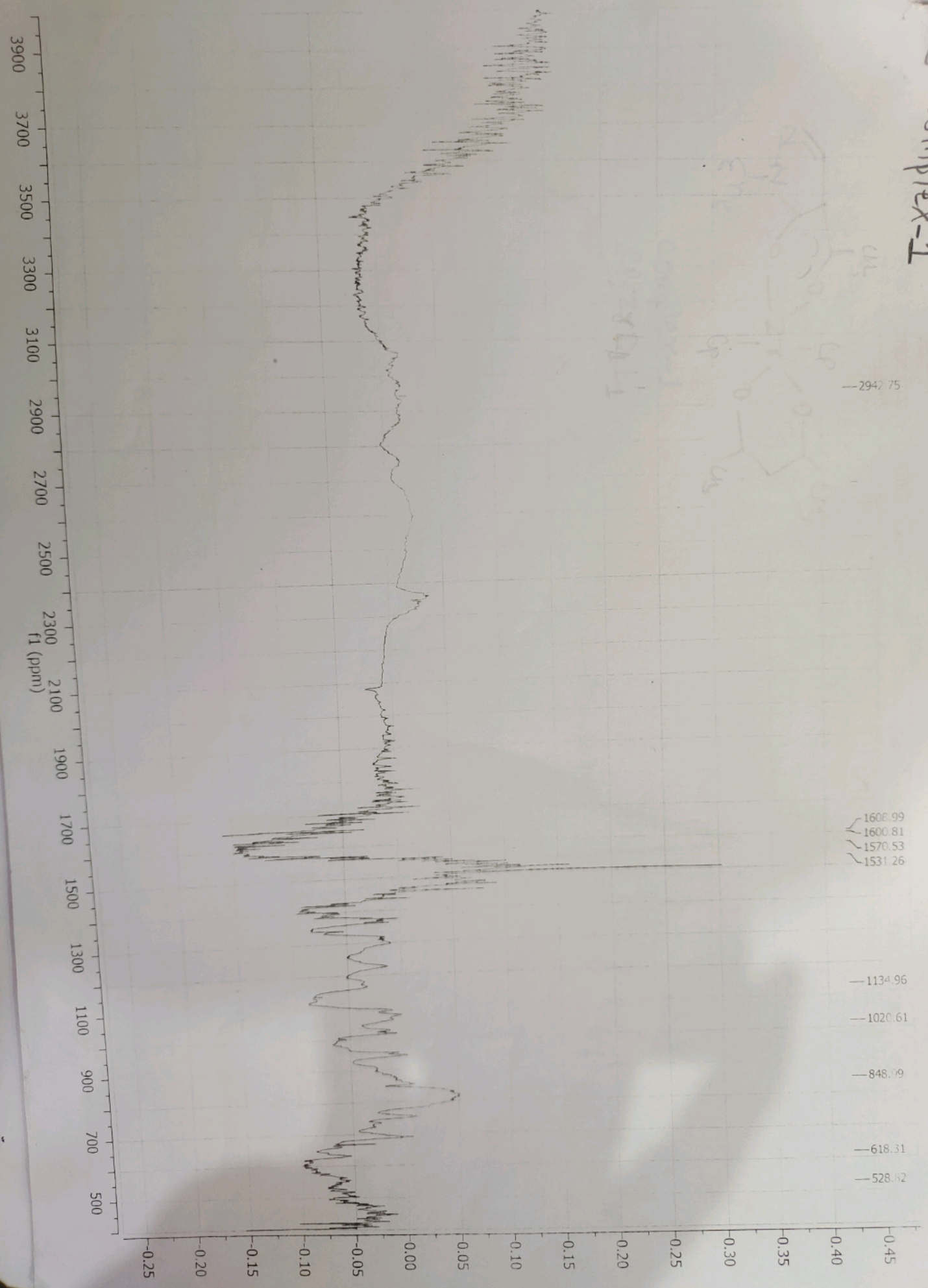
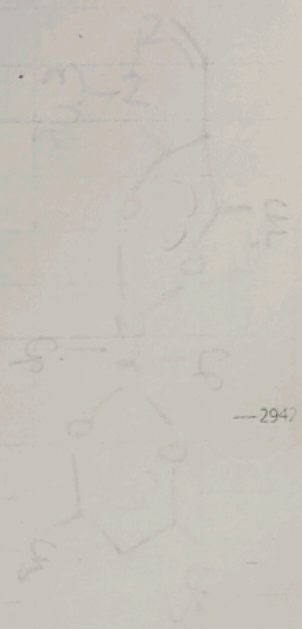
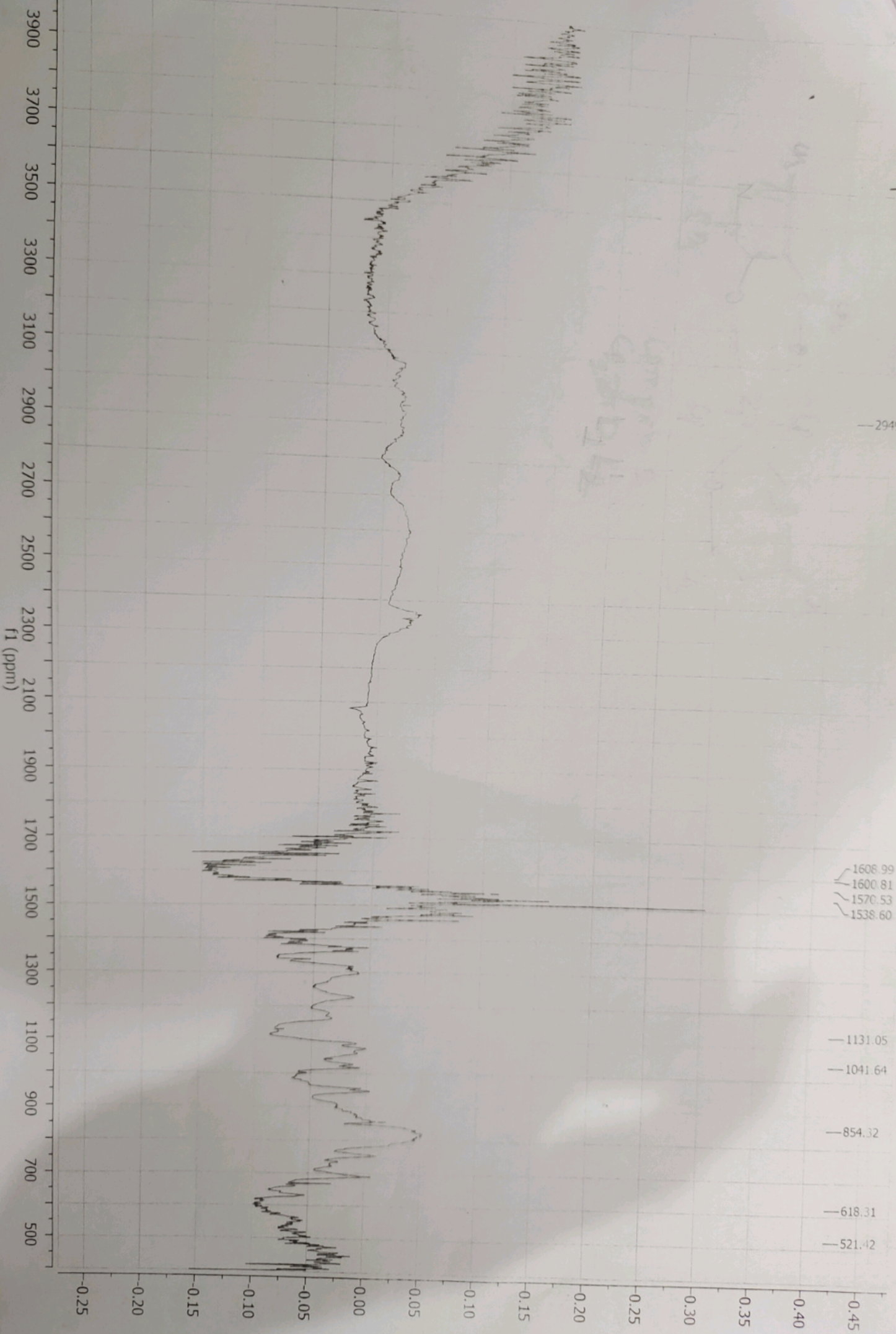


Complex-1



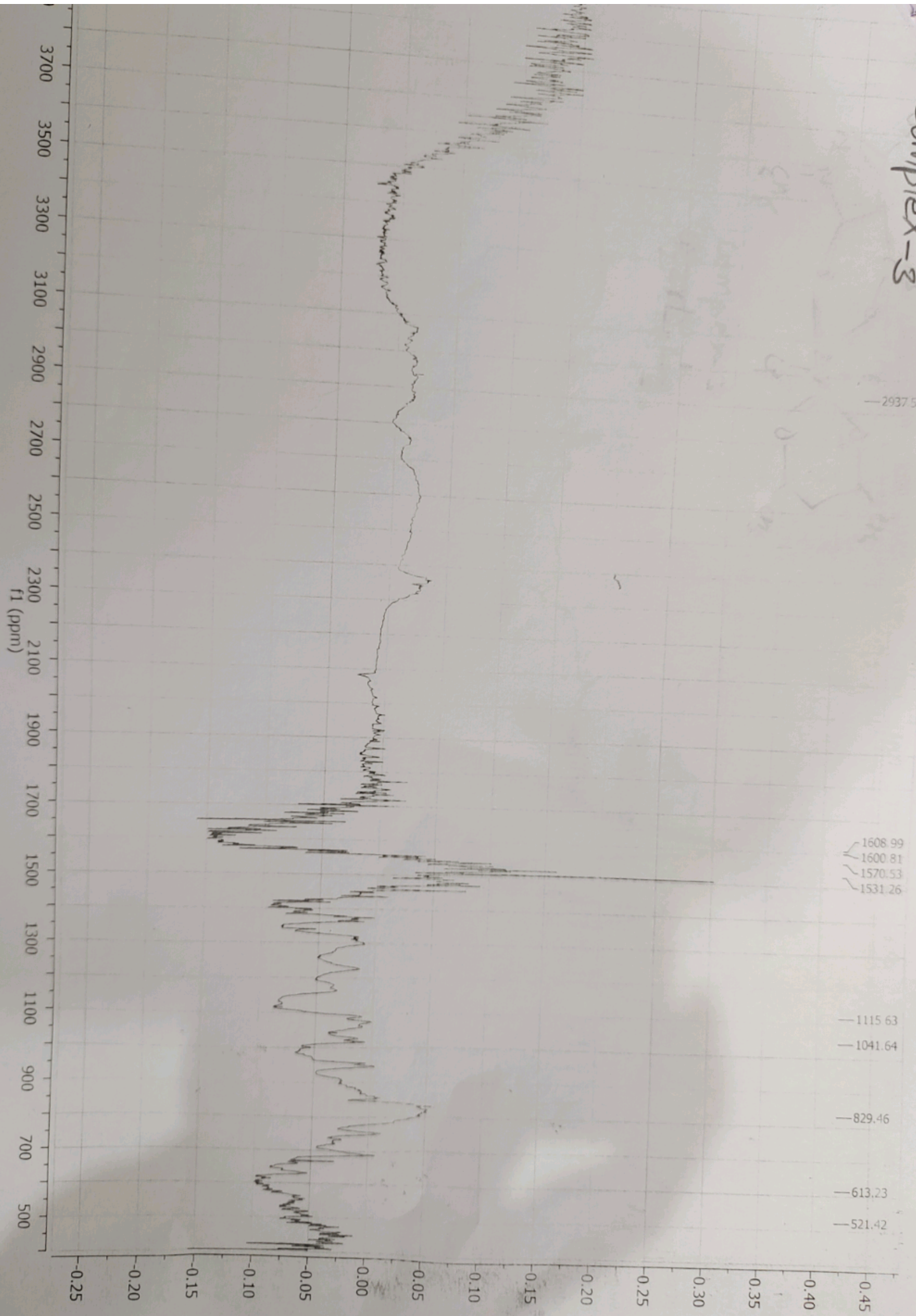
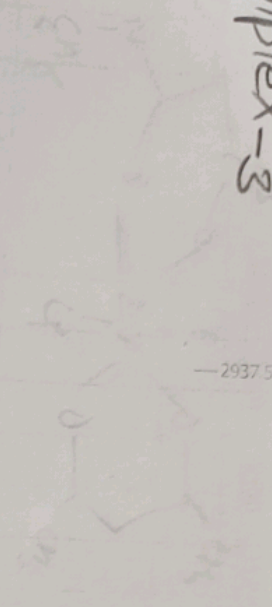
Complex-2



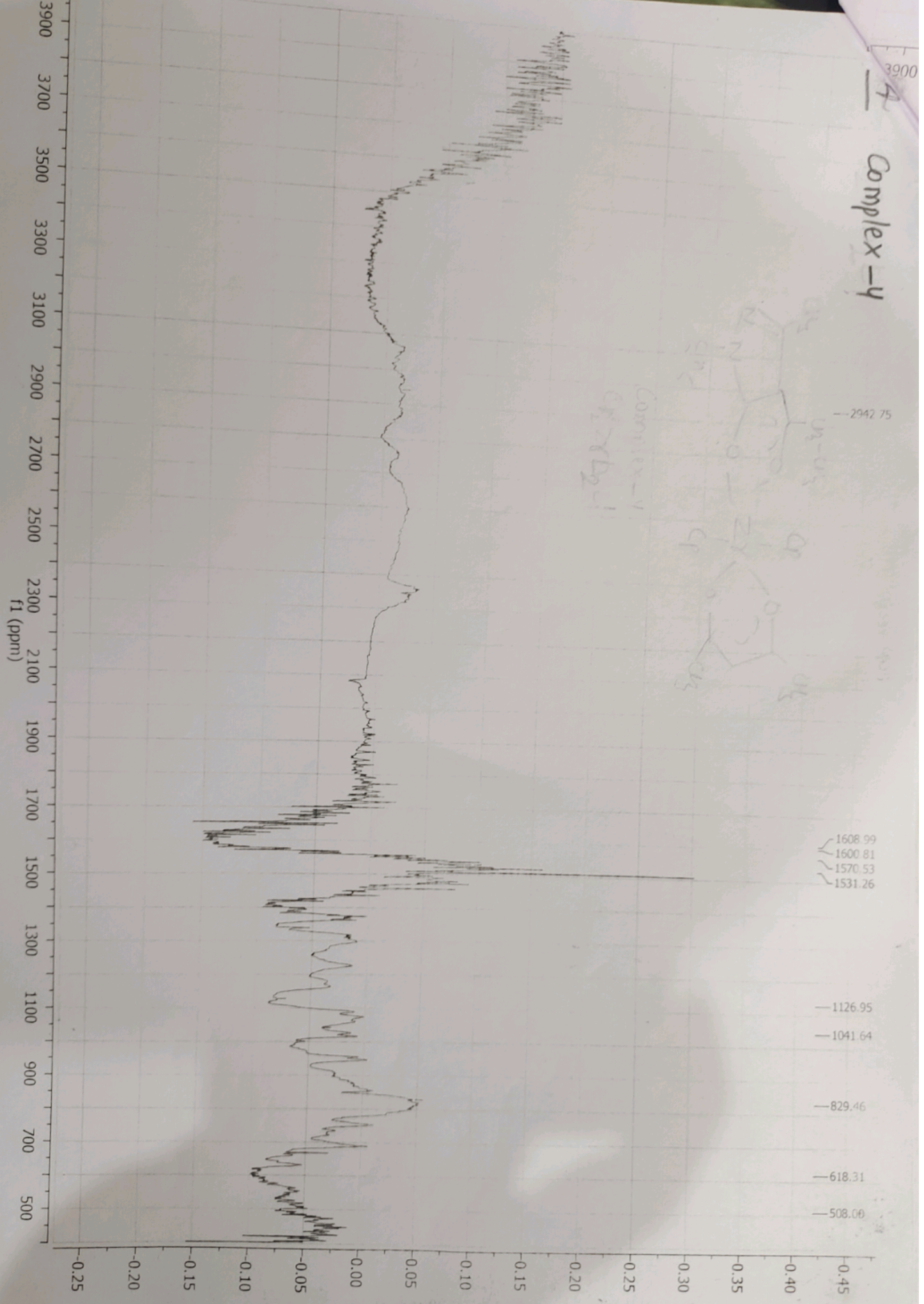
Complex-2
99.9%



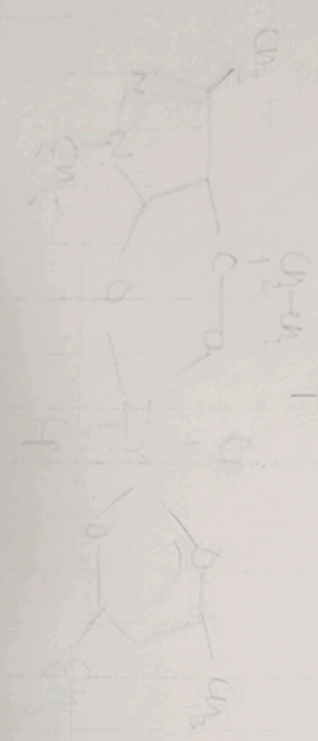
Complex-3



Complex-4



Complex-5

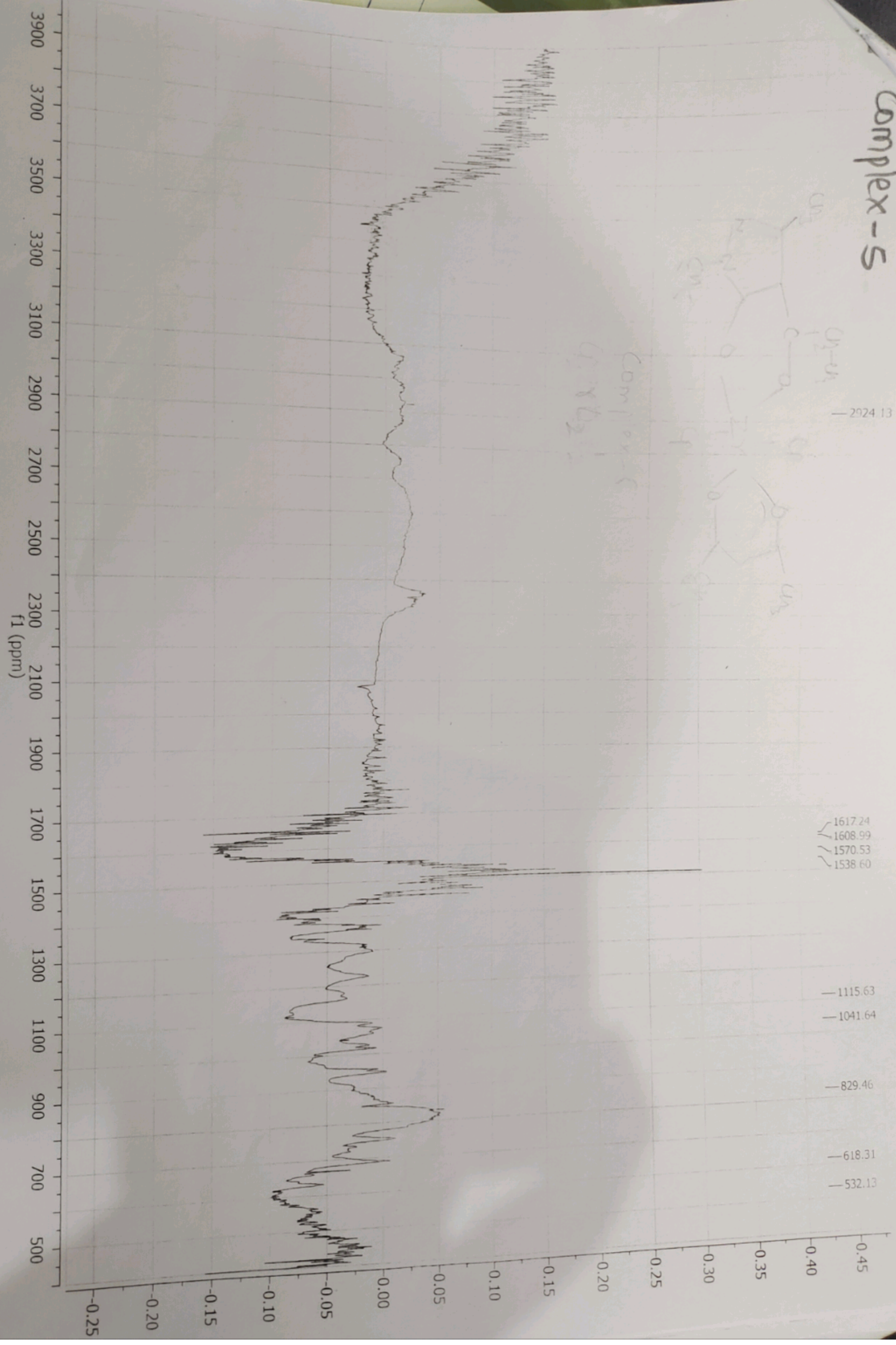


Complex-5
G. R. B. 2024

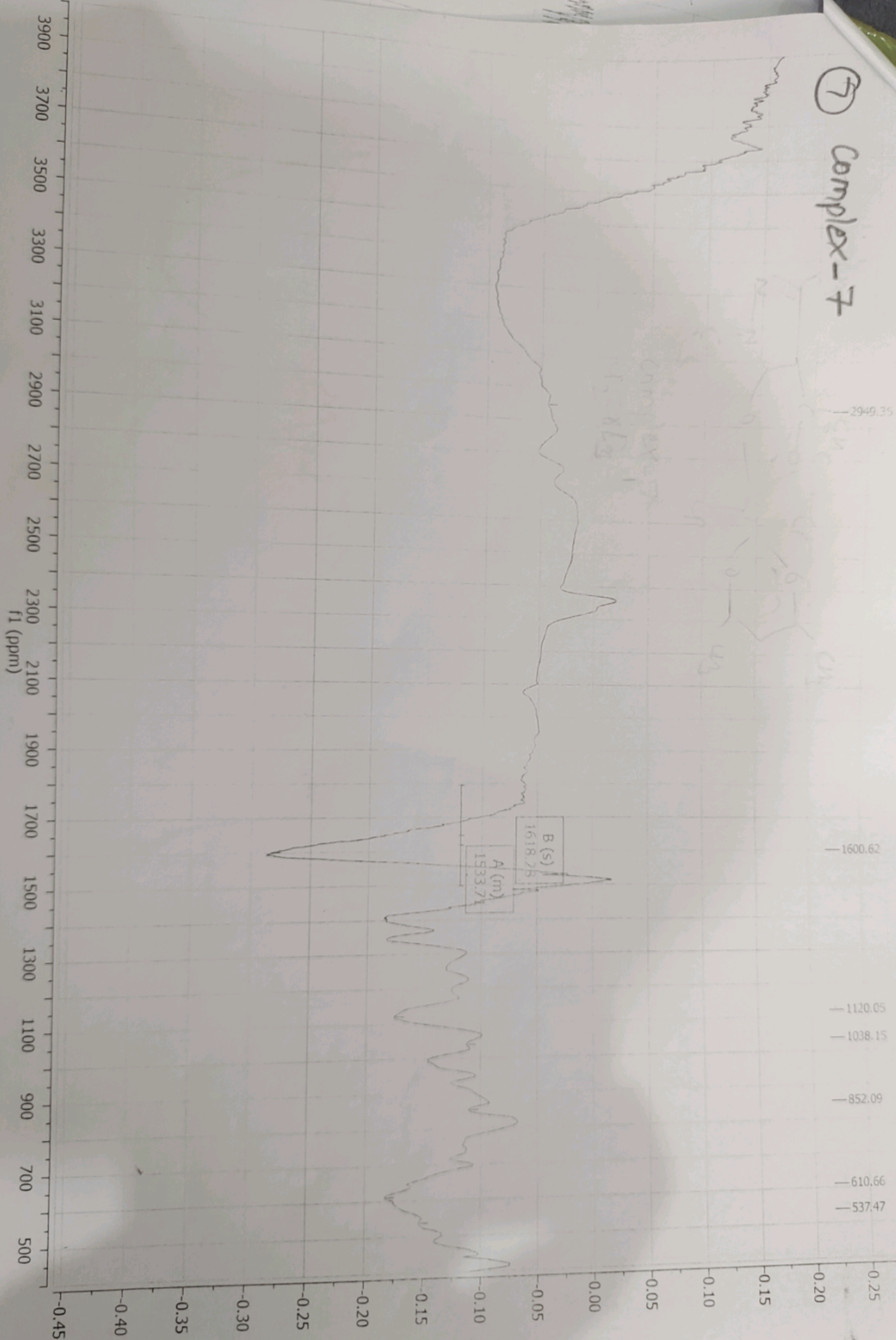
— 2024.13

1617.24 7.4
1608.99 3.9
1570.53 0.6
1538.60 8.0

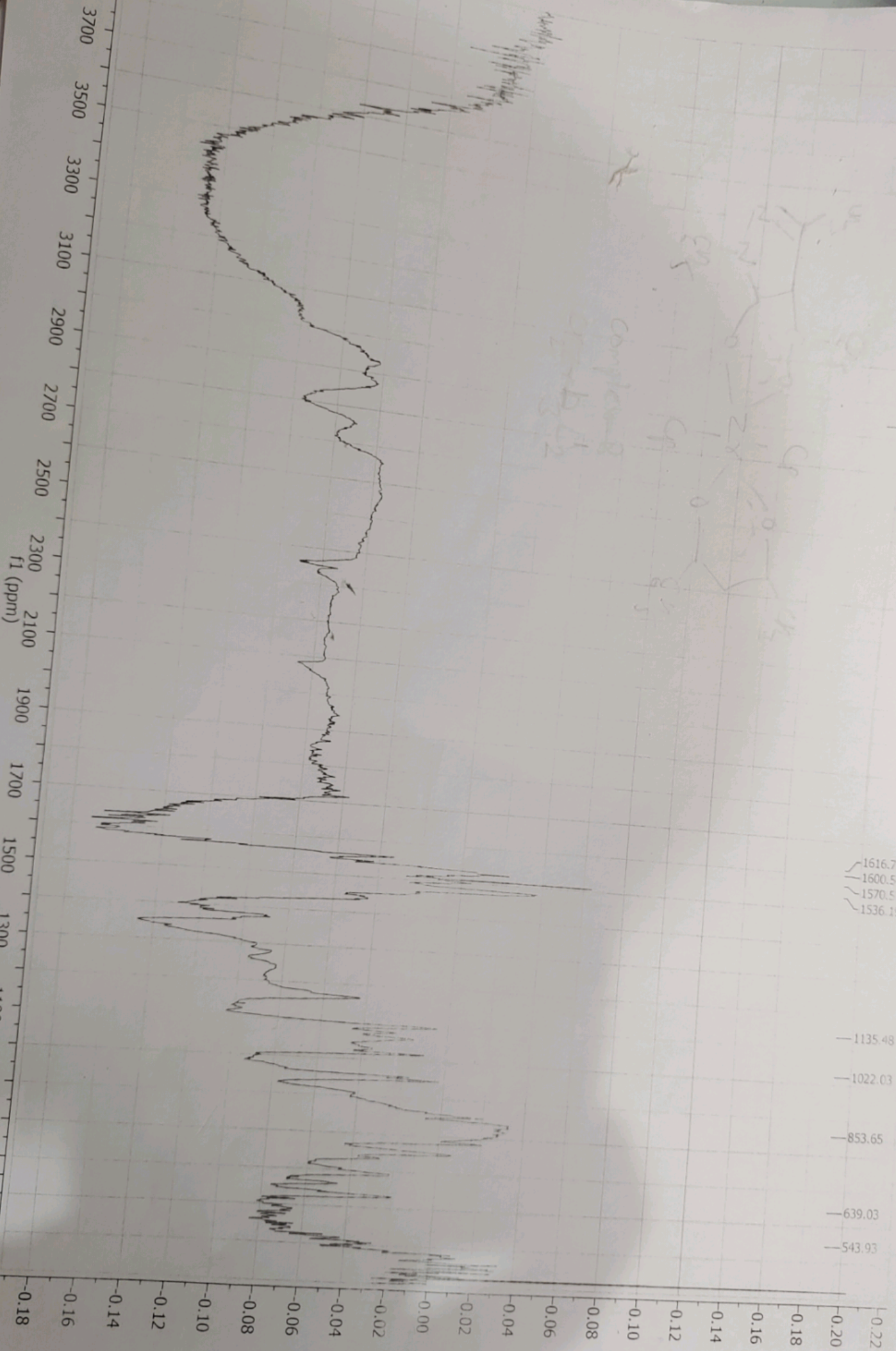
— 1115.63
— 1041.64
— 829.46
— 618.31
— 532.13



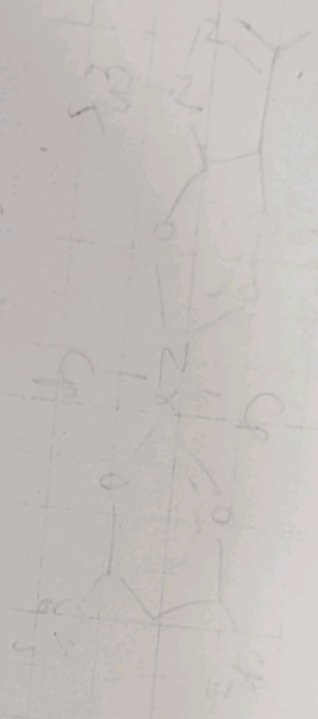
⑦ Complex-7



8 Complex-8



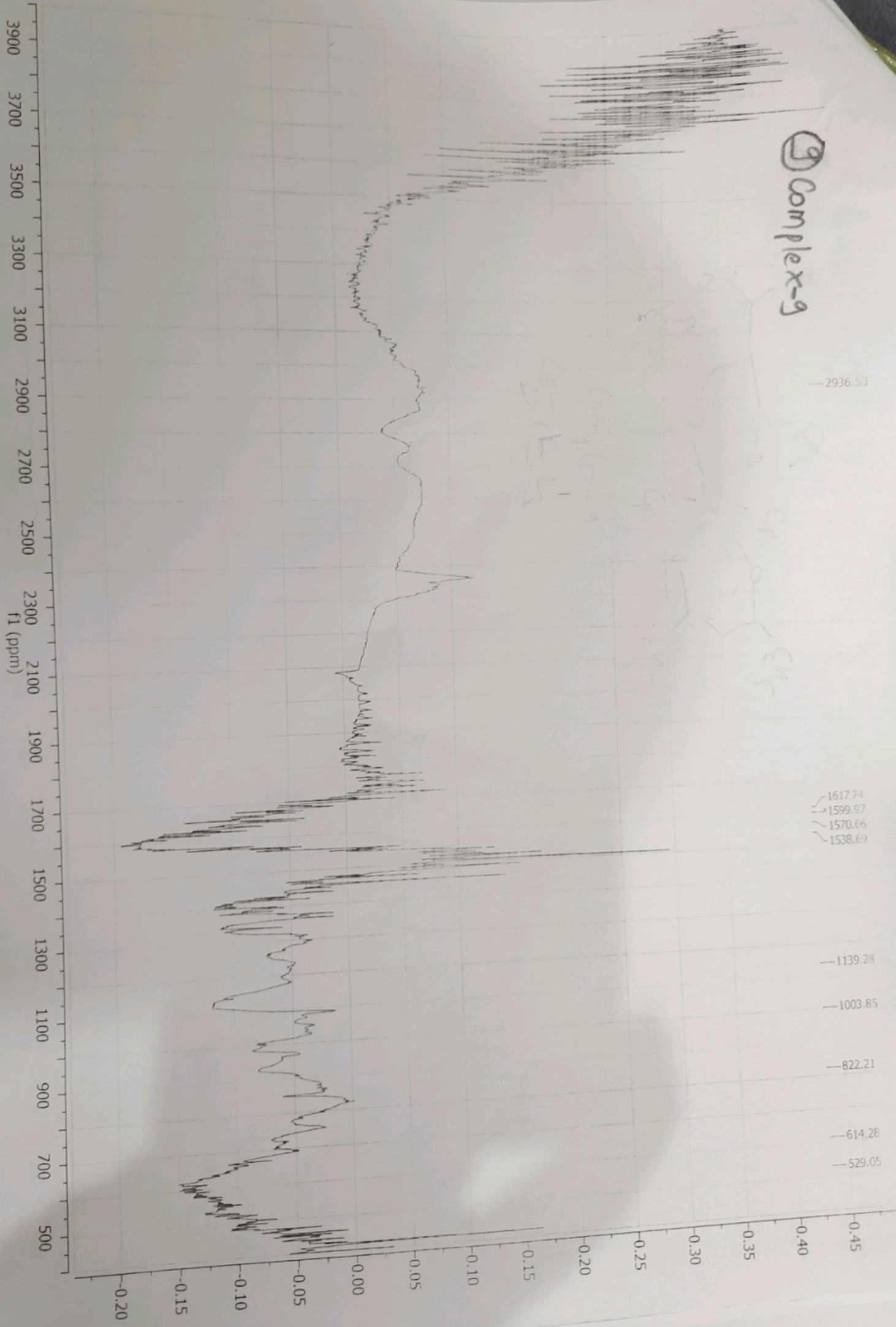
Complex-8
C₁₂H₁₄O₂



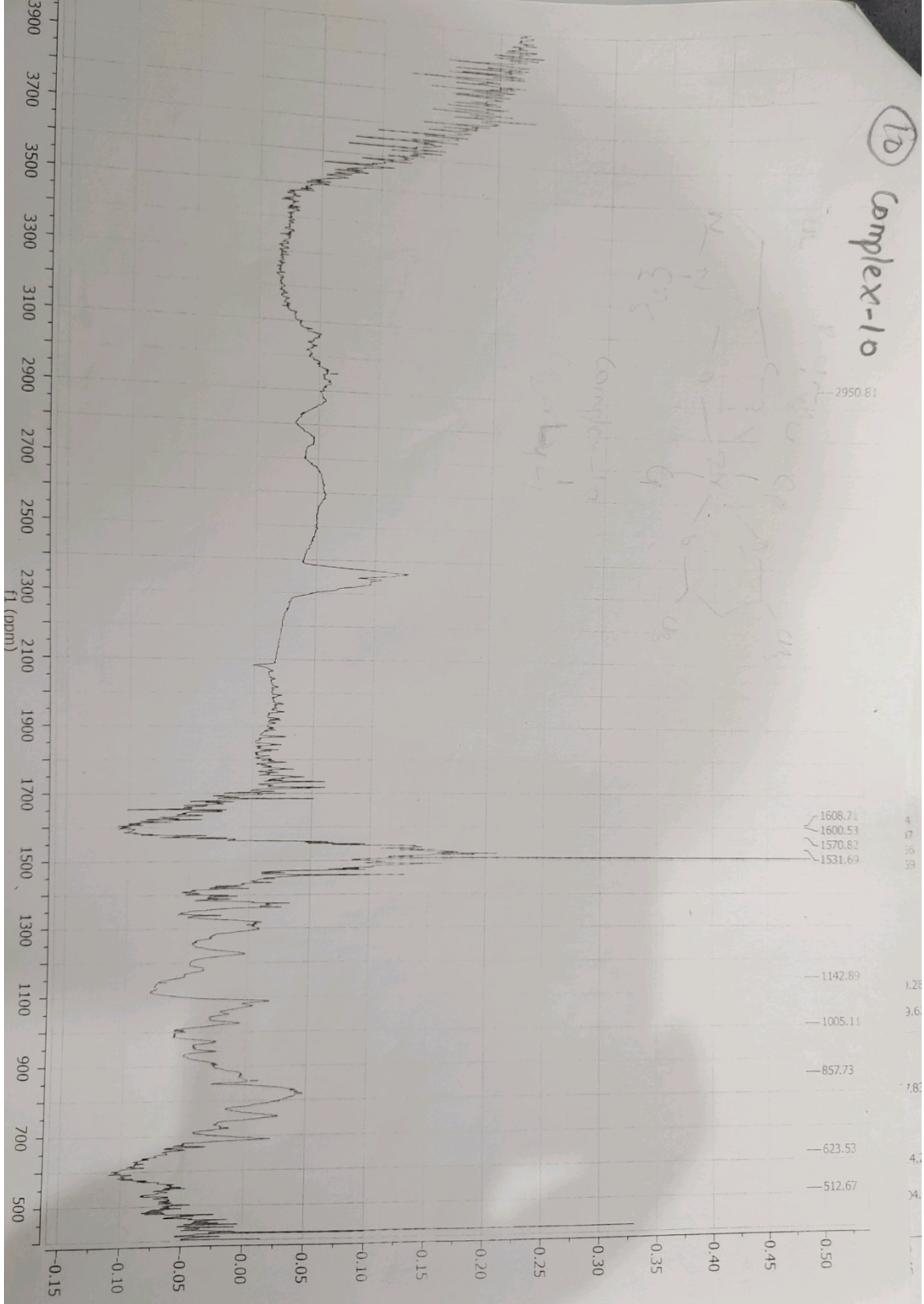
- 1616.73
- 1600.56
- 1570.53
- 1536.19
- 1135.48
- 1022.03
- 853.65
- 639.03
- 543.93

2934.05

Complex-9



(b) Complex-10

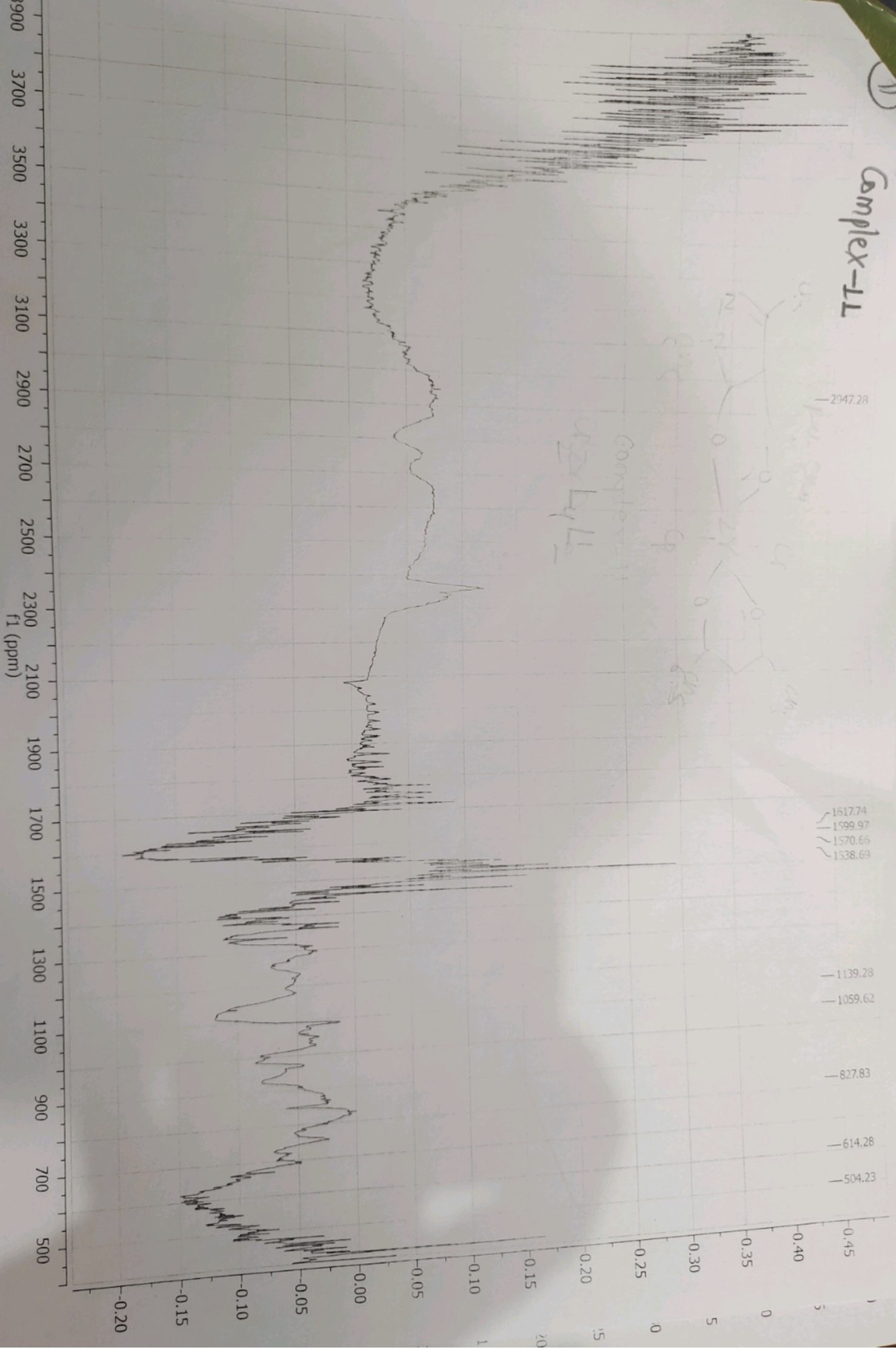


2950.81

1608.71
1600.53
1570.82
1531.69

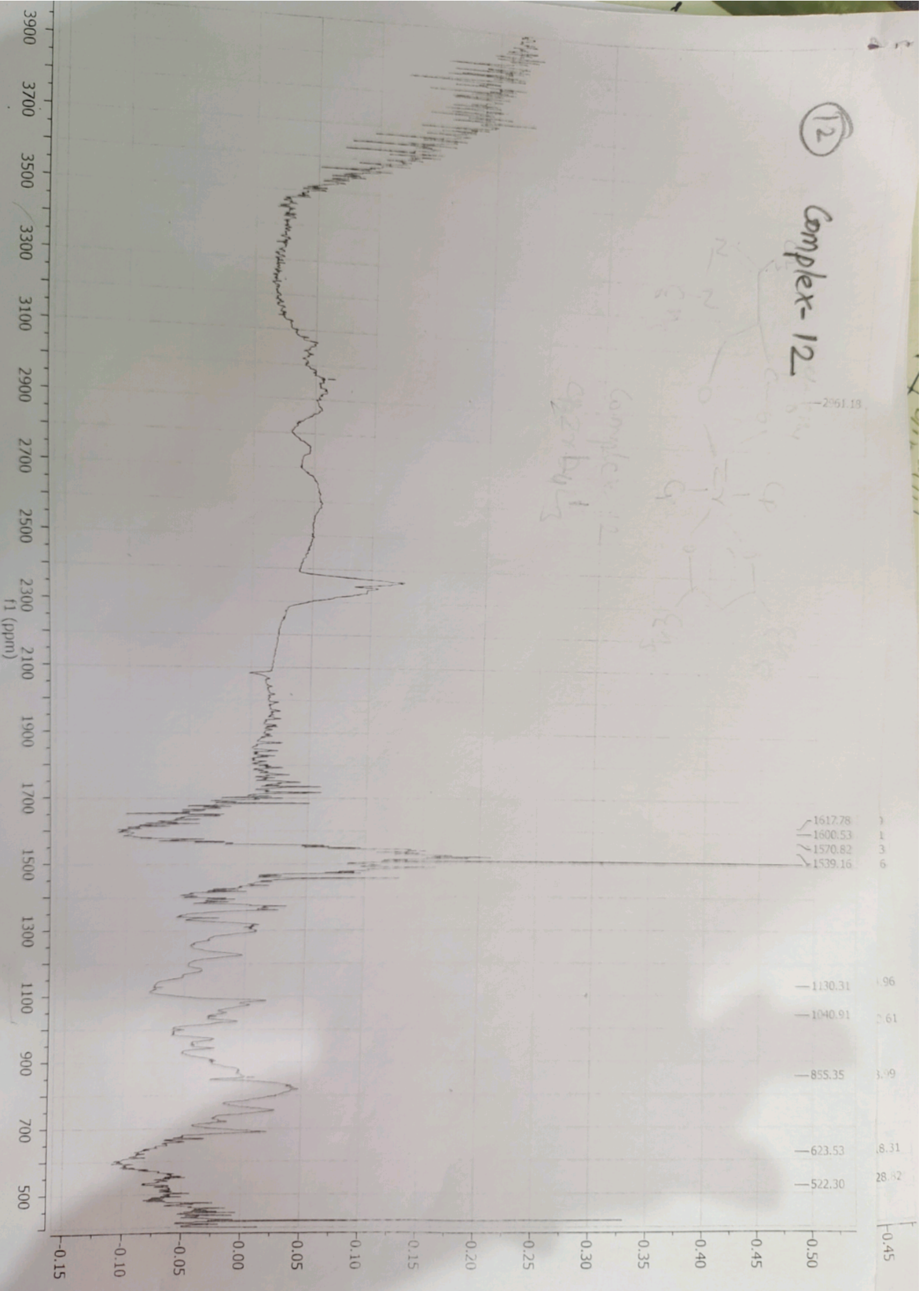
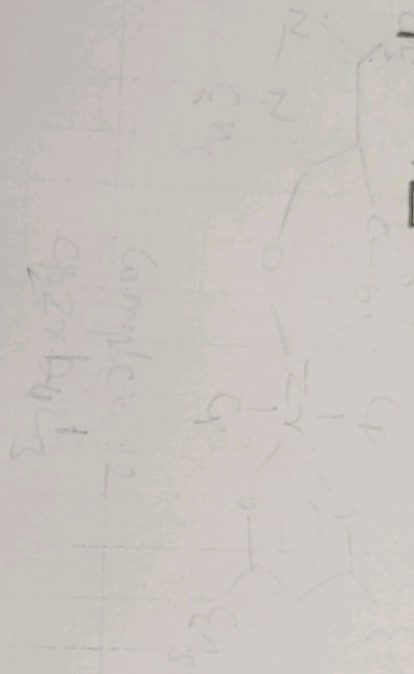
1142.89
1005.11
857.73
623.53
512.67

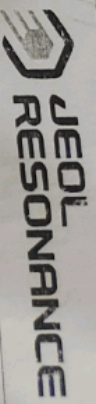
Complex-1L



12

Complex-12





----- PROCESSING PARAMETERS -----

dc balance
 exp : 0.2[Hz]
 trapezoid : 0[%] : 0[%] : 80[%] : 100[%]
 zerofill : 1
 ft : 1
 machinephase
 ppm

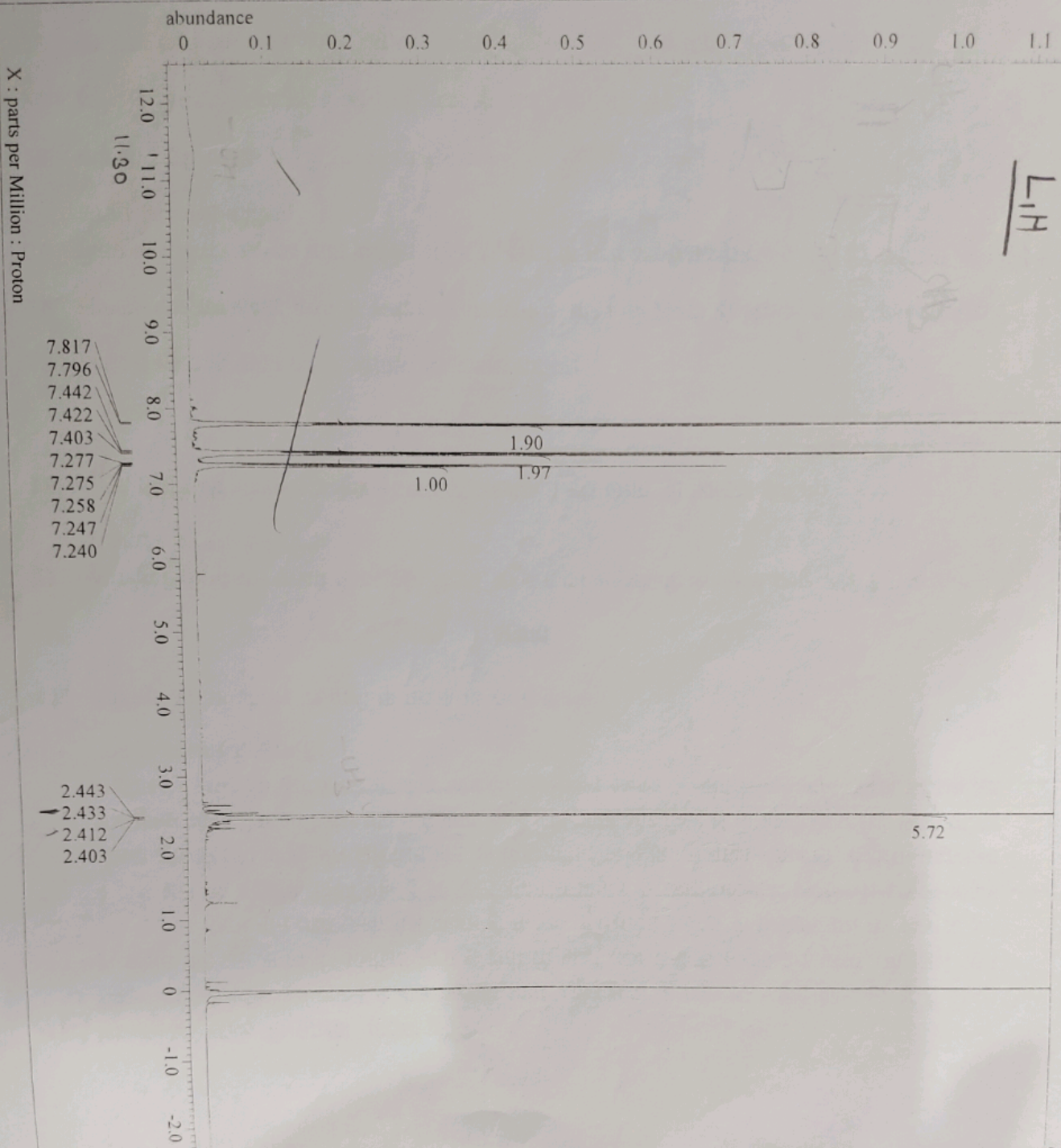
Filename = RU-AM_Proton_ft-1-2.jdf
 Author = datum
 Experiment = proton.jxp
 Sample Id = RU-AM
 Solvent = CHLOROFORM-D
 Creation Time = 1-MAR-2019 15:24:00
 Revision Time = 1-MAR-2019 15:08:39
 Current Time = 1-MAR-2019 15:09:04

Comment = single pulse
 Data Format = 1D COMPLEX
 Dim Size = 26214
 Dim Title = Proton
 Dim Units = [ppm]
 Dimensions = X
 Site = JNM-EC6400
 Spectrometer = DELTA2_NMR

Field Strength = 9.369766[T] (400 [kHz])
 X_Acq Duration = 4.36731904[s]
 X_Domain = 1H
 X_Freq = 399.78219838 [kHz]
 X_Offset = 51[ppm]
 X Points = 32768
 X Prescans = 1
 X Resolution = 0.22897343 [Hz]
 X_Sweep Clipped = 7.5030012 [kHz]
 X_Sweep = 6.00240096 [kHz]
 X_Domain = Proton
 X_Freq = 399.78219838 [kHz]
 X_Offset = 51[ppm]
 X_Domain = Proton
 X_Freq = 399.78219838 [kHz]
 X_Offset = 51[ppm]
 X_Domain = Proton
 X_Freq = 399.78219838 [kHz]
 X_Offset = 51[ppm]
 Scans = FALSE
 total_scans = 16

Relaxation Delay = 21[s]
 Recv Gain = 32
 Recv_Offset = 19.1 [dc]
 X_90_Width = 11.75 [us]
 X_Acq Time = 4.36731904 [s]
 X_Angle = 45 [deg]
 X_Abn = 0.5 [dB]
 X_Pulse = 5.875 [us]
 X_Mode = Off
 X_Offset = Off

File Name = RU-AM_Proton_ft-1-2.jdf
 Author = datum
 Experiment = proton.jxp
 Sample Id = RU-AM
 Solvent = CHLOROFORM-D
 Creation Time = 1-MAR-2019 15:24:00
 Revision Time = 1-MAR-2019 15:08:39
 Current Time = 1-MAR-2019 15:09:04
 Comment = single pulse
 Data Format = 1D COMPLEX
 Dim Size = 26214
 Dim Title = Proton
 Dim Units = [ppm]
 Dimensions = X
 Site = JNM-EC6400
 Spectrometer = DELTA2_NMR
 Field Strength = 9.369766[T] (400 [kHz])
 X_Acq Duration = 4.36731904[s]
 X_Domain = 1H
 X_Freq = 399.78219838 [kHz]
 X_Offset = 51[ppm]
 X Points = 32768
 X Prescans = 1
 X Resolution = 0.22897343 [Hz]
 X_Sweep Clipped = 7.5030012 [kHz]
 X_Sweep = 6.00240096 [kHz]
 X_Domain = Proton
 X_Freq = 399.78219838 [kHz]
 X_Offset = 51[ppm]
 X_Domain = Proton
 X_Freq = 399.78219838 [kHz]
 X_Offset = 51[ppm]
 X_Domain = Proton
 X_Freq = 399.78219838 [kHz]
 X_Offset = 51[ppm]
 Scans = FALSE
 total_scans = 16
 Relaxation Delay = 21[s]
 Recv Gain = 32
 Recv_Offset = 19.1 [dc]
 X_90_Width = 11.75 [us]
 X_Acq Time = 4.36731904 [s]
 X_Angle = 45 [deg]
 X_Abn = 0.5 [dB]
 X_Pulse = 5.875 [us]
 X_Mode = Off
 X_Offset = Off



----- PROCESSING PARAMETERS -----

dc balance
 sexp : 0.2 [Hz]
 rrapezoid : 0 [%] : 80 [%] : 100 [%]
 zerofill : 1
 fft : 1
 matchphase
 ppm

Filename = RU-FM Proton_fr-1-2.jdf
 Author = datum
 Experiment = proton_jxp
 Sample_Id = RU-FM
 Solvent = CHLOROFORM-D
 Creation_Time = 1-MAR-2019 14:52:26
 Revision_Time = 1-MAR-2019 14:45:58
 Current_Time = 1-MAR-2019 14:46:02

Comment = single pulse
 Data_Format = ID COMPLEX
 Dim Size = 26214
 Dim Title = Proton
 Dim Units = [ppm]
 Dimensions = X
 Site = QM-EGS400
 Spectrometer = DELTA2_NMR

Field Strength = 9.389766 [T] (400 [MHz])
 X Acq_Duration = 4.36731904 [s]
 X Domain = 1H

X Freq = 399.78219838 [MHz]
 X Offset = 5 [ppm]
 X Points = 32768
 X Prescans = 1

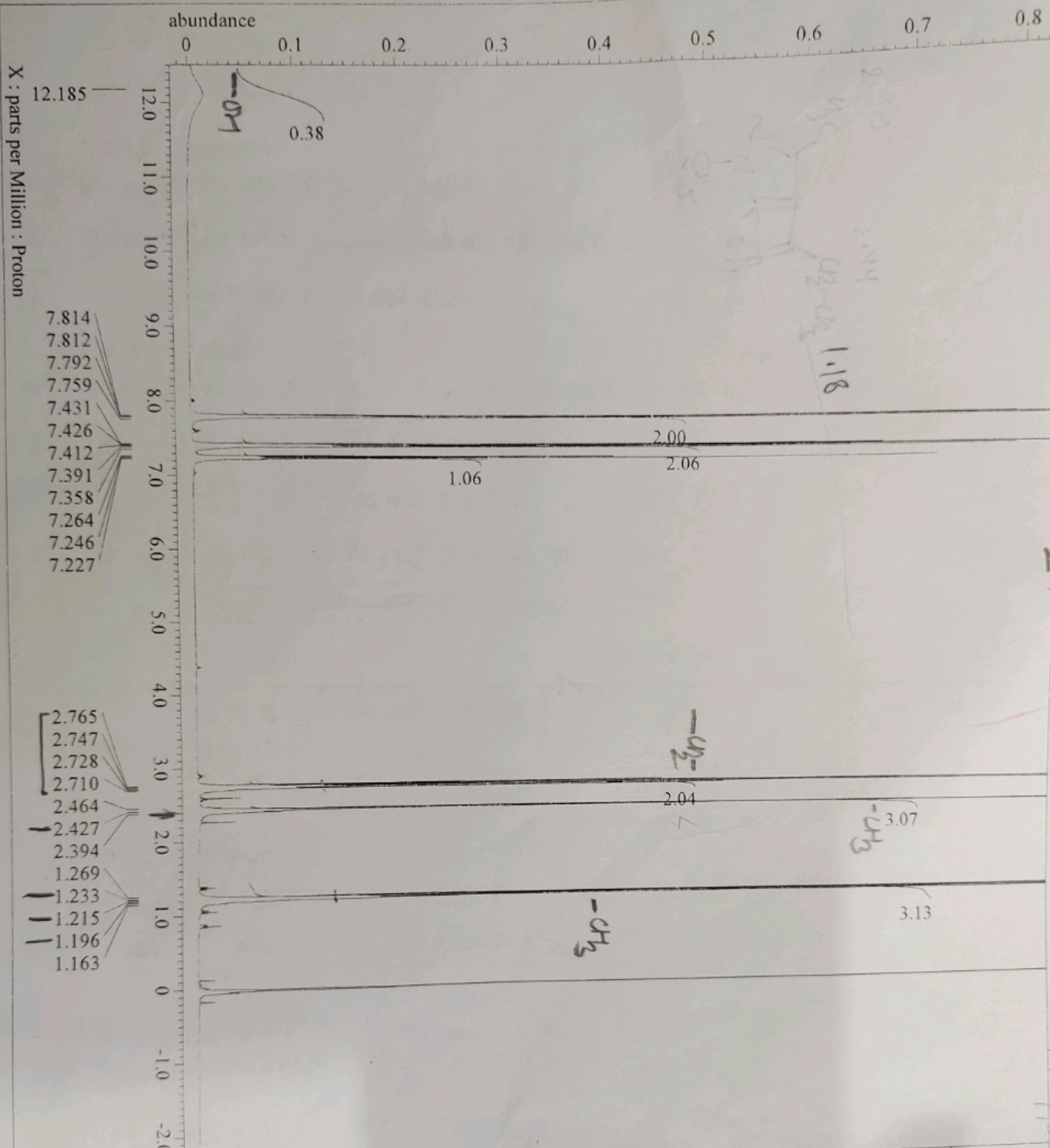
X Resolution = 0.22897343 [Hz]
 X Resolution = 7.5030012 [kHz]
 X Sweep = 6.00240096 [kHz]
 X_Sweep_Clipped = Proton

Irr_Loamin = 399.78219838 [MHz]
 Irr_Freq = 5 [ppm]
 Irr_Offset = Proton

Tri_Domain = 399.78219838 [MHz]
 Tri_Freq = 5 [ppm]
 Tri_Offset = PULSE

Clipped = 16
 Scans = 16
 Total_Scans = 16

Relaxation_Delay = 2 [s]
 Recvr_Gain = 26
 Temp_Get = 19.2 [dC]
 X 90_Width = 11.75 [us]
 X Acq_Time = 4.36731904 [s]
 X Angle = 45 [deg]
 X Atn = 0.5 [dB]
 X Pulse = 5.875 [us]
 X Pulse Mode = OFF
 Irr_Mode = OFF
 Tri_Mode = OFF



X : parts per Million : Proton

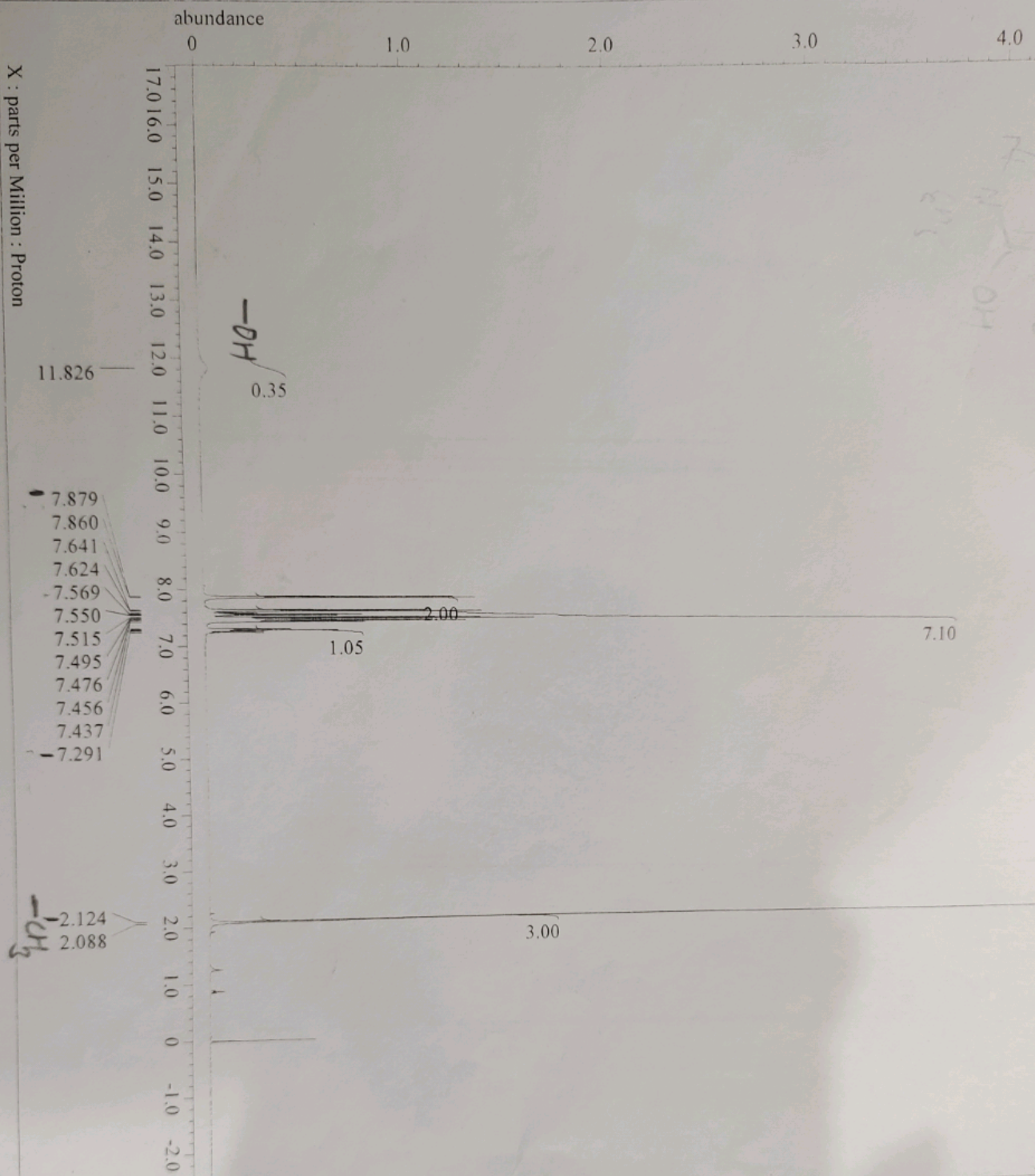
----- PROCESSING PARAMETERS -----
 dc balance = 0
 exp : 0.2 [Hz]
 expozoid : 0 [s] : 0 [s] : 80 [s] : 100 [s]
 fastfill : 1
 fff : 1
 machinephase
 ppm

Filename = R0-BM_Proton_t1-1-2.jdf
 Author = datum
 Experiment = proton_jxp
 Sample_Id = R0-BM
 Solvent = CHLOROFORM-D
 Creation_Time = 12-MAR-2019 14:44:21
 Revision_Time = 12-MAR-2019 14:26:16
 Current_Time = 12-MAR-2019 14:26:57

Comment = single pulse
 Data Format = ID COMPLEX
 Data Size = 26214
 Data Title = Proton
 Data Units = [ppm]
 Dimensions = X
 Site = JNM-ECG400
 Spectrometer = DELTA2_NMR

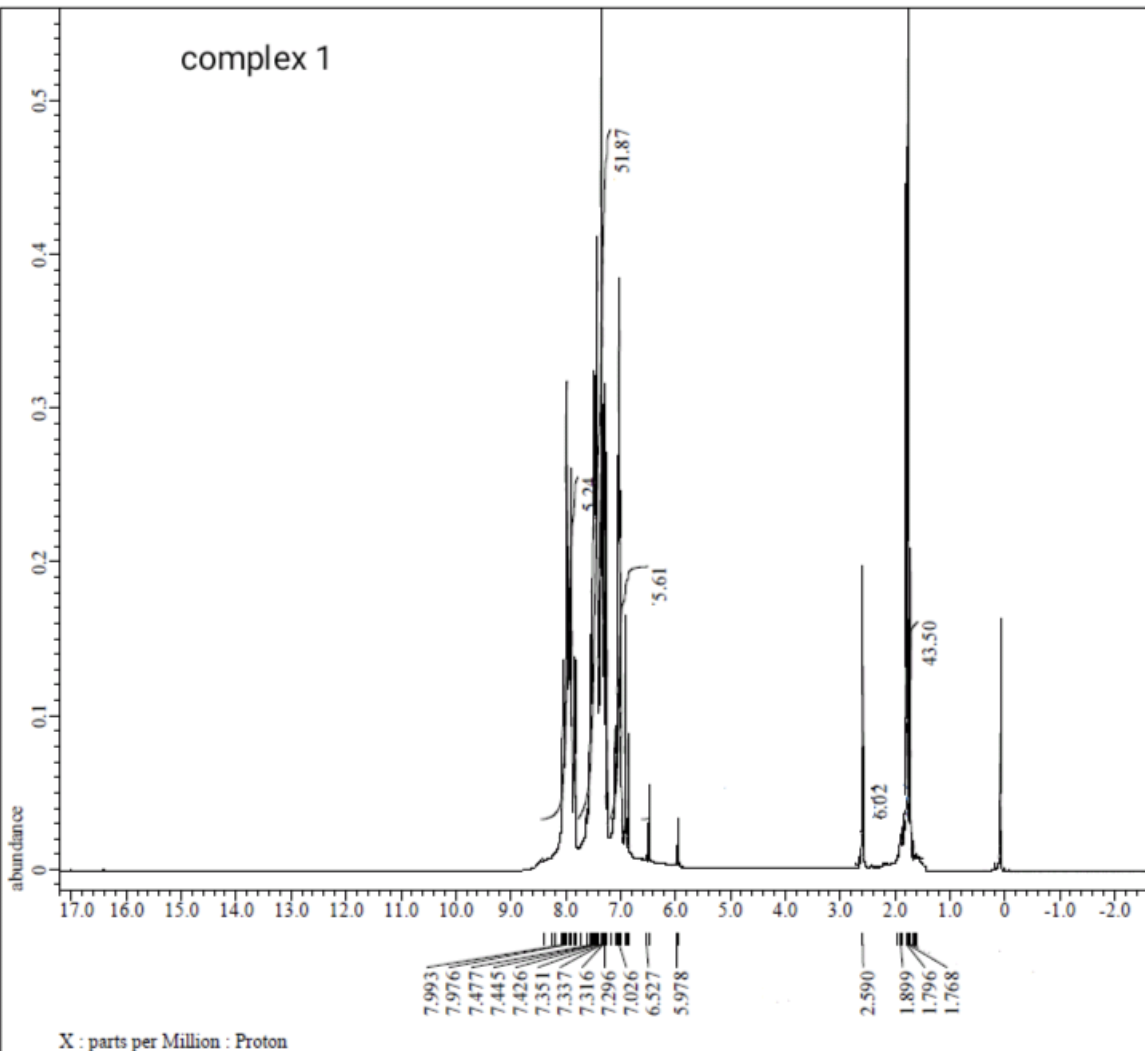
Field Strength = 9.389766 [T] (400 [MHz])
 X Acq Duration = 3.2768 [s]
 X Domain = 1H
 X Freq = 399.78219838 [MHz]
 X Offset = 7 [ppm]
 X Points = 32768
 X Prescans = 1
 X Resolution = 0.30517578 [Hz]
 X Resolution = 10 [kHz]
 X Sweep = 8 [kHz]
 X Sweep_Clippped = Proton
 Irf_Domain = Proton
 Irf_Freq = 399.78219838 [MHz]
 Irf_Offset = 5 [ppm]
 Irf_Domain = Proton
 Tri_Domain = Proton
 Tri_Freq = 399.78219838 [MHz]
 Tri_Offset = 5 [ppm]
 Tri_Offset_Clippped = FALSE
 Scans = 16
 Total_Scans = 16

Relaxation_Delay = 2 [s]
 Recvr Gain = 32
 Temp_Get = 19.4 [dC]
 X 90_Width = 11.75 [us]
 X Acq Time = 3.2768 [s]
 X_Angle = 45 [deg]
 X_Atn = 0.5 [dB]
 X_Pulse = 5.875 [us]
 Irf_Mode = Off
 Tri_Mode = Off



Handwritten notes on the right side of the page:
 L3H
 BM ppm

complex 1



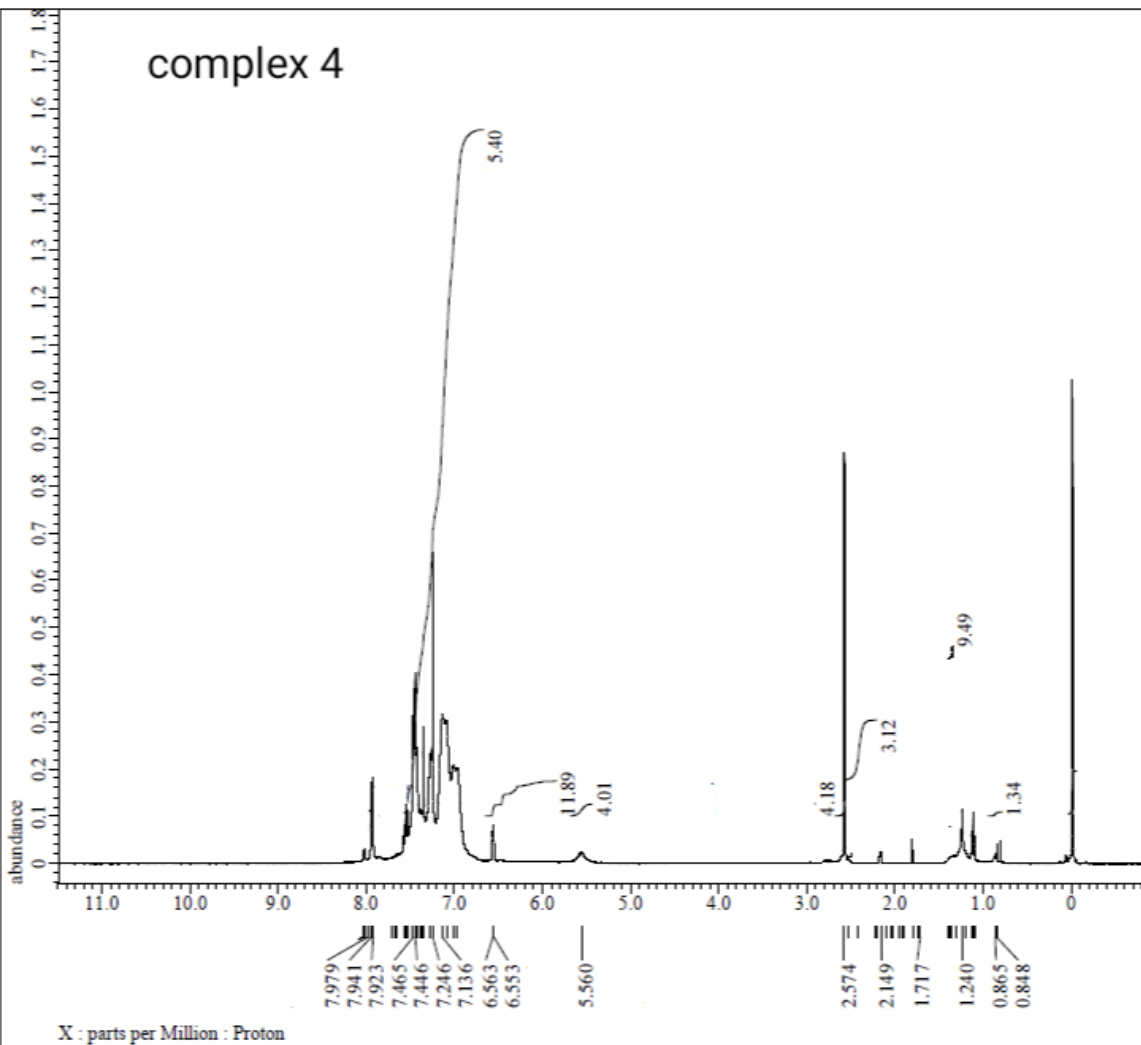
---- PROCESSING PARAMETERS ----
dc balance
sexp : 0.2[Hz]
trapezoid : 0[%] : 0[%] : 80[%] : 100[%]
zerofill : 1
fft : 1
machinephase
ppm

Filename = RU-2-ErED-NA_Proton_ft
Author = datum
Experiment = proton_jxp
Sample Id = RU-2-ErED-NA
Solvent = CHLOROFORM-D
Creation Time = 16-APR-2019 13:11:50
Revision Time = 14-DEC-2021 11:53:42
Current Time = 14-DEC-2021 11:54:01

Comment = single_pulse
Data Format = 1D_COMPLEX
Dim Size = 26214
Dim Title = Proton
Dim Units = [ppm]
Dimensions = X
Site = JNM-ECS400
Spectrometer = DELTA2_NMR
Field Strength = 9.389766[T] (400[MHz])
X_Acq_Duration = 3.2768[s]
X_Domain = 18
X_Freq = 399.78219838[MHz]
X_Offset = 7[ppm]
X_Points = 32768
X_Prescans = 1
X_Resolution = 0.30517578[Hz]
X_Sweep = 10[kHz]
X_Sweep_Clippped = 8[kHz]
Irr_Domain = Proton
Irr_Freq = 399.78219838[MHz]
Irr_Offset = 5[ppm]
Tri_Domain = Proton
Tri_Freq = 399.78219838[MHz]
Tri_Offset = 5[ppm]
Clipped = FALSE
Scans = 64
Total_Scans = 64

Relaxation_Delay = 2[s]
Recvr_Gain = 30
Temp_Get = 22.7[degC]
X_90_Width = 11.75[us]
X_Acq_Time = 3.2768[s]
X_Angle = 45[deg]
X_Atn = 0.5[db]
X_Pulse = 5.875[us]
Irr_Mode = Off
Tri_Mode = Off

complex 4



---- PROCESSING PARAMETERS ----

dc balance
 exp : 0.2[Hz]
 trapezoid : 0[%] : 0[%] : 80[%] : 100[%]
 zerofill : 1
 fft : 1
 machinphase
 ppm

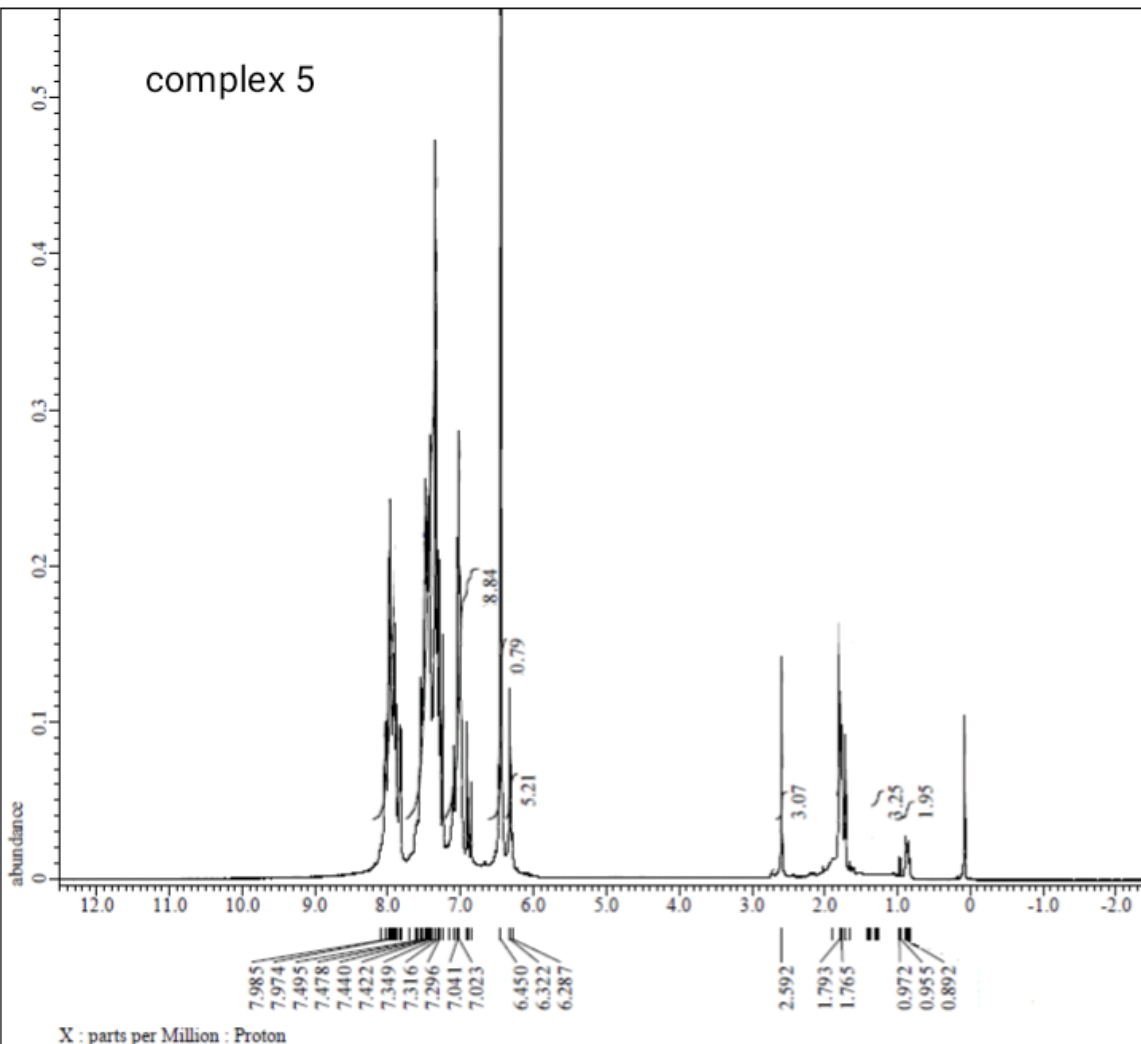
Filename = RU-2-3-BAM Proton_ft-2
 Author = datum
 Experiment = proton_jmp
 Sample Id = RU-2-3-BAM
 Solvent = CHLOROFORM-D
 Creation Time = 28-MAY-2019 14:34:18
 Revision Time = 14-DEC-2021 11:55:15
 Current Time = 14-DEC-2021 11:55:40

Comment = single_pulse
 Data Format = 1D COMPLEX
 Dim Size = 26214
 Dim Title = Proton
 Dim Units = [ppm]
 Dimensions = X
 Site = JNM-ECS400
 Spectrometer = DELTA2_NMR

Field Strength = 9.389766[T] (400[MHz])
 X Acq Duration = 2.73154048[s]
 X Domain = 18
 X Freq = 399.78219838[MHz]
 X Offset = 8[ppm]
 X Points = 32768
 X Prescans = 1
 X Resolution = 0.36609379[Hz]
 X Sweep = 11.99616123[kHz]
 X Sweep Clipped = 9.59692898[kHz]
 Irr Domain = Proton
 Irr Freq = 399.78219838[MHz]
 Irr Offset = 5[ppm]
 Tri Domain = Proton
 Tri Freq = 399.78219838[MHz]
 Tri Offset = 5[ppm]
 Clipped = FALSE
 Scans = 16
 Total Scans = 16

Relaxation Delay = 2[s]
 Recvr Gain = 40
 Temp Set = 20.5[dc]
 X 90 Width = 11.75[us]
 X Acq Time = 2.73154048[s]
 X Angle = 45[deg]
 X Atn = 0.5[db]
 X Pulse = 5.875[us]
 Irr Mode = Off
 Tri Mode = Off

complex 5



X : parts per Million : Proton

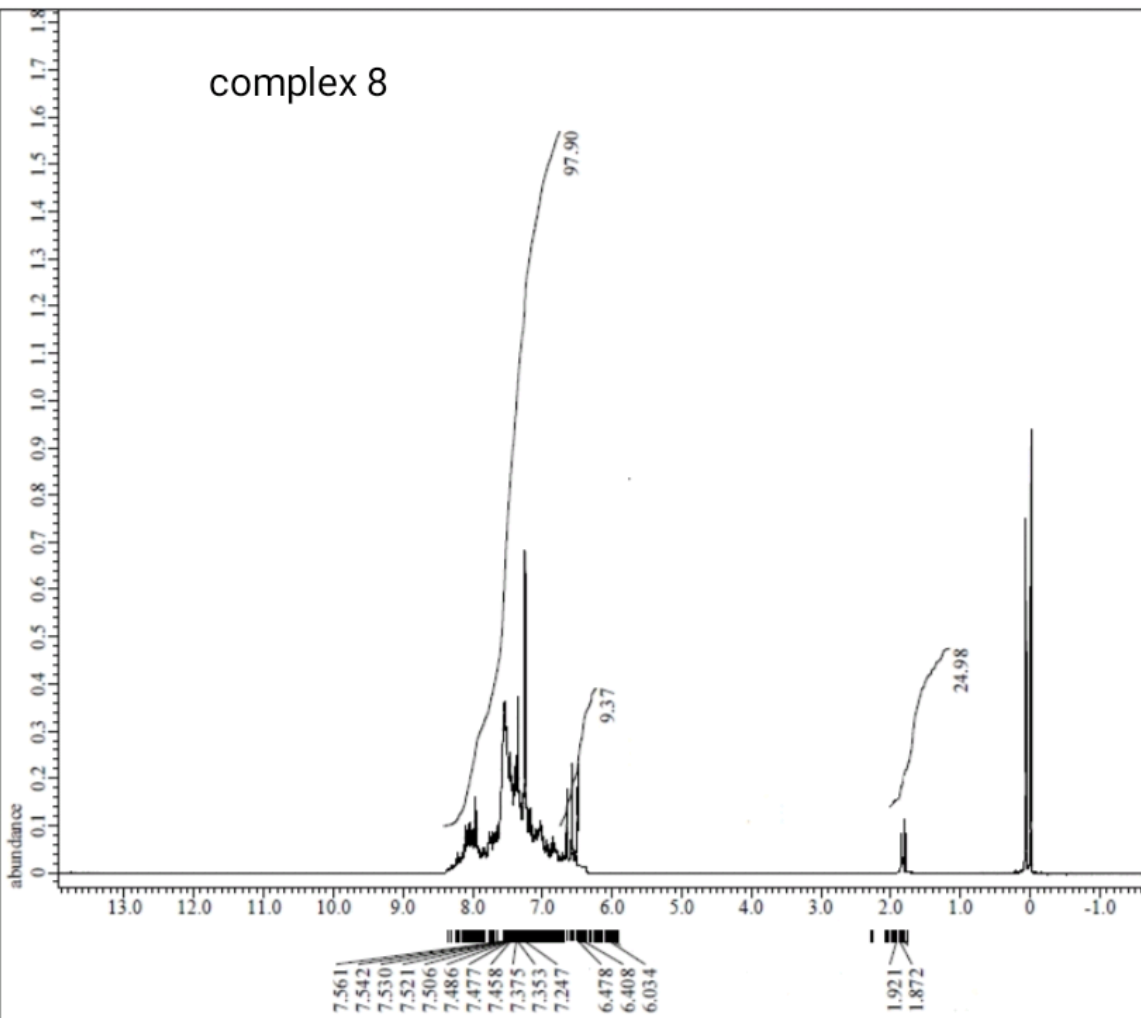
----- PROCESSING PARAMETERS -----
dc_balance
swxp : 0.2[Hz]
trapezoid : 0[%] : 0[%] : 80[%] : 100[%]
zerofill : 1
fft : 1
machinephase
ppm

Filename = RU-2-EBD_Proton_ft-1-2.
Author = datum
Experiment = proton.jxp
Sample_Id = RU-2-EBD
Solvent = CHLOROFORM-D
Creation_Time = 18-APR-2019 11:02:07
Revision_Time = 18-APR-2019 10:43:52
Current_Time = 18-APR-2019 10:44:24

Comment = single pulse
Data_Format = 1D COMPLEX
Dim_Size = 26214
Dim_Title = Proton
Dim_Units = [ppm]
Dimensions = X
Site = JNM-ECS400
Spectrometer = DELTA2_NMR
Field_Strength = 9.389766[T] (400[MHz])
X_Acq_Duration = 4.36731904[s]
X_Domain = 1H
X_Freq = 399.78219838[MHz]
X_Offset = 5[ppm]
X_Points = 32768
X_Prescans = 1
X_Resolution = 0.22897343[Hz]
X_Sweep = 7.5030012[kHz]
X_Sweep_Clipped = 6.00240096[kHz]
Irr_Domain = Proton
Irr_Freq = 399.78219838[MHz]
Irr_Offset = 5[ppm]
Tri_Domain = Proton
Tri_Freq = 399.78219838[MHz]
Tri_Offset = 5[ppm]
Clipped = FALSE
Scans = 16
Total_Scans = 16

Relaxation_Delay = 2[s]
Recvr_Gain = 32
Temp_Get = 21.8[degC]
X_90_Width = 11.75[us]
X_Acq_Time = 4.36731904[s]
X_Angle = 45[deg]
X_Atn = 0.5[dB]
X_Pulse = 5.875[us]
Irr_Mode = Off
Tri_Mode = Off

complex 8



X : parts per Million : Proton

---- PROCESSING PARAMETERS ----
 dc balance
 samp : 0.2[Hz]
 trapezoid : 0[%] : 0[%] : 80[%] : 100[%]
 zerofill : 1
 fft : 1
 machinephase
 ppm

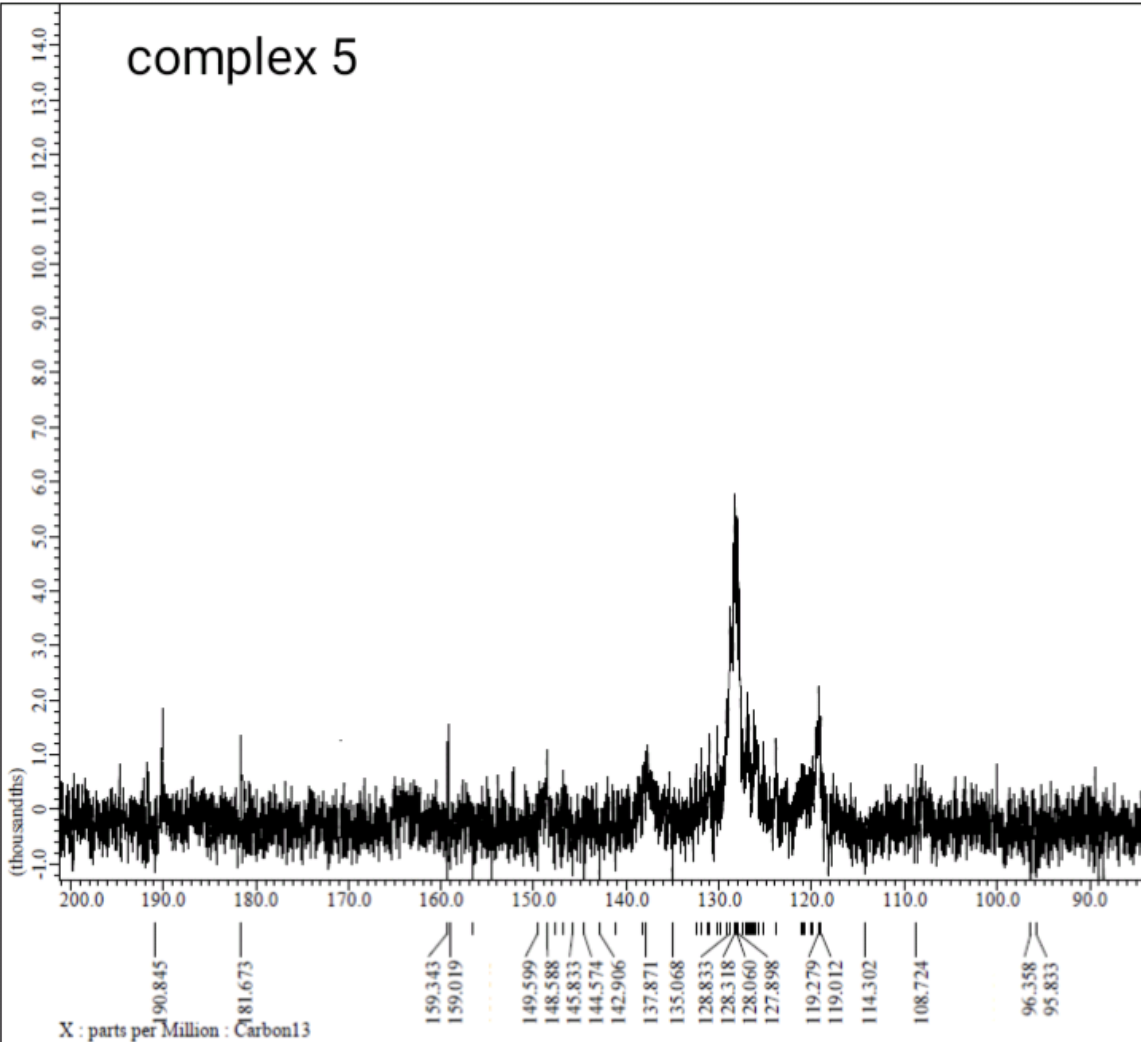
Filename = RU-E-1-CMB Proton_ft-1
 Author = datum
 Experiment = proton.jpg
 Sample Id = RU-E-1-CMB
 Solvent = CHLOROFORM-D
 Creation Time = 28-MAY-2019 13:57:14
 Revision Time = 14-DEC-2021 11:51:21
 Current Time = 14-DEC-2021 11:51:53

Comment = single pulse
 Data Format = 1D COMPLEX
 Dim Size = 26214
 Dim Title = Proton
 Dim Units = [ppm]
 Dimensions = X
 Site = JNM-ECX400
 Spectrometer = DELTA2_NMR

Field Strength = 9.389766[T] (400[MHz])
 X Acq Duration = 2.73154048[s]
 X Domain = 1H
 X Freq = 399.78219838[MHz]
 X Offset = 0[ppm]
 X Points = 32768
 X Prescans = 1
 X Resolution = 0.36609379[Hz]
 X Sweep = 11.99616123[kHz]
 X Sweep Clipped = 9.59692898[kHz]
 Irr Domain = Proton
 Irr Freq = 399.78219838[MHz]
 Irr Offset = 0[ppm]
 Tri Domain = Proton
 Tri Freq = 399.78219838[MHz]
 Tri Offset = 0[ppm]
 Clipped = FALSE
 Scans = 16
 Total Scans = 16

Relaxation Delay = 2[s]
 Recvr Gain = 40
 Temp Get = 20.5[dc]
 X 90 Width = 11.75[us]
 X Acq Time = 2.73154048[s]
 X Angle = 45[deg]
 X Atn = 0.5[db]
 X Pulse = 5.875[us]
 Irr Mode = off
 Tri Mode = off

complex 5



```

---- PROCESSING PARAMETERS ----
dc Balance
saxp : 2[Hz]
trapezoid : 0[%] : 0[%] : 80[%] : 100[%]
zerofill : 1
fft : 1
machinephase
ppm

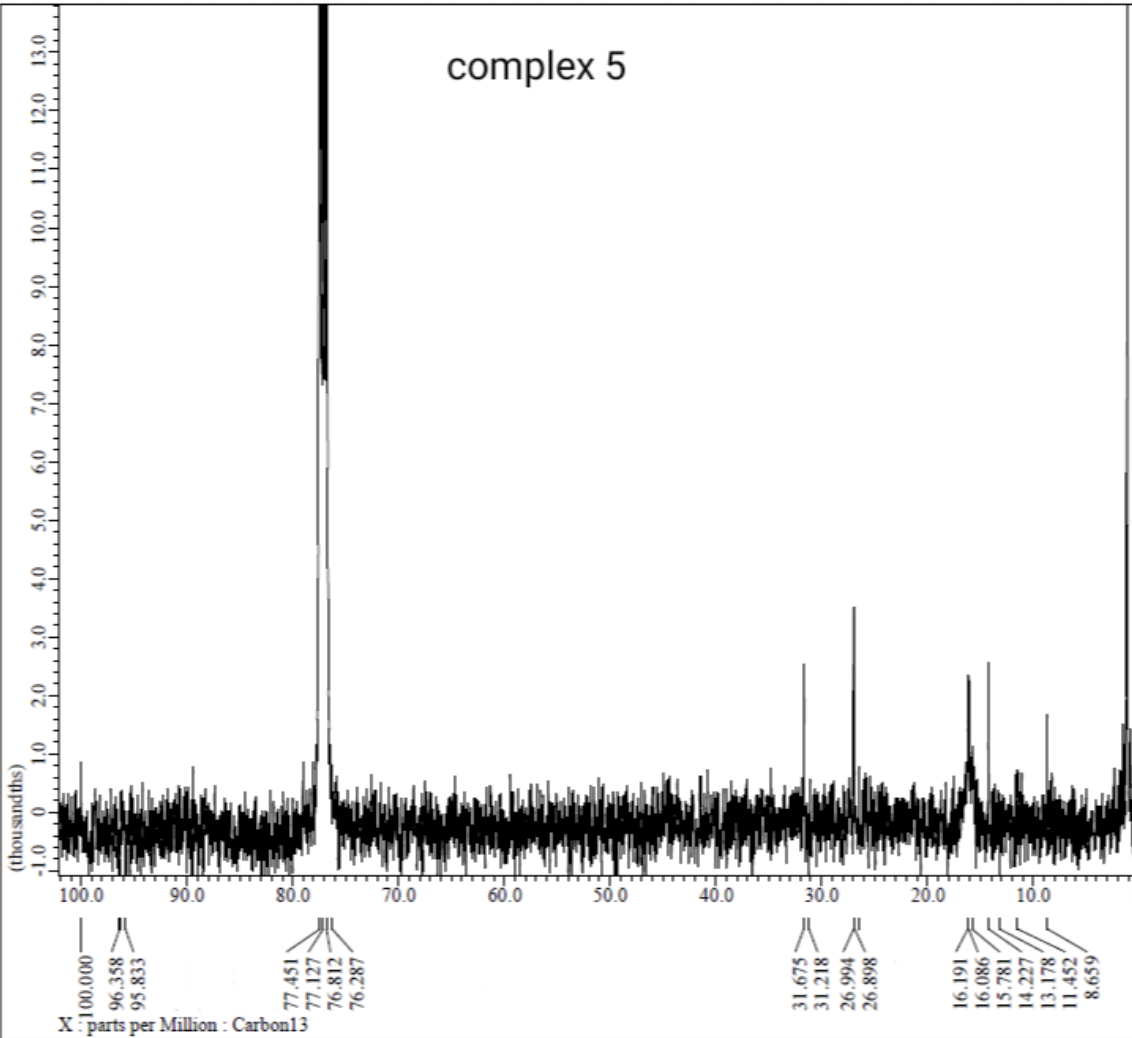
Filename      = RU-K-1-R_Carbon_ft-1-2.
Author       = datum
Experiment   = carbon_jxp
Sample_Id    = RU-K-1-R
Solvent      = CHLOROFORM-D
Creation_Time = 23-MAR-2017 17:23:46
Revision_Time = 21-DEC-2021 10:50:03
Current_Time = 21-DEC-2021 10:50:48

Comment      = single pulse decoupled
Data_Format  = 1D COMPLEX
Dim_Size     = 26214
Dim_Title    = Carbon13
Dim_Units    = [ppm]
Dimensions   = X
Site         = JNM-ECS400
Spectrometer = DELTA2_NMR

Field_Strength = 9.389766[T] (400[MHz])
X_Acq_Duration = 1.04333312[s]
X_Domain       = 13C
X_Freq         = 100.52530333[MHz]
X_Offset       = 100[ppm]
X_Points       = 32768
X_Prescans     = 4
X_Resolution   = 0.95846665[Hz]
X_Sweep        = 31.40703518[kHz]
X_Sweep_Clipped = 25.12562814[kHz]
Irr_Domain     = Proton
Irr_Freq       = 399.78219838[MHz]
Irr_Offset     = 5[ppm]
Clipped        = FALSE
Scans          = 3200
Total_Scans    = 3200

Relaxation_Delay = 2[s]
Recvr_Gain       = 50
Temp_Get         = 20.9[dc]
X_90_Width      = 8.75[us]
X_Acq_Time      = 1.04333312[s]
X_Angle         = 30[deg]
X_Att           = 4[db]
X_Pulse         = 2.91666667[us]
Irr_Atn_Dec     = 21.814[db]
Irr_Atn_Hoe     = 21.814[db]
Irr_Noise       = WALTZ
Irr_Pwidth      = 0.115[ms]
Decoupling      = TRUE
    
```

complex 5



---- PROCESSING PARAMETERS ----
 dc Balance
 sqXp : 2 [Hz]
 trapezoid : 0 [%] : 0 [%] : 80 [%] : 100 [%]
 zerofill : 1
 fft : 1
 machinephase
 ppm

Filename = RU-K-1-R_Carbon_ft-1-2.
 Author = datum
 Experiment = carbon_jxp
 Sample Id = RU-K-1-R
 Solvent = CHLOROFORM-D
 Creation_Time = 23-MAR-2017 17:23:46
 Revision_Time = 21-DEC-2021 10:50:03
 Current_Time = 21-DEC-2021 10:51:15

Comment = single pulse decoupled
 Data_Format = 1D COMPLEX
 Dim_Size = 26214
 Dim_Title = Carbon13
 Dim_Units = [ppm]
 Dimensions = X
 Site = JNM-ECS400
 Spectrometer = DELTA2_NMR

Field_Strength = 9.389766 [T] (400 [MHz])
 X_Acq_Duration = 1.04333312 [s]
 X_Domain = 13C
 X_Freq = 100.52530333 [MHz]
 X_Offset = 100 [ppm]
 X_Points = 32768
 X_Prescans = 4
 X_Resolution = 0.95846665 [Hz]
 X_Sweep = 31.40703518 [kHz]
 X_Sweep_Clipped = 25.12562814 [kHz]
 Irr_Domain = Proton
 Irr_Freq = 399.78219838 [MHz]
 Irr_Offset = 5 [ppm]
 Clipped = FALSE
 Scans = 3200
 Total_Scans = 3200

Relaxation_Delay = 2 [s]
 Recvr_Gain = 50
 Temp_Get = 20.9 [dC]
 X_90_Width = 8.75 [us]
 X_Acq_Time = 1.04333312 [s]
 X_Angle = 30 [deg]
 X_Atn = 4 [dB]
 X_Pulse = 2.91666667 [us]
 Irr_Atn_Dec = 21.814 [dB]
 Irr_Atn_Noe = 21.814 [dB]
 Irr_Noise = WALTZ
 Irr_Pwidth = 0.115 [ms]
 Decoupling = TRUE

complex 5



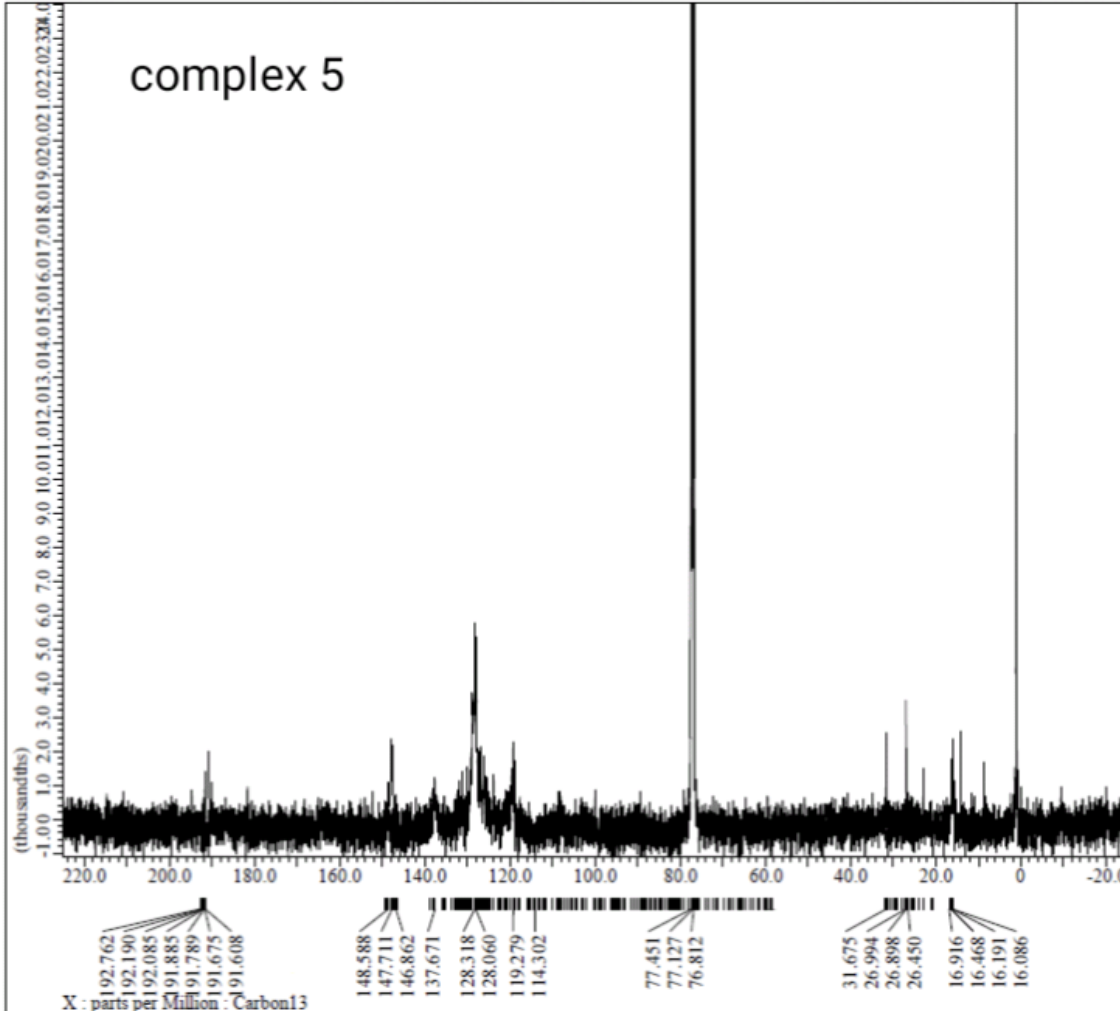
----- PROCESSING PARAMETERS -----
 dc_balance = datum
 samp : 2[Hz]
 trapezoid : 0[%] : 0[%] : 80[%] : 100[%]
 zerofill : 1
 fft : 1
 machinephase
 ppm

Filename = RD-K-1-R_Carbon_ft-1-2.
 Author = datum
 Experiment = carbon.jsp
 Sample_Id = RD-K-1-R
 Solvent = CHLOROFORM-D
 Creation_Time = 23-MAR-2017 17:23:46
 Revision_Time = 13-JAN-2022 11:54:52
 Current_Time = 13-JAN-2022 11:55:01

Comment = single pulse decoupled
 Data_Format = 1D COMPLEX
 Dim_Size = 26214
 Dim_Title = Carbon13
 Dim_Units = [ppm]
 Dimensions = X
 Site = JNM-BCS400
 Spectrometer = DELTA2_MMR

Field_Strength = 9.389766[T] (400[MHz])
 X_Acq_Duration = 1.04333312[s]
 X_Domain = 13C
 X_Freq = 100.52530333[MHz]
 X_Offset = 100[ppm]
 X_Points = 32768
 X_Frescans = 4
 X_Resolution = 0.95846665[Hz]
 X_Sweep = 31.40703518[kHz]
 X_Sweep_Clipped = 25.12562814[kHz]
 Irr_Domain = Proton
 Irr_Freq = 399.78219838[MHz]
 Irr_Offset = 5[ppm]
 Clipped = FALSE
 Scans = 3200
 Total_Scans = 3200

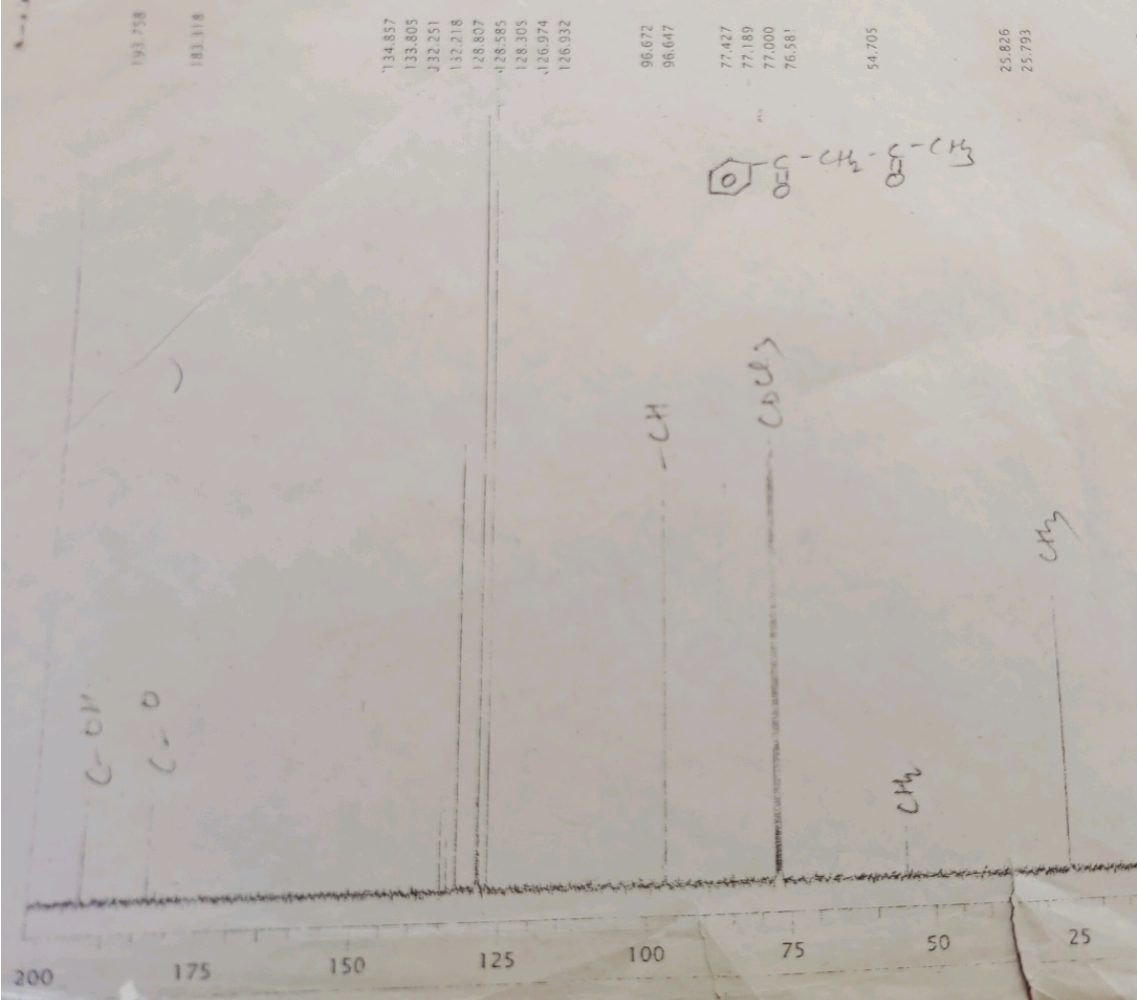
Relaxation_Delay = 2[s]
 Recvr_Gain = 50
 Temp_Get = 20.9[deg]
 X_90_Width = 8.75[us]
 X_Acq_Time = 1.04333312[s]
 X_Angle = 30[deg]
 X_Atn = 4[deg]
 X_Pulse = 2.91666667[us]
 Irr_Atn_Dec = 21.814[dB]
 Irr_Atn_Hoe = 21.814[dB]
 Irr_Noise = WALTZ
 Irr_Pwidth = 0.115[ms]
 Decoupling = TRUE



C:\WINMR98\TEMPDATA\13DT0812111BCM_E14.ALS
Suman Kumar

L2H B. Acetone

121
B. 5



Parameter	Value
MENUF	BCM
OBNUC	13C
OFR	75.45 MHz
OBSET	124.00 KHz
OBFIN	1840.00 Hz
PW1	4.80 usec
DEADT	27.01 usec
PREDL	0.20000 msec
IWT	1.0000 msec
POINT	32768
SPO	32768
TIMES	640
DUMMY	1
FREQU	20356.23 Hz
FLT	
DELAY	19.61 usec
ACOTM	1.6097 sec
PD	1.3900 sec
ADBIT	16
RGAIN	23
BF	1.00 Hz
T1	0.00
T2	0.00
T3	90.00
T4	100.00
EXMOD	BCM
EXPCM	Bilevel, complete decoupl
IRNUC	1H
IFR	300.40 MHz
IRSET	130.00 KHz
IRFIN	1150.00 Hz
IRRP	50 usec
IRAT	511
DFIL	
SF	C:\WINMR98\TEMPD
LKSET	25.60 KHz
LKFIN	52.0 Hz
LKLEV	180
LGAIN	25
LKPHS	132
LKSIG	348
CSPED	12 Hz
FILDC	
FILDF	

DT