Supplementary data

Synthesis of Flavonols and Assessment of Their Biological Activities as Anticancer Agents

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Contents

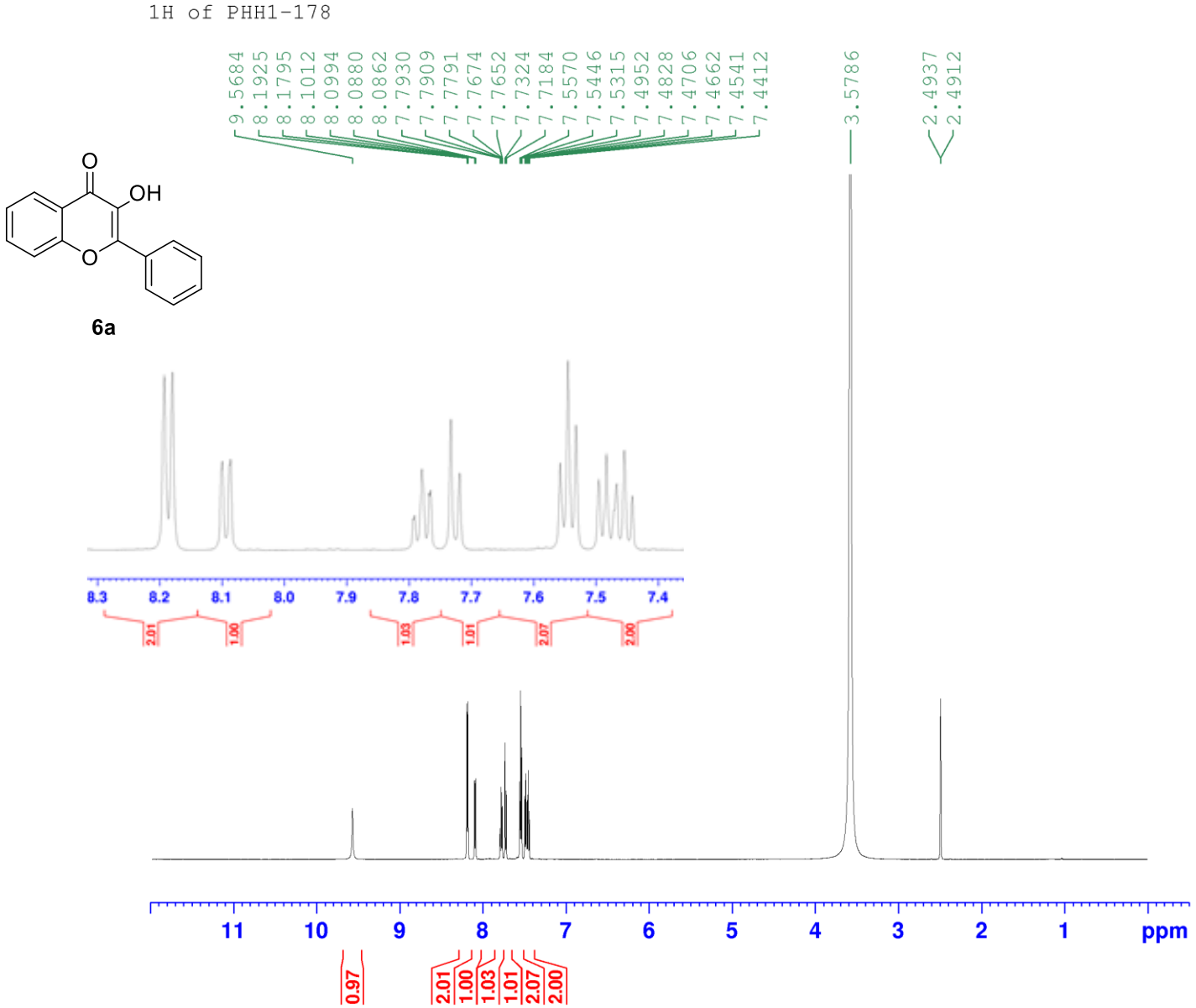


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Figure S1. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **6a**.

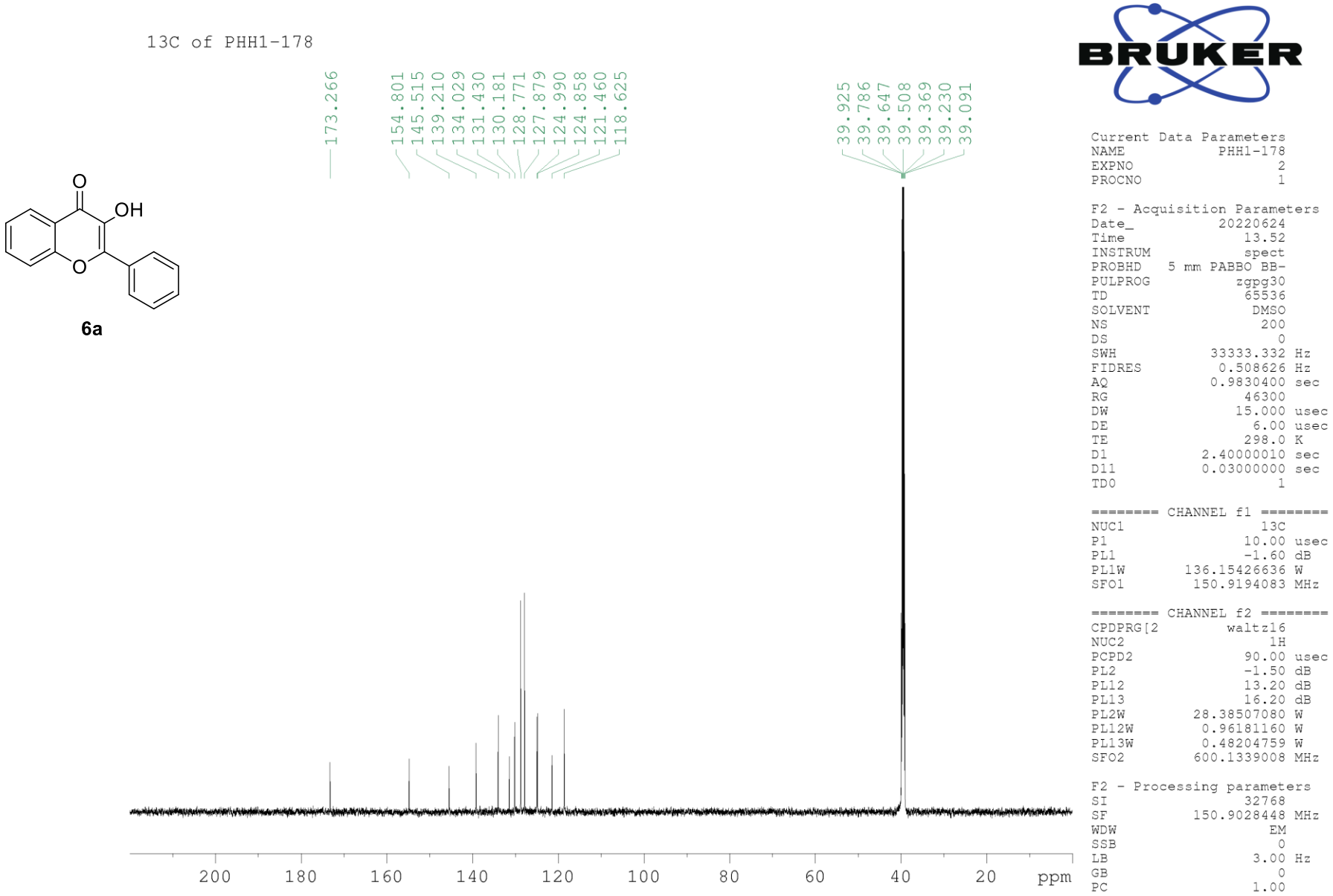
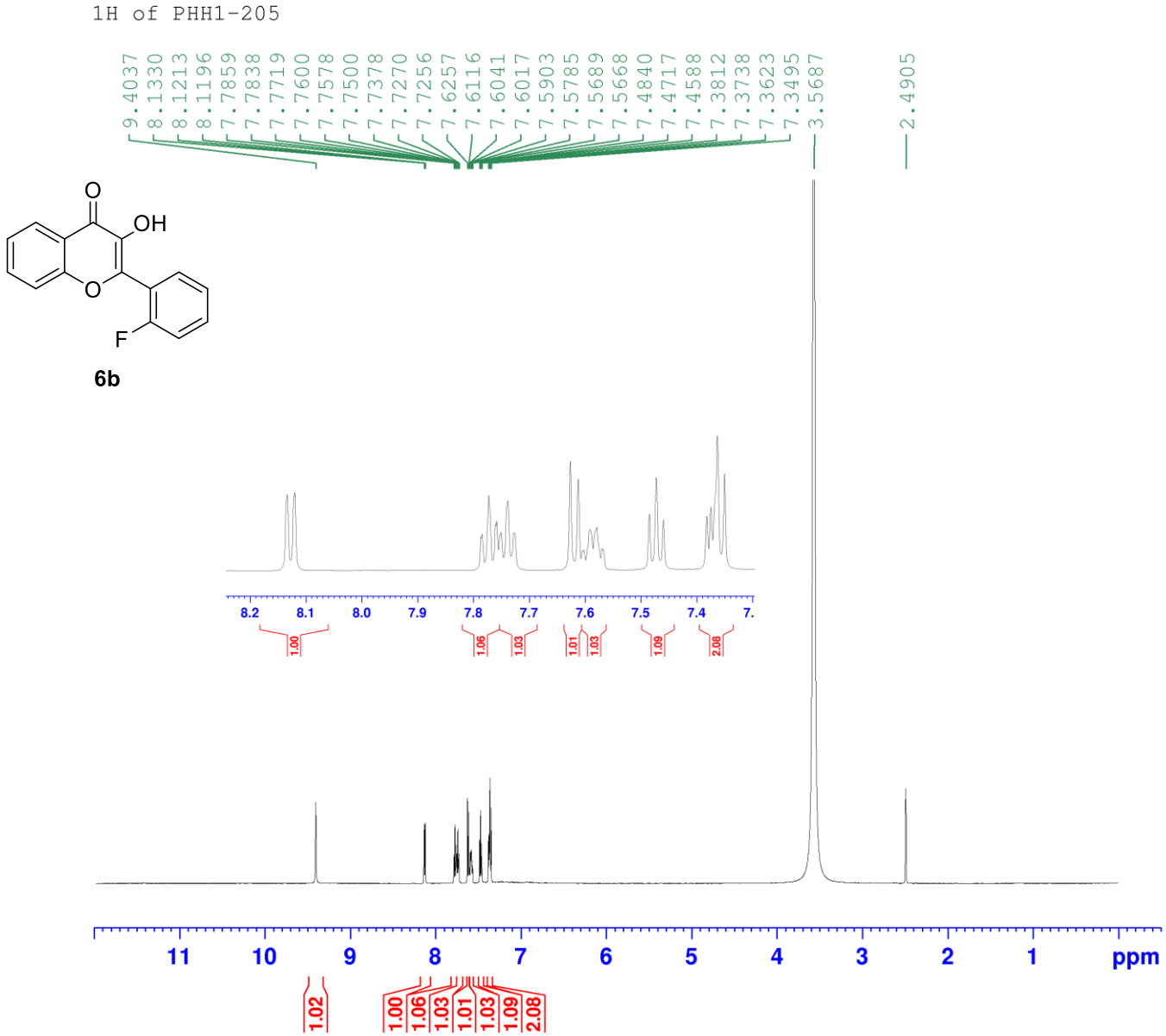


Figure S2. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **6a**.

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AQ                  2.2806528 sec
RG                         161
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TE                     300.9 K
D1                  2.00000000 sec
TD0                          1

======== CHANNEL f1 ========
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PL1                      0.20 dB
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F2 - Processing parameters
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Figure S3. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **6b**.

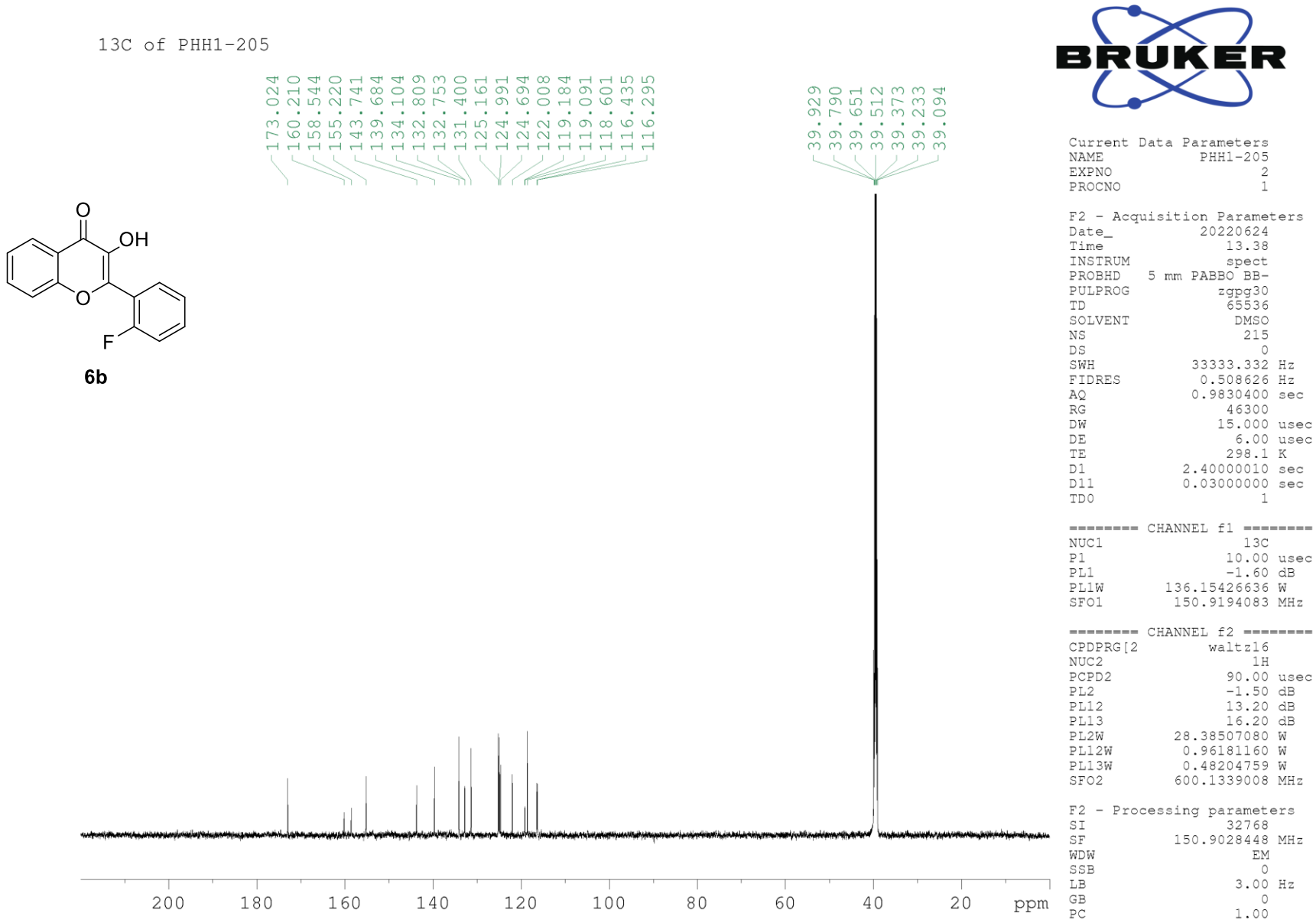
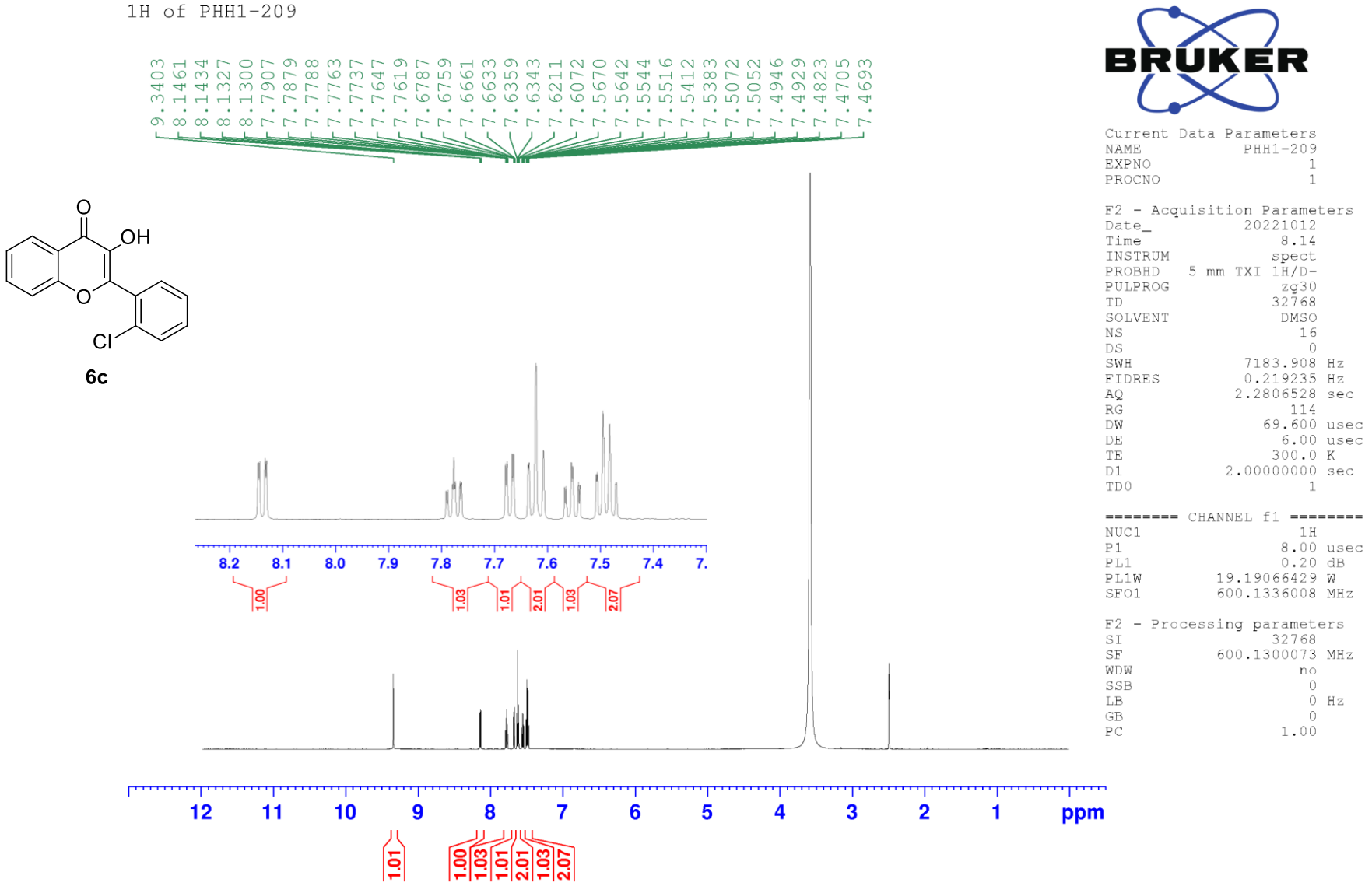


Figure S4. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **6b**.

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TD                      32768
SOLVENT                  DMSO
NS                         16
DS                          0
SWH                  7183.908 Hz
FIDRES              0.219235 Hz
AQ                  2.2806528 sec
RG                        114
DW                     69.600 usec
DE                      6.00 usec
TE                     300.0 K
D1                  2.00000000 sec
TD0                          1

======== CHANNEL f1 ========
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PL1                      0.20 dB
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SFO1              600.1336008 MHz

F2 - Processing parameters
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WDW                         no
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LB                           0 Hz
GB                           0
PC                        1.00
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Figure S5. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **6c**.

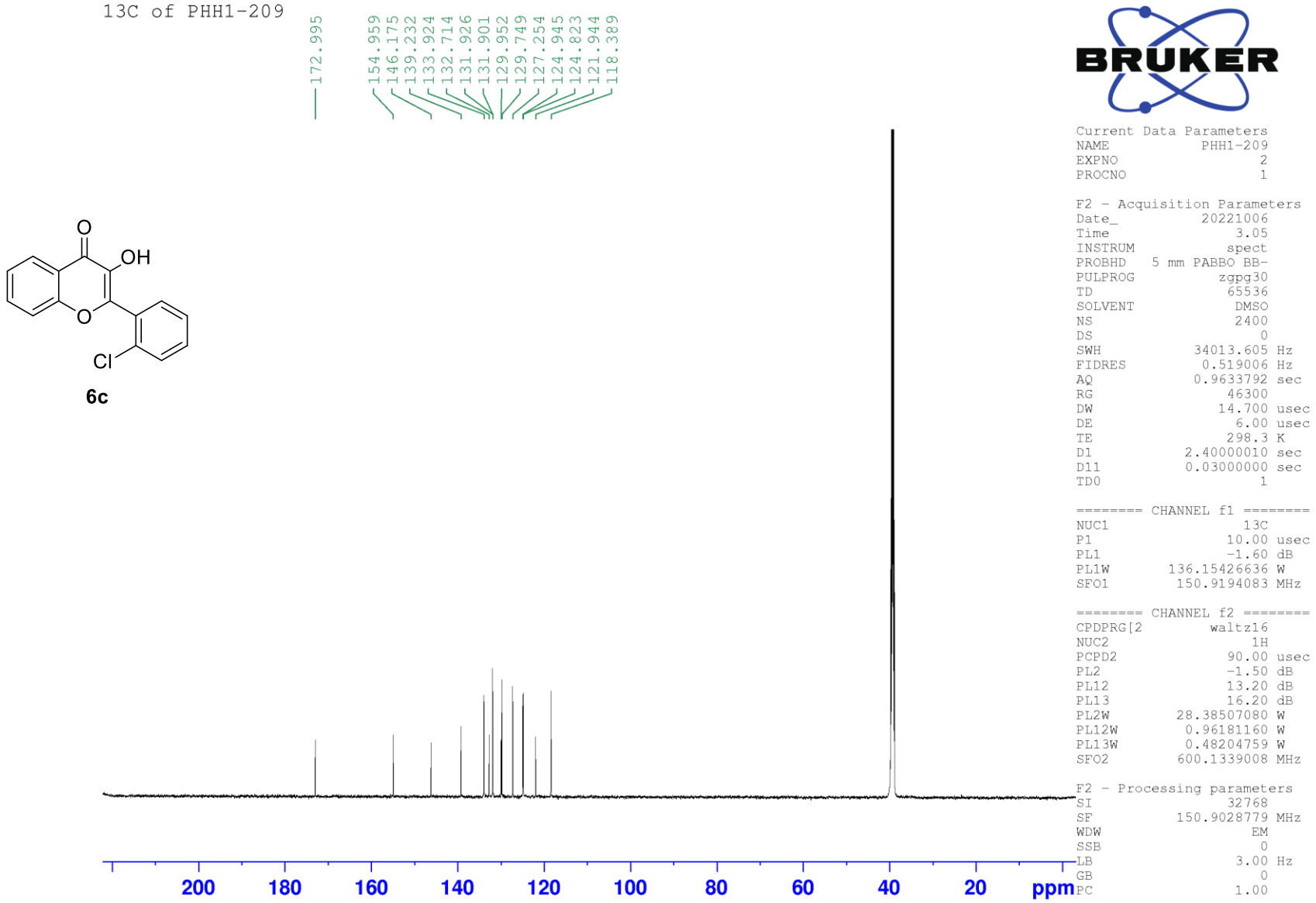


Figure S6. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **6c**.

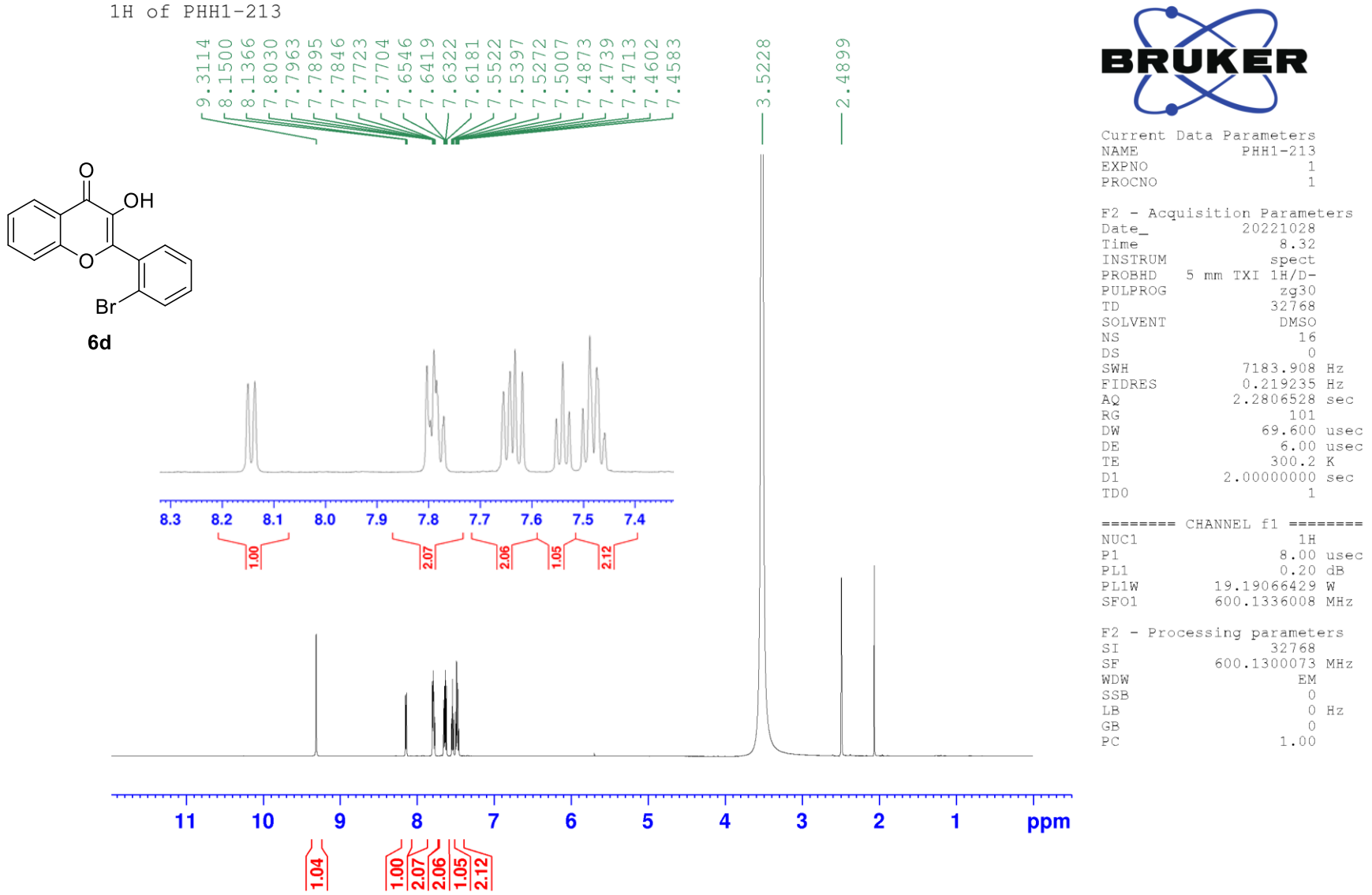


Figure S7. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **6d**.

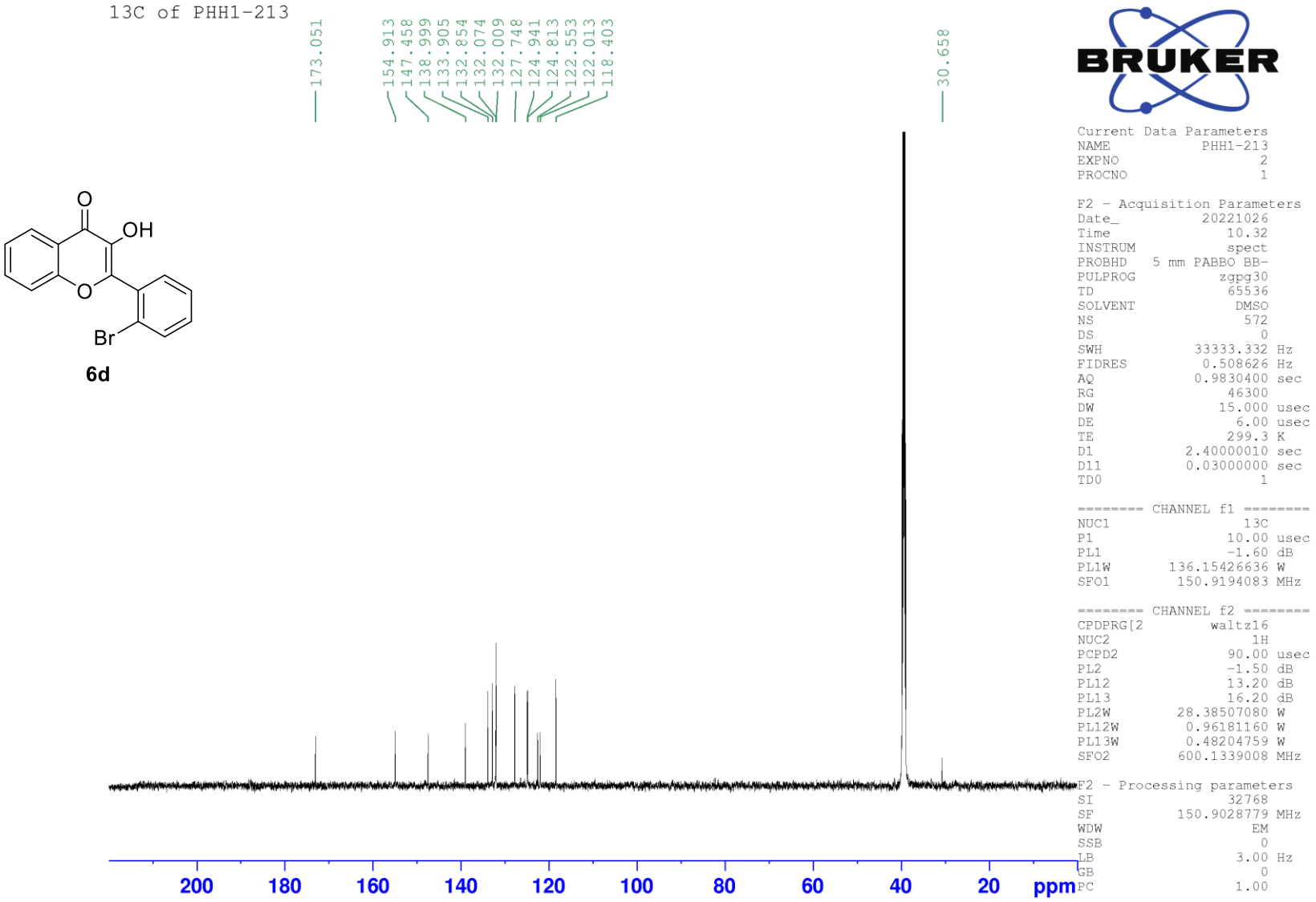


Figure S8. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **6d**.

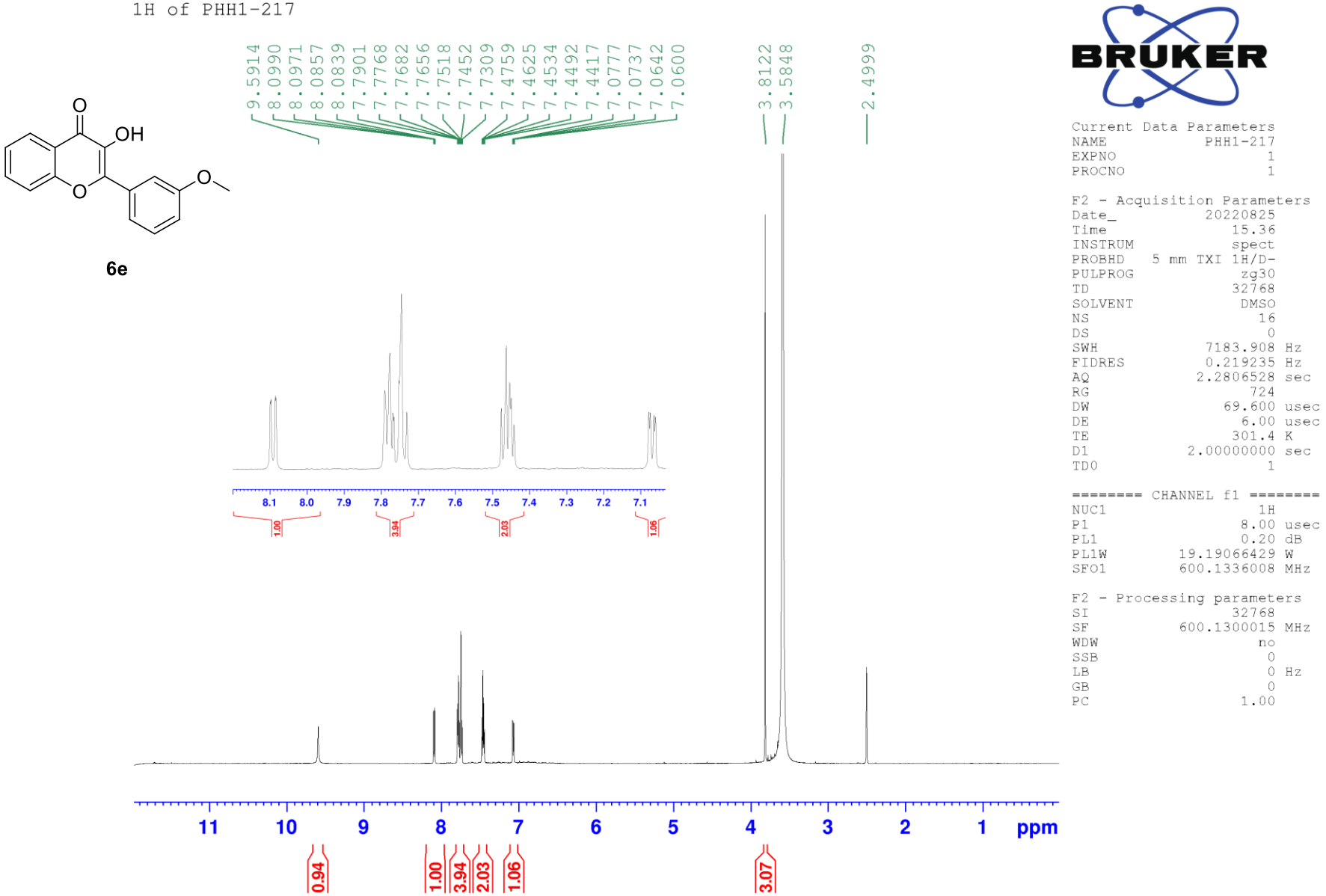


Figure S9. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **6e**.

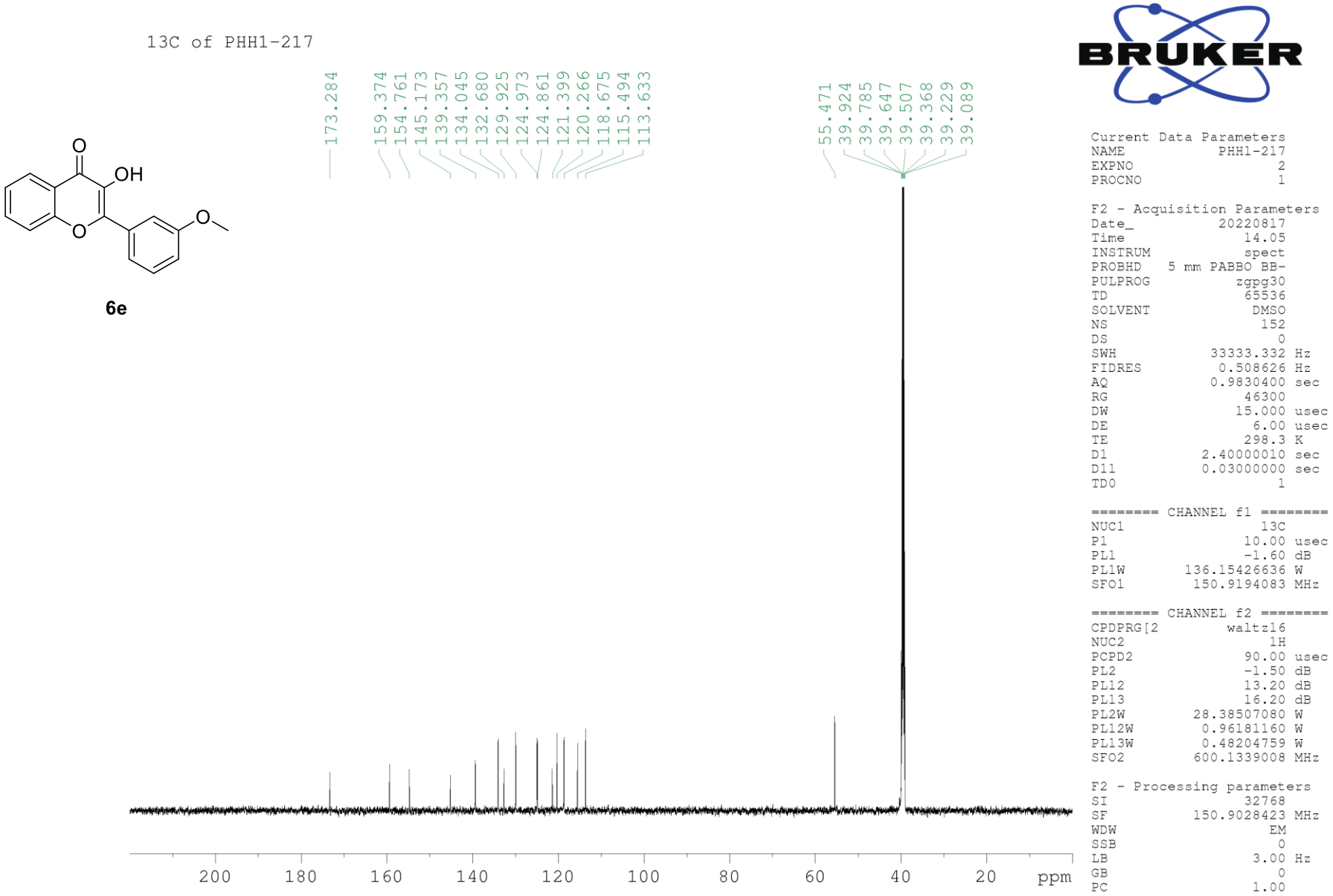
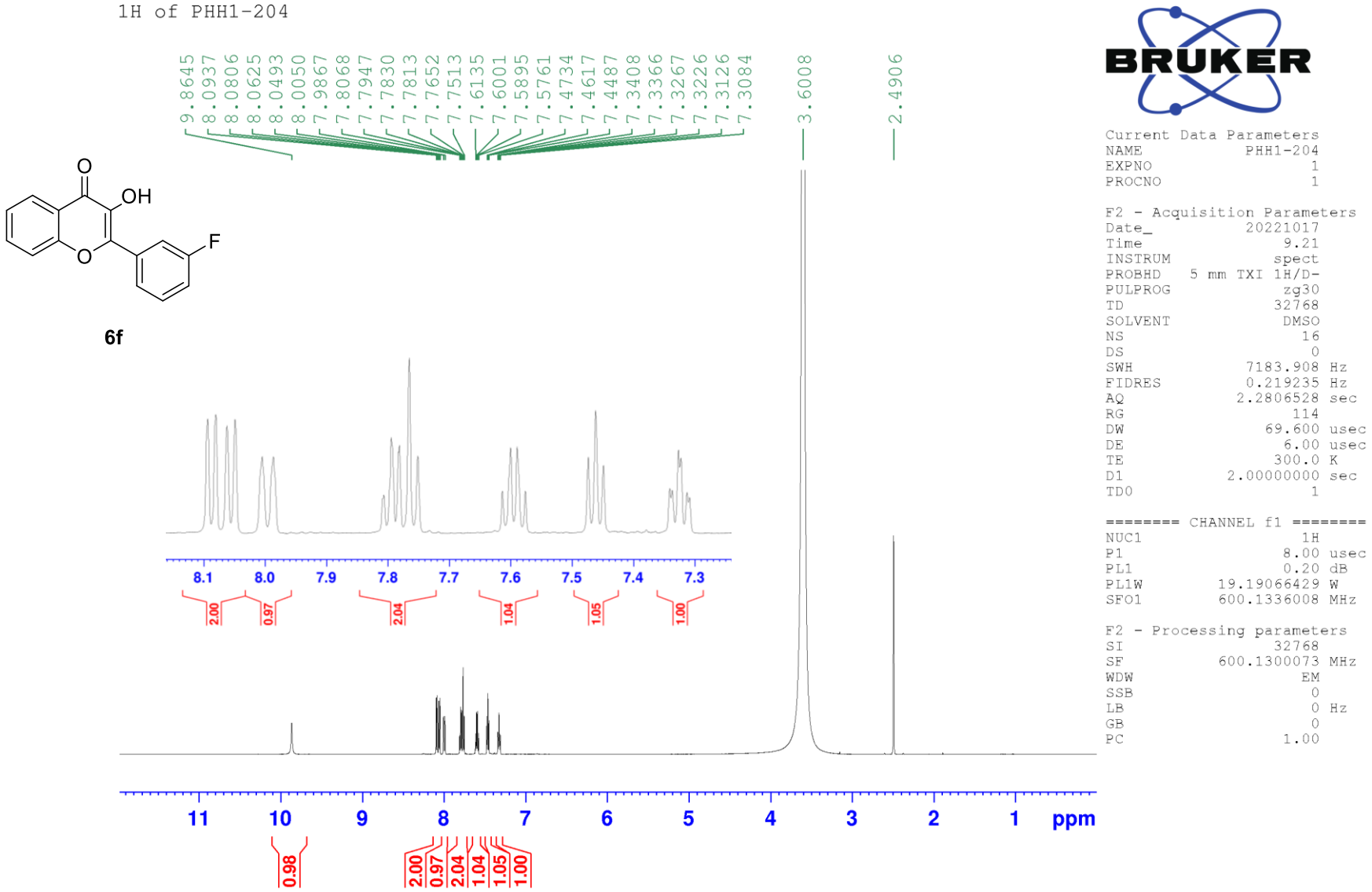


Figure S10. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **6e**.

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TD                      32768
SOLVENT                  DMSO
NS                         16
DS                          0
SWH                  7183.908 Hz
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AQ                  2.2806528 sec
RG                        114
DW                     69.600 usec
DE                      6.00 usec
TE                     300.0 K
D1                  2.00000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                       8.00 usec
PL1                      0.20 dB
PL1W              19.19066429 W
SFO1              600.1336008 MHz

F2 - Processing parameters
SI                       32768
SF                600.1300073 MHz
WDW                         EM
SSB                          0
LB                           0 Hz
GB                           0
PC                        1.00
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Figure S11. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **6f**.

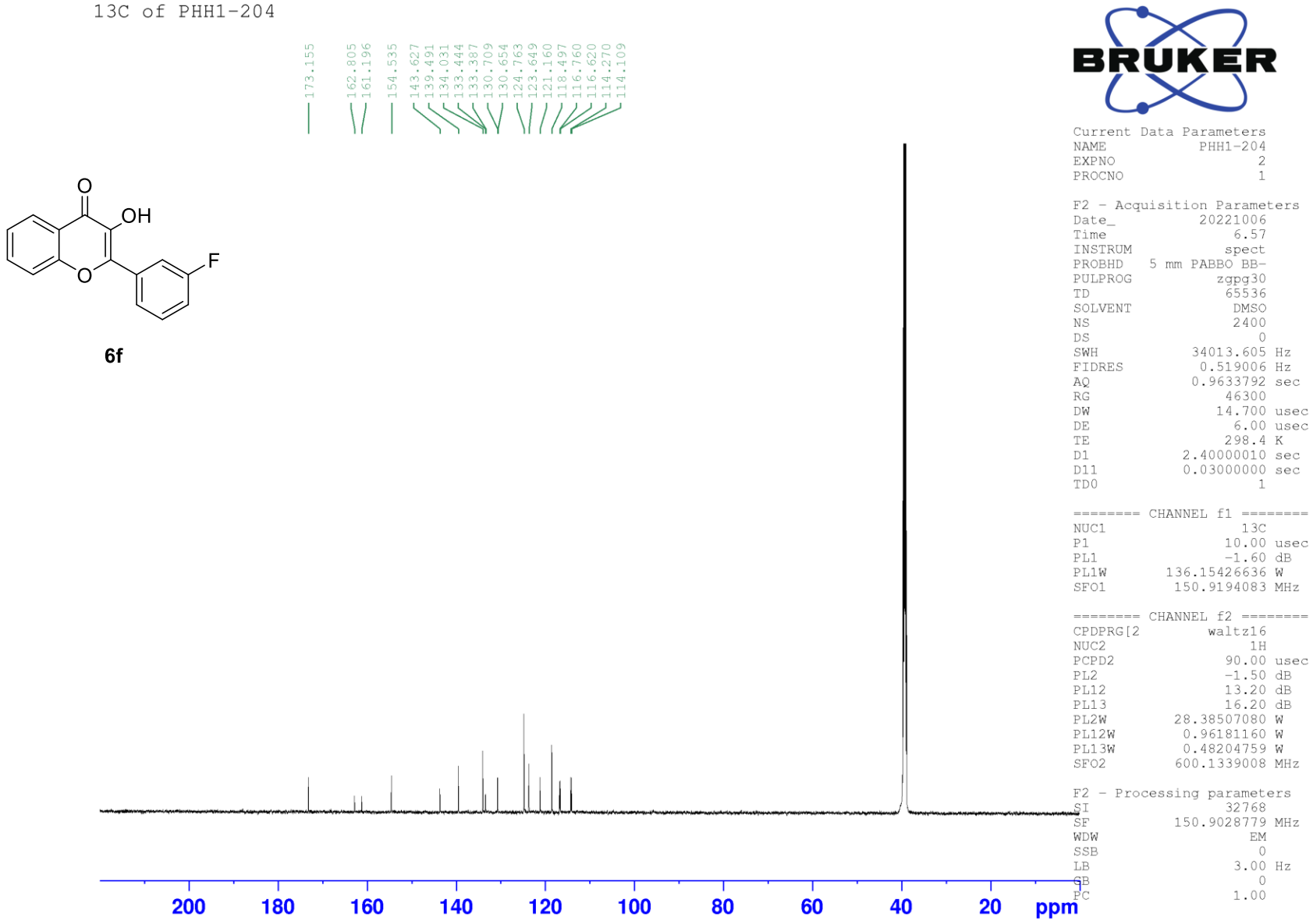


Figure S12. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **6f**.

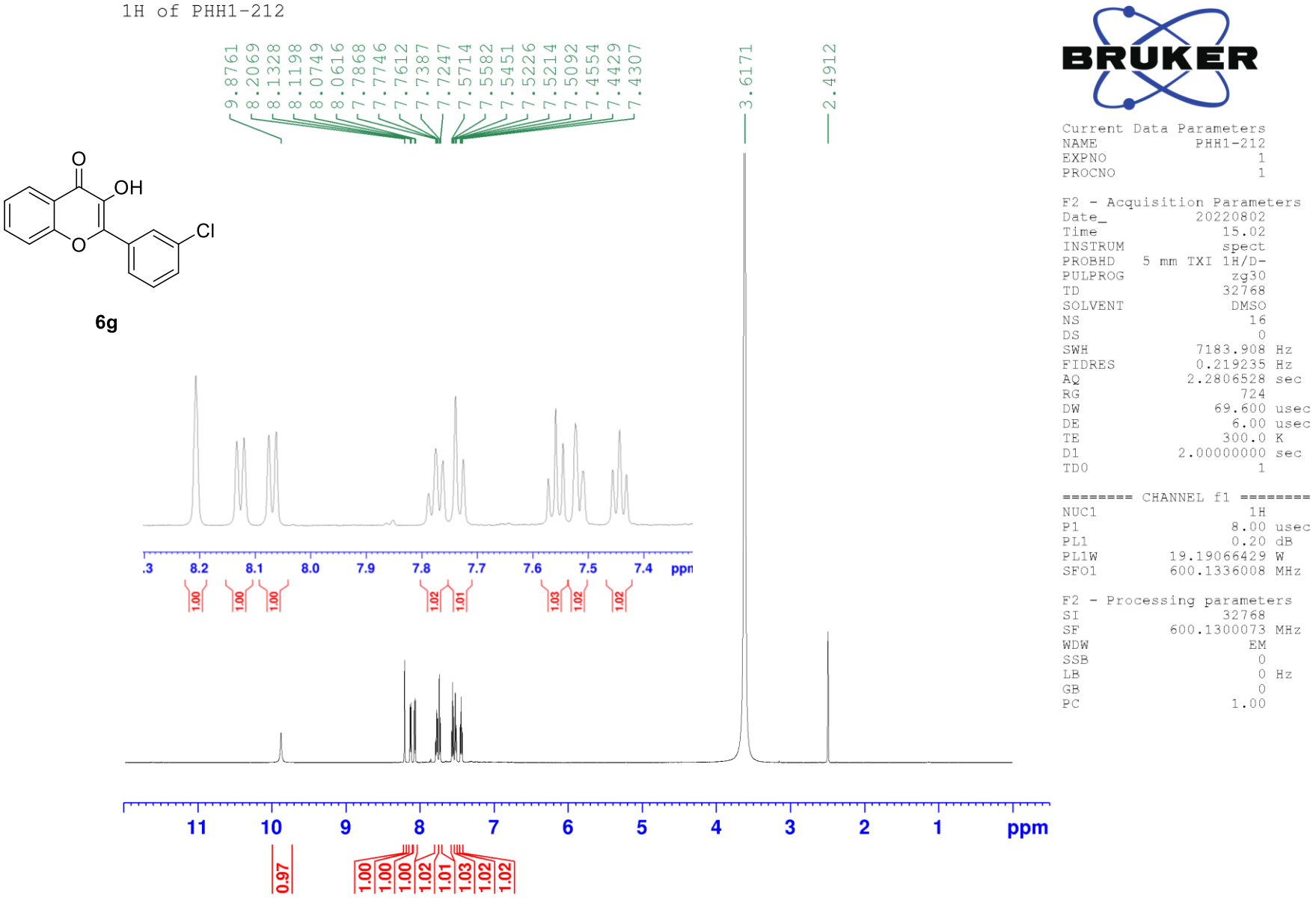


Figure S13. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **6g**.

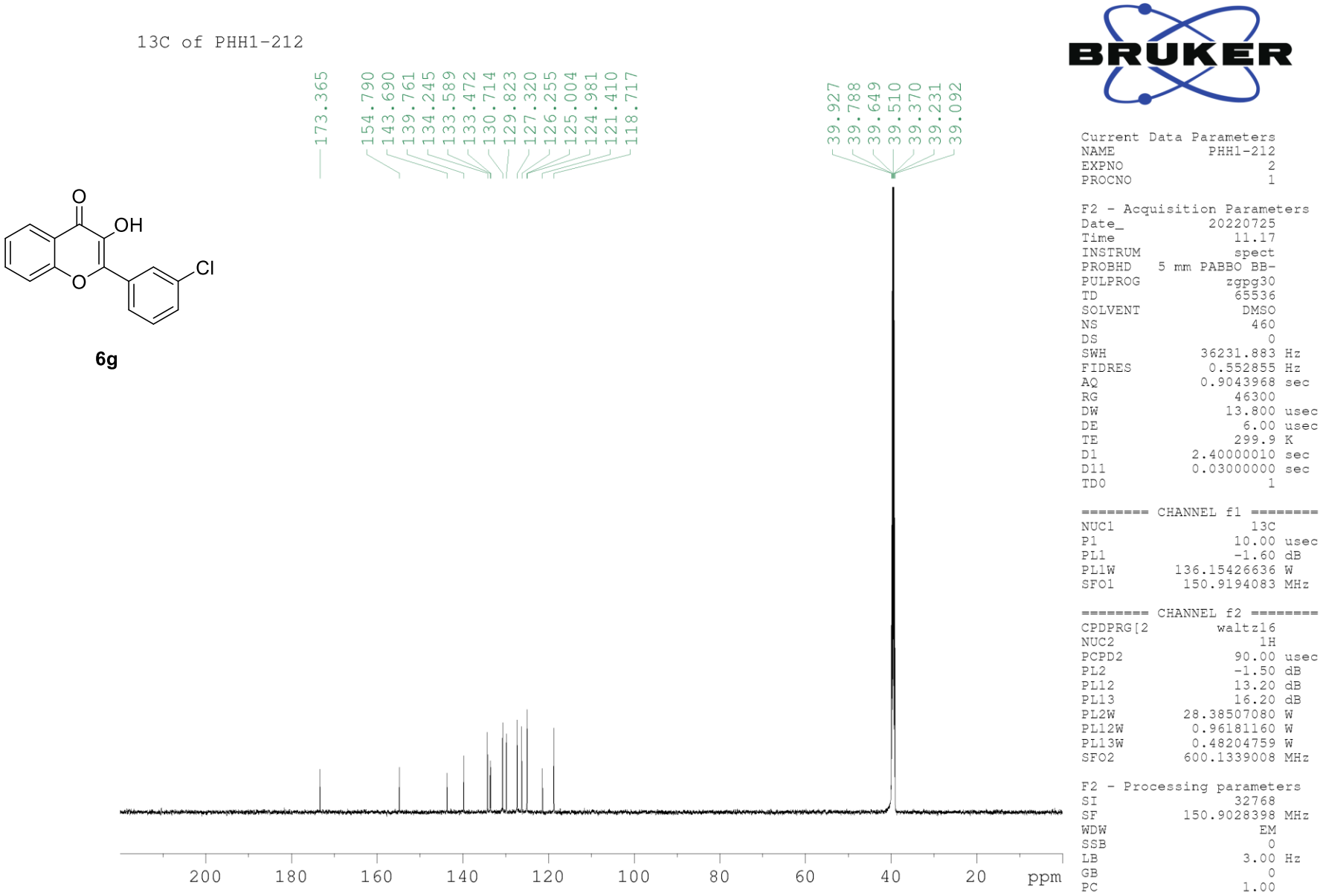


Figure S14. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **6g**.

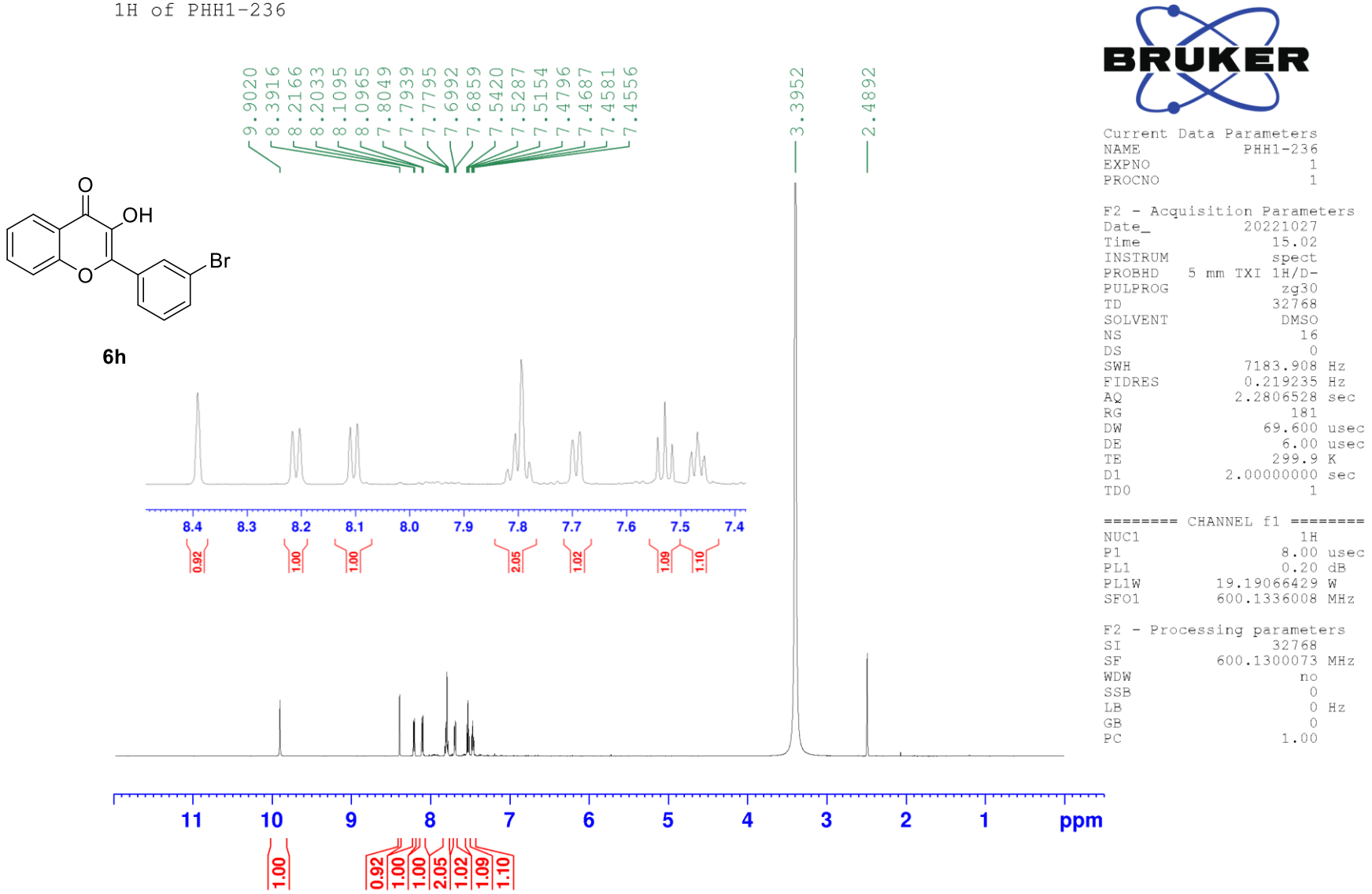


Figure S15. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **6h**.

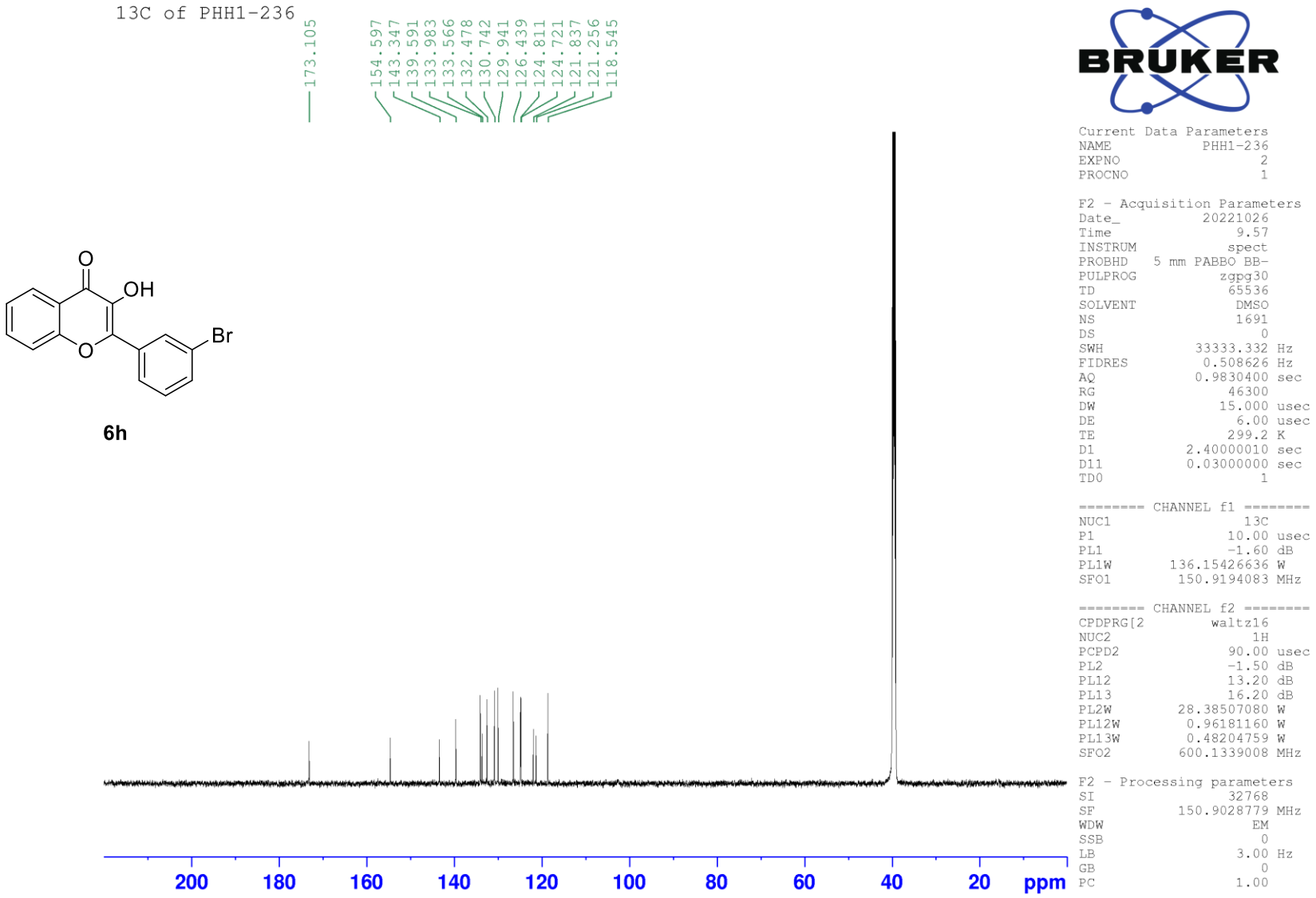
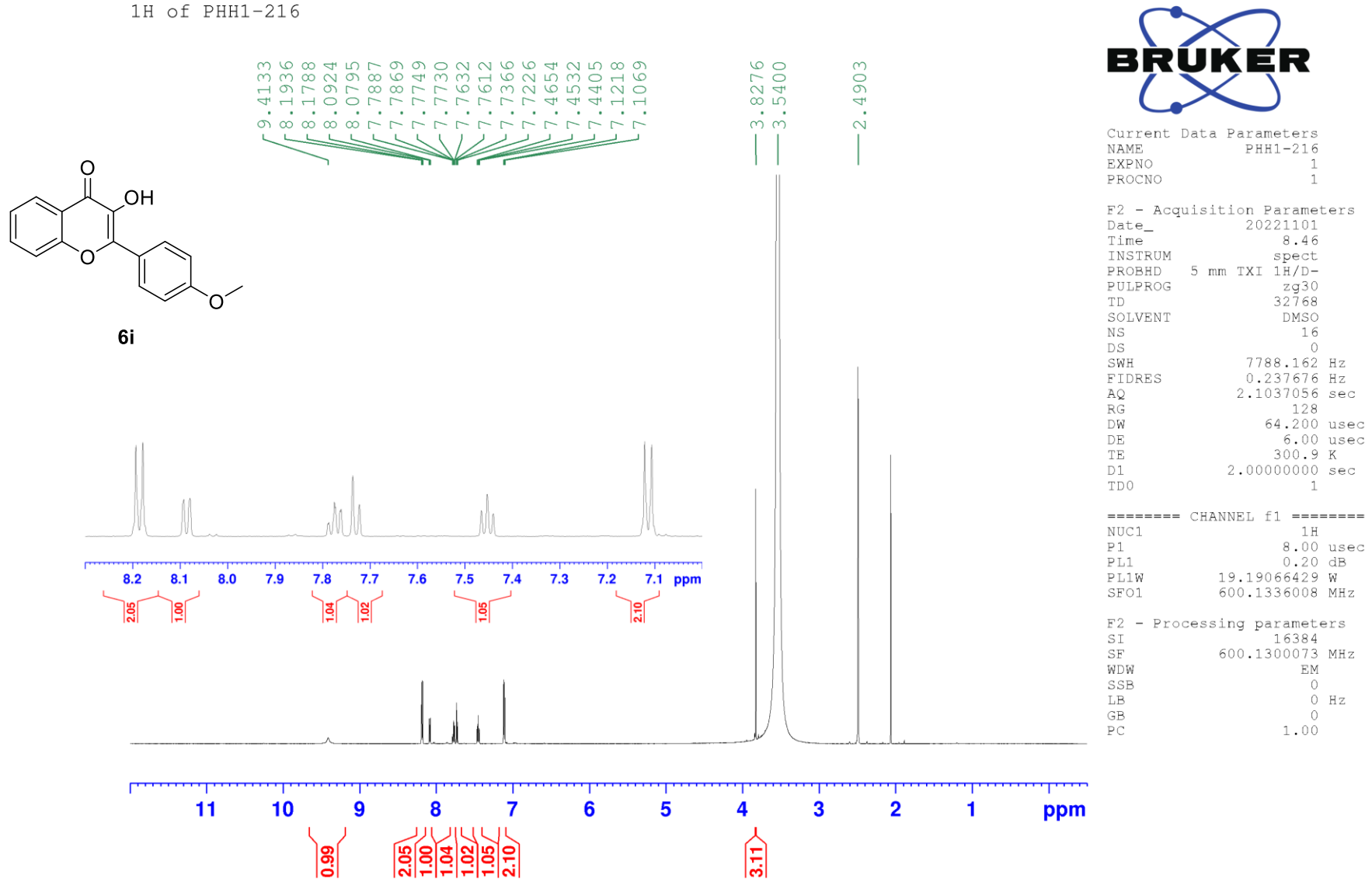


Figure S16. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **6h**.

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TD                      32768
SOLVENT                  DMSO
NS                         16
DS                          0
SWH                  7788.162 Hz
FIDRES              0.237676 Hz
AQ                  2.1037056 sec
RG                        128
DW                     64.200 usec
DE                      6.00 usec
TE                     300.9 K
D1                  2.00000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                       8.00 usec
PL1                      0.20 dB
PL1W               19.19066429 W
SFO1               600.1336008 MHz

F2 - Processing parameters
SI                       16384
SF                 600.1300073 MHz
WDW                         EM
SSB                          0
LB                           0 Hz
GB                           0
PC                        1.00
```

Figure S17. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **6i**.

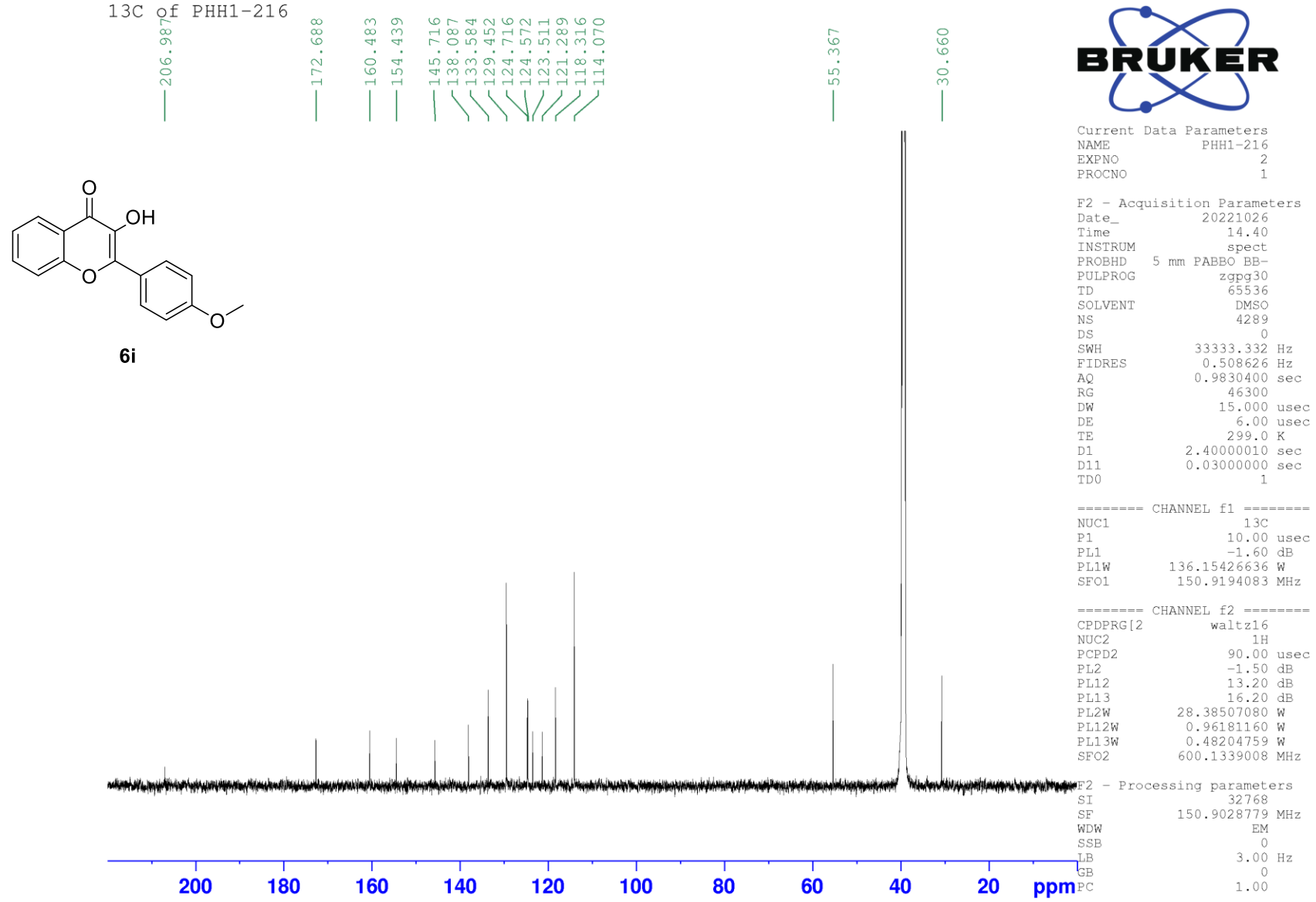
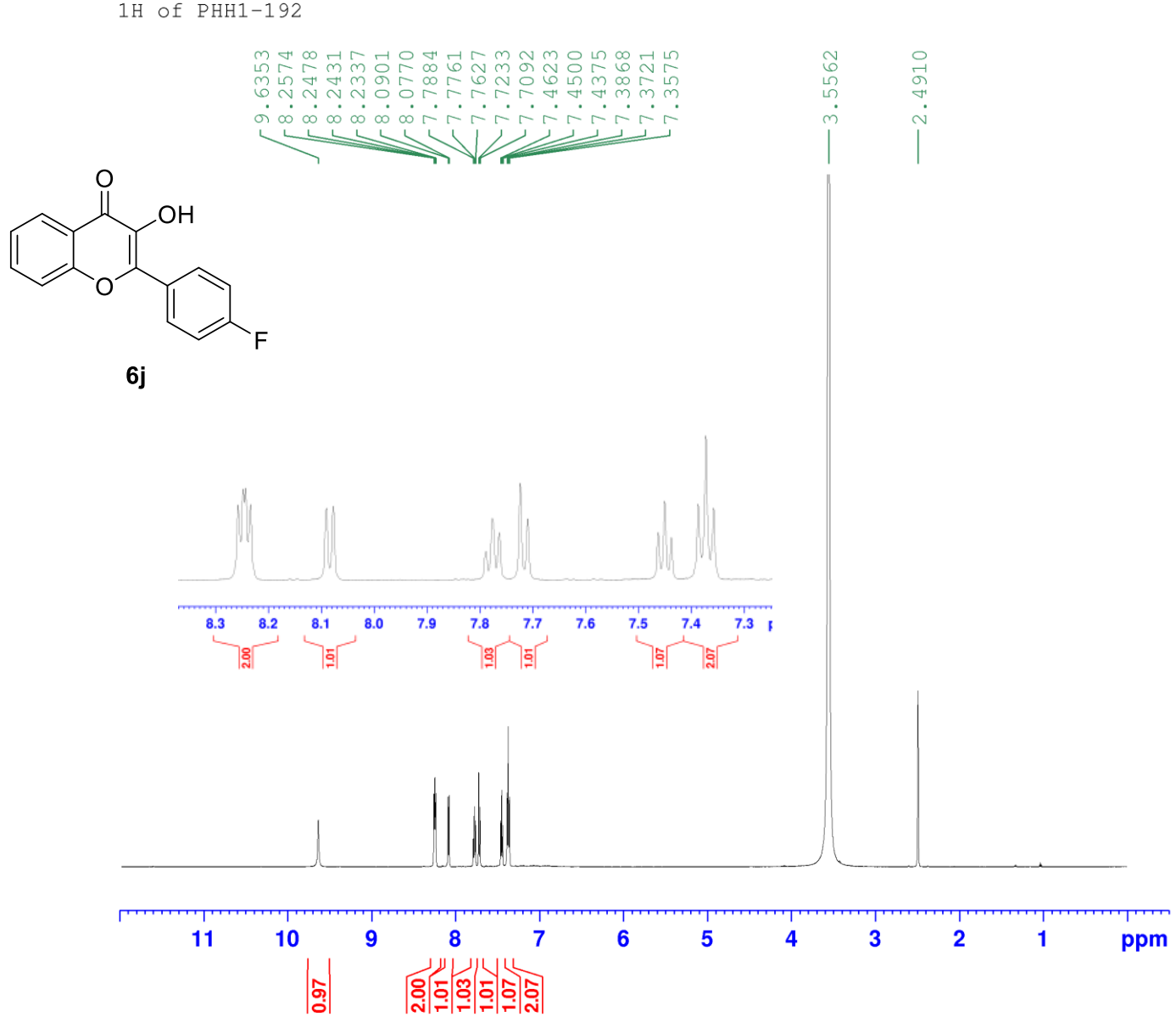


Figure S18. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **6i**.

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TD                     32768
SOLVENT                 DMSO
NS                        16
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SWH                 7183.908 Hz
FIDRES              0.219235 Hz
AQ                  2.2806528 sec
RG                       724
DW                    69.600 usec
DE                     6.00 usec
TE                     302.2 K
D1                  2.00000000 sec
TD0                         1

======== CHANNEL f1 ========
NUC1                       1H
P1                      8.00 usec
PL1                     0.20 dB
PL1W             19.19066429 W
SFO1             600.1336008 MHz

F2 - Processing parameters
SI                         32768
SF               600.1300073 MHz
WDW                           no
SSB                            0
LB                             0 Hz
GB                             0
PC                          1.00
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Figure S19. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **6j**.

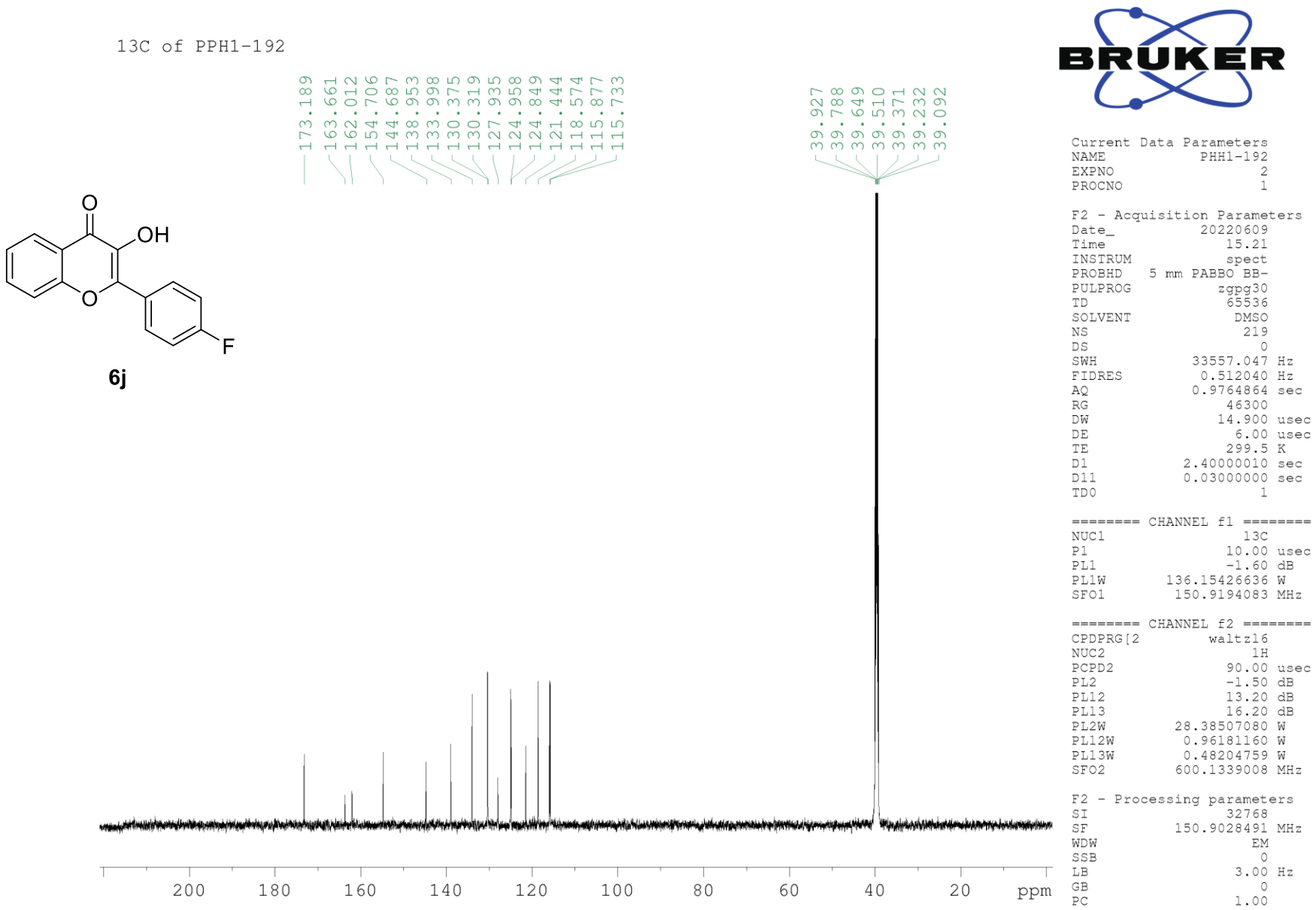
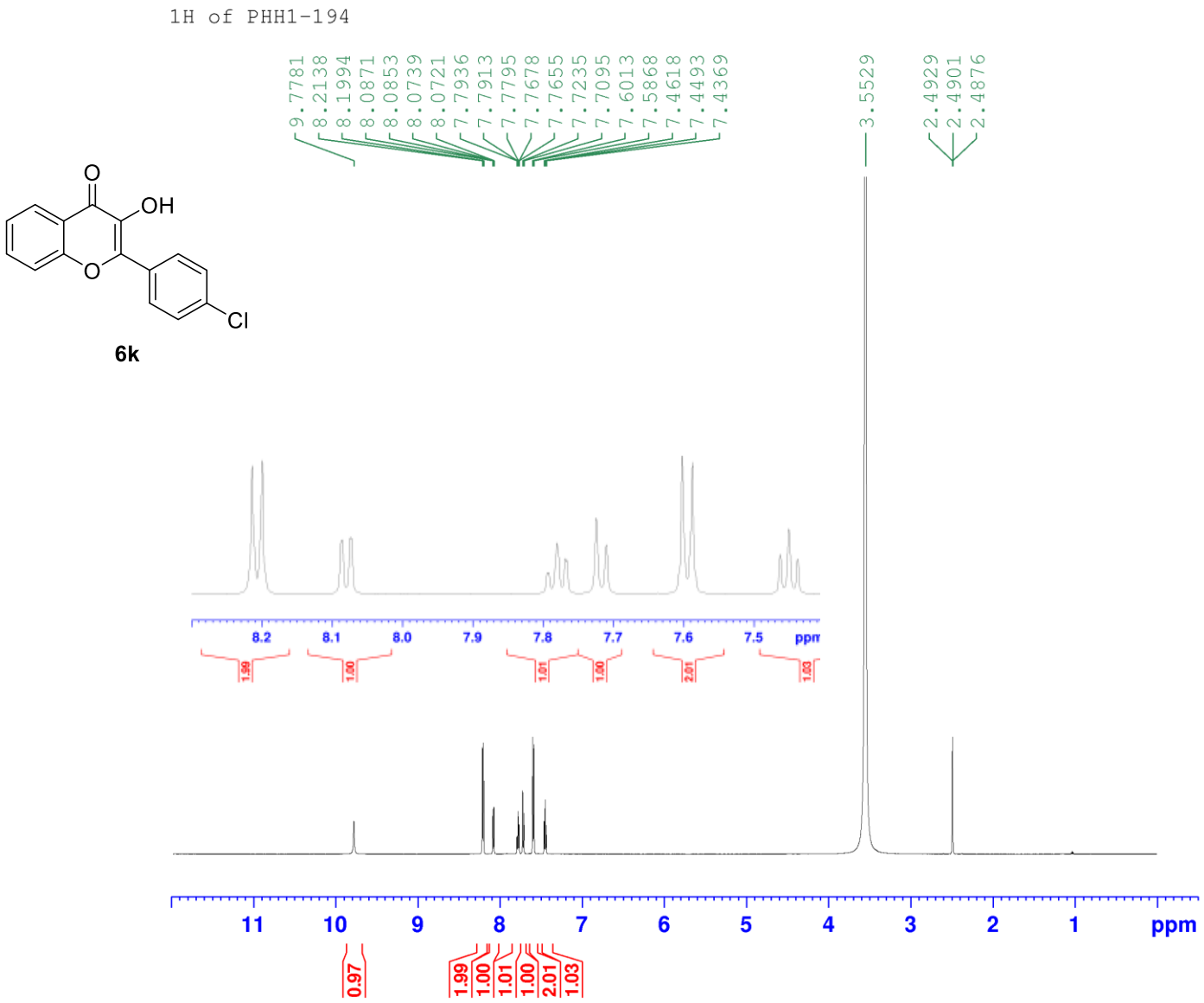


Figure S20. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **6j**.

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TD                     32768
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FIDRES              0.219235 Hz
AQ                2.2806528 sec
RG                       161
DW                    69.600 usec
DE                     6.00 usec
TE                    300.2 K
D1                2.00000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                       8.00 usec
PL1                      0.20 dB
PL1W             19.19066429 W
SFO1             600.1336008 MHz

F2 - Processing parameters
SI                         32768
SF               600.1300073 MHz
WDW                          EM
SSB                          0
LB                           0 Hz
GB                           0
PC                        1.00
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Figure S21. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **6k**.

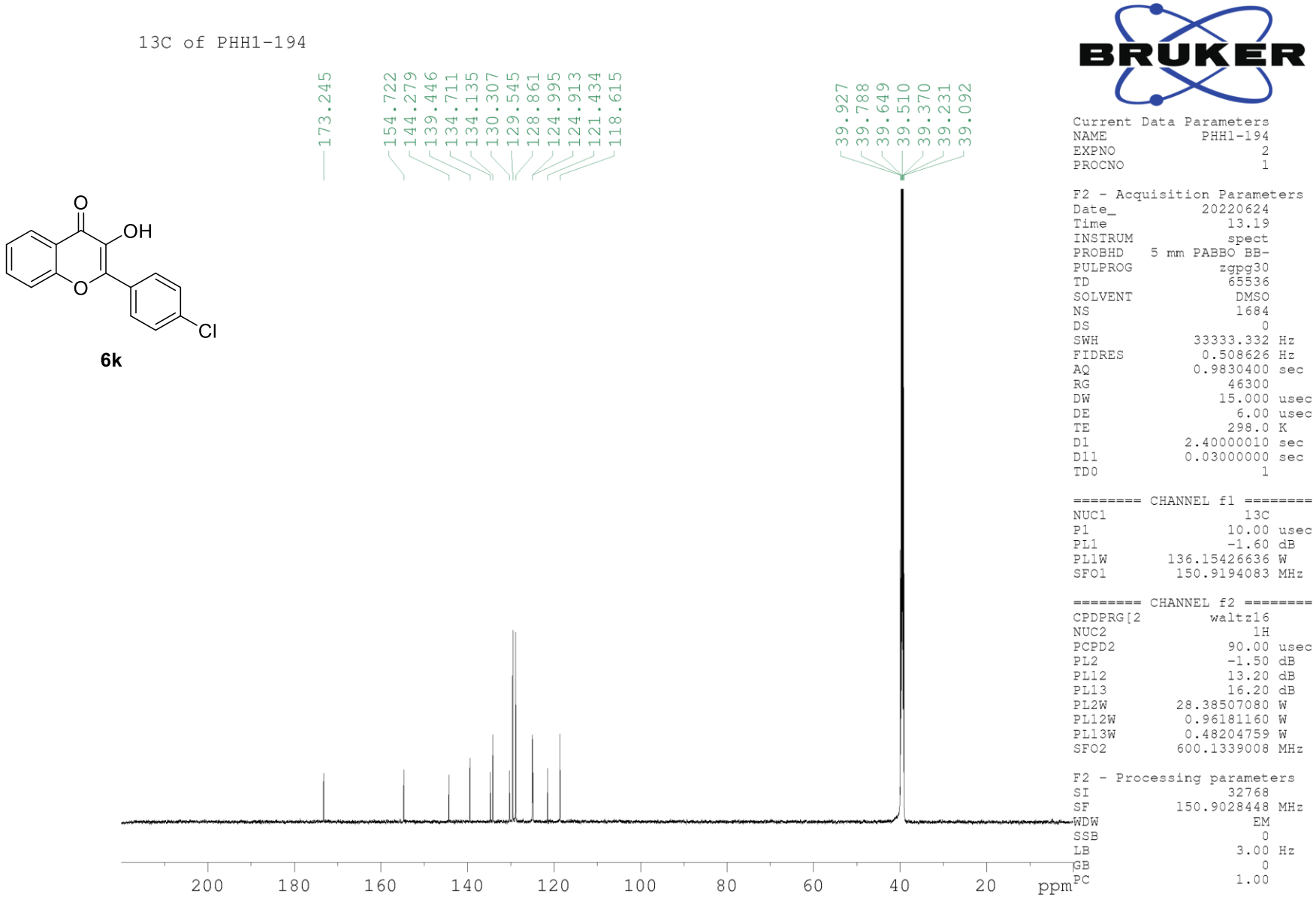
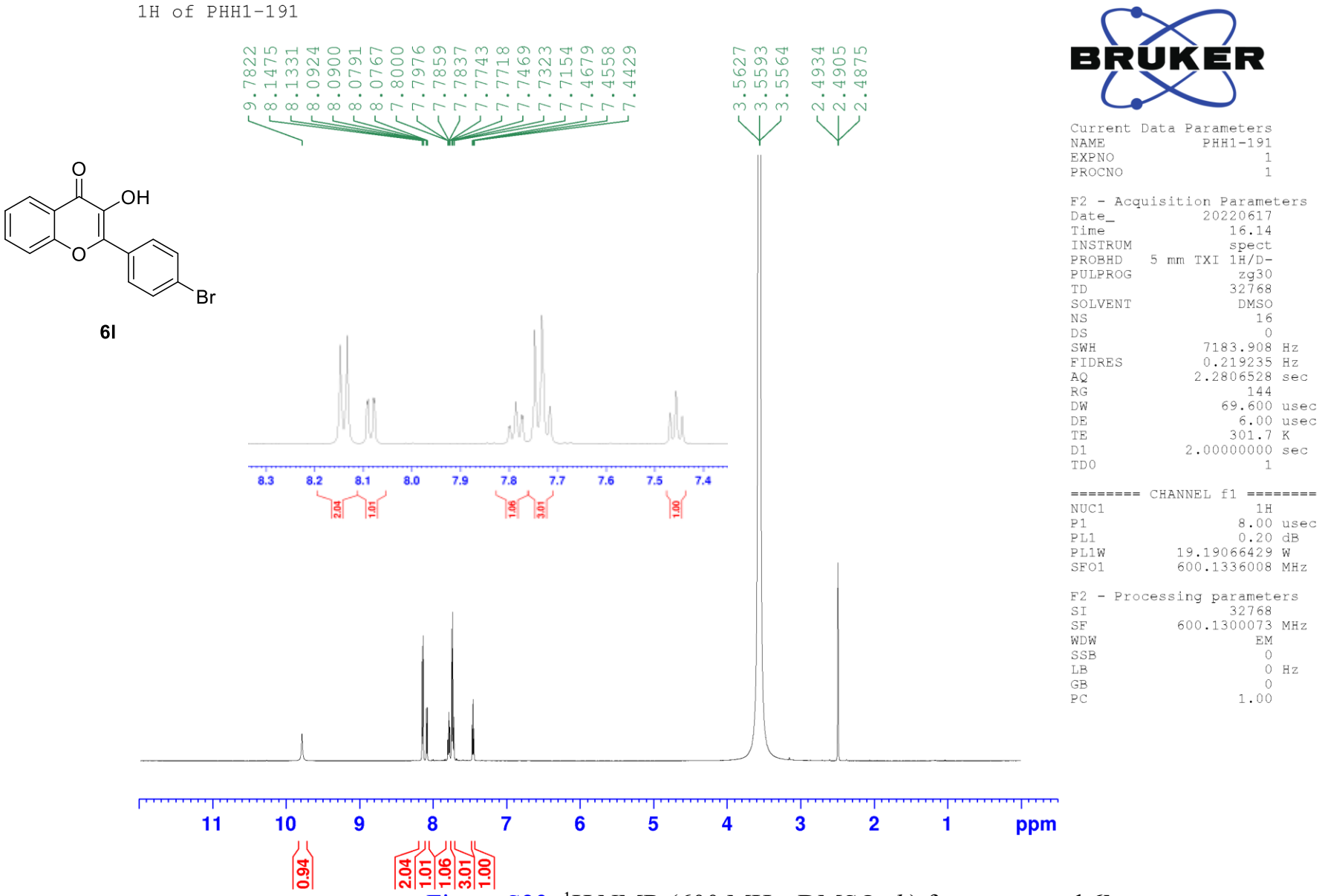


Figure S22. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **6k**.



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PROCNO 1

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PULPROG zg30
TD 32768
SOLVENT DMSO
NS 16
DS 0
SWH 7183.908 Hz
FIDRES 0.219235 Hz
AQ 2.2806528 sec
RG 144
DW 69.600 usec
DE 6.00 usec
TE 301.7 K
D1 2.00000000 sec
TD0 1

======== CHANNEL f1 ========
NUC1 1H
P1 8.00 usec
PL1 0.20 dB
PL1W 19.19066429 W
SFO1 600.1336008 MHz

F2 - Processing parameters
SI 32768
SF 600.1300073 MHz
WDW EM
SSB 0
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GB 0
PC 1.00

Figure S23. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **6l**.

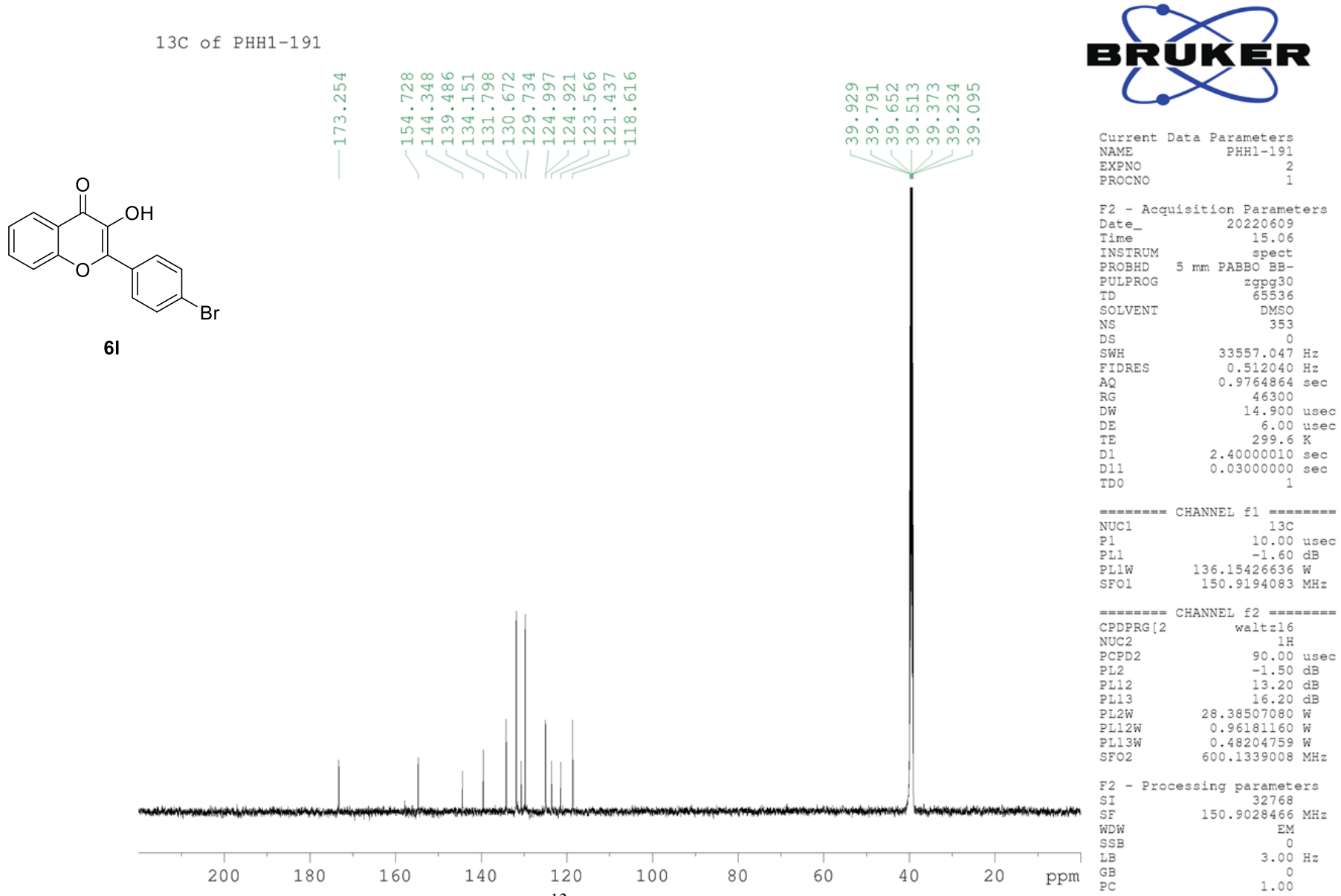
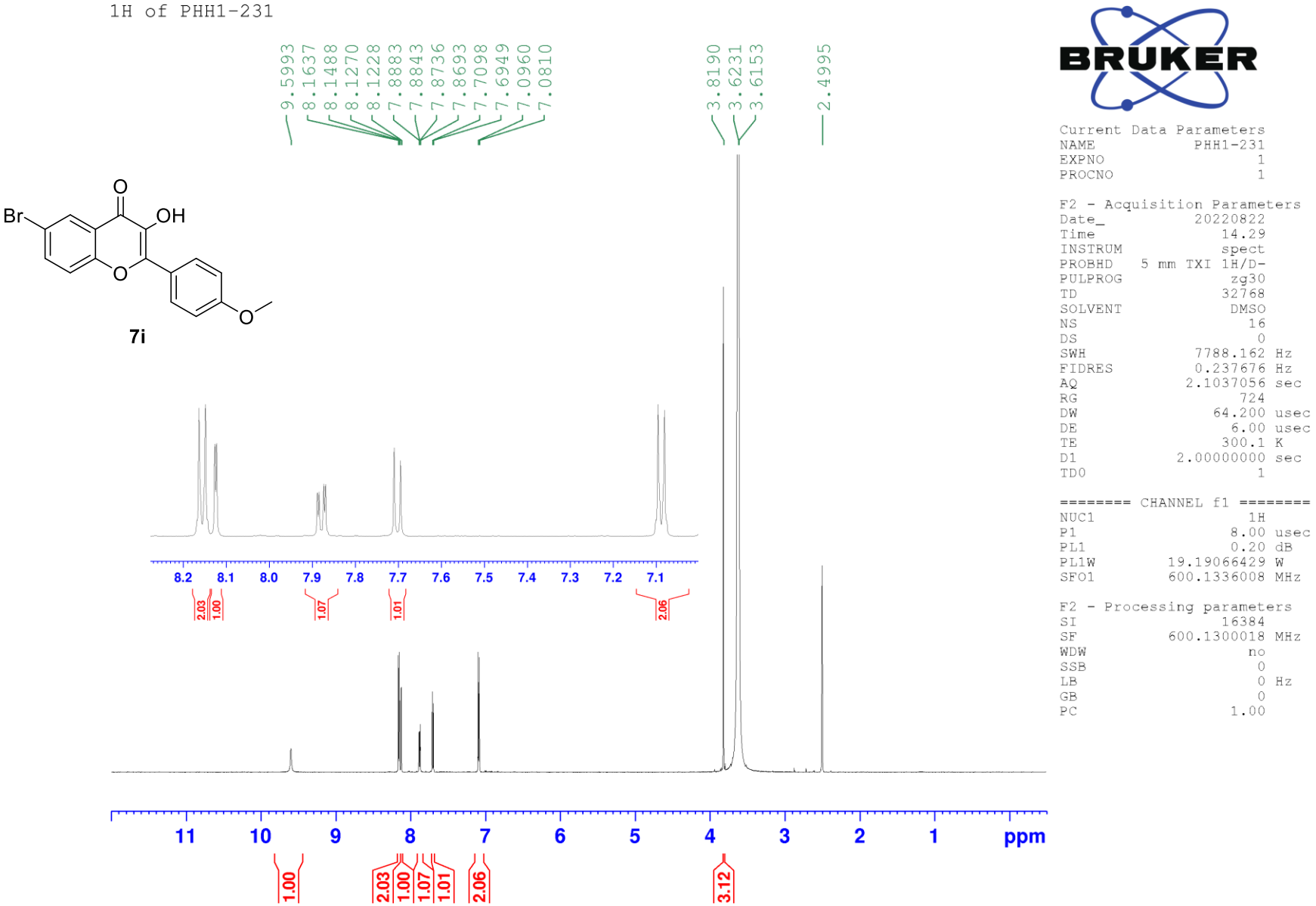


Figure S24. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **6l**.

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PULPROG                  zg30
TD                      32768
SOLVENT                  DMSO
NS                         16
DS                          0
SWH                  7788.162 Hz
FIDRES              0.237676 Hz
AQ                 2.1037056 sec
RG                         724
DW                    64.200 usec
DE                     6.00 usec
TE                     300.1 K
D1                 2.00000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                       8.00 usec
PL1                      0.20 dB
PL1W            19.19066429 W
SFO1            600.1336008 MHz

F2 - Processing parameters
SI                       16384
SF              600.1300018 MHz
WDW                         no
SSB                          0
LB                           0 Hz
GB                           0
PC                        1.00
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Figure S25. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **7i**.

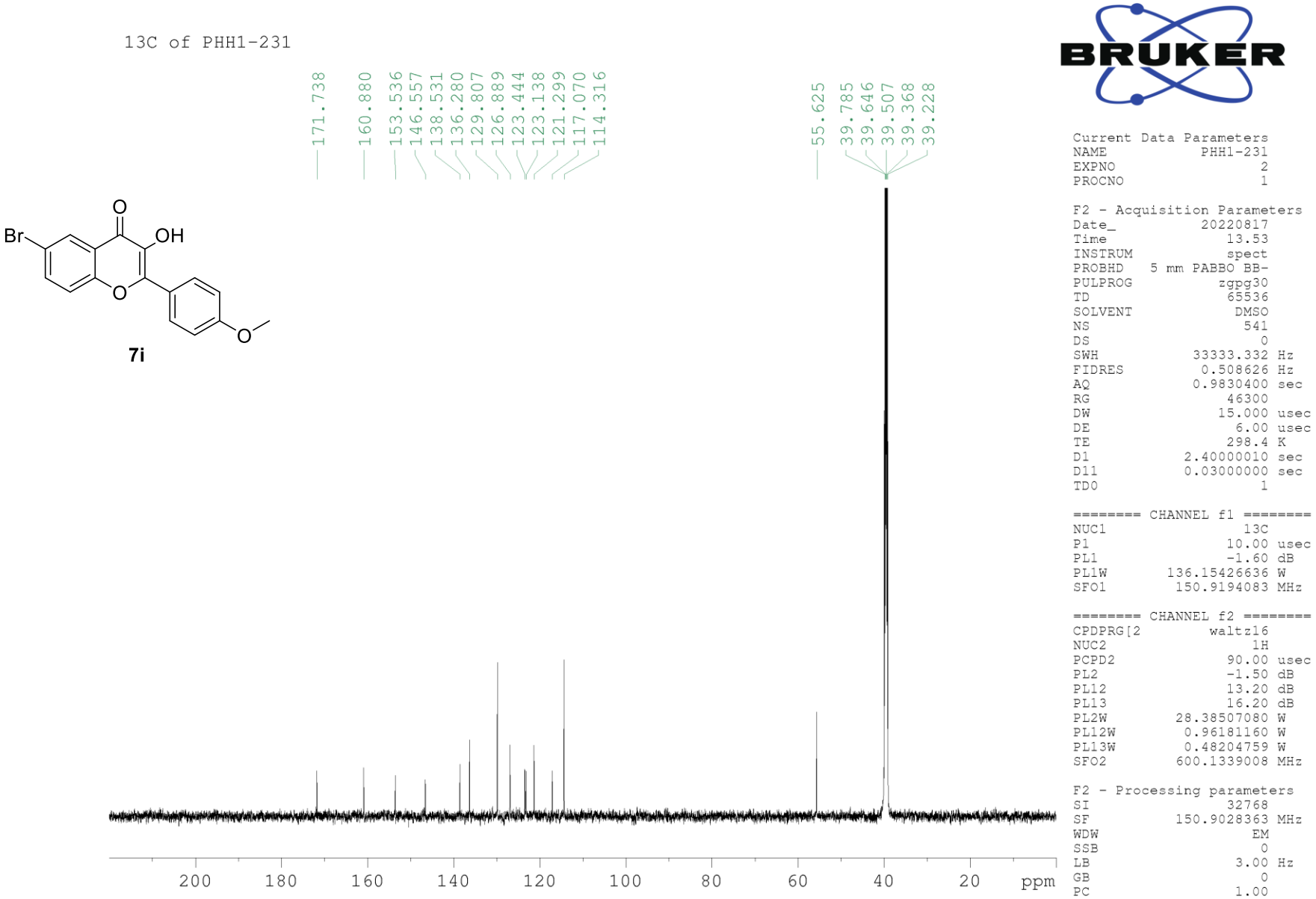
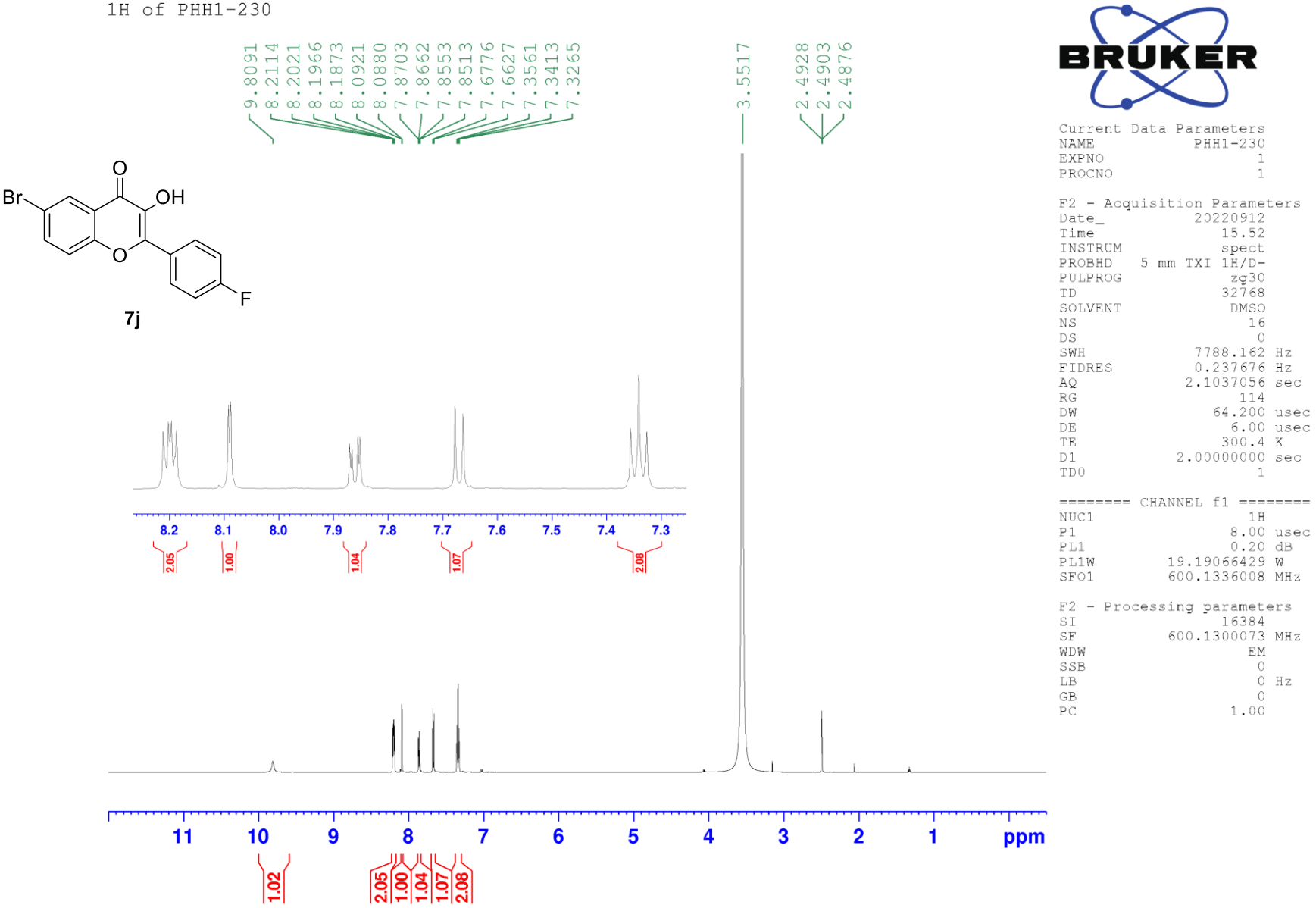


Figure S26. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **7i**.

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TD                      32768
SOLVENT                  DMSO
NS                         16
DS                          0
SWH                  7788.162 Hz
FIDRES              0.237676 Hz
AQ                  2.1037056 sec
RG                         114
DW                     64.200 usec
DE                      6.00 usec
TE                      300.4 K
D1                 2.00000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                       8.00 usec
PL1                      0.20 dB
PL1W            19.19066429 W
SFO1            600.1336008 MHz

F2 - Processing parameters
SI                       16384
SF              600.1300073 MHz
WDW                         EM
SSB                          0
LB                           0 Hz
GB                           0
PC                        1.00
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Figure S27. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **7j**.

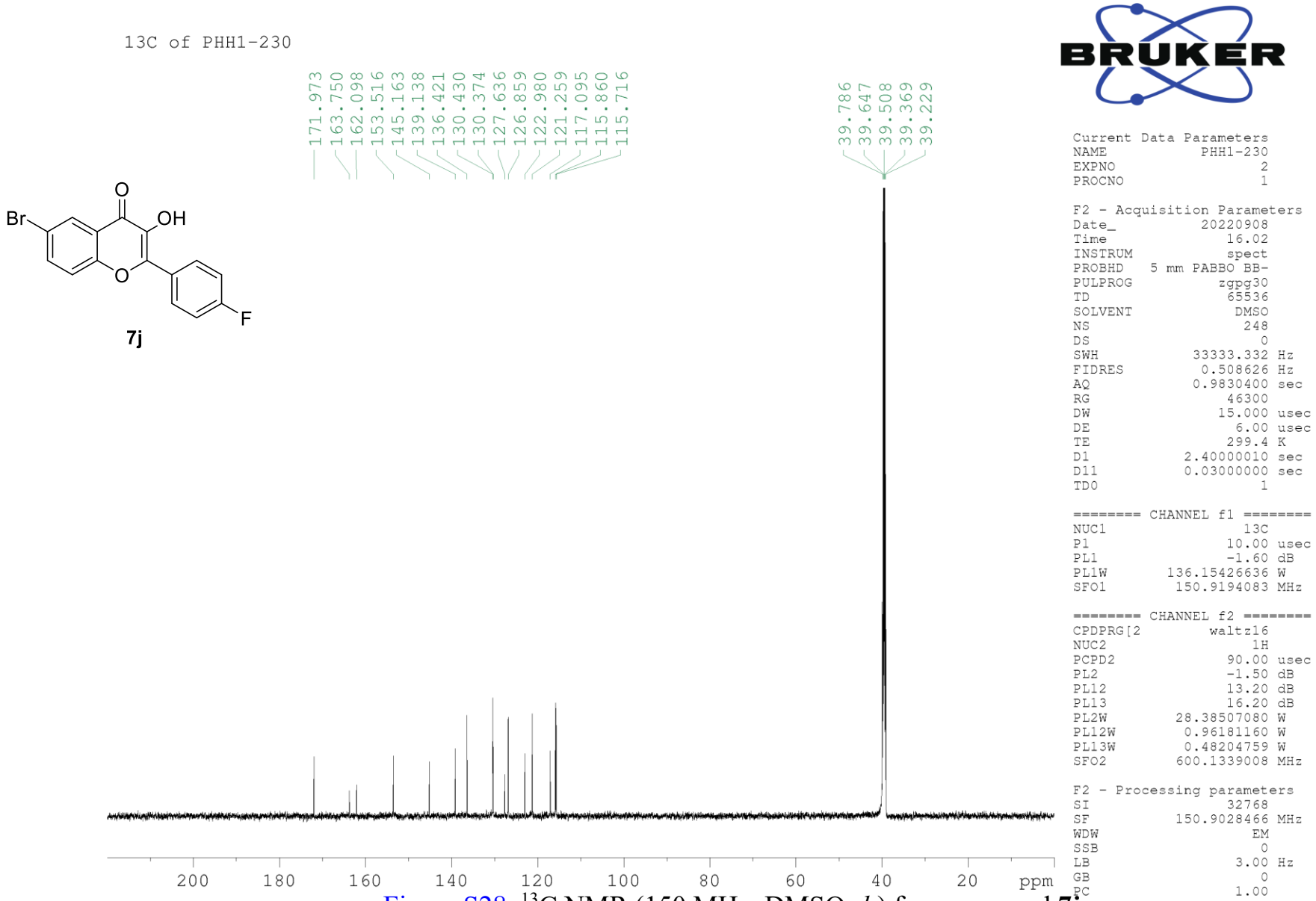


Figure S28. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **7j**.

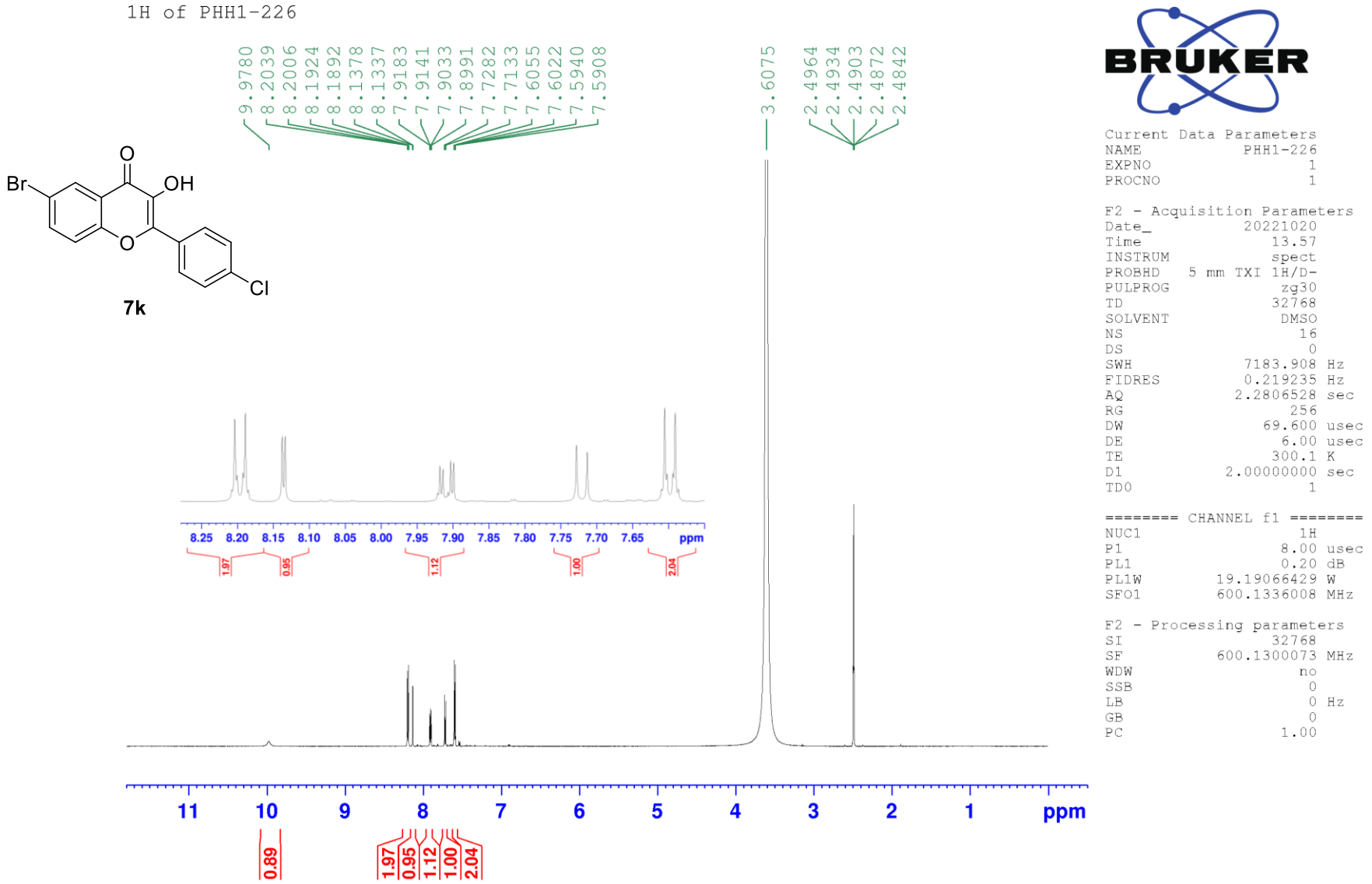


Figure S29. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **7k**.

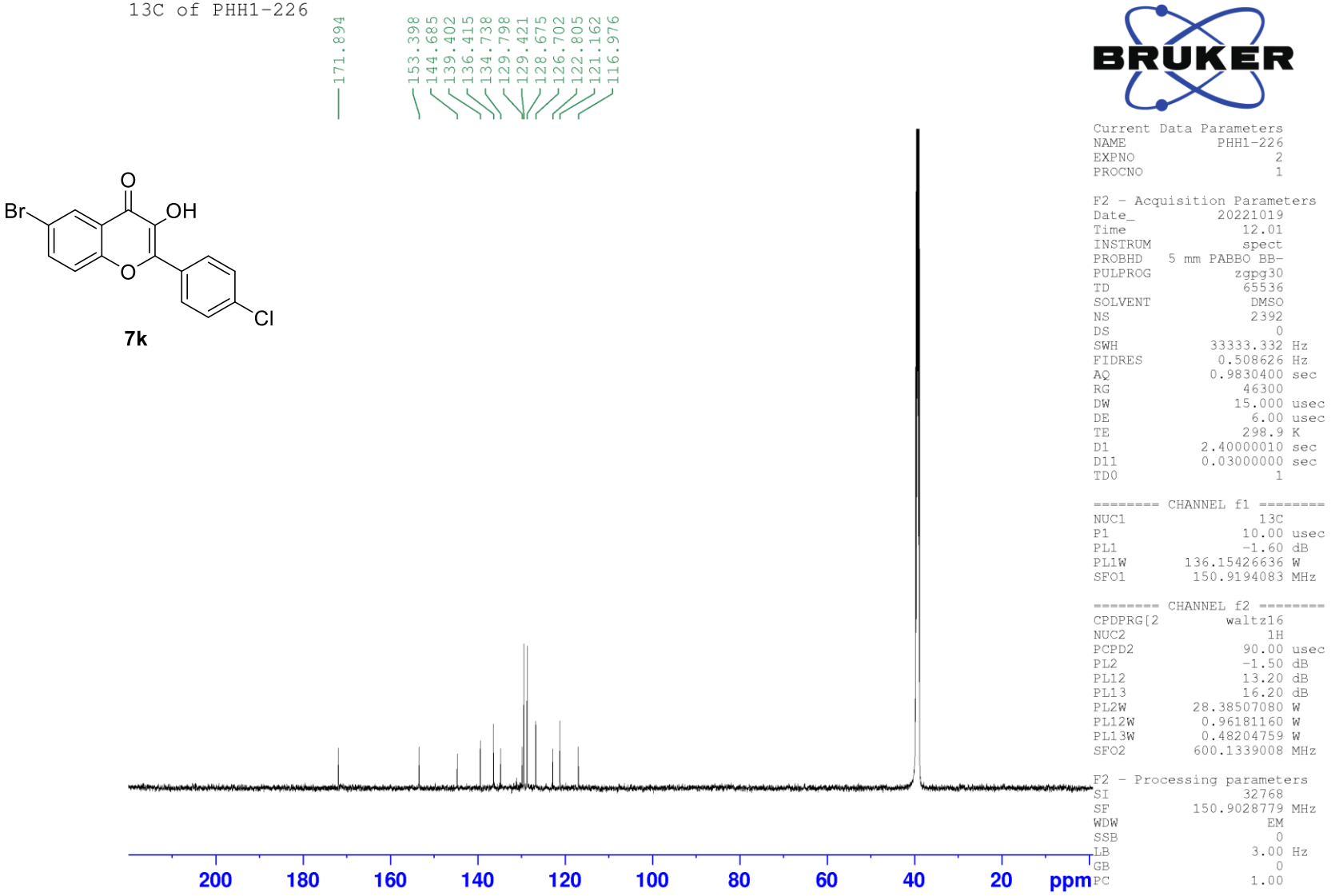
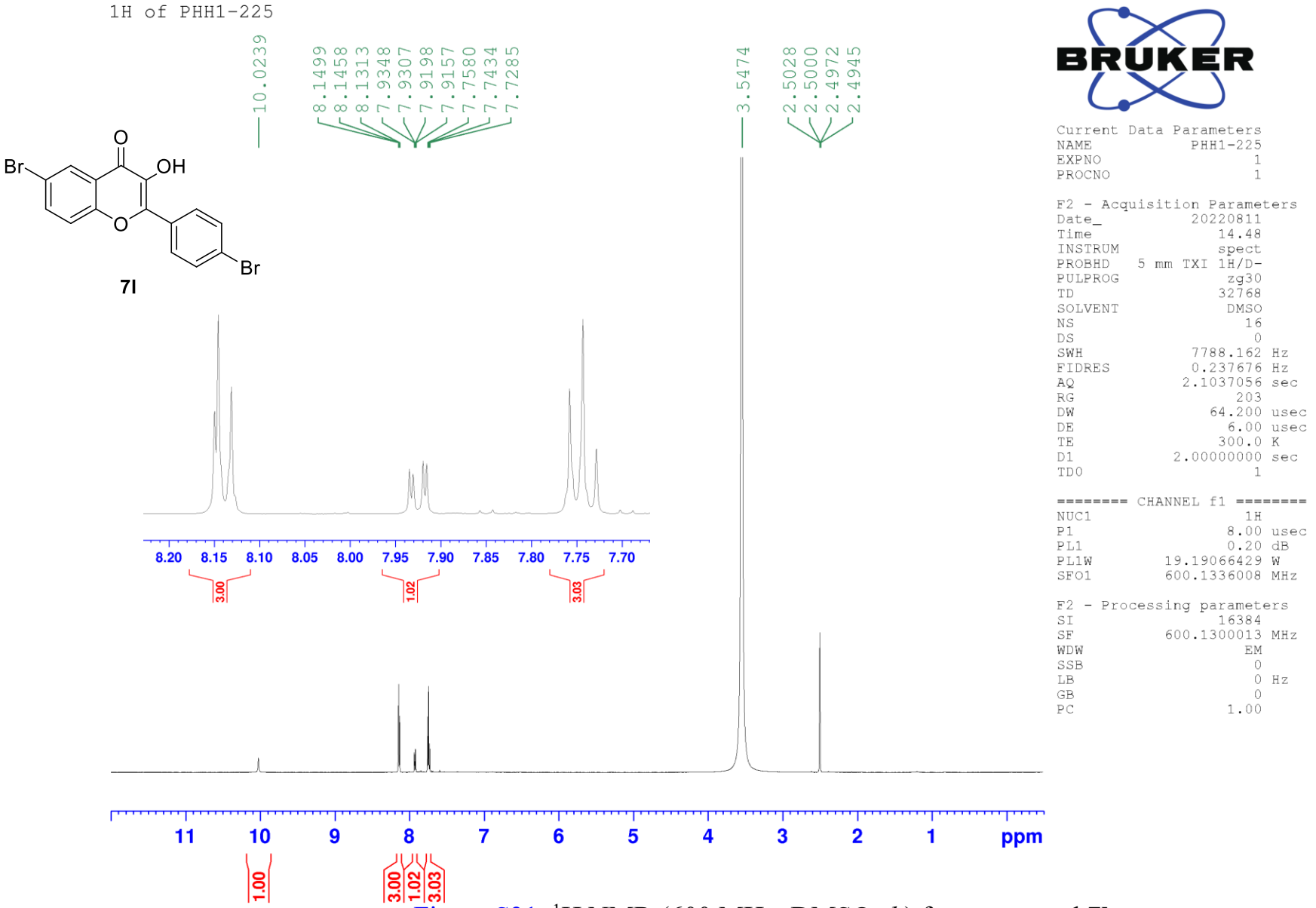


Figure S30. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **7k**.

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Current Data Parameters
NAME                  PHH1-225
EXPNO                        1
PROCNO                       1

F2 - Acquisition Parameters
Date_                 20220811
Time                     14.48
INSTRUM                  spect
PROBHD    5 mm TXI 1H/D-
PULPROG                  zg30
TD                      32768
SOLVENT                  DMSO
NS                         16
DS                          0
SWH                  7788.162 Hz
FIDRES              0.237676 Hz
AQ                 2.1037056 sec
RG                        203
DW                     64.200 usec
DE                      6.00 usec
TE                     300.0 K
D1                 2.00000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                       8.00 usec
PL1                      0.20 dB
PL1W              19.19066429 W
SFO1              600.1336008 MHz

F2 - Processing parameters
SI                       16384
SF                600.1300013 MHz
WDW                         EM
SSB                          0
LB                           0 Hz
GB                           0
PC                        1.00
```

Figure S31. ^{1}H NMR (600 MHz, DMSO-d_6) for compound **7l**.

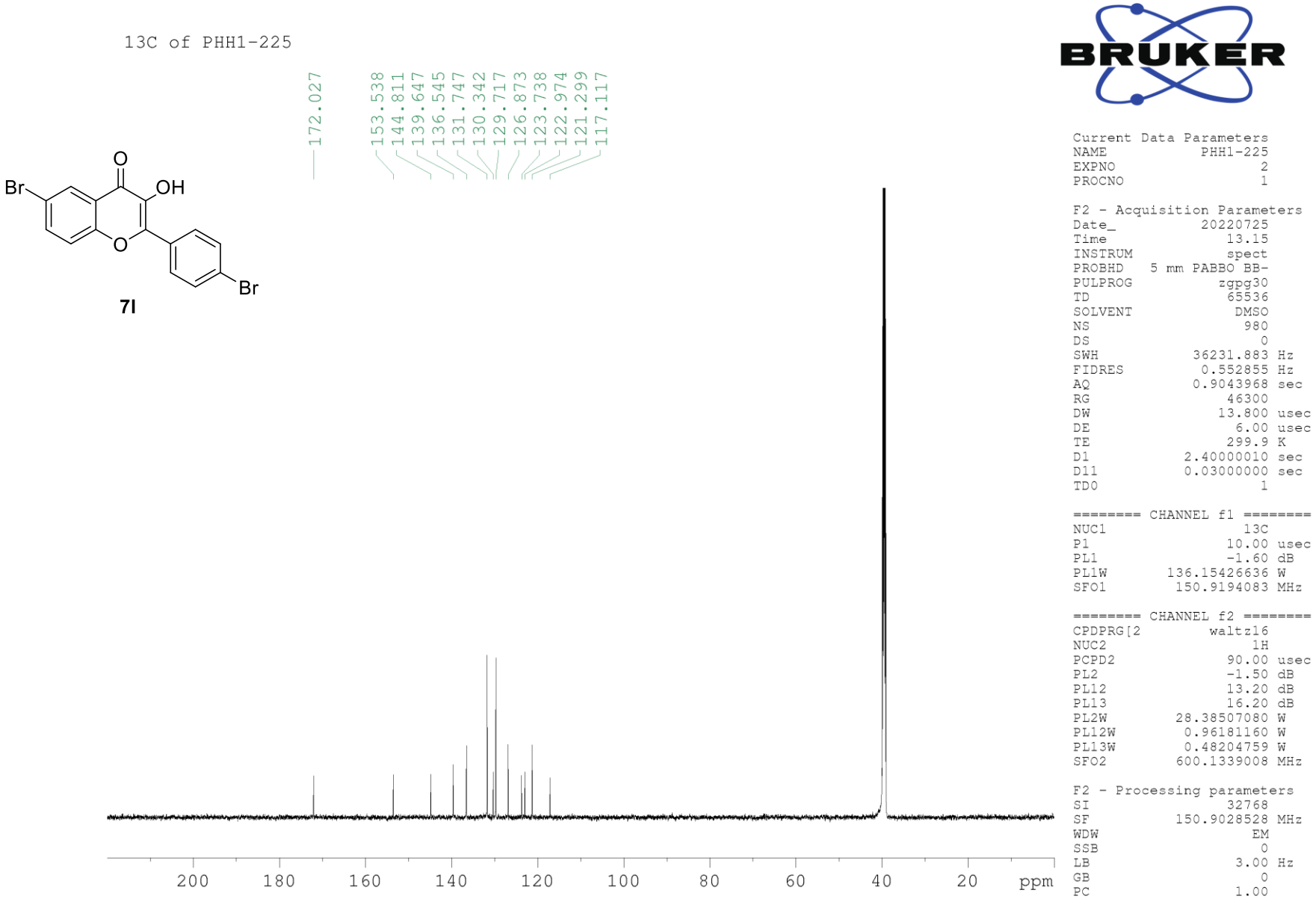

Figure S32. ^{13}C NMR (150 MHz, DMSO-d_6) for compound **7l**.