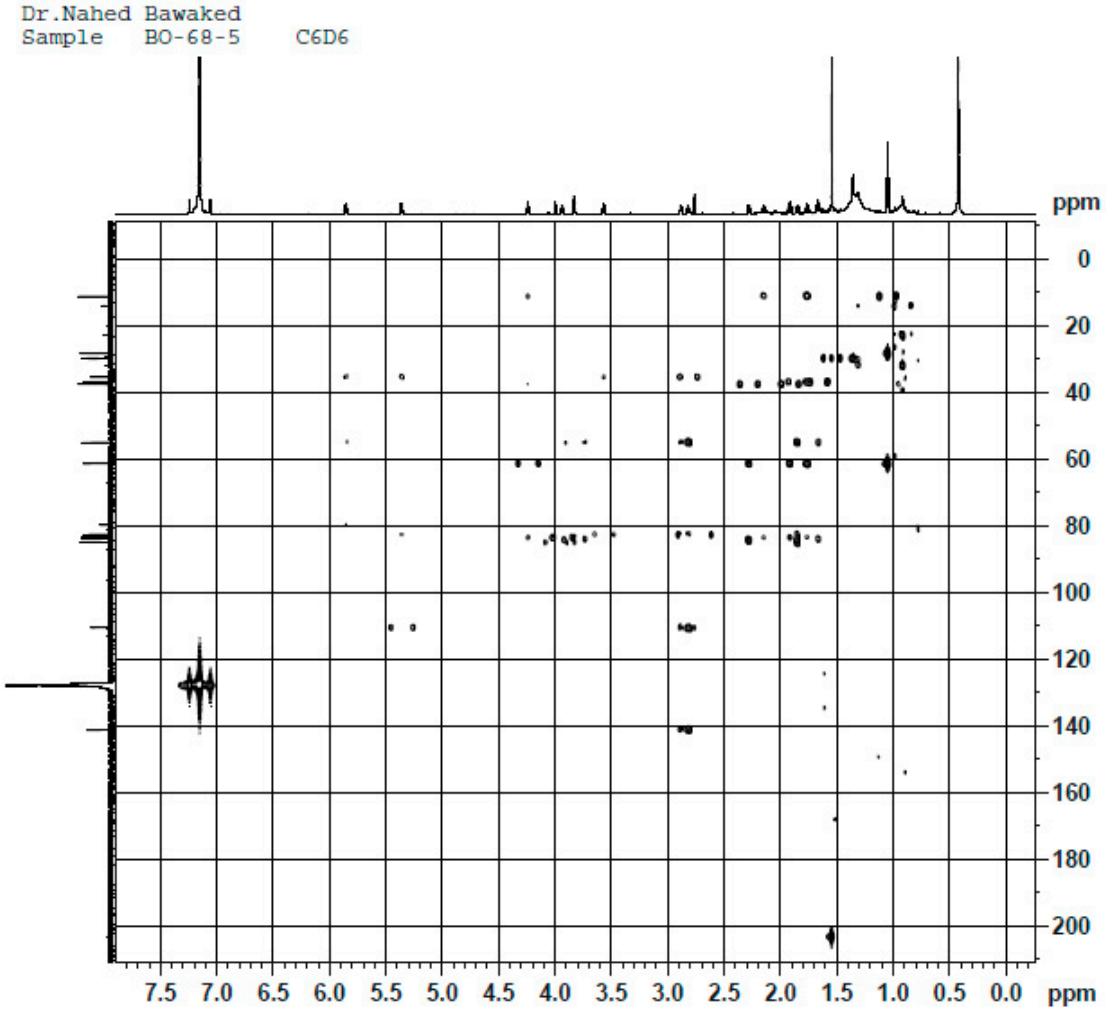


Figure S2m: HSQC NMR of compound 2

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SWH                    6944.444 Hz
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RG                        186.93
DW                        72.000 usec
DE                        10.00 usec
TE                        298.0 K
CNST13                 8.0000000
D0                     0.00000300 sec
D1                     1.38613305 sec
D6                     0.06250000 sec
D16                    0.00020000 sec
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NUC1                         1H
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PLW1                15.30000019 W

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NUC2                         13C
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PLW2               130.00000000 W

====== GRADIENT CHANNEL =====
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GPNAM[3]          SMSQ10.100
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GPZ2                      30.00 %
GPZ3                      40.10 %
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FnMODE                        QF

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GB                   0
PC                        1.40

F1 - Processing parameters
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Figure S2n: HMBC NMR of compound 2

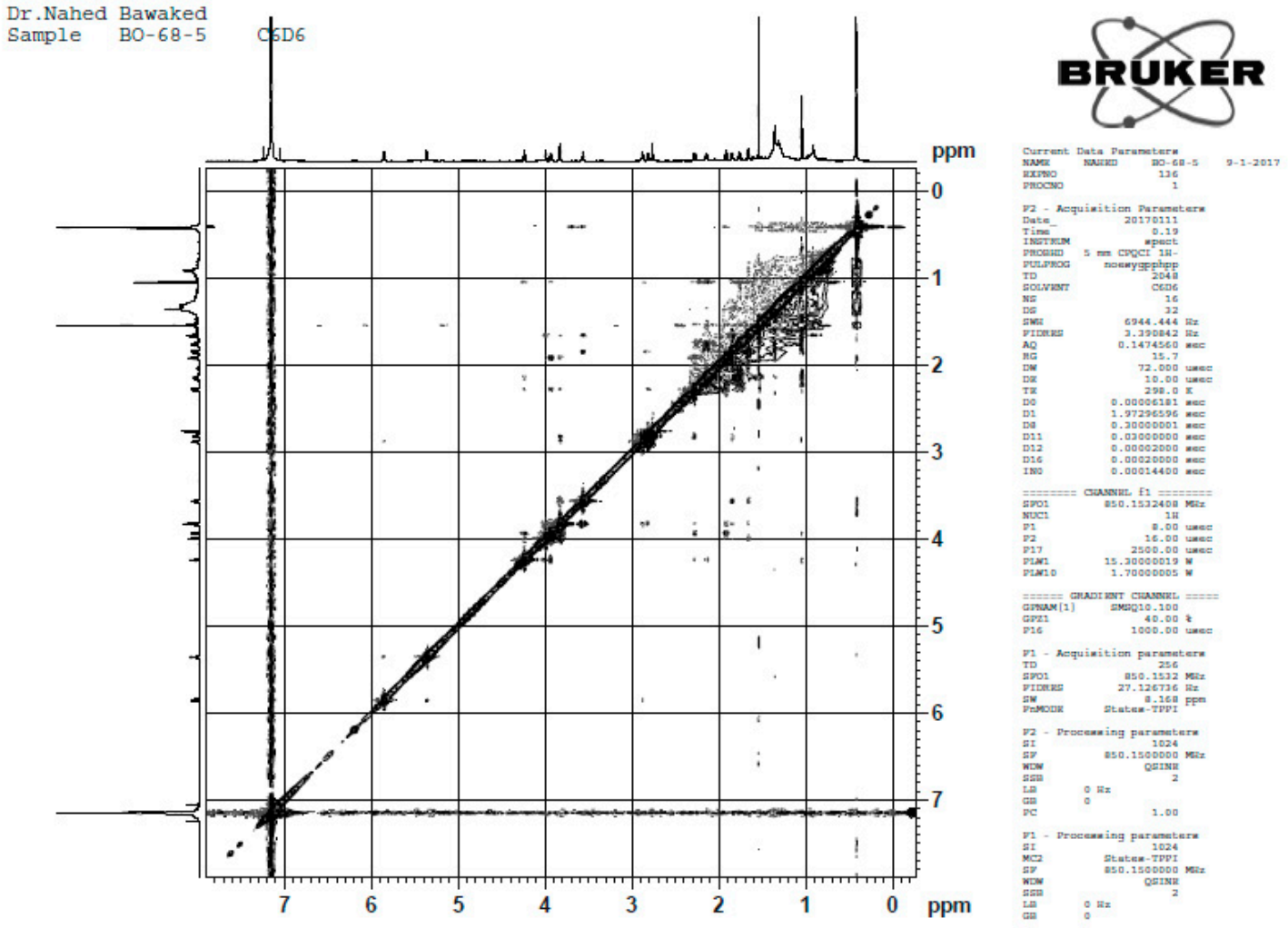

Figure S2o: NOESY NMR of compound 2

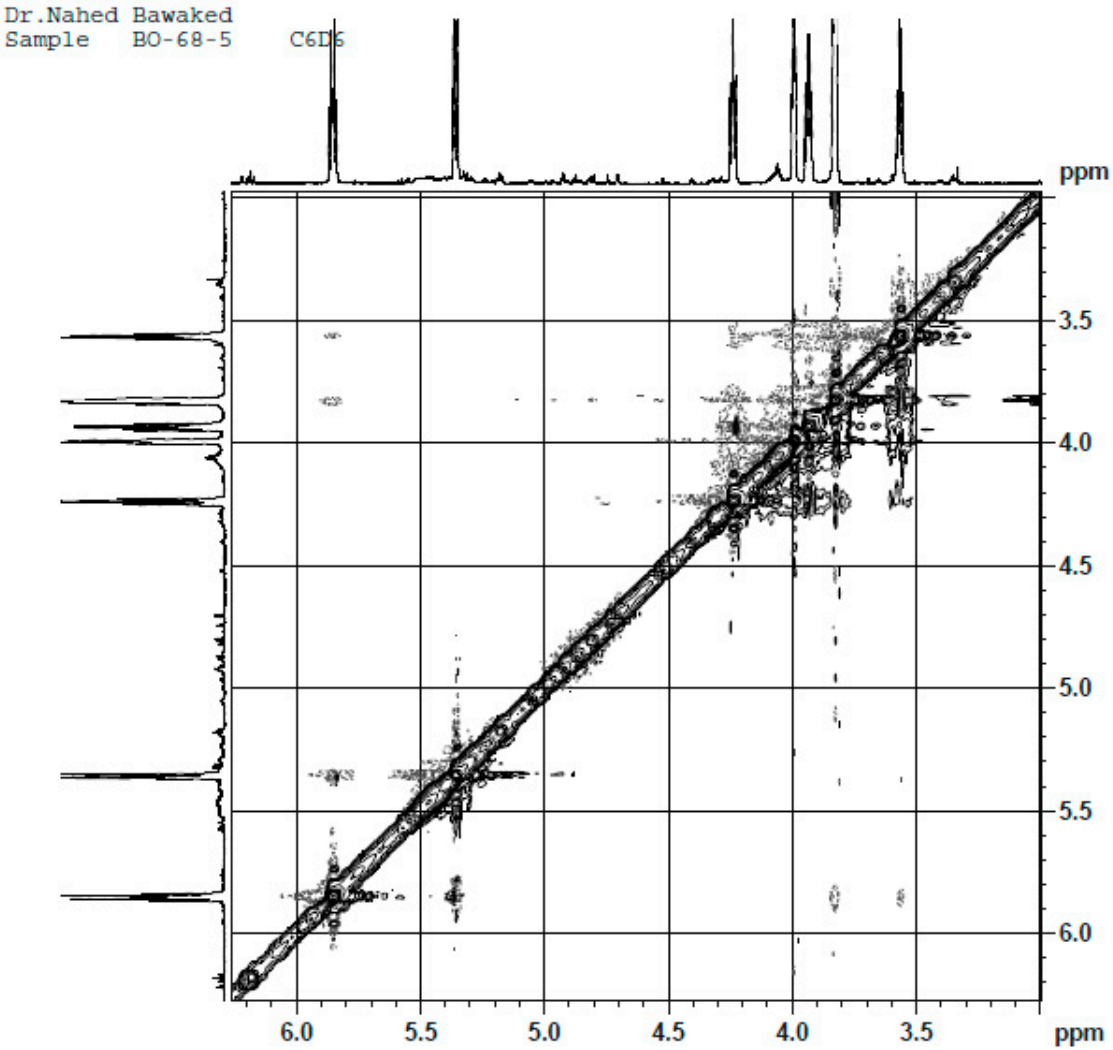

Figure S2p: NOESY NMR of compound 2