

Supporting Information

Green Design, Synthesis, and Molecular Docking Study of Novel Quinoxaline Derivatives with Insecticidal Potential against *Aphis Craccivora*

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Spectra data of Compounds

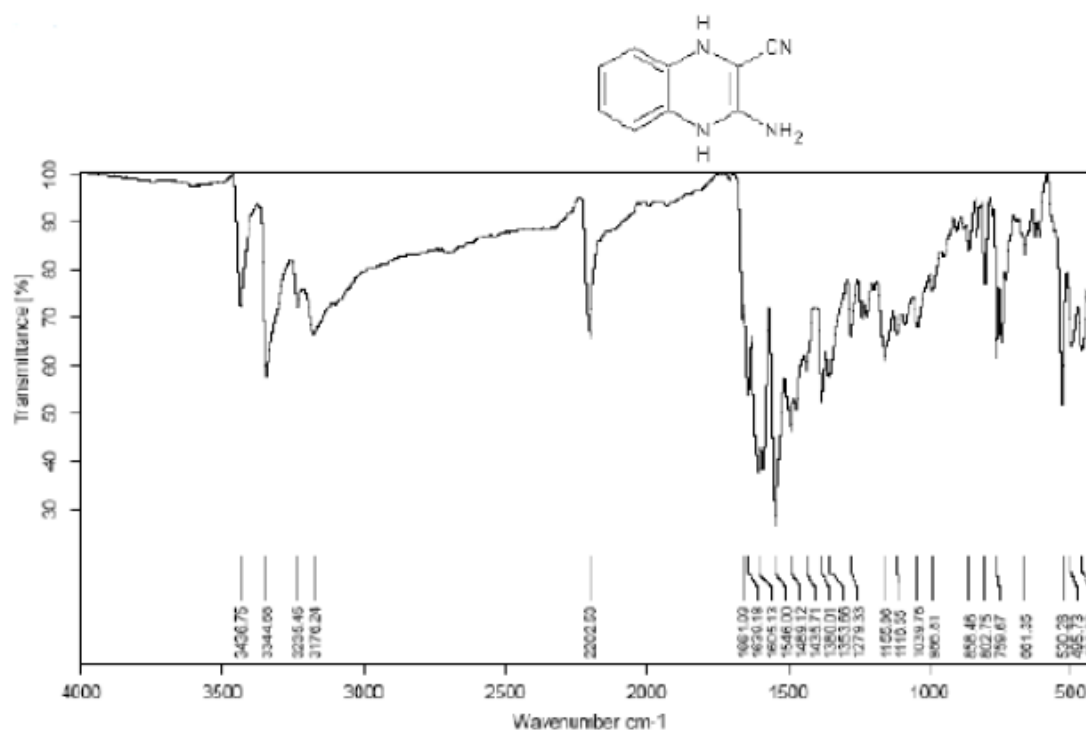


Figure S1: IR spectrum of compound 1.

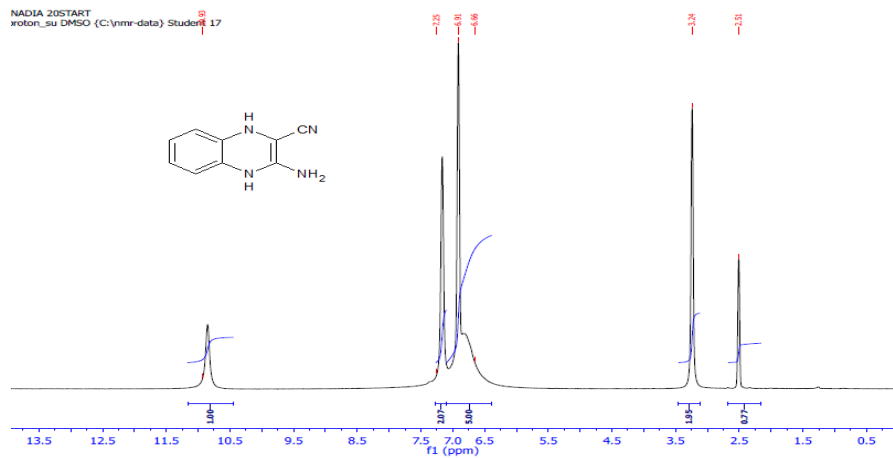
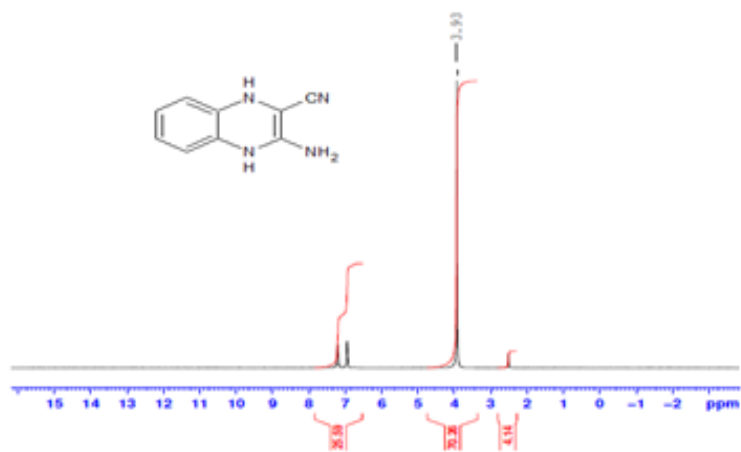


Figure S2: ^1H NMR spectrum for compound **1** in $\text{DMSO-}d_6$.

START
D2O
proton_su DMSO (C:\nmr-data) student 23



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PROCNO   1
F2 - Acquisition Parameters
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PCPDPRG  3 no phase flip
TO       400
SOLVENT  DMSO
NS       2
DS       4
SWH      8012.820 Hz
FIDRES   0.142424 Hz
AQ       4.0044442 sec
RG       170.04
WDW      EM
SSB      0
LB       0.30 Hz
GB       0
PC       1.0000000 Hz
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AQ       4.0044442 sec
RG       170.04
WDW      EM
SSB      0
LB       0.30 Hz
GB       0
PC       1.00
```

Figure S3: ^1H NMR spectrum (deuteration) for compound **1** in $\text{DMSO-}d_6$.

NADIA 20Th-P-B
c13_su DMSO (C:\nmr-data) Student 18

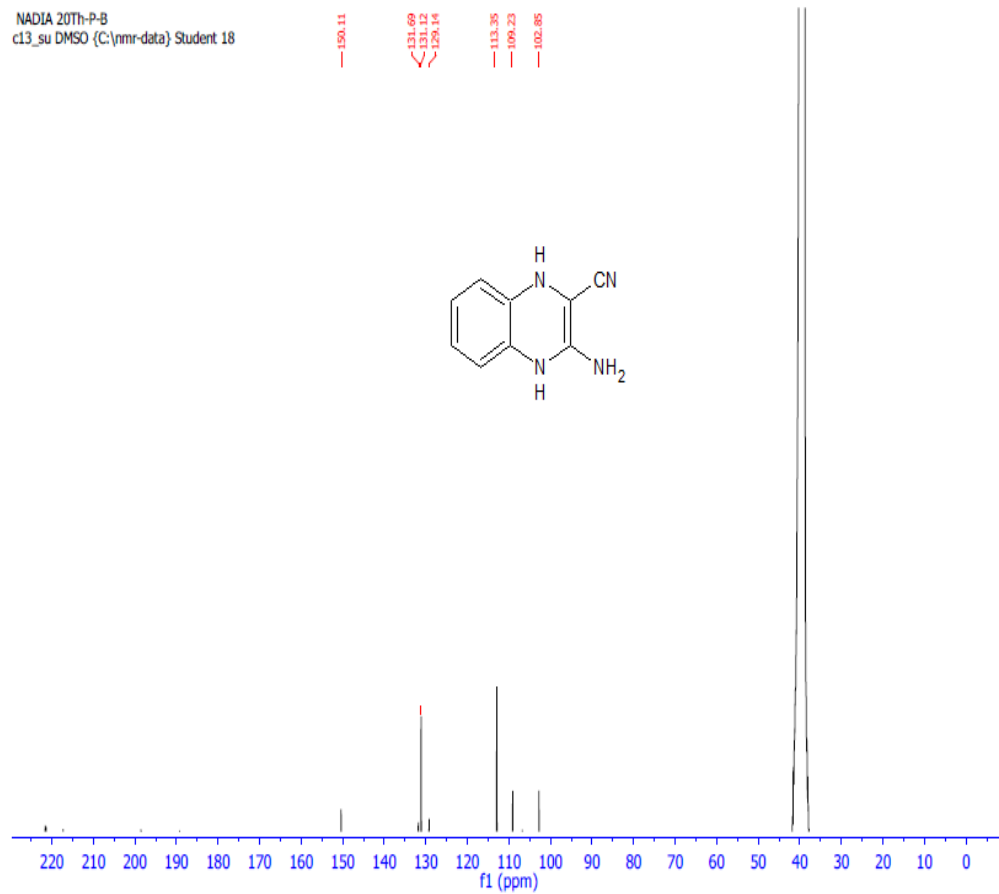


Figure S4: ^{13}C NMR spectrum of compound **1** in $\text{DMSO-}d_6$.

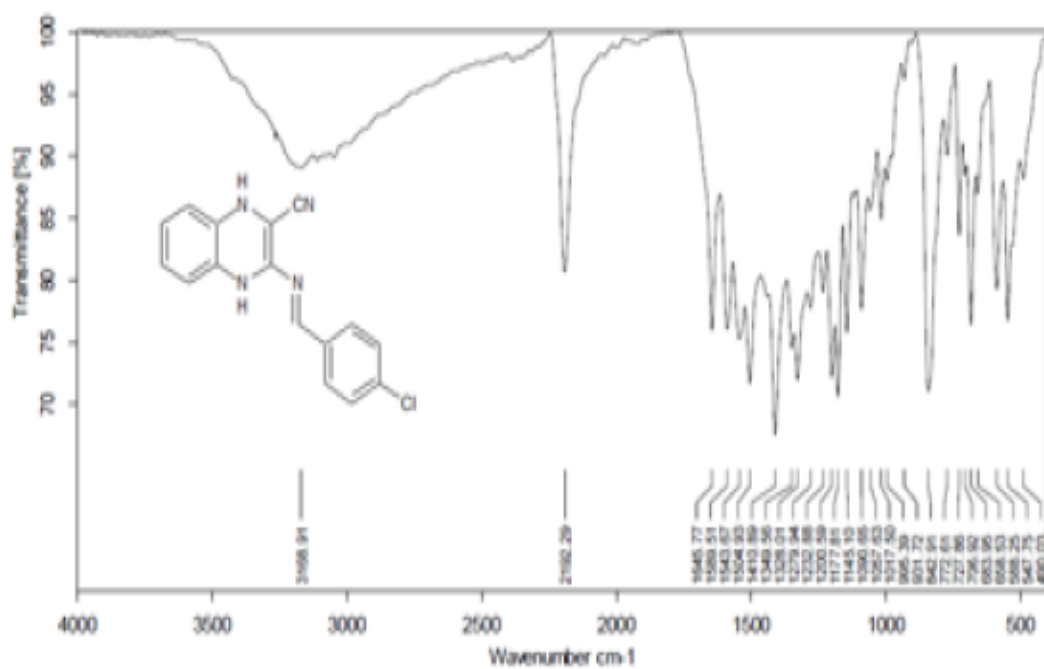


Figure S5: IR spectrum of compound **9**

NADIA 20M-1
proton_su DMSO (C:\nmr-data) Student 22

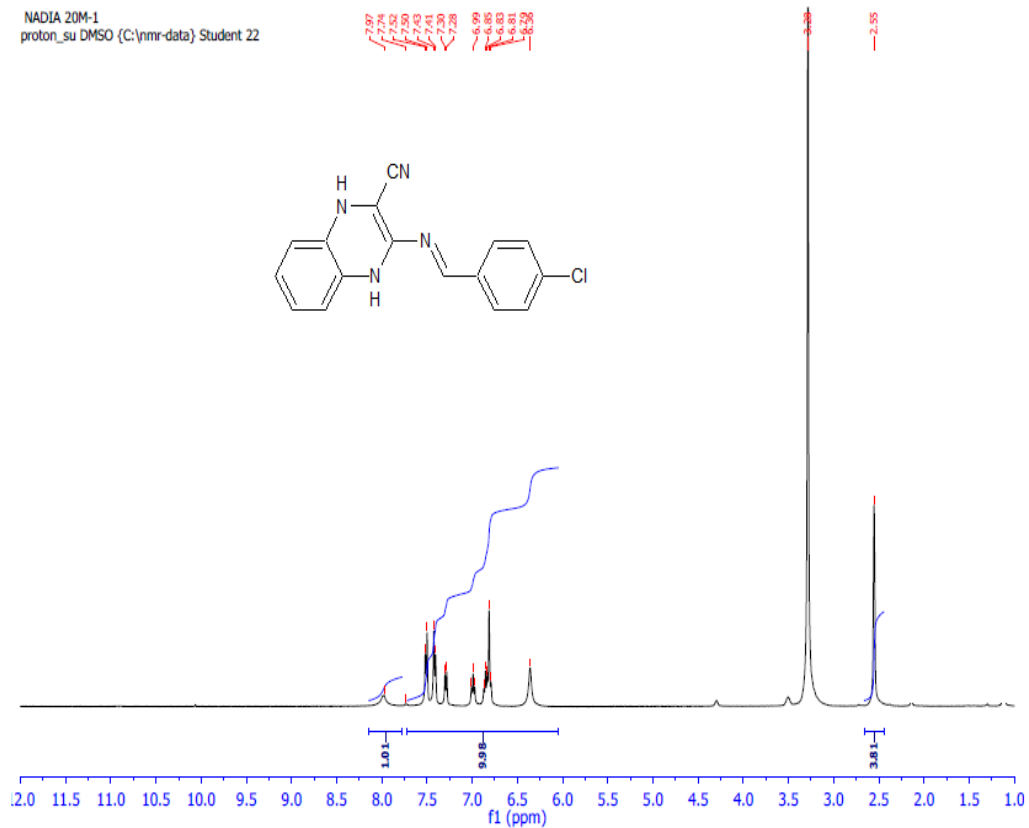


Figure S6: ¹H NMR spectrum of compound 9

NADIA 20TH-O-B
c13_su DMSO (C:\nmr-data) Student 17

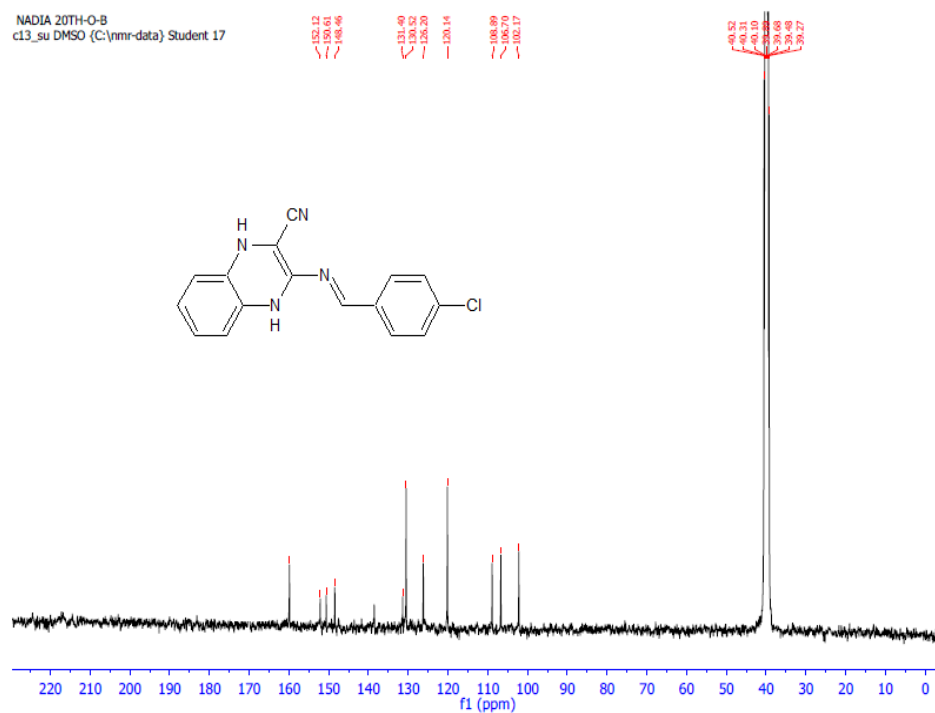


Figure S7: ^{13}C NMR spectrum of compound **9**

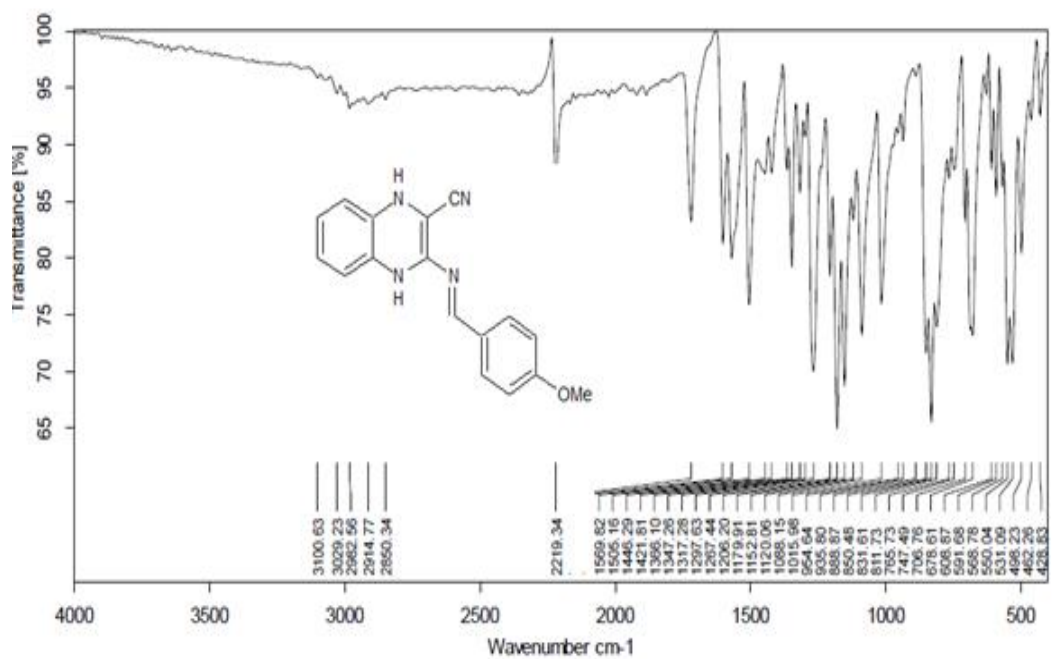


Figure S8: IR spectrum of compound 12.

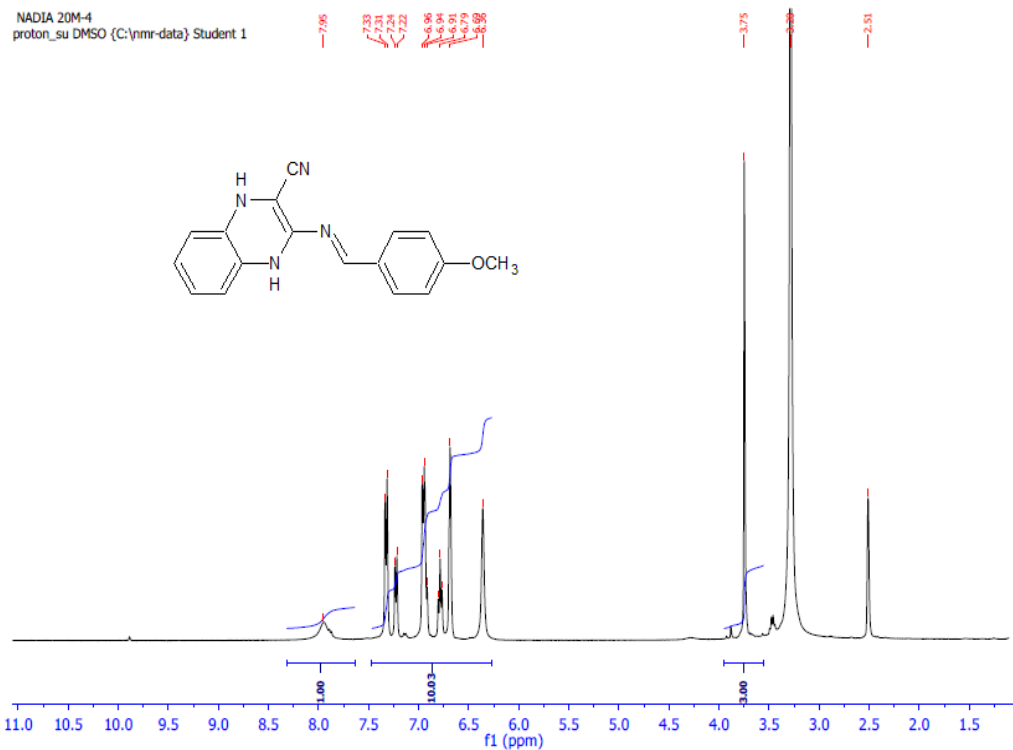


Figure S9: ^1H NMR spectrum of compound 12

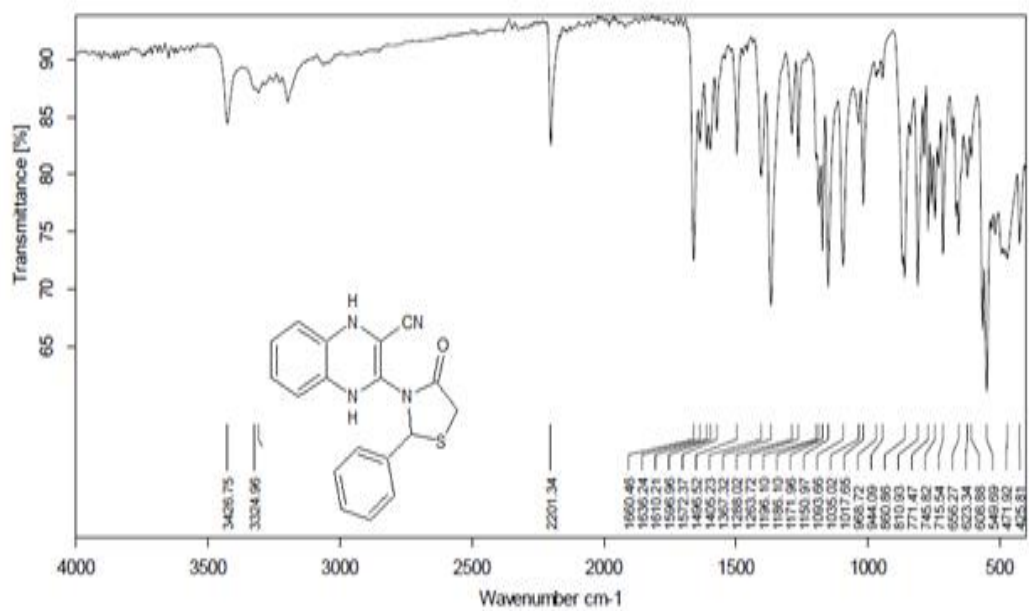


Figure S10: IR spectrum of compound **15**

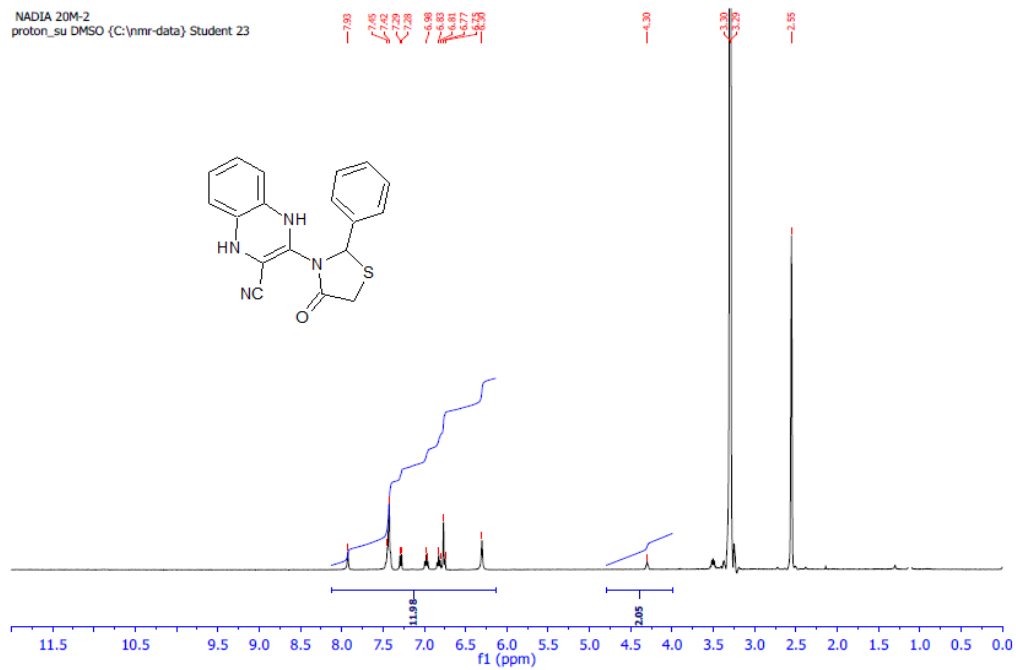


Figure S11: ^1H NMR spectrum of compound **15**

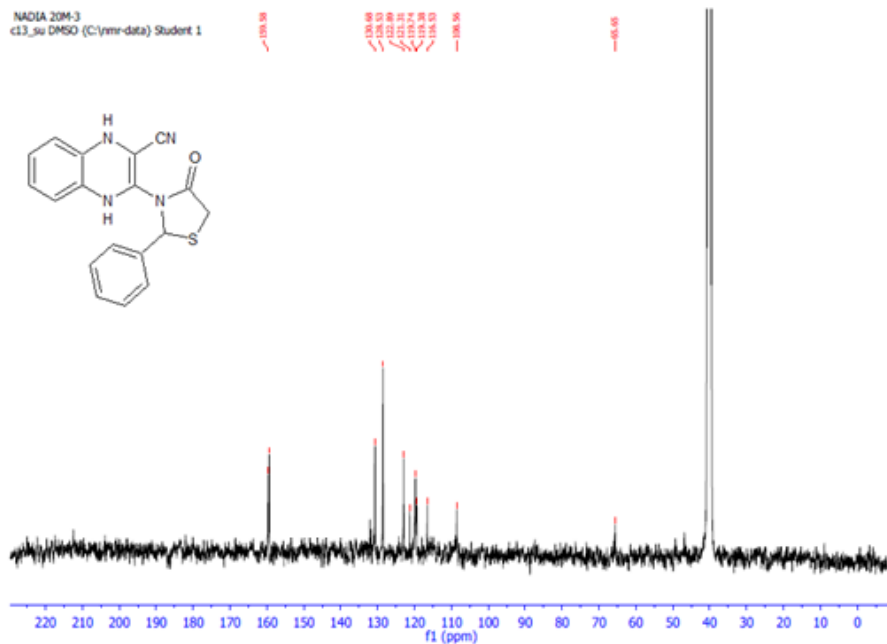


Figure S12: ^{13}C NMR of compound **15**

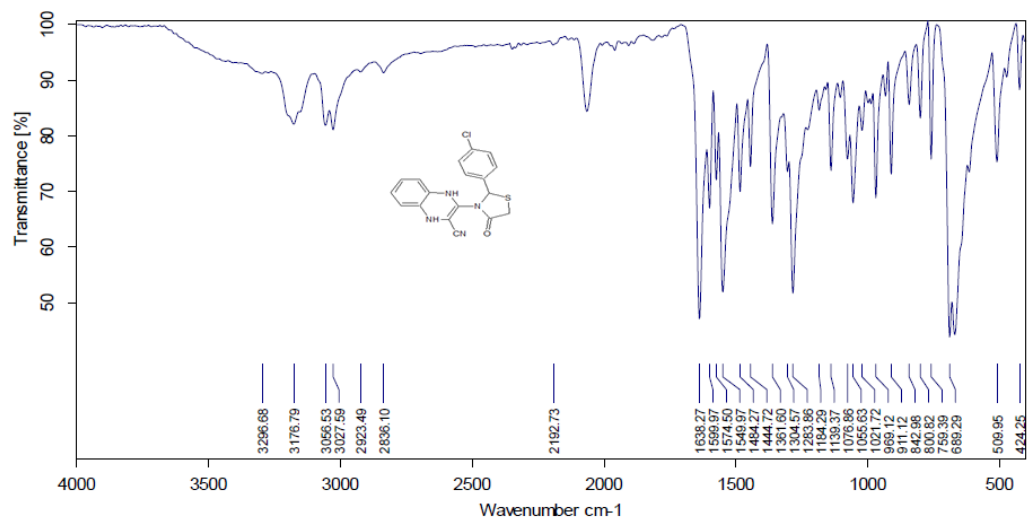


Figure S13: IR spectrum of compound **16**

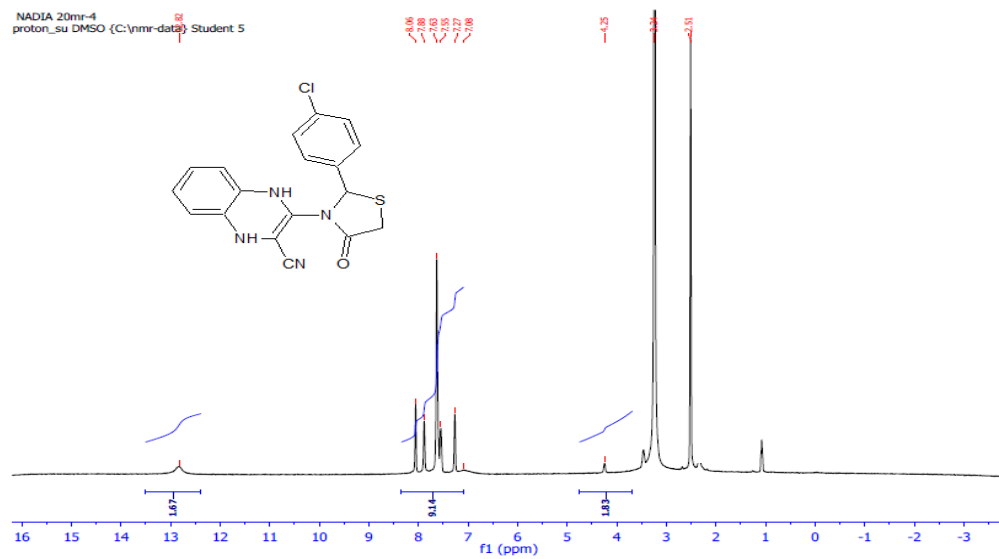


Figure S14: ^1H NMR spectrum of compound **16**

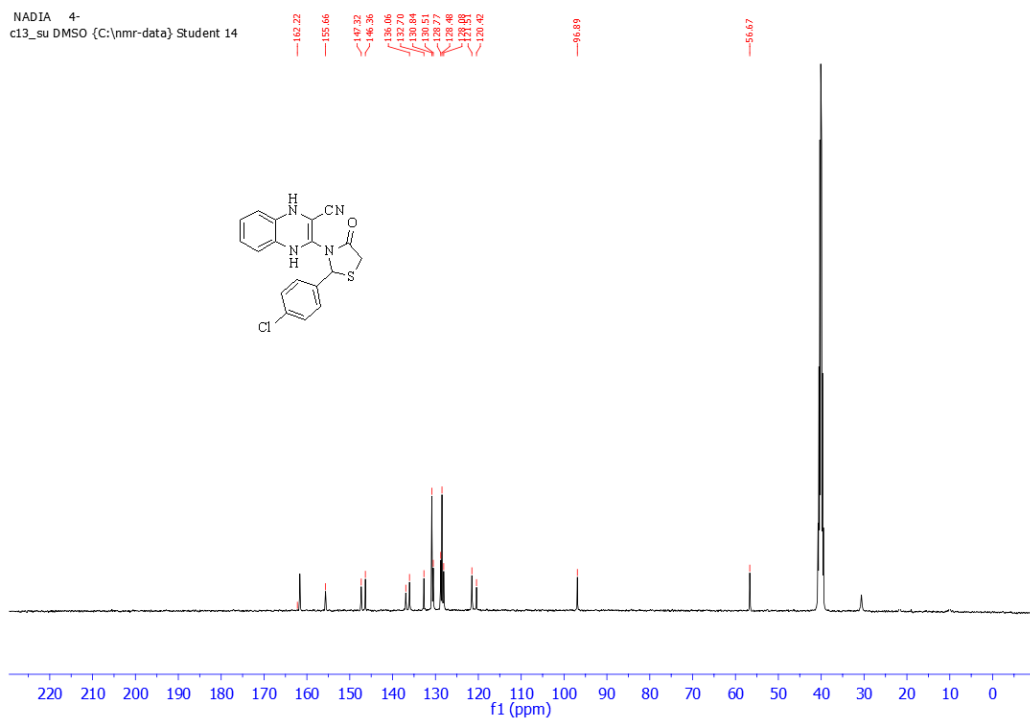


Figure S15: ^{13}C NMR spectrum of compound 16

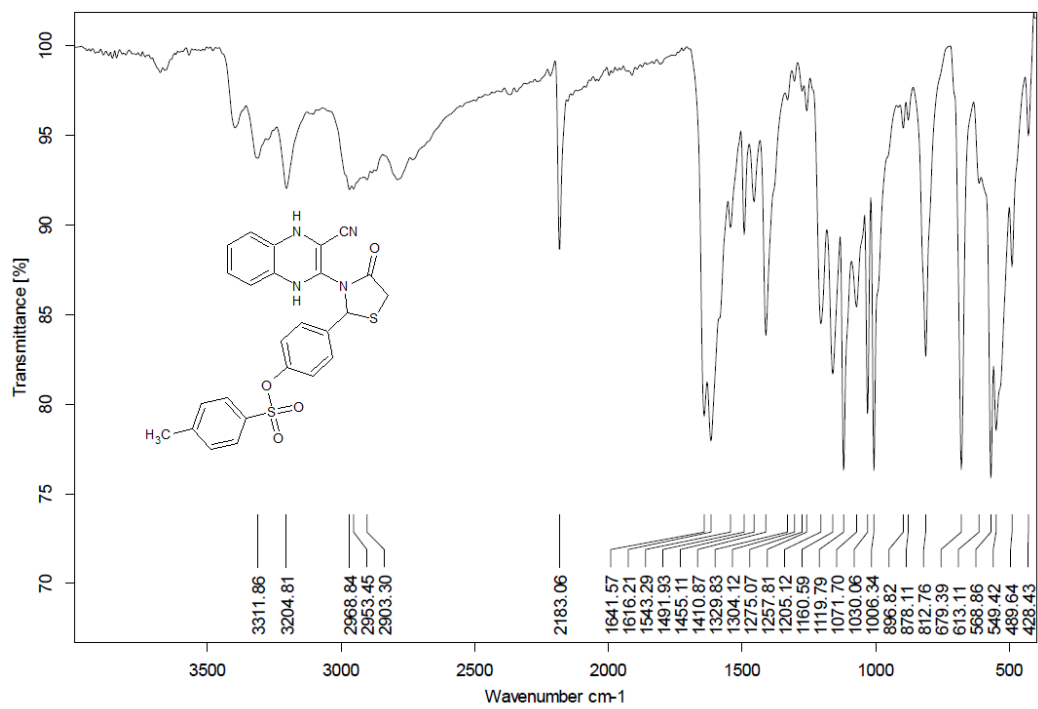


Figure S16: IR spectrum of compound 20

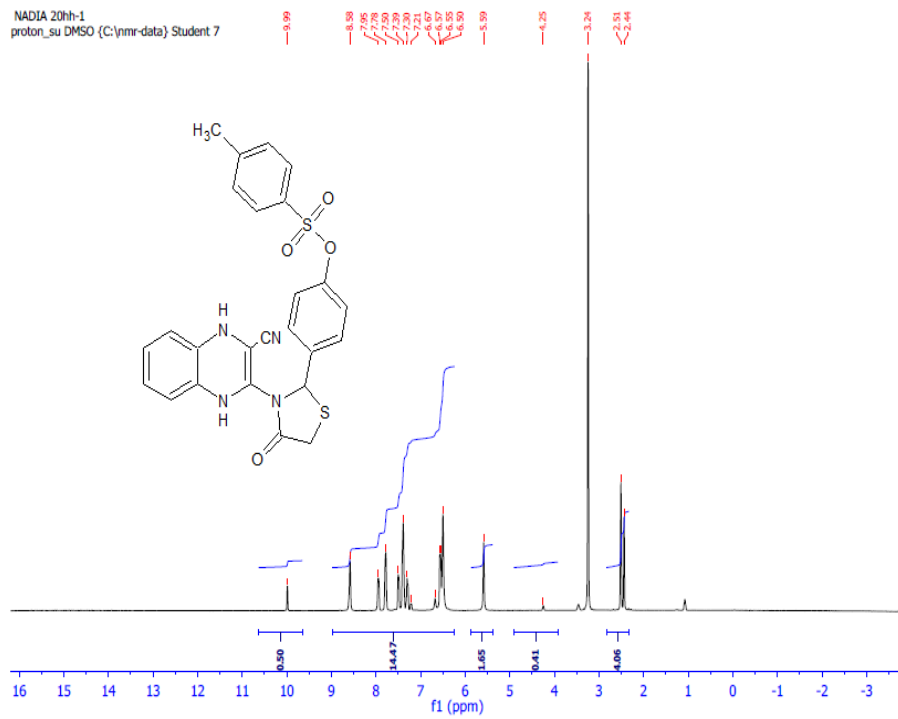


Figure S17: ^1H NMR spectrum of compound **20**

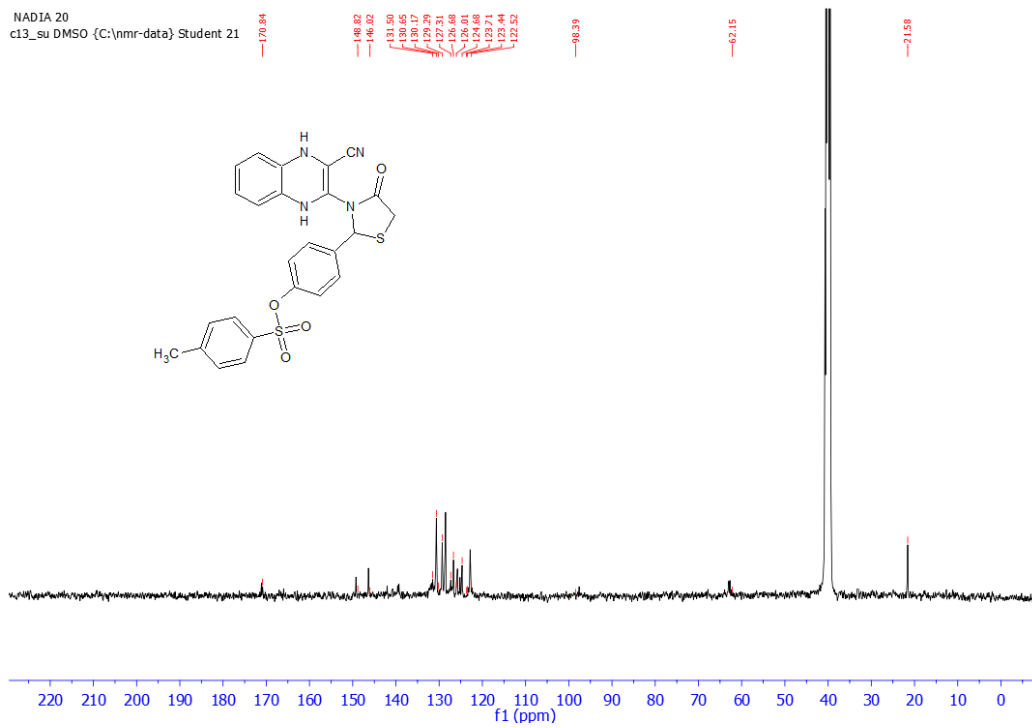


Figure S18: ^{13}C NMR spectrum of compound 20

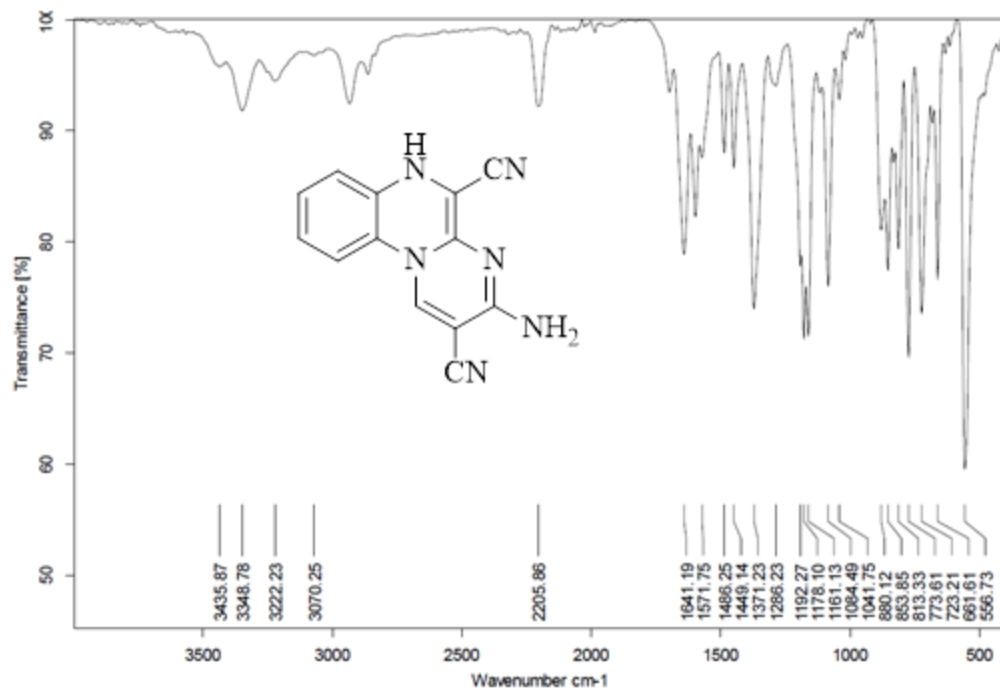


Figure S20: IR spectrum of compound 35

NADIA 7
proton_su DMSO {C:\nmr-data} Student 7

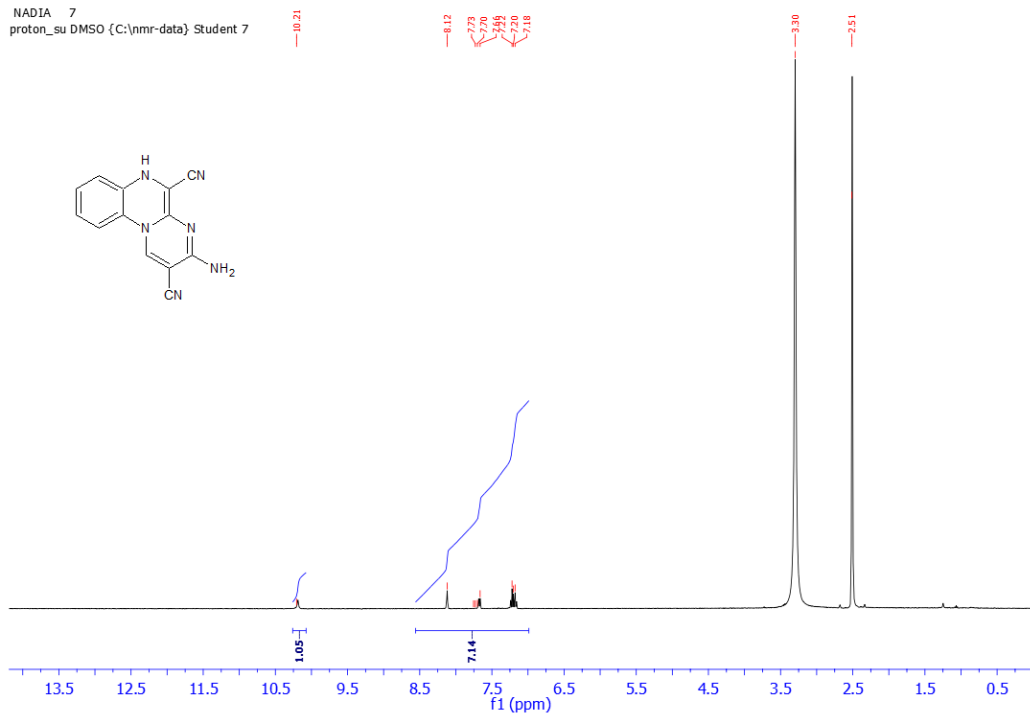


Figure S21: ^1H NMR spectrum of compound 35

NADIA L-1
c13_su DMSO (C:\nmr-data) Student 24

151.71
150.74
146.49
137.94
137.66
131.66
130.48
129.74
129.40
127.71
119.58
116.91

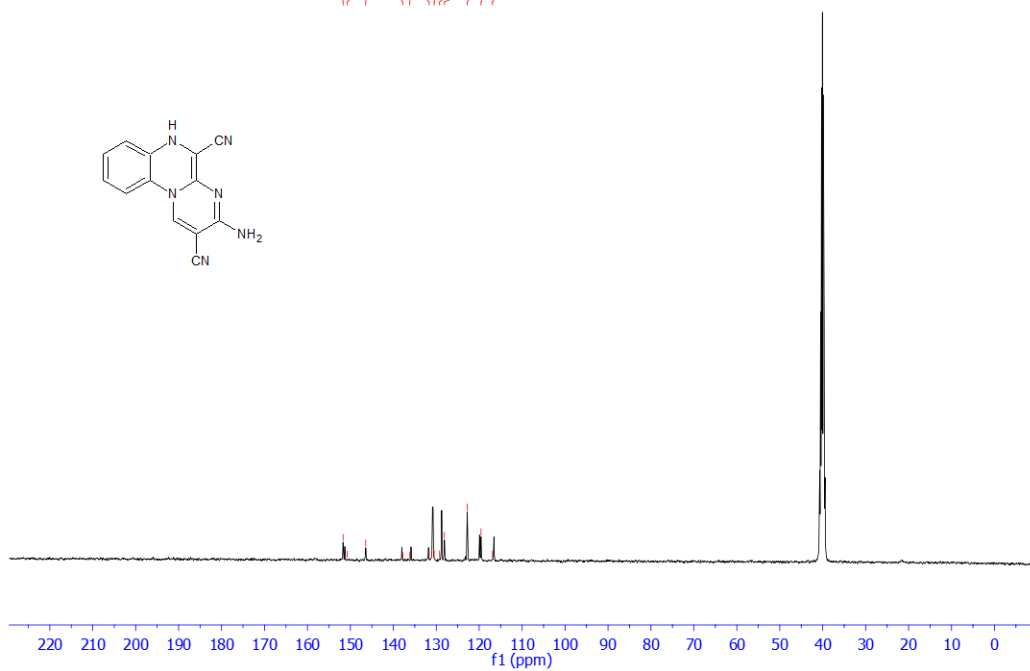


Figure S22: ^{13}C NMR spectrum of compound 35

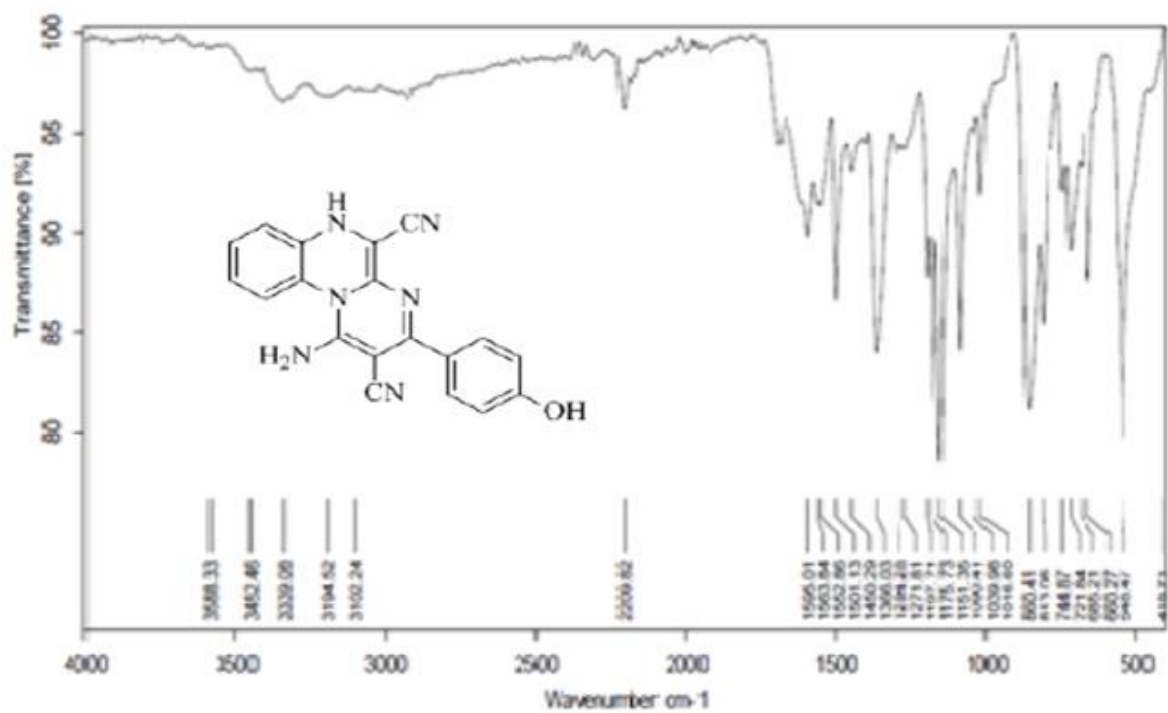


Figure S23:IR spectrum of compound **30**

NADIA 19
proton_su DMSO (C:\nmr-data) Student 21

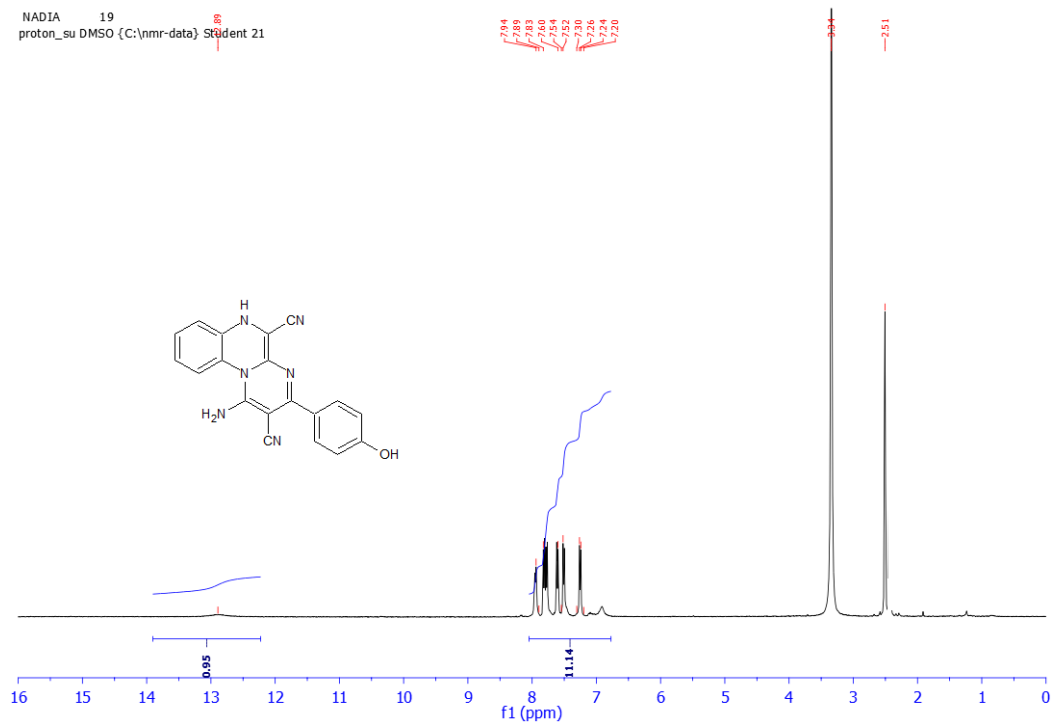


Figure S24: ¹H NMR spectrum of compound 30

NADIA -1
c13_su DMSO {C:\nmr-data} Student 9

156.56
154.28
150.32
149.81
146.97
146.86
137.91
137.72
133.02
133.01
130.81
130.34
128.65
127.49
119.82
117.25

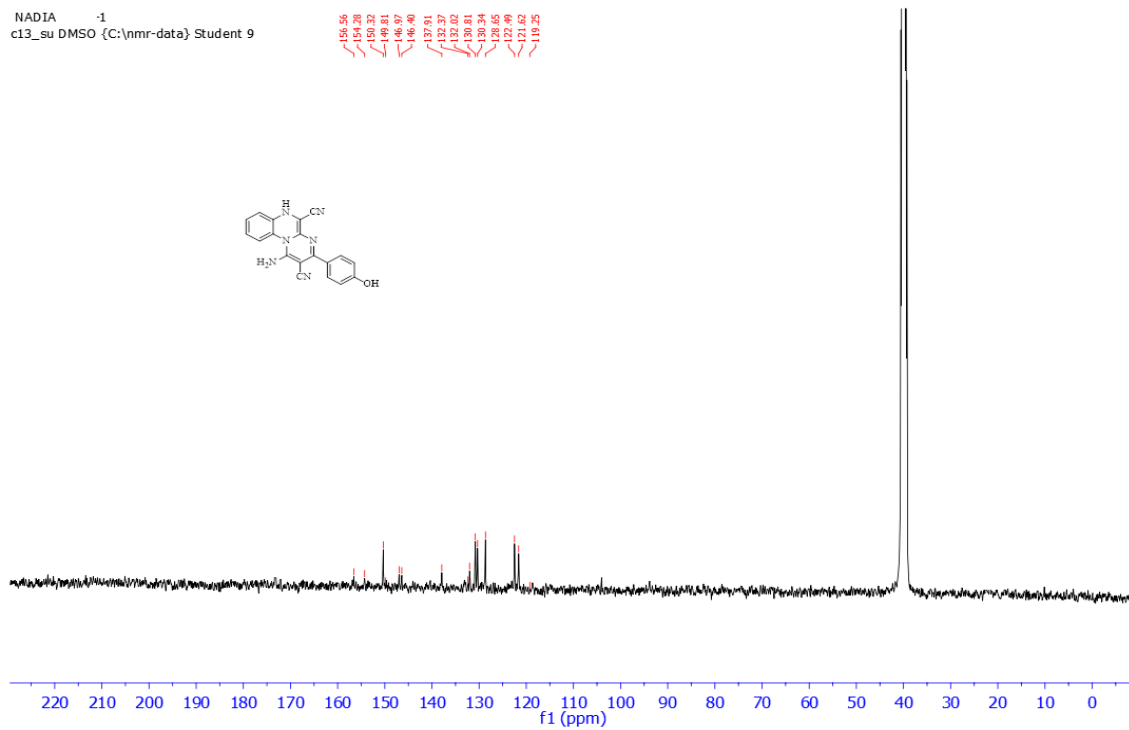
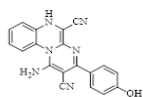


Figure S25: ^{13}C NMR spectrum of compound **30**