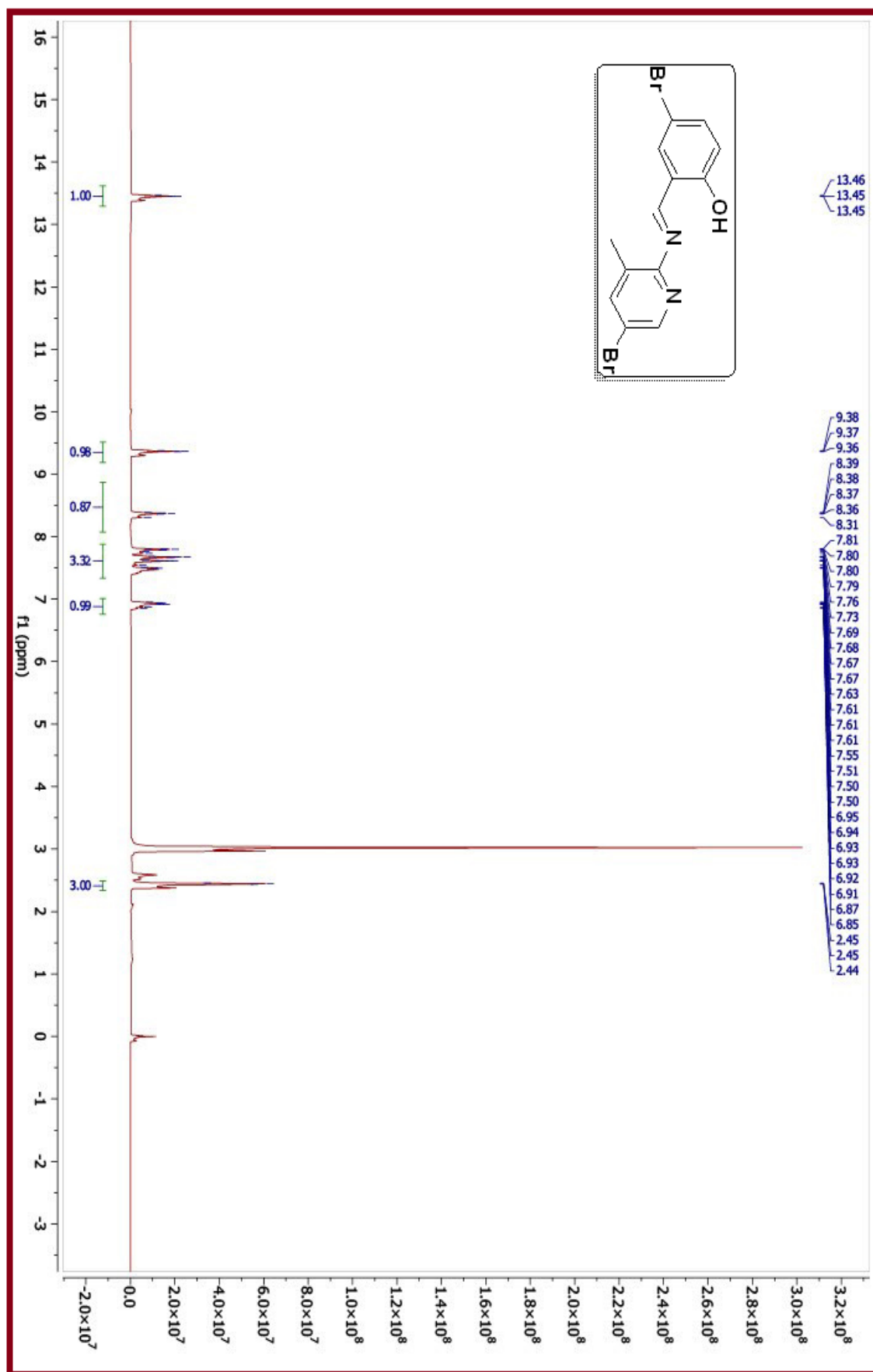
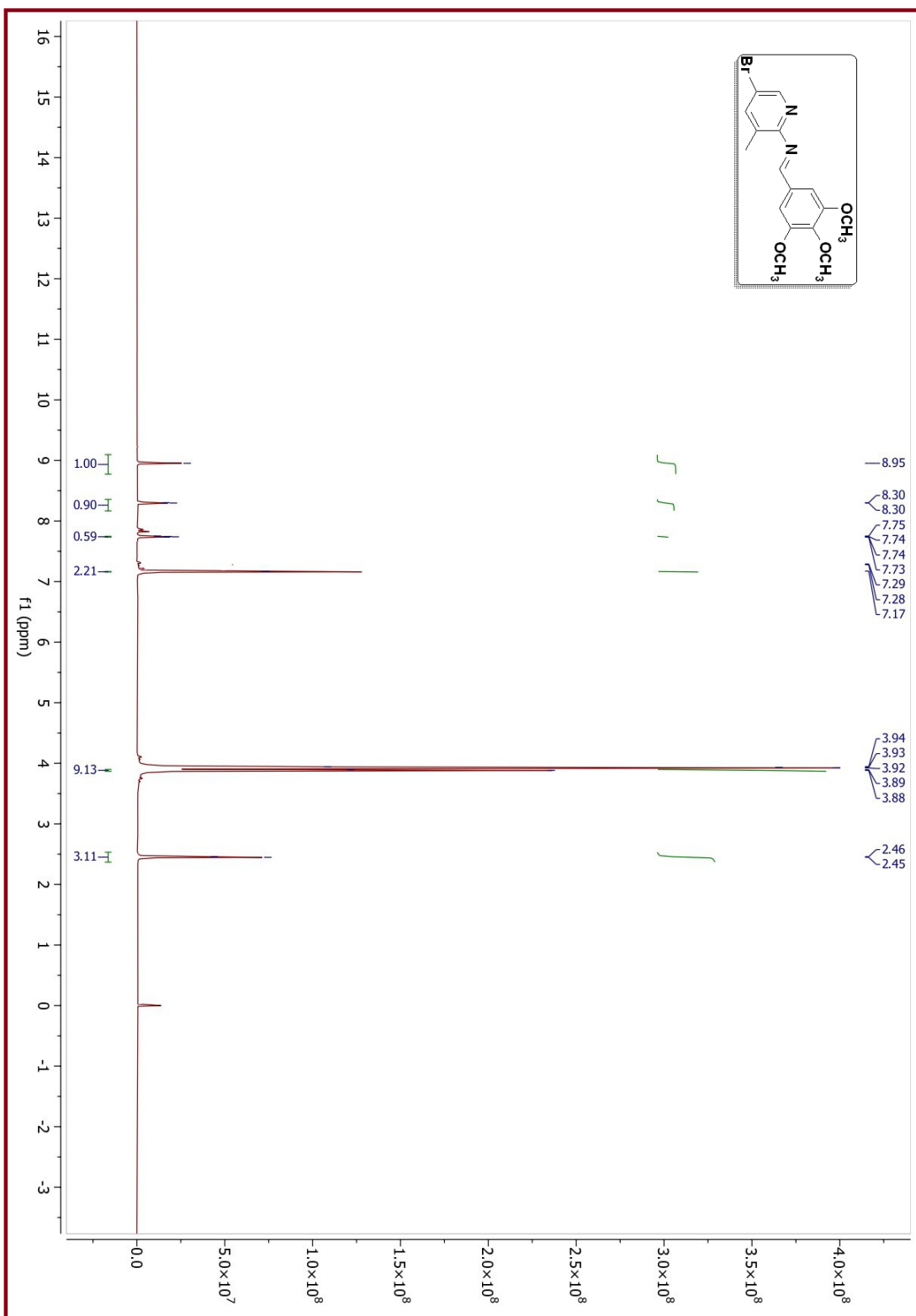


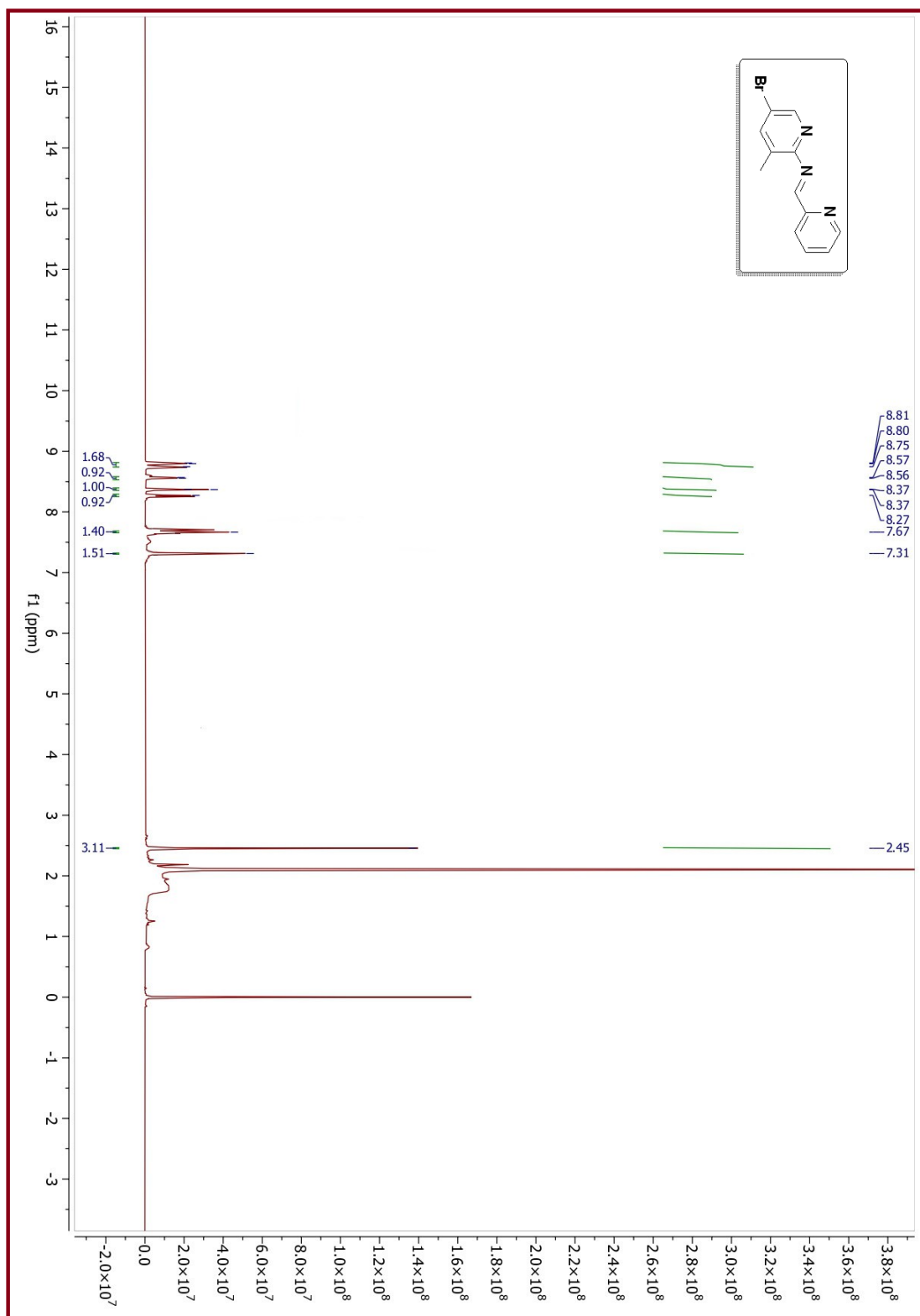
¹H NMR of compound 3a



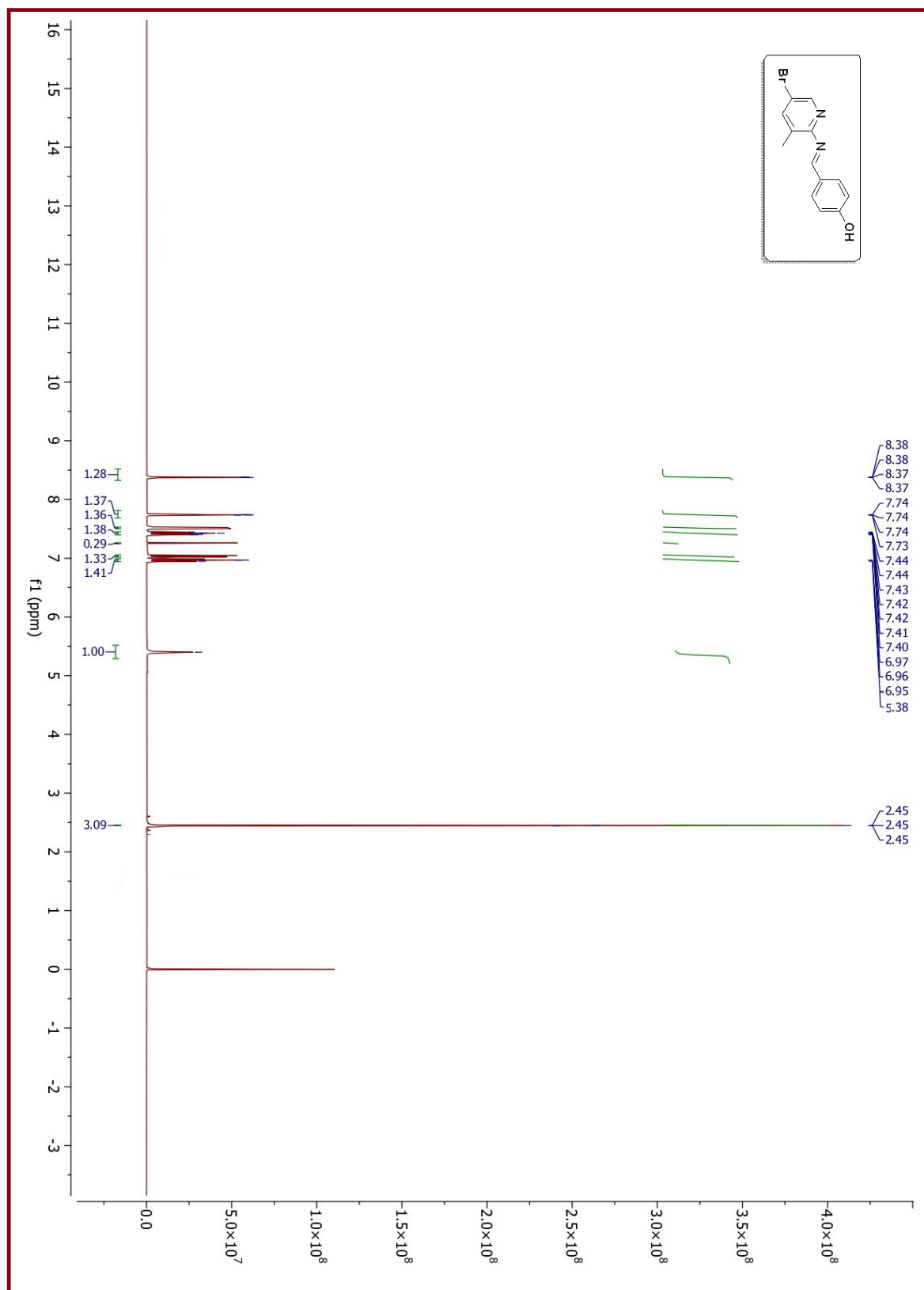
¹H NMR of compound 3b



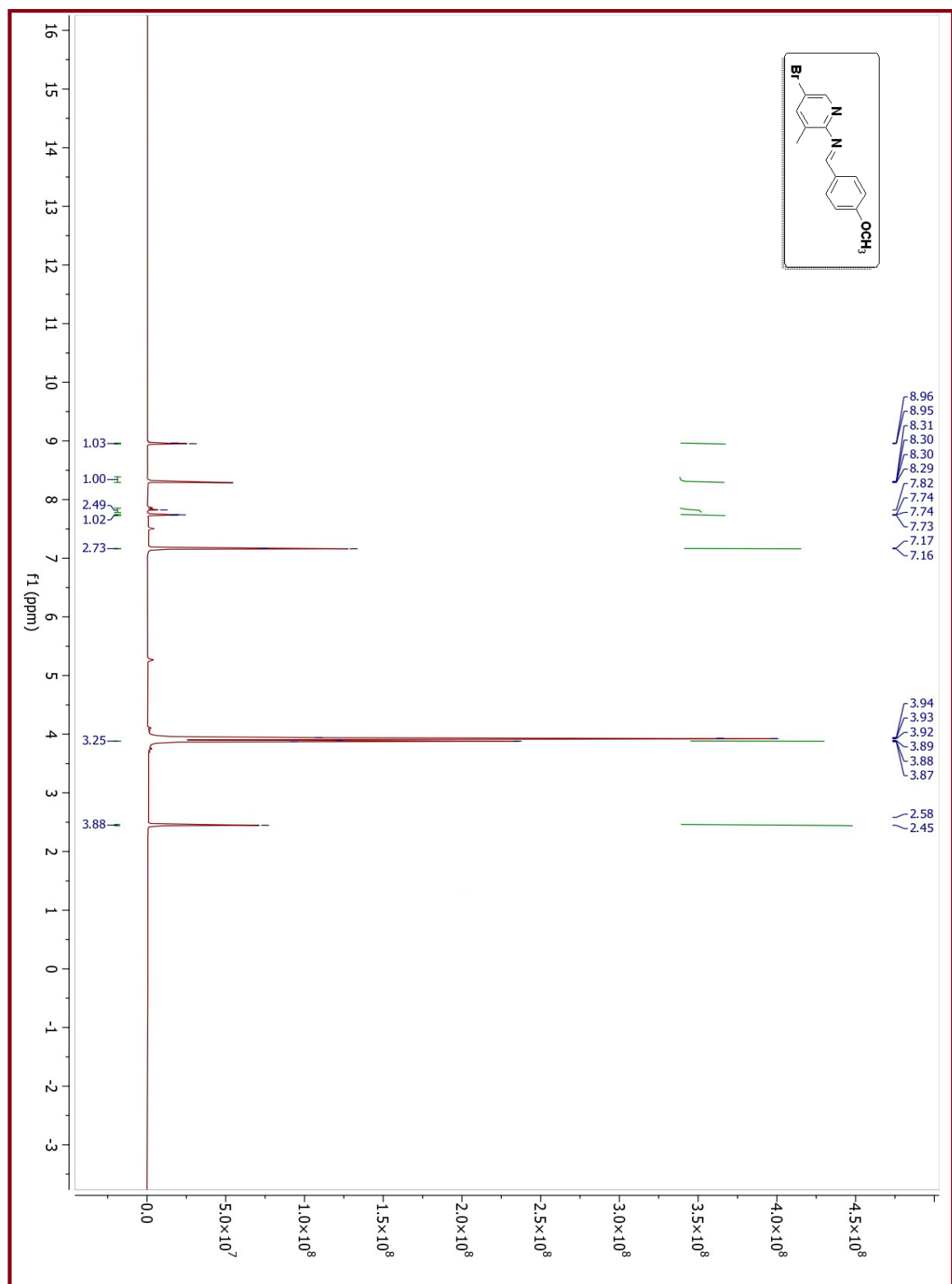
¹H NMR of compound 3c



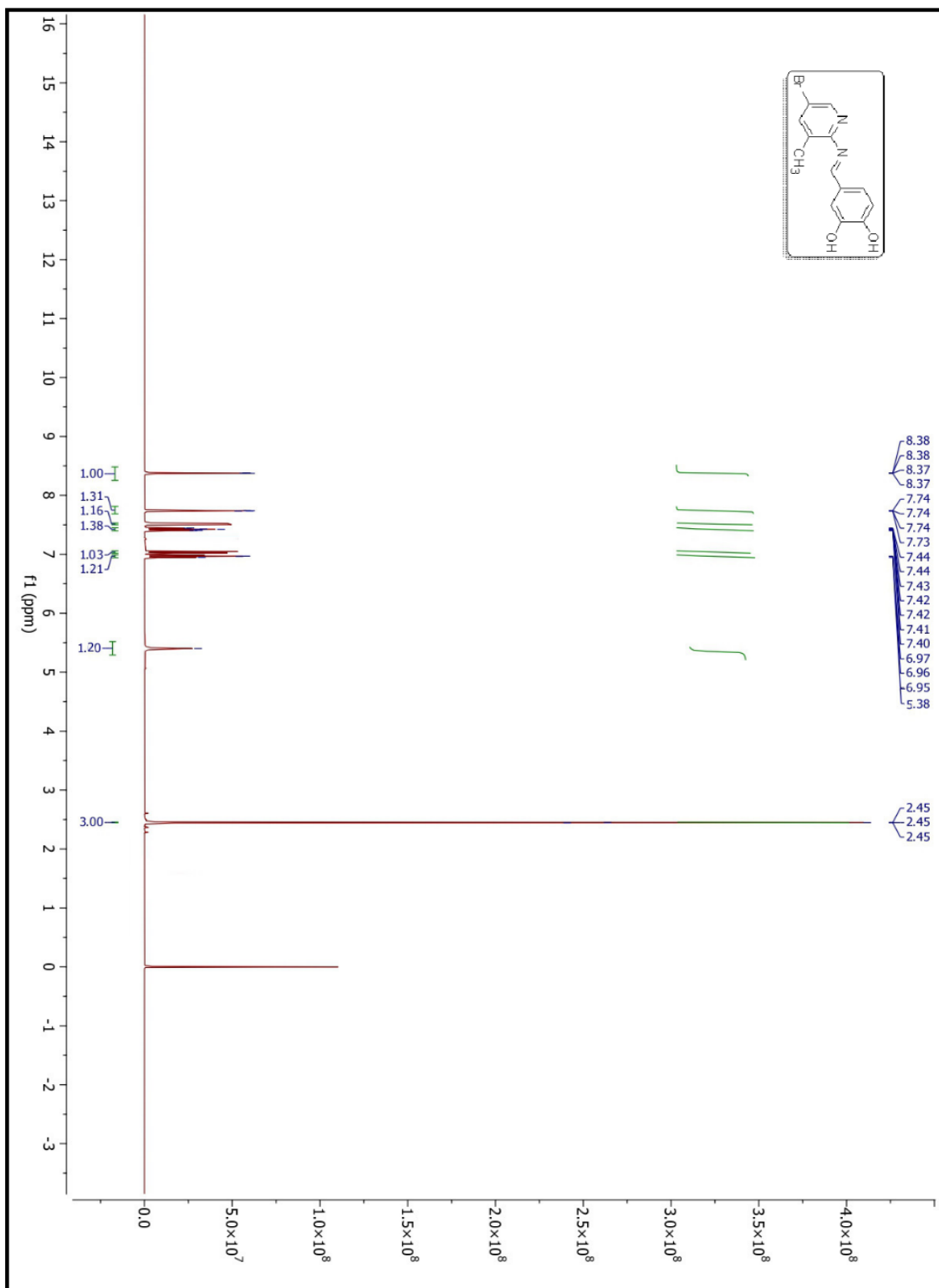
^1H NMR of compound 3d



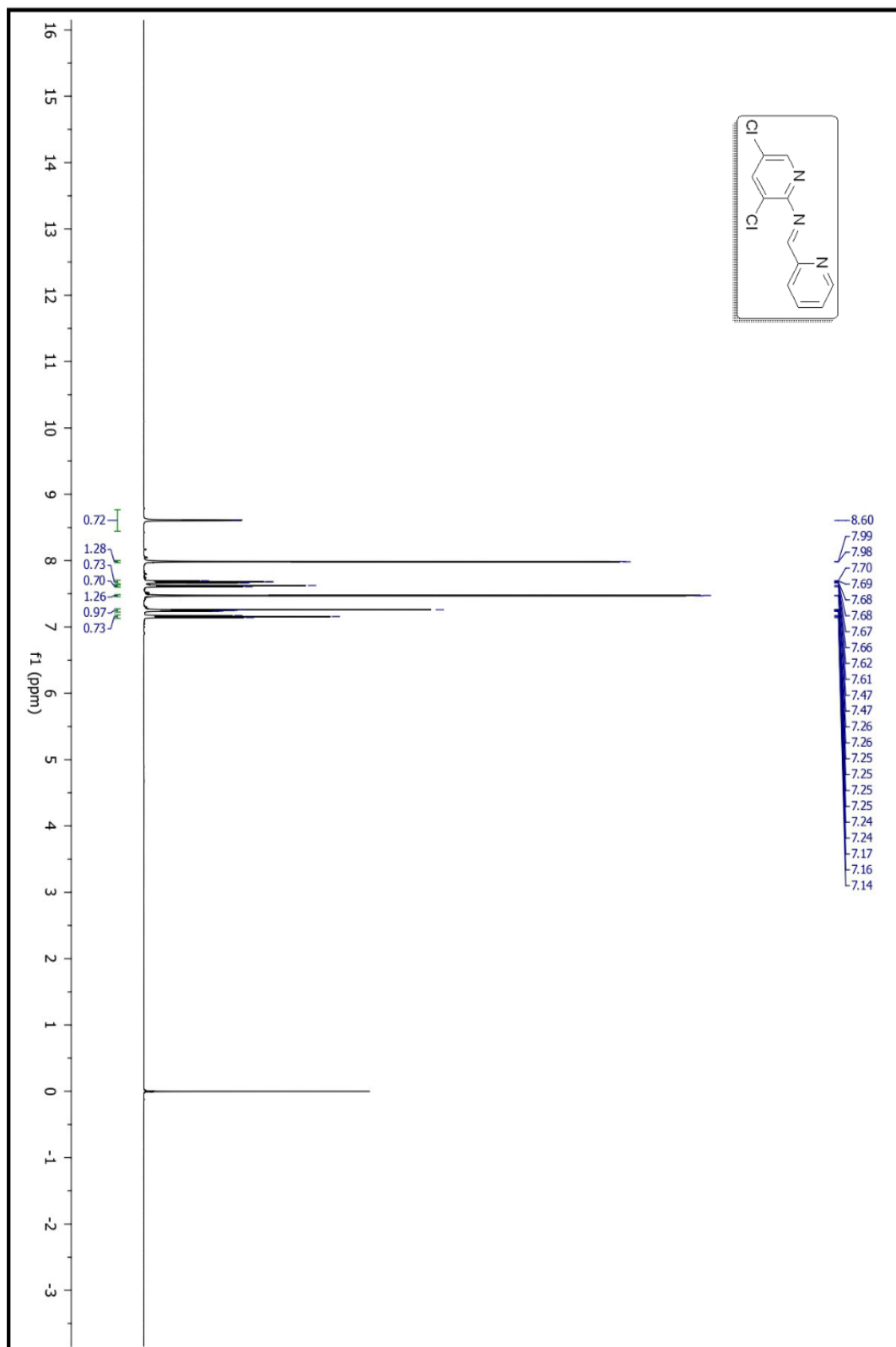
¹H NMR of Compound 3e



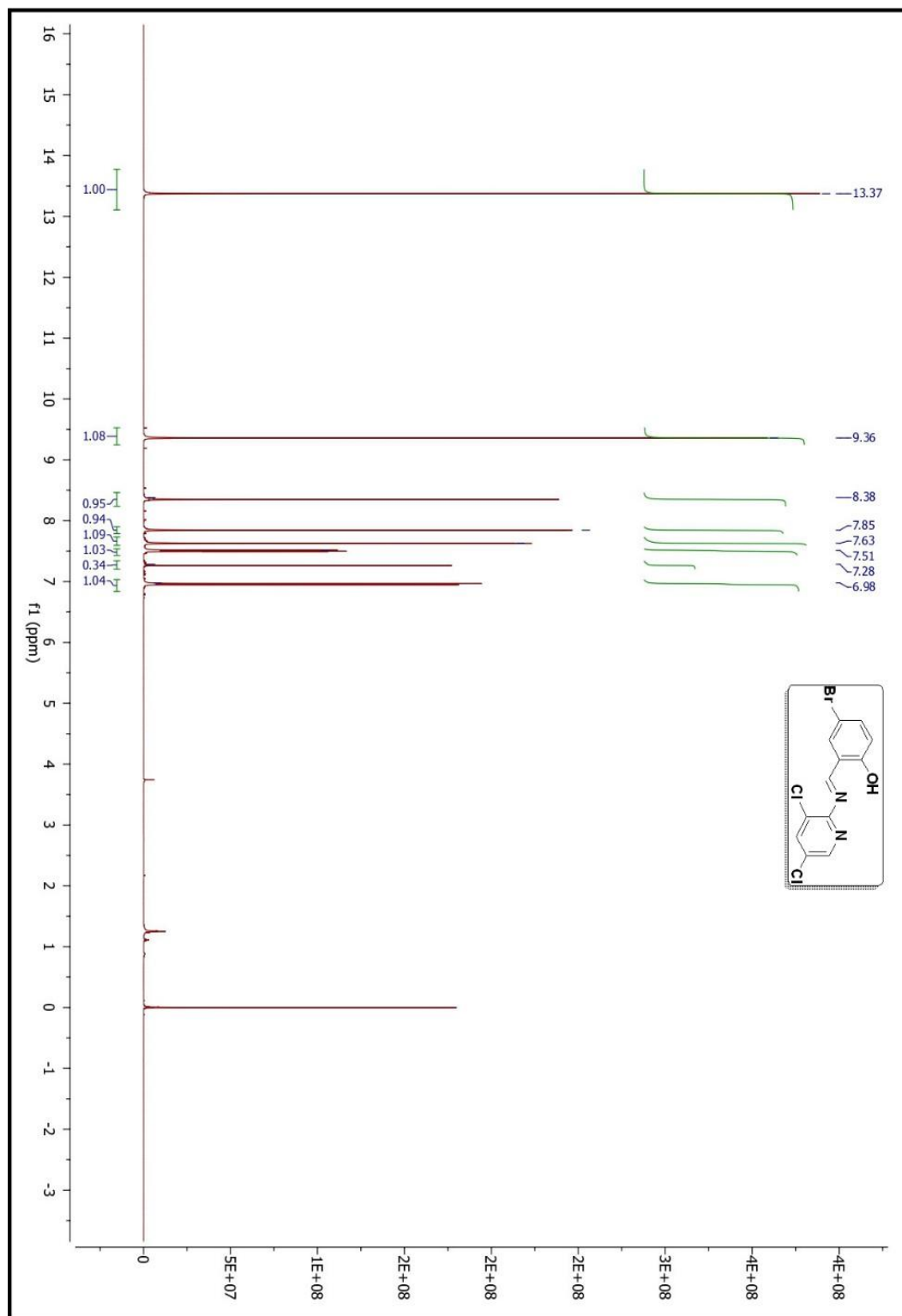
¹H NMR of compound 3f



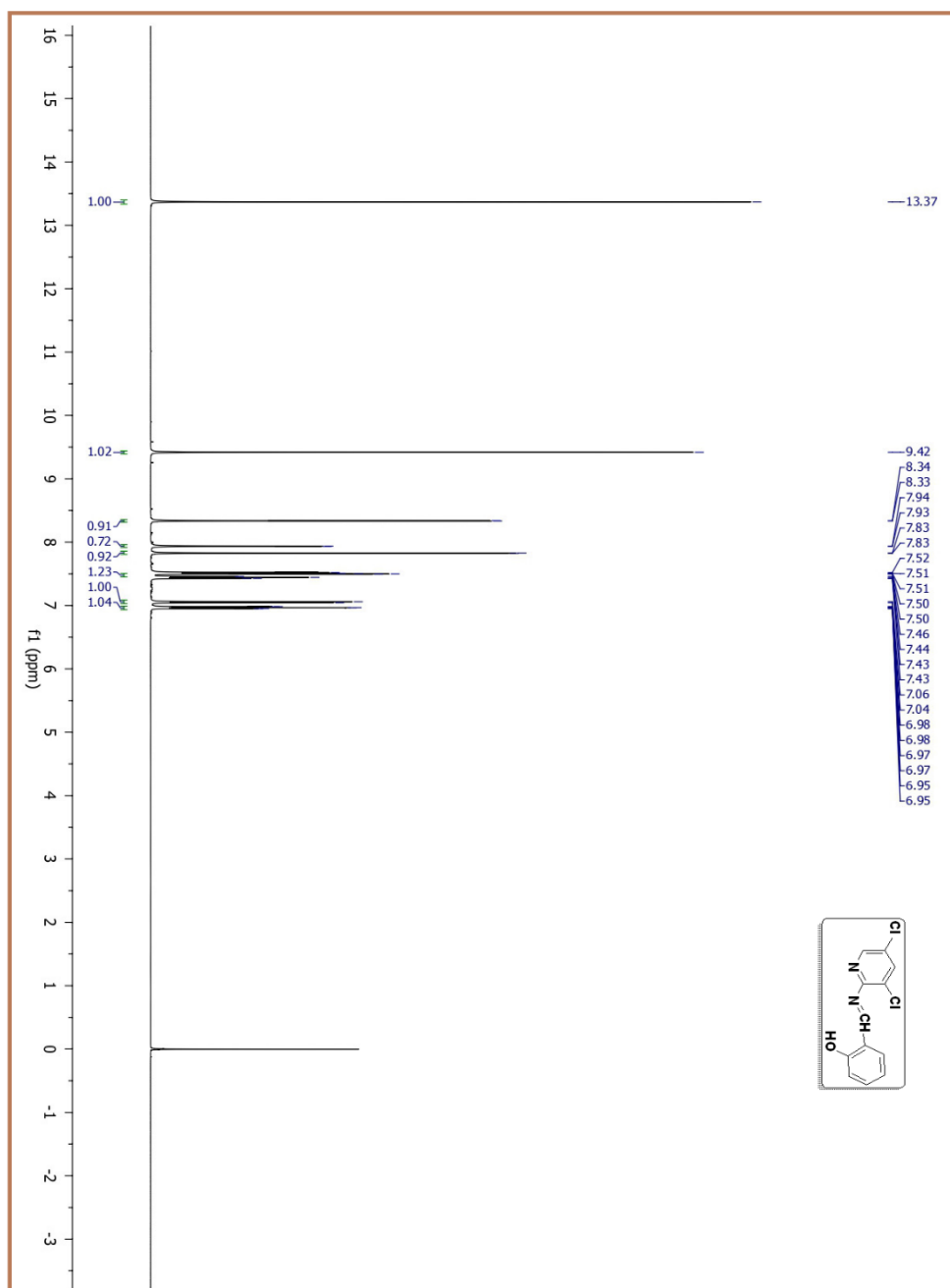
¹H NMR of compound 3g



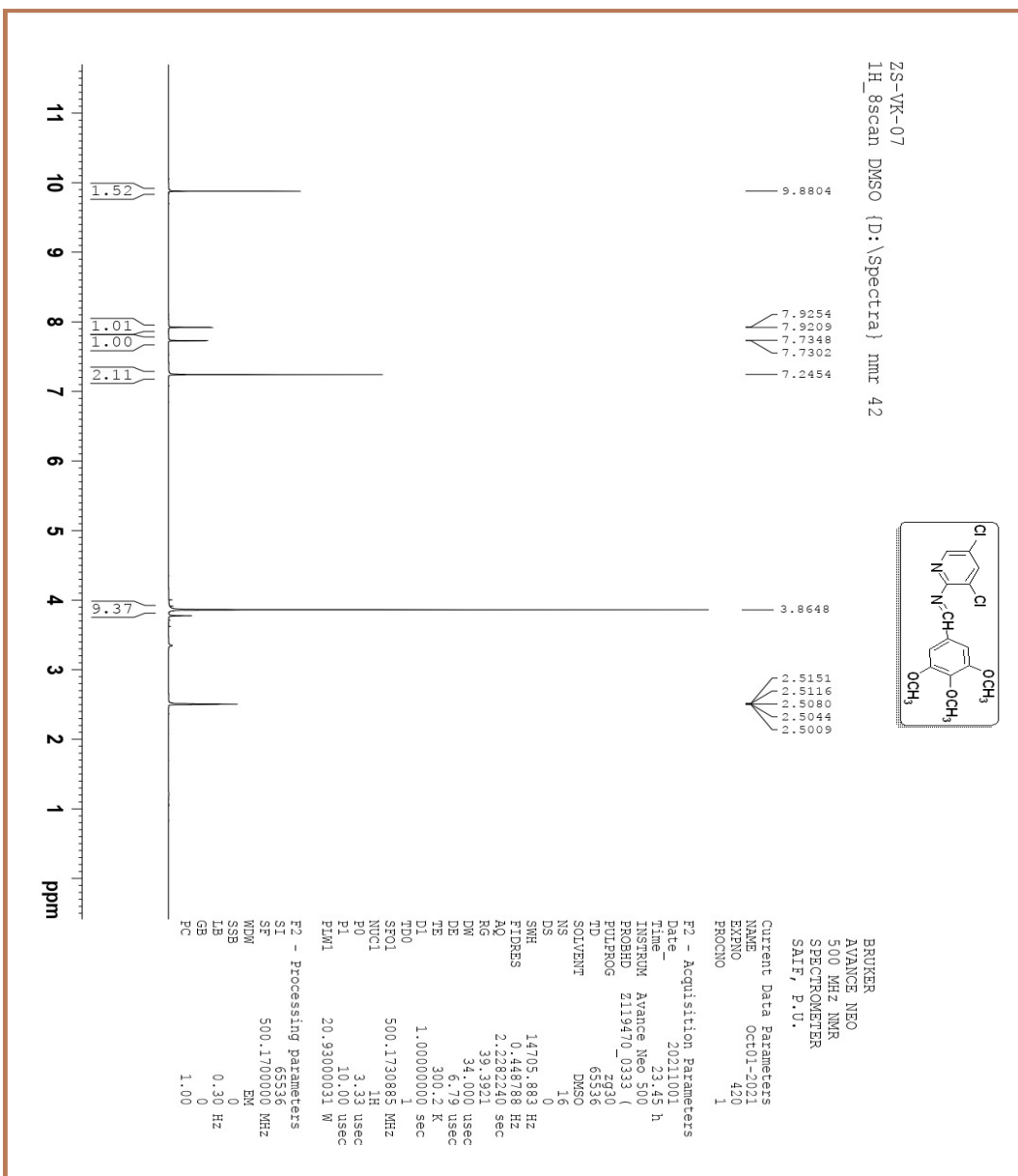
¹H NMR of Compound 3h



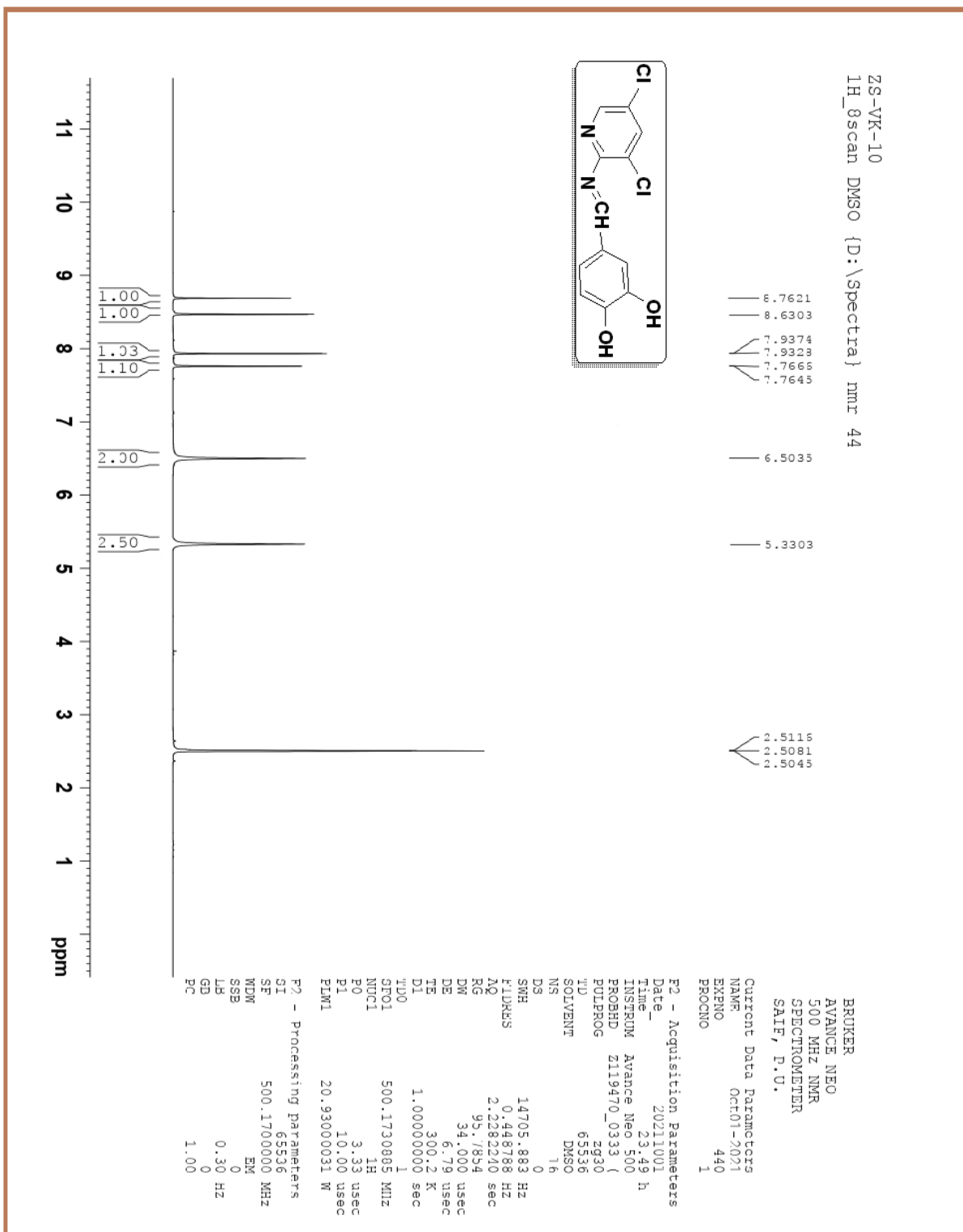
¹H NMR of Compound 3i



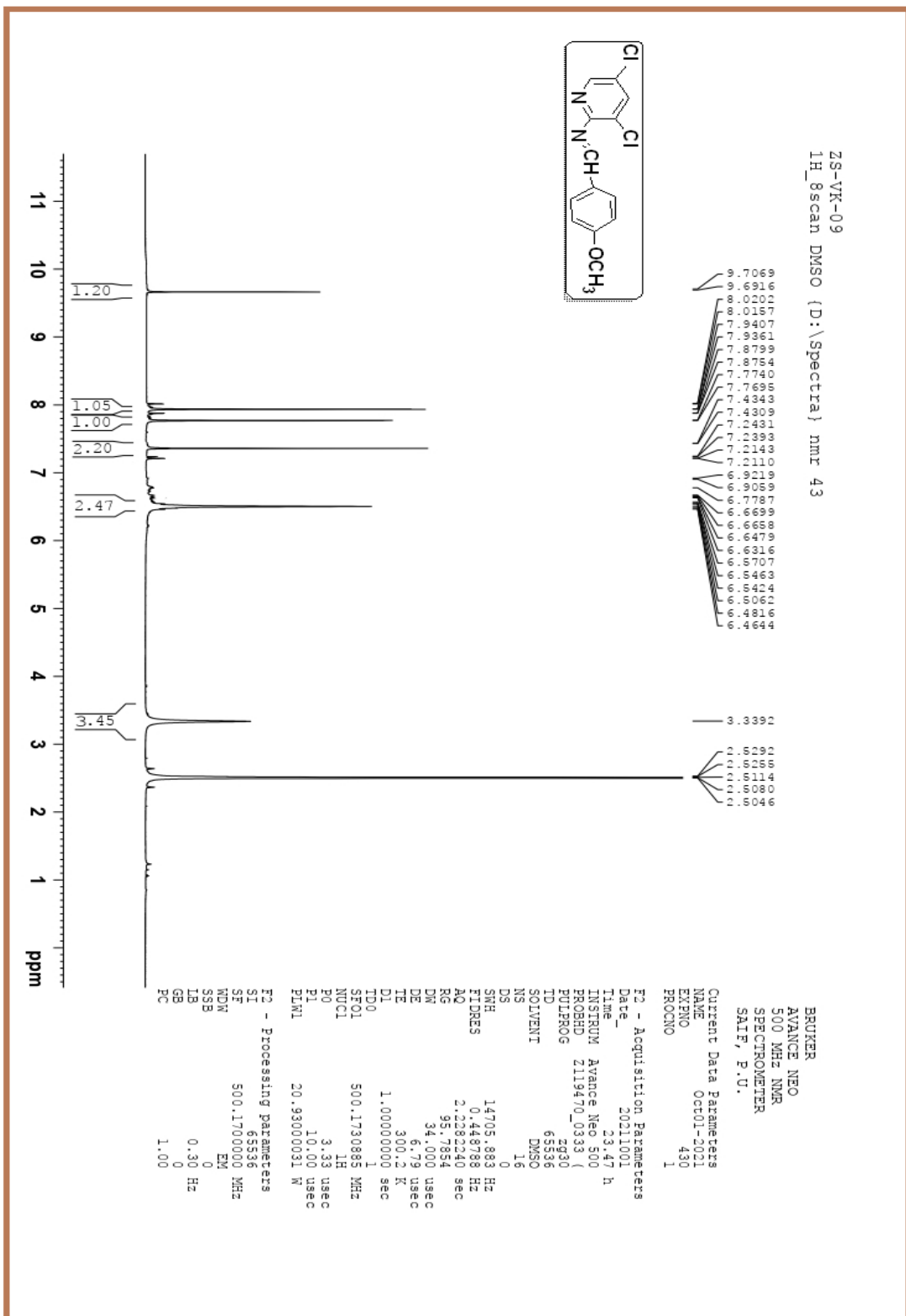
¹H NMR of Compound 3j



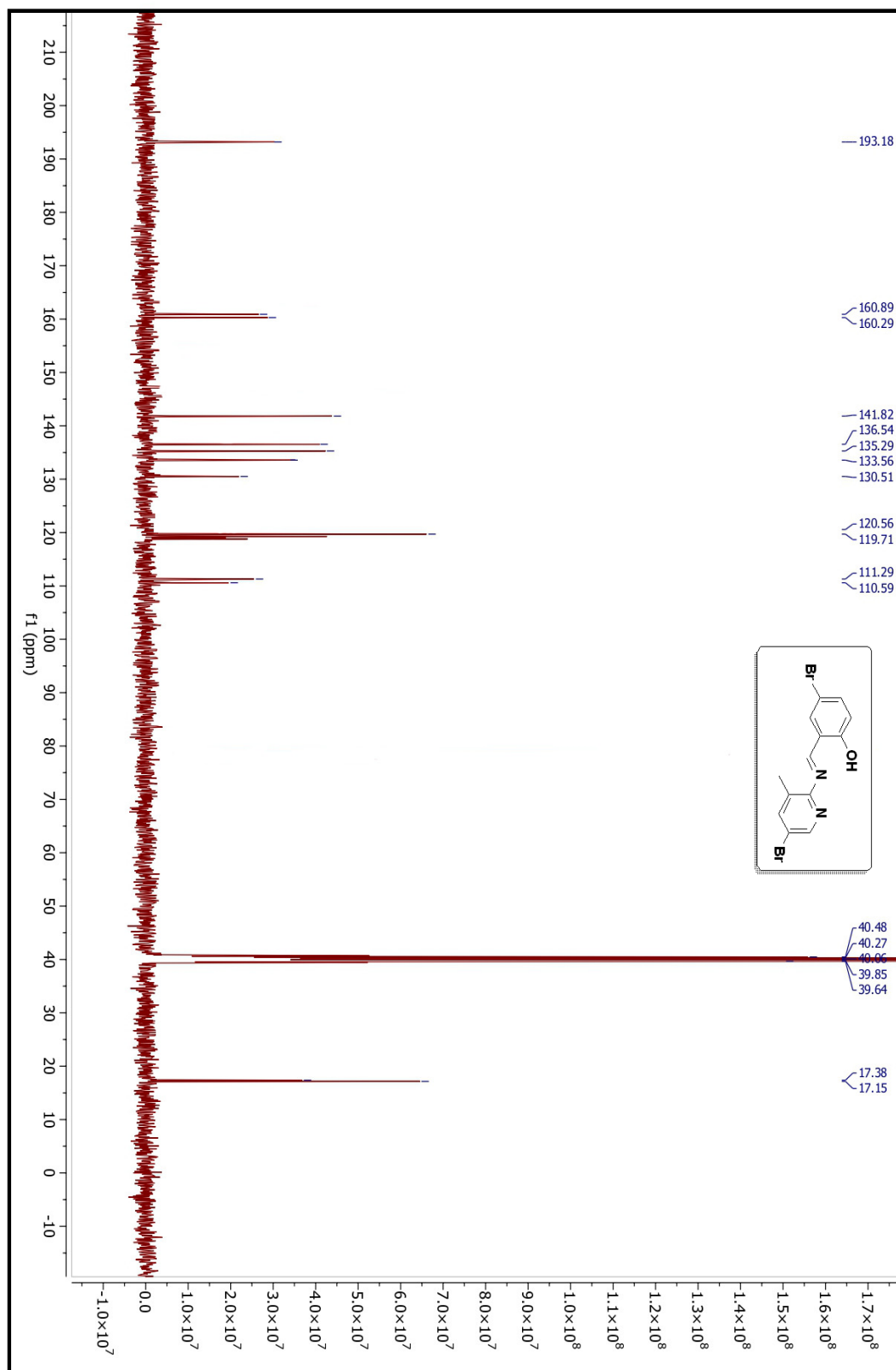
¹H NMR of Compound 3k



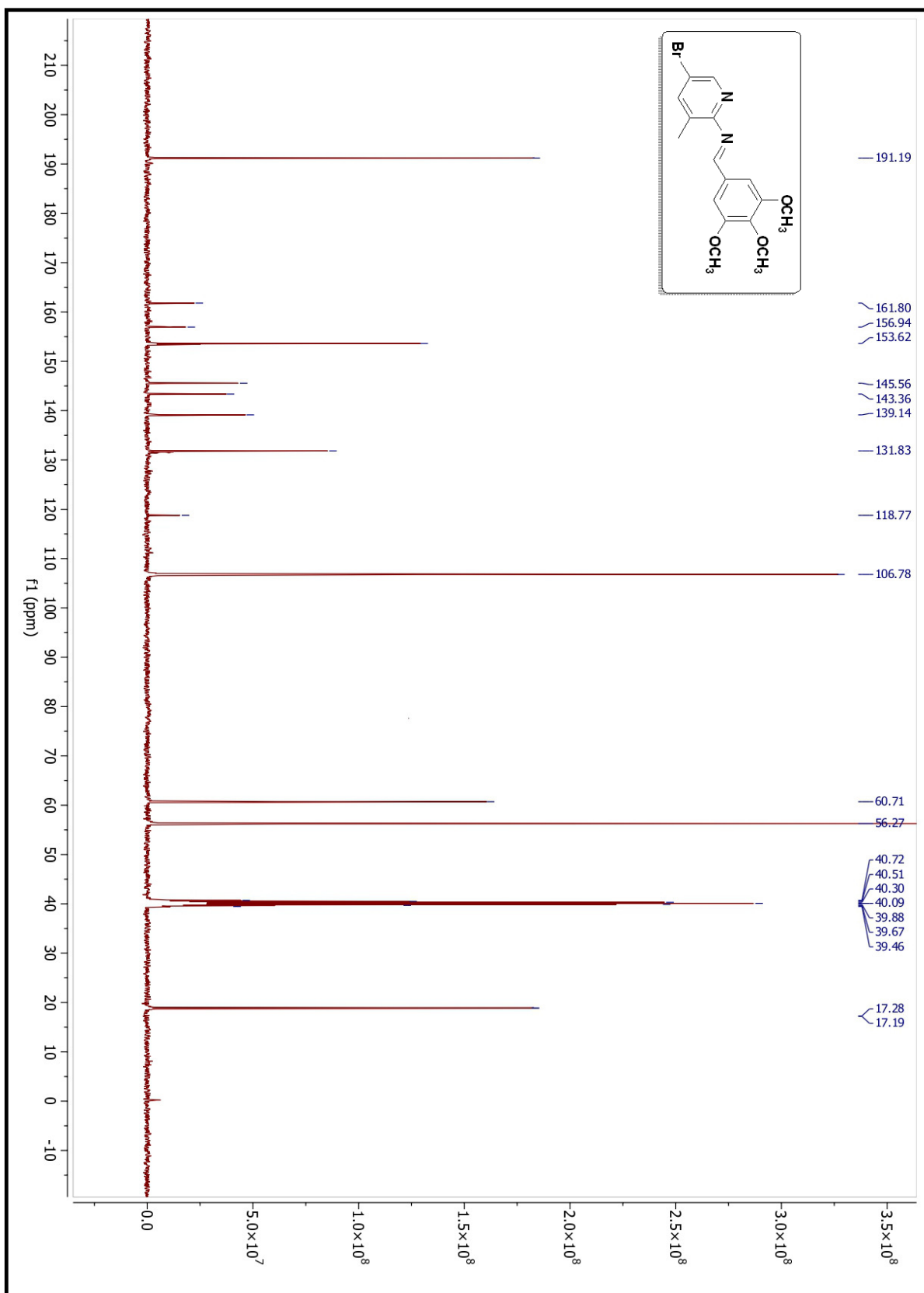
¹H NMR of Compound 31



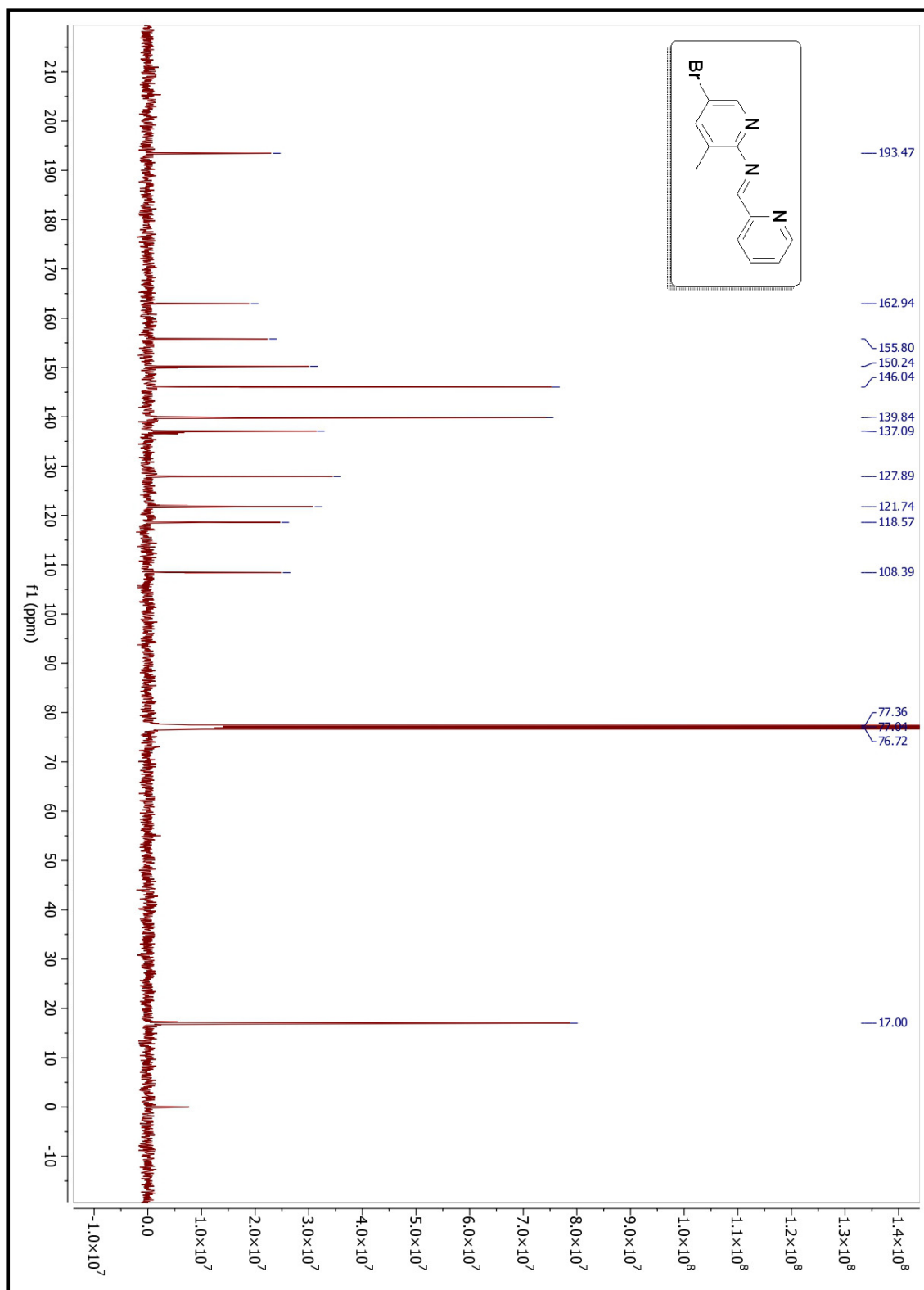
¹³C NMR of Compound 3a



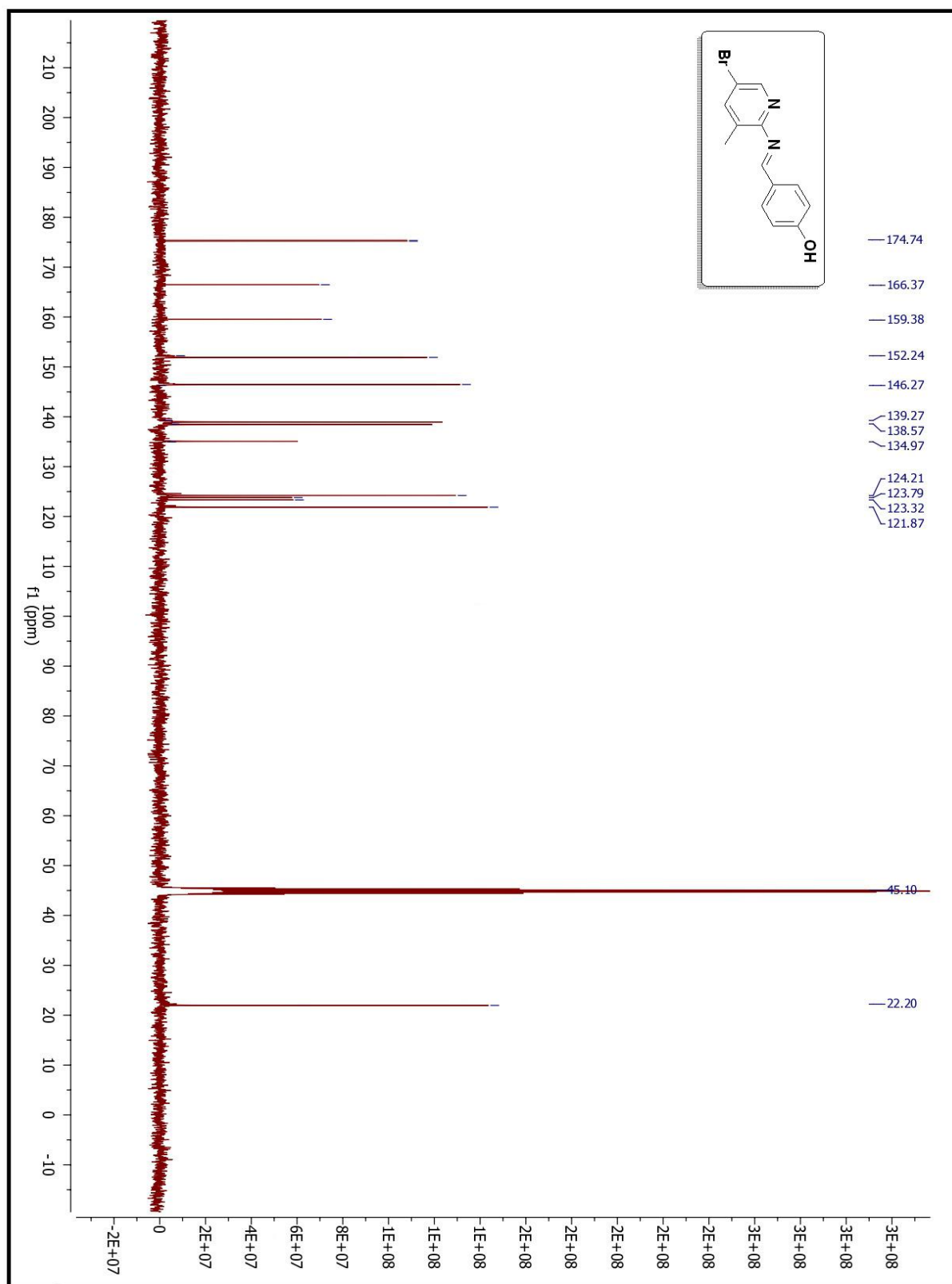
13C of Compound 3b



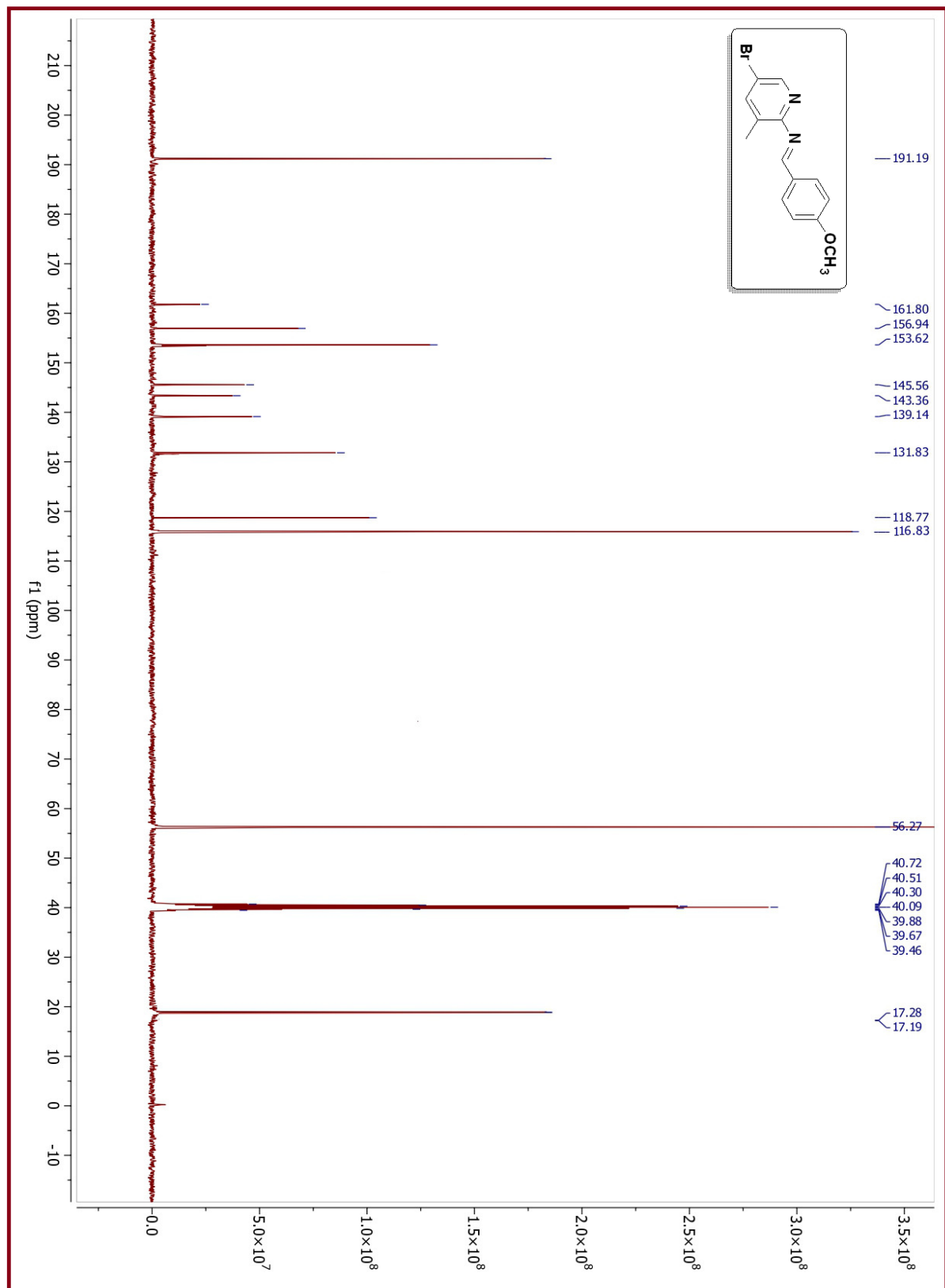
13C of Compound 3c



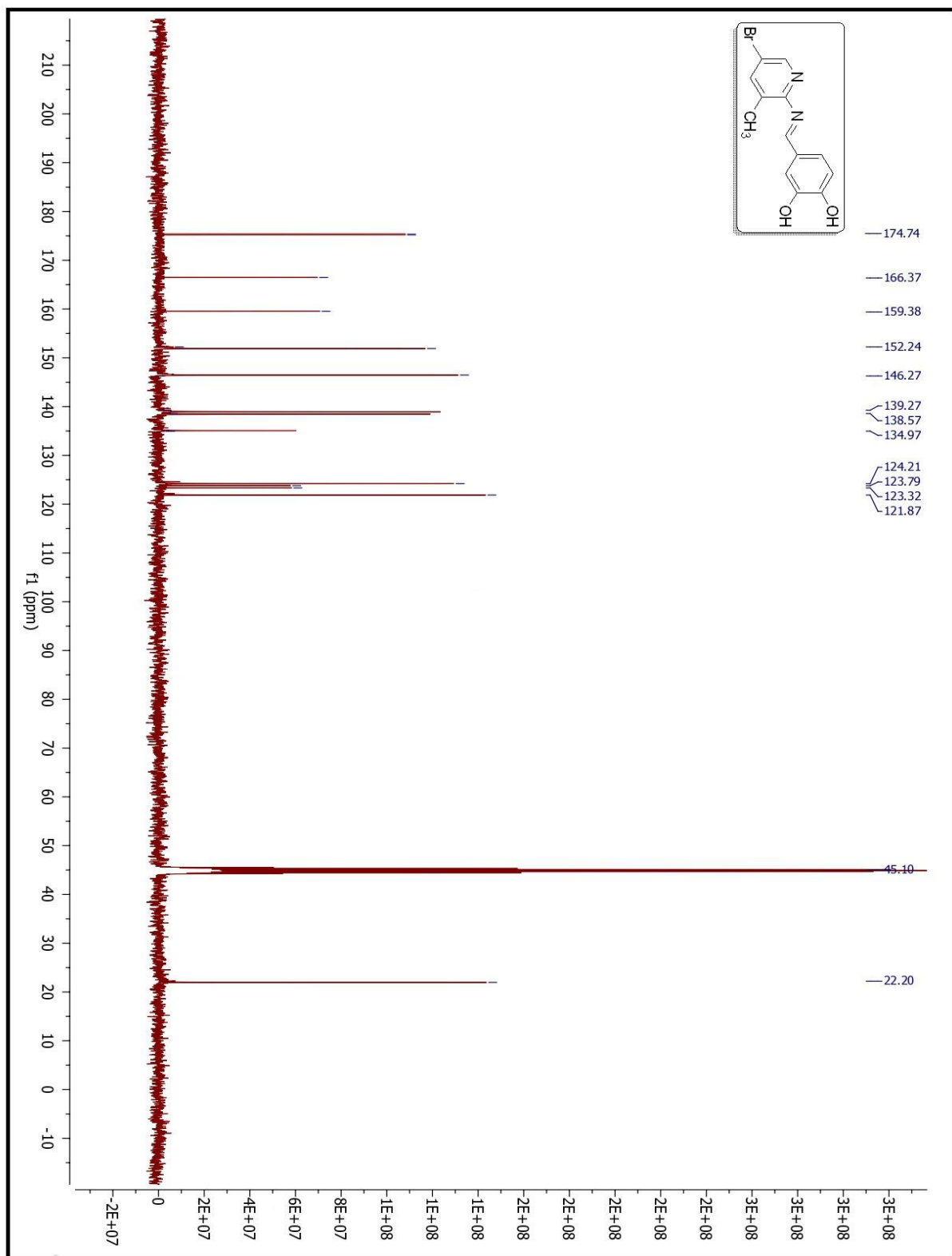
13C NMR of Compound 3d



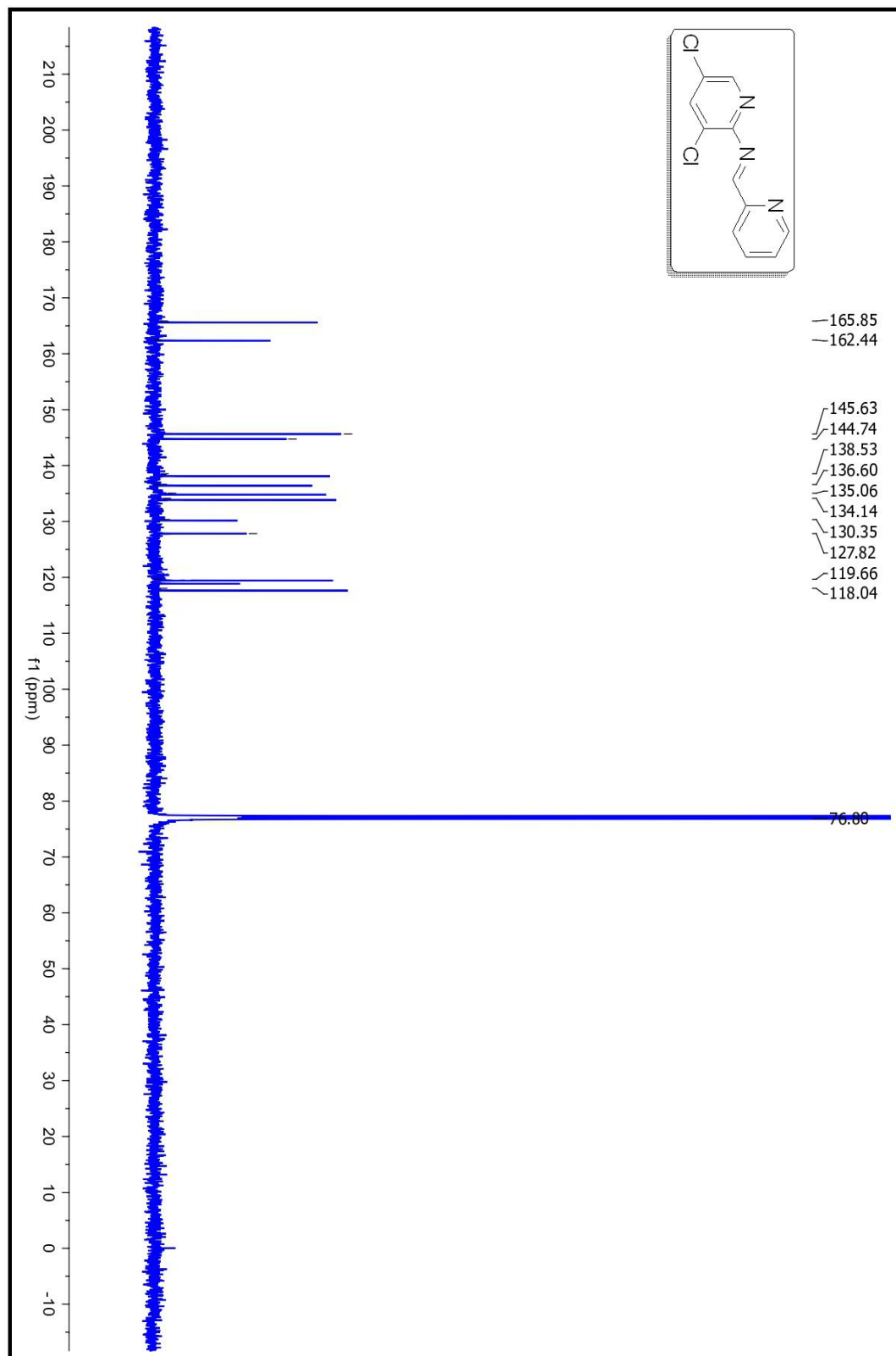
13C NMR of Compound 3e



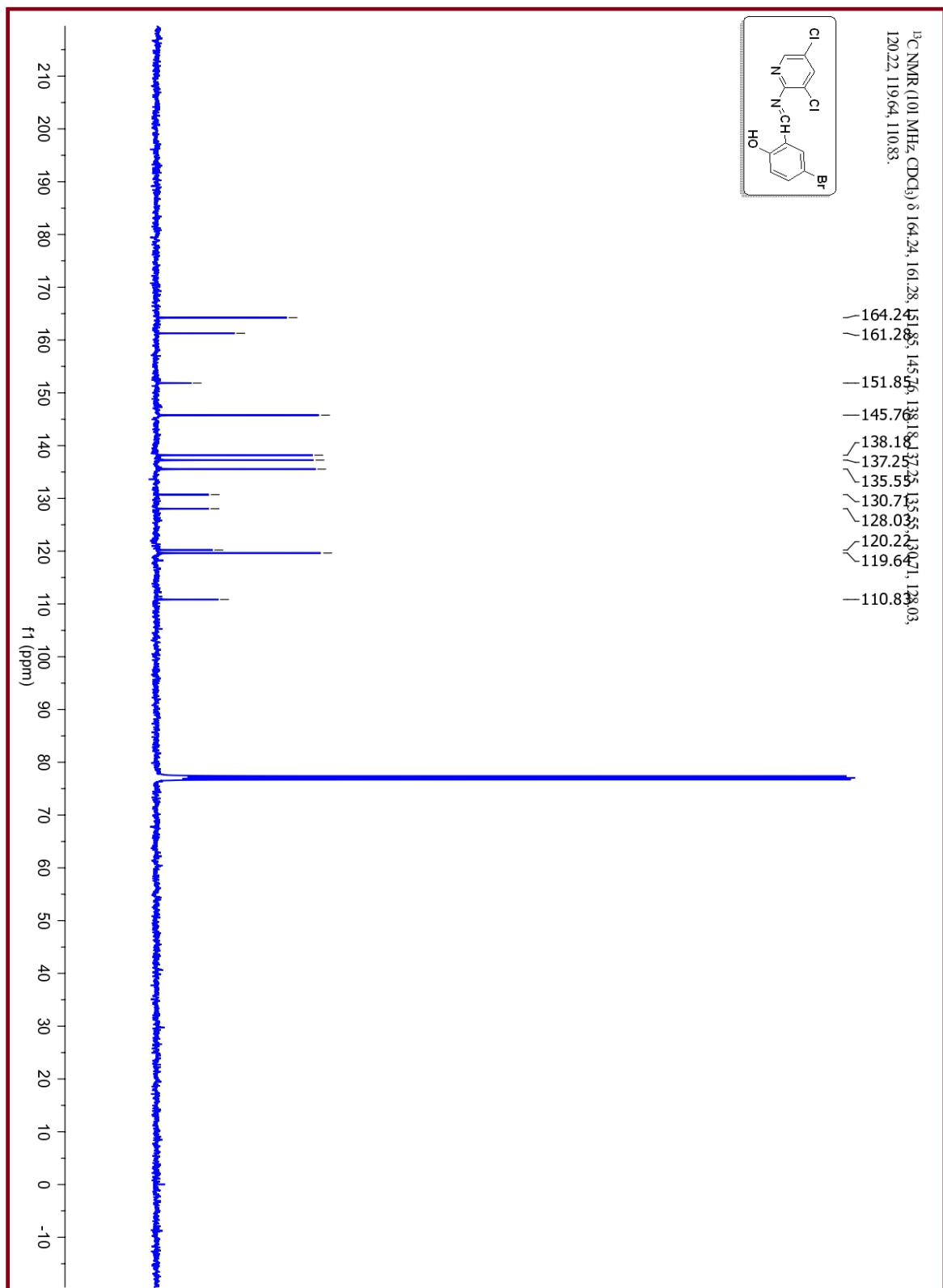
13C NMR of Compound 3f



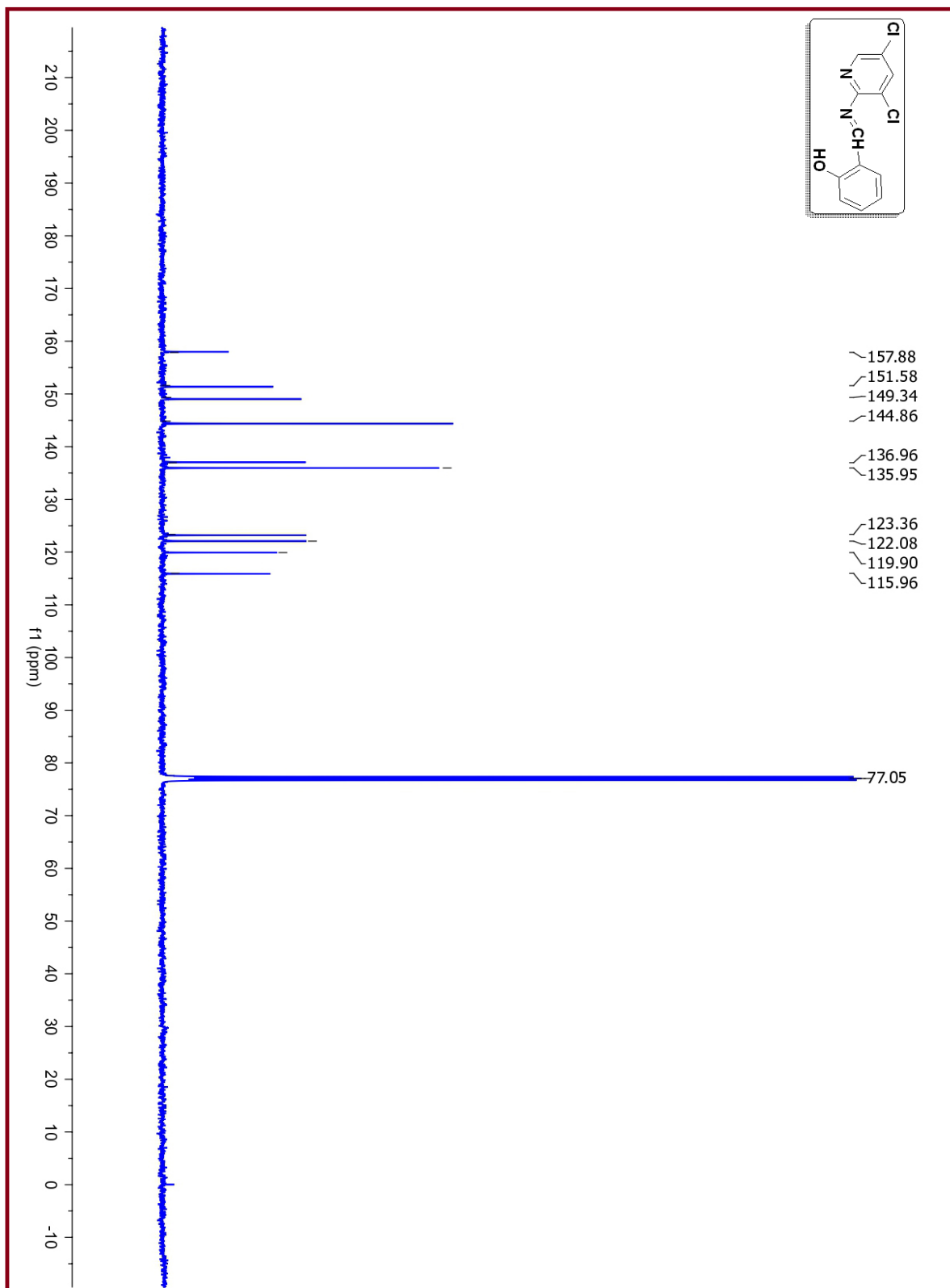
13C NMR of Compound 3g



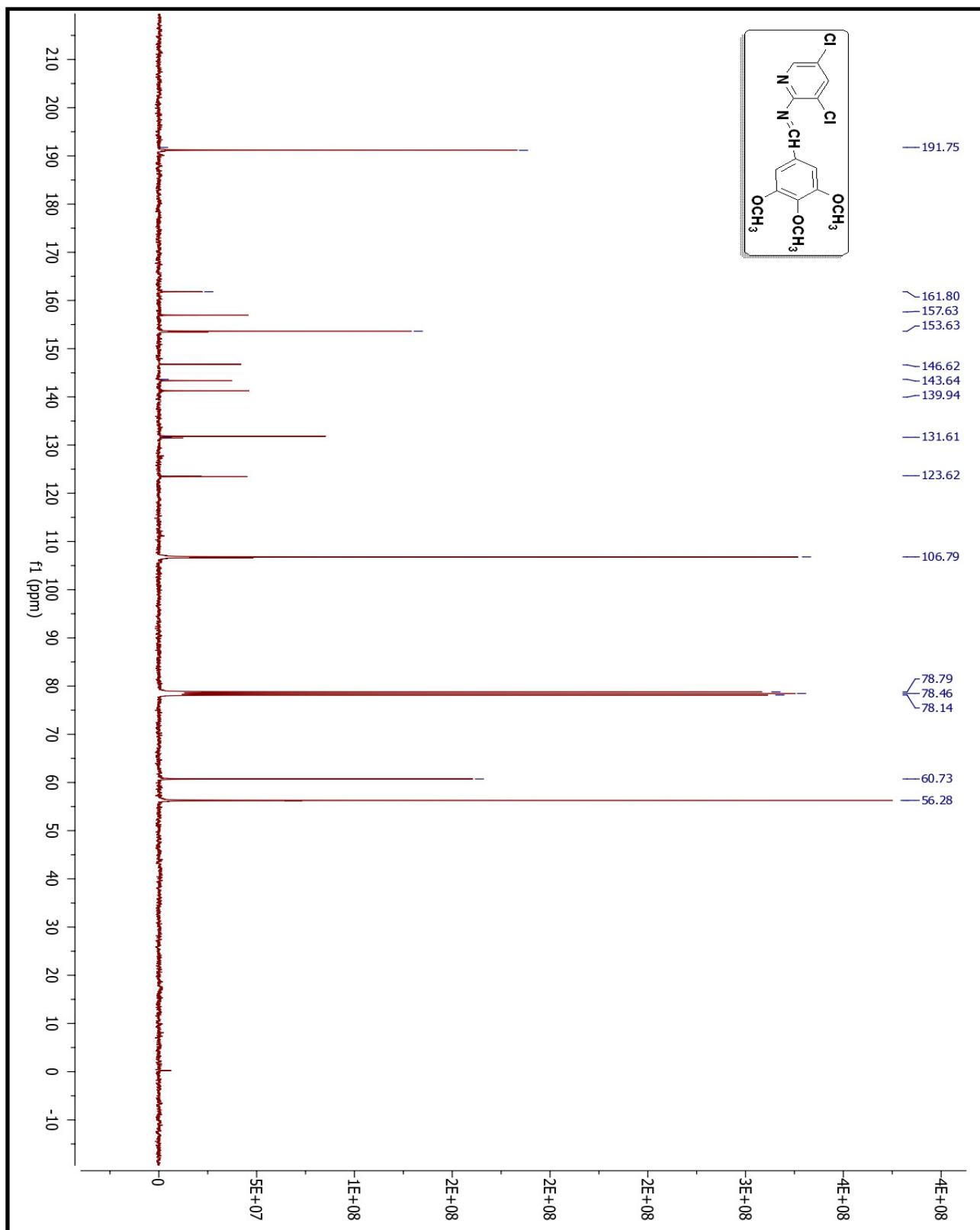
13C NMR of Compound 3h



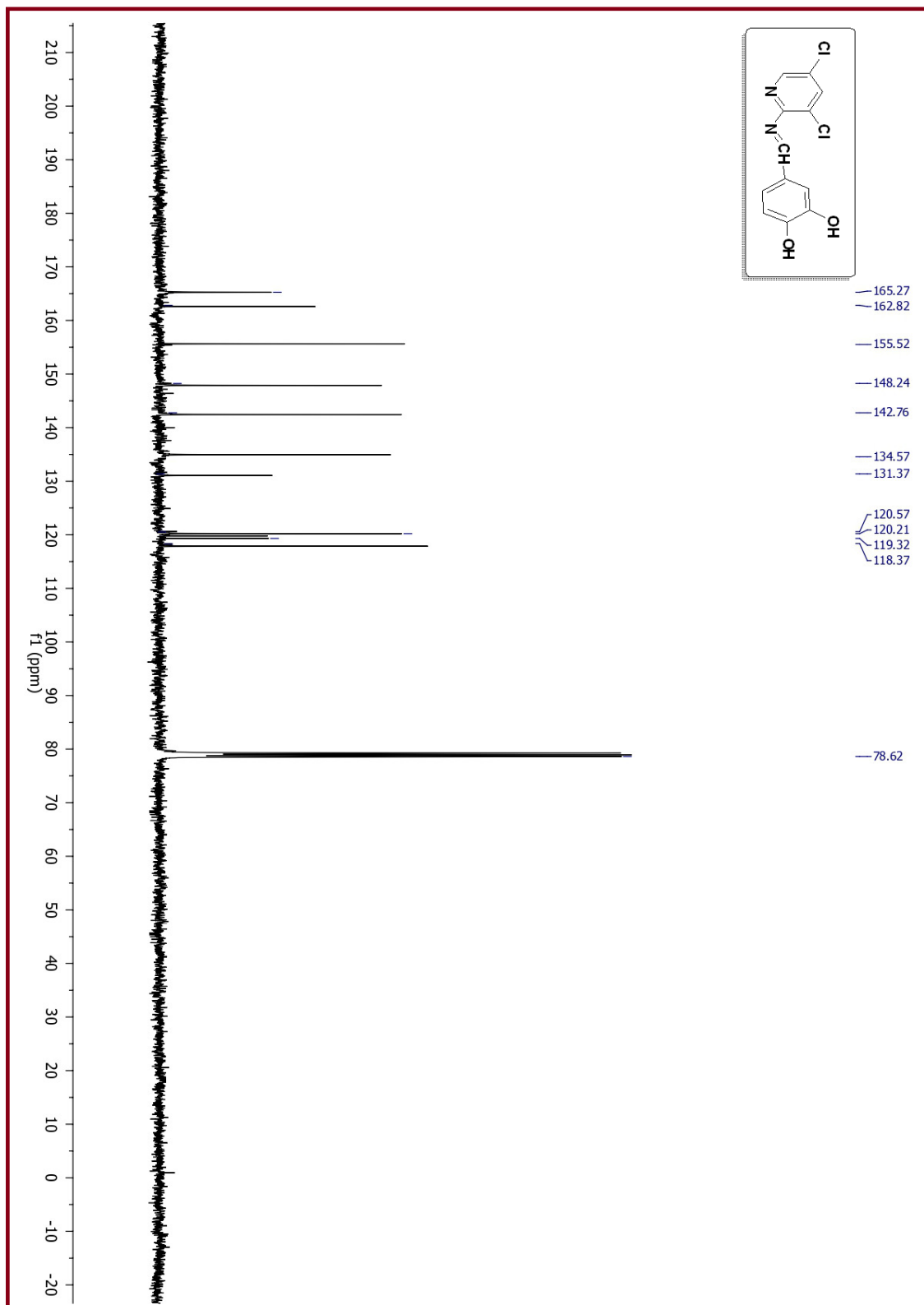
13C NMR of Compound 3i



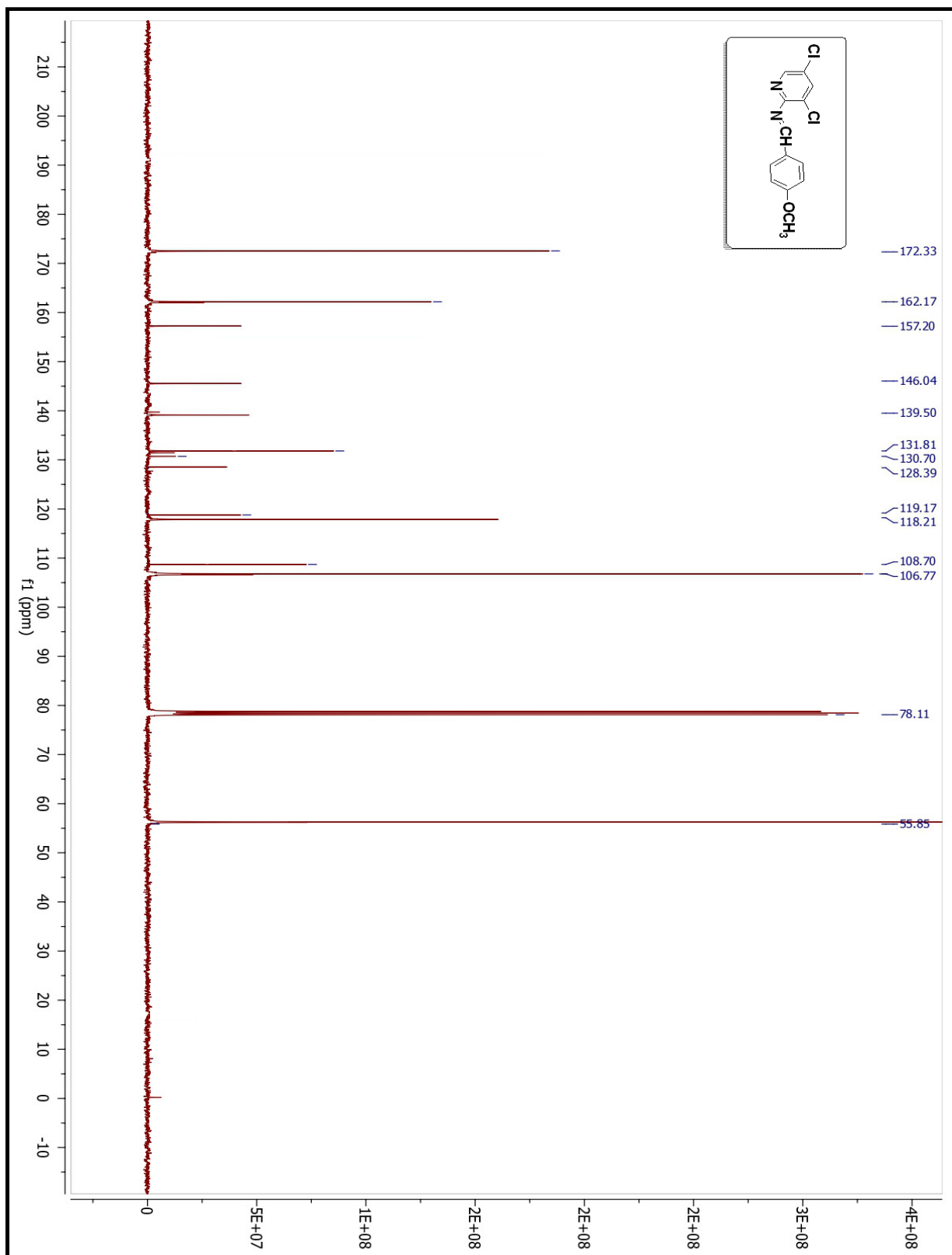
¹³C NMR of Compound 3j



13C NMR of Compound 3k



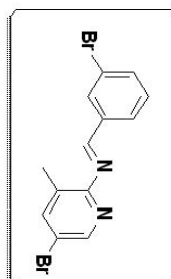
13C NMR of Compound 3l



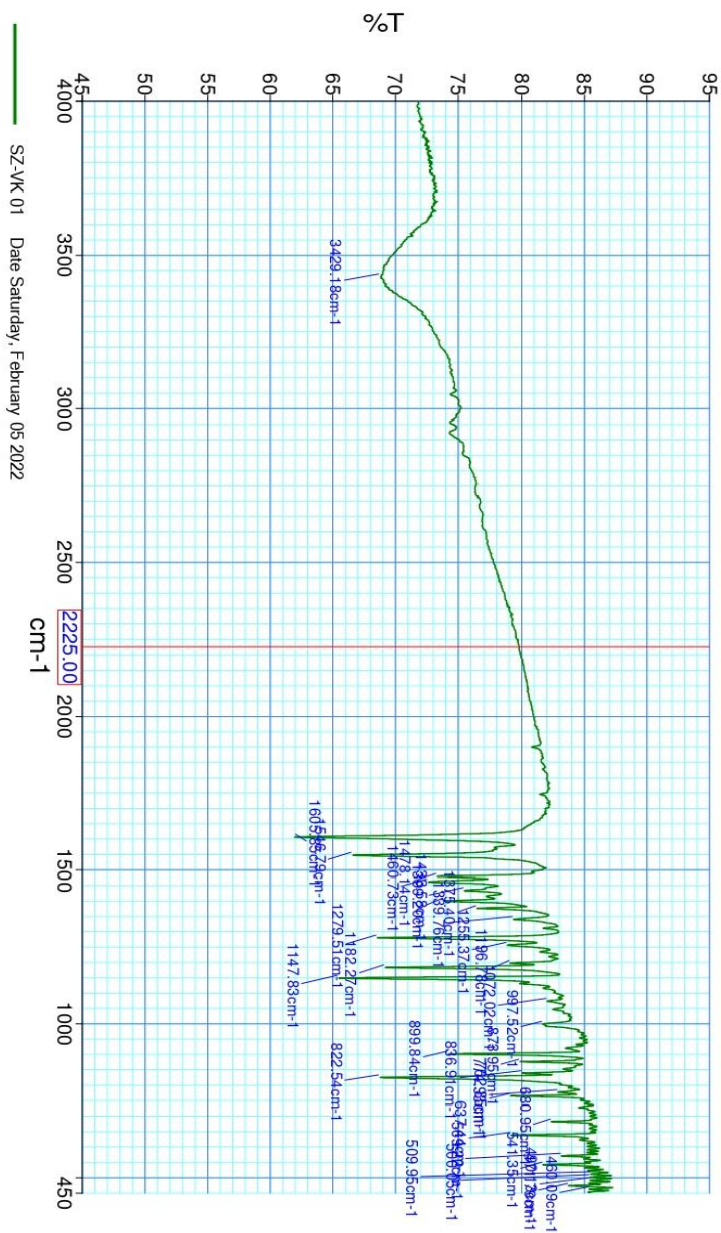
IR Spectra of Compound 3a (SZ-VK-01)

Analyst
Date

QCANL-01
Saturday, February 05, 2022 3:54 PM



PerkinElmer Spectrum IR Version 10.6.0
Saturday, February 05, 2022 3:54 PM

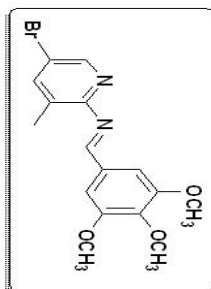


SZ-VK 01 Date Saturday, February 05 2022

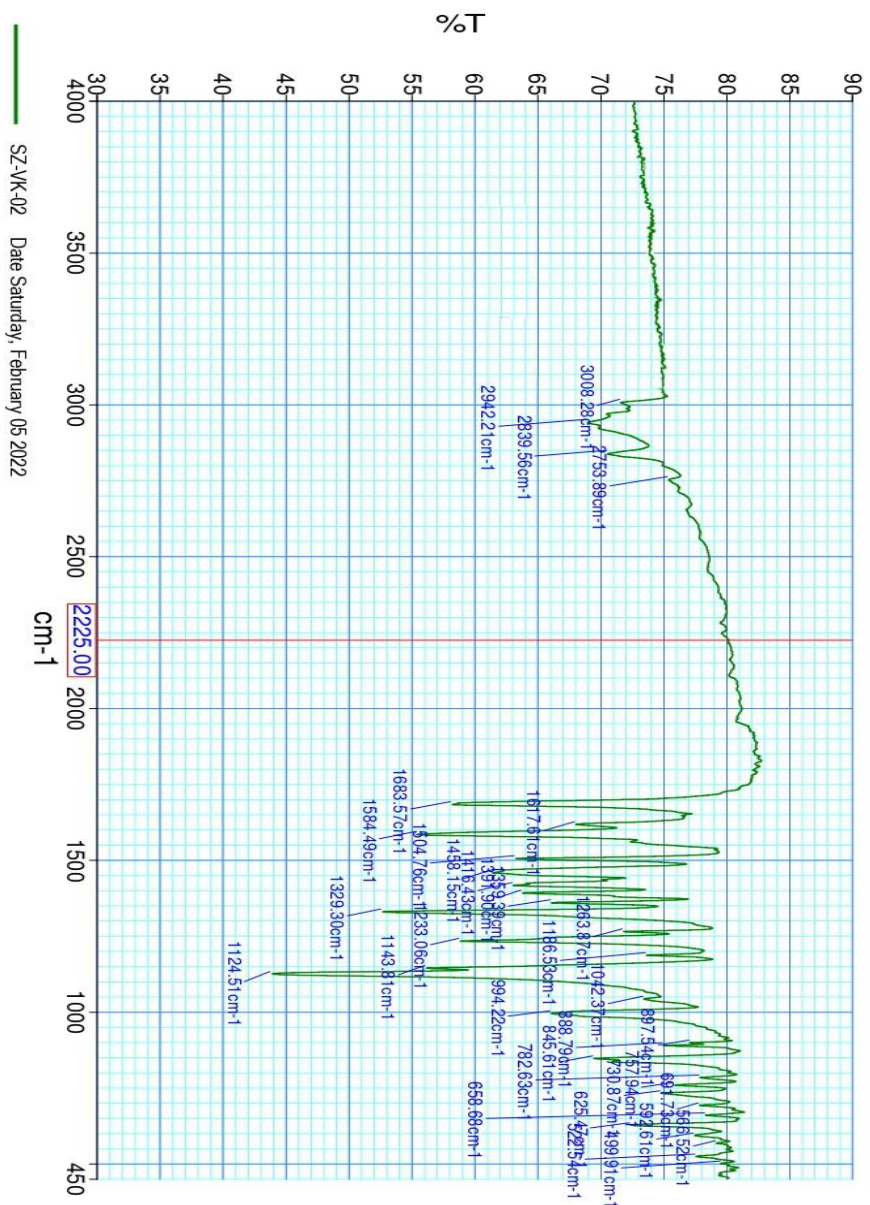
IR Spectra of Compound 3b (SZ-VK-02)

Analyst
Date

QCANL-01
Saturday, February 05, 2022 4:14 PM

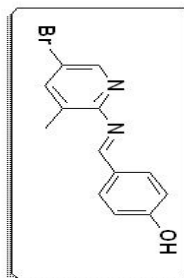


PerkinElmer Spectrum IR Version 10.6.0
Saturday, February 05, 2022 4:14 PM

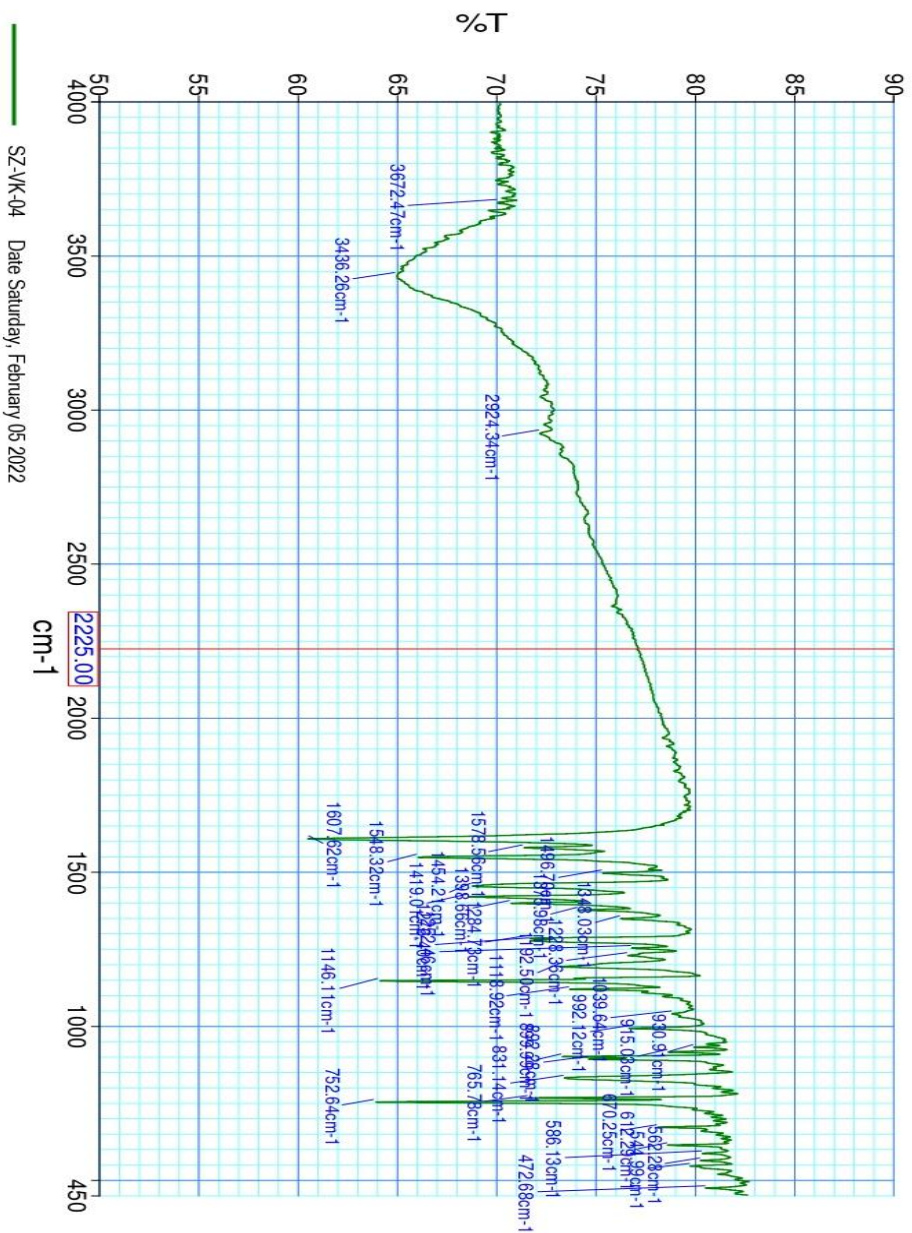


IR Spectra of Compound 3d (SZ-VK-04)

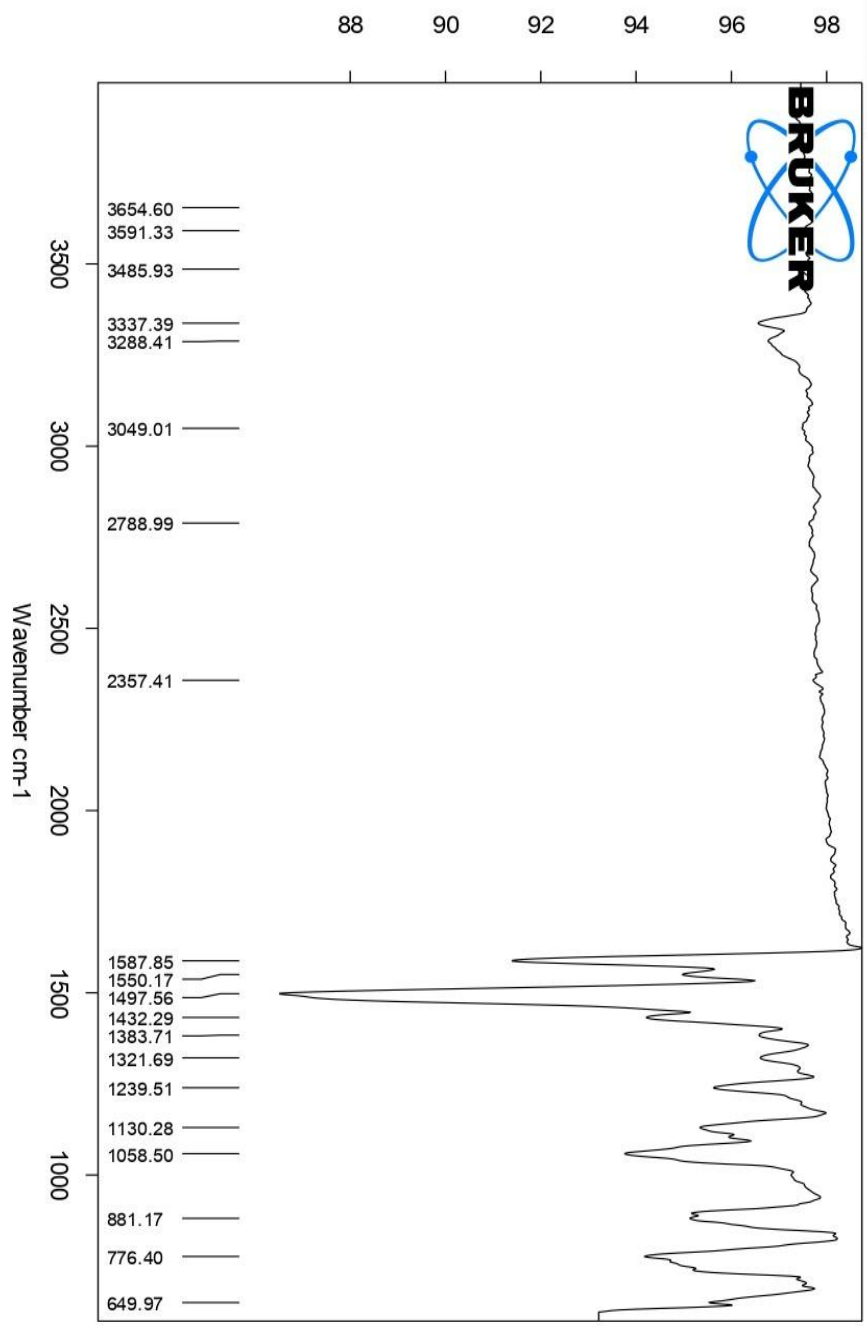
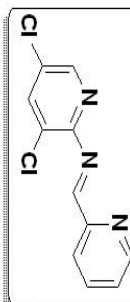
Analyst: QCANL-01
Date: Saturday, February 05, 2022 4:10 PM



PerkinElmer Spectrum IR Version 10.6.0
Saturday, February 05, 2022 4:10 PM

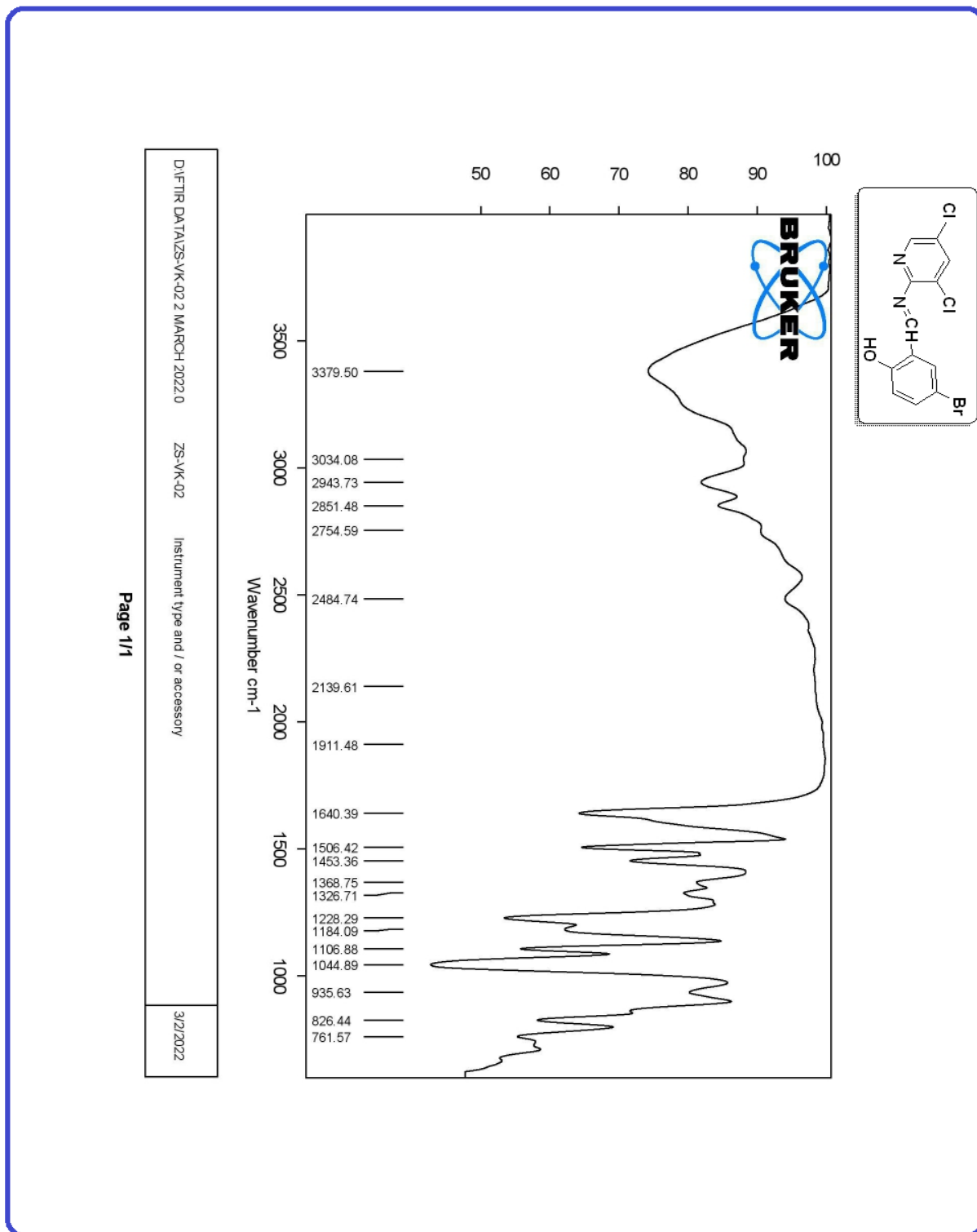


IR Spectra of Compound 3g (ZS-VK-01)

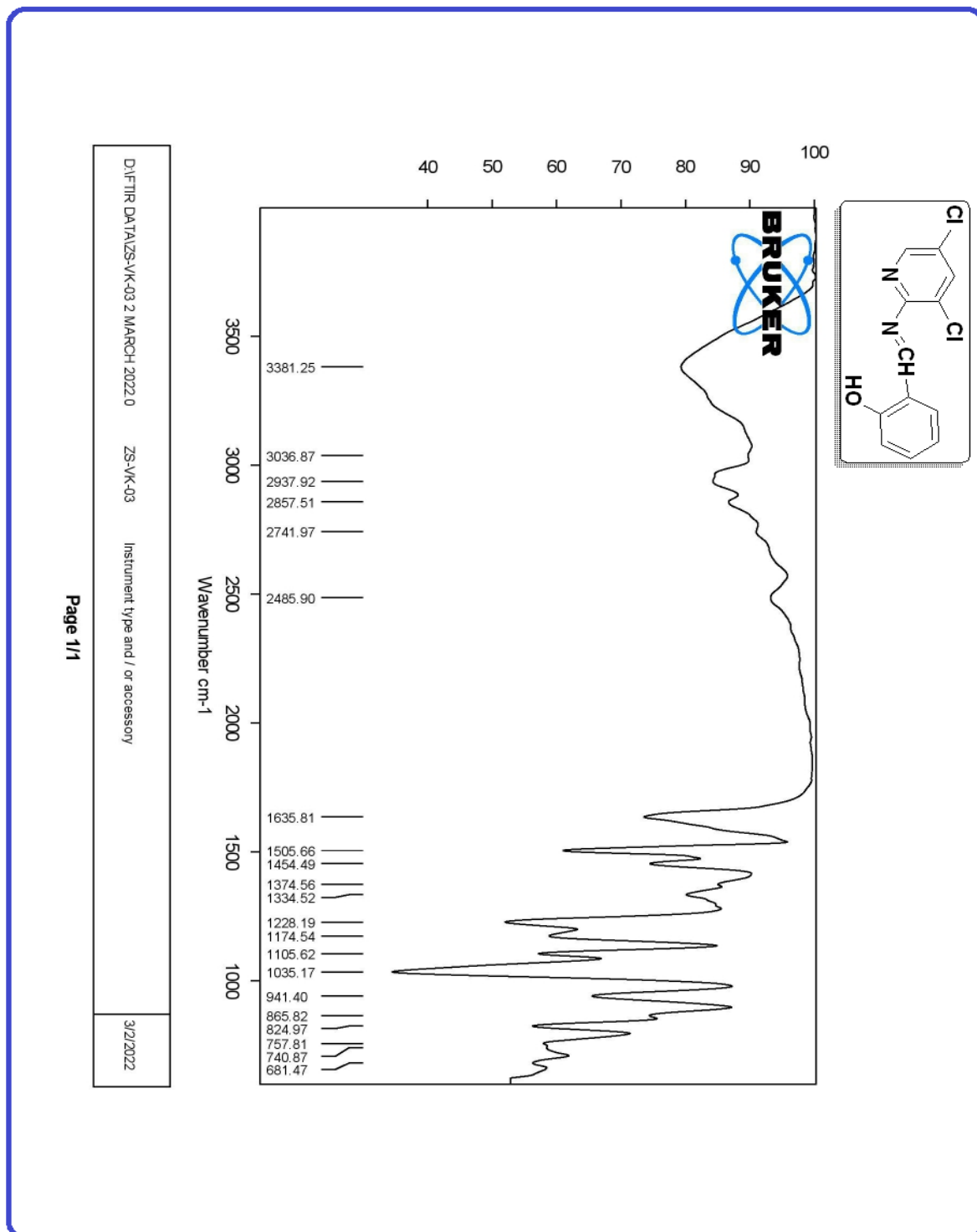


D:\FTIR DATA\ZS-VK-01 2 MARCH 2022.0 ZS-VK-01 Instrument type and / or accessory

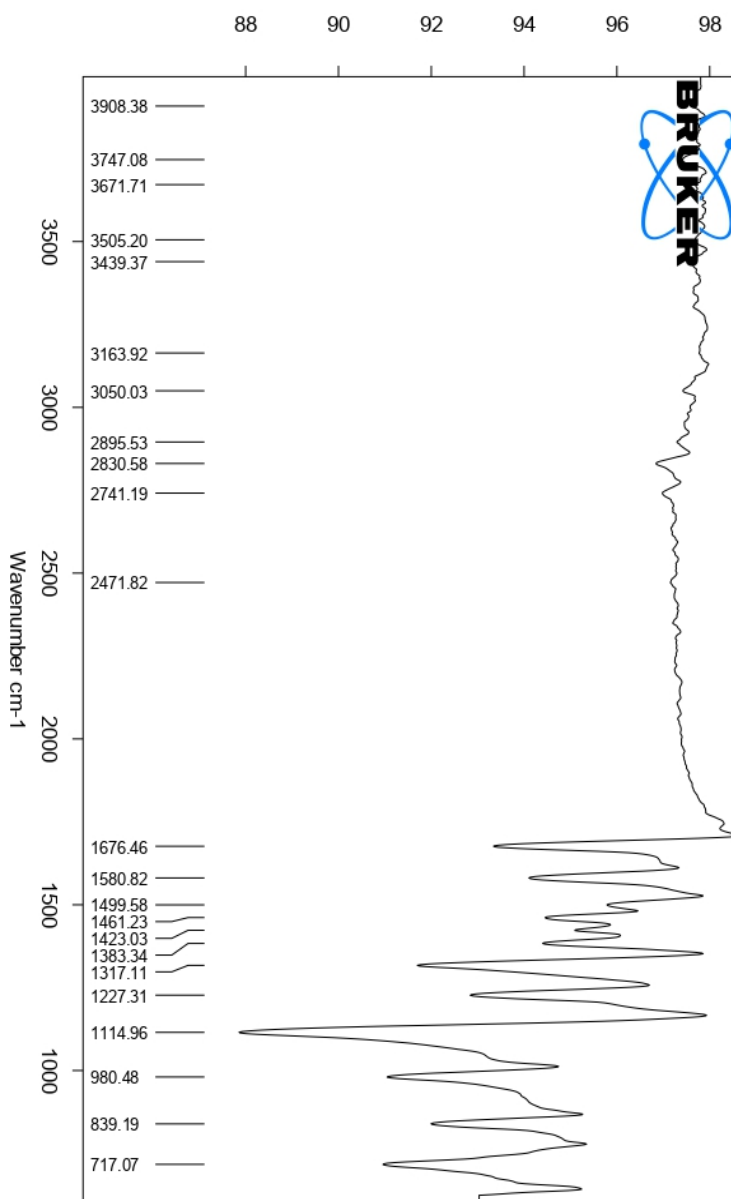
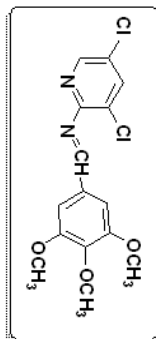
IR Spectra of Compound 3h (ZS-VK-02)



IR Spectra of Compound 3i (ZS-VK-03)



IR Spectra of Compound 3j (ZS-VK-04)



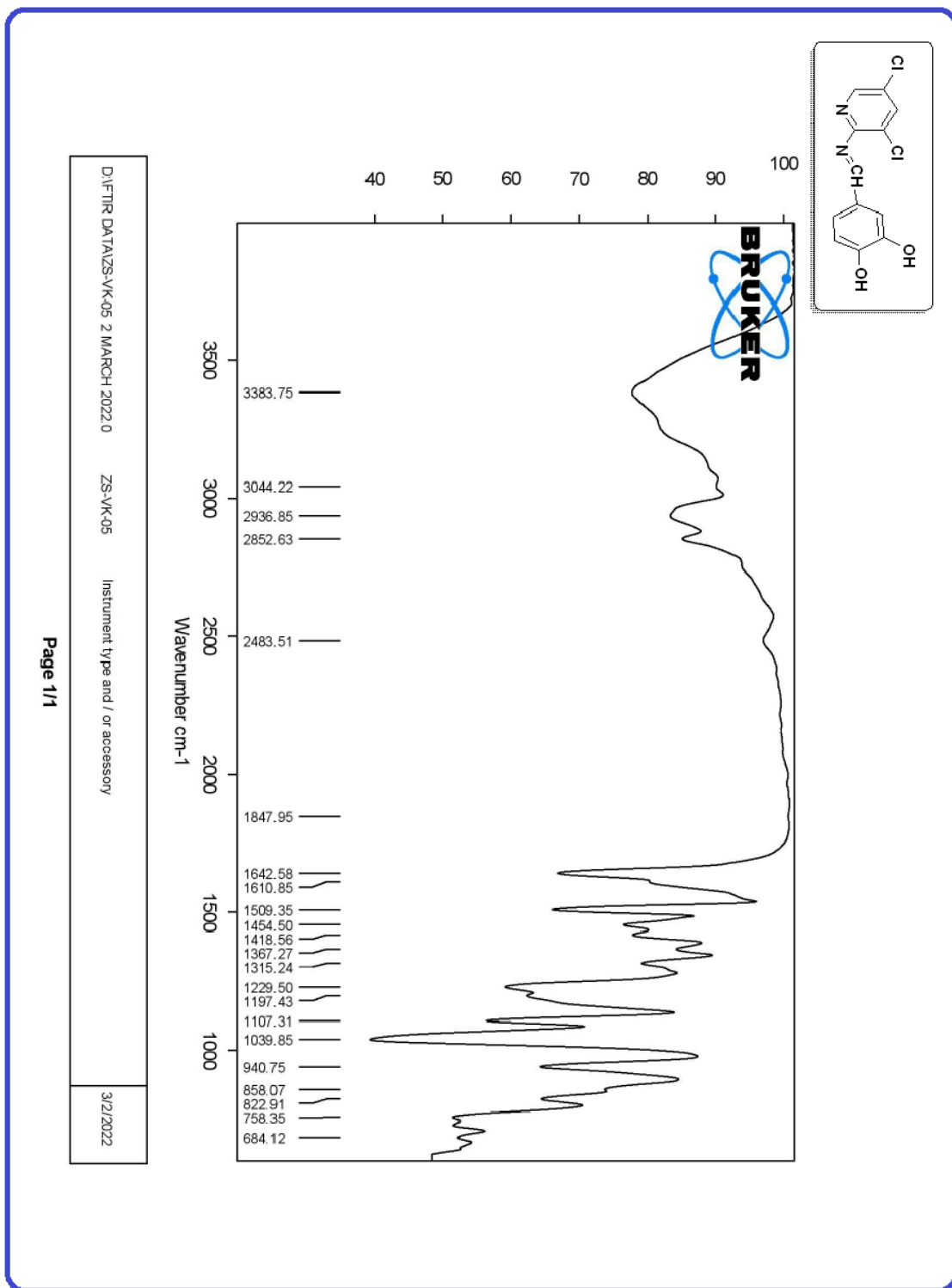
D:\FTIR DATA\ZS-VK-04 2 MARCH 2022.0

ZS-VK-04

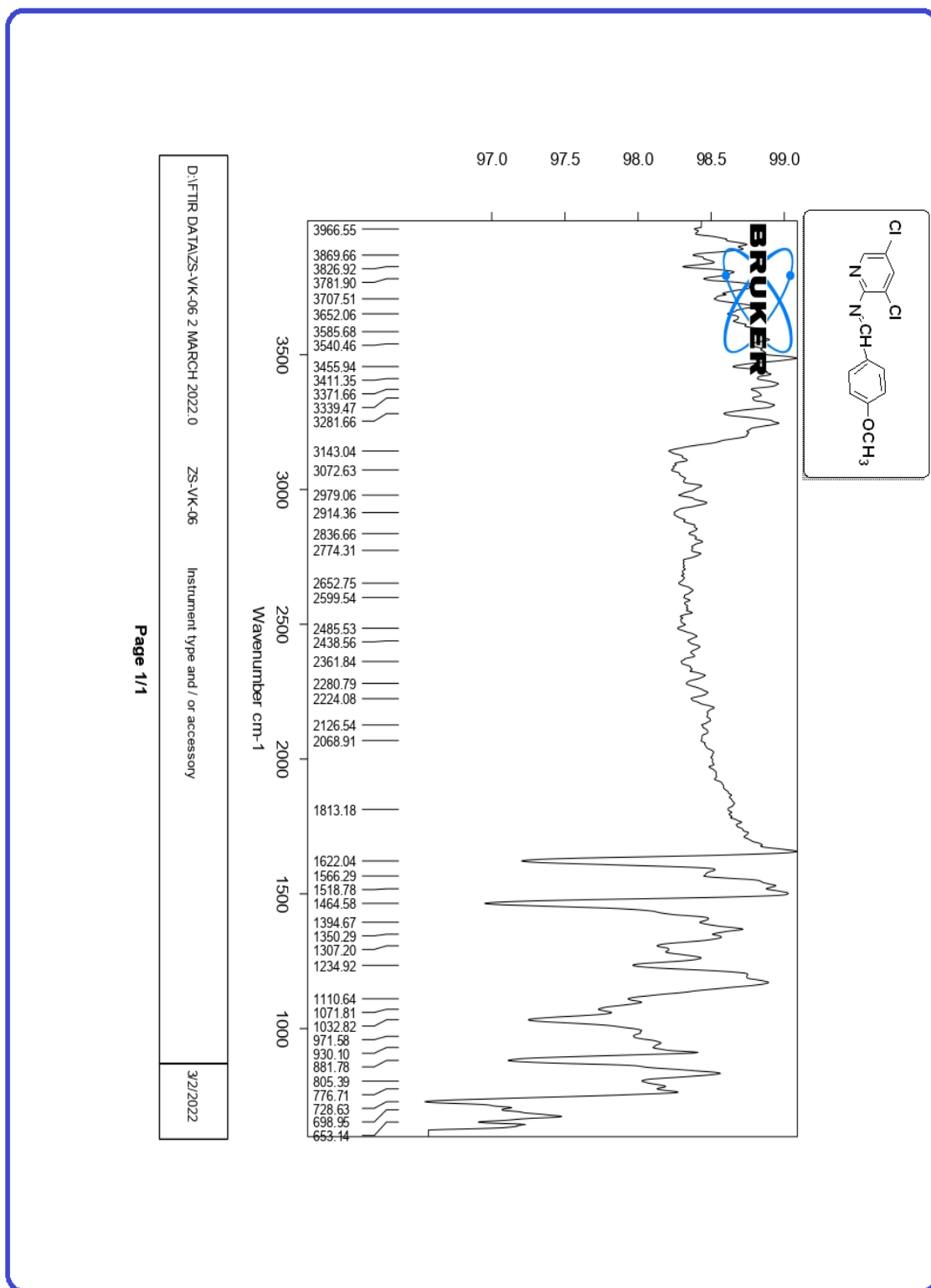
Instrument type and / or accessory

3/2/2022

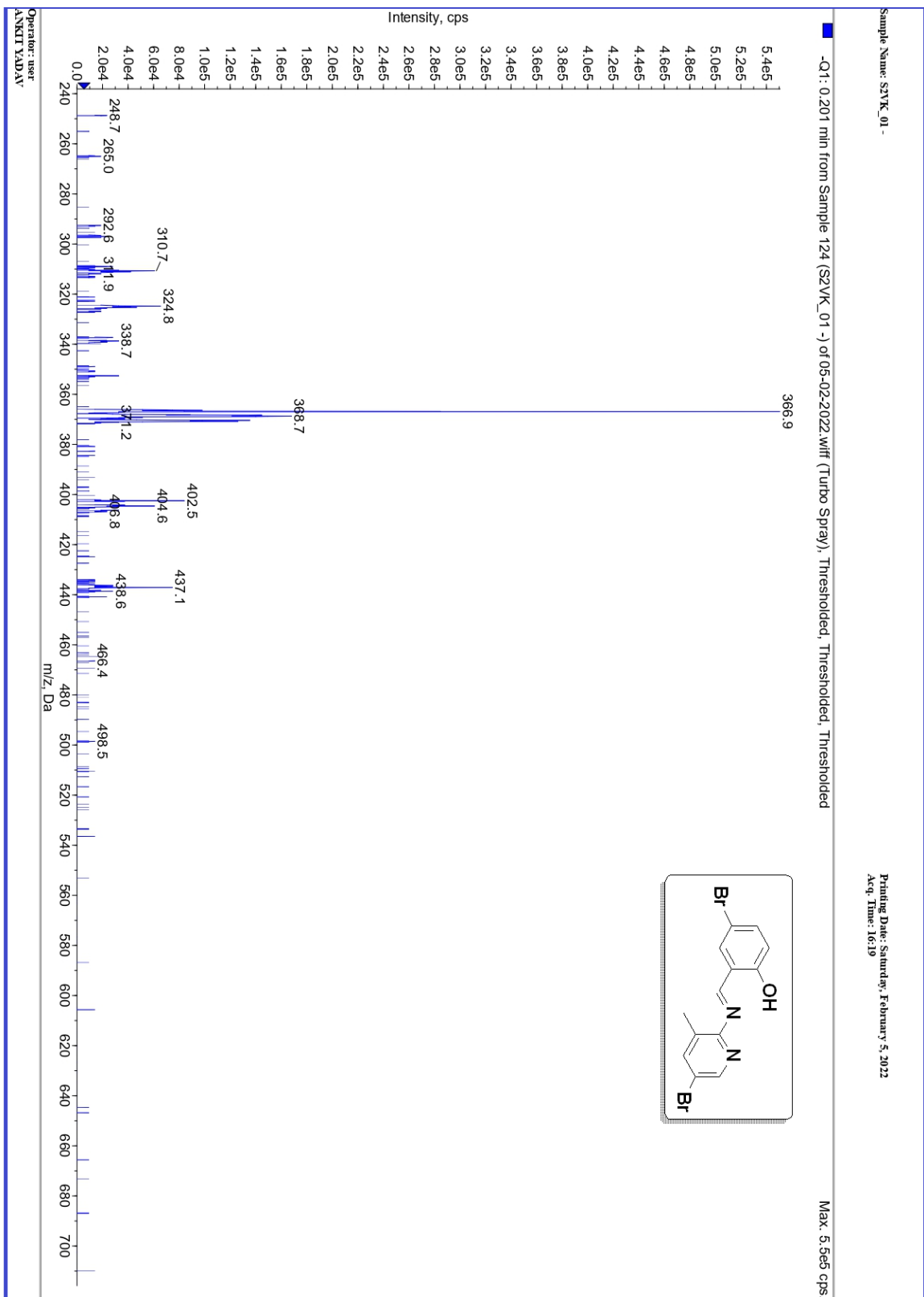
IR Spectra of Compound 3k (ZS-VK-05)



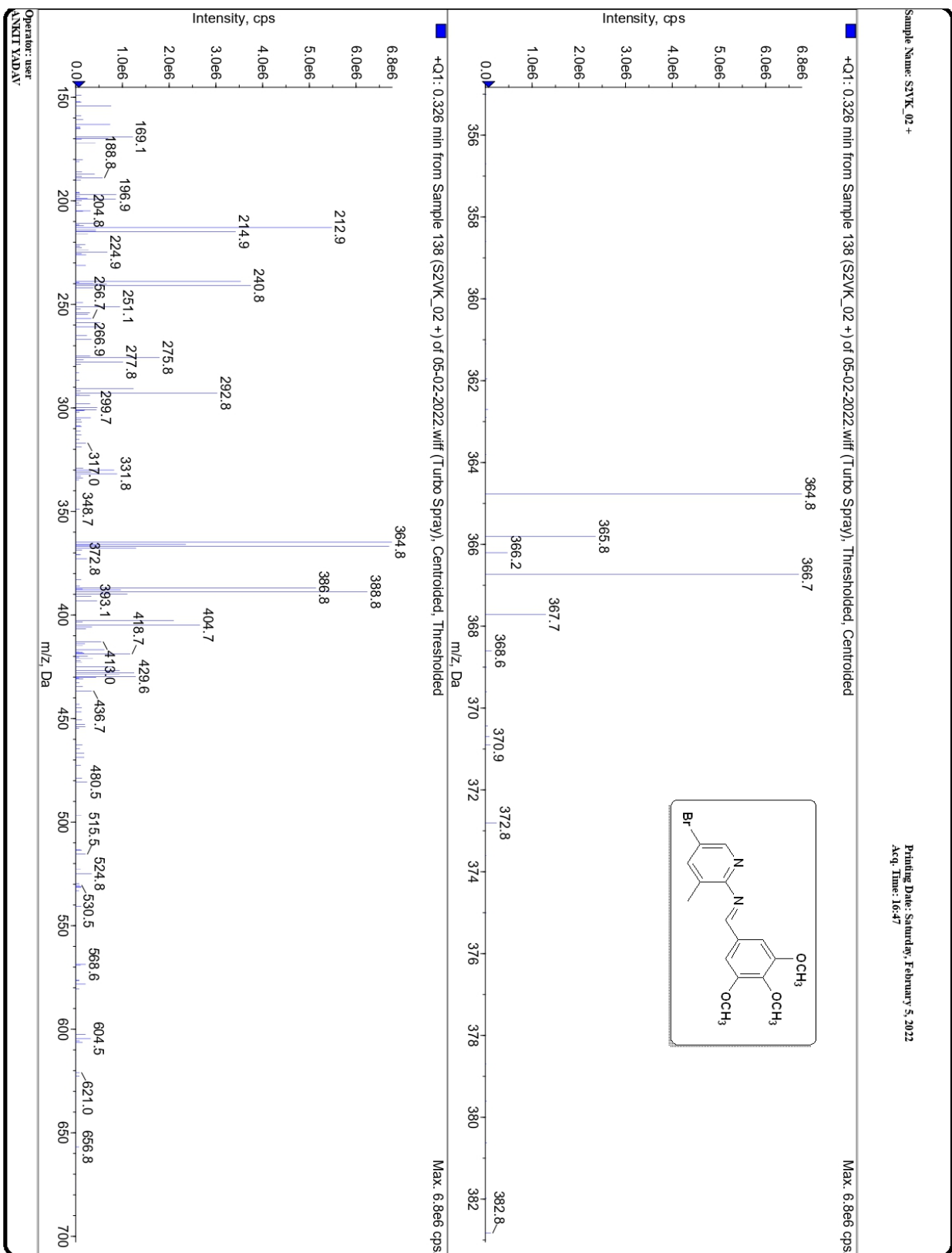
IR Spectra of Compound 31 (ZS-VK-06)



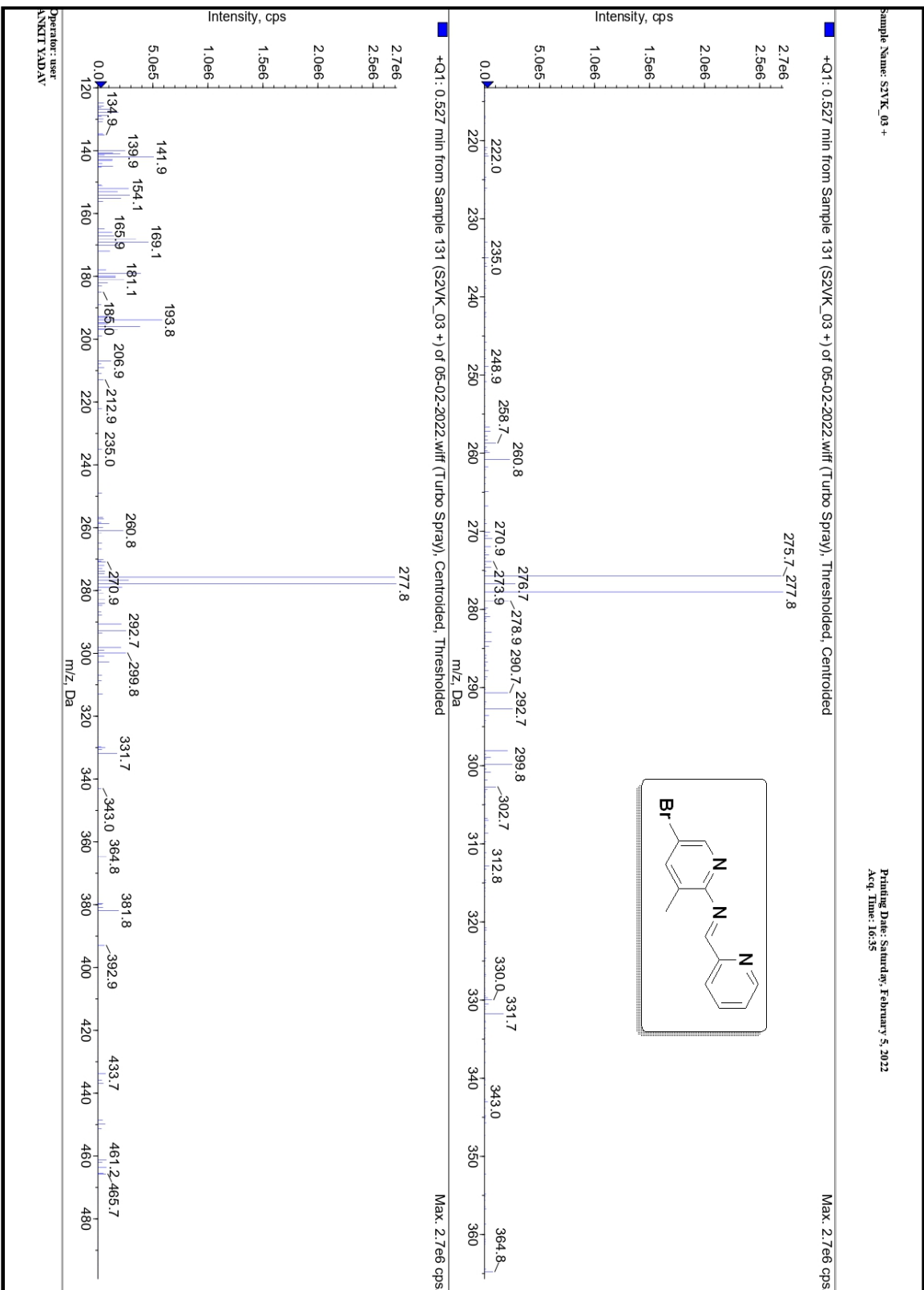
Mass Spectrum of Compound 3a (SZ-VK-01)



Mass Spectrum of Compound 3b (SZ-VK-02)



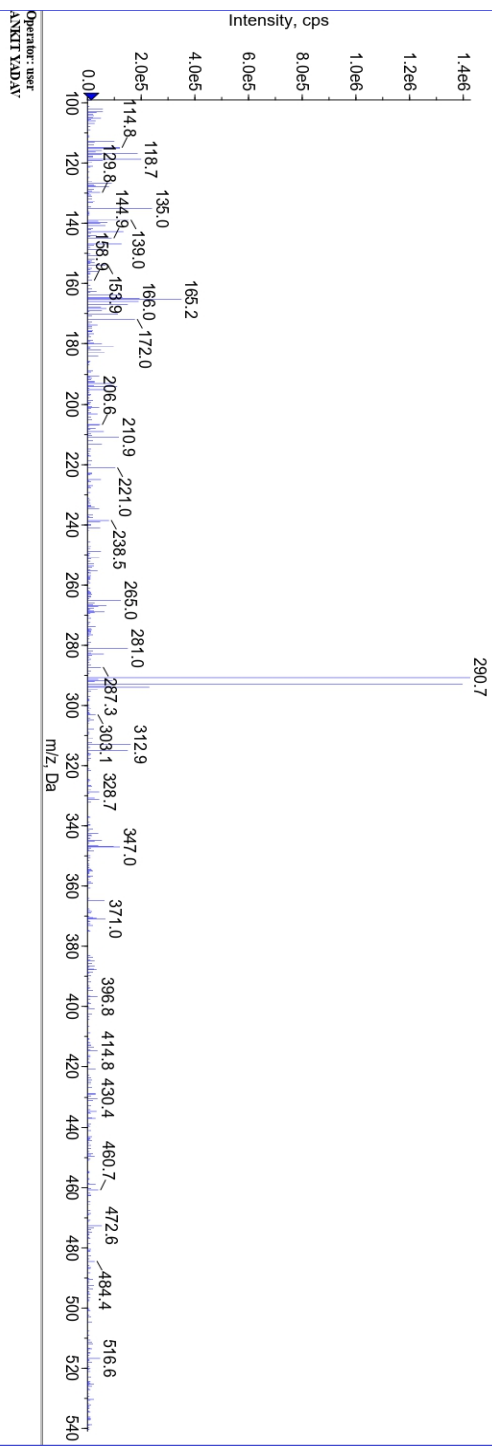
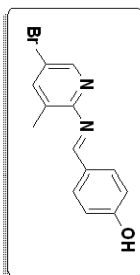
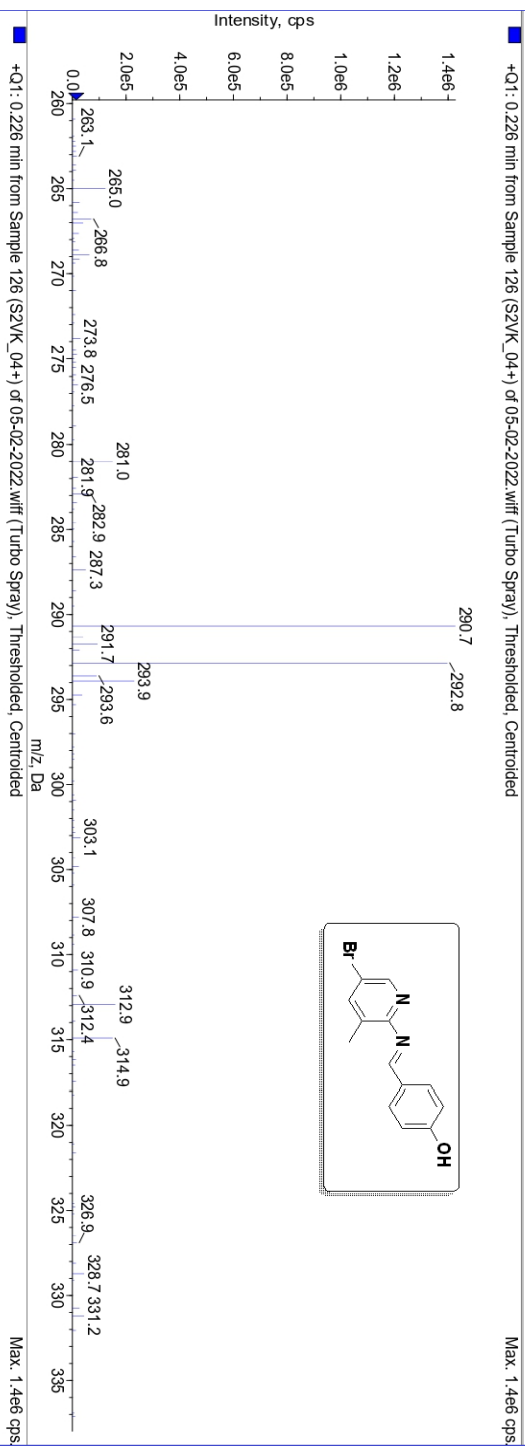
Mass Spectrum of Compound 3c (SZ-VK-03)



Mass Spectrum of Compound 3d (SZ-VK-04)

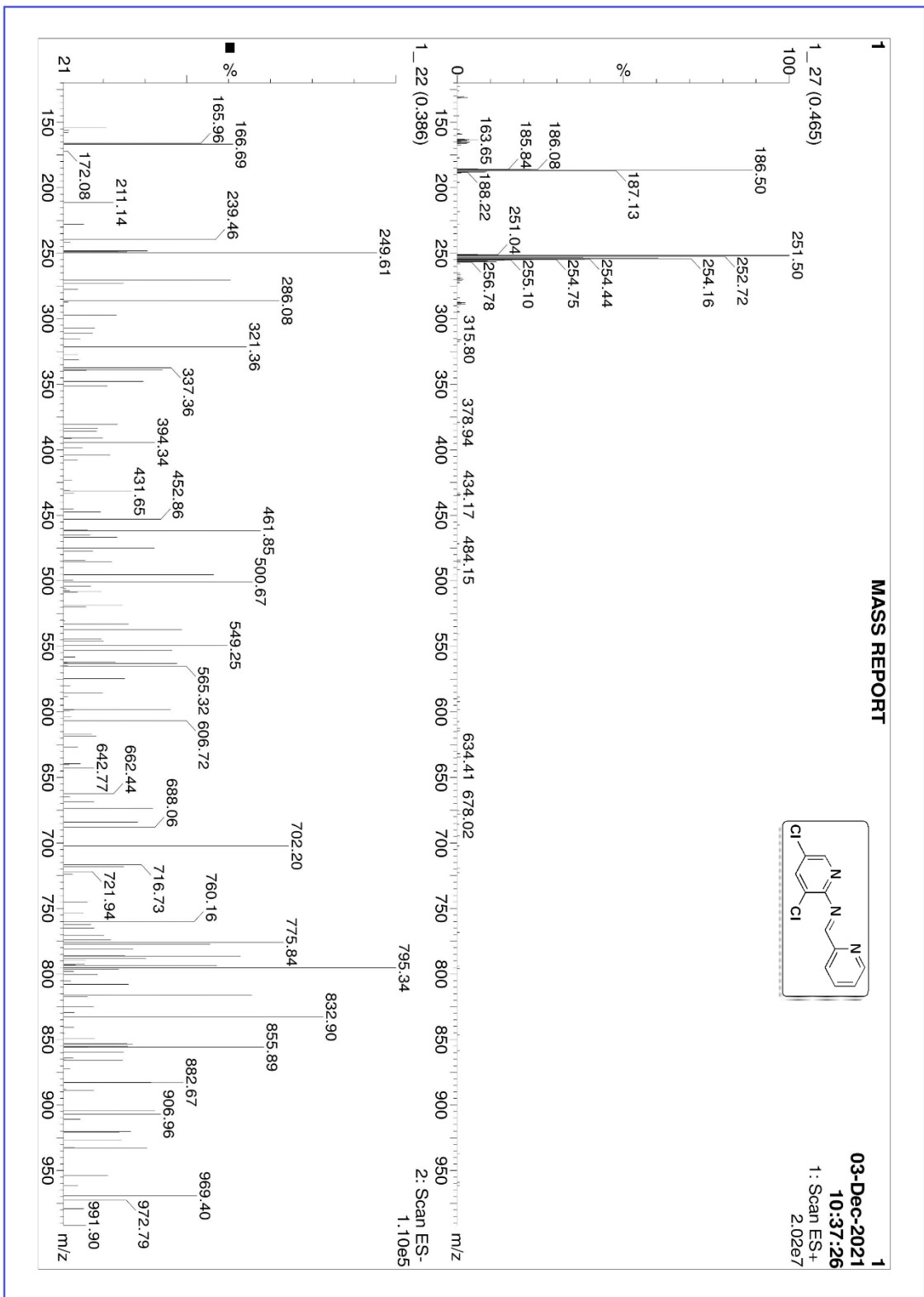
Sample Name: SZVK_04+

Printing Date: Saturday, February 5, 2022
Acq. Time: 16:24

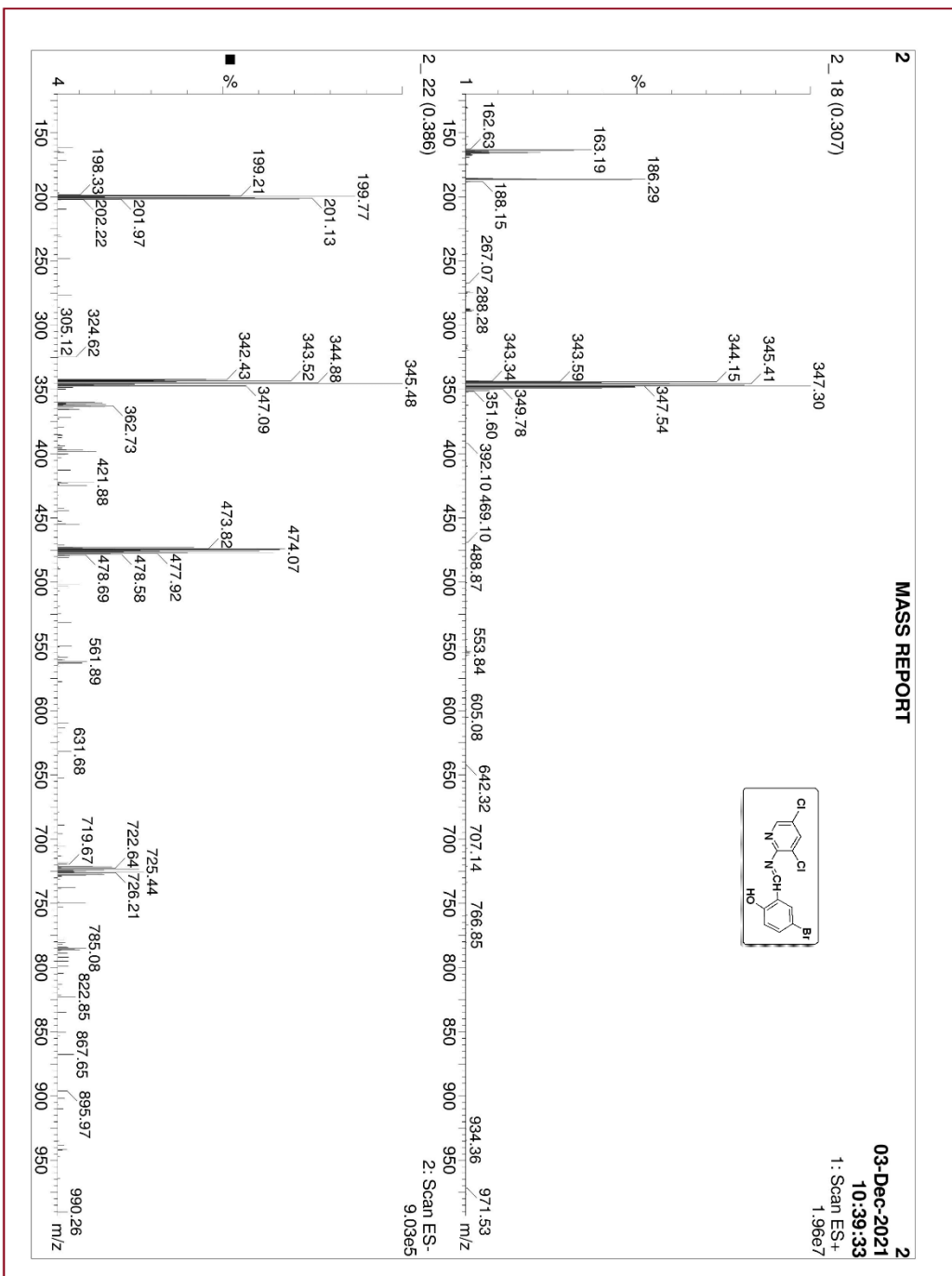


Operator: user
ANKIT YADAV

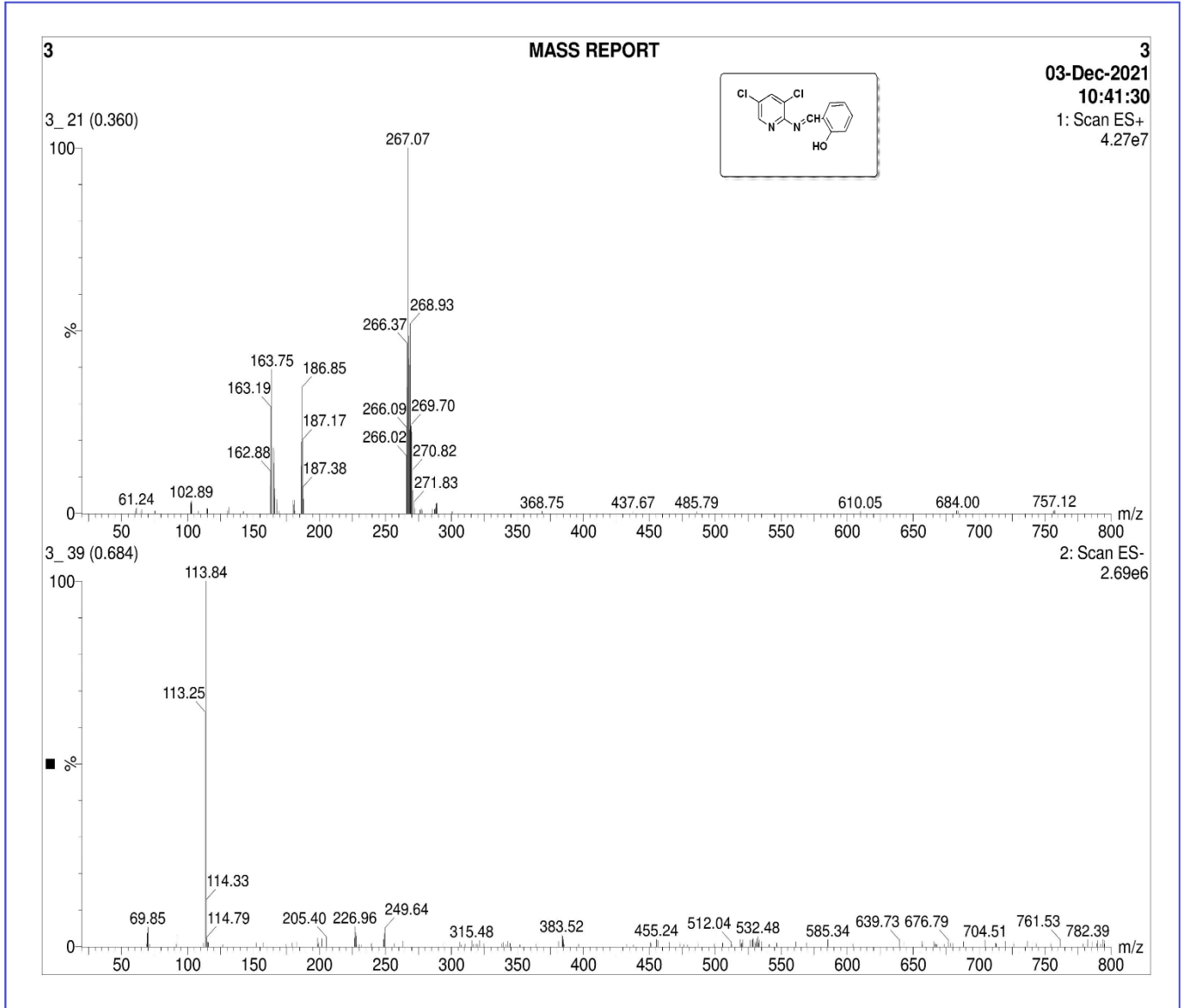
Mass Spectrum of Compound 3g (ZS-VK-01)



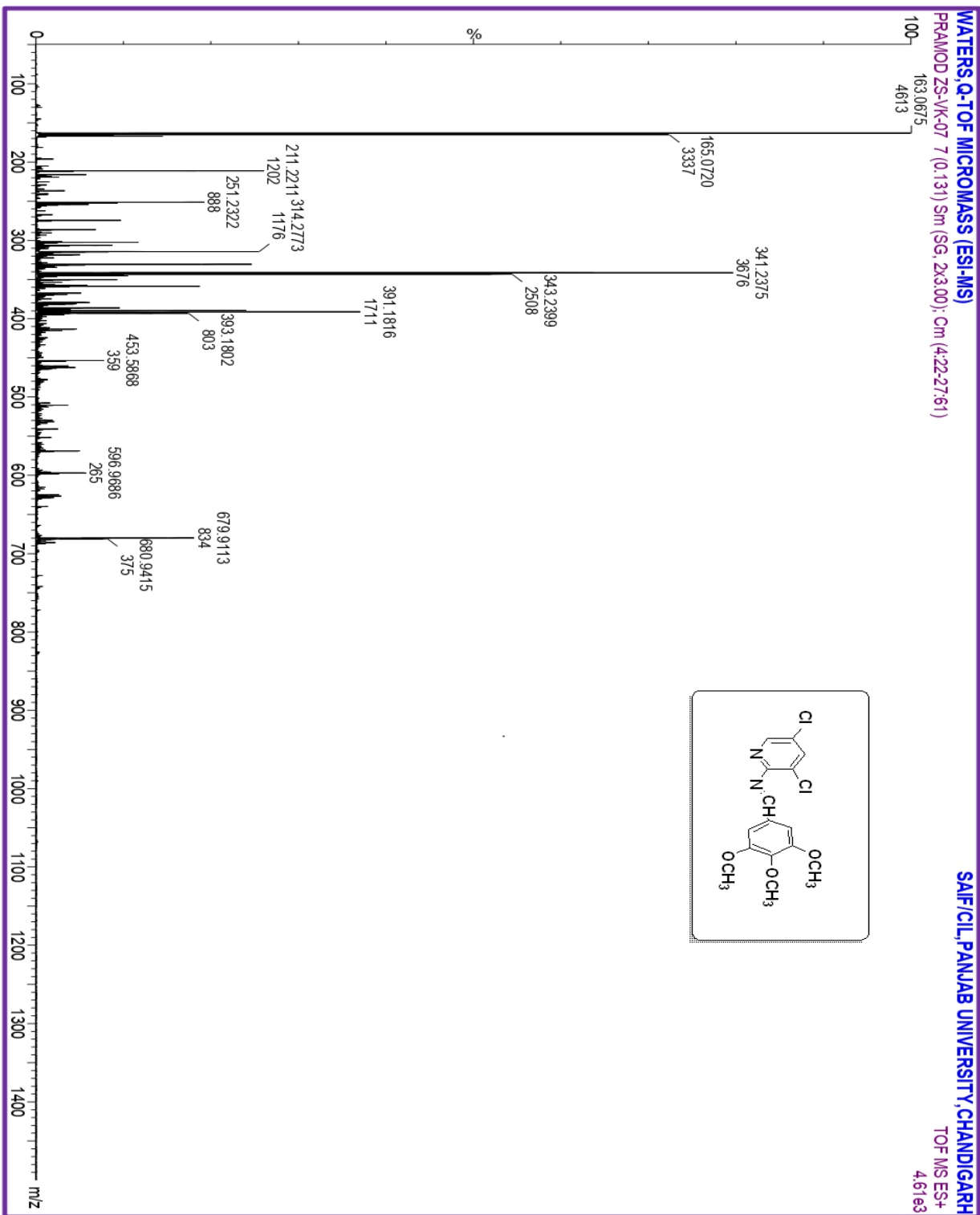
Mass Spectrum of Compound 3h (ZS-VK-02)



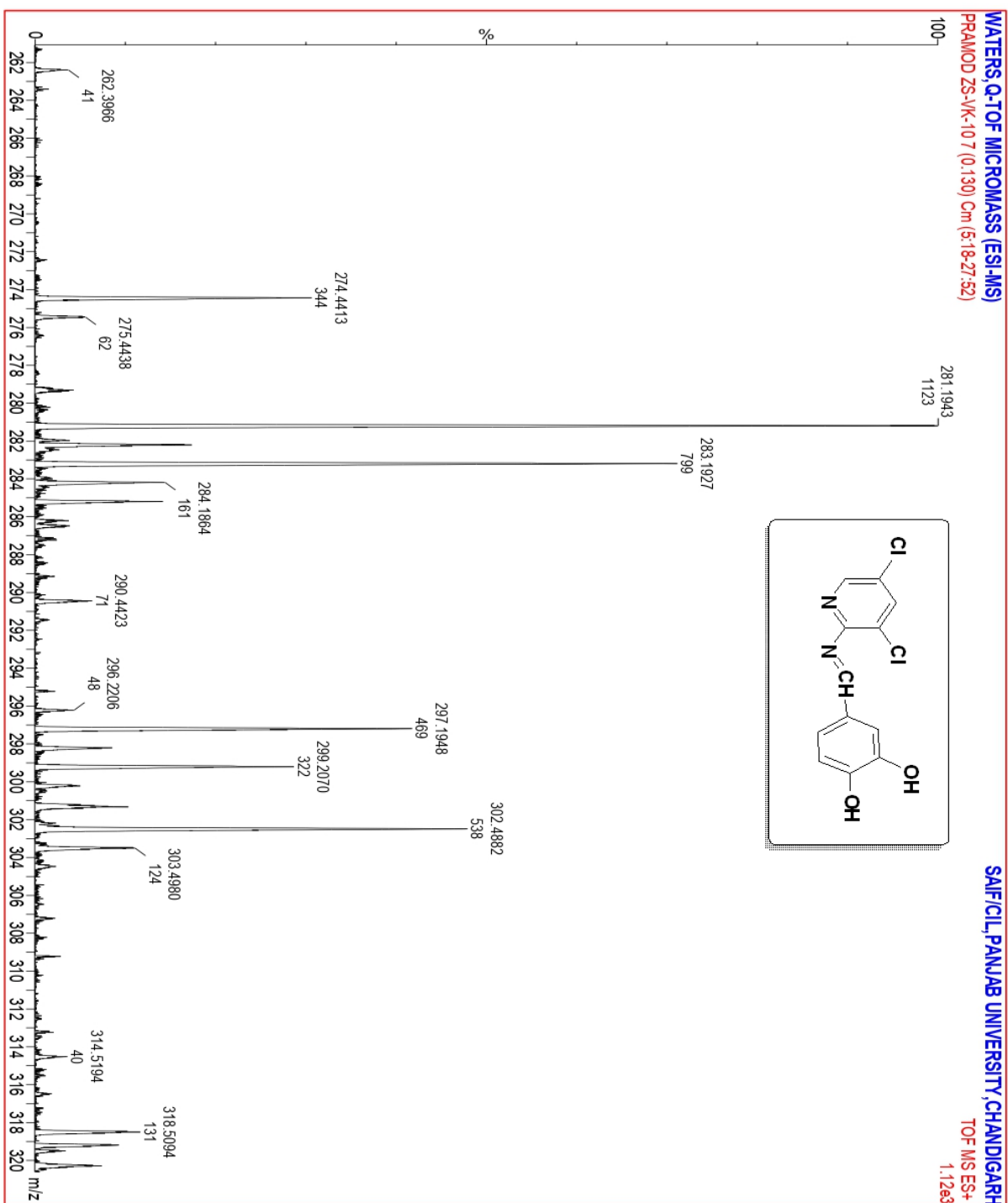
Mass Spectrum of Compound 3i (ZS-VK-03)



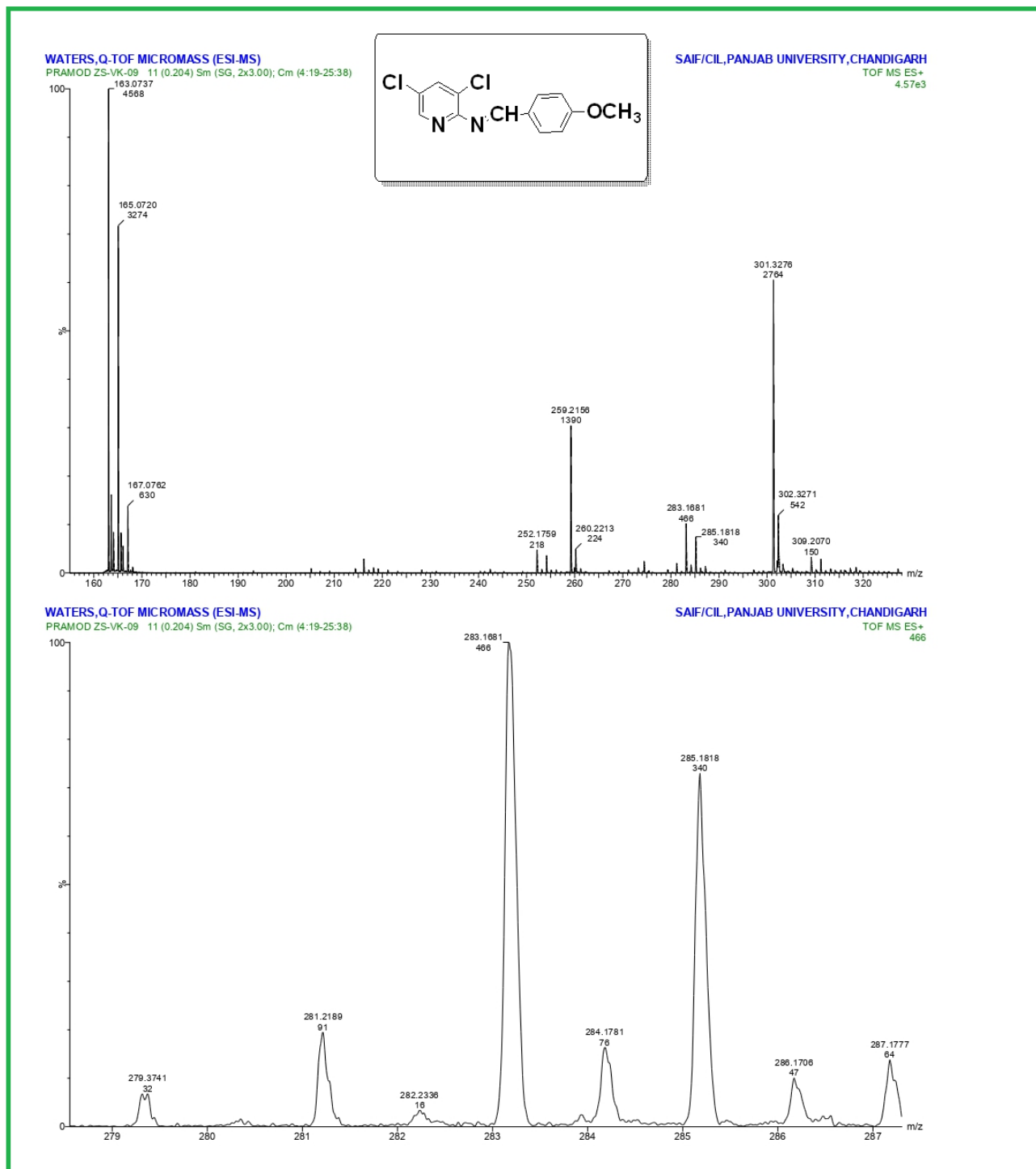
Mass Spectrum of Compound 3j (ZS-VK-04(07))



Mass Spectrum of Compound 3k (ZS-VK-05(10))



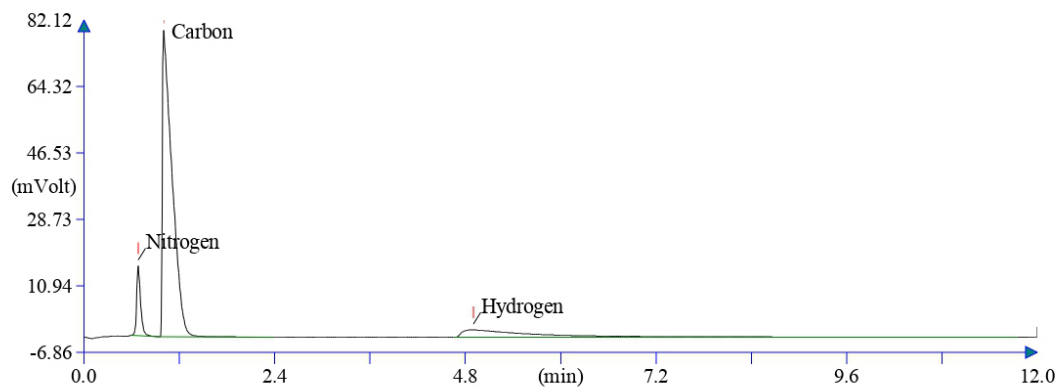
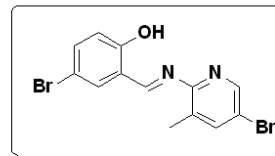
Mass Spectrum of Compound 31 (ZS-VK-06(09))



CHNS analysis report of compound 3a (SZ-VK-01)

Babasaheb Ambedkar Marathwada University
Chemistry Dept. Aurangabad
CHNS Analysis Report

Operator ID:
Method filename: D:\CHNS_JUNE22\CHNS_30JUNE22.mth
Method name: NCHS
Analysed: 01/01/2009 02:39
Printed: 01-01-2009 05:22
Elemental Analyser method:
Sampler method:
Sample ID: SZ-VK-01 1 DEC 2022 (# 20)
Analysis type: UnkNown
Chromatogram filename: SZ-VK-01 1 DEC 2022.dat
Calibration method: K Factors
Sample weight: 3.5
Protein factor: 6.25

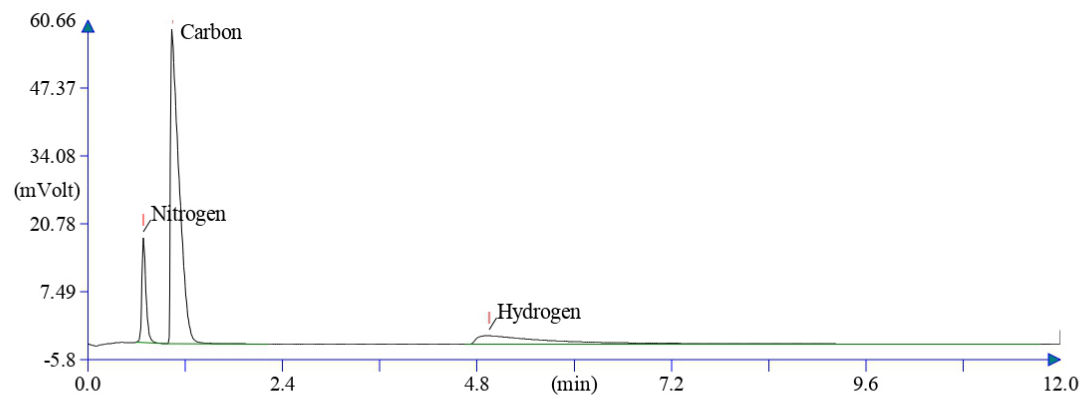
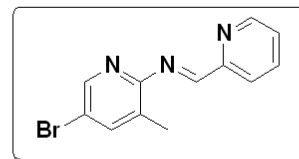


Element Name	Ret. Time	Area	BC	Area ratio	K factor
Nitrogen	7.7161	41	651814	RS 10.624800	.198325E+07
Carbon	42.0114	61	6925396	RS 1.000000	.458828E+07
Hydrogen	2.6568	294	1298508	RS 5.333349	.139642E+08
Totals	52.3843		8875718		

CHNS analysis report of compound 3c (SZ-VK-03)

Babasaheb Ambedkar Marathwada University
Chemistry Dept. Aurangabad
CHNS Analysis Report

Operator ID:
Method filename: D:\CHNS_JUNE22\CHNS_30JUNE22.mth
Method name: NCHS
Analysed: 01/01/2009 02:51
Printed: 01-01-2009 05:23
Elemental Analyser method:
Sampler method:
Sample ID: SZ-VK-03 1 DEC 2022 (# 21)
Analysis type: UnkNown
Chromatogram filename: SZ-VK-03 1 DEC 2022.dat
Calibration method: K Factors
Sample weight: 2.146
Protein factor: 6.25

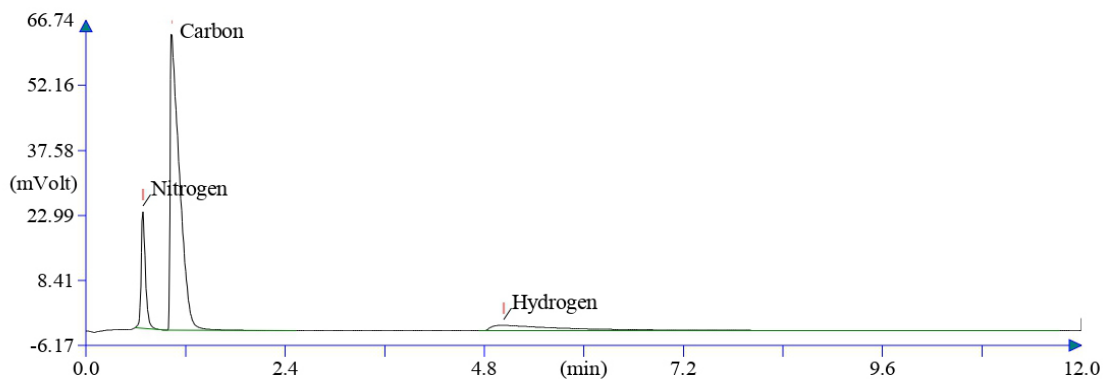
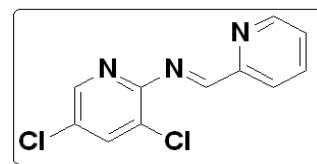


Element Name	Ret. Time	Area	BC	Area ratio	K factor	
Nitrogen	15.2576	41	725958	RS	6.269897	.198325E+07
Carbon	52.1417	63	4551682	RS	1.000000	.458828E+07
Hydrogen	3.8011	297	1139093	RS	3.995883	.139642E+08
Totals	71.2004		6416733			

CHNS analysis report of compound 3g (ZS-VK-01)

Babasaheb Ambedkar Marathwada University
Chemistry Dept. Aurangabad
CHNS Analysis Report

Operator ID:
Method filename: D:\CHNS_JUNE22\CHNS_30JUNE22.mth
Method name: NCHS
Analysed: 01/01/2009 02:15
Printed: 01-01-2009 05:20
Elemental Analyser method:
Sampler method:
Sample ID: ZS-VK-01 1 DEC 2022 (# 18)
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Chromatogram filename: ZS-VK-01 1 DEC 2022.dat
Calibration method: K Factors
Sample weight: 2.681
Protein factor: 6.25

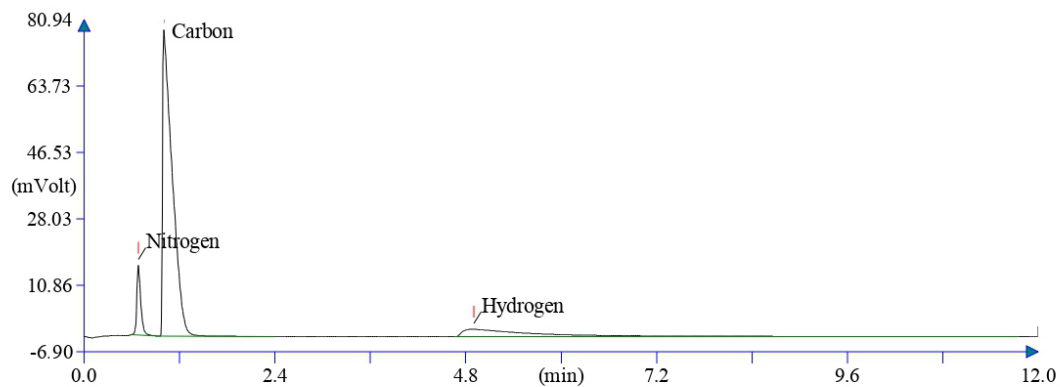
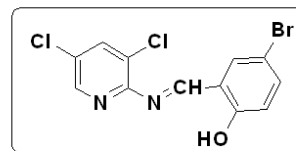


Element Name	Ret. Time	Area	BC	Area ratio	K factor
Nitrogen	16.9251	41	946721	RS	5.500406 .198325E+07
Carbon	52.1841	62	5207350	RS	1.000000 .458828E+07
Hydrogen	2.3999	302	898468	RS	5.795810 .139642E+08
Totals	61.5091		7052539		

CHNS analysis report of compound 3h

Babasaheb Ambedkar Marathwada University
Chemistry Dept. Aurangabad
CHNS Analysis Report

Operator ID:
Method filename: D:\CHNS_JUNE22\CHNS_30JUNE22.mth
Method name: NCHS
Analysed: 01/01/2009 02:09
Printed: 01-01-2009 05:25
Elemental Analyser method:
Sampler method:
Sample ID: SZ-VK-11 1 DEC 2022 (# 22)
Analysis type: UnkNown
Chromatogram filename: SZ-VK-11 1 DEC 2022.dat
Calibration method: K Factors
Sample weight: 3.1
Protein factor: 6.25

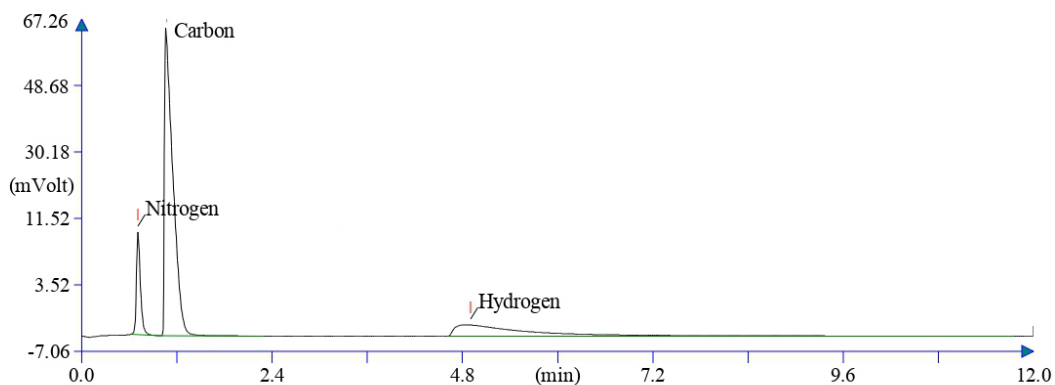
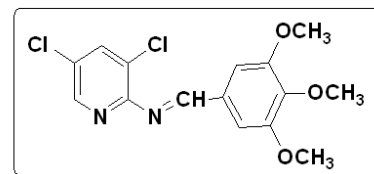


Element Name	Ret. Time	Area	BC	Area ratio	K factor	
Nitrogen	8.1661	41	608829	RS	15.624305	.198325E+07
Carbon	41.6114	64	6185316	RS	1.000000	.458828E+07
Hydrogen	2.0868	298	1088501	RS	5.757349	.139642E+08
Totals	51.8643		8808498			

CHNS analysis report of compound 3j (ZS-VK-07)

Babasaheb Ambedkar Marathwada University
Chemistry Dept. Aurangabad
CHNS Analysis Report

Operator ID:
Method filename: D:\CHNS_JUNE22\CHNS_30JUNE22.mth
Method name: NCHS
Analysed: 01/01/2009 02:27
Printed: 01-01-2009 05:22
Elemental Analyser method:
Sampler method:
Sample ID: ZS-VK-07 1 DEC 2022 (# 19)
Analysis type: UnkNown
Chromatogram filename: ZS-VK-07 1 DEC 2022.dat
Calibration method: K Factors
Sample weight: 2.555
Protein factor: 6.25



Element Name	Ret. Time	Area	BC	Area ratio	K factor	
Nitrogen	8.4125	42	118373	RS	60.709390	.198325E+07
Carbon	52.7457	60	7186353	RS	1.000000	.458828E+07
Hydrogen	4.2932	294	2102611	RS	3.417823	.139642E+08
Totals	65.4514		9407337			