

**Cairo University  
Micro Analytical Center**

**DI Analysis  
Shimadzu Qp-2010 Plus**

Sample Information  
 Analyzed by : A.GABR  
 Analyzed : 01/09/2013 03:50:28 م  
 Sample Name : RX25  
 Sample ID :  
 Customer Name : نسمه بيومى - علوم المنصوره  
 Data File : C:\GCMSsolution\Data\Project1\RX25.QGD  
 Org Data File : C:\GCMSsolution\Data\Project1\RX25.QGD  
 Method File : C:\GCMSsolution\Data\Project1\A.GABR.qgm  
 Org Method File : C:\GCMSsolution\Data\Project1\A.GABR.qgm  
 Report File :  
 Tuning File : C:\GCMSsolution\System\Tune1\default1.qgt  
 \$EndIf\$Modified by : A.GABR  
 Modified : 01/09/2013 03:53:13 م

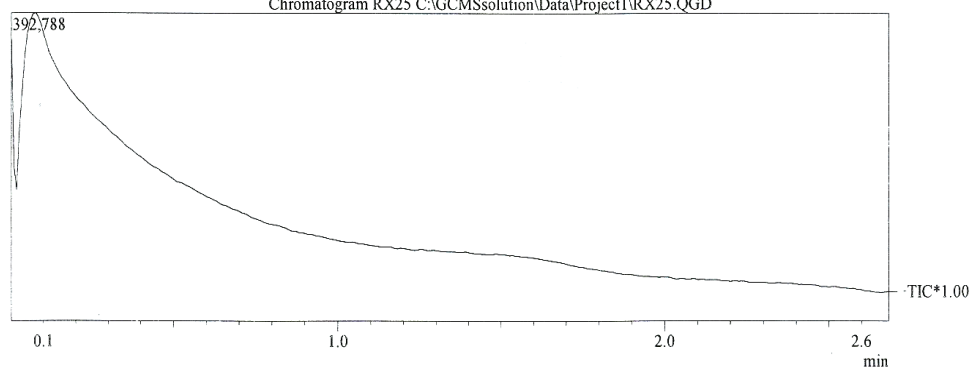
Method  
 Analytical Line 1  
 IonSourceTemp : 250.00 °C  
 [MS Table]  
 -Group 1 - Event 1-  
 Start Time : 0.00min  
 End Time : 10.00min  
 ACQ Mode : Scan  
 Event Time : 0.50sec  
 Scan Speed : 526  
 Start m/z : 50.00  
 End m/z : 300.00

Electron Voltage : 70 eV  
 Ionization Mode : EI



C:\GCMSsolution\Data\Project1\RX25.QGD

Chromatogram RX25 C:\GCMSsolution\Data\Project1\RX25.QGD



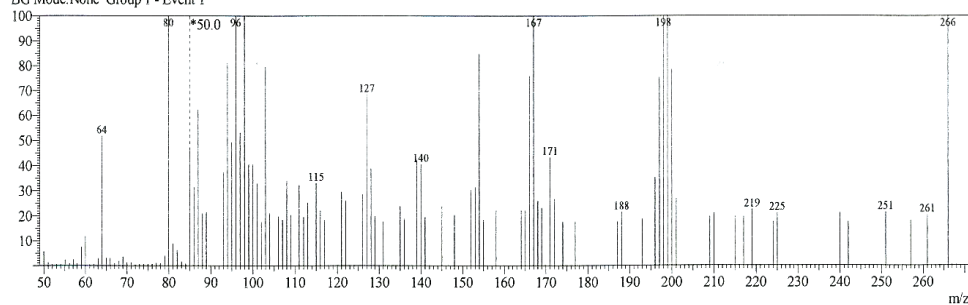
Spectrum

Line#:1 R.Time:2.4(Scan#:292)

MassPeaks:115

RawMode:Single 2.4(292) BasePeak:80(14674)

BG Mode:None Group 1 - Event 1



Mass Table

Line#:1 R.Time:2.4(Scan#:292)

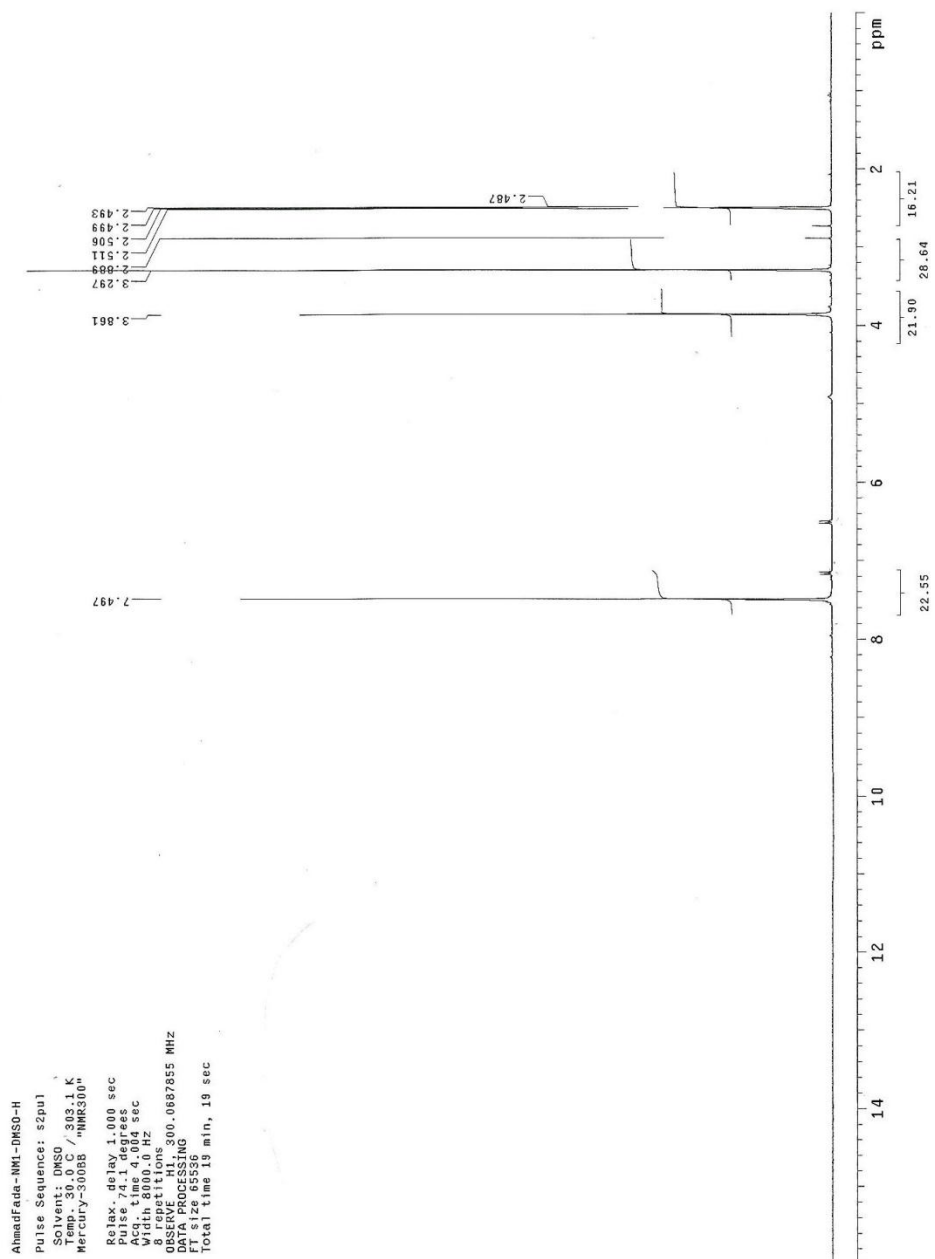
MassPeaks:115

RawMode:Single 2.4(292) BasePeak:80(14674)

BG Mode:None Group 1 - Event 1

| # | m/z   | Abs. In | Rel. Int. | # | m/z   | Abs. In | Rel. Int. | # | m/z   | Abs. In | Rel. Int. |
|---|-------|---------|-----------|---|-------|---------|-----------|---|-------|---------|-----------|
| 1 | 49.95 | 830     | 5.66      | 4 | 53.00 | 74      | 0.50      | 7 | 56.10 | 142     | 0.97      |
| 2 | 51.00 | 199     | 1.36      | 5 | 54.00 | 97      | 0.66      | 8 | 57.05 | 364     | 2.48      |
| 3 | 52.00 | 71      | 0.48      | 6 | 55.05 | 345     | 2.35      | 9 | 58.00 | 137     | 0.93      |

**Fig. (1): Compound 2 Mass**

Fig. (2):Compound 2 <sup>1</sup>H-NMR

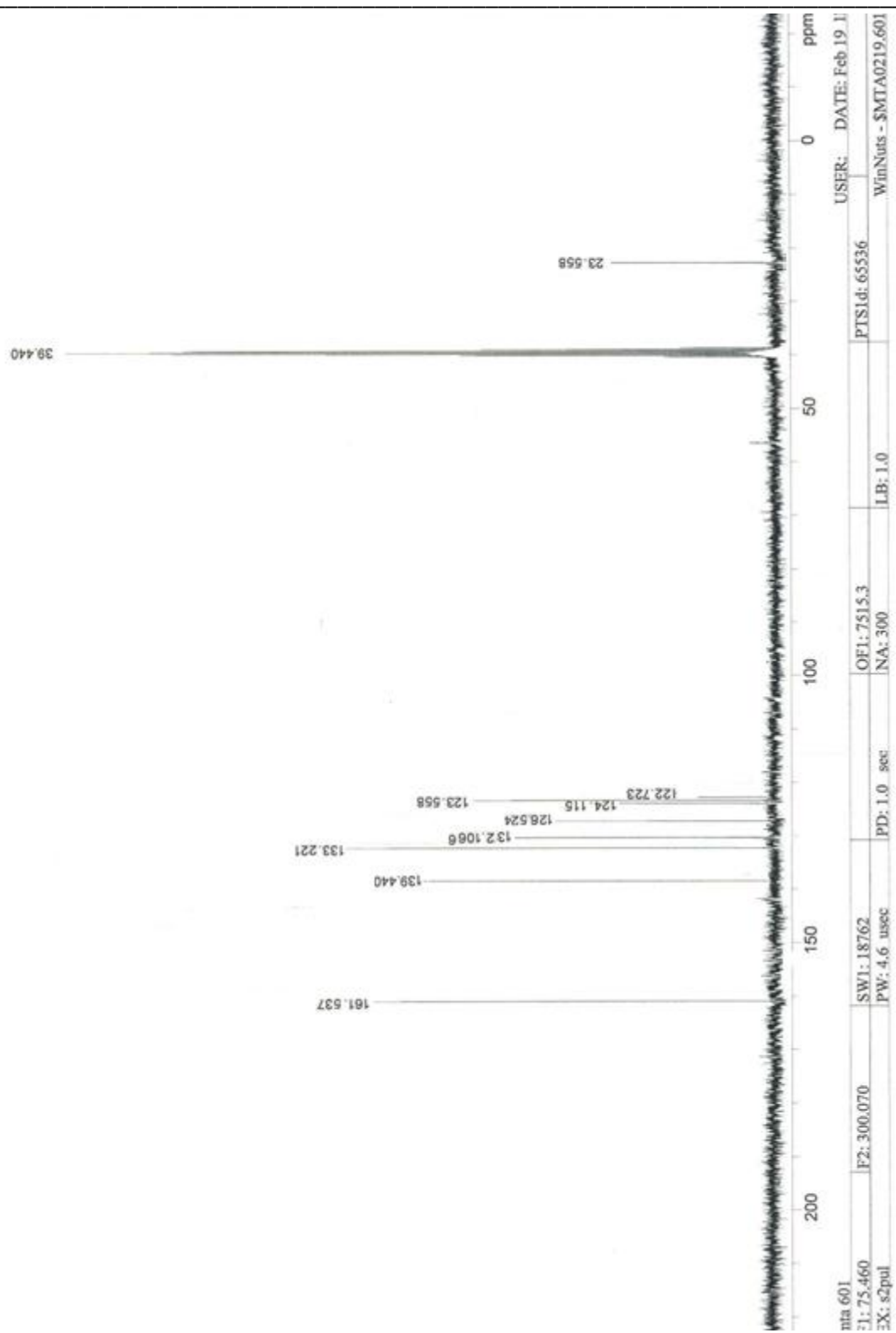


Fig. (3):Compound 2 C<sup>13</sup>-NMR

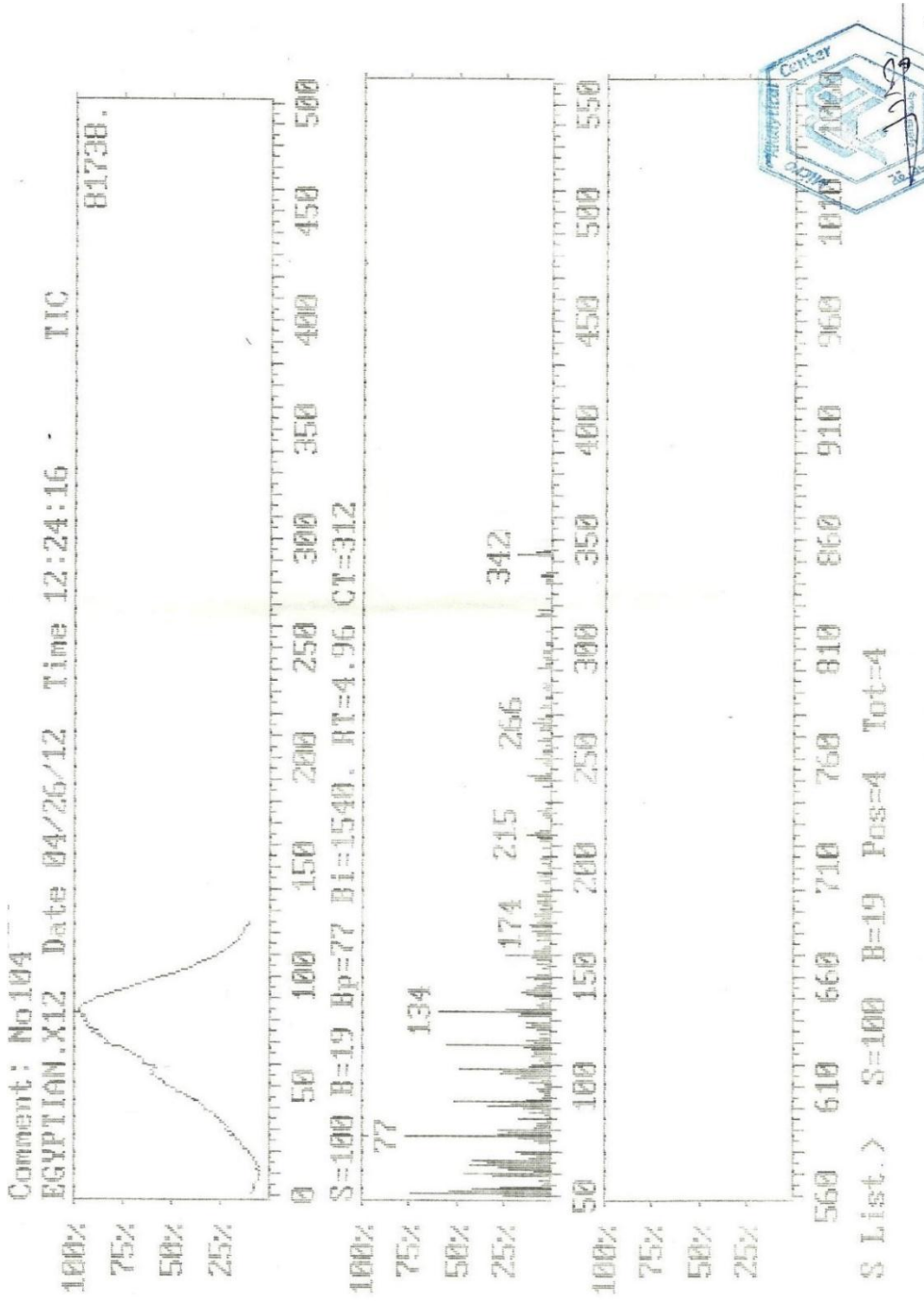
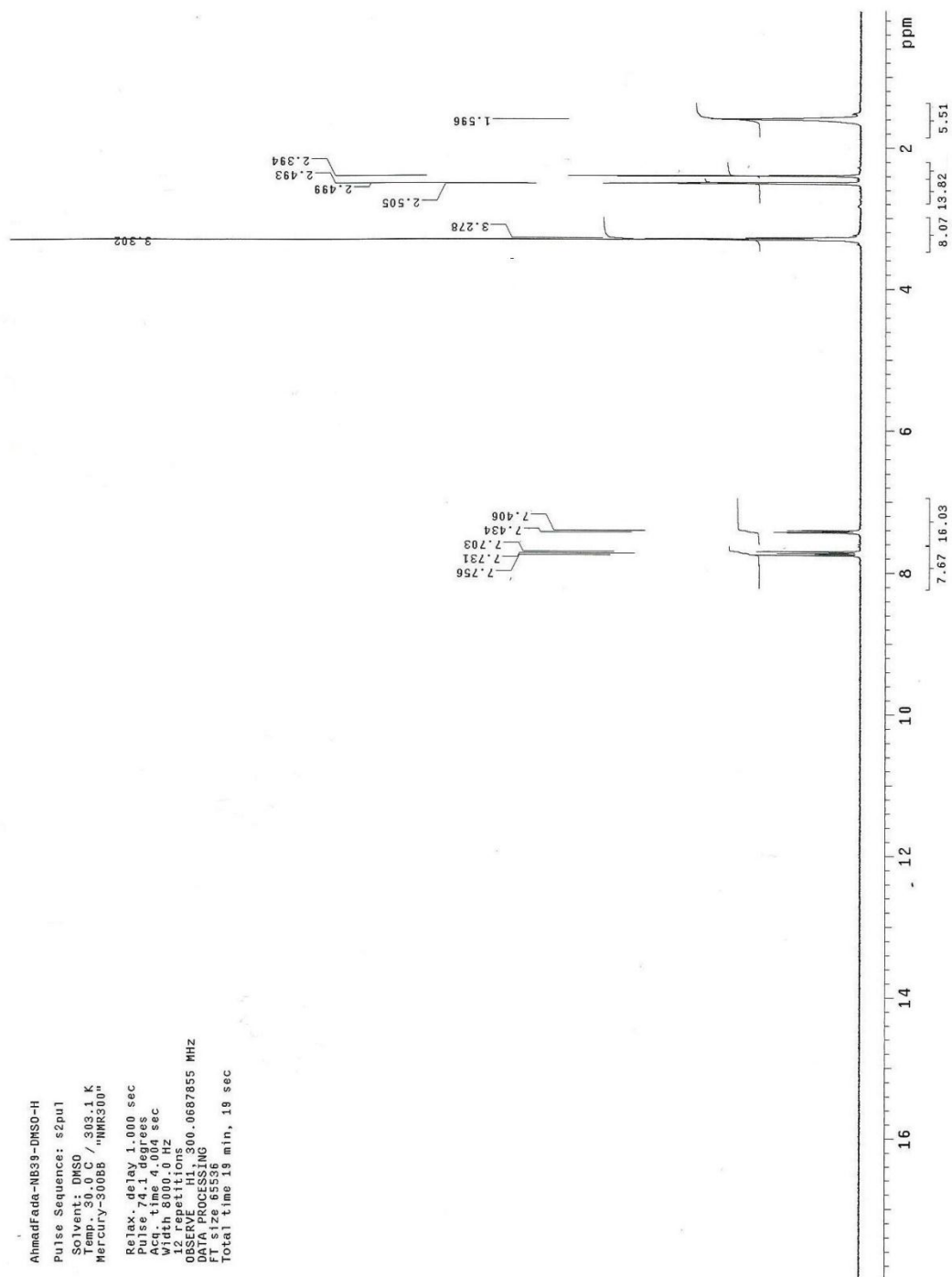


Fig. (4): Compound 4 Mass

Fig. (5): Compound 4 <sup>1</sup>H-NMR

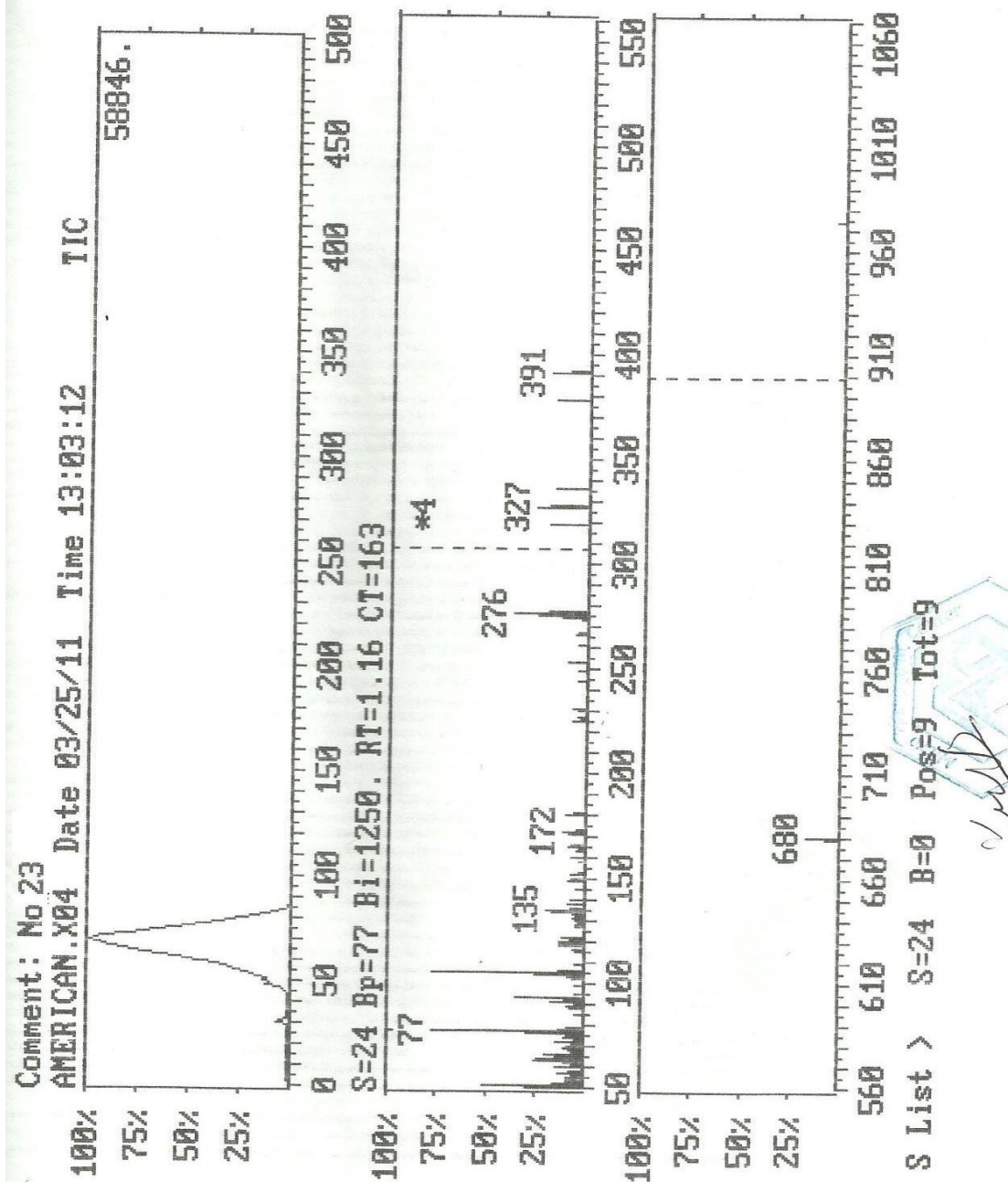
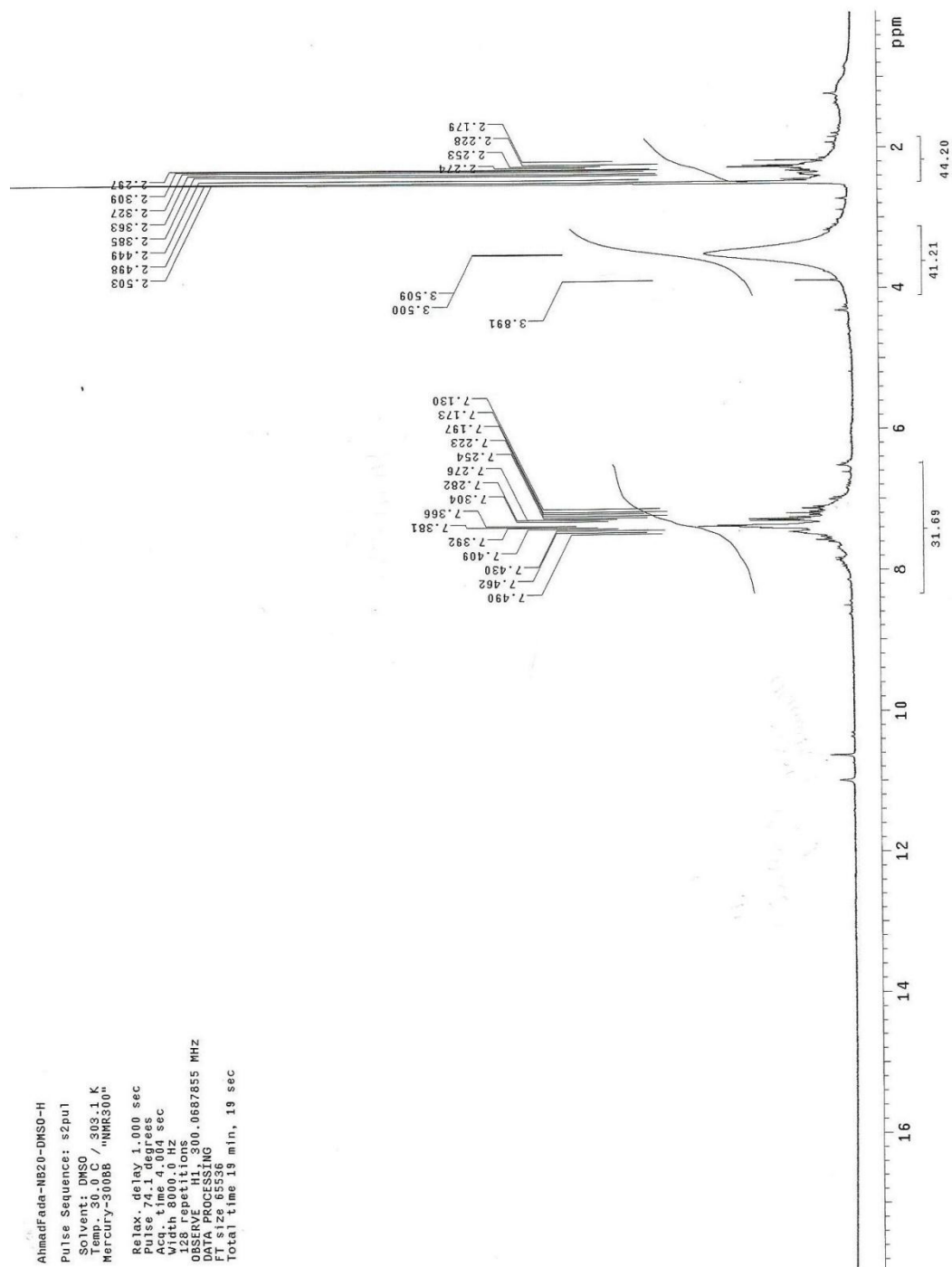


Fig. (6): Compound 5a Mass

Fig. (7): Compound 5a <sup>1</sup>H-NMR

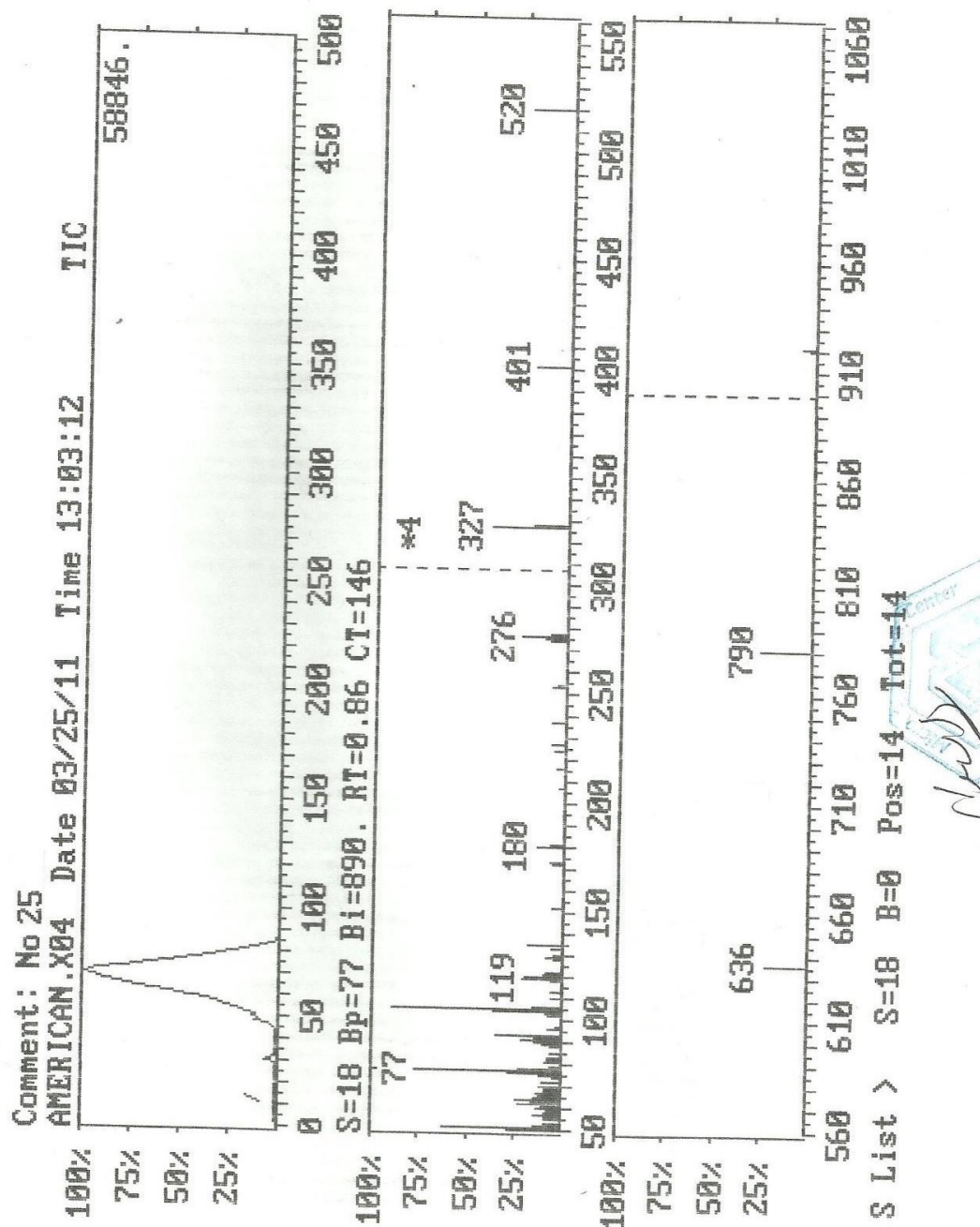
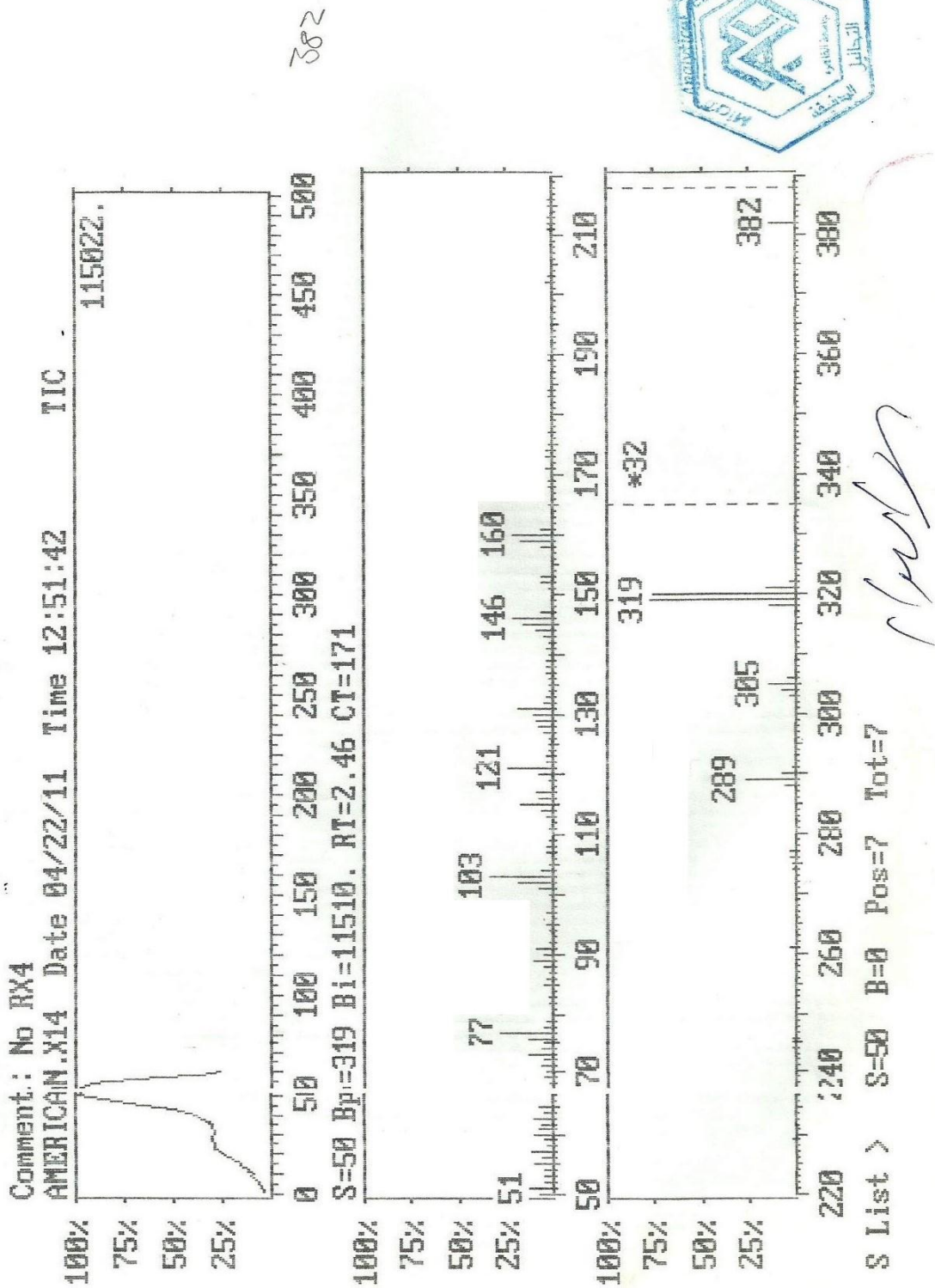


Fig. (8): Compound 5b Mass





382

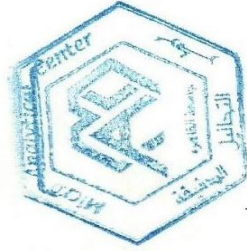
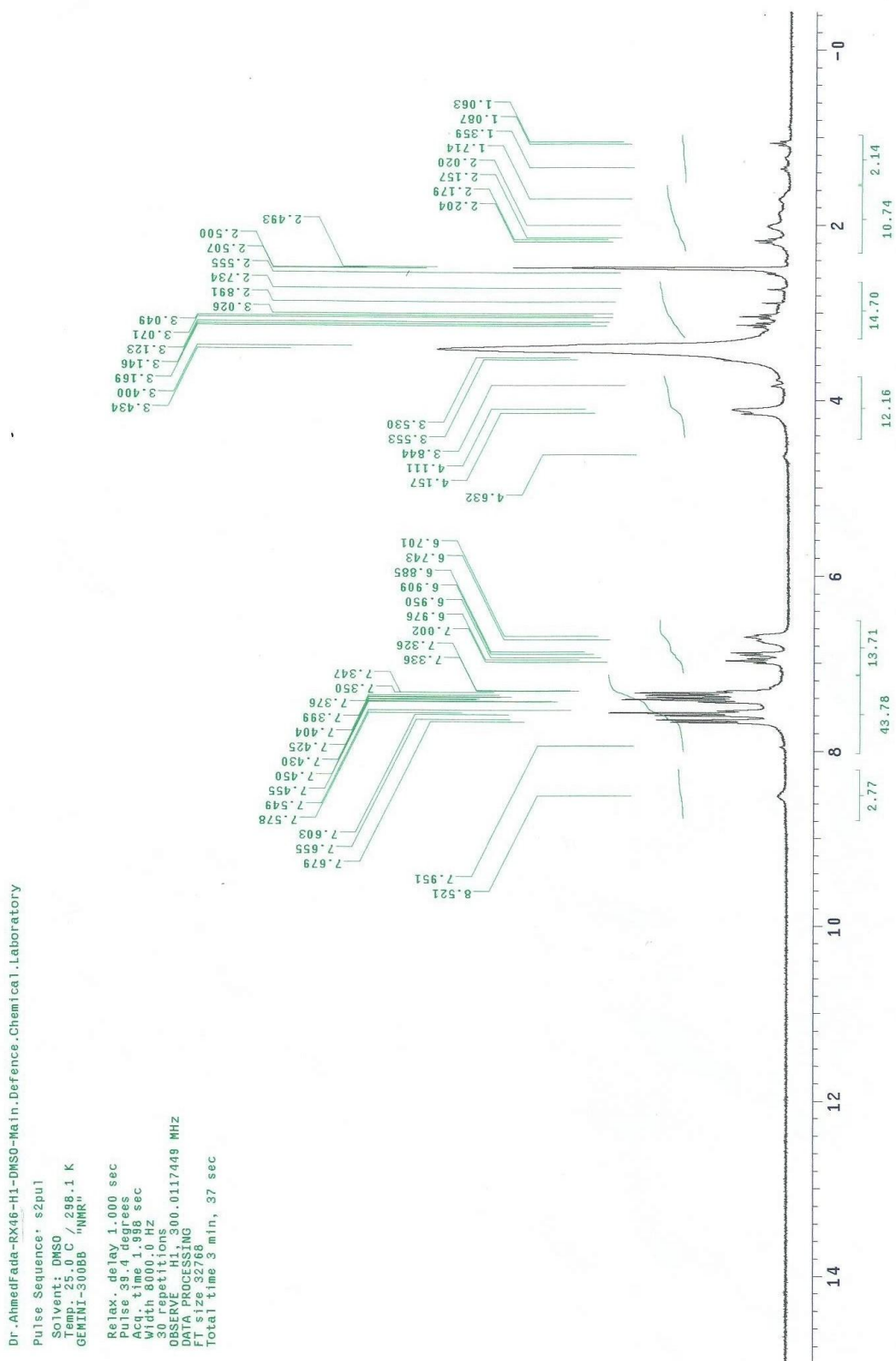
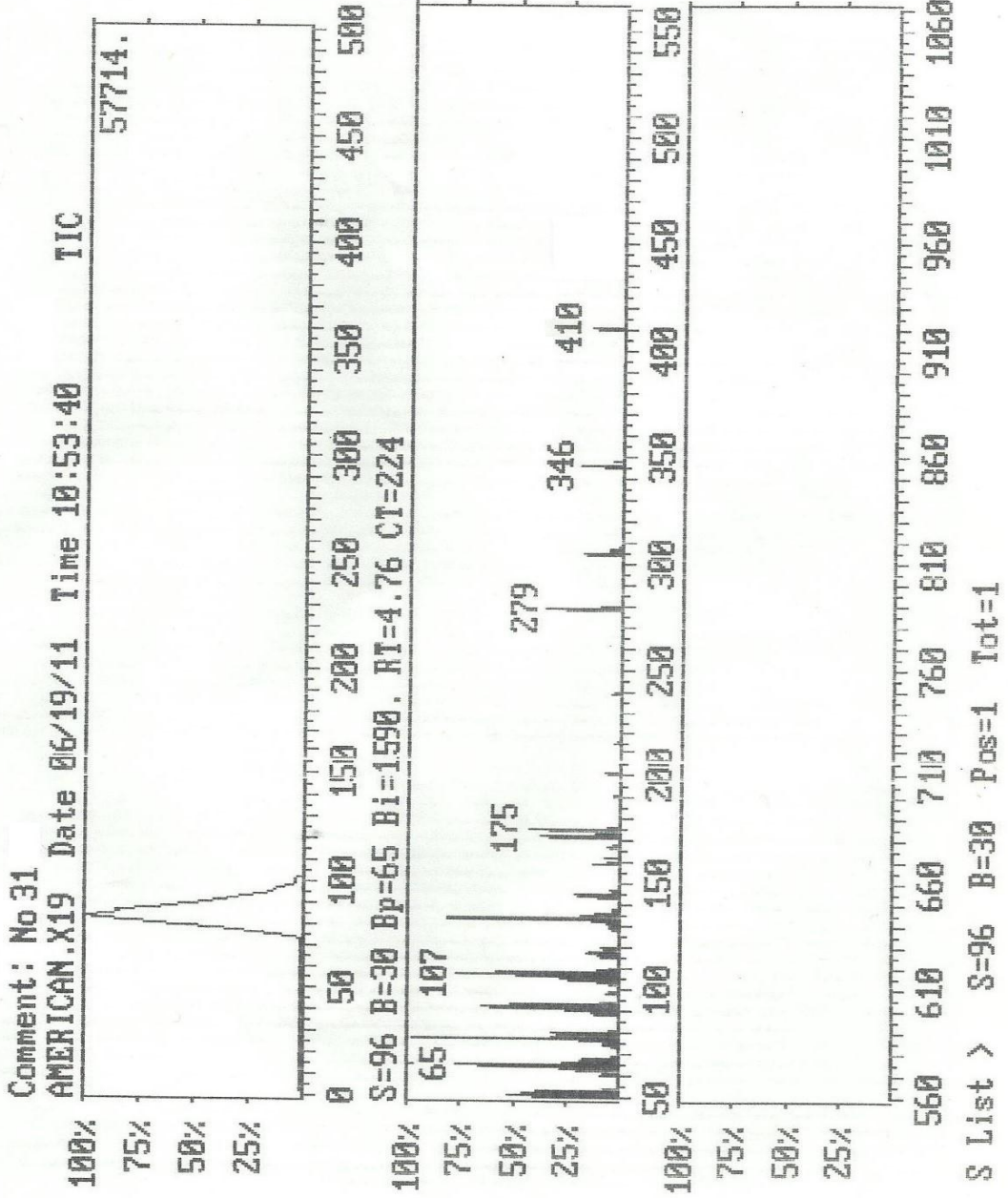


Fig. (9): Compound 6a Mass

Fig. (10): Compound 6a  $^1\text{H}$ -NMR



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**Fig. (11): Compound 6b Mass**

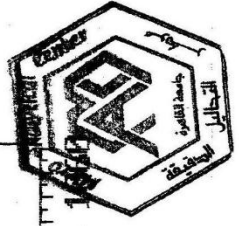
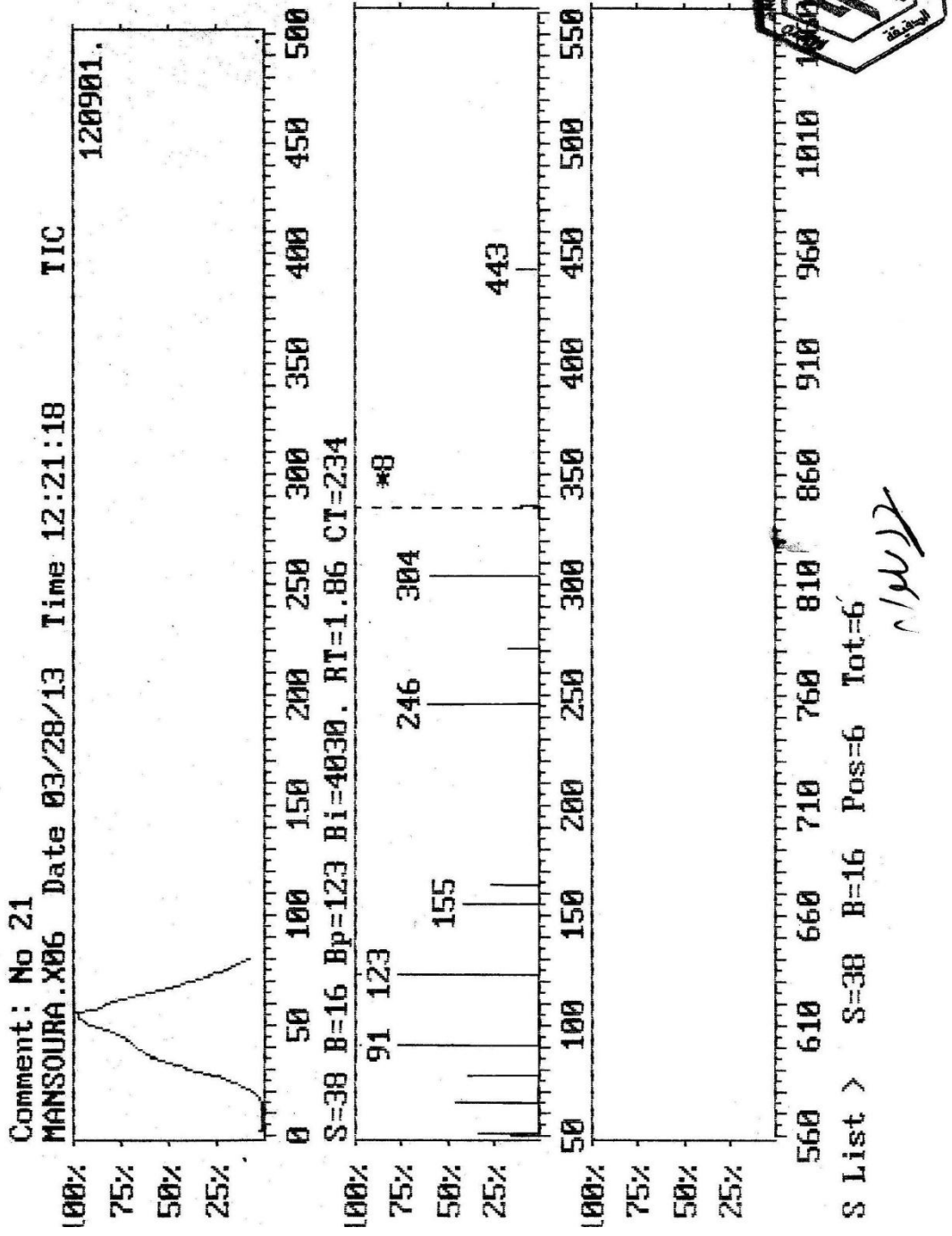


Fig. (12): Compound 7 Mass

AhmadFada -NW77 -DMSO-H  
Pulse Sequence: s2pul  
Solvent: DMSO  
Temp: 30.0 C / 86.1 K  
Mercury-300BB -NMR300  
Relax: delay 1.000 sec  
AcqSe: time 4.000 sec  
AcqTime: 4.004 sec  
Width: 8000.0 Hz  
15 repetitions  
OBSERVE: H1, 300.0687875 MHz  
DATA PROCESSING  
FT size 65536  
Total time 19 min, 19 sec

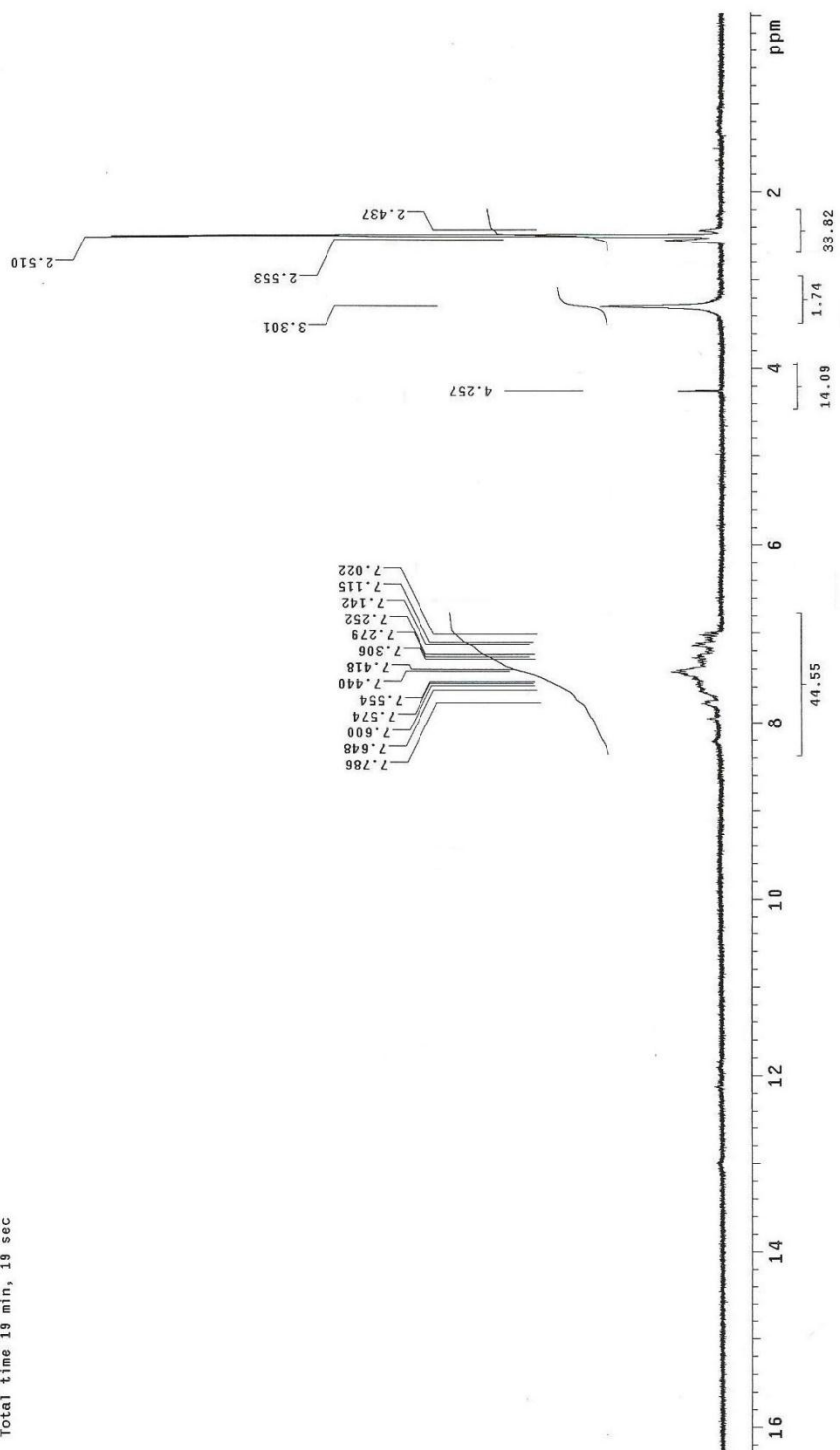
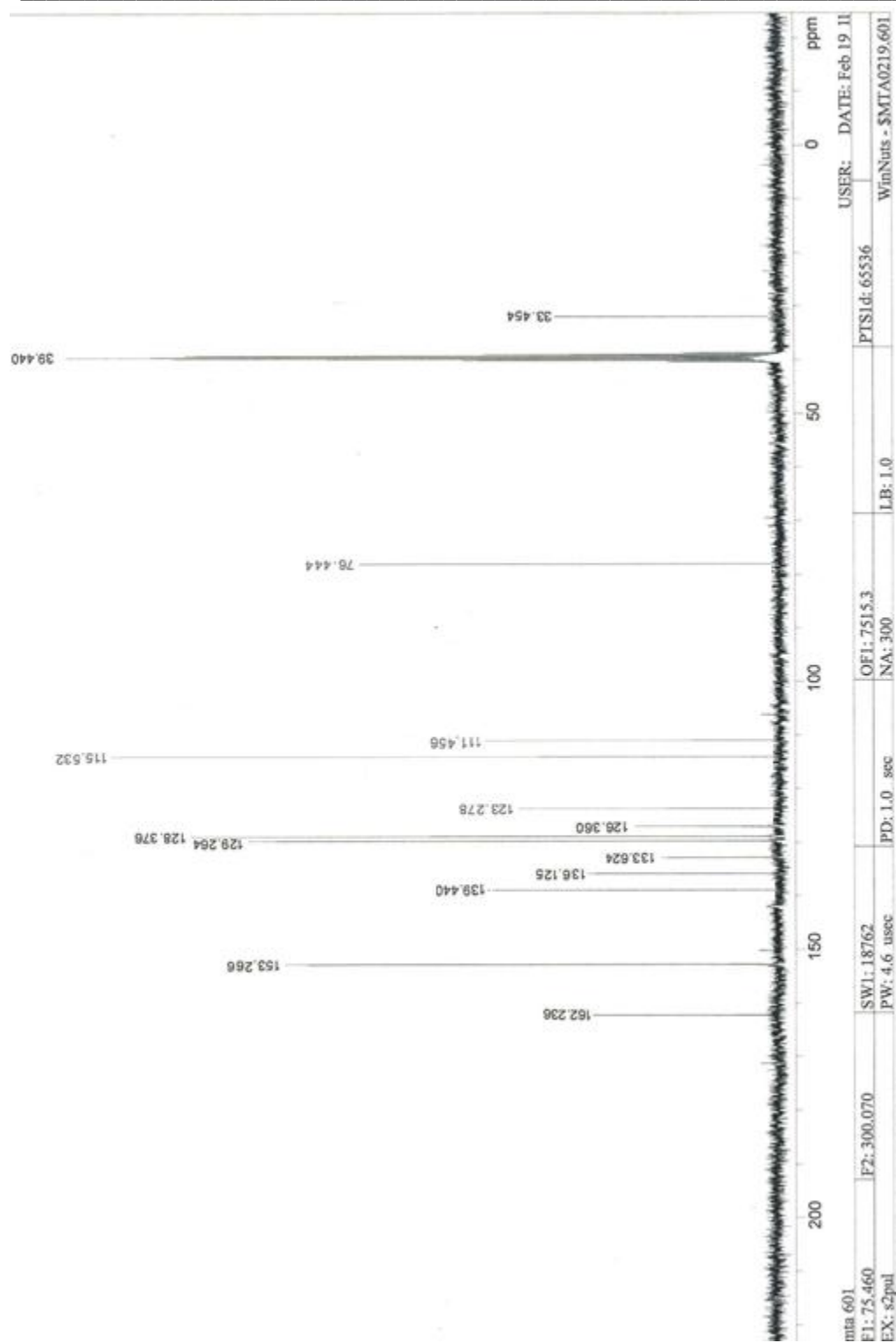


Fig. (13): Compound 7  $^1\text{H-NMR}$

Fig. (14):Compound 7 C<sup>13</sup>-NMR

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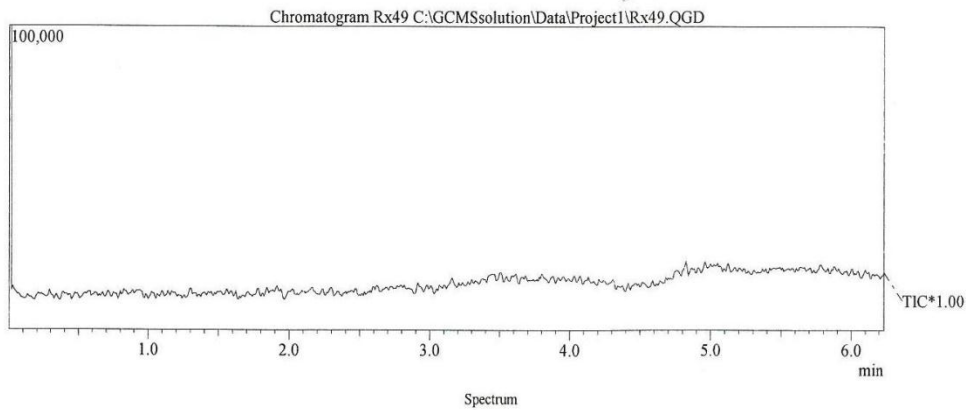
**DI Analysis  
Shimadzu Qp-2010 Plus**

Sample Information  
 Analyzed by : A.GABR  
 Analyzed : 26/12/2013 02:53:42 م  
 Sample Name : Rx49  
 Sample ID :  
 Customer Name : أحمد فضة - علوم المنصورة  
 Data File : C:\GCMSsolution\Data\Project1\Rx49.QGD  
 Org Data File : C:\GCMSsolution\Data\Project1\Rx49.QGD  
 Method File : C:\GCMSsolution\Data\Project1\A.GABR.qgm  
 Org Method File : C:\GCMSsolution\Data\Project1\A.GABR.qgm  
 Report File :  
 Tuning File : C:\GCMSsolution\System\Tune1\\_default1.qgt  
 \$EndIf\$Modified by : A.GABR  
 Modified : 26/12/2013 03:00:05 م

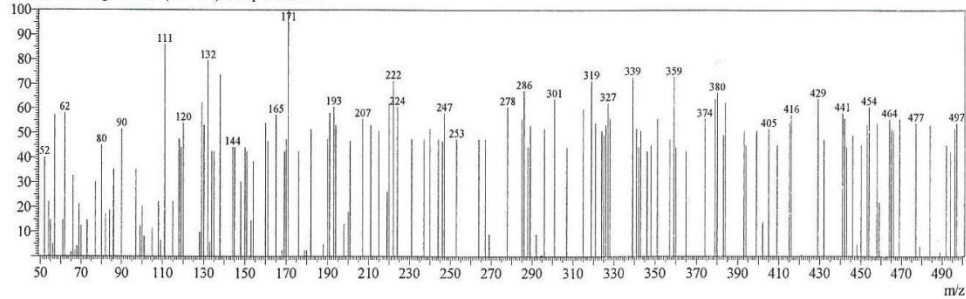
Method  
 Analytical Line 1  
 IonSourceTemp :250.00 °C  
 [MS Table]  
 -Group 1 - Event 1-  
 Start Time :0.00min  
 End Time :10.00min  
 ACQ Mode :Scan  
 Event Time :0.50sec  
 Scan Speed :1250  
 Start m/z :50.00  
 End m/z :600.00  
 Electron Voltage : 70 eV  
 Ionization Mode : EI



C:\GCMSsolution\Data\Project1\Rx49.QGD



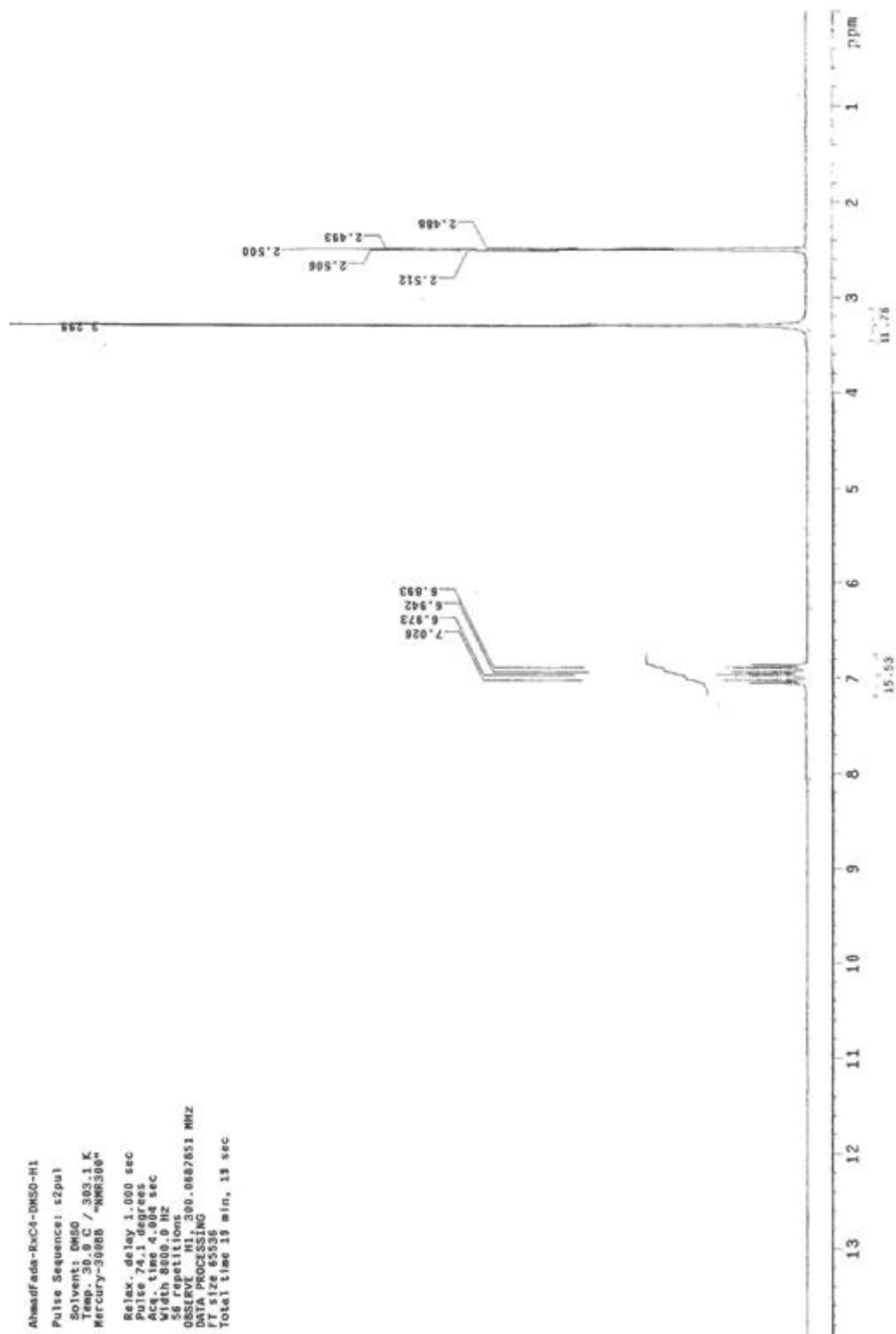
Line#:1 R.Time:3.6(Scan#:434)  
 MassPeaks:149  
 RawMode:Single 3.6(434) BasePeak:171(122)  
 BG Mode:Averaged 3.6-3.6(429-429) Group 1 - Event 1



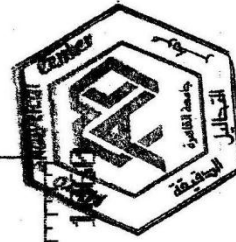
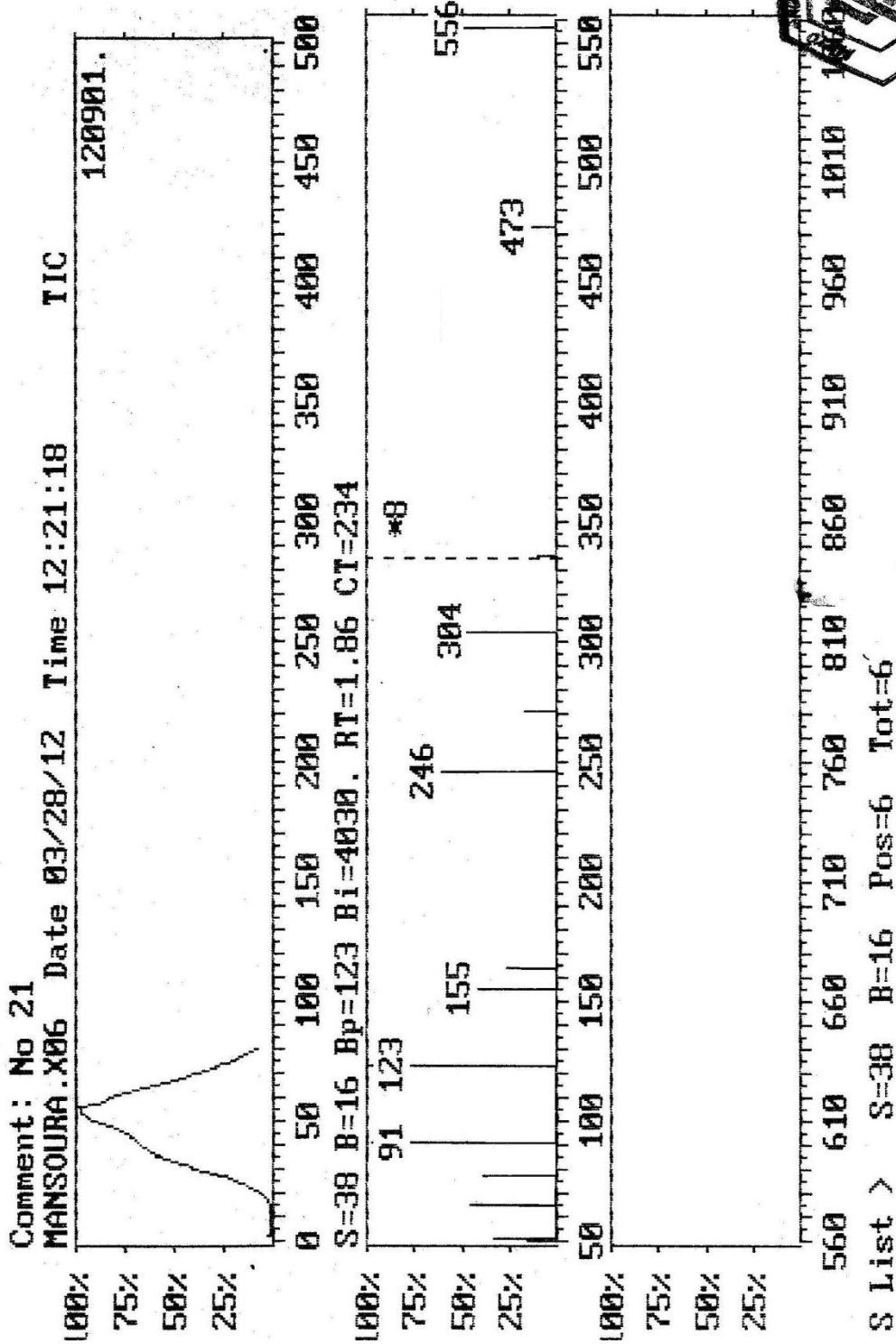
Mass Table  
 Line#:1 R.Time:3.6(Scan#:434)  
 MassPeaks:149  
 RawMode:Single 3.6(434) BasePeak:171(122)  
 BG Mode:Averaged 3.6-3.6(429-429) Group 1 - Event 1

| # | m/z   | Abs. In | Rel. Int. | # | m/z   | Abs. In | Rel. Int. | # | m/z   | Abs. In | Rel. Int. |
|---|-------|---------|-----------|---|-------|---------|-----------|---|-------|---------|-----------|
| 1 | 52.00 | 49      | 40.16     | 4 | 56.00 | 6       | 4.92      | 7 | 62.00 | 71      | 58.20     |
| 2 | 54.00 | 27      | 22.13     | 5 | 57.00 | 70      | 57.38     | 8 | 65.00 | 2       | 1.64      |
| 3 | 55.00 | 18      | 14.75     | 6 | 61.00 | 18      | 14.75     | 9 | 66.00 | 40      | 32.79     |

**Fig. (15): Compound 8 Mass**

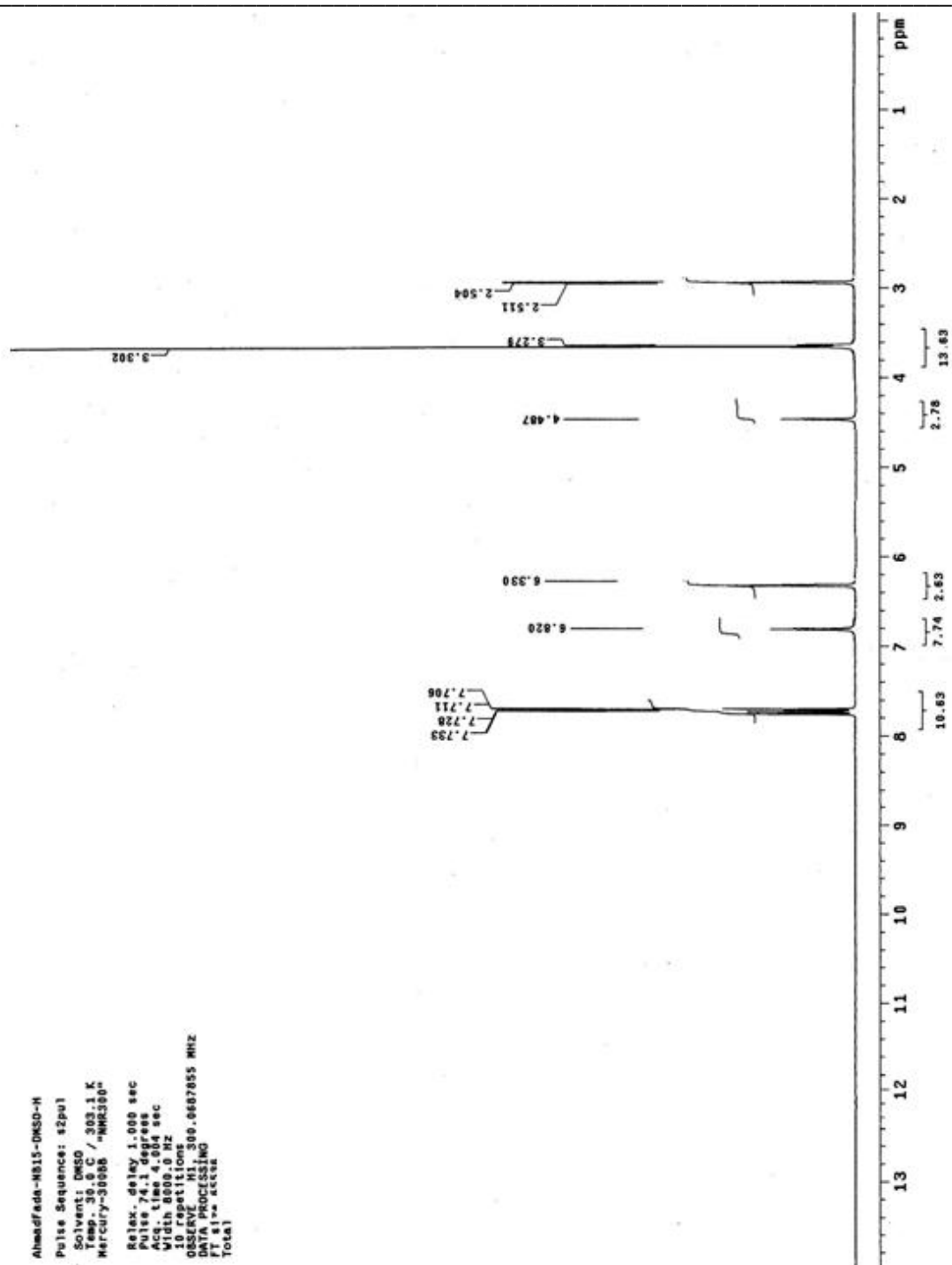
Fig. (16): Compound 8  $^1\text{H}$ -NMR





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Fig. (17): Compound 9 Mass

Fig. (18): Compound 9  $^1\text{H}$ -NMR

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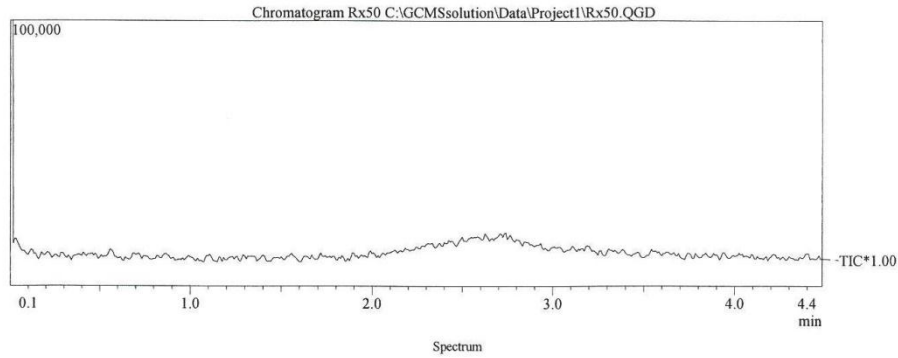
**DI Analysis  
Shimadzu Qp-2010 Plus**

Sample Information  
 Analyzed by : A.GABR  
 Analyzed : 26/12/2013 03:09:07  
 Sample Name : Rx50  
 Sample ID :  
 Customer Name : أحمد فاضل - علوم المنصورة  
 Data File : C:\GCMSsolution\Data\Project1\Rx50.QGD  
 Org Data File : C:\GCMSsolution\Data\Project1\Rx50.QGD  
 Method File : C:\GCMSsolution\Data\Project1\A.GABR.qgm  
 Org Method File : C:\GCMSsolution\Data\Project1\A.GABR.qgm  
 Report File :  
 Tuning File : C:\GCMSsolution\System\Tune1\\_default1.qgt  
 \$EndIIS Modified by : A.GABR  
 Modified : 26/12/2013 03:13:45

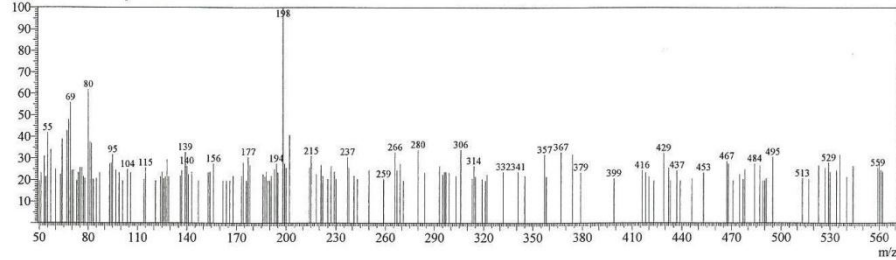
Method  
 Analytical Line 1  
 IonSourceTemp : 250.00 °C  
 [MS Table]  
 -Group 1 - Event 1-  
 Start Time : 0.00min  
 End Time : 10.00min  
 ACQ Mode : Scan  
 Event Time : 0.50sec  
 Scan Speed : 1250  
 Start m/z : 50.00  
 End m/z : 600.00  
 Electron Voltage : 70 eV  
 Ionization Mode : EI



C:\GCMSsolution\Data\Project1\Rx50.QGD



Line#:1 R.Time:1.6(Scan#:197)  
 MassPeaks:155  
 RawMode:Single 1.6(197) BasePeak:198(265)  
 BG Mode:None Group 1 - Event 1



Mass Table  
 Line#:1 R.Time:1.6(Scan#:197)  
 MassPeaks:155  
 RawMode:Single 1.6(197) BasePeak:198(265)  
 BG Mode:None Group 1 - Event 1

| # | m/z   | Abs. In | Rel. Int. | # | m/z   | Abs. In | Rel. Int. | # | m/z   | Abs. In | Rel. Int. |
|---|-------|---------|-----------|---|-------|---------|-----------|---|-------|---------|-----------|
| 1 | 50.00 | 52      | 19.62     | 4 | 54.00 | 57      | 21.51     | 7 | 60.00 | 66      | 24.91     |
| 2 | 51.00 | 62      | 23.40     | 5 | 55.00 | 111     | 41.89     | 8 | 63.00 | 60      | 22.64     |
| 3 | 53.00 | 82      | 30.94     | 6 | 57.00 | 90      | 33.96     | 9 | 64.00 | 103     | 38.87     |

**Fig. (19): Compound 10 Mass**

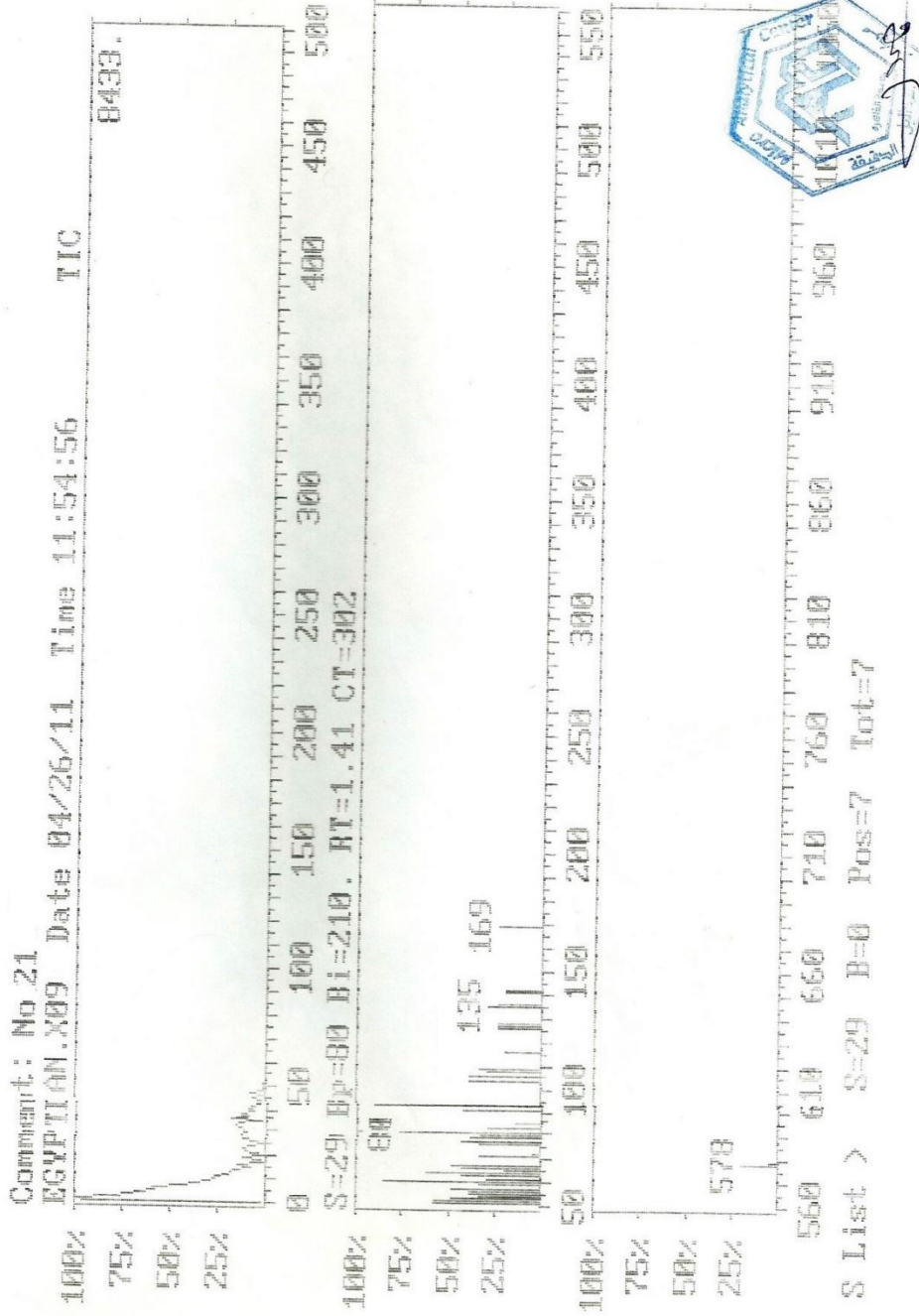


Fig. (20) Compound 11 Mass

AhmadFada-NB15-DMSO-H  
Pulse Sequence: e2pul  
Solvent: DMSO  
Temp: 300.1 K  
Nuc1: <sup>1</sup>H  
Nuc2: <sup>13</sup>C  
Acq: 31006 "NM300"  
Relax. delay: 1.000 sec  
Pulse: 74.10000000  
Acc. time: 4.004 sec  
Width: 8000.0 Hz  
10 repetitions  
OBSERVE: H1, 300.6687855 MHz  
DATA PROCESSING  
F1 size: 85538  
Total time: 18 min, 18 sec

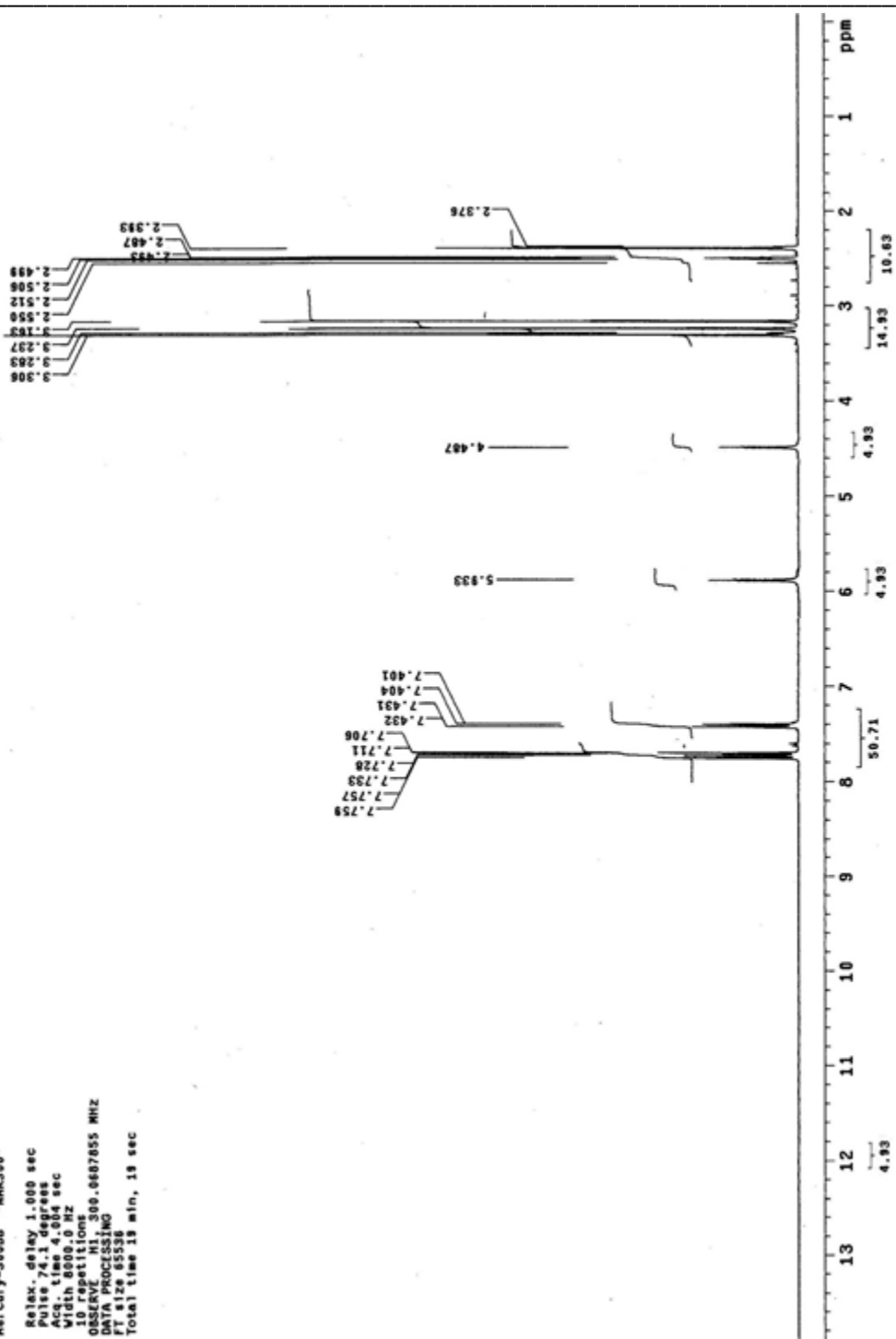


Fig. (21): Compound 11 <sup>1</sup>H-NMR

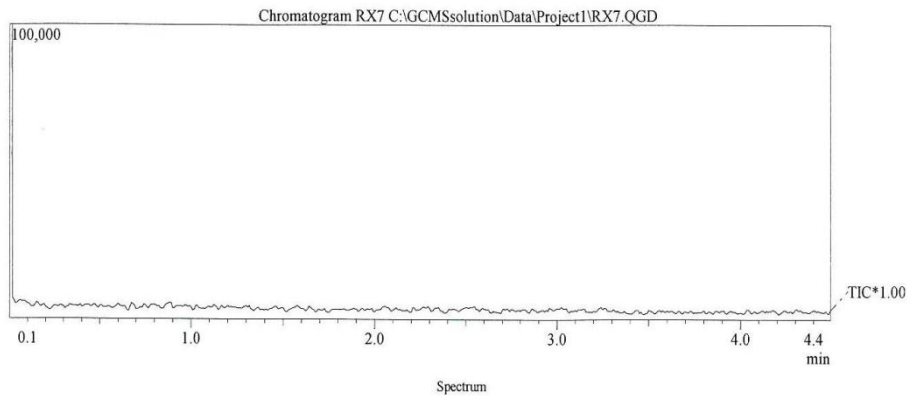
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**DI Analysis  
Shimadzu Qp-2010 Plus**

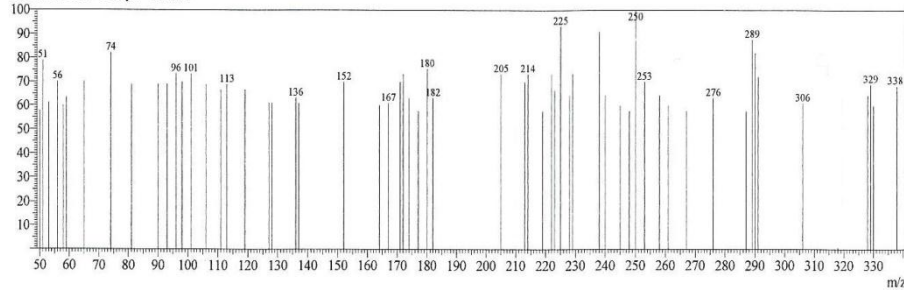
|                    |   |                          |
|--------------------|---|--------------------------|
| Sample Information |   | Method                   |
| Analyzed by        | : A.GABR                                    | ==== Analytical Line 1   |
| Analyzed           | : 30/11/2013 11:01:31 ص                     | IonSourceTemp :250.00 °C |
| Sample Name        | : RX7                                       | [MS Table]               |
| Sample ID          | :   | --Group 1 - Event 1--    |
| Customer Name      | : نسمة بيومي - علوم المنصورة                | Start Time :0.00min      |
| Data File          | : C:\GCMSolution\Data\Project1\RX7.QGD      | End Time :10.00min       |
| Org Data File      | : C:\GCMSolution\Data\Project1\RX7.QGD      | ACQ Mode :Scan           |
| Method File        | : C:\GCMSolution\Data\Project1\A.GABR.qgm   | Event Time :0.50sec      |
| Org Method File    | : C:\GCMSolution\Data\Project1\A.GABR.qgm   | Scan Speed :769          |
| Report File        | :   | Start m/z :50.00         |
| Tuning File        | : C:\GCMSolution\System\Tune1\_default1.qgt | End m/z :400.00          |
| SEndfSMmodified by | : A.GABR                                    | Electron Voltage :70 eV  |
| Modified           | : 30/11/2013 11:06:04 ص                     | Ionization Mode :EI      |



C:\GCMSolution\Data\Project1\RX7.QGD



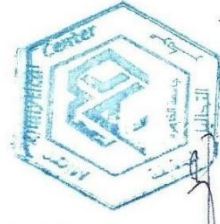
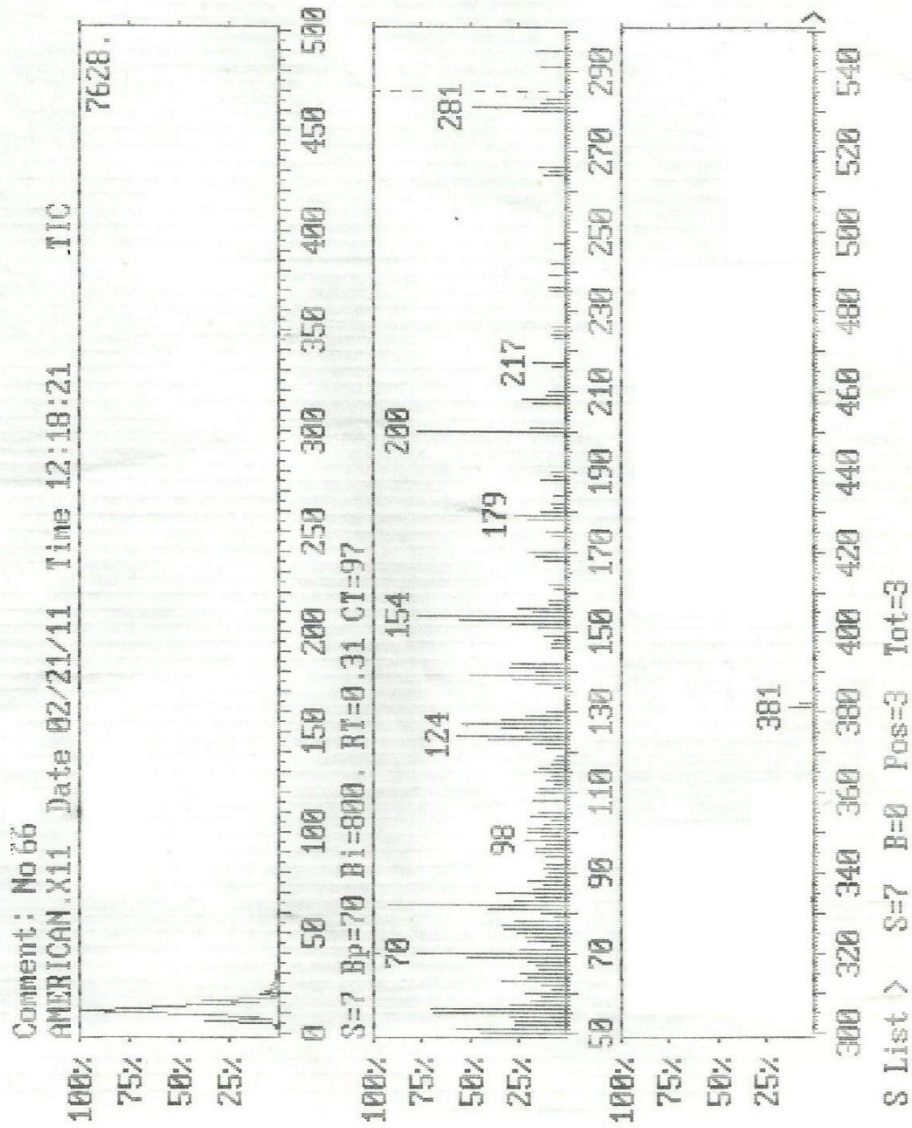
Line#:1 R.Time:0.6(Scan#:74)  
MassPeaks:59  
RawMode:Single 0.6(74) BasePeak:250(90)  
BG Mode:None Group 1 - Event 1



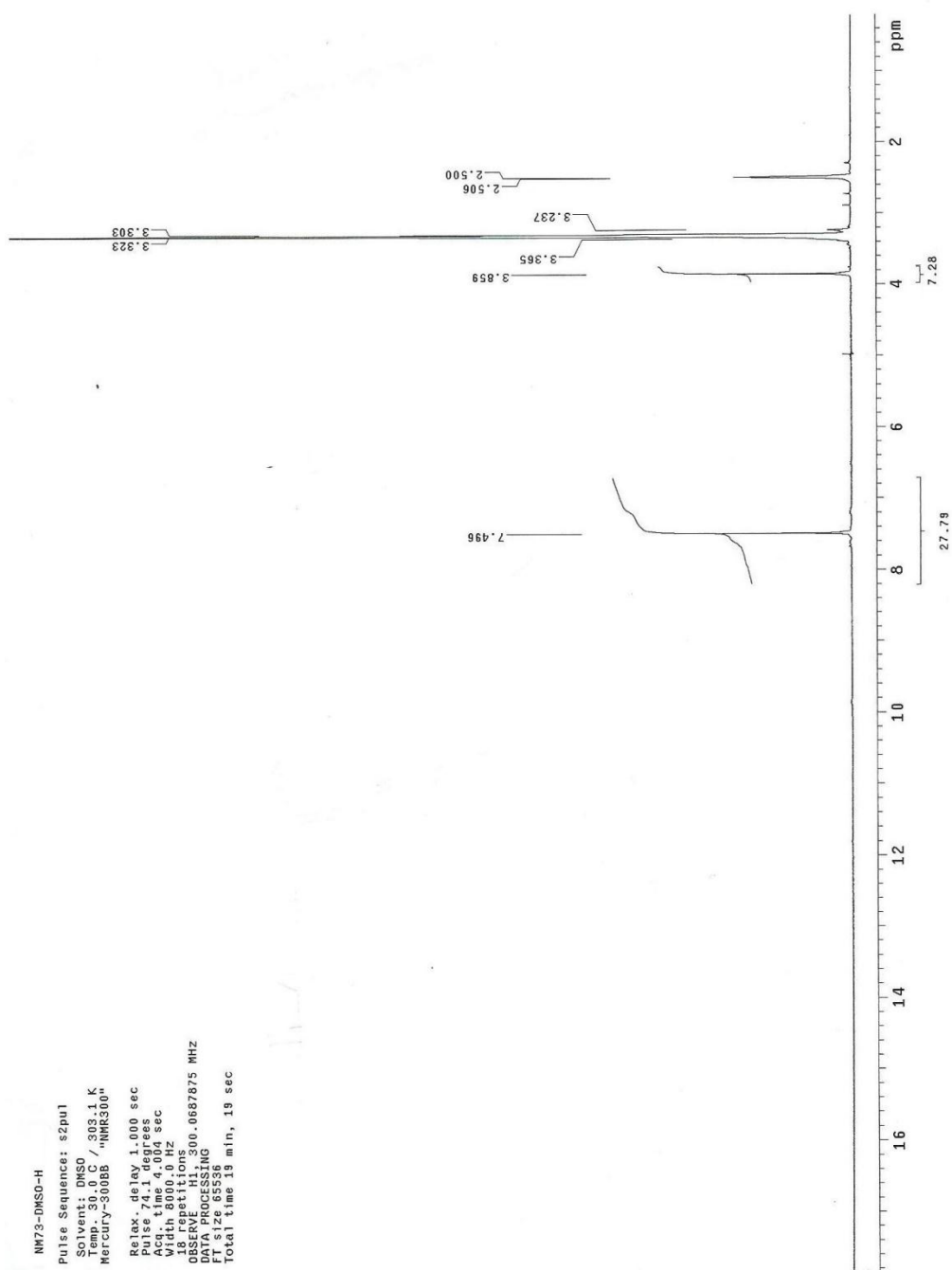
Mass Table  
Line#:1 R.Time:0.6(Scan#:74)  
MassPeaks:59  
RawMode:Single 0.6(74) BasePeak:250(90)  
BG Mode:None Group 1 - Event 1

| # | m/z   | Abs. In | Rel. Int. | # | m/z   | Abs. In | Rel. Int. | # | m/z   | Abs. In | Rel. Int. |
|---|-------|---------|-----------|---|-------|---------|-----------|---|-------|---------|-----------|
| 1 | 50.00 | 52      | 57.78     | 4 | 56.00 | 63      | 70.00     | 7 | 65.00 | 63      | 70.00     |
| 2 | 51.00 | 71      | 78.89     | 5 | 58.00 | 54      | 60.00     | 8 | 74.00 | 74      | 82.22     |
| 3 | 53.00 | 55      | 61.11     | 6 | 59.00 | 57      | 63.33     | 9 | 81.00 | 62      | 68.89     |

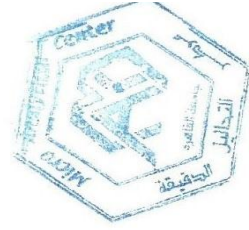
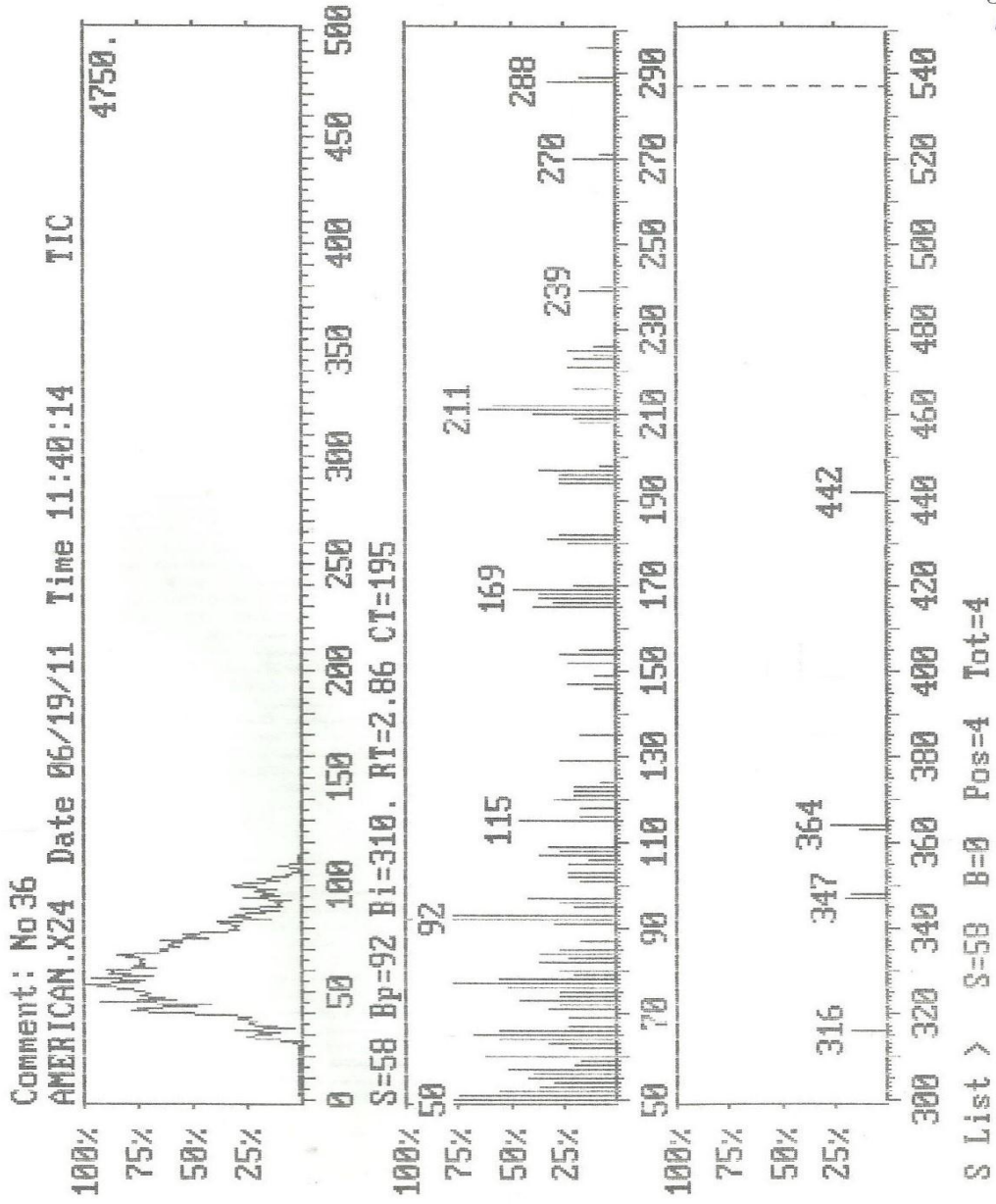
**Fig. (22): Compound 12 Mass**



**Fig. (23): Compound 13 Mass**

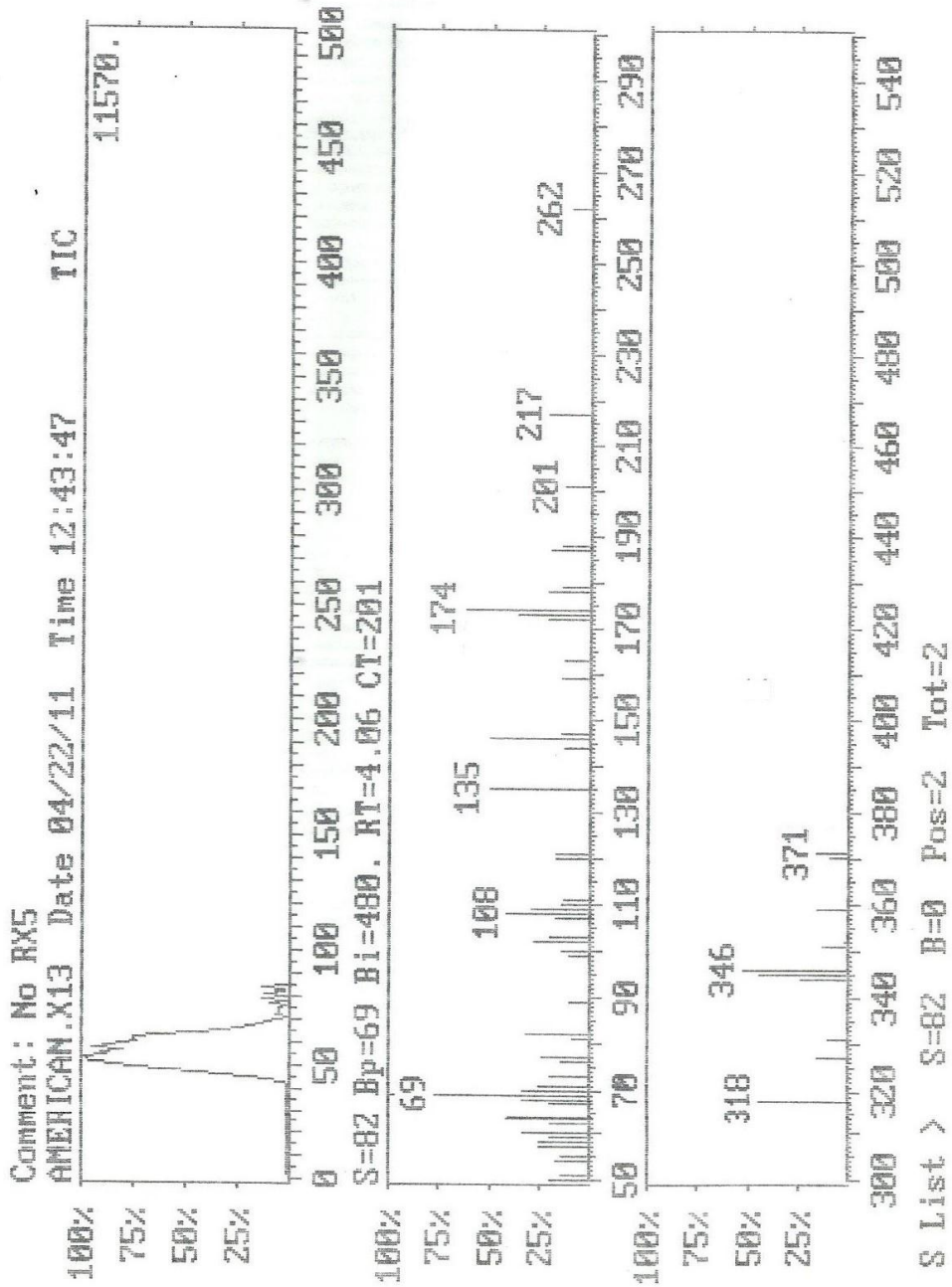
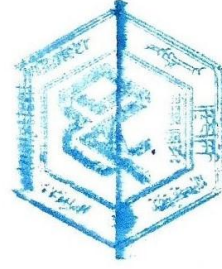
Fig. (24): Compound 13 <sup>1</sup>H-NMR





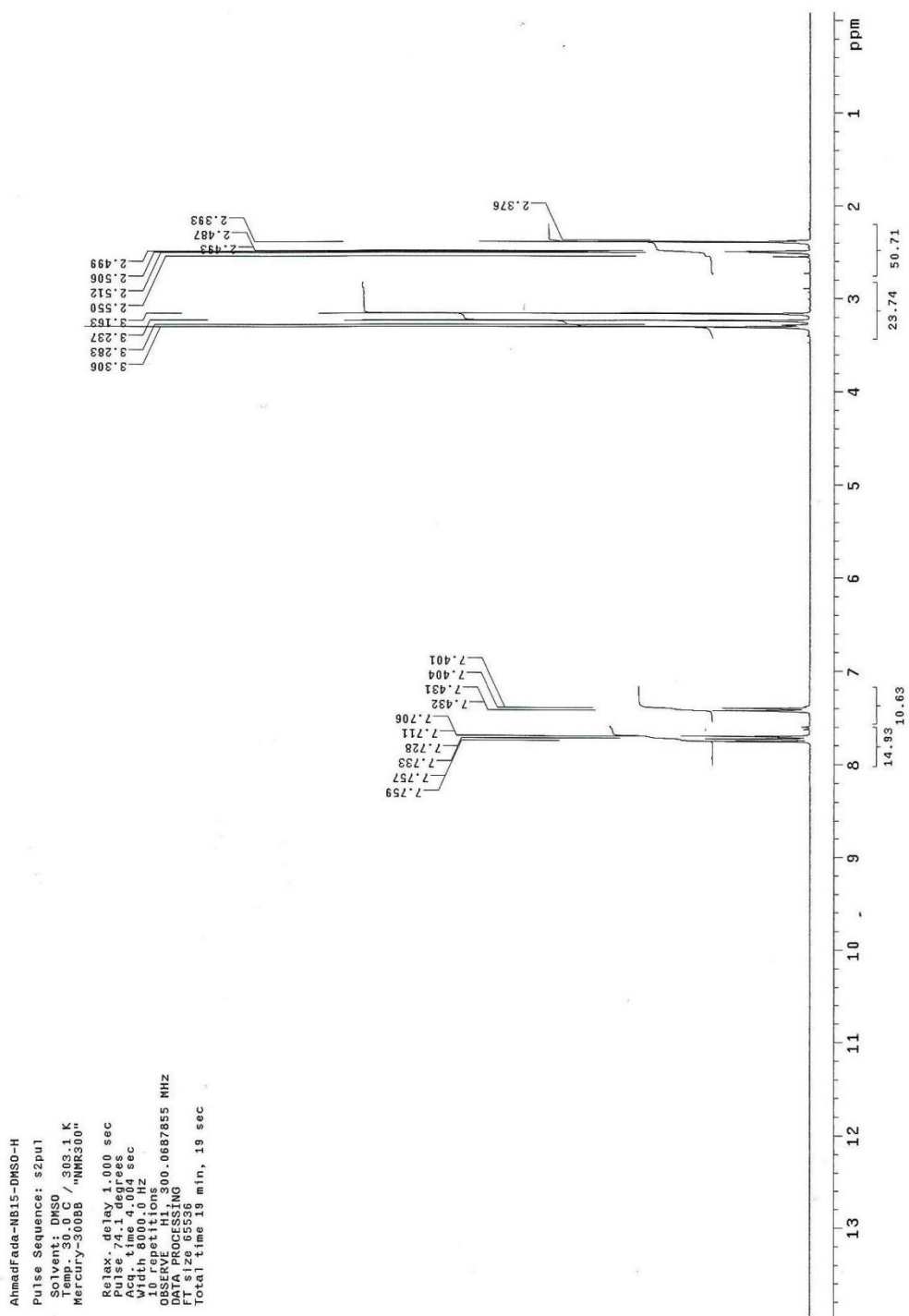
*[Handwritten signature]*

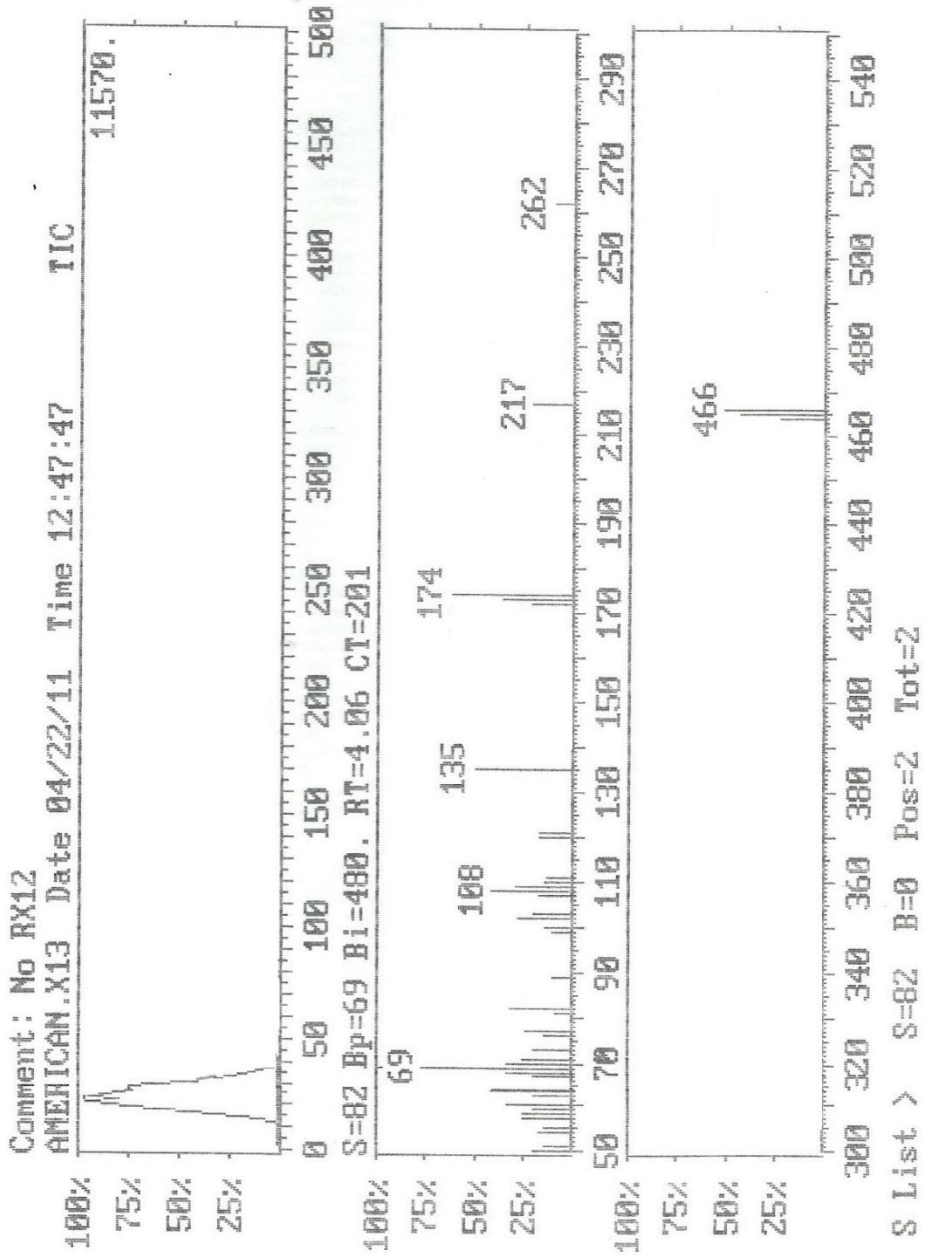
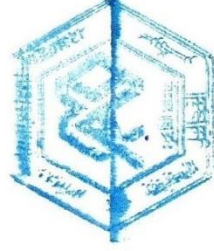
**Fig. (25): Compound 15 Mass**



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**Fig. (26): Compound 16 Mass**

Fig. (27): Compound 16 <sup>1</sup>H-NMR



*Handwritten signature*

**Fig. (28): Compound 17 Mass**