TestAmerica
Knoxville

IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 1613B

Workorder	HR0035D	Prep Batch		Lot No	
Data File	/20110819i/d1110819i4.	Prep Date		SDG No	
Analysis ID	134811	Prep Exp Date		Date Received	
Analysis Date	08/19/11 20:04	Matrix	UNKNOWN	Date Sampled	
Anal Exp Date		Initial Wt/Vol		Lims Test Code	
Instrument	D11A	Extract Vol		Method	DX1613B
Analyst	MSD	Diluton Factor	1.00	Code	F8

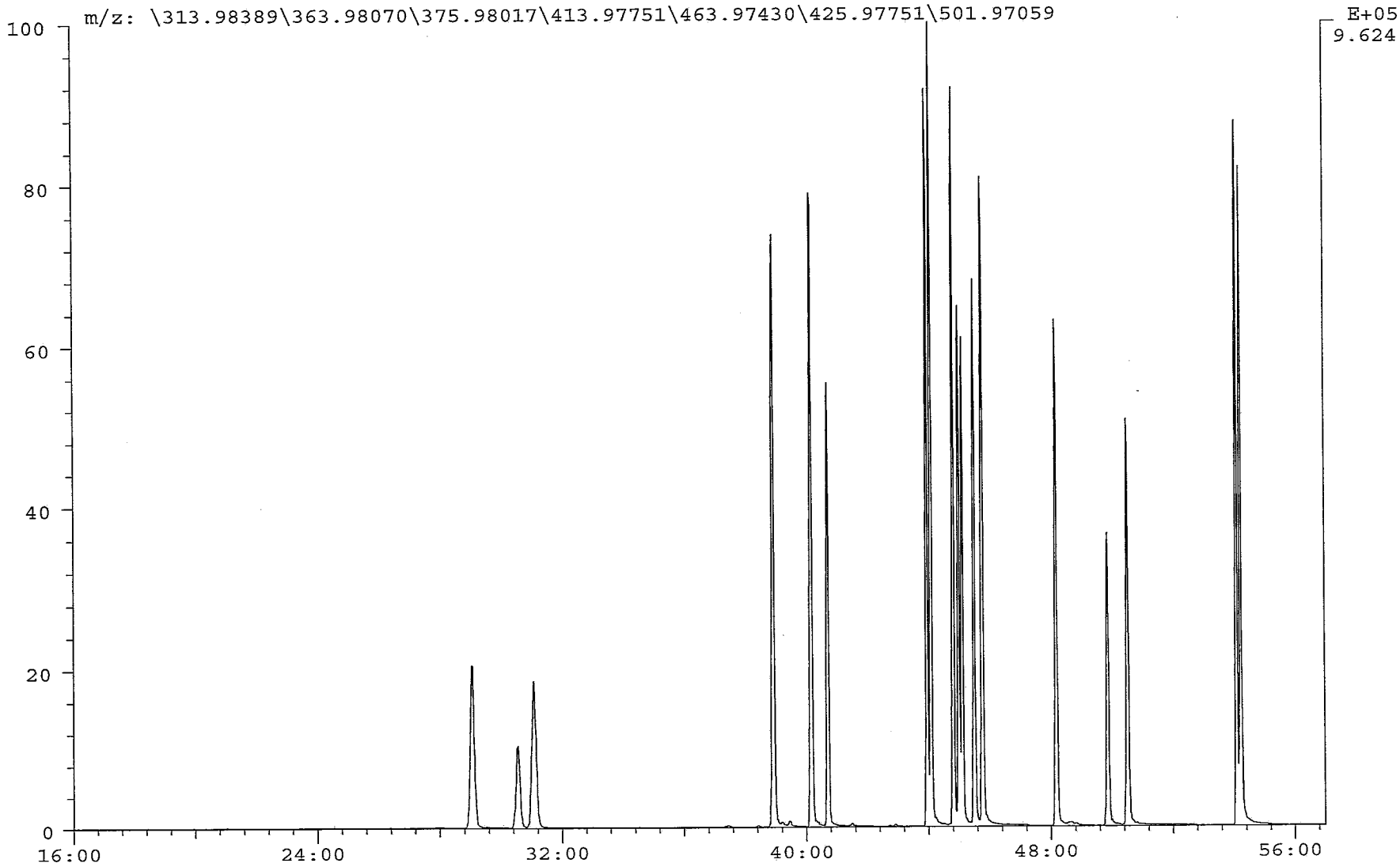
View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
390					389.8156	391.8127	389.8156	391.8127	1.05-1.43		
	Noise	00:00	00:00	0	233	220	93	88	1.06	/	
	1,2,3,4,7,8-HxCDD	44:59	00:00	0	911732	738834	246635	197360	1.23	ABV/ABV	M
	1,2,3,6,7,8-HxCDD	45:07	00:00	0	919614	732178	234792	186438	1.26	AVV/AVV	M
	1,2,3,7,8,9-HxCDD	45:30	00:00	0	1048083	830555	266488	209763	1.26	AVV/AVV	M
402					401.8559	403.8529	401.8559	403.8529	1.05-1.43		
	Noise	00:00	00:00	0	175	125	70	50	1.40	/	
	13C-1,2,3,4,7,8-HxCDD	44:58	00:00	0	444584	354132	119323	94456	1.26	ABV/ABV	
	13C-1,2,3,6,7,8-HxCDD	45:06	00:00	0	447353	339331	112091	85149	1.32	AVV/AVV	
	13C-1,2,3,7,8,9-HxCDD	45:29	00:00	0	495827	399825	121810	102219	1.24	AVV/AVV	
408					407.7818	409.7788	407.7818	409.7788	0.88-1.20		
	Noise	00:00	00:00	0	130	165	52	66	0.79 *	/	
	1,2,3,4,6,7,8-HpCDF	48:10	00:00	0	1080808	1047677	230747	227453	1.03	ABV/ABV	M
	1,2,3,4,7,8,9-HpCDF	50:31	00:00	0	916260	911275	180763	179848	1.01	ABV/ABV	M
418					417.8250	419.8220	417.8250	419.8220	0.37-0.51		
	Noise	00:00	00:00	0	48	75	19	30	0.63 *	/	
	13C-1,2,3,4,6,7,8-HpCDF	48:09	00:00	0	238878	521879	51981	115018	0.46	ABV/ABV	
	13C-1,2,3,4,7,8,9-HpCDF	50:30	00:00	0	217371	480234	41769	92796	0.45	ABV/ABV	
424					423.7767	425.7737	423.7767	425.7737	0.88-1.20		
	Noise	00:00	00:00	0	85	85	34	34	1.00	/	
	1,2,3,4,6,7,8-HpCDD	49:51	00:00	0	609198	597495	121978	121024	1.02	ABV/ABV	M
436					435.8169	437.8140	435.8169	437.8140	0.88-1.20		
	Noise	00:00	00:00	0	33	30	13	12	1.08	/	
	13C-1,2,3,4,6,7,8-HpCDD	49:50	00:00	0	311169	293540	60605	57180	1.06	ABV/ABV	
442					441.7428	443.7399	441.7428	443.7399	0.76-1.02		
	Noise	00:00	00:00	0	115	153	46	61	0.75 *	/	
	OCDF	54:13	00:00	0	1465444	1635362	368962	406645	0.90	ABV/ABV	M
458					457.7377	459.7348	457.7377	459.7348	0.76-1.02		
	Noise	00:00	00:00	0	135	193	54	77	0.70 *	/	
	OCDD	54:05	00:00	0	1151377	1290514	294866	324733	0.89	ABV/ABV	M
470					469.7780	471.7750	469.7780	471.7750	0.76-1.02		
	Noise	00:00	00:00	0	108	110	43	44	0.98	/	
	13C-OCDD	54:04	00:00	0	517695	579627	133127	148126	0.89	ABV/ABV	

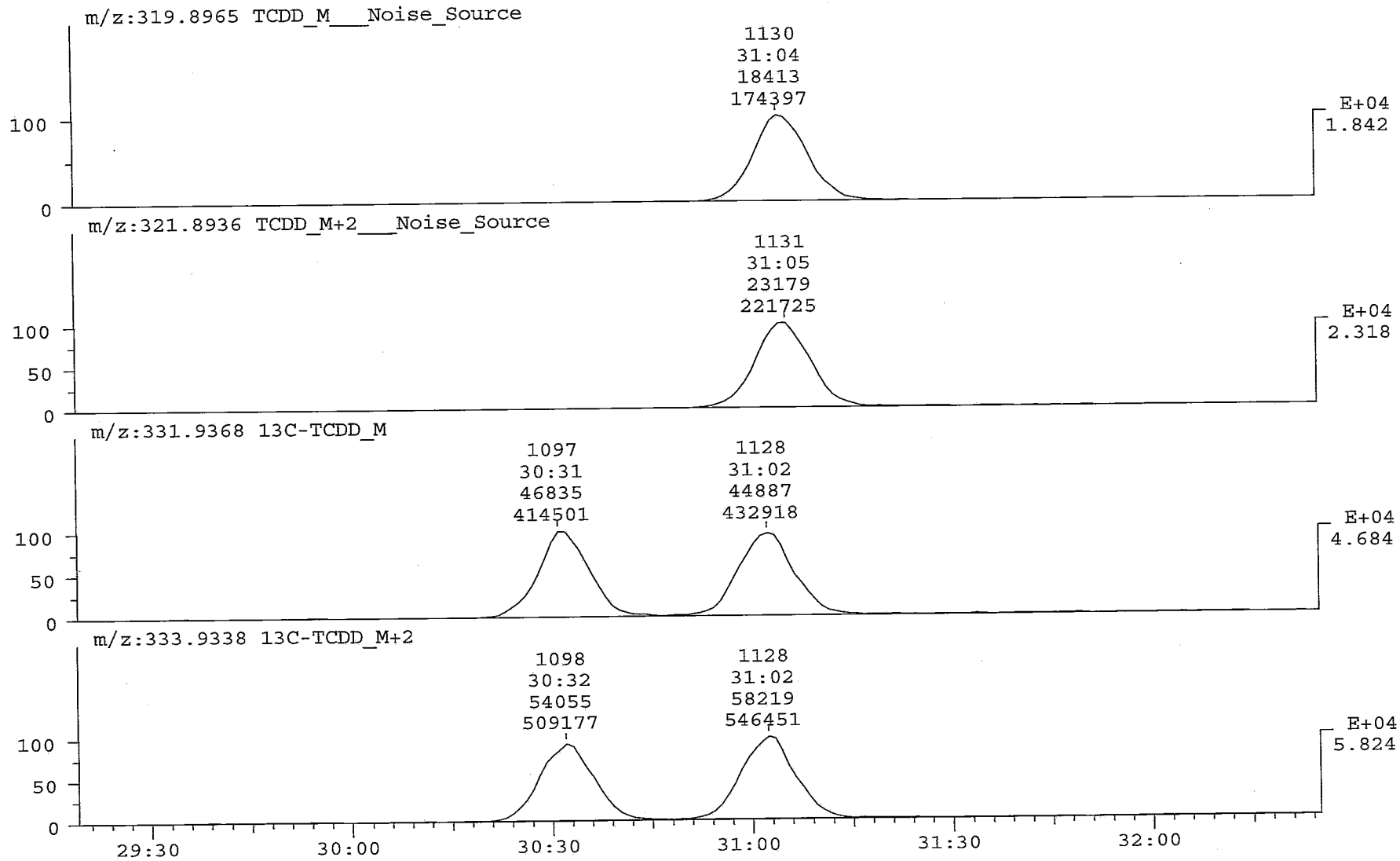
Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

CHRO: d1110819i4 19-Aug-11 Elapse: 54:12 2481
Samp: WO=hr0035d Meth=F8 Dil=1 Start : 20:04:06 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 235 > 2647 Masses: 303 > 514
Area: 5, 0.50, 0 Baseline : 100, 3 Label : 0, 0.0
Disp: Height Area

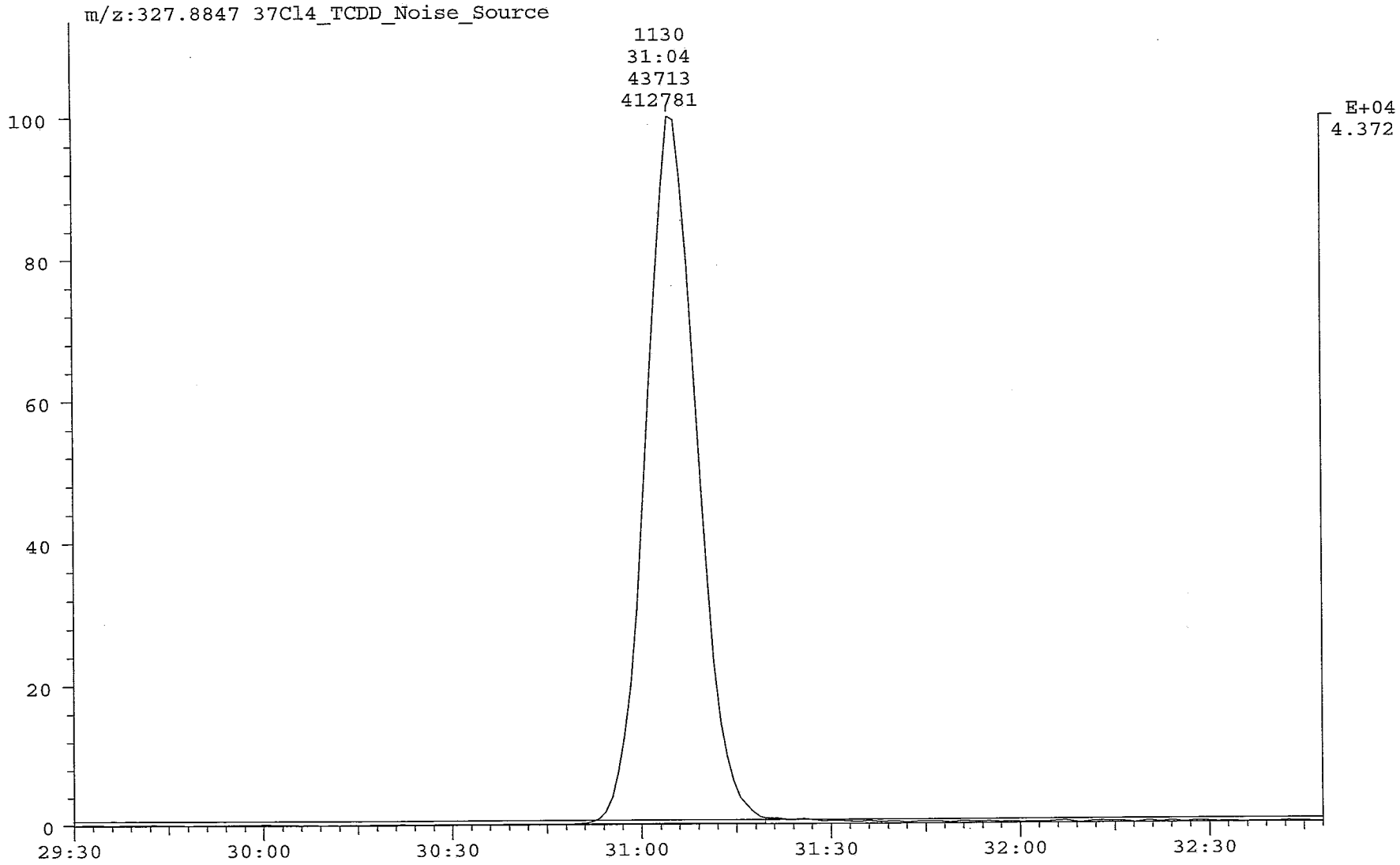
Int, Calc MSD 8-204/
QC Ken 8/22/11



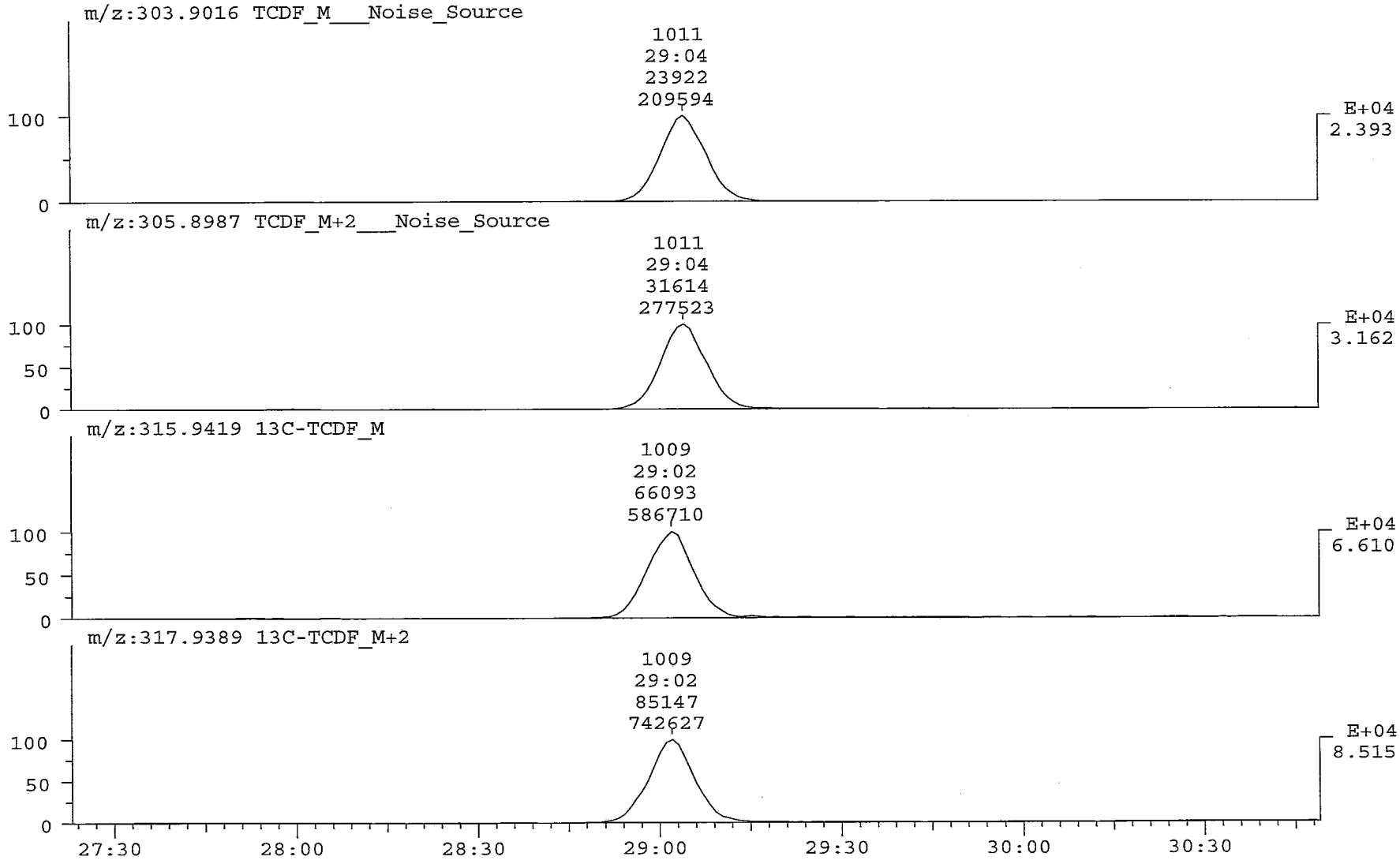
CHRO: d1110819i4 19-Aug-11 Elapse: 30:52 1118
Samp: WO=hr0035d Meth=F8 Dil=1 Start : 20:04:06 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1026 > 1210 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



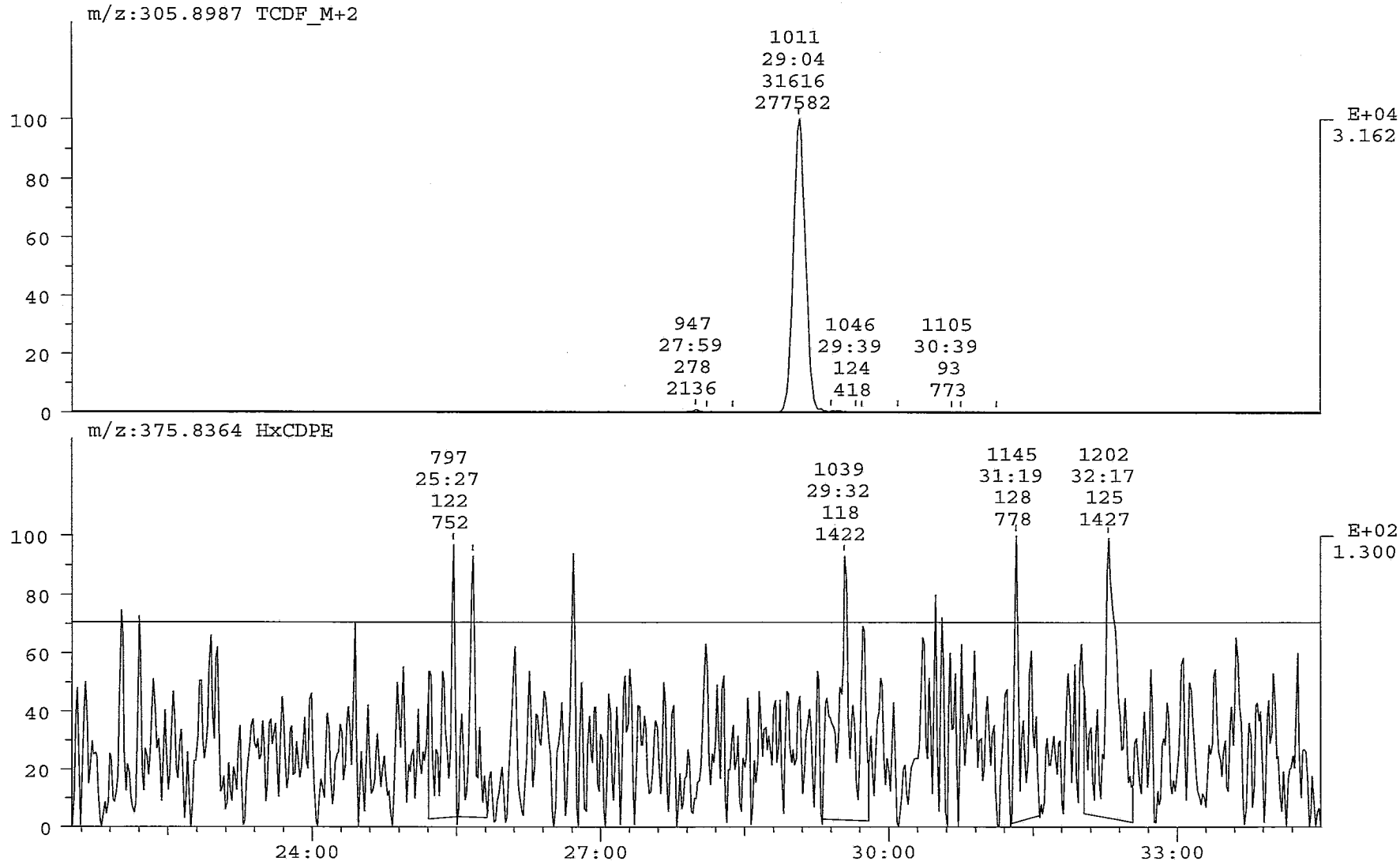
CHRO: d1110819i4 19-Aug-11 Elapse: 31:06 1132
Samp: WO=hr0035d Meth=F8 Dil=1 Start : 20:04:06 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1037 > 1233 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



```
CHRO:  d1110819i4                                19-Aug-11  Elapse:  29:03      1010
Samp:  WO=hr0035d Meth=F8 Dil=1                             Start :  20:04:06   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   911 > 1115             Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  2, 5.0
Disp:  Height  Area
```



```
CHRO:  d1110819i4                                19-Aug-11  Elapse:  29:03      1010
Samp:  WO=hr0035d Meth=F8 Dil=1                             Start :  20:04:06   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:  562 > 1333              Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :  100, 3                  Label :  -2, 5.0
Disp:  Height  Area
```



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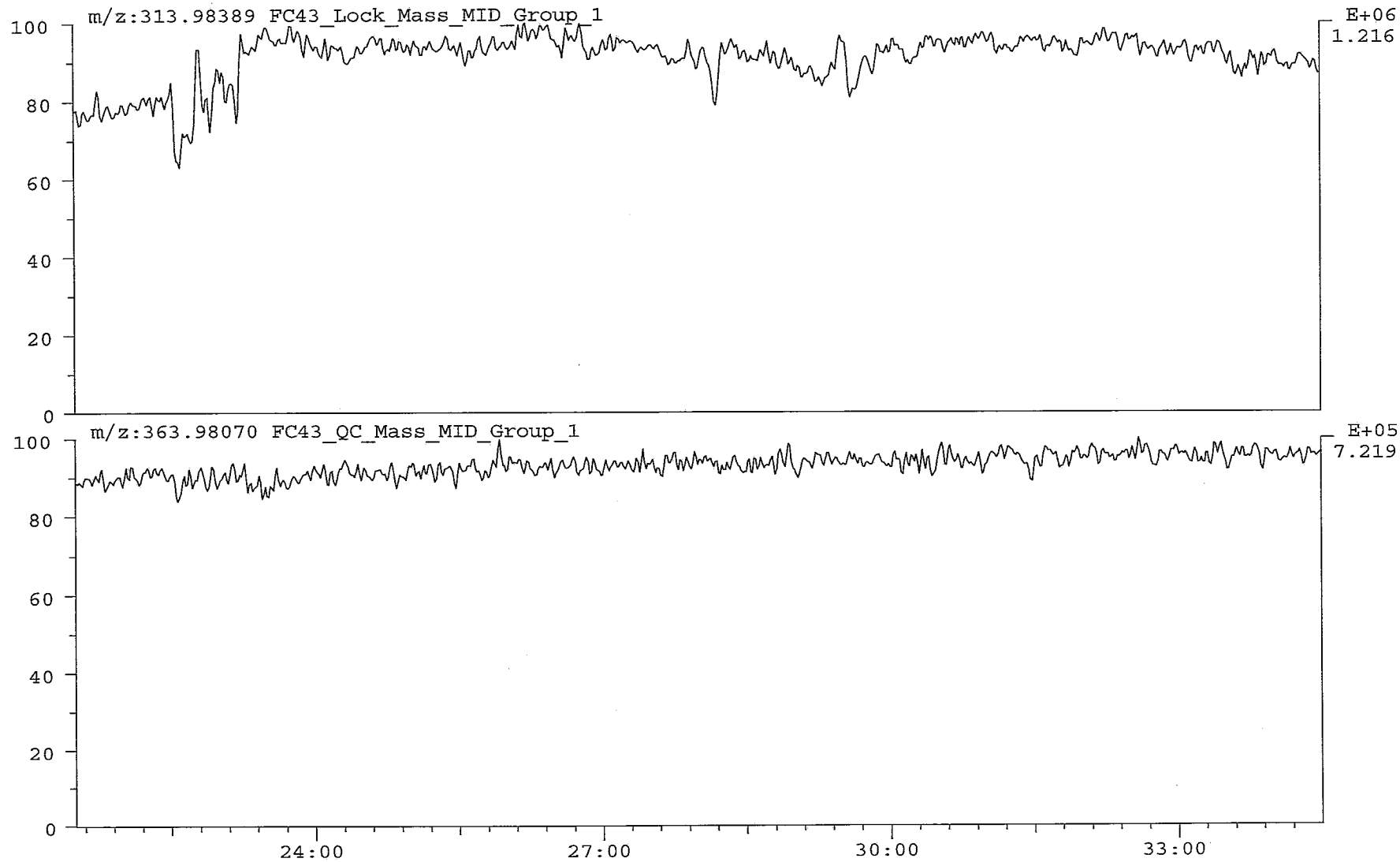
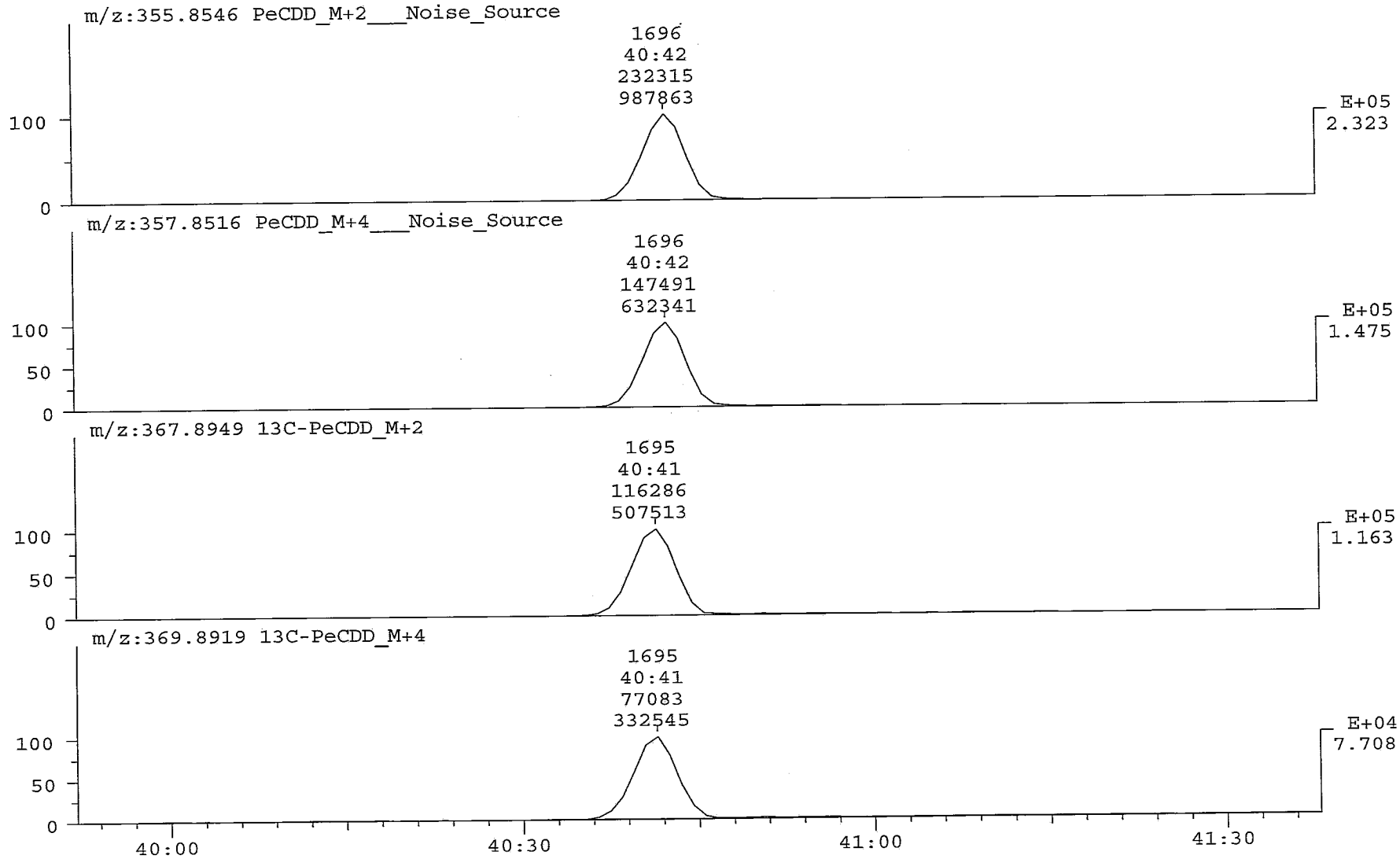
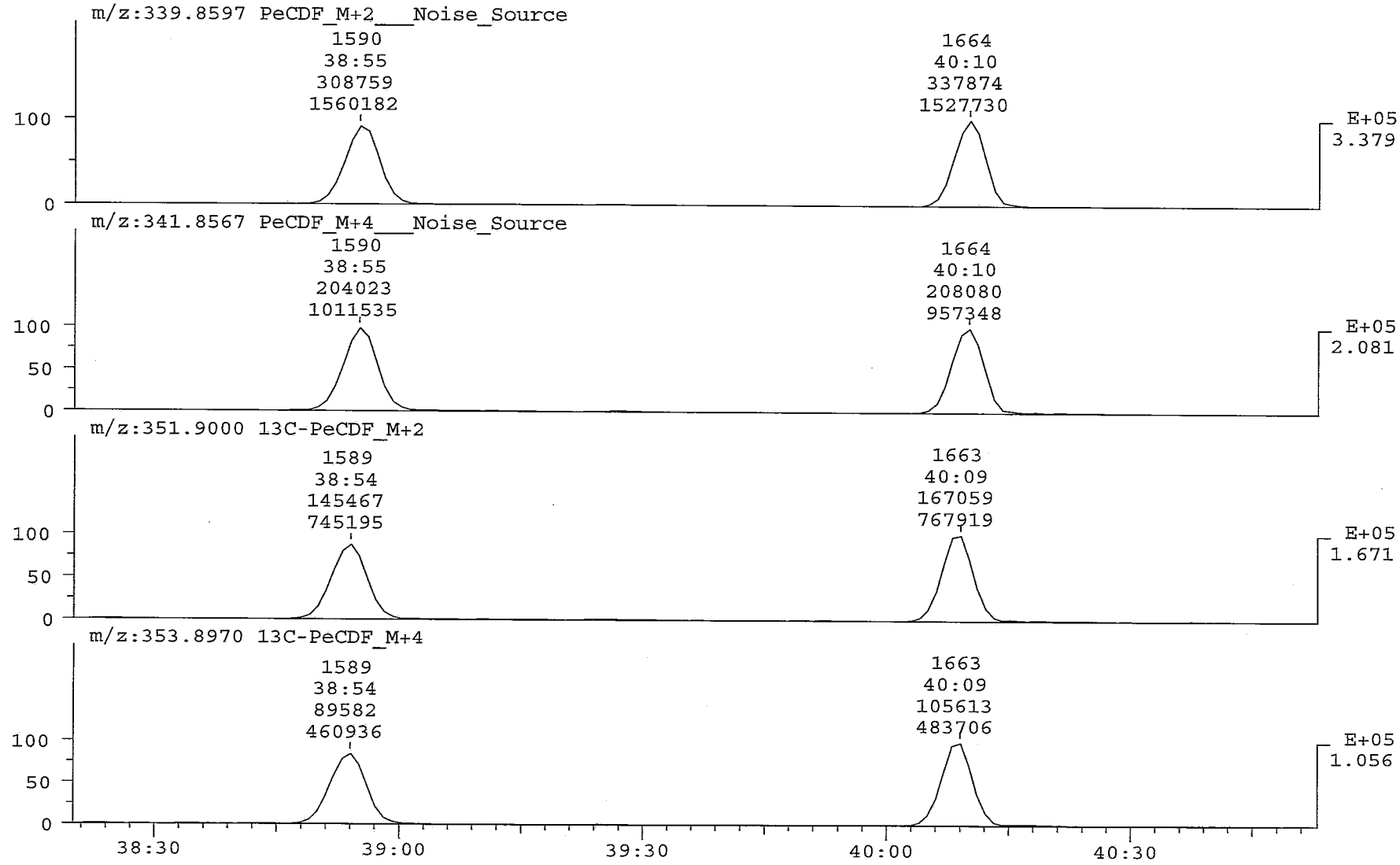
CHRO:  d1110819i4                                19-Aug-11  Elapse:  29:03      1010
Samp:  WO=hr0035d Meth=F8 Dil=1                             Start :  20:04:06   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   562 > 1333             Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  0, 0.0
Disp:  Height  Area
```



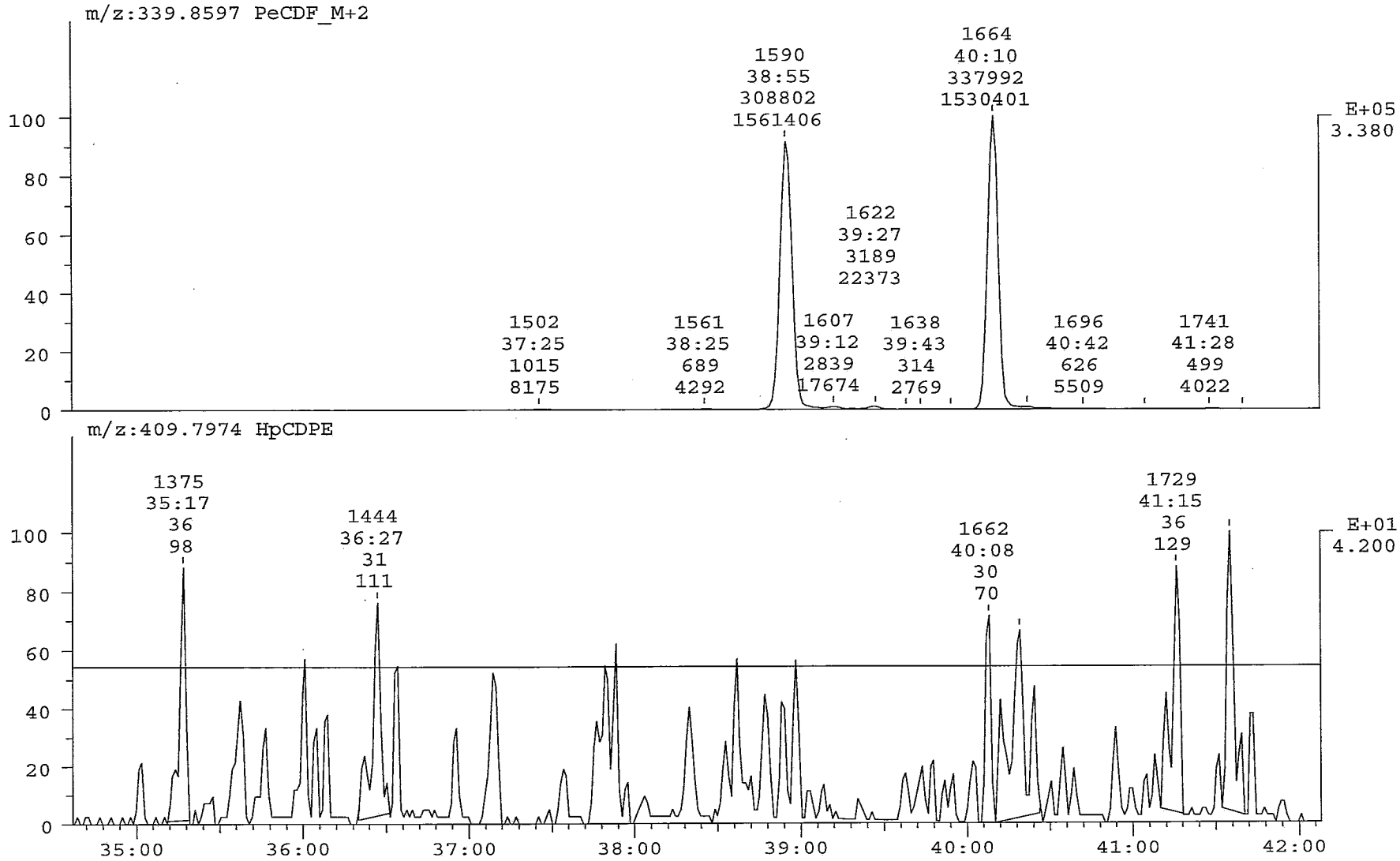
```
CHRO:  d1110819i4                                19-Aug-11  Elapse:  40:42      1696
Samp:  WO=hr0035d Meth=F8 Dil=1                             Start :  20:04:06   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1646 > 1751            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  2, 5.0
Disp:  Height  Area
```



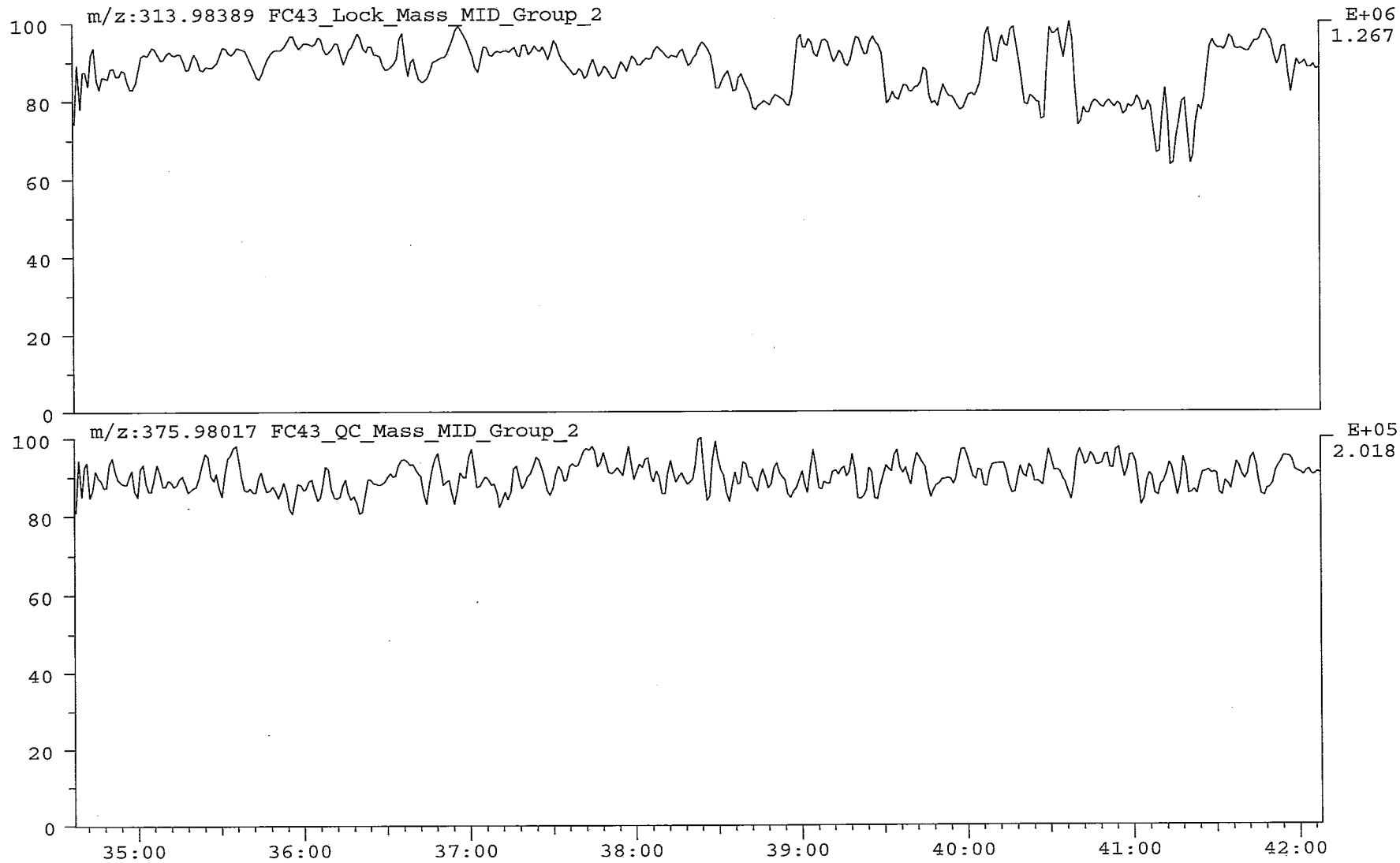
CHRO: d1110819i4 19-Aug-11 Elapse: 39:35 1630
Samp: WO=hr0035d Meth=F8 Dil=1 Start : 20:04:06 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1555 > 1706 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



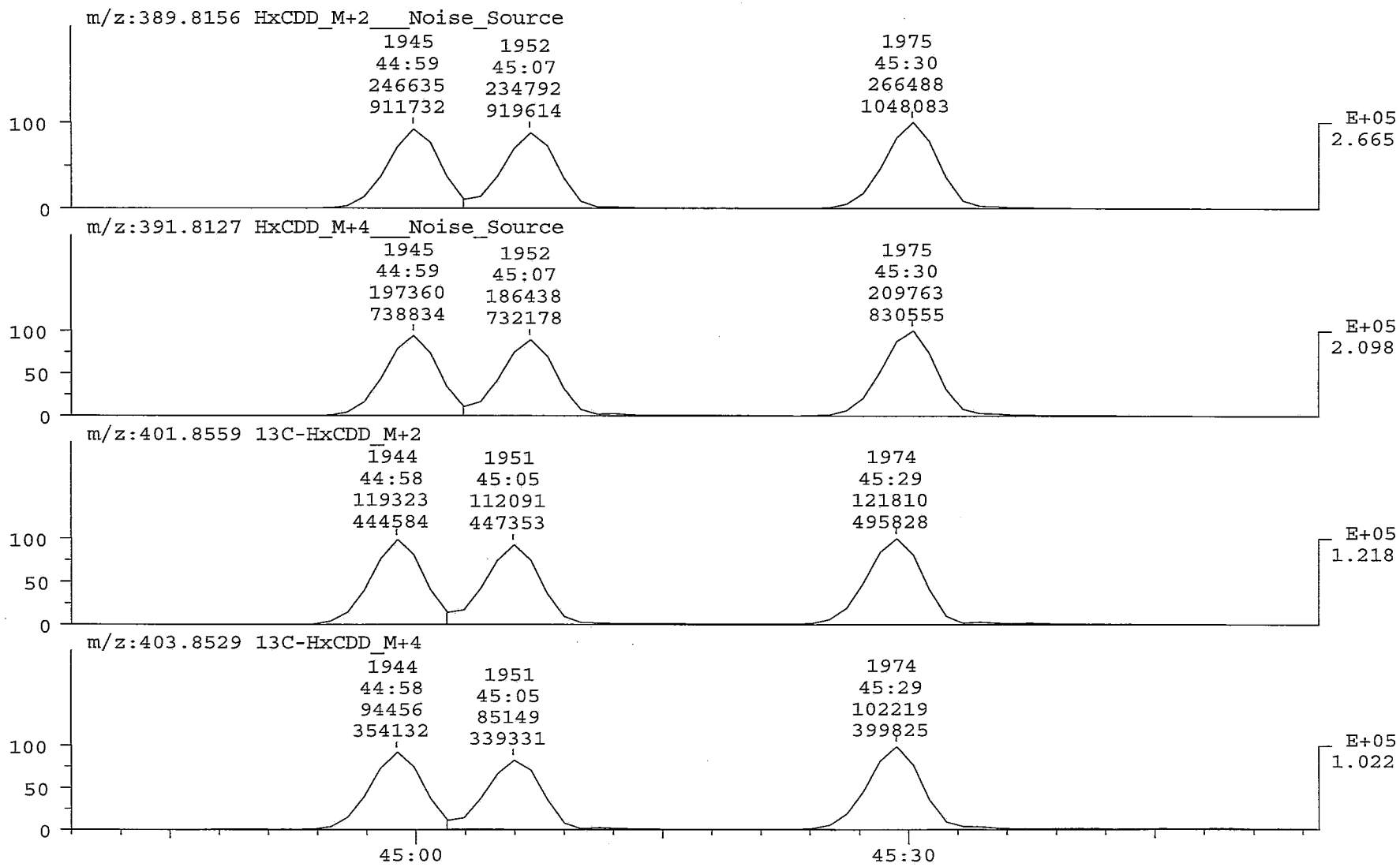
CHRO: d1110819i4 19-Aug-11 Elapse: 39:35 1630
Samp: WO=hr0035d Meth=F8 Dil=1 Start : 20:04:06 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1336 > 1780 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



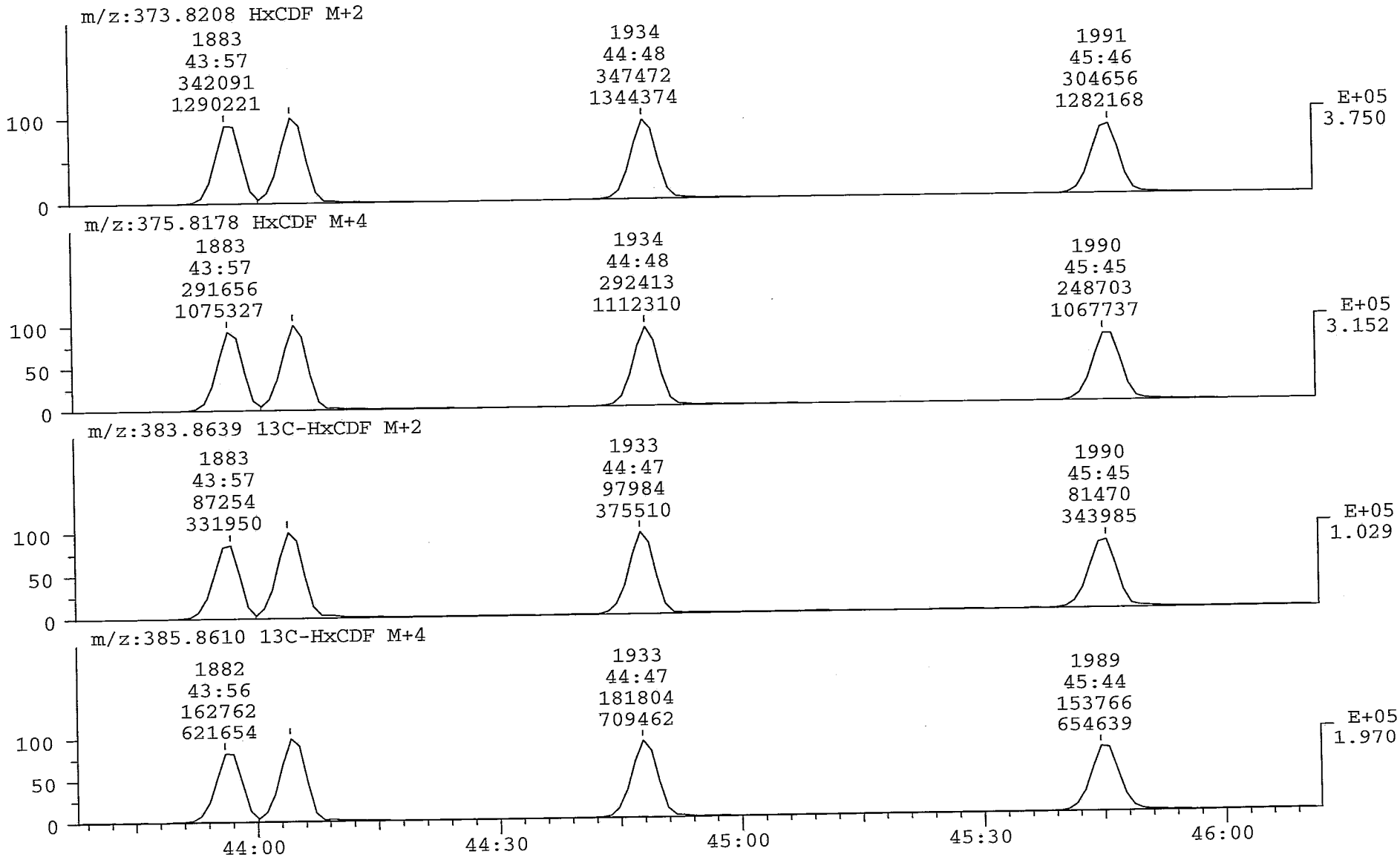
CHRO: d1110819i4 19-Aug-11 Elapse: 39:35 1630
Samp: WO=hr0035d Meth=F8 Dil=1 Start : 20:04:06 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1336 > 1780 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 0, 0.0
Disp: Height Area



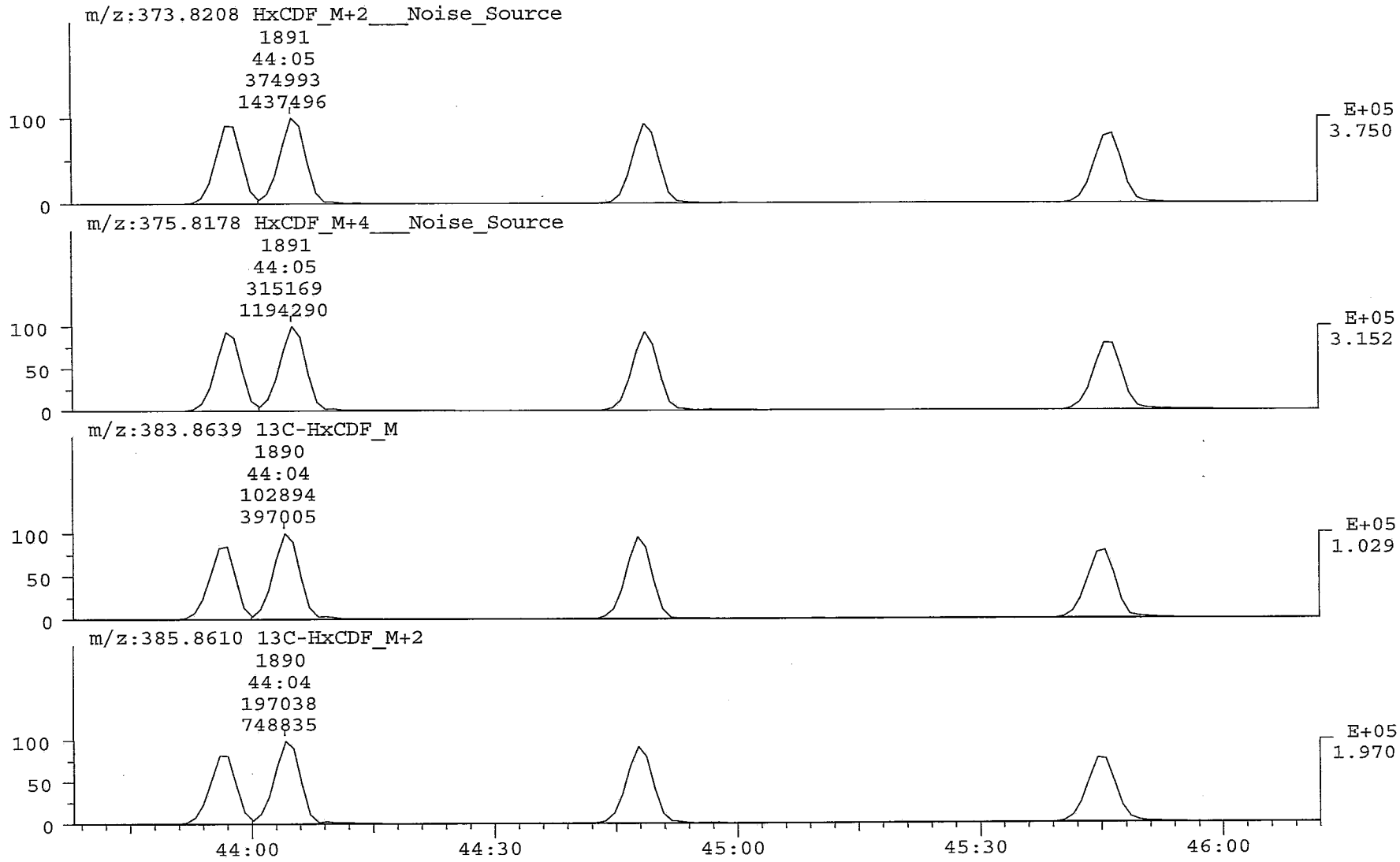
```
CHRO:  d1110819i4                                19-Aug-11  Elapse:  45:17      1962
Samp:  WO=hr0035d Meth=F8 Dil=1                             Start :  20:04:06   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1924 > 1999            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  2, 5.0
Disp:  Height  Area
```



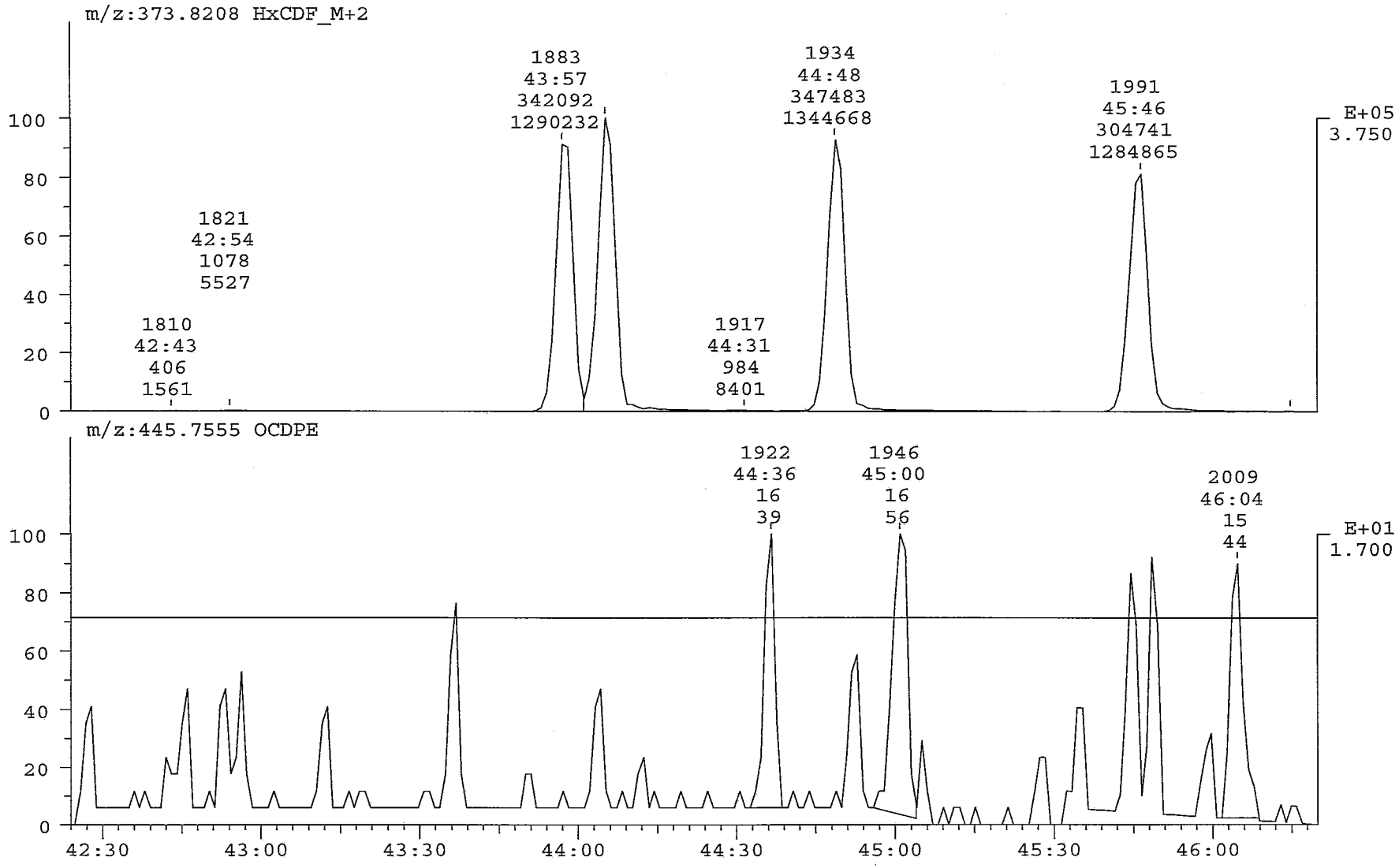
CHRO: d1110819i4 19-Aug-11 Elapse: 54:12 2481
Samp: WO=hr0035d Meth=F8 Dil=1 Start : 20:04:06 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1864 > 2016 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



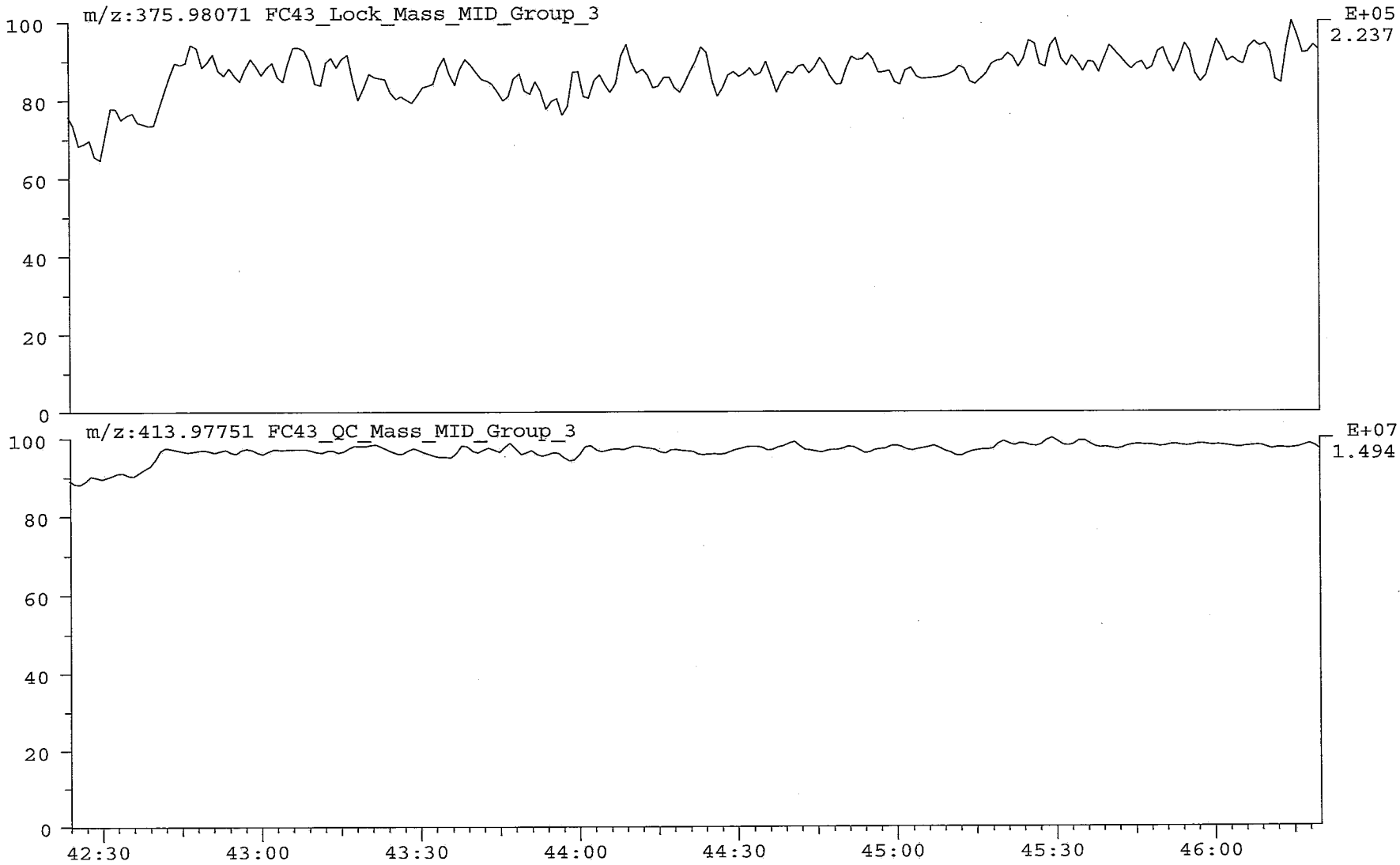
```
CHRO:  d1110819i4                                19-Aug-11  Elapse:  44:06      1892
Samp:  WO=hr0035d Meth=F8 Dil=1                             Start :  20:04:06   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1888 > 1896            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



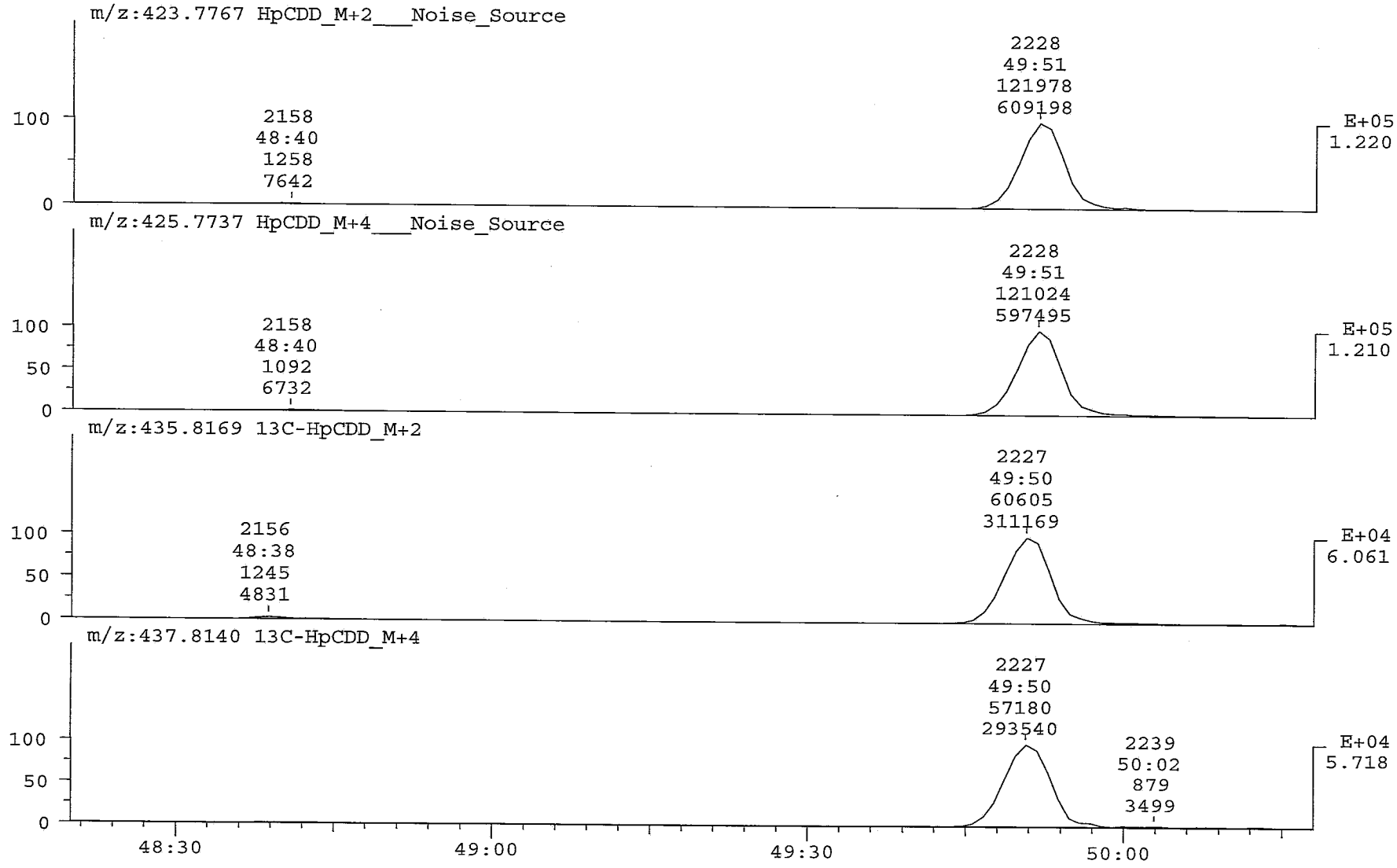
```
CHRO:  d1110819i4                                19-Aug-11  Elapse:  44:06      1892
Samp:  WO=hr0035d Meth=F8 Dil=1                             Start :  20:04:06   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1791 > 2024            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



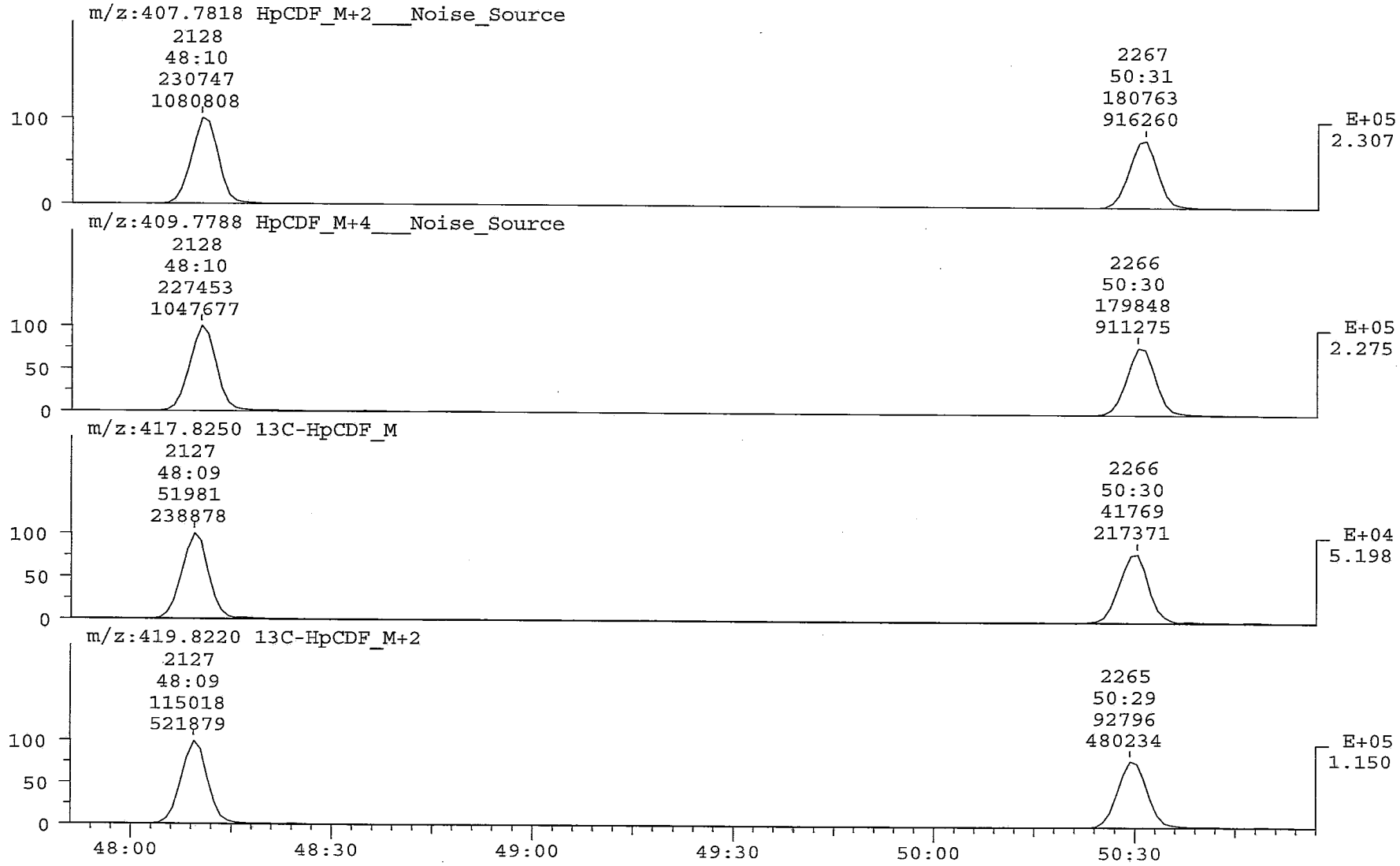
CHRO: d1110819i4 19-Aug-11 Elapse: 44:06 1892
Samp: WO=hr0035d Meth=F8 Dil=1 Start : 20:04:06 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1791 > 2024 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 0, 0.0
Disp: Height Area



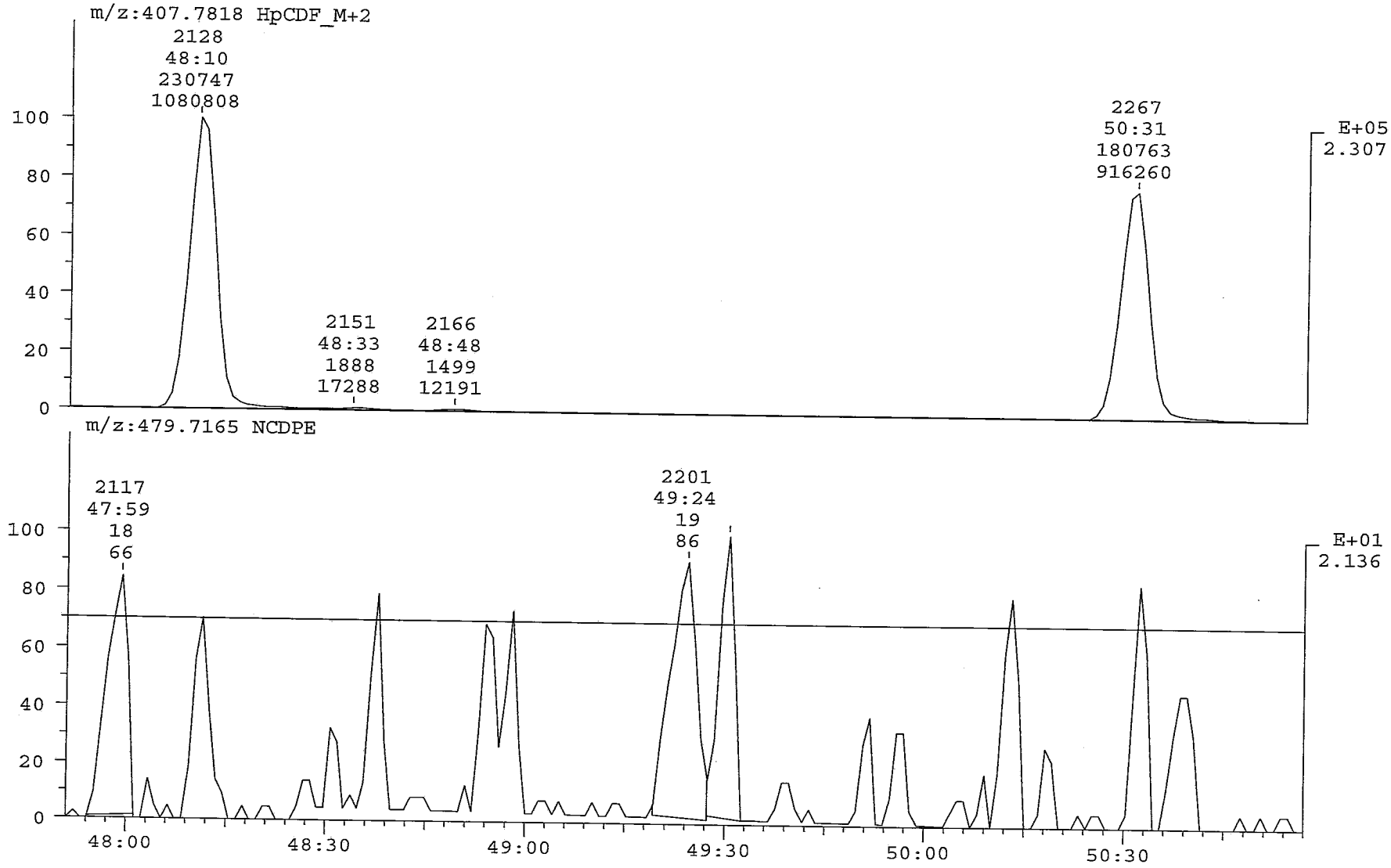
CHRO: d1110819i4 19-Aug-11 Elapse: 44:06 1892
Samp: WO=hr0035d Meth=F8 Dil=1 Start : 20:04:06 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 2138 > 2254 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



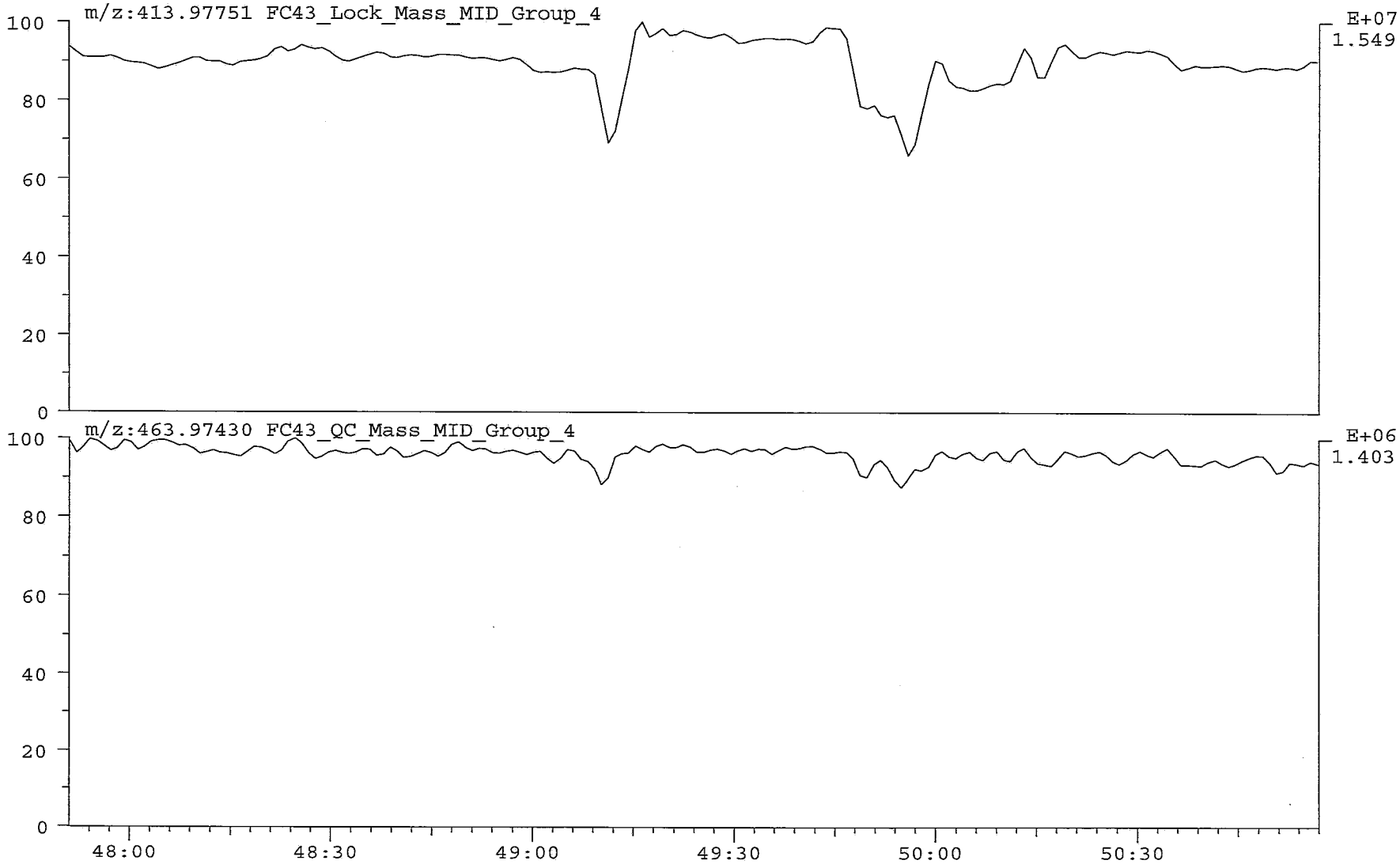
```
CHRO:  d1110819i4                          19-Aug-11  Elapse:  49:24      2201
Samp:  WO=hr0035d Meth=F8 Dil=1                       Start :  20:04:06   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                            Study :  1613/8290 ICAL
Oper:  MSD                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2109 > 2292      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



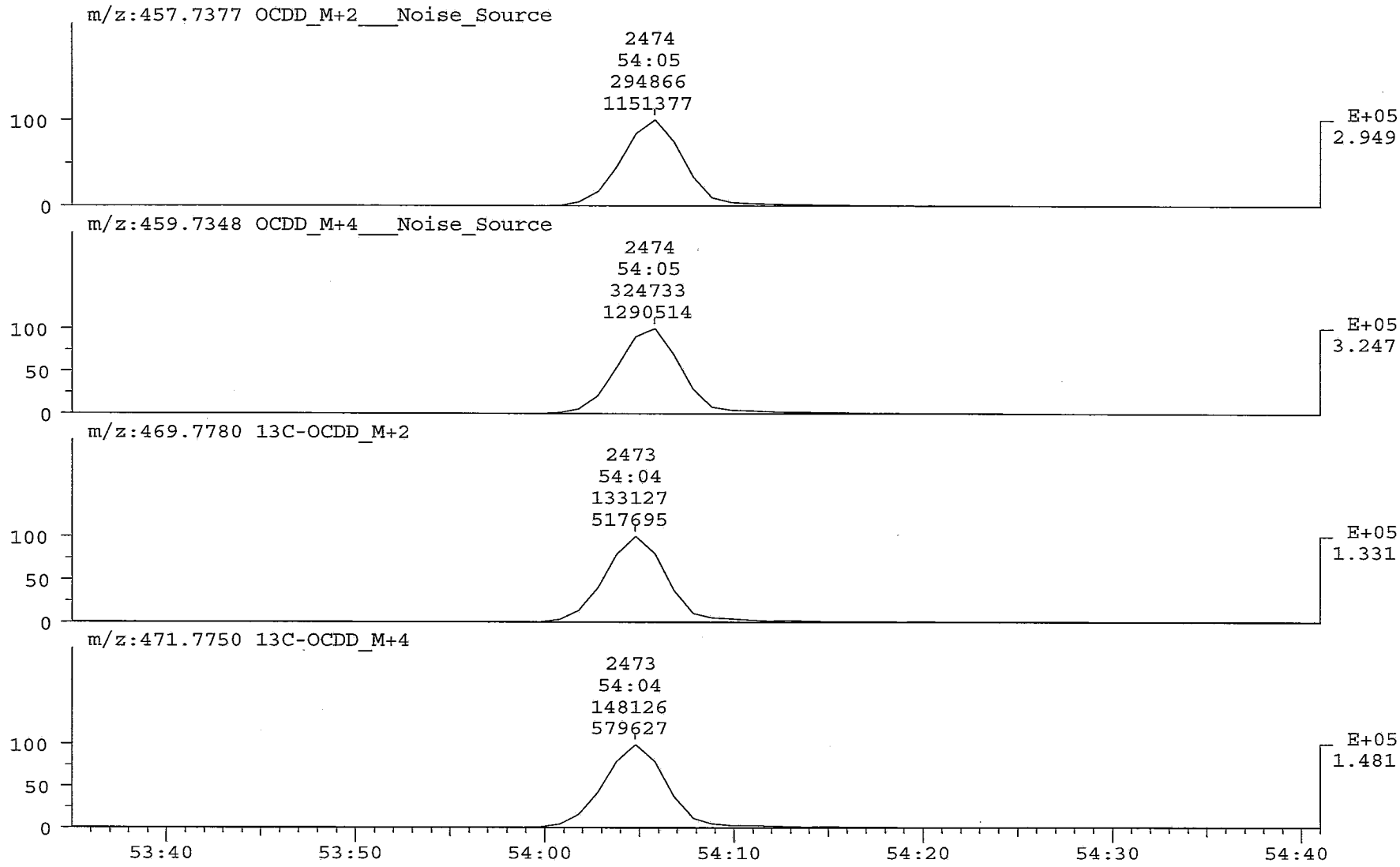
CHRO: d1110819i4 19-Aug-11 Elapse: 49:24 2201
Samp: WO=hr0035d Meth=F8 Dil=1 Start : 20:04:06 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 2109 > 2292 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



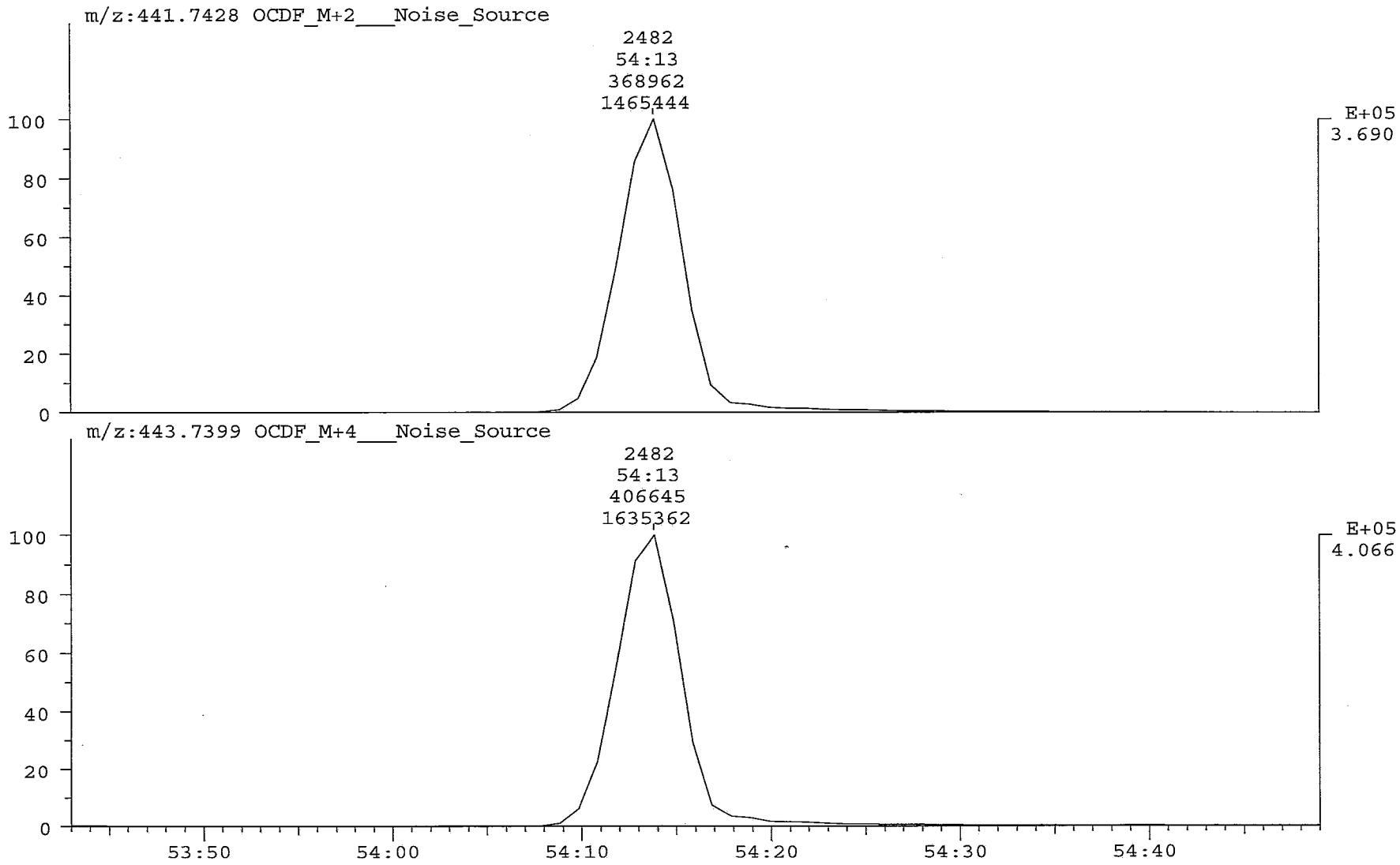
```
CHRO:  d1110819i4                                19-Aug-11  Elapse:  49:24      2201
Samp:  WO=hr0035d Meth=F8 Dil=1                             Start :  20:04:06   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2109 > 2292            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  0, 0.0
Disp:  Height  Area
```



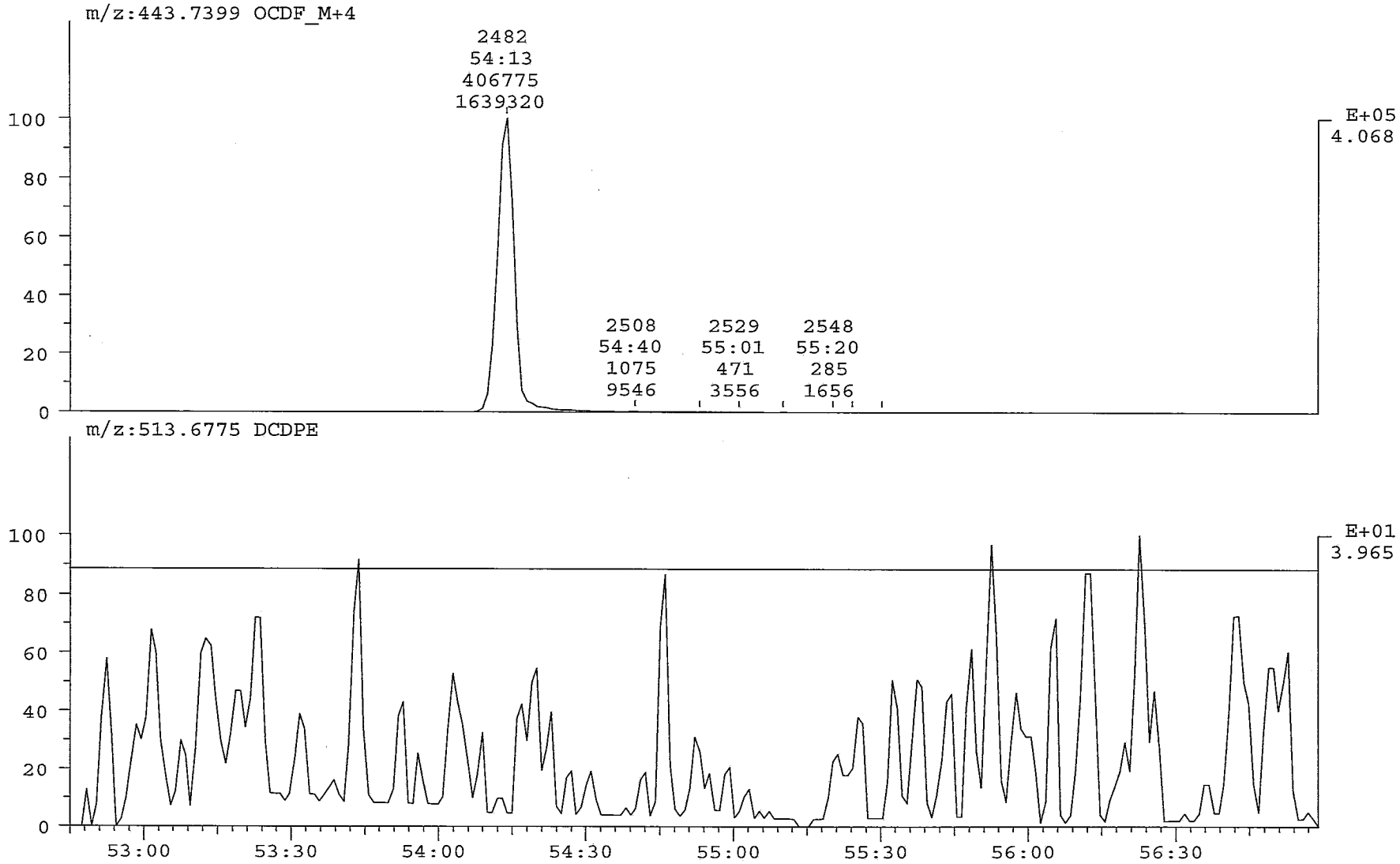
```
CHRO:  d1110819i4                          19-Aug-11  Elapse:  54:04      2473
Samp:  WO=hr0035d Meth=F8 Dil=1                       Start :  20:04:06   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                            Study :  1613/8290 ICAL
Oper:  MSD                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2443 > 2509      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



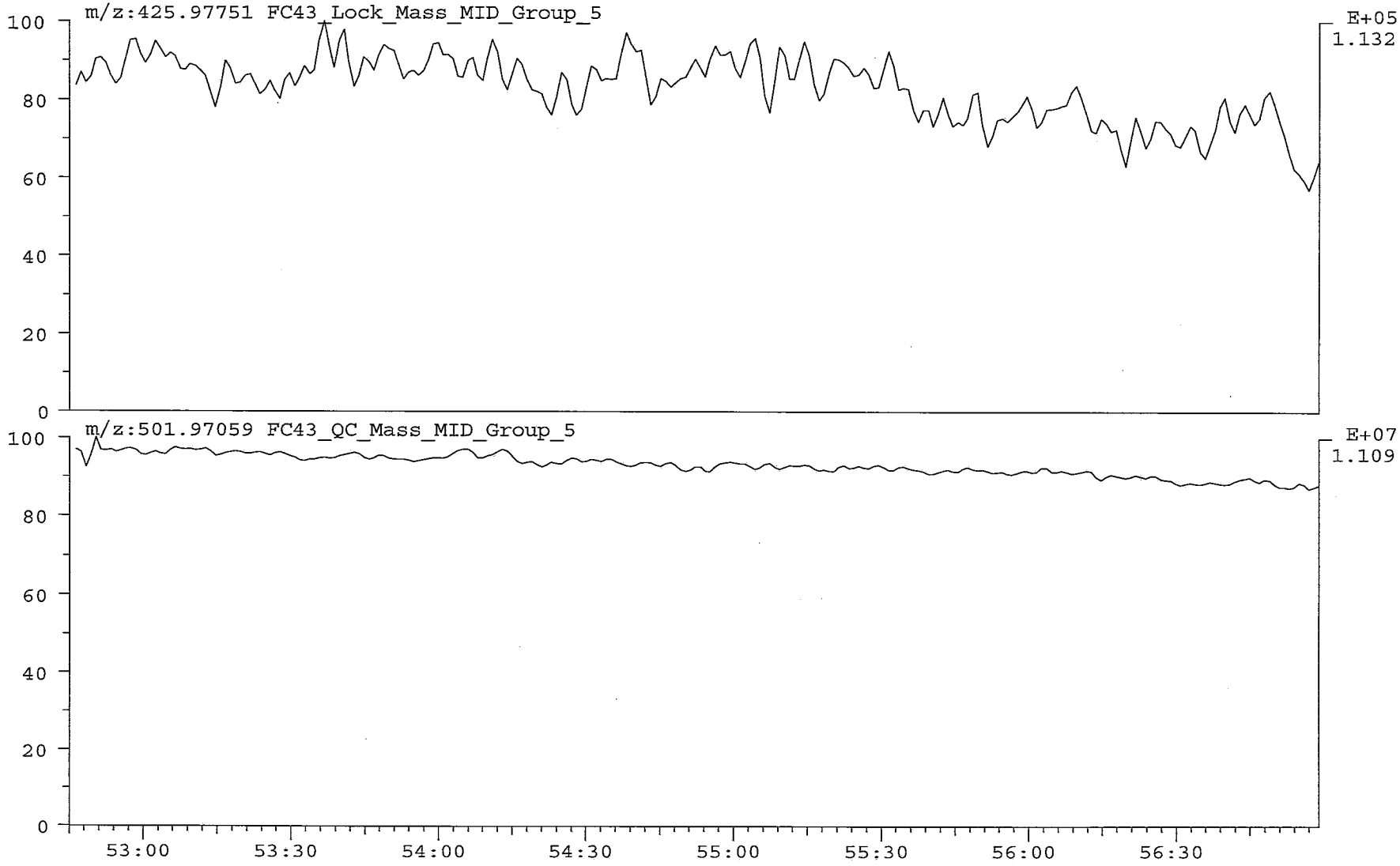
```
CHRO:  d1110819i4                          19-Aug-11   Elapse:  54:12      2481
Samp:  WO=hr0035d Meth=F8 Dil=1                        Start :  20:04:06   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                             Study :  1613/8290 ICAL
Oper:  MSD                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2451 > 2517       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  -2, 5.0
Disp:  Height  Area
```



```
CHRO:  d1110819i4                          19-Aug-11  Elapse:  54:12      2481
Samp:  WO=hr0035d Meth=F8 Dil=1                       Start :  20:04:06   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                            Study :  1613/8290 ICAL
Oper:  MSD                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2395 > 2646      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



```
CHRO:  d1110819i4                          19-Aug-11  Elapse:  54:12      2481
Samp:  WO=hr0035d Meth=F8 Dil=1                       Start :  20:04:06   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                            Study :  1613/8290 ICAL
Oper:  MSD                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2395 > 2646      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  0, 0.0
Disp:  Height  Area
```



```
*** file opened Fri Aug 19 20:07:53 2011 ***

Started by                - Xcalibur
Instrument Internet name  - DFS MS
Instrument model          - DFS MS
Instrument service number - 0000
Workstation internet name - KNXDXNDFS01

  Analysis started at: 19-Aug-11 20:07:52

  Analysis will stop at user request

  Firmware Version: 1.03

  MCAL file name: mcal1.cal

  MID procedure: 5W_DB5_FC43_SINGLEGC


  Mid Time Windows:
        Start        Measure      End        Cycletime

  # 1  12:00 min  22:31 min  34:31 min   1.00 sec
  # 2  34:31 min   7:37 min  42:09 min   1.00 sec
  # 3  42:09 min   5:02 min  47:12 min   1.00 sec
  # 4  47:12 min   5:27 min  52:39 min   1.00 sec
  # 5  52:39 min   4:20 min  57:00 min   1.00 sec

  Mid Masses:
   Window # 1
        mass F  int  gr  time (ms)
    303.9016     1  1      124
    305.8987     1  1      124
    313.9834 l  20  1        6
    313.9834    20  1        6
    315.9419     5  1       24
    317.9389     5  1       24
    319.8965     1  1      124
    321.8936     1  1      124
    327.8847     1  1      124
    331.9368     5  1       24
    333.9338     5  1       24
    363.9802 c  20  1        6
    363.9802    20  1        6
    375.8364     1  1      124
   Window # 2
        mass F  int  gr  time (ms)
    313.9834 l  20  1        7
    313.9834    20  1        7
    339.8597     1  1      146
    341.8567     1  1      146
    351.9000     5  1       29
    353.8970     5  1       29
    355.8546     1  1      146
    357.8516     1  1      146
    367.8949     5  1       29
    369.8919     5  1       29
    375.9802 c  20  1        7
    375.9802    20  1        7
    409.7974     1  1      146
   Window # 3
        mass F  int  gr  time (ms)
    373.8208     1  1      146
    375.8178     1  1      146
    375.9802 l  20  1        7
    375.9802    20  1        7
    383.8639     5  1       29
```

```
  385.8610      5  1        29
  389.8158      1  1       146
  391.8127      1  1       146
  401.8559      5  1        29
  403.8529      5  1        29
  413.9770 c   20  1         7
  413.9770     20  1         7
  445.7555      1  1       146
 Window # 4
      mass F  int  gr  time (ms)
  407.7817      1  1       146
  409.7788      1  1       146
  413.9770 l   20  1         7
  413.9770     20  1         7
  417.8250      5  1        29
  419.8220      5  1        29
  423.7767      1  1       146
  425.7737      1  1       146
  435.8169      5  1        29
  437.8140      5  1        29
  463.9738 c   20  1         7
  463.9738     20  1         7
  479.7165      1  1       146
 Window # 5
      mass F  int  gr  time (ms)
  425.9770 l   20  1         7
  425.9770     20  1         7
  441.7428      1  1       159
  443.7399      1  1       159
  457.7377      1  1       159
  459.7348      1  1       159
  469.7780      5  1        31
  471.7750      5  1        31
  501.9706 c   20  1         7
  501.9706     20  1         7
  513.6775      1  1       159

MID Window terminated after 34.533333 minutes
MID Window end time was 34.530000 minutes
MID Window terminated after 42.166667 minutes
MID Window end time was 42.160000 minutes
MID Window terminated after 47.200000 minutes
MID Window end time was 47.200000 minutes
MID Window terminated after 52.666667 minutes
MID Window end time was 52.660000 minutes
MID Window terminated after 57.000000 minutes
MID Window end time was 57.000000 minutes

Tune file name: C:\Xcalibur\System\DFS\MSI\tune2.DFSTune

DFS - Parameter

 ACCU            333.0000   BCORRS            0.0169   BMASS          309.9834
 BQUAD            -5.5000   CAPIL             0.0000   CAPTSET          0.0000
 CCURR             0.0000   COUNTING          0.0000   DELAY            0.0000
 DRAW            -25.0000   DRAWC             0.0000   DRAWS            0.0000
 DYNVOLTAGE       15.0000   ECORR             1.0002   ECURR            0.8000
 EDAC        7969177.0000   EDACG             0.9998   EDACZ         1415.4000
 ELEN            -45.0000   EMULT          2044.0000   ENS            123.0000
 ENSBR            -5.5000   ERATIO            1.0000   ESA            679.0600
 ESIPAR            0.0000   EXS             168.0000   EXSBR           -1.0000
 FDMA       18000000.0000   FILTER          100.0000   FLENS            1.0000
 FM              375.8364   FMII             50.0000   FQUAD            4.4000
 FQUADGAIN         0.1000   FREQ           1201.2012   FSLOPE    36000000.0000
 FVANAL            0.0132   FVINLET           0.0549   FVSRC            0.0496
 FWIN              0.7000   HCURR             0.0000   HVANAL           0.0000
 HVSRC             0.0000   ICAL0             0.0011   ICAL1            0.4030
```

ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	742.0000
LENS_SYM	-6.2500	LM	375.8364	LMII	500.0000
LMASS	309.9834	LKM	425.9770	MASS	309.9834
MDAC	3607736.3595	MRANGE	1291.1210	NSAM	400.0000
NSCAN	2668.0000	NSMAX	8.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	0.0000	PSAM	10.0000
PUSHER	-4.0000	RECURR	0.7883	RELEN	0.0000
RES	11256.9814	RPUSHER	-4.1685	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	700.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	0.0000	SLOW	60.0000	SS	3.0000
SW	0.1036	TANAL	0.0000	TCURR	0.0000
TD	1.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	100.0000	TSAM	400.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	309.9834	XLENS_POT	826.0000
XLENS_SYM	-5.5000	YLENS_POT	406.0000	YLENS_SYM	3.0000

```
Source Gauge:        2.8e-005 mbar
Analyzer Penning:    1.0e-007 mbar
Pirani Analyse:      1.3e-002 mbar
Pirani Source:       4.9e-002 mbar
Pirani Inlet System: 5.5e-002 mbar

Scantype is electric

Sourcemode is EI POS

MID Time Window 1: Resolution is 10401.
MID Time Window 2: Resolution is 10736.
MID Time Window 3: Resolution is 10450.
MID Time Window 4: Resolution is 10192.
MID Time Window 5: Resolution is 11256.

Amplifier Offset: 87.


*** File closed Fri Aug 19 21:04:54 2011
  ***
```

QUAN: d1110819i4.q0 Entries: 92

Data file(s) used
File: d1110819i4 19-Aug-11
Samp: WO=hr0035d Meth=F8 Dil=1 Start : 20:04:06 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290
Oper: MSD Inlet : LC

Disp: CHRO
Amount = (area * ref amnt) / (ref area * response factor); amount = f(reponse)
Response factors from quantitation file

Quan Masses	Actual Time	Area	Height	Peak Beginn	Peak End	Noise Value	La Pe	Lab Fac	Integration Baseline
319.8805	31:04	174397.	18413.	30:50	31:19	26.	1	1.0	ABV
321.8775	31:05	221725.	23179.	30:50	31:20	30.	1	1.0	ABV
319.8805	31:04	174397.	18413.	30:50	31:19	26.	2	5.0	ABV
321.8775	31:05	221725.	23179.	30:50	31:20	30.	2	5.0	ABV
331.9202	30:31	414501.	46835.	30:17	30:46	73.	2	5.0	ABV
331.9202	31:02	432918.	44887.	30:47	31:17	73.	2	5.0	AVV
333.9171	30:32	509177.	54055.	30:16	30:47	83.	2	5.0	ABV
333.9171	31:02	546451.	58219.	30:47	31:17	83.	2	5.0	AVV
327.8683	31:04	412781.	43713.	30:49	31:19	48.	1	1.0	ABV
327.8683	31:04	412781.	43713.	30:49	31:19	48.	2	5.0	ABV
303.8864	29:04	209563.	23922.	28:50	29:19	33.	1	1.0	AVV
305.8834	29:04	277523.	31614.	28:50	29:19	37.	1	1.0	ABV
303.8864	29:04	209594.	23922.	28:49	29:19	33.	2	5.0	AVV
305.8834	29:04	277523.	31614.	28:50	29:19	37.	2	5.0	ABV
315.9261	29:02	586710.	66093.	28:47	29:17	51.	2	5.0	ABV
317.9230	29:02	742627.	85147.	28:48	29:16	50.	2	5.0	ABV
355.8368	40:42	987863.	232315.	40:34	40:57	35.	1	1.0	ABV
357.8337	40:42	632341.	147491.	40:33	40:57	21.	1	1.0	ABV
355.8368	40:42	987863.	232315.	40:34	40:57	35.	2	5.0	ABV
357.8337	40:42	632341.	147491.	40:33	40:57	21.	2	5.0	ABV
367.8765	40:41	507513.	116286.	40:31	40:52	29.	2	5.0	ABV
369.8734	40:41	332545.	77083.	40:33	40:48	21.	2	5.0	ABV
339.8427	38:55	1560182.	308759.	38:42	39:08	90.	1	1.0	ABV
341.8396	38:55	1011535.	204023.	38:42	39:07	66.	1	1.0	ABV
339.8427	38:55	1560182.	308759.	38:42	39:08	90.	2	5.0	ABV
339.8427	40:10	1527730.	337874.	40:00	40:20	90.	2	5.0	ABV
341.8396	38:55	1011535.	204023.	38:42	39:07	66.	2	5.0	ABV
341.8396	40:10	957347.	208080.	40:00	40:17	66.	2	5.0	ABV
351.8824	38:54	745195.	145467.	38:42	39:08	50.	2	5.0	ABV
351.8824	40:09	767919.	167059.	40:00	40:24	50.	2	5.0	ABV
353.8793	38:54	460936.	89582.	38:40	39:05	51.	2	5.0	ABV
353.8793	40:09	483706.	105613.	39:56	40:24	51.	2	5.0	ABV
389.7961	45:30	1048083.	266488.	45:21	45:45	93.	1	1.0	AVV
391.7931	45:30	830555.	209763.	45:23	45:45	88.	1	1.0	AVV
389.7961	44:59	911732.	246635.	44:52	45:02	93.	2	5.0	ABV
389.7961	45:07	919614.	234792.	45:02	45:21	93.	2	5.0	AVV
389.7961	45:30	1048083.	266488.	45:21	45:45	93.	2	5.0	AVV
391.7931	44:59	738834.	197360.	44:52	45:02	88.	2	5.0	ABV
391.7931	45:07	732178.	186438.	45:02	45:22	88.	2	5.0	AVV
391.7931	45:30	830555.	209763.	45:23	45:45	88.	2	5.0	AVV
401.8358	44:58	444584.	119323.	44:51	45:01	70.	2	5.0	ABV
401.8358	45:06	447353.	112091.	45:01	45:21	70.	2	5.0	AVV
401.8358	45:29	495827.	121810.	45:22	45:44	70.	2	5.0	AVV
403.8327	44:58	354132.	94456.	44:51	45:01	50.	2	5.0	ABV
403.8327	45:06	339331.	85149.	45:01	45:16	50.	2	5.0	AVV
403.8327	45:29	399825.	102219.	45:21	45:38	50.	2	5.0	AVV
373.8021	44:05	1437496.	374993.	44:01	44:20	83.	1	1.0	AVV
375.7990	44:05	1194290.	315169.	44:01	44:20	73.	1	1.0	AVV
373.8021	43:57	1290221.	342091.	43:50	44:01	83.	2	5.0	ABV
373.8021	44:05	1437496.	374993.	44:01	44:20	83.	2	5.0	AVV

373.8021	44:48	1344374.	347472.	44:37	45:04	83.	2	5.0	AVV
373.8021	45:46	1282168.	304656.	45:38	46:01	83.	2	5.0	ABV
375.7990	43:57	1075327.	291656.	43:48	44:01	73.	2	5.0	ABV
375.7990	44:05	1194290.	315169.	44:01	44:20	73.	2	5.0	AVV
375.7990	44:48	1112310.	292413.	44:37	45:04	73.	2	5.0	AVV
375.7990	45:45	1067737.	248703.	45:38	46:00	73.	2	5.0	ABV
383.8447	44:04	397005.	102894.	44:00	44:19	60.	2	5.0	AVV
383.8447	44:47	375510.	97984.	44:35	44:59	60.	2	5.0	ABV
385.8417	43:56	621654.	162762.	43:50	44:00	70.	2	5.0	ABV
385.8417	44:04	748834.	197038.	44:00	44:18	70.	2	5.0	AVV
385.8417	44:47	709462.	181804.	44:33	45:02	70.	2	5.0	AVV
385.8417	45:44	654638.	153766.	45:37	45:59	70.	2	5.0	ABV
423.7555	49:51	609198.	121978.	49:42	50:07	34.	1	1.0	ABV
425.7524	49:51	597495.	121024.	49:42	50:07	34.	1	1.0	ABV
423.7555	48:40	7642.	1258.	48:34	48:56	34.	2	5.0	ABV
423.7555	49:51	609198.	121978.	49:42	50:07	34.	2	5.0	ABV
425.7524	48:40	6732.	1092.	48:34	48:56	34.	2	5.0	ABV
425.7524	49:51	597495.	121024.	49:42	50:07	34.	2	5.0	ABV
435.7951	48:38	4831.	1245.	48:33	48:51	13.	2	5.0	ABB
435.7951	49:50	311169.	60605.	49:41	50:05	13.	2	5.0	ABV
437.7921	49:50	293540.	57180.	49:42	49:58	12.	2	5.0	ABV
437.7921	50:02	3499.	879.	49:58	50:04	12.	2	5.0	AVV
407.7614	48:10	1080808.	230747.	48:02	48:25	52.	1	1.0	ABV
409.7583	48:10	1047677.	227453.	48:02	48:25	66.	1	1.0	ABV
407.7614	48:10	1080808.	230747.	48:02	48:25	52.	2	5.0	ABV
407.7614	50:31	916260.	180763.	50:22	50:46	52.	2	5.0	ABV
409.7583	48:10	1047677.	227453.	48:02	48:25	66.	2	5.0	ABV
409.7583	50:30	911275.	179848.	50:22	50:45	66.	2	5.0	ABV
417.8041	48:09	238878.	51981.	48:02	48:23	19.	2	5.0	ABV
417.8041	50:30	217371.	41769.	50:21	50:45	19.	2	5.0	ABV
419.8010	48:09	521879.	115018.	48:01	48:22	30.	2	5.0	ABV
419.8010	50:29	480234.	92796.	50:19	50:44	30.	2	5.0	ABV
457.7148	54:05	1151377.	294866.	53:58	54:20	54.	1	1.0	ABV
459.7118	54:05	1290514.	324733.	53:58	54:20	77.	1	1.0	ABV
457.7148	54:05	1151377.	294866.	53:58	54:20	54.	2	5.0	ABV
459.7118	54:05	1290514.	324733.	53:58	54:20	77.	2	5.0	ABV
469.7545	54:04	517695.	133127.	53:57	54:19	43.	2	5.0	ABV
471.7514	54:04	579627.	148126.	53:57	54:19	44.	2	5.0	ABV
441.7207	54:13	1465444.	368962.	54:01	54:29	46.	1	1.0	ABV
443.7177	54:13	1635362.	406645.	54:02	54:29	61.	1	1.0	ABV
441.7207	54:13	1465444.	368962.	54:01	54:29	46.	2	5.0	ABV
443.7177	54:13	1635362.	406645.	54:02	54:29	61.	2	5.0	ABV

TestAmerica
Knoxville

IsoCalc Preliminary Sample Report

PCDD/PCDF by EPA Method 1613B

Workorder	HR0035E	Prep Batch		Lot No	
Data File	/20110819i/d1110819i5.d	Prep Date		SDG No	
Analysis ID	134812	Prep Exp Date		Date Received	
Analysis Date	8/19/2011	Matrix	UNKNOWN	Date Sampled	
Analysis Time	21:04	Initial Wt/Vol		Lims Test Code	
Anal Exp Date		Extract Vol		Method	DX1613B
Instrument	D11A	Dil Factor	1.00	Code	F8
Analyst	MSD				

Analyte	RT	Area	Height	RF	Std Amt	Amount	Rec	Conc (ng/mL)	DL (ng/mL)
2,3,7,8-TCDD	31:07	2130468	222577	1.000	200.0	213.023367	106.51	213.023367	0.127
Total TCDD				1.000		213.023367		213.023367	0.127
2,3,7,8-TCDF	29:05	2662864	291952	1.000	200.0	190.201990	95.10	190.201990	0.198
Total TCDF				1.000		190.201990		190.201990	0.198
1,2,3,7,8-PeCDD	40:43	8843619	2069930	1.000	1000	977.856738	97.79	977.856738	0.116
Total PeCDD				1.000		977.856738		977.856738	0.116
1,2,3,7,8-PeCDF	38:55	14471982	2990267	1.000	1000	1093.79104	109.38	1093.79104	0.243
2,3,4,7,8-PeCDF	40:09	13717948	3102031	1.000	1000	996.765695	99.68	996.765695	0.209
Total PeCDF				1.000		2090.55673		2090.55673	0.225
1,2,3,4,7,8-HxCDD	44:59	9736831	2633666	1.000	1000	1087.54103	108.75	1087.54103	0.273
1,2,3,6,7,8-HxCDD	45:06	9620878	2537447	1.000	1000	1084.76985	108.48	1084.76985	0.287
1,2,3,7,8,9-HxCDD	45:30	9929988	2517789	1.000	1000	1114.34420	111.43	1114.34420	0.280
Total HxCDD				1.000		3286.65508		3286.65508	0.280
1,2,3,4,7,8-HxCDF	43:57	15281074	4065045	1.000	1000	1262.06738	126.21	1262.06738	0.304
1,2,3,6,7,8-HxCDF	44:04	16479090	4426354	1.000	1000	1193.90683	119.39	1193.90683	0.268
2,3,4,6,7,8-HxCDF	44:48	15614031	4111479	1.000	1000	1202.79653	120.28	1202.79653	0.291
1,2,3,7,8,9-HxCDF	45:46	13606139	3263535	1.000	1000	1208.85003	120.89	1208.85003	0.369
Total HxCDF				1.000		4867.62077		4867.62077	0.304
1,2,3,4,6,7,8-HpCDD	49:51	7731298	1588992	1.000	1000	1048.79511	104.88	1048.79511	0.194
Total HpCDD				1.000		1048.79511		1048.79511	0.194
1,2,3,4,6,7,8-HpCDF	48:10	11295724	2515644	1.000	1000	1396.77211	139.68	1396.77211	0.294
1,2,3,4,7,8,9-HpCDF	50:30	9852804	2026054	1.000	1000	1315.19074	131.52	1315.19074	0.339
Total HpCDF				1.000		2711.96285		2711.96285	0.314
OCDD	54:05	12942156	3450813	1.000	2000	2135.86139	106.79	2135.86139	0.299
OCDF	54:13	17229209	4634203	1.000	2000	2843.35951	142.17	2843.35951	0.357
13C-2,3,7,8-TCDD	31:05	1000110	106298	1.000	100.0	113.897626	113.90	113.897626	0.419
13C-2,3,7,8-TCDF	29:03	1400019	153866	1.000	100.0	159.441302	159.44	159.441302	0.183
13C-1,2,3,7,8-PeCDD	40:41	904388	206233	1.000	100.0	102.996317	103.00	102.996317	0.0982
13C-1,2,3,7,8-PeCDF	38:54	1323103	271033	1.000	100.0	150.681716	150.68	150.681716	0.276
13C-2,3,4,7,8-PeCDF	40:08	1376246	314406	1.000	100.0	156.733912	156.73	156.733912	0.276
13C-1,2,3,4,7,8-HxCDD	44:58	895307	244567	1.000	100.0	90.880733	90.88	90.880733	0.125
13C-1,2,3,6,7,8-HxCDD	45:05	886905	232360	1.000	100.0	90.027864	90.03	90.027864	0.125
13C-1,2,3,4,7,8-HxCDF	43:56	1210797	322393	1.000	100.0	122.905461	122.91	122.905461	0.150
13C-1,2,3,6,7,8-HxCDF	44:03	1380266	366012	1.000	100.0	140.107903	140.11	140.107903	0.150
13C-2,3,4,6,7,8-HxCDF	44:47	1298144	337075	1.000	100.0	131.771871	131.77	131.771871	0.150
13C-1,2,3,7,8,9-HxCDF	45:45	1125544	265798	1.000	100.0	114.251608	114.25	114.251608	0.150
13C-1,2,3,4,6,7,8-HpCDD	49:50	737160	149685	1.000	100.0	74.827563	74.83	74.827563	0.0340
13C-1,2,3,4,6,7,8-HpCDF	48:09	808702	176300	1.000	100.0	82.089642	82.09	82.089642	0.0440
13C-1,2,3,4,7,8,9-HpCDF	50:29	749154	152844	1.000	100.0	76.045049	76.05	76.045049	0.0440
13C-OCDD	54:04	1211891	311324	1.000	200.0	123.016510	61.51	123.016510	0.0580
37Cl4-2,3,7,8-TCDD	31:07	2156712	227623	1.000	200.0	245.617360	122.81	245.617360	0.111
13C-1,2,3,4-TCDD	30:34	878078	94182	1.000	100.0	100.000000	100.00	100.000000	0.419
13C-1,2,3,7,8,9-HxCDD	45:29	985145	249940	1.000	100.0	100.000000	100.00	100.000000	0.125

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IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 1613B

Workorder	HR0035E	Prep Batch		Lot No	
Data File	/20110819i/d110819i5.	Prep Date		SDG No	
Analysis ID	134812	Prep Exp Date		Date Received	
Analysis Date	08/19/11 21:04	Matrix	UNKNOWN	Date Sampled	
Anal Exp Date		Initial Wt/Vol		Lims Test Code	
Instrument	D11A	Extract Vol		Method	DX1613B
Analyst	MSD	Diluton Factor	1.00	Code	F8

View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
304					303.9016	305.8987	303.9016	305.8987	0.65-0.89		
	Noise	00:00	00:00	0	133	173	53	69	0.77	/	
	2,3,7,8-TCDF	29:05	00:00	0	1152562	1510302	126271	165681	0.76	ABV/AVV	M
316					315.9419	317.9389	315.9419	317.9389	0.65-0.89		
	Noise	00:00	00:00	0	80	93	32	37	0.86	/	
	13C-2,3,7,8-TCDF	29:03	00:00	0	611525	788494	66542	87324	0.78	ABV/ABV	
320					319.8965	321.8936	319.8965	321.8936	0.65-0.89		
	Noise	00:00	00:00	0	78	58	31	23	1.35 *	/	
	2,3,7,8-TCDD	31:07	00:00	0	940022	1190446	97935	124642	0.79	AVV/AVV	M
328					327.8847		327.8847				
	Noise	00:00	00:00	0	105		42				
	37Cl4-2,3,7,8-TCDD	31:07	00:00	0	2156712		227623			AVV	M
332					331.9368	333.9338	331.9368	333.9338	0.65-0.89		
	Noise	00:00	00:00	0	173	223	69	89	0.78	/	
	13C-1,2,3,4-TCDD	30:34	00:00	0	391811	486267	40126	54056	0.81	AVV/ABV	
	13C-2,3,7,8-TCDD	31:05	00:00	0	439783	560327	47903	58395	0.78	AVV/AVV	
340					339.8597	341.8567	339.8597	341.8567	1.32-1.78		
	Noise	00:00	00:00	0	365	293	146	117	1.25 *	/	
	1,2,3,7,8-PeCDF	38:55	00:00	0	8736762	5735220	1802850	1187417	1.52	ABV/AVV	M
	2,3,4,7,8-PeCDF	40:09	00:00	0	8265469	5452479	1851340	1250691	1.52	ABV/ABV	
352					351.9000	353.8970	351.9000	353.8970	1.32-1.78		
	Noise	00:00	00:00	0	123	138	49	55	0.89 *	/	
	13C-1,2,3,7,8-PeCDF	38:54	00:00	0	804938	518165	165027	106006	1.55	ABV/ABV	
	13C-2,3,4,7,8-PeCDF	40:08	00:00	0	849730	526516	194387	120019	1.61	ABV/ABV	
356					355.8546	357.8516	355.8546	357.8516	1.32-1.78		
	Noise	00:00	00:00	0	130	110	52	44	1.18 *	/	
	1,2,3,7,8-PeCDD	40:43	00:00	0	5372314	3471305	1249399	820531	1.55	ABV/ABV	
368					367.8949	369.8919	367.8949	369.8919	1.32-1.78		
	Noise	00:00	00:00	0	43	50	17	20	0.85 *	/	
	13C-1,2,3,7,8-PeCDD	40:41	00:00	0	550850	353538	124987	81246	1.56	ABV/ABV	
374					373.8208	375.8178	373.8208	375.8178	1.05-1.43		
	Noise	00:00	00:00	0	570	410	228	164	1.39	/	
	1,2,3,4,7,8-HxCDF	43:57	00:00	0	8385552	6895522	2213330	1851715	1.22	ABV/ABV	M
	1,2,3,6,7,8-HxCDF	44:04	00:00	0	9079641	7399449	2416324	2010030	1.23	AVV/AVV	M
	2,3,4,6,7,8-HxCDF	44:48	00:00	0	8597452	7016579	2250474	1861005	1.23	AVV/AVB	M
	1,2,3,7,8,9-HxCDF	45:46	00:00	0	7488809	6117330	1789944	1473591	1.22	ABV/ABV	M
384					383.8639	385.8610	383.8639	385.8610	0.43-0.59		
	Noise	00:00	00:00	0	190	185	76	74	1.03 *	/	
	13C-1,2,3,4,7,8-HxCDF	43:56	00:00	0	421851	788946	111724	210669	0.53	ABV/ABV	
	13C-1,2,3,6,7,8-HxCDF	44:03	00:00	0	472912	907354	127868	238144	0.52	AVB/AVV	
	13C-2,3,4,6,7,8-HxCDF	44:47	00:00	0	457111	841033	118980	218095	0.54	AVV/AVV	
	13C-1,2,3,7,8,9-HxCDF	45:45	00:00	0	381819	743725	90599	175199	0.51	AVV/ABV	
390					389.8156	391.8127	389.8156	391.8127	1.05-1.43		

Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

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IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 1613B

Workorder	HR0035E	Prep Batch		Lot No	
Data File	/20110819i/d111081915.	Prep Date		SDG No	
Analysis ID	134812	Prep Exp Date		Date Received	
Analysis Date	08/19/11 21:04	Matrix	UNKNOWN	Date Sampled	
Anal Exp Date		Initial Wt/Vol		Lims Test Code	
Instrument	D11A	Extract Vol		Method	DX1613B
Analyst	MSD	Diluton Factor	1.00	Code	F8

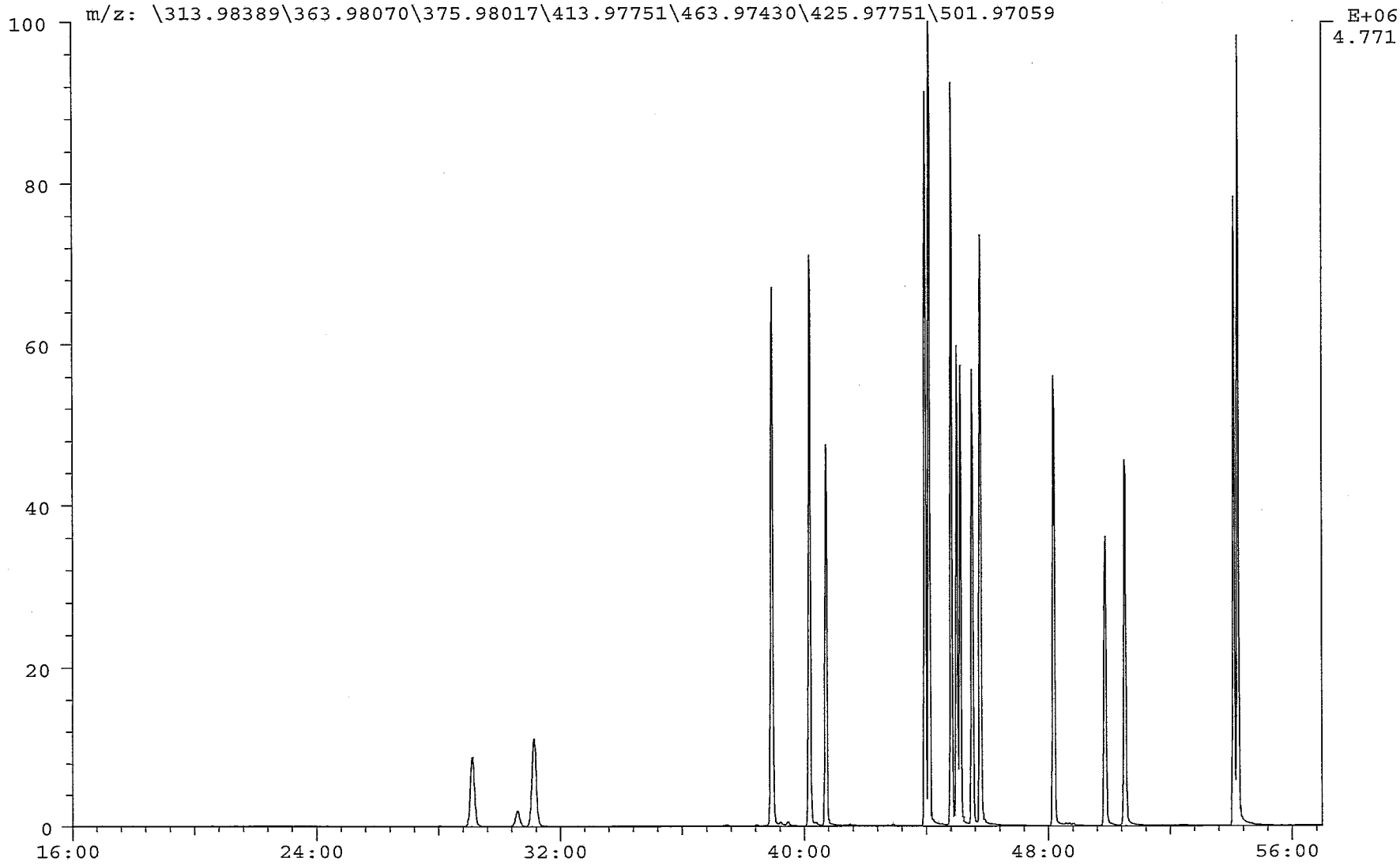
View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
390					389.8156	391.8127	389.8156	391.8127	1.05-1.43		
	Noise	00:00	00:00	0	400	268	160	107	1.50 *	/	
	1,2,3,4,7,8-HxCDD	44:59	00:00	0	5383319	4353512	1454462	1179204	1.24	ABV/ABV	M
	1,2,3,6,7,8-HxCDD	45:06	00:00	0	5339235	4281643	1403600	1133847	1.25	AVV/AVV	M
	1,2,3,7,8,9-HxCDD	45:30	00:00	0	5483295	4446693	1392301	1125488	1.23	AVV/AVV	M
402					401.8559	403.8529	401.8559	403.8529	1.05-1.43		
	Noise	00:00	00:00	0	150	163	60	65	0.92 *	/	
	13C-1,2,3,4,7,8-HxCDD	44:58	00:00	0	508980	386327	139478	105089	1.32	ABV/ABV	
	13C-1,2,3,6,7,8-HxCDD	45:05	00:00	0	496984	389921	131407	100953	1.27	AVV/AVB	
	13C-1,2,3,7,8,9-HxCDD	45:29	00:00	0	555458	429687	140408	109532	1.29	ABV/ABV	
408					407.7818	409.7788	407.7818	409.7788	0.88-1.20		
	Noise	00:00	00:00	0	258	260	103	104	0.99	/	
	1,2,3,4,6,7,8-HpCDF	48:10	00:00	0	5677097	5618627	1258034	1257610	1.01	ABV/ABV	M
	1,2,3,4,7,8,9-HpCDF	50:30	00:00	0	4961588	4891216	1009132	1016922	1.01	ABV/ABV	M
418					417.8250	419.8220	417.8250	419.8220	0.37-0.51		
	Noise	00:00	00:00	0	55	55	22	22	1.00 *	/	
	13C-1,2,3,4,6,7,8-HpCDF	48:09	00:00	0	252698	556004	55393	120907	0.45	ABV/ABV	
	13C-1,2,3,4,7,8,9-HpCDF	50:29	00:00	0	245791	503363	49347	103497	0.49	AVV/ABV	
424					423.7767	425.7737	423.7767	425.7737	0.88-1.20		
	Noise	00:00	00:00	0	125	165	50	66	0.76 *	/	
	1,2,3,4,6,7,8-HpCDD	49:51	00:00	0	3961354	3769944	808773	780219	1.05	ABV/ABV	M
436					435.8169	437.8140	435.8169	437.8140	0.88-1.20		
	Noise	00:00	00:00	0	38	48	15	19	0.79 *	/	
	13C-1,2,3,4,6,7,8-HpCDD	49:50	00:00	0	377830	359330	75728	73957	1.05	ABV/ABV	
442					441.7428	443.7399	441.7428	443.7399	0.76-1.02		
	Noise	00:00	00:00	0	223	333	89	133	0.67 *	/	
	OCDF	54:13	00:00	0	8126451	9102758	2194700	2439503	0.89	ABV/ABV	M
458					457.7377	459.7348	457.7377	459.7348	0.76-1.02		
	Noise	00:00	00:00	0	248	218	99	87	1.14 *	/	
	OCDD	54:05	00:00	0	6085983	6856173	1622691	1828122	0.89	ABV/ABV	M
470					469.7780	471.7750	469.7780	471.7750	0.76-1.02		
	Noise	00:00	00:00	0	60	85	24	34	0.71 *	/	
	13C-OCDD	54:04	00:00	0	573797	638094	146181	165143	0.90	ABV/ABV	

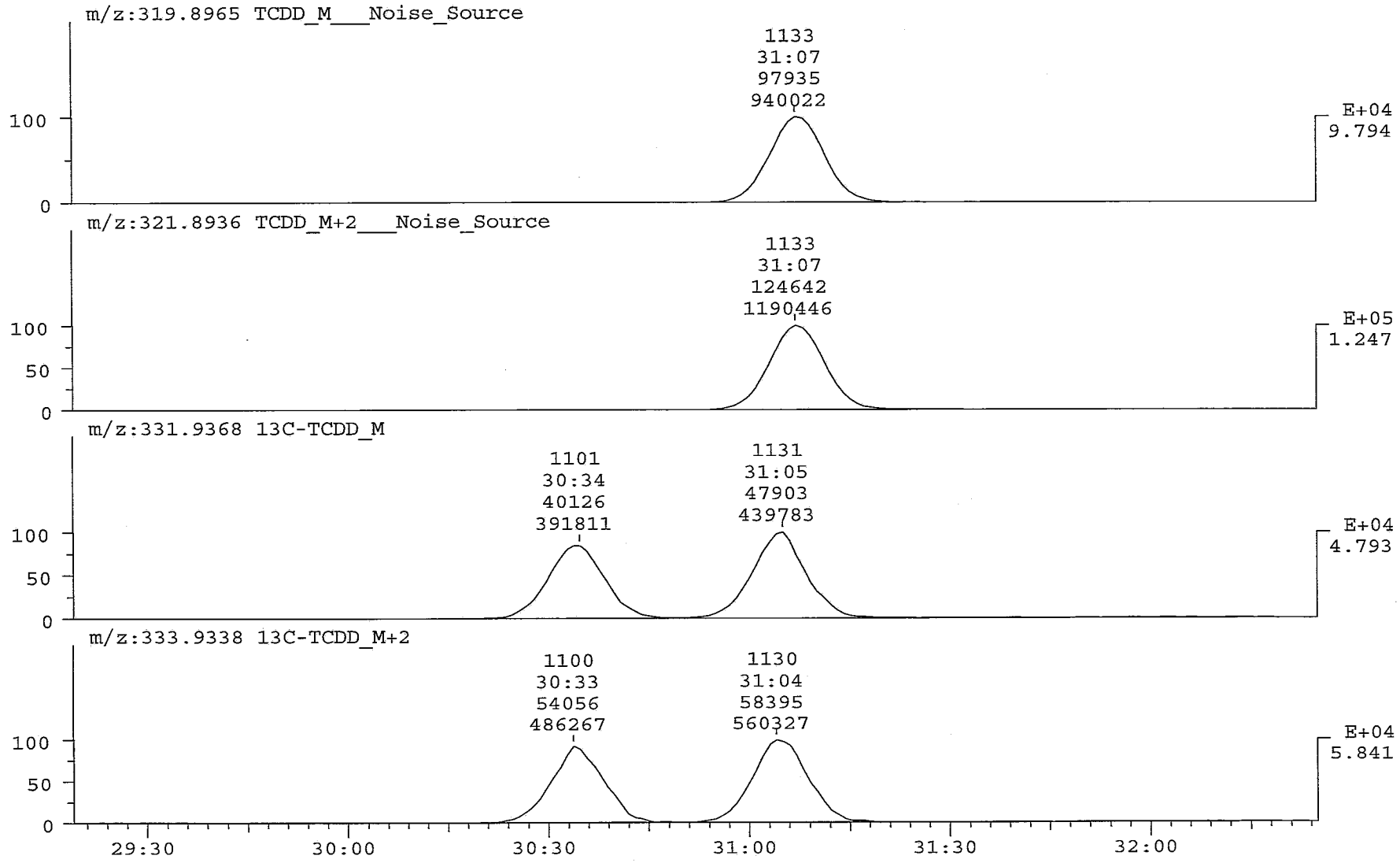
Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

CHRO: d1110819i5 19-Aug-11 Elapse: 54:12 2481
Samp: WO=hr0035e Meth=F8 Dil=1 Start : 21:04:56 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 235 > 2647 Masses: 303 > 514
Area: 5, 0.50, 0 Baseline : 100, 3 Label : 0, 0.0
Disp: Height Area

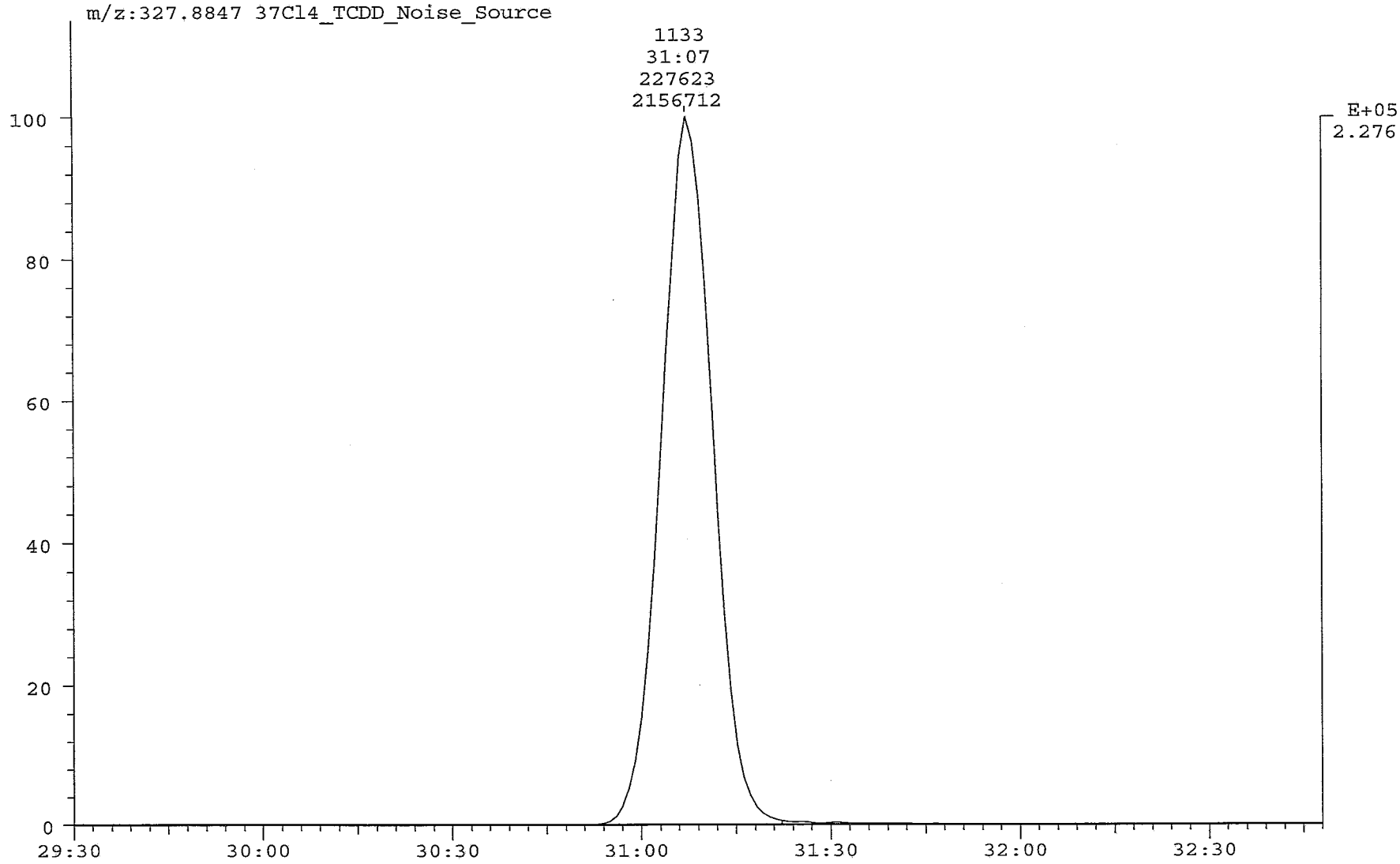
Int, Calc MSD 8-20-11
QC Kch 8/22/11



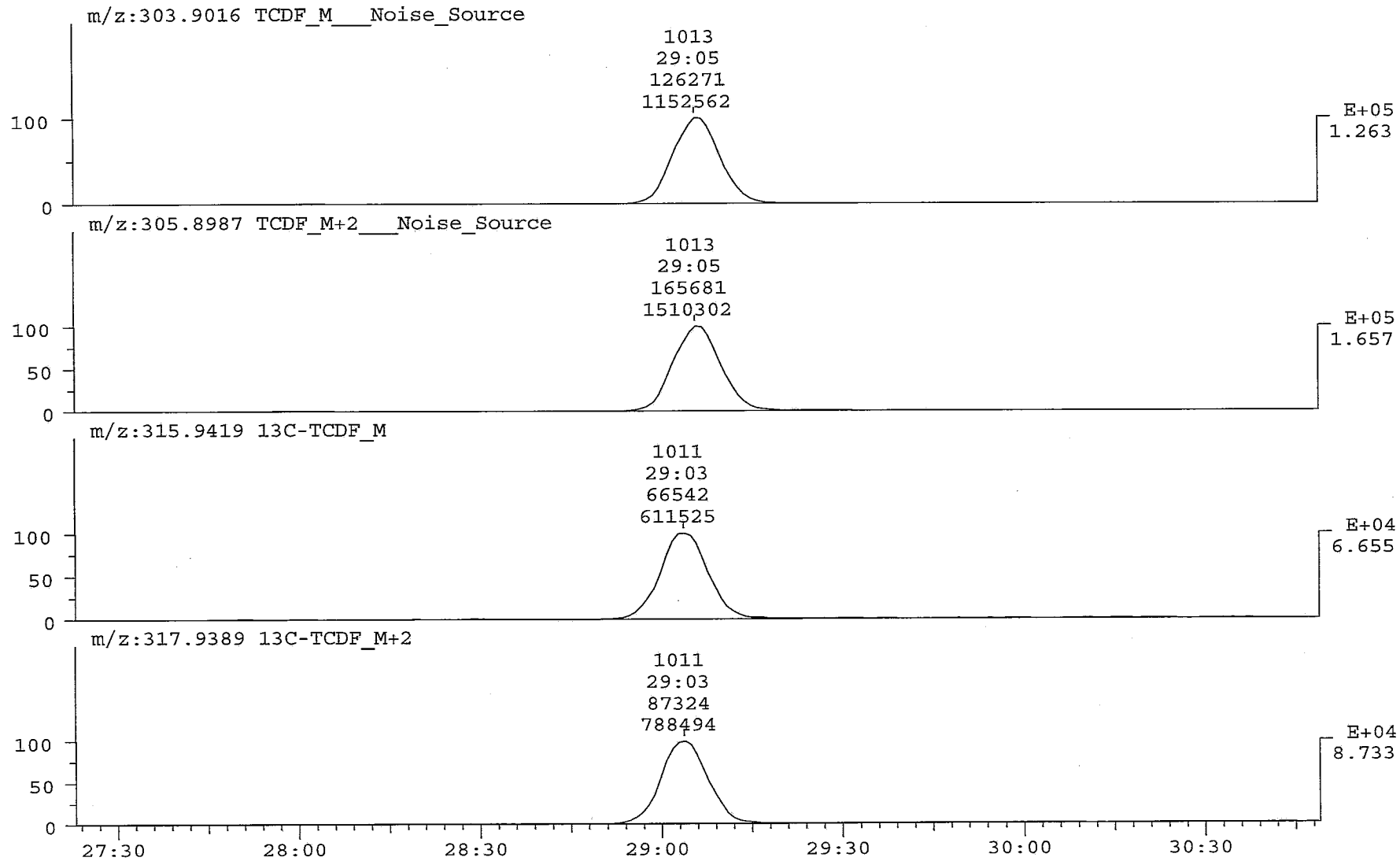
```
CHRO:  d1110819i5                                19-Aug-11  Elapse:  30:51      1118
Samp:  WO=hr0035e Meth=F8 Dil=1                             Start :  21:04:56   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1026 > 1210            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  2, 5.0
Disp:  Height  Area
```



```
CHRO:  d1110819i5                                19-Aug-11  Elapse:  31:06      1132
Samp:  WO=hr0035e Meth=F8 Dil=1                             Start :  21:04:56   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1037 > 1233            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



```
CHRO:  d1110819i5                                19-Aug-11  Elapse:  29:02      1010
Samp:  WO=hr0035e Meth=F8 Dil=1                             Start :  21:04:56   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   911 > 1115             Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  2, 5.0
Disp:  Height  Area
```



```
CHRO:  d1110819i5                                19-Aug-11  Elapse:  29:02      1010
Samp:  WO=hr0035e Meth=F8 Dil=1                             Start :  21:04:56   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   562 > 1334             Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
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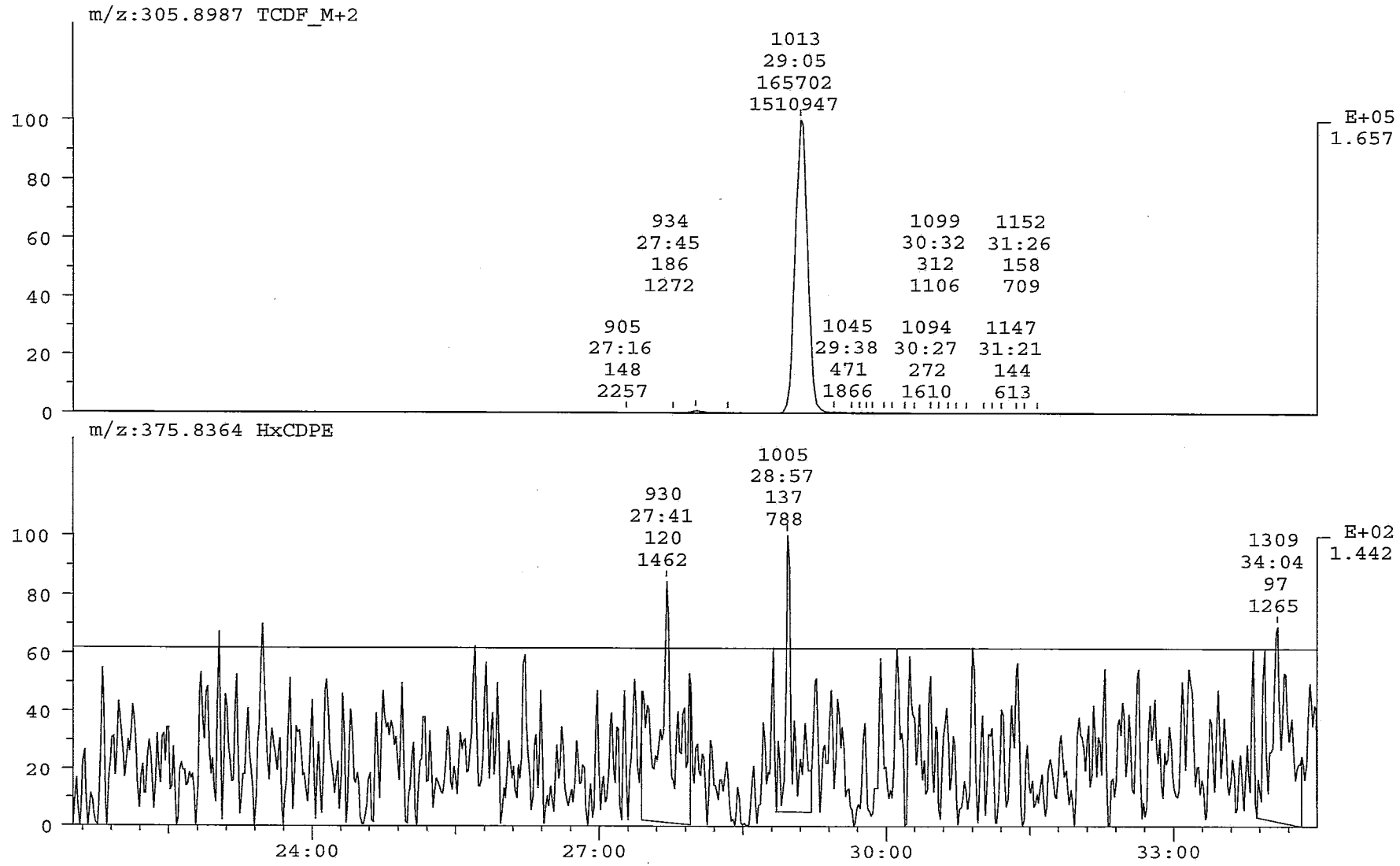

```
CHRO:  d1110819i5                                19-Aug-11  Elapse:  29:02      1010
Samp:  WO=hr0035e Meth=F8 Dil=1                             Start :  21:04:56   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   562 > 1334             Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  0, 0.0
Disp:  Height  Area
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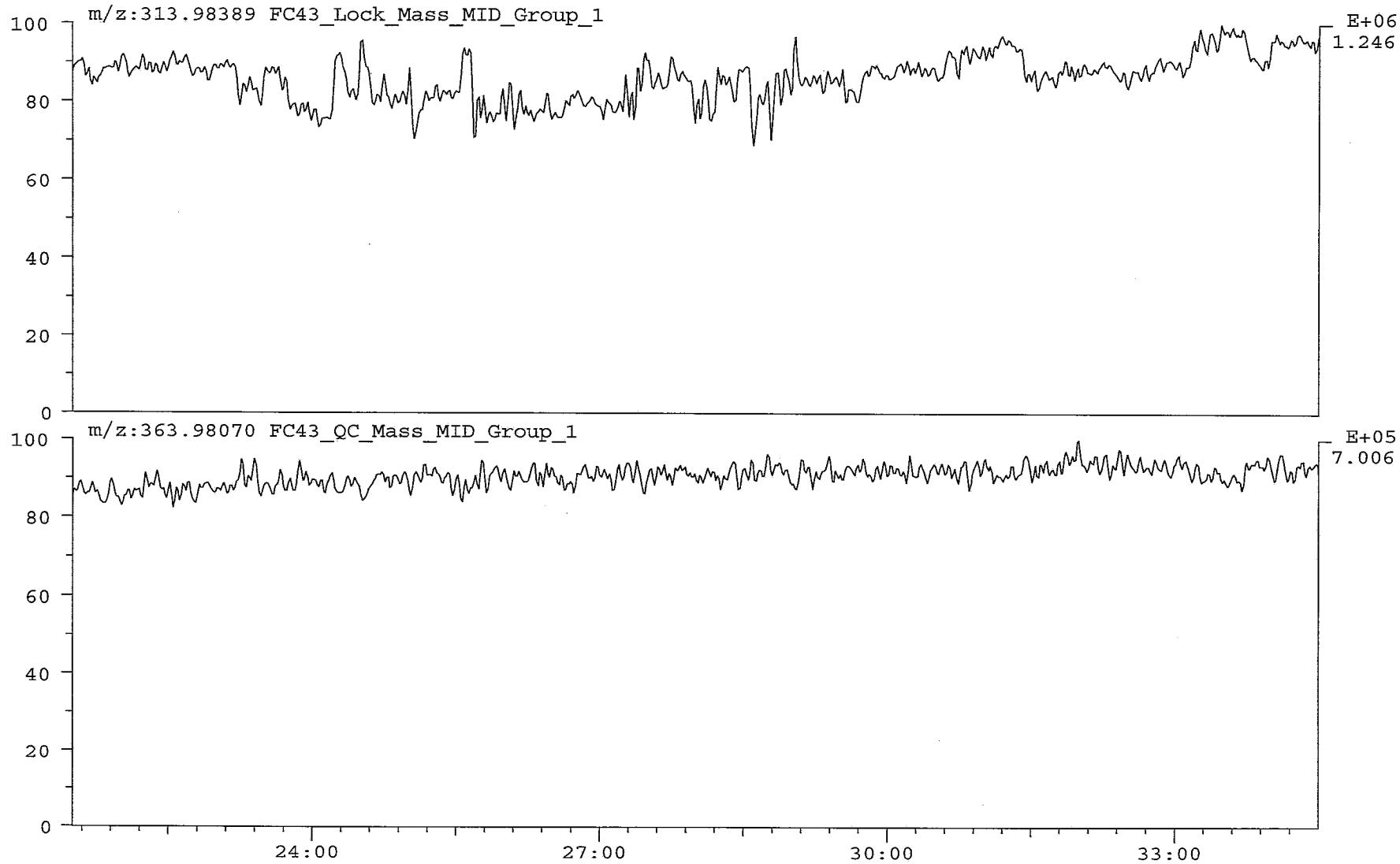
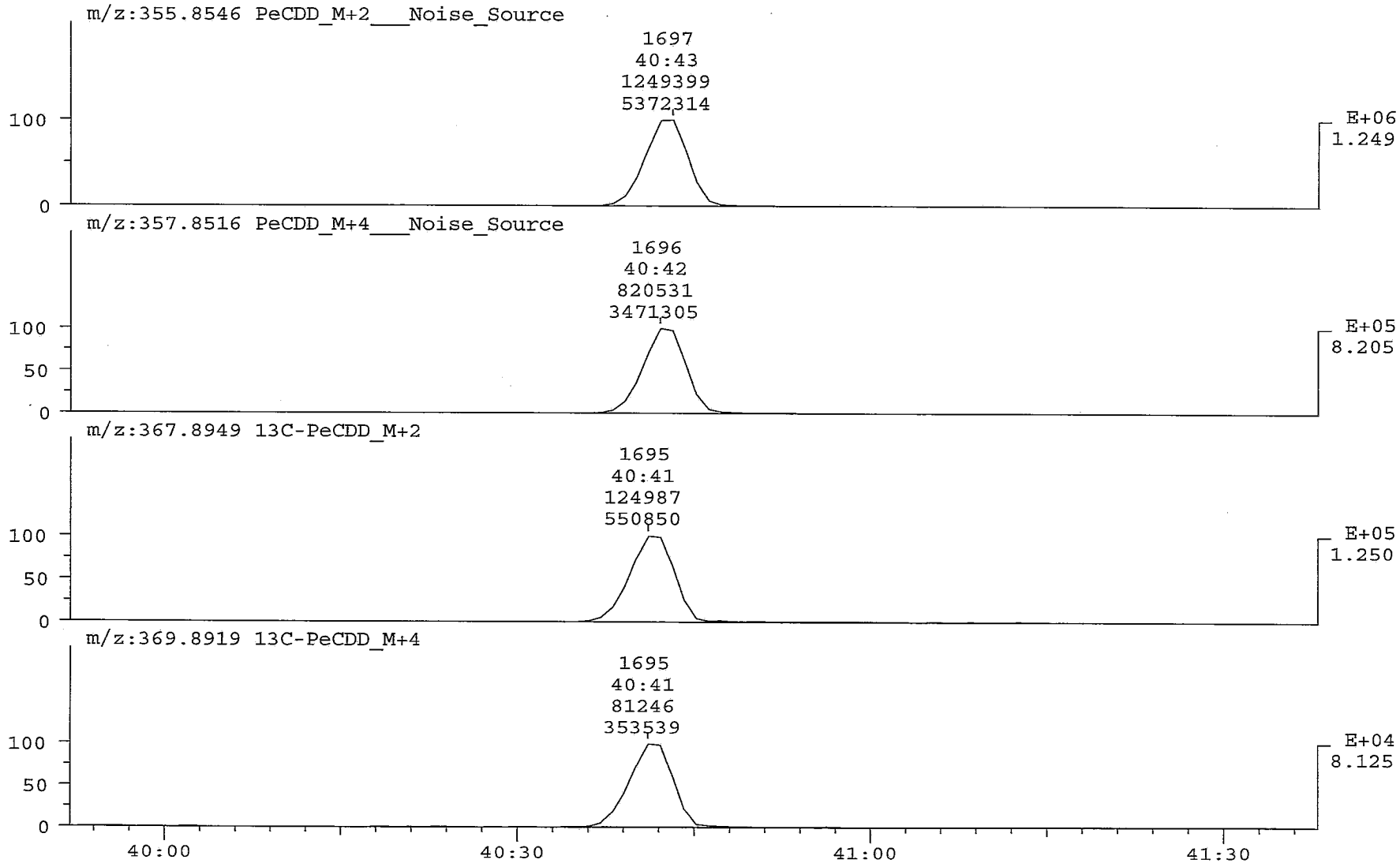
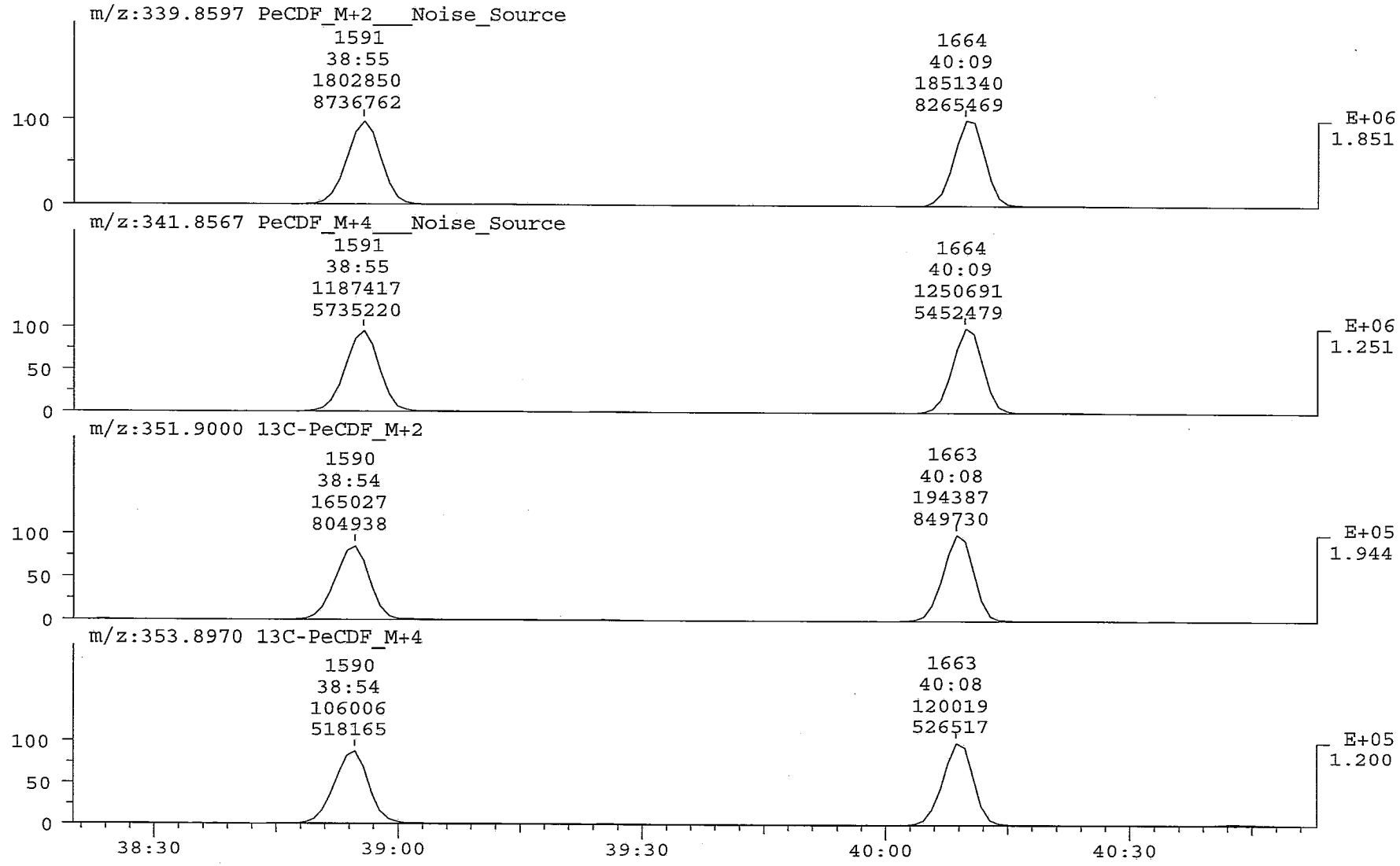


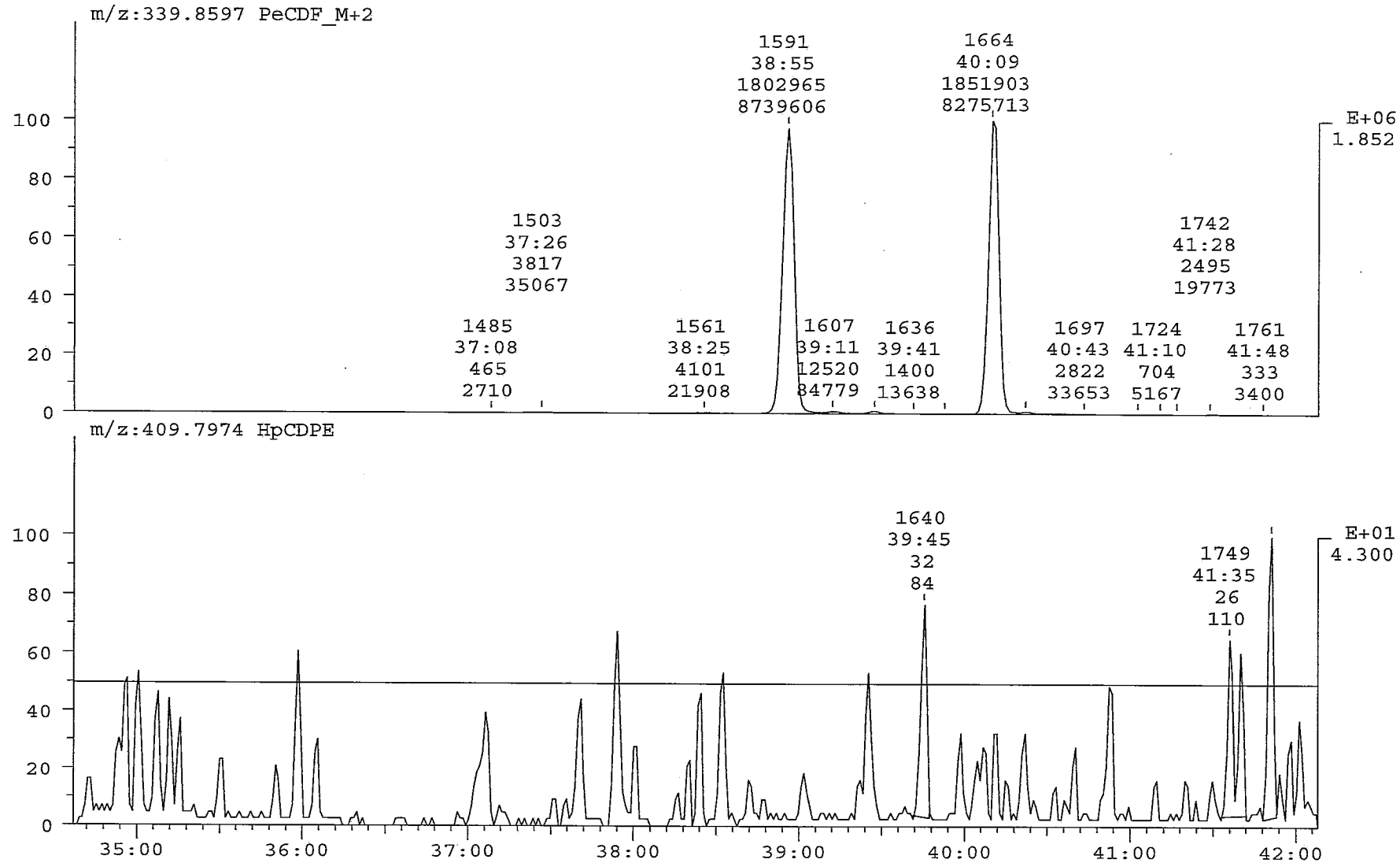
```
CHRO:  d1110819i5                          19-Aug-11   Elapse:  40:42      1696
Samp:  WO=hr0035e Meth=F8 Dil=1                        Start :  21:04:56   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                             Study :  1613/8290 ICAL
Oper:  MSD                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1647 > 1751       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  2, 5.0
Disp:  Height  Area
```



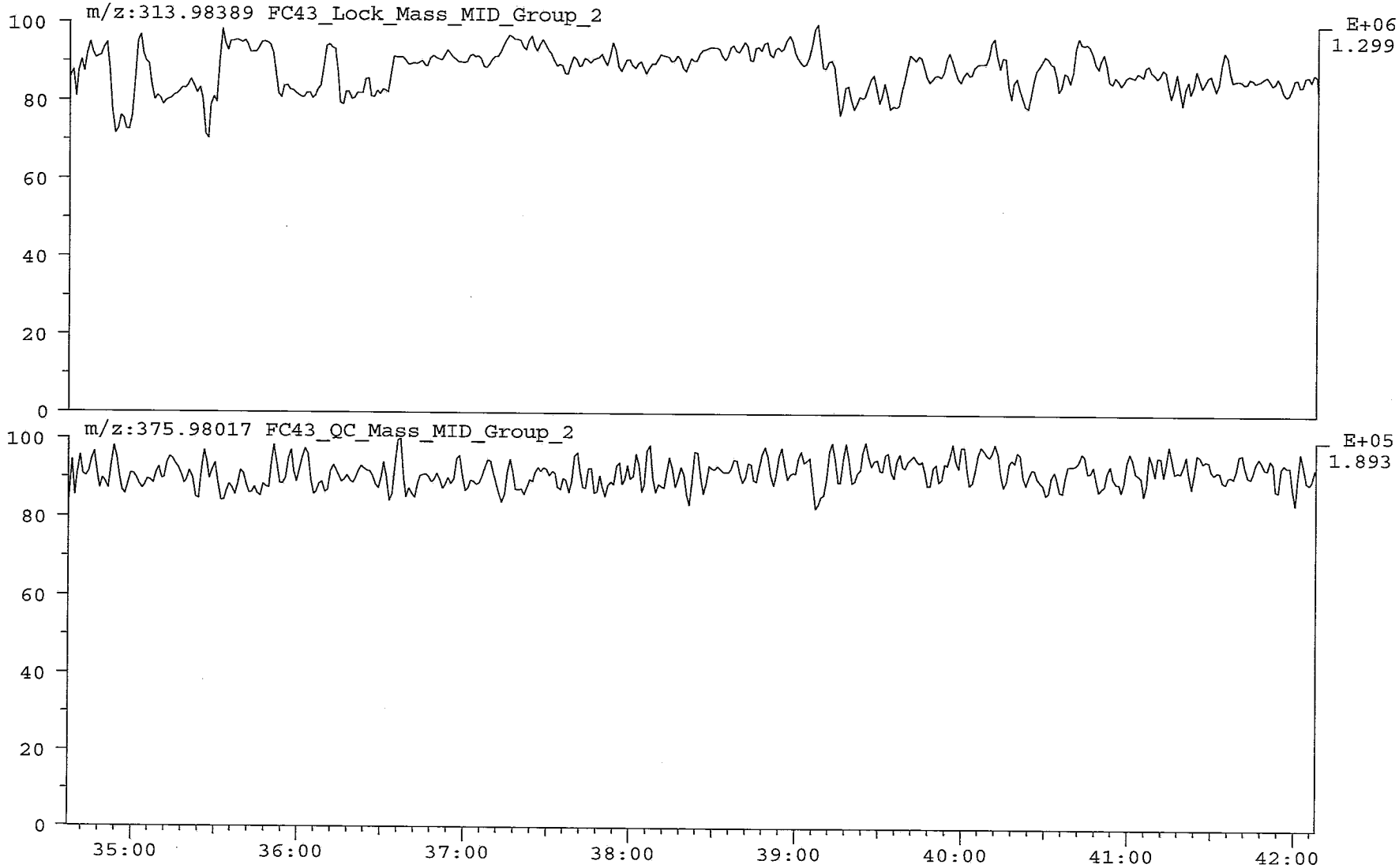
CHRO: d1110819i5 19-Aug-11 Elapse: 39:36 1631
Samp: WO=hr0035e Meth=F8 Dil=1 Start : 21:04:56 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1556 > 1707 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



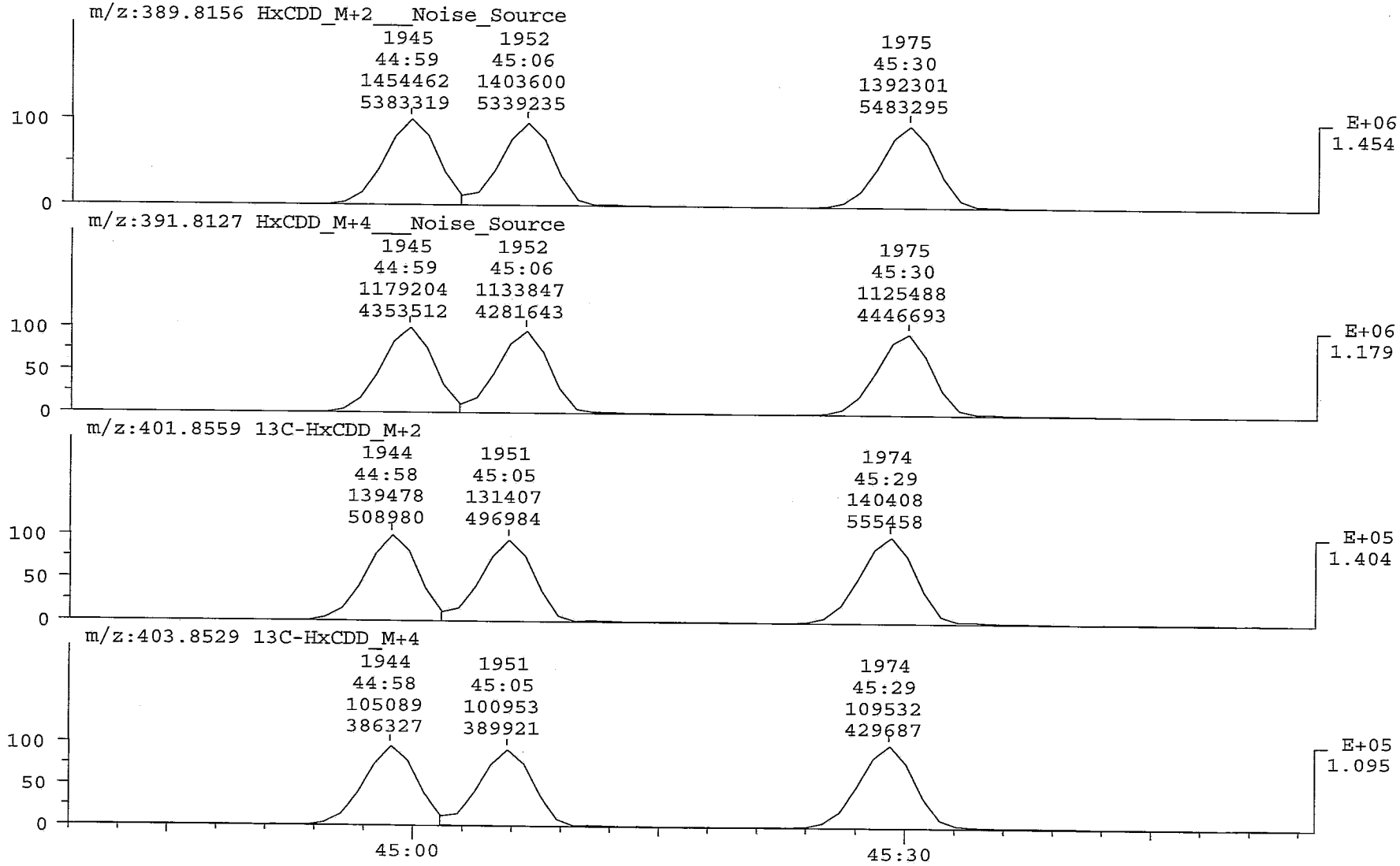
CHRO: d1110819i5 19-Aug-11 Elapse: 39:36 1631
Samp: WO=hr0035e Meth=F8 Dil=1 Start : 21:04:56 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1336 > 1781 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



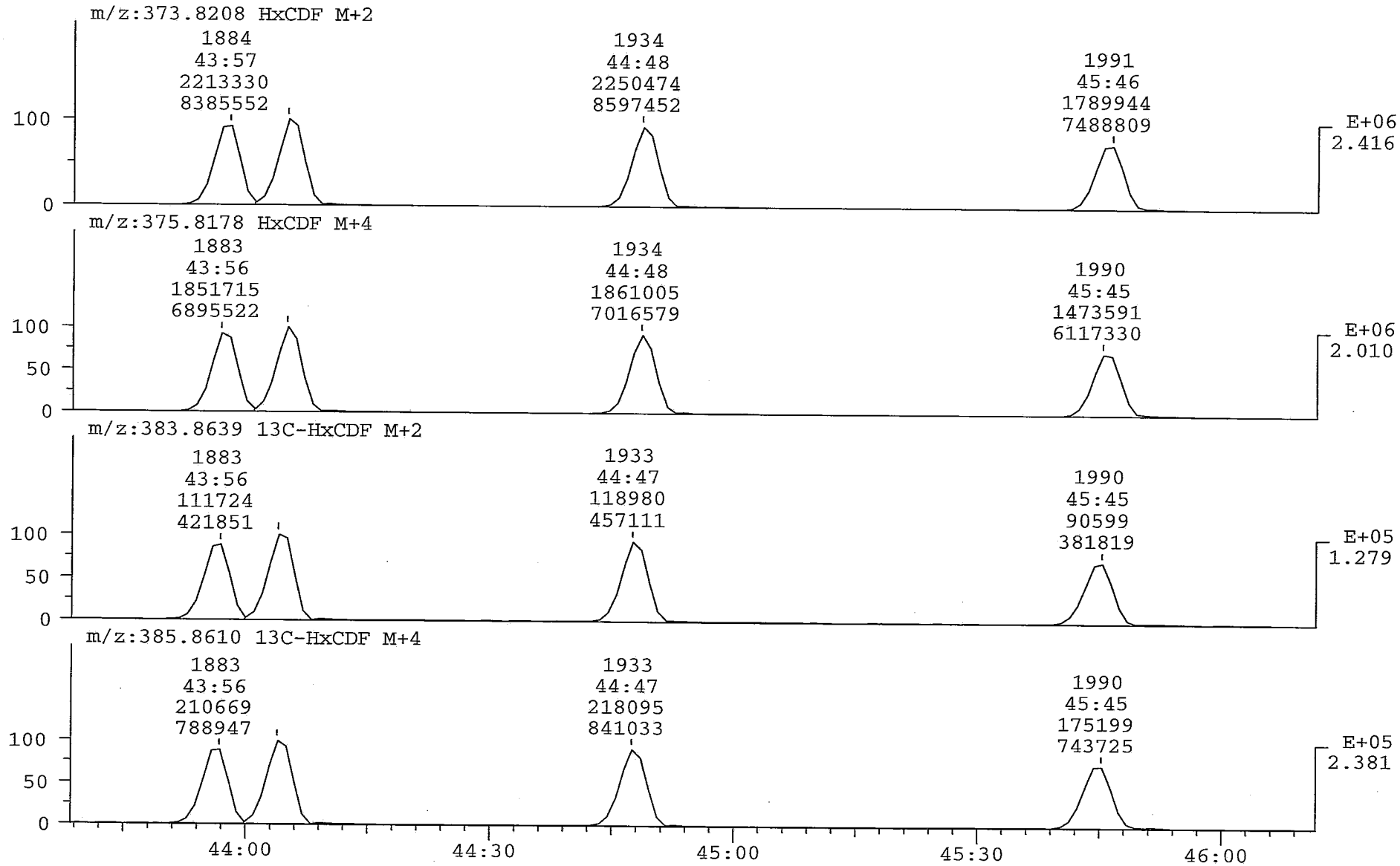
CHRO: d1110819i5 19-Aug-11 Elapse: 39:36 1631
Samp: WO=hr0035e Meth=F8 Dil=1 Start : 21:04:56 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1336 > 1781 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 0, 0.0
Disp: Height Area



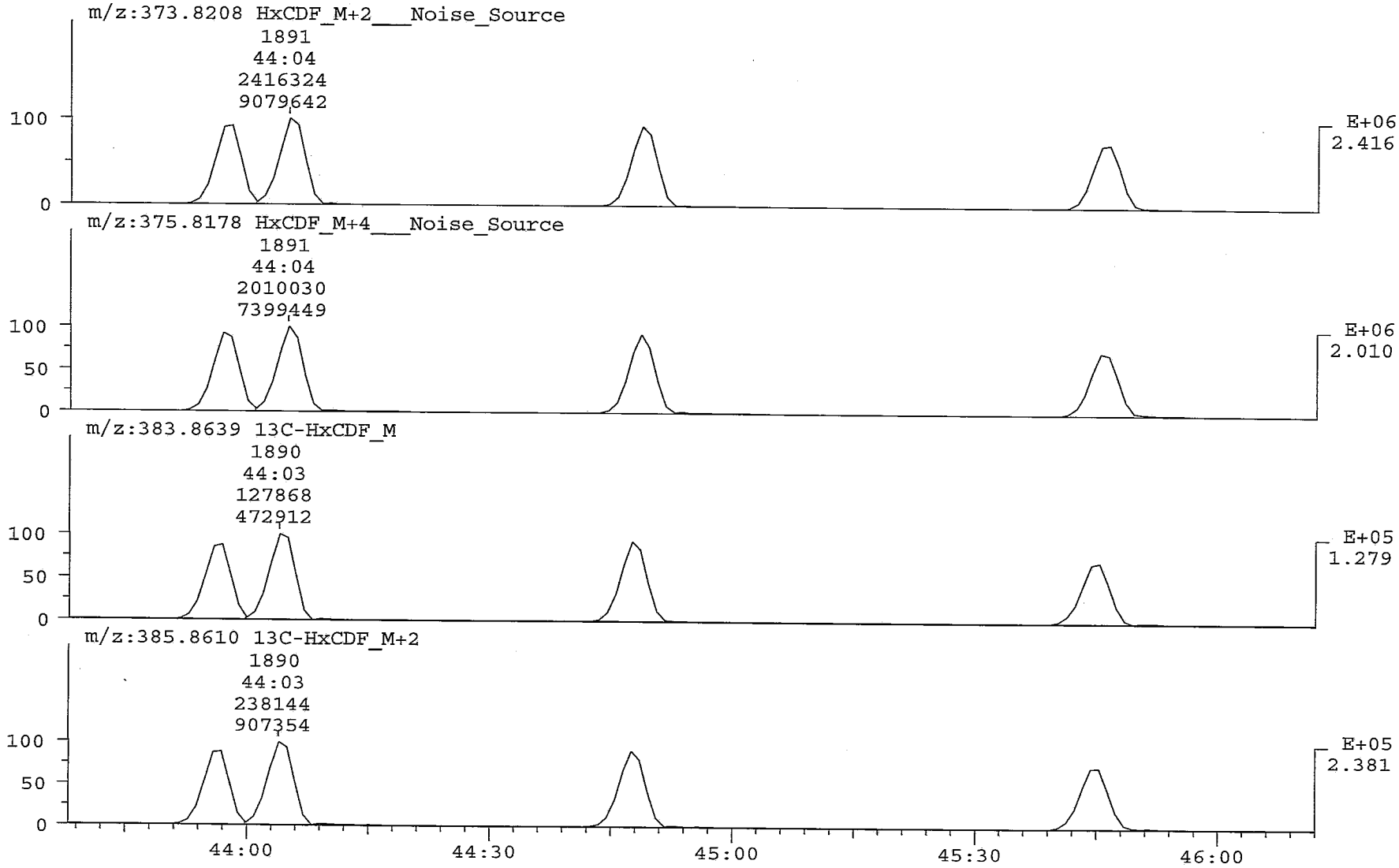
CHRO: d1110819i5 19-Aug-11 Elapse: 45:16 1962
Samp: WO=hr0035e Meth=F8 Dil=1 Start : 21:04:56 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1925 > 2000 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



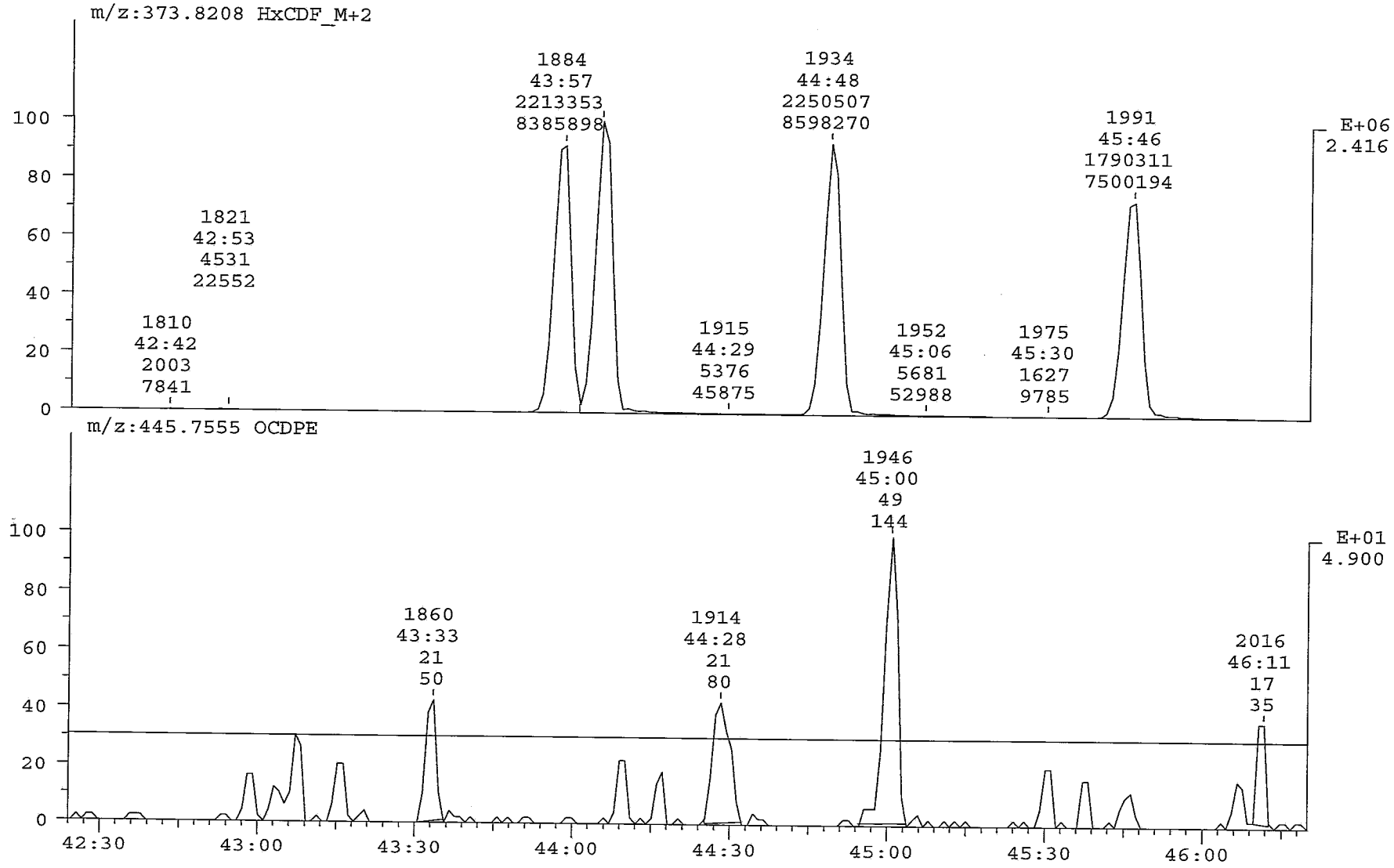
CHRO: d1110819i5 19-Aug-11 Elapse: 54:12 2481
Samp: WO=hr0035e Meth=F8 Dil=1 Start : 21:04:56 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1865 > 2016 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



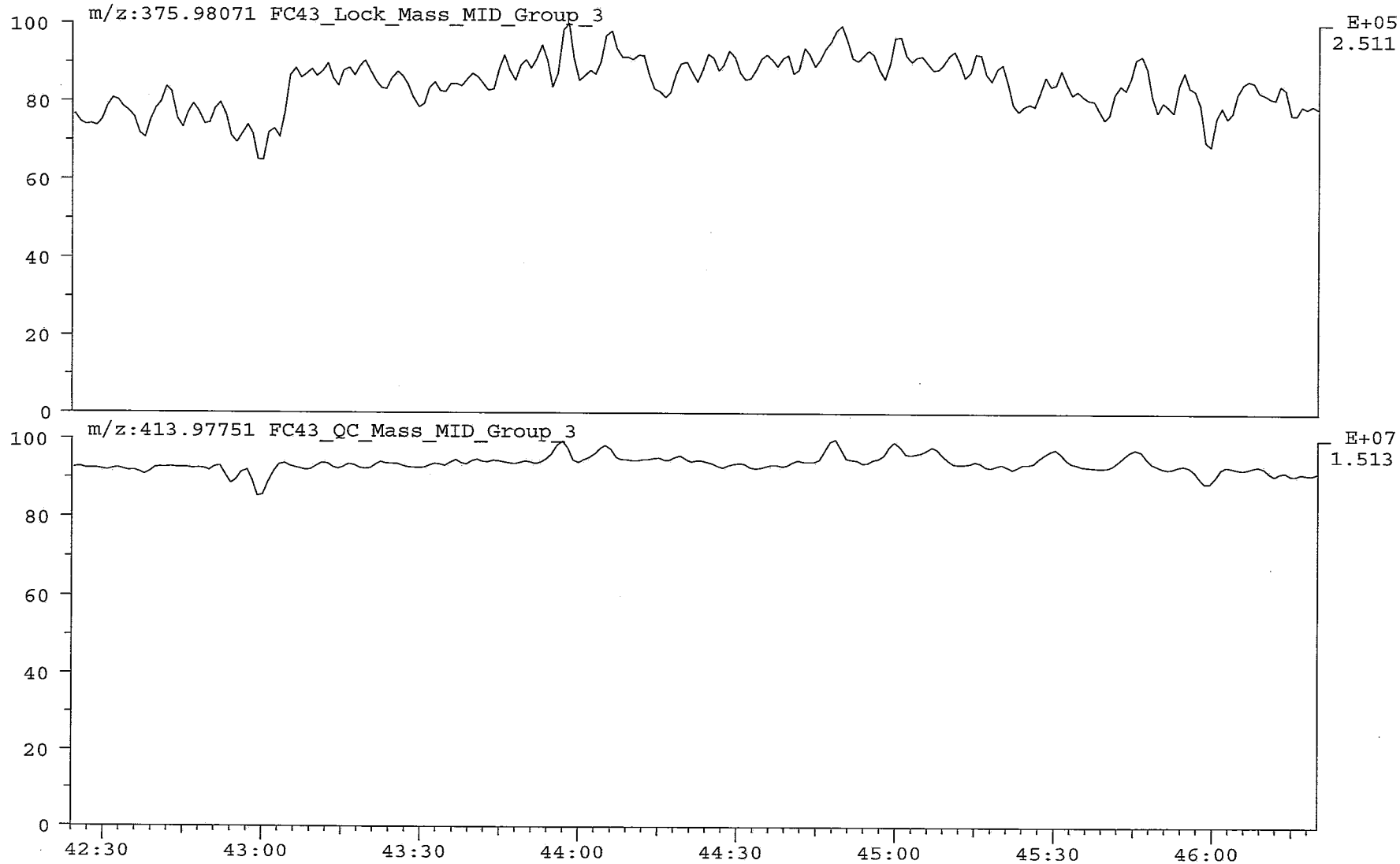
```
CHRO:  d1110819i5                                19-Aug-11   Elapse:  44:05      1892
Samp:  WO=hr0035e Meth=F8 Dil=1                              Start :  21:04:56   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                   Study :  1613/8290 ICAL
Oper:  MSD                                                   Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1888 > 1896             Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                  Label :  -2, 5.0
Disp:  Height  Area
```



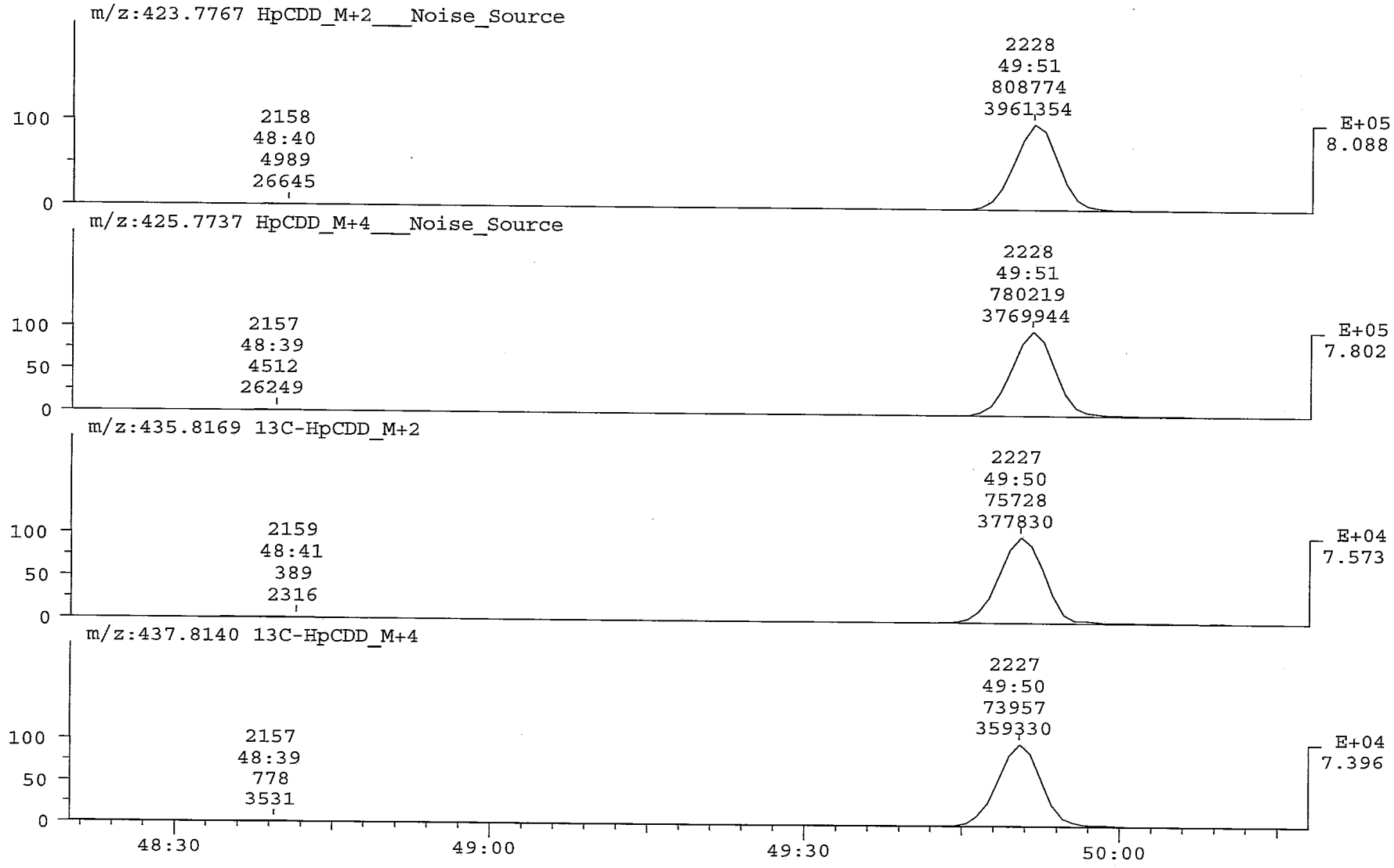
CHRO: d1110819i5 19-Aug-11 Elapse: 44:05 1892
Samp: WO=hr0035e Meth=F8 Dil=1 Start : 21:04:56 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1792 > 2024 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



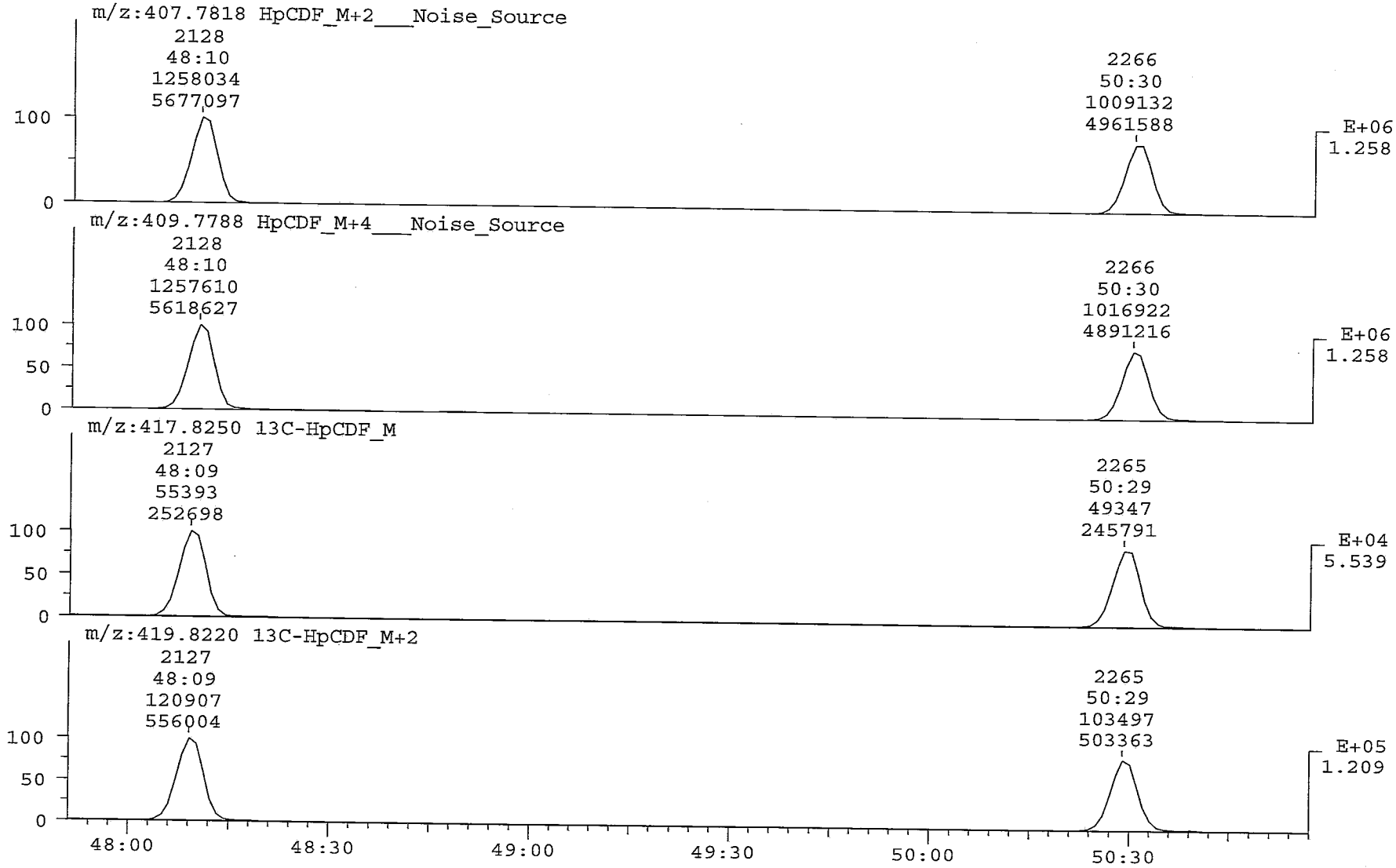
```
CHRO:  d1110819i5                                19-Aug-11  Elapse:  44:05      1892
Samp:  WO=hr0035e Meth=F8 Dil=1                             Start :  21:04:56   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1792 > 2024            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  0, 0.0
Disp:  Height  Area
```



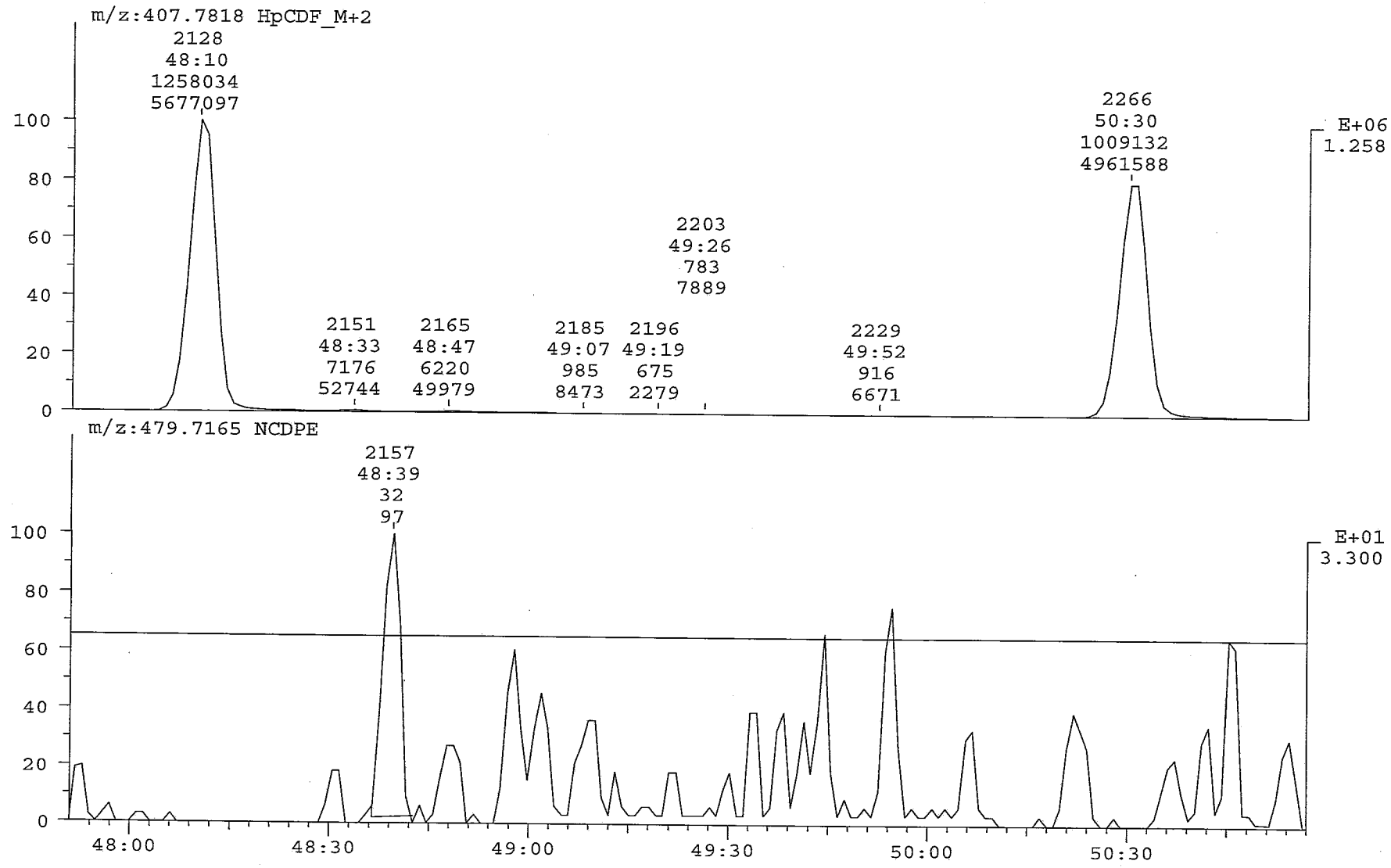
CHRO: d1110819i5 19-Aug-11 Elapse: 44:05 1892
Samp: WO=hr0035e Meth=F8 Dil=1 Start : 21:04:56 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 2138 > 2254 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



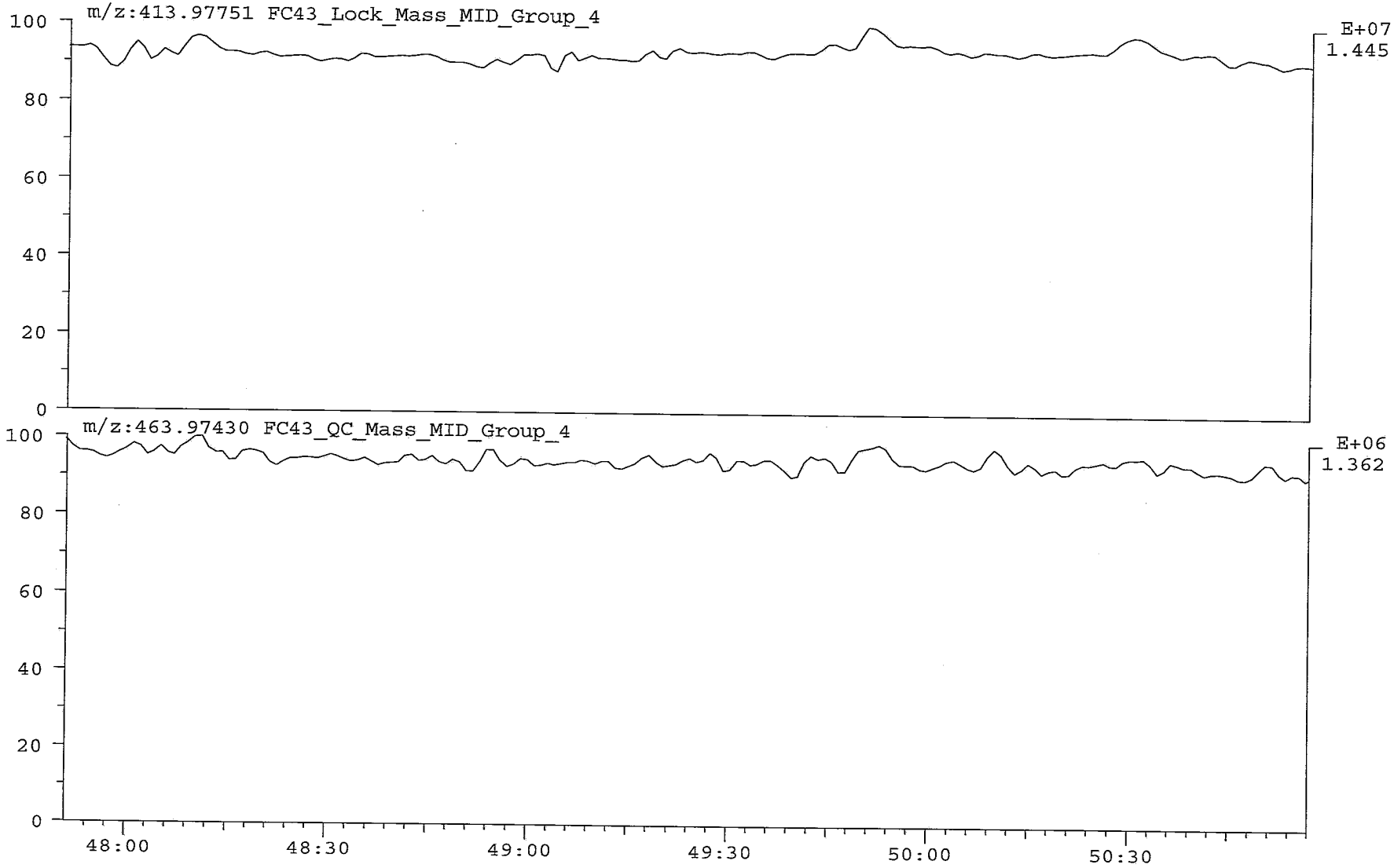
CHRO: d1110819i5 19-Aug-11 Elapse: 49:24 2201
Samp: WO=hr0035e Meth=F8 Dil=1 Start : 21:04:56 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 2109 > 2293 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



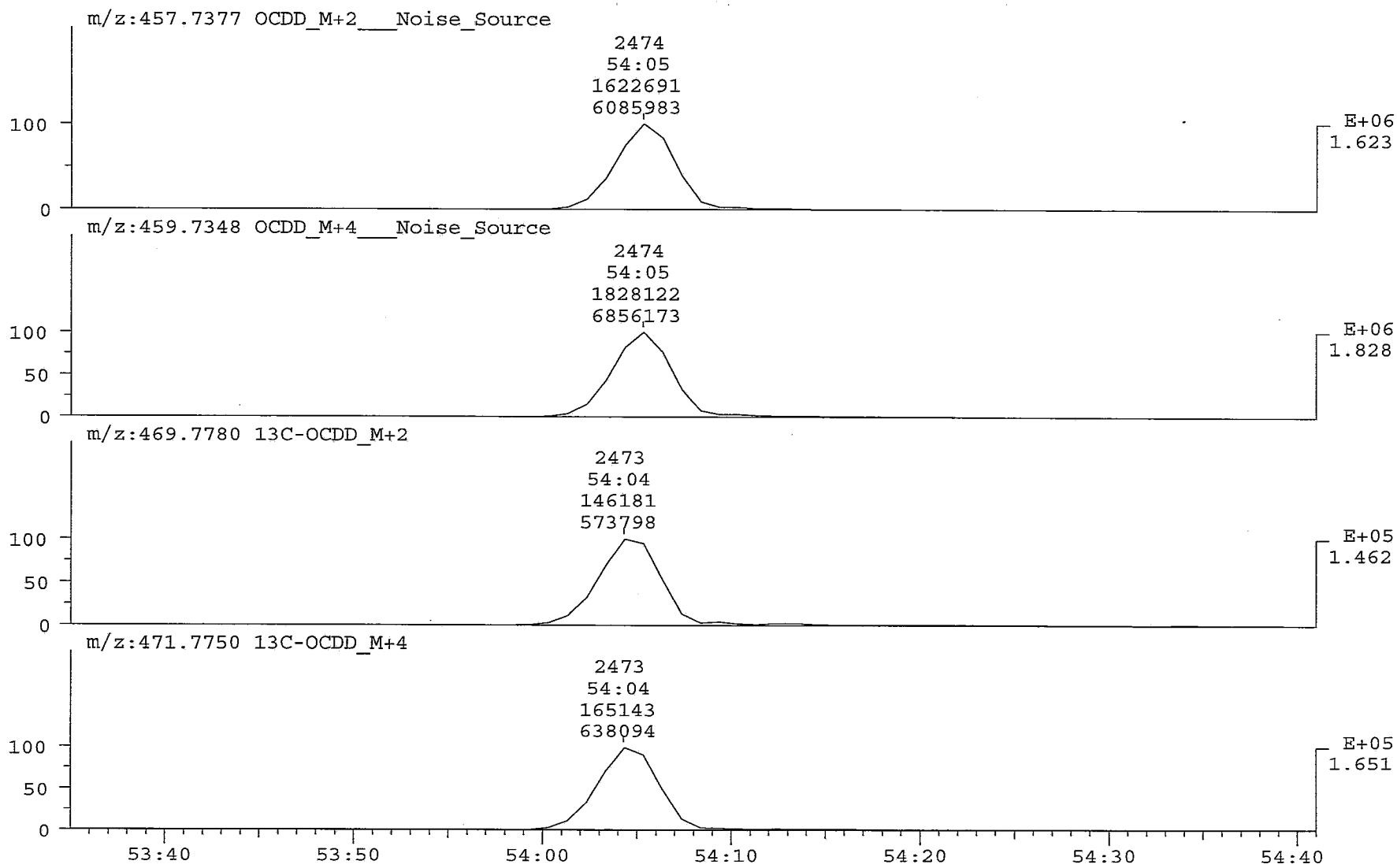
CHRO: d1110819i5 19-Aug-11 Elapse: 49:24 2201
Samp: WO=hr0035e Meth=F8 Dil=1 Start : 21:04:56 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 2109 > 2293 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



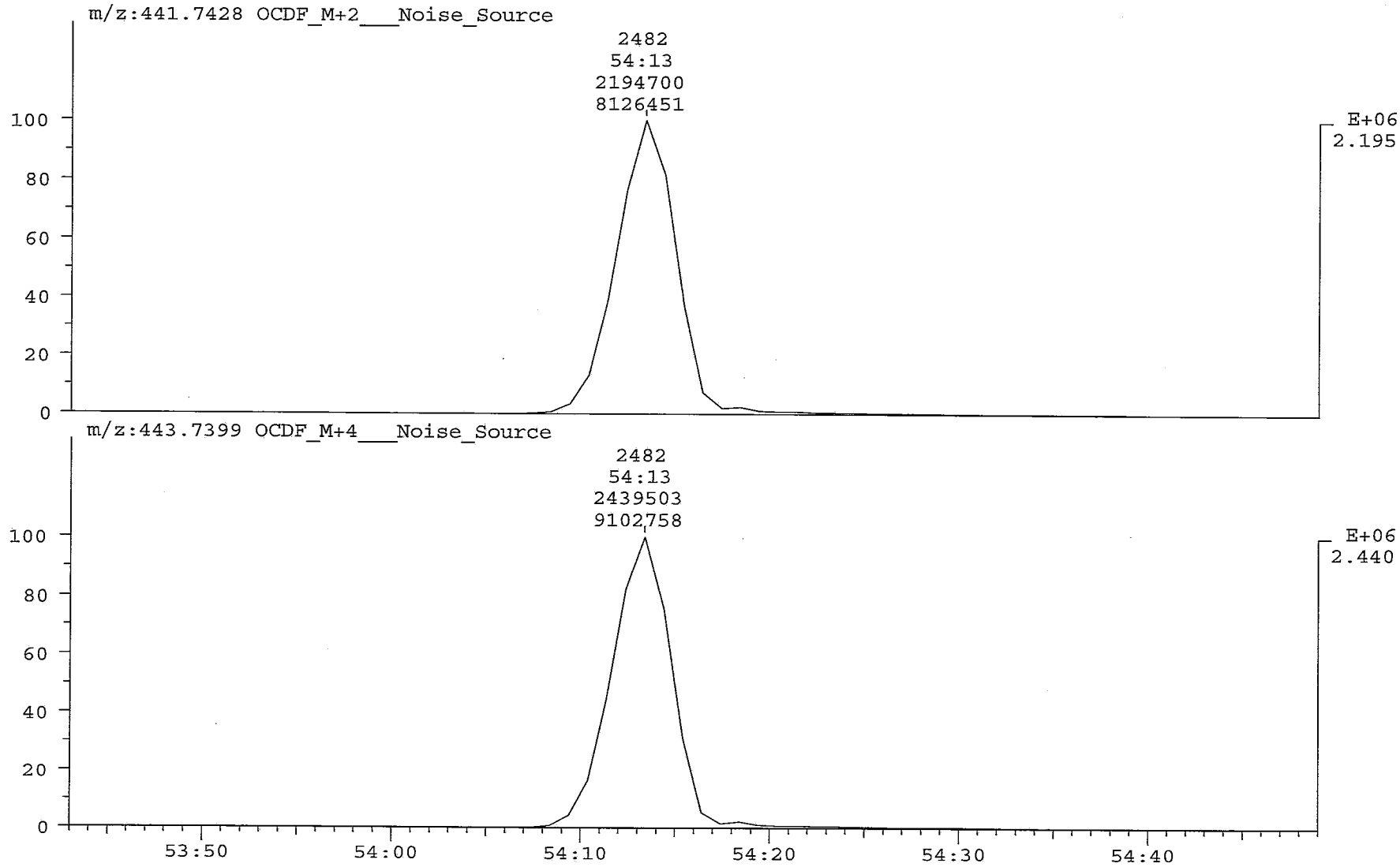
CHRO: d1110819i5 19-Aug-11 Elapse: 49:24 2201
Samp: WO=hr0035e Meth=F8 Dil=1 Start : 21:04:56 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 2109 > 2293 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 0, 0.0
Disp: Height Area



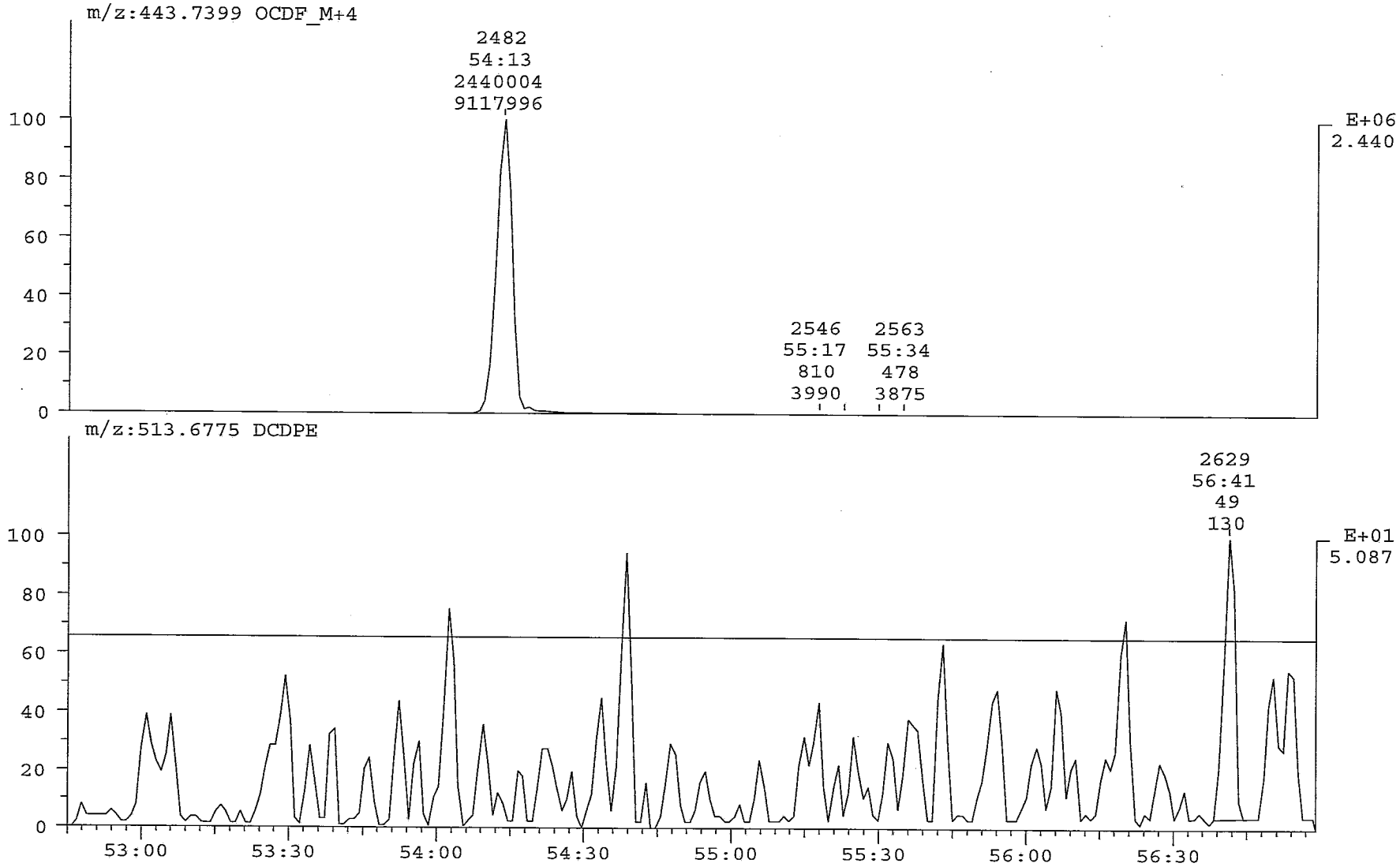
```
CHRO:  d1110819i5                          19-Aug-11   Elapse:  54:05      2474
Samp:  WO=hr0035e Meth=F8 Dil=1                        Start :  21:04:56   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                             Study :  1613/8290 ICAL
Oper:  MSD                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2444 > 2509       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  -2, 5.0
Disp:  Height  Area
```



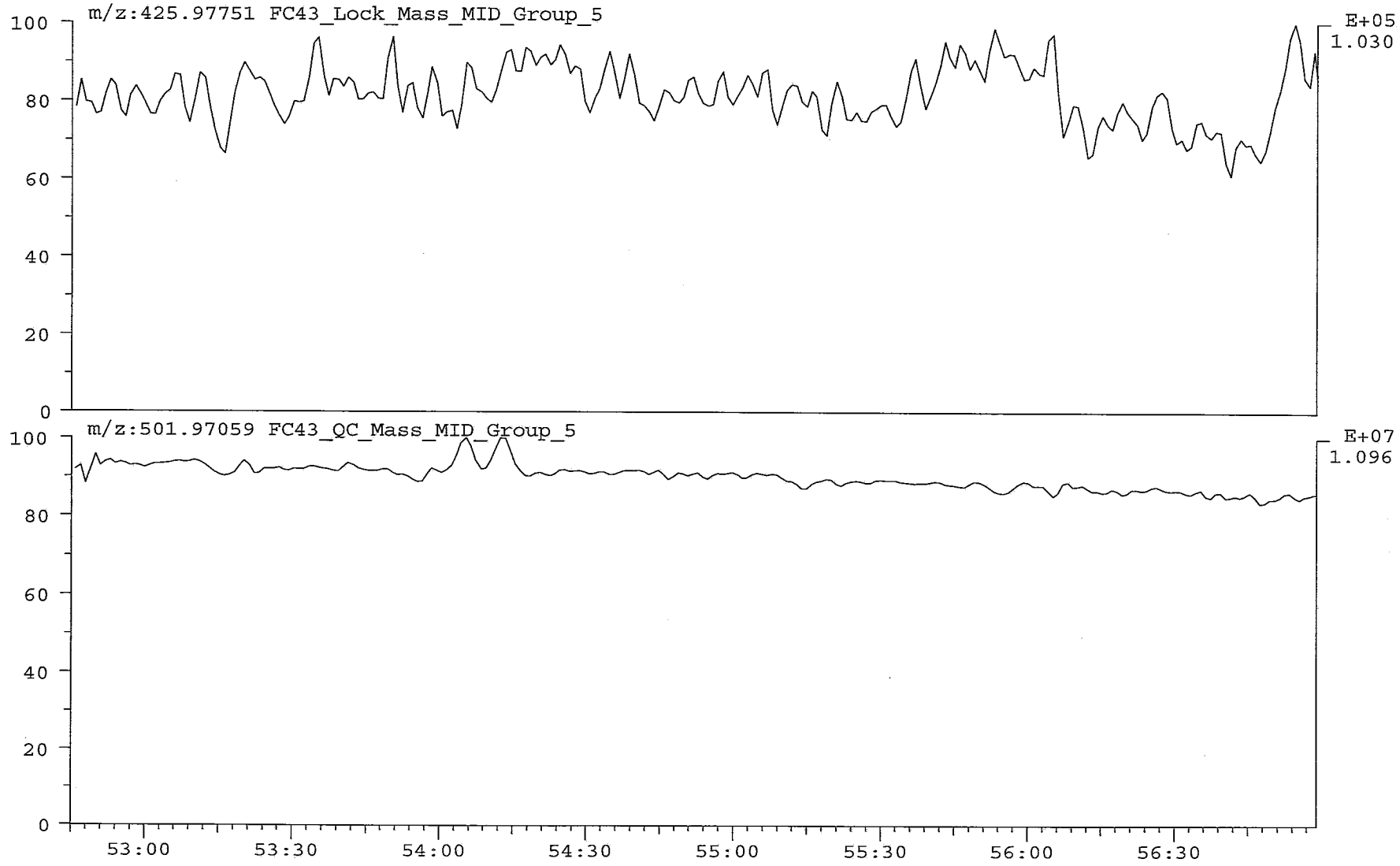
```
CHRO:  d1110819i5                          19-Aug-11   Elapse:  54:13      2482
Samp:  WO=hr0035e Meth=F8 Dil=1                        Start :  21:04:56   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                             Study :  1613/8290 ICAL
Oper:  MSD                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2452 > 2517       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  -2, 5.0
Disp:  Height  Area
```



CHRO: d1110819i5 19-Aug-11 Elapse: 54:13 2482
Samp: WO=hr0035e Meth=F8 Dil=1 Start : 21:04:56 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 2395 > 2647 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



```
CHRO:  d1110819i5                                19-Aug-11  Elapse:  54:13      2482
Samp:  WO=hr0035e Meth=F8 Dil=1                             Start :  21:04:56   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2395 > 2647            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  0, 0.0
Disp:  Height  Area
```



*** file opened Fri Aug 19 21:08:43 2011 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - KNXDXNDFS01

Analysis started at: 19-Aug-11 21:08:42

Analysis will stop at user request

Firmware Version: 1.03

MCAL file name: mcal1.cal

MID procedure: 5W_DB5_FC43_SINGLEGC

Mid Time Windows:

	Start	Measure	End	Cycletime
# 1	12:00 min	22:31 min	34:31 min	1.00 sec
# 2	34:31 min	7:37 min	42:09 min	1.00 sec
# 3	42:09 min	5:02 min	47:12 min	1.00 sec
# 4	47:12 min	5:27 min	52:39 min	1.00 sec
# 5	52:39 min	4:20 min	57:00 min	1.00 sec

Mid Masses:

Window # 1

mass	F	int	gr	time (ms)
303.9016		1	1	124
305.8987		1	1	124
313.9834	l	20	1	6
313.9834		20	1	6
315.9419		5	1	24
317.9389		5	1	24
319.8965		1	1	124
321.8936		1	1	124
327.8847		1	1	124
331.9368		5	1	24
333.9338		5	1	24
363.9802	c	20	1	6
363.9802		20	1	6
375.8364		1	1	124

Window # 2

mass	F	int	gr	time (ms)
313.9834	l	20	1	7
313.9834		20	1	7
339.8597		1	1	146
341.8567		1	1	146
351.9000		5	1	29
353.8970		5	1	29
355.8546		1	1	146
357.8516		1	1	146
367.8949		5	1	29
369.8919		5	1	29
375.9802	c	20	1	7
375.9802		20	1	7
409.7974		1	1	146

Window # 3

mass	F	int	gr	time (ms)
373.8208		1	1	146
375.8178		1	1	146
375.9802	l	20	1	7
375.9802		20	1	7
383.8639		5	1	29

```
  385.8610      5  1        29
  389.8158      1  1       146
  391.8127      1  1       146
  401.8559      5  1        29
  403.8529      5  1        29
  413.9770 c   20  1         7
  413.9770     20  1         7
  445.7555      1  1       146
 Window # 4
      mass F  int  gr  time (ms)
  407.7817      1  1       146
  409.7788      1  1       146
  413.9770 l   20  1         7
  413.9770     20  1         7
  417.8250      5  1        29
  419.8220      5  1        29
  423.7767      1  1       146
  425.7737      1  1       146
  435.8169      5  1        29
  437.8140      5  1        29
  463.9738 c   20  1         7
  463.9738     20  1         7
  479.7165      1  1       146
 Window # 5
      mass F  int  gr  time (ms)
  425.9770 l   20  1         7
  425.9770     20  1         7
  441.7428      1  1       159
  443.7399      1  1       159
  457.7377      1  1       159
  459.7348      1  1       159
  469.7780      5  1        31
  471.7750      5  1        31
  501.9706 c   20  1         7
  501.9706     20  1         7
  513.6775      1  1       159

MID Window terminated after 34.533333 minutes
MID Window end time was 34.530000 minutes
MID Window terminated after 42.166667 minutes
MID Window end time was 42.160000 minutes
MID Window terminated after 47.200000 minutes
MID Window end time was 47.200000 minutes
MID Window terminated after 52.666667 minutes
MID Window end time was 52.660000 minutes
MID Window terminated after 57.000000 minutes
MID Window end time was 57.000000 minutes

Tune file name: C:\Xcalibur\System\DFS\MSI\tune2.DFSTune

DFS - Parameter

 ACCU            333.0000   BCORRS            0.0169   BMASS          309.4834
 BQUAD            -5.5000   CAPIL             0.0000   CAPTSET          0.0000
 CCURR             0.0000   COUNTING          0.0000   DELAY            0.0000
 DRAW            -25.0000   DRAWC             0.0000   DRAWS            0.0000
 DYNVOLTAGE       15.0000   ECORR             1.0002   ECURR            0.8000
 EDAC        7969177.0000   EDACG             0.9998   EDACZ         1415.4000
 ELEN            -45.0000   EMULT          2044.0000   ENS            123.0000
 ENSBR            -5.5000   ERATIO            1.0000   ESA            679.0600
 ESIPAR            0.0000   EXS             168.0000   EXSBR           -1.0000
 FDMA       18000000.0000   FILTER          100.0000   FLENS            1.0000
 FM              375.8364   FMII             50.0000   FQUAD            4.4000
 FQUADGAIN         0.1000   FREQ           1201.2012   FSLOPE    36000000.0000
 FVANAL            0.0132   FVINLET           0.0546   FVSRC            0.0496
 FWIN              0.7000   HCURR             0.0000   HVANAL           0.0000
 HVSRC             0.0000   ICAL0             0.0011   ICAL1            0.4030
```

ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	742.0000
LENS_SYM	-6.2500	LM	375.8364	LMII	500.0000
LMASS	309.4834	LKM	425.9770	MASS	309.4834
MDAC	3603633.6110	MRANGE	1291.1210	NSAM	400.0000
NSCAN	2668.0000	NSMAX	8.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	0.0000	PSAM	10.0000
PUSHER	-4.0000	RECURR	0.7897	RELEN	0.0000
RES	11228.4760	RPUSHER	-4.1685	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	700.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	0.0000	SLOW	60.0000	SS	3.0000
SW	0.1036	TANAL	0.0000	TCURR	0.0000
TD	1.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	100.0000	TSAM	400.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	309.4834	XLENS_POT	826.0000
XLENS_SYM	-5.5000	YLENS_POT	406.0000	YLENS_SYM	3.0000

```
Source Gauge:         2.8e-005 mbar
Analyzer Penning:     1.0e-007 mbar
Pirani Analyse:       1.3e-002 mbar
Pirani Source:        5.0e-002 mbar
Pirani Inlet System: 5.5e-002 mbar

Scantype is electric

Sourcemode is EI POS

MID Time Window 1: Resolution is 11305.
MID Time Window 2: Resolution is 10771.
MID Time Window 3: Resolution is 11157.
MID Time Window 4: Resolution is 10322.
MID Time Window 5: Resolution is 11228.

Amplifier Offset: 88.


*** File closed Fri Aug 19 22:05:44 2011
  ***
```

QUAN: d1110819i5.q0 Entries: 92

Data file(s) used
File: d1110819i5 19-Aug-11
Samp: WO=hr0035e Meth=F8 Dil=1 Start : 21:04:56 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290
Oper: MSD Inlet : LC

Disp: CHRO
Amount = (area * ref amnt) / (ref area * response factor); amount = f(reponse)
Response factors from quantitation file

Quan Masses	Actual Time	Area	Height	Peak Beginn	Peak End	Noise Value	La Pe	Lab Fac	Integration Baseline
319.8805	31:07	940022.	97935.	30:51	31:22	31.	1	1.0	AVV
321.8775	31:07	1190446.	124642.	30:51	31:22	23.	1	1.0	AVV
319.8805	31:07	940022.	97935.	30:51	31:22	31.	2	5.0	AVV
321.8775	31:07	1190446.	124642.	30:51	31:22	23.	2	5.0	AVV
331.9202	30:34	391811.	40126.	30:19	30:49	69.	2	5.0	AVV
331.9202	31:05	439783.	47903.	30:49	31:20	69.	2	5.0	AVV
333.9171	30:33	486267.	54056.	30:18	30:45	89.	2	5.0	ABV
333.9171	31:04	560327.	58395.	30:50	31:19	89.	2	5.0	AVV
327.8683	31:07	2156712.	227623.	30:51	31:22	42.	1	1.0	AVV
327.8683	31:07	2156712.	227623.	30:51	31:22	42.	2	5.0	AVV
303.8864	29:05	1152562.	126271.	28:50	29:21	53.	1	1.0	ABV
305.8834	29:05	1510302.	165681.	28:50	29:21	69.	1	1.0	AVV
303.8864	29:05	1152562.	126271.	28:50	29:21	53.	2	5.0	ABV
305.8834	29:05	1510302.	165681.	28:50	29:21	69.	2	5.0	AVV
315.9261	29:03	611525.	66542.	28:49	29:19	32.	2	5.0	ABV
317.9230	29:03	788494.	87324.	28:48	29:19	37.	2	5.0	ABV
355.8368	40:43	5372314.	1249399.	40:34	40:58	52.	1	1.0	ABV
357.8337	40:42	3471305.	820531.	40:34	40:57	44.	1	1.0	ABV
355.8368	40:43	5372314.	1249399.	40:34	40:58	52.	2	5.0	ABV
357.8337	40:42	3471305.	820531.	40:34	40:57	44.	2	5.0	ABV
367.8765	40:41	550850.	124987.	40:34	40:55	17.	2	5.0	ABV
369.8734	40:41	353538.	81246.	40:34	40:53	20.	2	5.0	ABV
339.8427	38:55	8736762.	1802850.	38:43	39:07	146.	1	1.0	ABV
341.8396	38:55	5735220.	1187417.	38:40	39:07	117.	1	1.0	AVV
339.8427	38:55	8736762.	1802850.	38:43	39:07	146.	2	5.0	ABV
339.8427	40:09	8265469.	1851340.	40:01	40:18	146.	2	5.0	ABV
341.8396	38:55	5735220.	1187417.	38:40	39:07	117.	2	5.0	AVV
341.8396	40:09	5452479.	1250691.	40:01	40:18	117.	2	5.0	ABV
351.8824	38:54	804938.	165027.	38:41	39:06	49.	2	5.0	ABV
351.8824	40:08	849730.	194387.	40:00	40:23	49.	2	5.0	ABV
353.8793	38:54	518165.	106006.	38:45	39:07	55.	2	5.0	ABV
353.8793	40:08	526516.	120019.	39:59	40:23	55.	2	5.0	ABV
389.7961	45:30	5483295.	1392301.	45:22	45:45	160.	1	1.0	AVV
391.7931	45:30	4446693.	1125488.	45:23	45:45	107.	1	1.0	AVV
389.7961	44:59	5383319.	1454462.	44:52	45:02	160.	2	5.0	ABV
389.7961	45:06	5339235.	1403600.	45:02	45:22	160.	2	5.0	AVV
389.7961	45:30	5483295.	1392301.	45:22	45:45	160.	2	5.0	AVV
391.7931	44:59	4353512.	1179204.	44:52	45:02	107.	2	5.0	ABV
391.7931	45:06	4281643.	1133847.	45:02	45:22	107.	2	5.0	AVV
391.7931	45:30	4446693.	1125488.	45:23	45:45	107.	2	5.0	AVV
401.8358	44:58	508980.	139478.	44:49	45:01	60.	2	5.0	ABV
401.8358	45:05	496984.	131407.	45:01	45:15	60.	2	5.0	AVV
401.8358	45:29	555458.	140408.	45:22	45:41	60.	2	5.0	ABV
403.8327	44:58	386327.	105089.	44:52	45:01	65.	2	5.0	ABV
403.8327	45:05	389921.	100953.	45:01	45:18	65.	2	5.0	AVB
403.8327	45:29	429687.	109532.	45:18	45:38	65.	2	5.0	ABV
373.8021	44:04	9079641.	2416324.	44:00	44:20	228.	1	1.0	AVV
375.7990	44:04	7399449.	2010030.	44:00	44:20	164.	1	1.0	AVV
373.8021	43:57	8385552.	2213330.	43:49	44:00	228.	2	5.0	ABV
373.8021	44:04	9079641.	2416324.	44:00	44:20	228.	2	5.0	AVV

373.8021	44:48	8597452.	2250474.	44:39	45:03	228.	2	5.0 AVV
373.8021	45:46	7488809.	1789944.	45:37	46:01	228.	2	5.0 ABV
375.7990	43:56	6895522.	1851715.	43:49	44:00	164.	2	5.0 ABV
375.7990	44:04	7399449.	2010030.	44:00	44:20	164.	2	5.0 AVB
375.7990	44:48	7016579.	1861005.	44:37	45:03	164.	2	5.0 AVV
375.7990	45:45	6117330.	1473591.	45:38	46:00	164.	2	5.0 ABV
383.8447	44:03	472912.	127868.	43:59	44:08	76.	2	5.0 AVB
383.8447	44:47	457111.	118980.	44:32	44:56	76.	2	5.0 AVB
385.8417	43:56	788946.	210669.	43:48	43:59	74.	2	5.0 ABV
385.8417	44:03	907354.	238144.	43:59	44:19	74.	2	5.0 AVV
385.8417	44:47	841033.	218095.	44:35	45:00	74.	2	5.0 AVV
385.8417	45:45	743725.	175199.	45:34	45:56	74.	2	5.0 ABV
423.7555	49:51	3961354.	808773.	49:42	50:06	50.	1	1.0 ABV
425.7524	49:51	3769944.	780219.	49:42	50:06	66.	1	1.0 ABV
423.7555	48:40	26645.	4989.	48:33	48:49	50.	2	5.0 ABV
423.7555	49:51	3961354.	808773.	49:42	50:06	50.	2	5.0 ABV
425.7524	48:39	26249.	4512.	48:33	48:54	66.	2	5.0 ABV
425.7524	49:51	3769944.	780219.	49:42	50:06	66.	2	5.0 ABV
435.7951	48:41	2316.	389.	48:32	48:44	15.	2	5.0 ABB
435.7951	49:50	377830.	75728.	49:40	50:02	15.	2	5.0 ABV
437.7921	48:39	3531.	778.	48:33	48:44	19.	2	5.0 ABB
437.7921	49:50	359330.	73957.	49:41	50:05	19.	2	5.0 ABV
407.7614	48:10	5677097.	1258034.	48:02	48:25	103.	1	1.0 ABV
409.7583	48:10	5618627.	1257610.	48:02	48:25	104.	1	1.0 ABV
407.7614	48:10	5677097.	1258034.	48:02	48:25	103.	2	5.0 ABV
407.7614	50:30	4961588.	1009132.	50:21	50:45	103.	2	5.0 ABV
409.7583	48:10	5618627.	1257610.	48:02	48:25	104.	2	5.0 ABV
409.7583	50:30	4891216.	1016922.	50:20	50:45	104.	2	5.0 ABV
417.8041	48:09	252698.	55393.	48:01	48:17	22.	2	5.0 ABV
417.8041	50:29	245791.	49347.	50:20	50:43	22.	2	5.0 AVV
419.8010	48:09	556004.	120907.	48:01	48:20	22.	2	5.0 ABV
419.8010	50:29	503363.	103497.	50:20	50:42	22.	2	5.0 ABV
457.7148	54:05	6085983.	1622691.	53:58	54:20	99.	1	1.0 ABV
459.7118	54:05	6856173.	1828122.	53:57	54:20	87.	1	1.0 ABV
457.7148	54:05	6085983.	1622691.	53:58	54:20	99.	2	5.0 ABV
459.7118	54:05	6856173.	1828122.	53:57	54:20	87.	2	5.0 ABV
469.7545	54:04	573797.	146181.	53:57	54:19	24.	2	5.0 ABV
471.7514	54:04	638094.	165143.	53:57	54:19	34.	2	5.0 ABV
441.7207	54:13	8126451.	2194700.	54:01	54:28	89.	1	1.0 ABV
443.7177	54:13	9102758.	2439503.	54:01	54:28	133.	1	1.0 ABV
441.7207	54:13	8126451.	2194700.	54:01	54:28	89.	2	5.0 ABV
443.7177	54:13	9102758.	2439503.	54:01	54:28	133.	2	5.0 ABV

TestAmerica Knoxville

IsoCalc Preliminary Sample Report

PCDD/PCDF by EPA Method 1613B

Workorder	4104:51	Prep Batch		Lot No	
Data File	/20110819i/d1110819ss.d	Prep Date		SDG No	
Analysis ID	134813	Prep Exp Date		Date Received	
Analysis Date	8/19/2011	Matrix	UNKNOWN	Date Sampled	
Analysis Time	22:53	Initial Wt/Vol		Lims Test Code	
Anal Exp Date		Extract Vol		Method	DX1613B
Instrument	D11A	Dil Factor	1.00	Code	F8
Analyst	MSD				

Analyte	RT	Area	Height	RF	Std Amt	Amount	Rec	Conc (ng/mL)		DL (ng/mL)
2,3,7,8-TCDD	31:04	113898	12124	1.090	10.00	9.560298	95.60	9.560298	J	0.0819
Total TCDD				1.090		9.560298		9.560298	J	0.0819
2,3,7,8-TCDF	29:03	180217	19817	0.983	10.00	10.553941	105.54	10.553941		0.0678
Total TCDF				0.983		10.553941		10.553941		0.0678
1,2,3,7,8-PeCDD	40:42	448169	105670	1.010	50.00	52.988455	105.98	52.988455		0.0468
Total PeCDD				1.010		52.988455		52.988455		0.0468
1,2,3,7,8-PeCDF	38:54	713160	140682	1.064	50.00	47.236626	94.47	47.236626	J	0.0749
2,3,4,7,8-PeCDF	40:09	744159	166663	1.010	50.00	53.217970	106.44	53.217970		0.0706
Total PeCDF				1.037		100.454596		100.454596		0.0726
1,2,3,4,7,8-HxCDD	44:59	482520	127779	1.049	50.00	50.899062	101.80	50.899062		0.0758
1,2,3,6,7,8-HxCDD	45:06	494064	123652	1.051	50.00	46.628964	93.26	46.628964	J	0.0720
1,2,3,7,8,9-HxCDD	45:30	484962	115430	1.183	50.00	42.884134	85.77	42.884134	J	0.0656
Total HxCDD				1.094		140.412161		140.412161		0.0709
1,2,3,4,7,8-HxCDF	43:56	794987	218838	1.271	50.00	47.284483	94.57	47.284483	J	0.0561
1,2,3,6,7,8-HxCDF	44:04	782621	205984	1.192	50.00	47.256312	94.51	47.256312	J	0.0589
2,3,4,6,7,8-HxCDF	44:48	783274	203807	1.184	50.00	49.480955	98.96	49.480955	J	0.0632
1,2,3,7,8,9-HxCDF	45:45	652576	151181	1.205	50.00	46.627249	93.25	46.627249	J	0.0787
Total HxCDF				1.213		190.648999		190.648999	J	0.0632
1,2,3,4,6,7,8-HpCDD	49:51	387210	74592	1.038	50.00	51.046797	102.09	51.046797		0.0732
Total HpCDD				1.038		51.046797		51.046797		0.0732
1,2,3,4,6,7,8-HpCDF	48:10	674510	142935	1.397	50.00	48.836555	97.67	48.836555	J	0.0496
1,2,3,4,7,8,9-HpCDF	50:31	586945	115293	1.246	50.00	54.709036	109.42	54.709036		0.0704
Total HpCDF				1.322		103.545591		103.545591		0.0586
OCDD	54:05	642675	157411	1.144	100.0	93.889333	93.89	93.889333	J	0.106
OCDF	54:13	815203	196287	1.479	100.0	92.118842	92.12	92.118842	J	0.0796
13C-2,3,7,8-TCDD	31:02	1092995	106454	1.032	100.0	107.139039	107.14	107.139039		0.458
13C-2,3,7,8-TCDF	29:01	1737111	195153	1.547	100.0	113.591680	113.59	113.591680		0.143
13C-1,2,3,7,8-PeCDD	40:41	837412	200933	0.875	100.0	96.814497	96.81	96.814497		0.125
13C-1,2,3,7,8-PeCDF	38:53	1418948	275943	1.287	100.0	111.531412	111.53	111.531412		0.201
13C-2,3,4,7,8-PeCDF	40:08	1384478	308633	1.339	100.0	104.595921	104.60	104.595921		0.193
13C-1,2,3,4,7,8-HxCDD	44:58	903712	238921	0.894	100.0	103.921007	103.92	103.921007		0.168
13C-1,2,3,6,7,8-HxCDD	45:05	1008149	251000	0.867	100.0	119.540878	119.54	119.540878		0.173
13C-1,2,3,4,7,8-HxCDF	43:55	1322805	361006	1.110	100.0	122.513420	122.51	122.513420		0.133
13C-1,2,3,6,7,8-HxCDF	44:03	1389362	366478	1.272	100.0	112.289493	112.29	112.289493		0.116
13C-2,3,4,6,7,8-HxCDF	44:47	1336977	344331	1.225	100.0	112.201500	112.20	112.201500		0.120
13C-1,2,3,7,8,9-HxCDF	45:44	1161460	271491	1.109	100.0	107.667227	107.67	107.667227		0.133
13C-1,2,3,4,6,7,8-HpCDD	49:50	730770	141433	0.637	100.0	117.937548	117.94	117.937548		0.128
13C-1,2,3,4,6,7,8-HpCDF	48:09	988660	209155	0.773	100.0	131.485628	131.49	131.485628		0.114
13C-1,2,3,4,7,8,9-HpCDF	50:29	861034	165369	0.650	100.0	136.181389	136.18	136.181389	✓	0.135
13C-OCDD	54:04	1196683	292946	0.537	200.0	229.095021	114.55	229.095021		0.208
37Cl4-2,3,7,8-TCDD	31:03	117825	12519	1.136	10.00	10.492244	104.92	10.492244		0.0536
13C-1,2,3,4-TCDD	30:31	988532	102570	1.000	100.0	100.000000	100.00	100.000000		0.473
13C-1,2,3,7,8,9-HxCDD	45:29	972723	232825	1.000	100.0	100.000000	100.00	100.000000		0.150

Ken 8/22/11

MSD 8-20-11

TestAmerica
Knoxville

IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 1613B

Workorder	4104:51	Prep Batch		Lot No	
Data File	/20110819i/d1110819ss.	Prep Date		SDG No	
Analysis ID	134813	Prep Exp Date		Date Received	
Analysis Date	08/19/11 22:53	Matrix	UNKNOWN	Date Sampled	
Anal Exp Date		Initial Wt/Vol		Lims Test Code	
Instrument	D11A	Extract Vol		Method	DX1613B
Analyst	MSD	Diluton Factor	1.00	Code	F8

View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
304					303.9016	305.8987	303.9016	305.8987	0.65-0.89		
	Noise	00:00	00:00	0	68	63	27	25	1.08 *	/	
	2,3,7,8-TCDF	29:03	00:00	0	78834	101383	9001	10816	0.78	ABV/ABV	
316					315.9419	317.9389	315.9419	317.9389	0.65-0.89		
	Noise	00:00	00:00	0	120	108	48	43	1.12 *	/	
	13C-2,3,7,8-TCDF	29:01	00:00	0	770354	966757	85249	109904	0.80	ABV/ABV	
320					319.8965	321.8936	319.8965	321.8936	0.65-0.89		
	Noise	00:00	00:00	0	45	50	18	20	0.90 *	/	
	2,3,7,8-TCDD	31:04	00:00	0	50388	63510	5273	6851	0.79	AVV/AVV	
328					327.8847		327.8847				
	Noise	00:00	00:00	0	63		25				
	37Cl4-2,3,7,8-TCDD	31:03	00:00	0	117825		12519			ABV	
332					331.9368	333.9338	331.9368	333.9338	0.65-0.89		
	Noise	00:00	00:00	0	245	240	98	96	1.02 *	/	
	13C-1,2,3,4-TCDD	30:31	00:00	0	437905	550627	45552	57018	0.80	ABV/AVV	
	13C-2,3,7,8-TCDD	31:02	00:00	0	485957	607038	45922	60532	0.80	AVV/AVV	
340					339.8597	341.8567	339.8597	341.8567	1.32-1.78		
	Noise	00:00	00:00	0	105	115	42	46	0.91 *	/	
	1,2,3,7,8-PeCDF	38:54	00:00	0	432432	280728	84604	56078	1.54	ABV/ABV	
	2,3,4,7,8-PeCDF	40:09	00:00	0	456039	288120	101560	65103	1.58	ABV/ABV	
352					351.9000	353.8970	351.9000	353.8970	1.32-1.78		
	Noise	00:00	00:00	0	138	128	55	51	1.08 *	/	
	13C-1,2,3,7,8-PeCDF	38:53	00:00	0	867610	551338	168966	106977	1.57	ABV/ABV	
	13C-2,3,4,7,8-PeCDF	40:08	00:00	0	843020	541458	187477	121156	1.56	ABV/ABV	
356					355.8546	357.8516	355.8546	357.8516	1.32-1.78		
	Noise	00:00	00:00	0	53	43	21	17	1.24 *	/	
	1,2,3,7,8-PeCDD	40:42	00:00	0	272944	175225	64174	41496	1.56	ABV/ABV	
368					367.8949	369.8919	367.8949	369.8919	1.32-1.78		
	Noise	00:00	00:00	0	70	43	28	17	1.65	/	
	13C-1,2,3,7,8-PeCDD	40:41	00:00	0	507116	330296	122654	78279	1.54	ABV/ABV	
374					373.8208	375.8178	373.8208	375.8178	1.05-1.43		
	Noise	00:00	00:00	0	120	138	48	55	0.87 *	/	
	1,2,3,4,7,8-HxCDF	43:56	00:00	0	437862	357125	120437	98401	1.23	ABV/ABV	
	1,2,3,6,7,8-HxCDF	44:04	00:00	0	434179	348442	114150	91834	1.25	AVV/AVV	
	2,3,4,6,7,8-HxCDF	44:48	00:00	0	432554	350720	113530	90277	1.23	AVV/AVV	
	1,2,3,7,8,9-HxCDF	45:45	00:00	0	361243	291333	83655	67526	1.24	ABV/ABV	
384					383.8639	385.8610	383.8639	385.8610	0.43-0.59		
	Noise	00:00	00:00	0	135	208	54	83	0.65 *	/	
	13C-1,2,3,4,7,8-HxCDF	43:55	00:00	0	452657	870148	124398	236608	0.52	ABV/ABV	
	13C-1,2,3,6,7,8-HxCDF	44:03	00:00	0	476175	913187	125416	241062	0.52	AVV/AVV	
	13C-2,3,4,6,7,8-HxCDF	44:47	00:00	0	471041	865936	121314	223017	0.54	AVV/AVV	
	13C-1,2,3,7,8,9-HxCDF	45:44	00:00	0	402280	759180	93652	177839	0.53	ABV/ABV	
390					389.8156	391.8127	389.8156	391.8127	1.05-1.43		

Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

TestAmerica
Knoxville

IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 1613B

Workorder	4104:51	Prep Batch		Lot No	
Data File	/20110819i/d1110819ss.	Prep Date		SDG No	
Analysis ID	134813	Prep Exp Date		Date Received	
Analysis Date	08/19/11 22:53	Matrix	UNKNOWN	Date Sampled	
Anal Exp Date		Initial Wt/Vol		Lims Test Code	
Instrument	D11A	Extract Vol		Method	DX1613B
Analyst	MSD	Diluton Factor	1.00	Code	F8

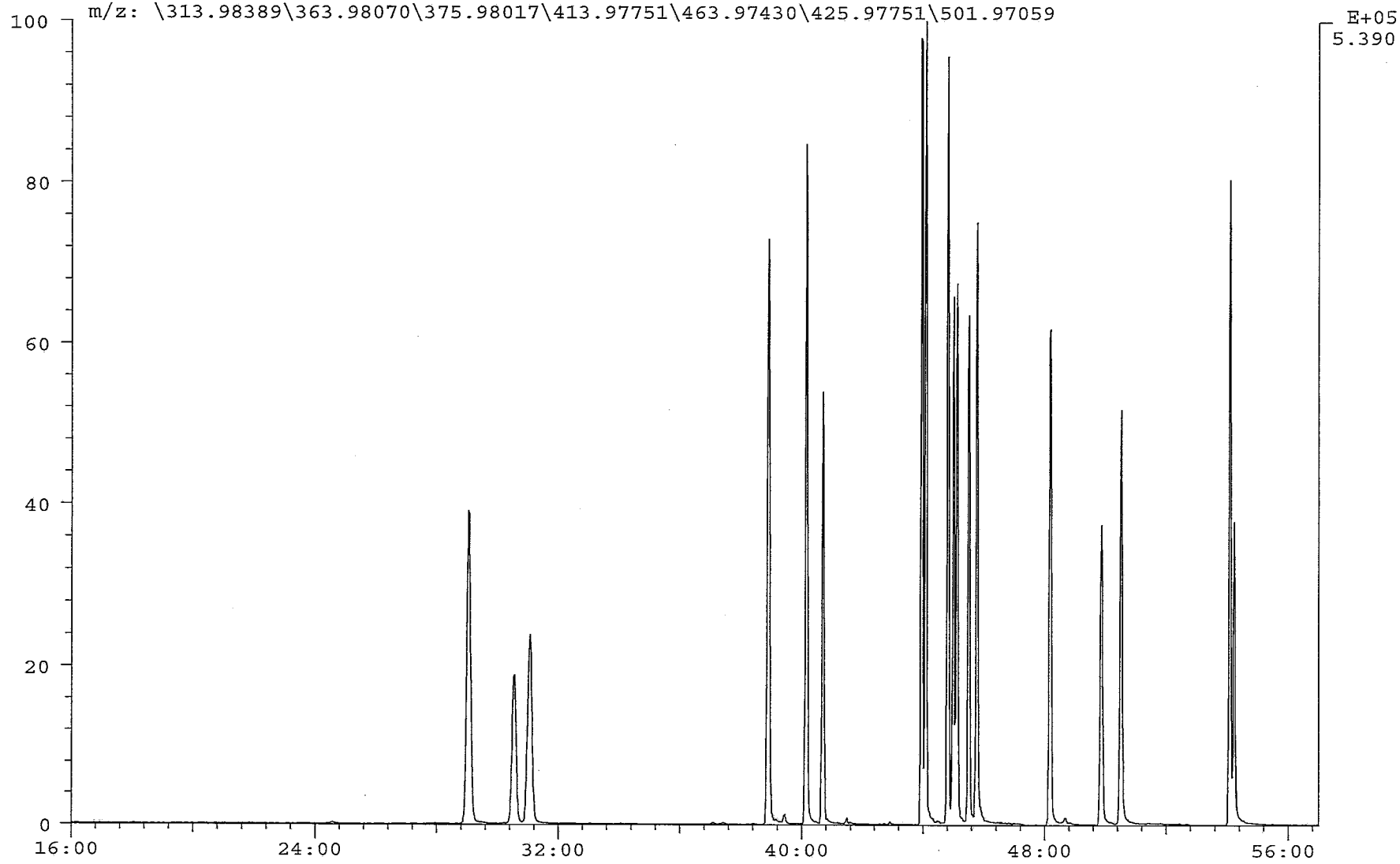
View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
390					389.8156	391.8127	389.8156	391.8127	1.05-1.43		
	Noise	00:00	00:00	0	108	83	43	33	1.30	/	
	1,2,3,4,7,8-HxCDD	44:59	00:00	0	268791	213729	72044	55735	1.26	ABV/ABV	
	1,2,3,6,7,8-HxCDD	45:06	00:00	0	277217	216847	69832	53820	1.28	AVV/AVV	
	1,2,3,7,8,9-HxCDD	45:30	00:00	0	270849	214113	65074	50356	1.26	AVV/AVV	
402					401.8559	403.8529	401.8559	403.8529	1.05-1.43		
	Noise	00:00	00:00	0	178	173	71	69	1.03 *	/	
	13C-1,2,3,4,7,8-HxCDD	44:58	00:00	0	509225	394487	133108	105813	1.29	ABV/ABV	
	13C-1,2,3,6,7,8-HxCDD	45:05	00:00	0	562891	445258	140695	110305	1.26	AVV/AVV	
	13C-1,2,3,7,8,9-HxCDD	45:29	00:00	0	538409	434314	128570	104255	1.24	AVV/AVV	
408					407.7818	409.7788	407.7818	409.7788	0.88-1.20		
	Noise	00:00	00:00	0	73	73	29	29	1.00	/	
	1,2,3,4,6,7,8-HpCDF	48:10	00:00	0	342588	331922	71840	71095	1.03	ABV/ABV	
	1,2,3,4,7,8,9-HpCDF	50:31	00:00	0	298429	288516	58801	56492	1.03	ABV/ABV	
418					417.8250	419.8220	417.8250	419.8220	0.37-0.51		
	Noise	00:00	00:00	0	88	118	35	47	0.74 *	/	
	13C-1,2,3,4,6,7,8-HpCDF	48:09	00:00	0	319027	669633	66981	142174	0.48	ABV/ABV	
	13C-1,2,3,4,7,8,9-HpCDF	50:29	00:00	0	263906	597128	50018	115351	0.44	ABV/ABV	
424					423.7767	425.7737	423.7767	425.7737	0.88-1.20		
	Noise	00:00	00:00	0	38	70	15	28	0.54 *	/	
	1,2,3,4,6,7,8-HpCDD	49:51	00:00	0	198174	189036	37715	36877	1.05	ABV/ABV	
436					435.8169	437.8140	435.8169	437.8140	0.88-1.20		
	Noise	00:00	00:00	0	90	100	36	40	0.90	/	
	13C-1,2,3,4,6,7,8-HpCDD	49:50	00:00	0	370626	360144	71323	70110	1.03	ABV/ABV	
442					441.7428	443.7399	441.7428	443.7399	0.76-1.02		
	Noise	00:00	00:00	0	103	70	41	28	1.46 *	/	
	OCDF	54:13	00:00	0	384822	430381	92491	103796	0.89	ABV/ABV	
458					457.7377	459.7348	457.7377	459.7348	0.76-1.02		
	Noise	00:00	00:00	0	55	123	22	49	0.45 *	/	
	OCDD	54:05	00:00	0	305855	336820	75537	81874	0.91	ABV/ABV	
470					469.7780	471.7750	469.7780	471.7750	0.76-1.02		
	Noise	00:00	00:00	0	123	138	49	55	0.89	/	
	13C-OCDD	54:04	00:00	0	563393	633290	139482	153464	0.89	ABV/ABV	

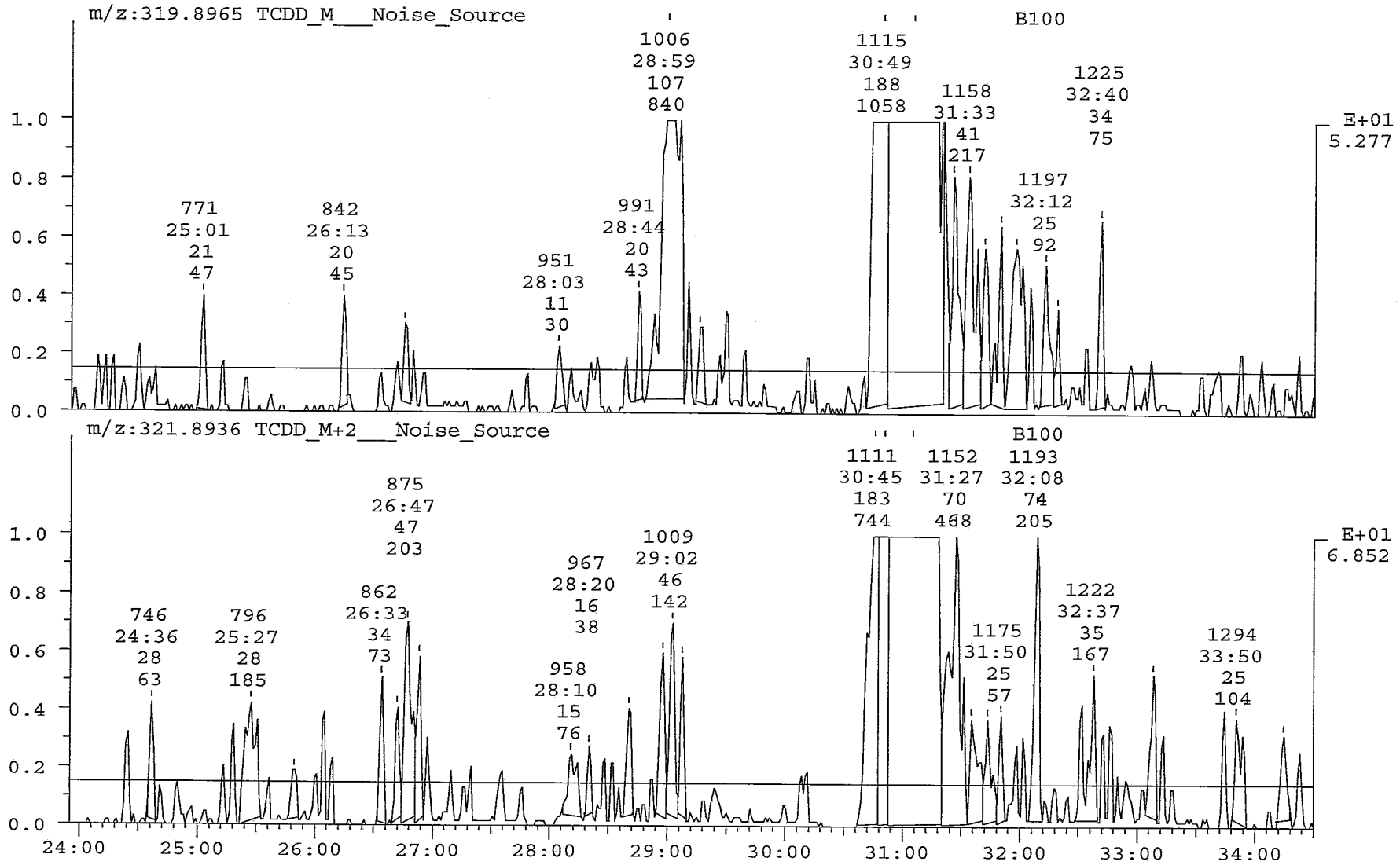
Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

CHRO: d1110819ss 19-Aug-11 Elapse: 54:14 2482
Samp: WO=4104:51 Meth=F8 Dil=1 Start : 22:53:16 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 235 > 2647 Masses: 303 > 514
Area: 5, 0.50, 0 Baseline : 100, 3 Label : 0, 0.0
Disp: Height Area

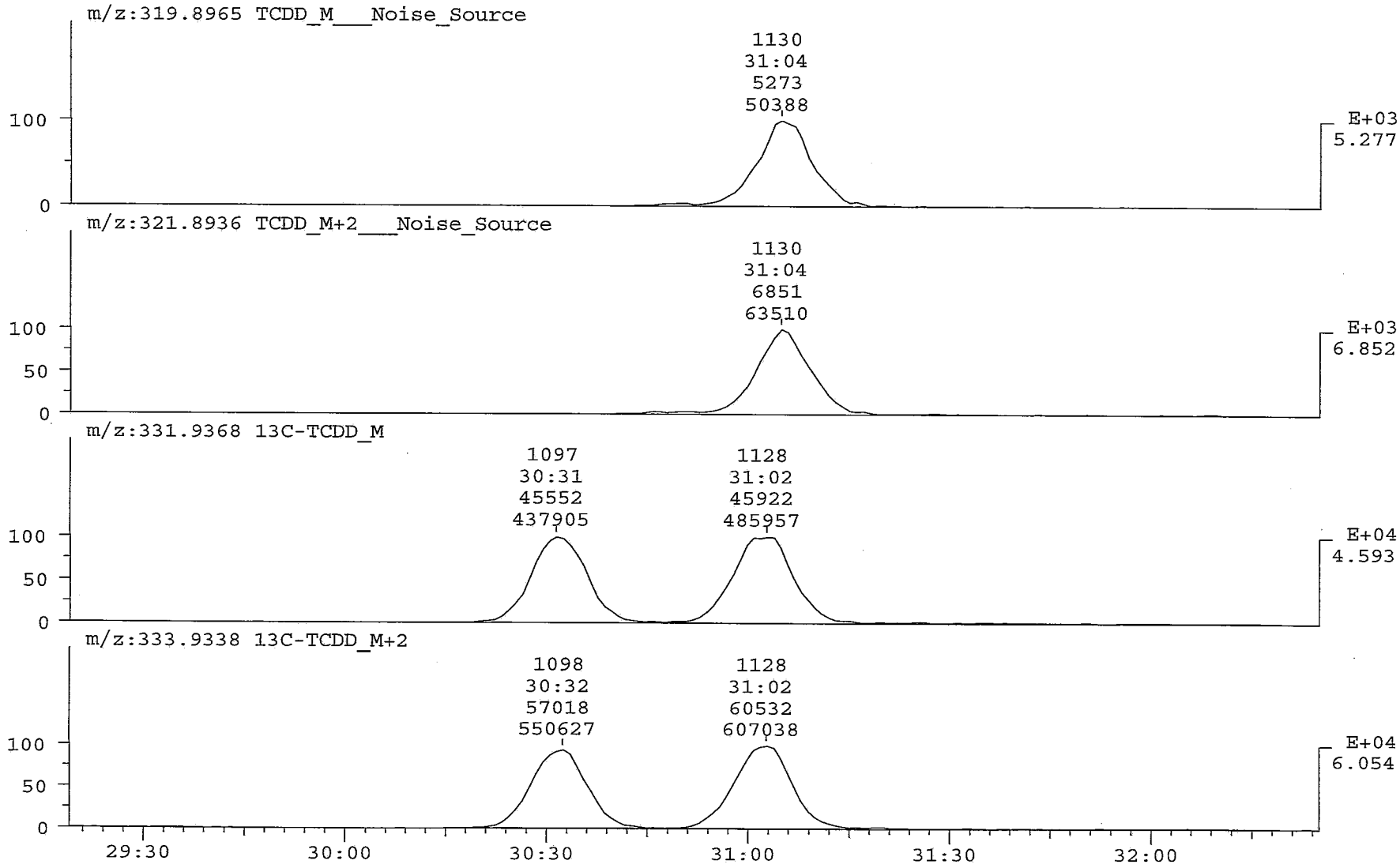
Int, Calc MSD 8-20-11
QC KM 8/22/11



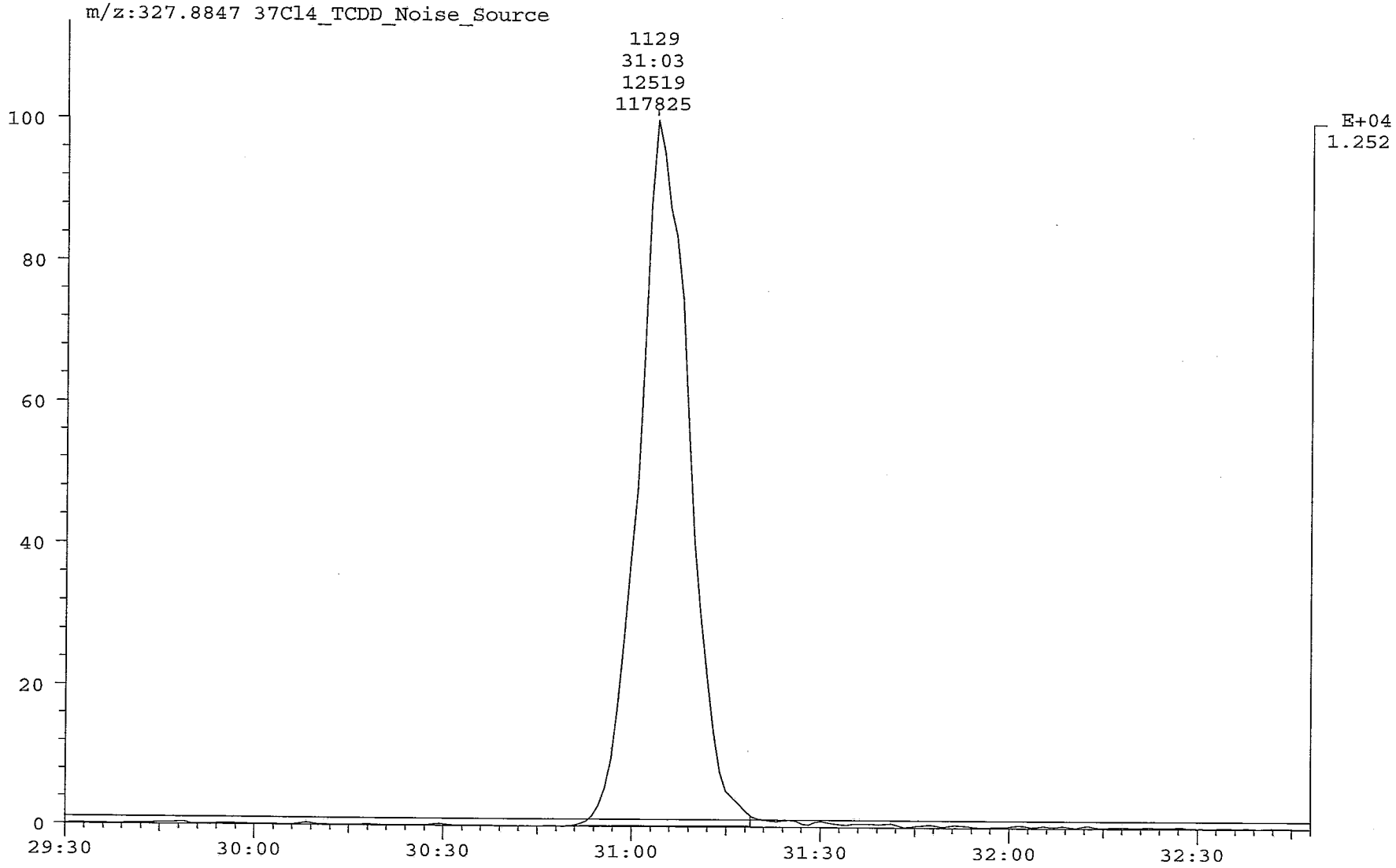
CHRO: d1110819ss 19-Aug-11 Elapse: 54:14 2482
Samp: WO=4104:51 Meth=F8 Dil=1 Start : 22:53:16 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 705 > 1333 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -3, 1.0
Disp: Height Area



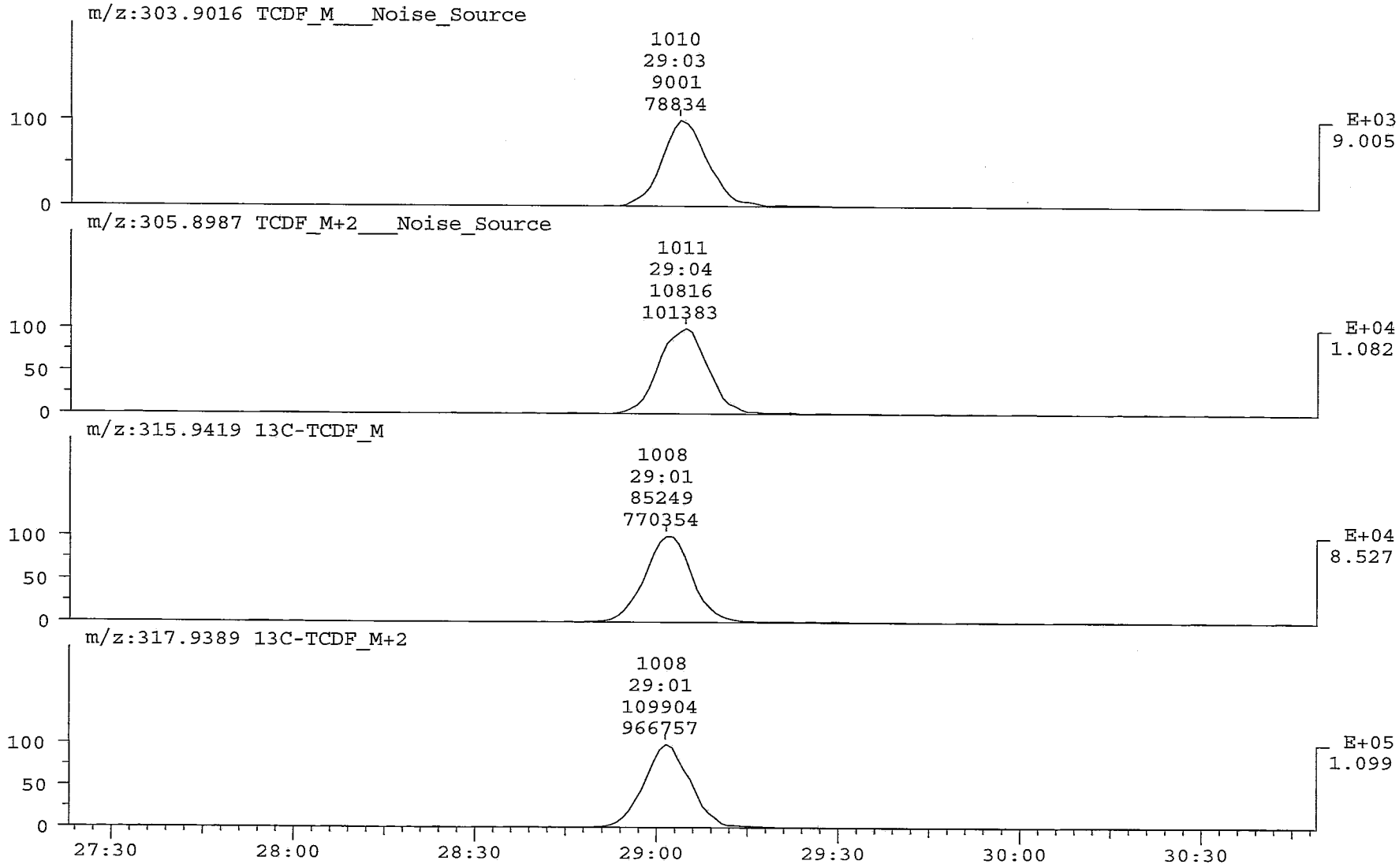
CHRO: d1110819ss 19-Aug-11 Elapse: 30:51 1117
Samp: WO=4104:51 Meth=F8 Dil=1 Start : 22:53:16 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1025 > 1209 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



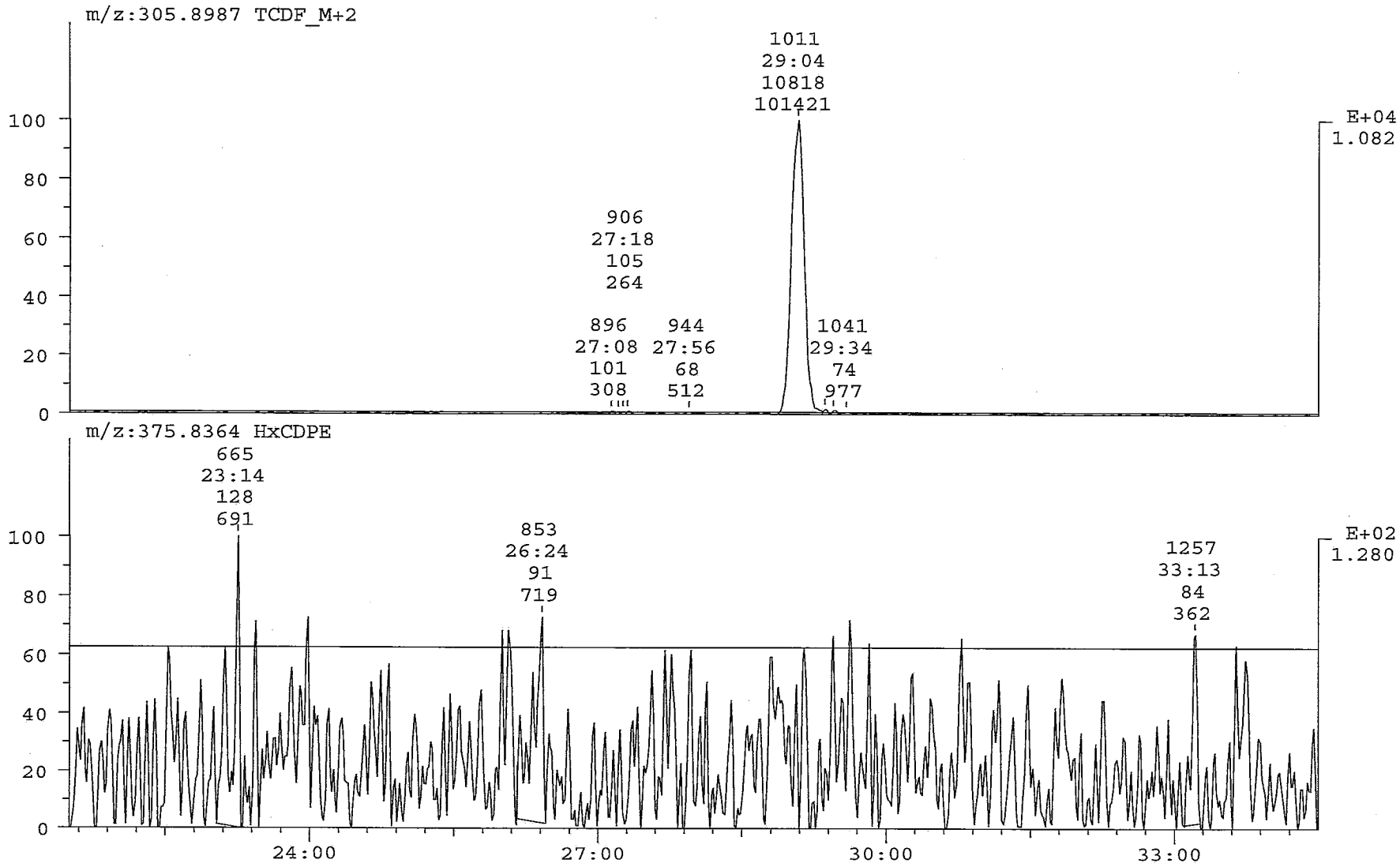
CHRO: d1110819ss 19-Aug-11 Elapse: 31:05 1131
Samp: WO=4104:51 Meth=F8 Dil=1 Start : 22:53:16 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1036 > 1232 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



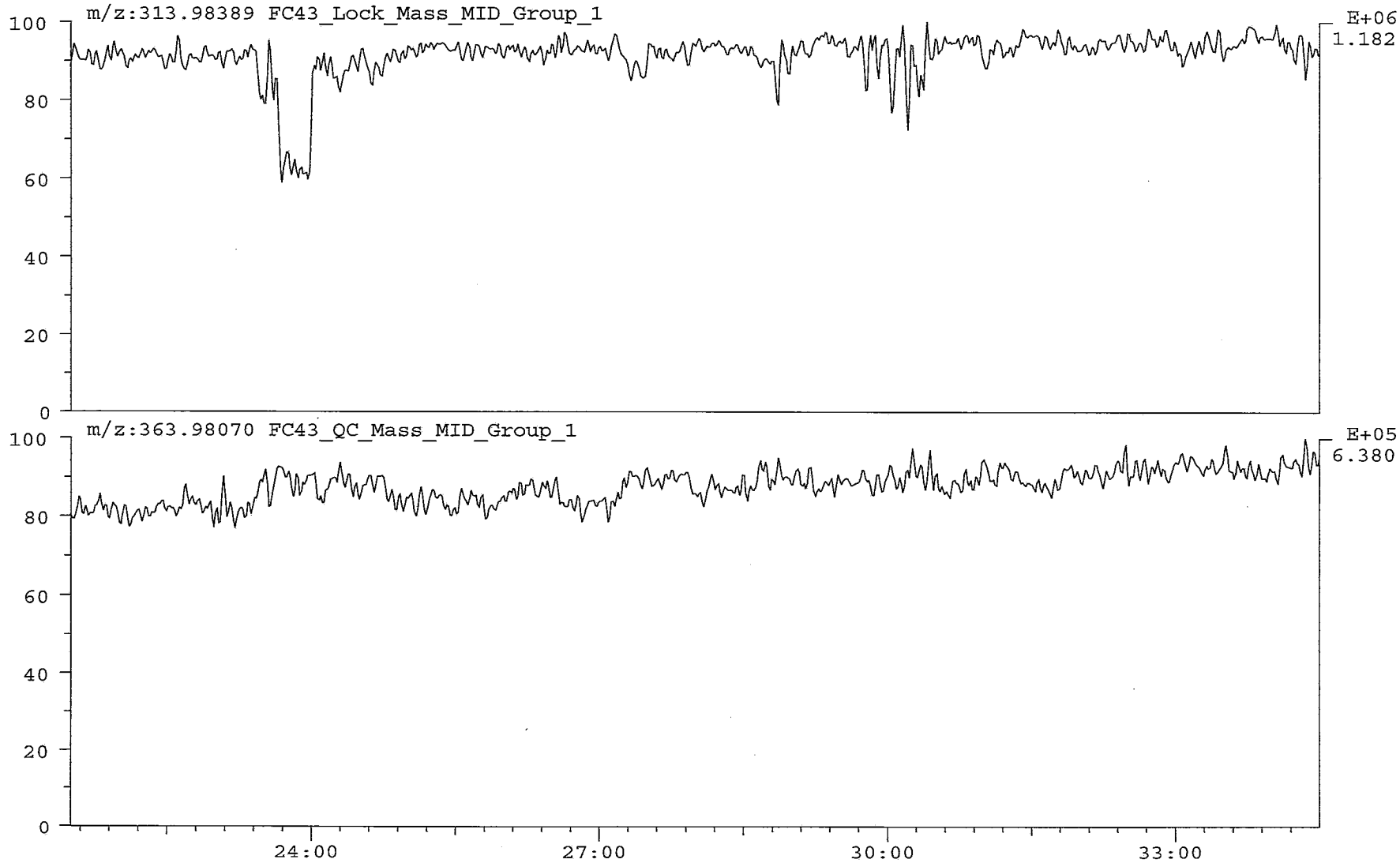
CHRO: d1110819ss 19-Aug-11 Elapse: 29:03 1010
Samp: WO=4104:51 Meth=F8 Dil=1 Start : 22:53:16 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 911 > 1114 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



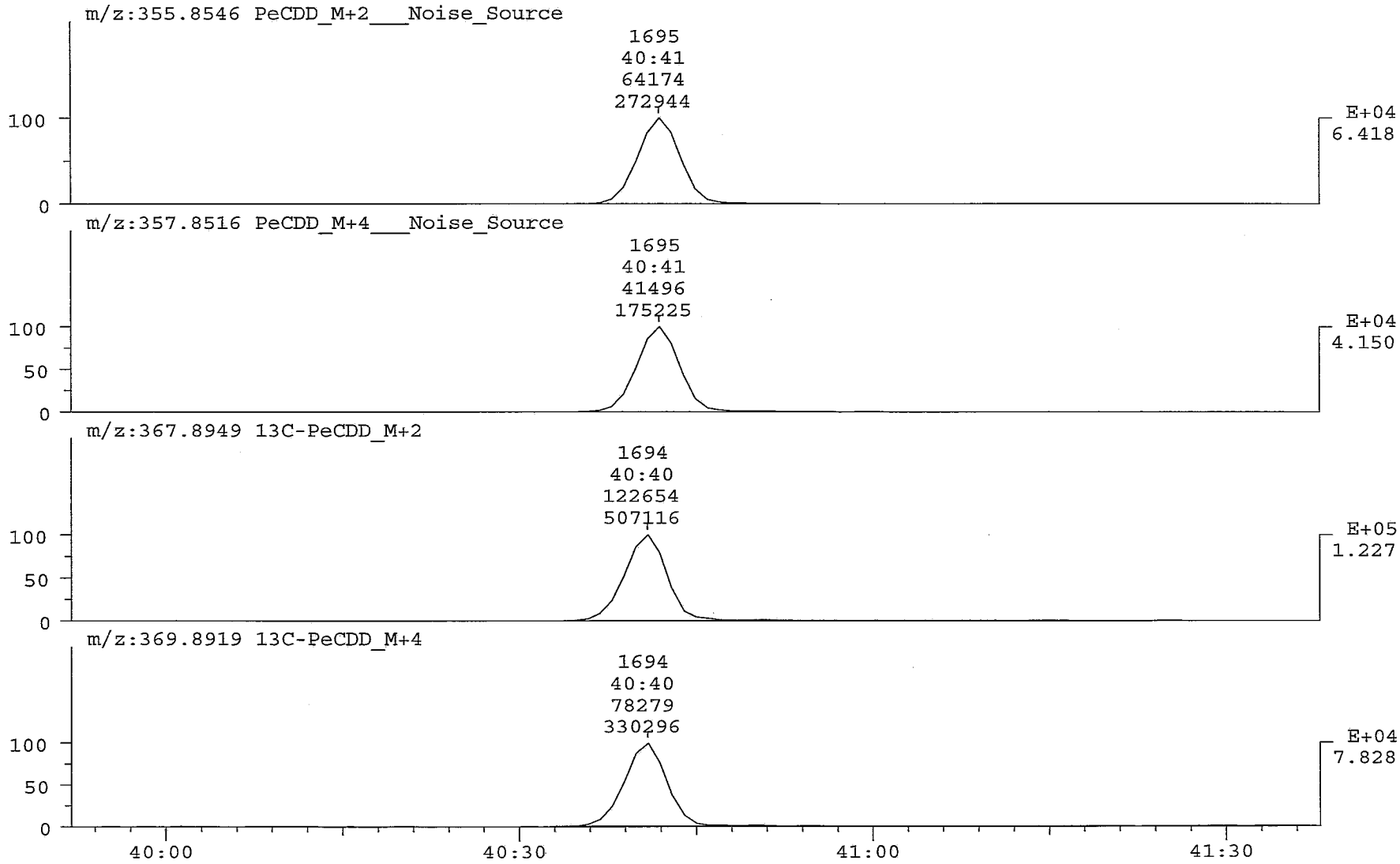
```
CHRO:  d1110819ss                          19-Aug-11  Elapse:  29:03      1010
Samp:  WO=4104:51 Meth=F8 Dil=1                       Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                            Study :  1613/8290 ICAL
Oper:  MSD                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   561 > 1333       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



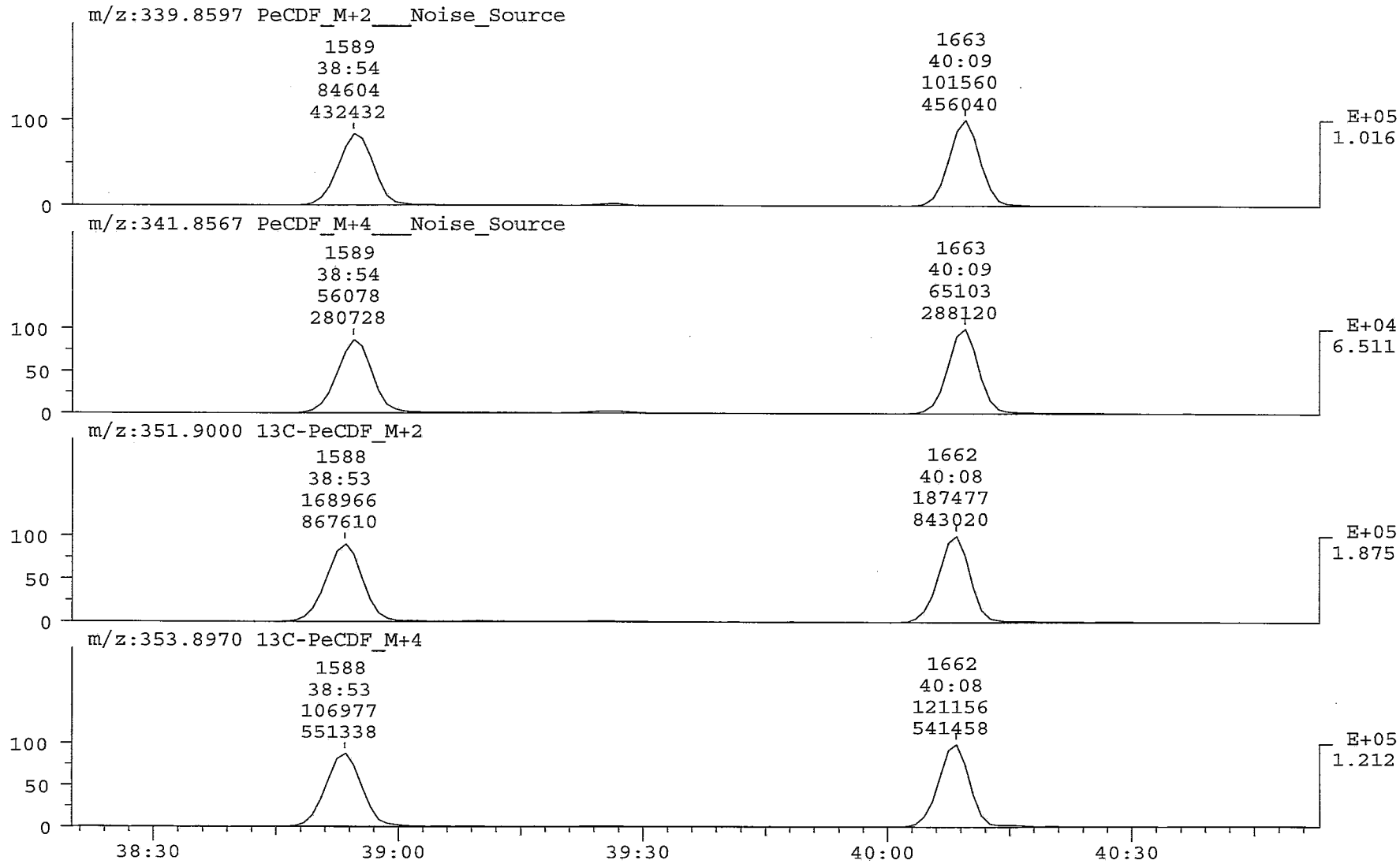
```
CHRO:  d1110819ss                          19-Aug-11  Elapse:  29:03      1010
Samp:  WO=4104:51 Meth=F8 Dil=1                       Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                            Study :  1613/8290 ICAL
Oper:  MSD                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   561 > 1333       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  0, 0.0
Disp:  Height  Area
```



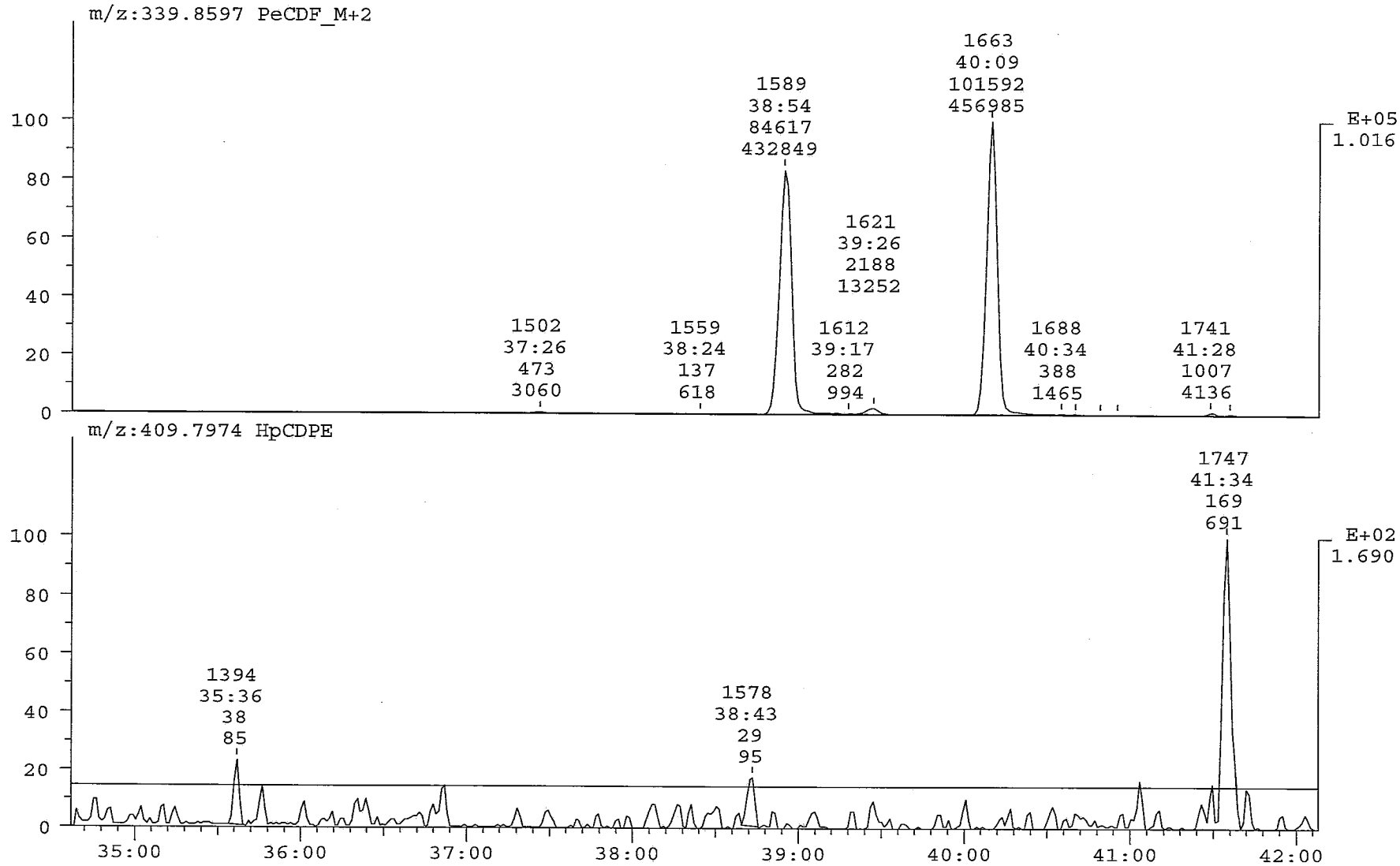
```
CHRO:  d1110819ss                          19-Aug-11  Elapse:  40:41      1695
Samp:  WO=4104:51 Meth=F8 Dil=1                       Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                            Study :  1613/8290 ICAL
Oper:  MSD                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1646 > 1750      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  2, 5.0
Disp:  Height  Area
```



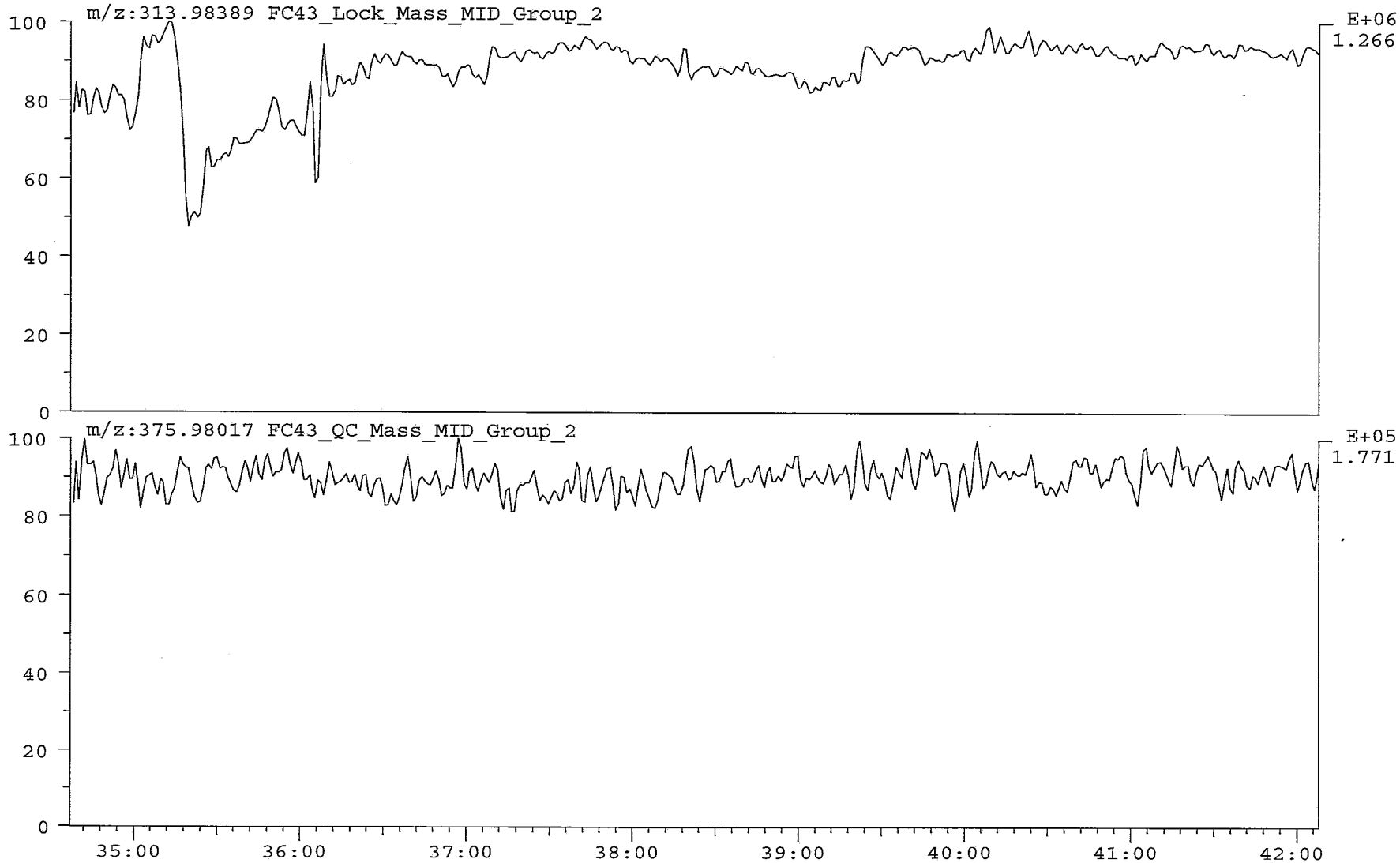
CHRO: d1110819ss 19-Aug-11 Elapse: 39:36 1630
Samp: WO=4104:51 Meth=F8 Dil=1 Start : 22:53:16 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1555 > 1706 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



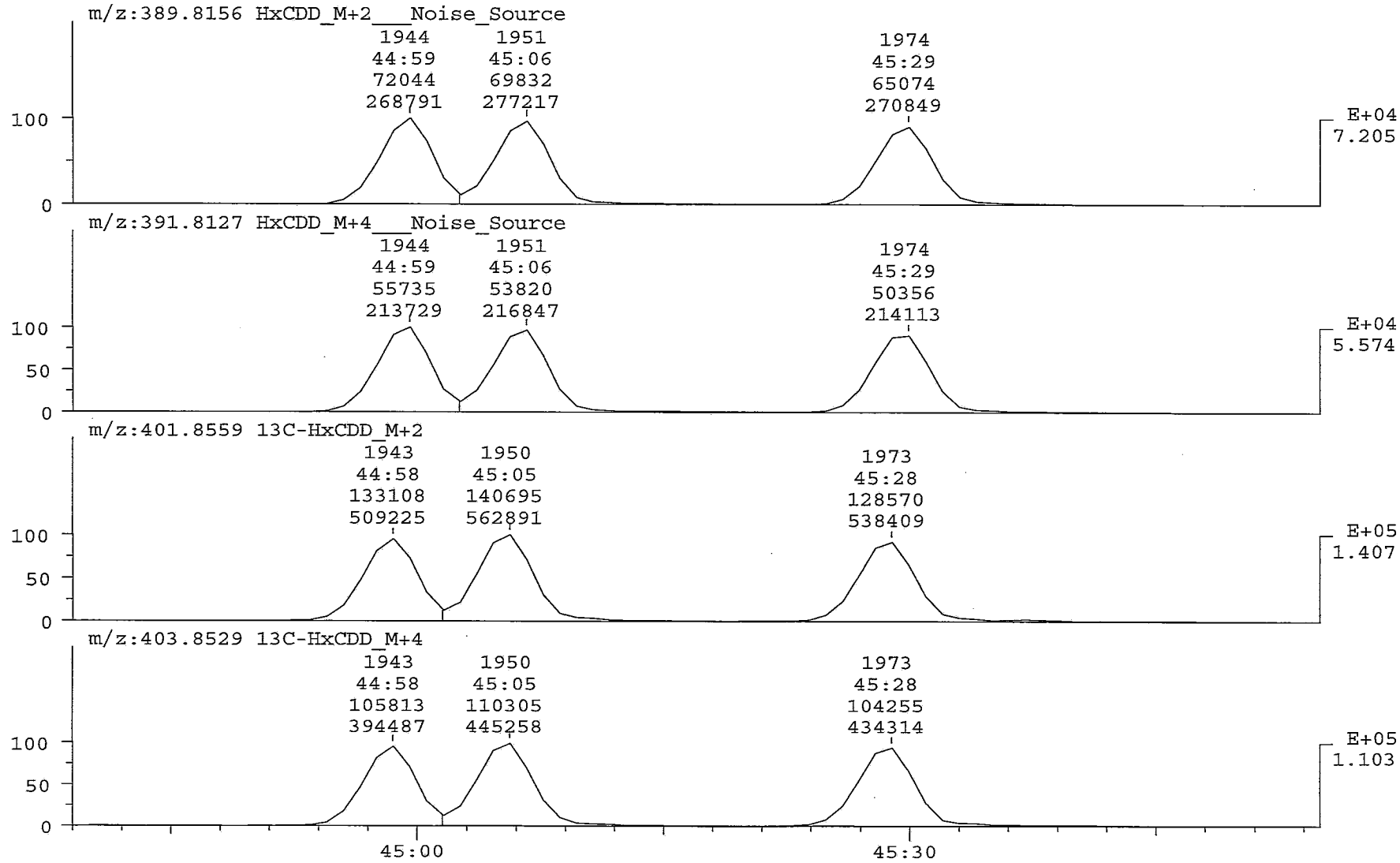
CHRO: d1110819ss 19-Aug-11 Elapse: 39:36 1630
Samp: WO=4104:51 Meth=F8 Dil=1 Start : 22:53:16 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1336 > 1780 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



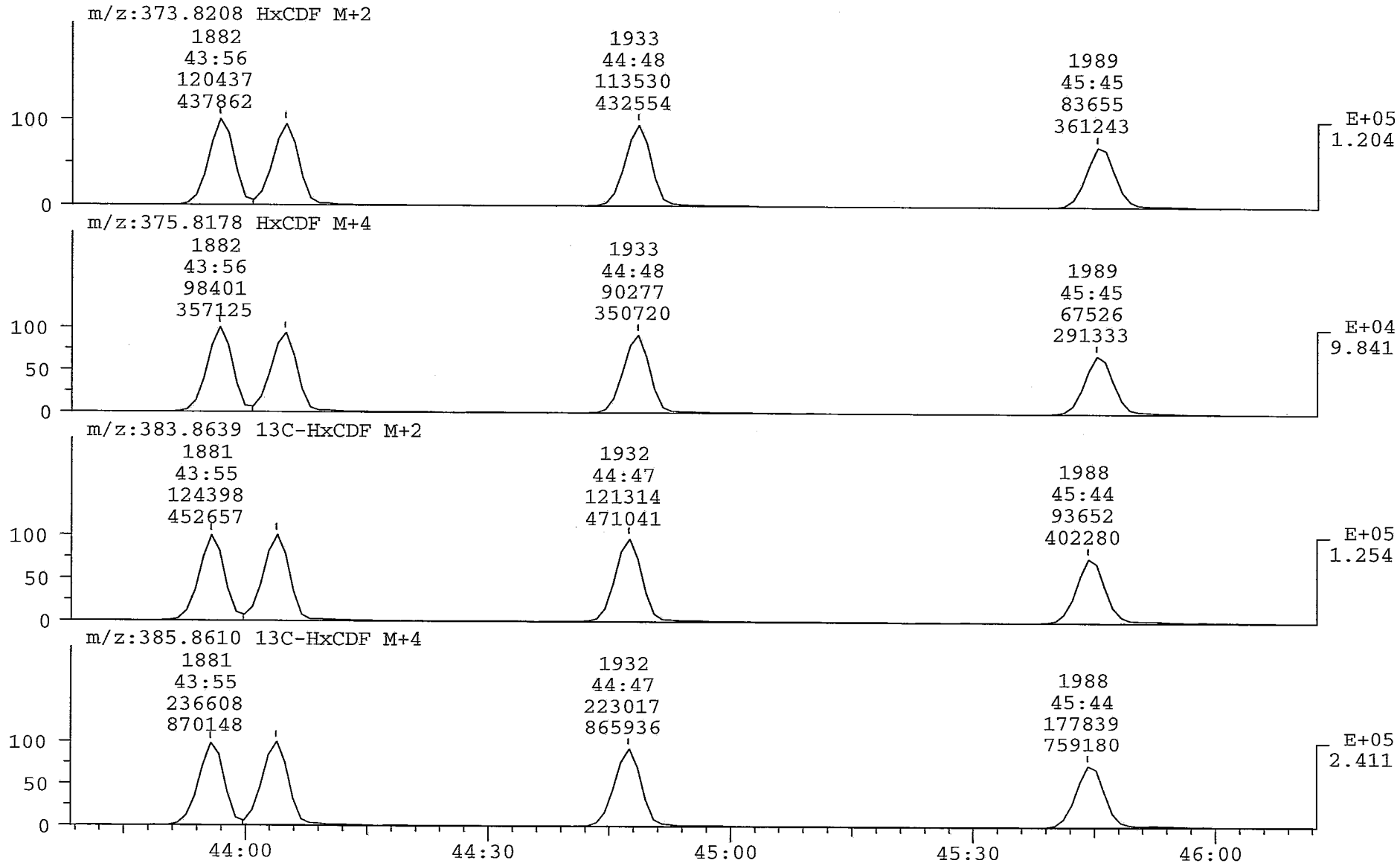
```
CHRO:  d1110819ss                                19-Aug-11  Elapse:  39:36      1630
Samp:  WO=4104:51 Meth=F8 Dil=1                             Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1336 > 1780            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  0, 0.0
Disp:  Height  Area
```



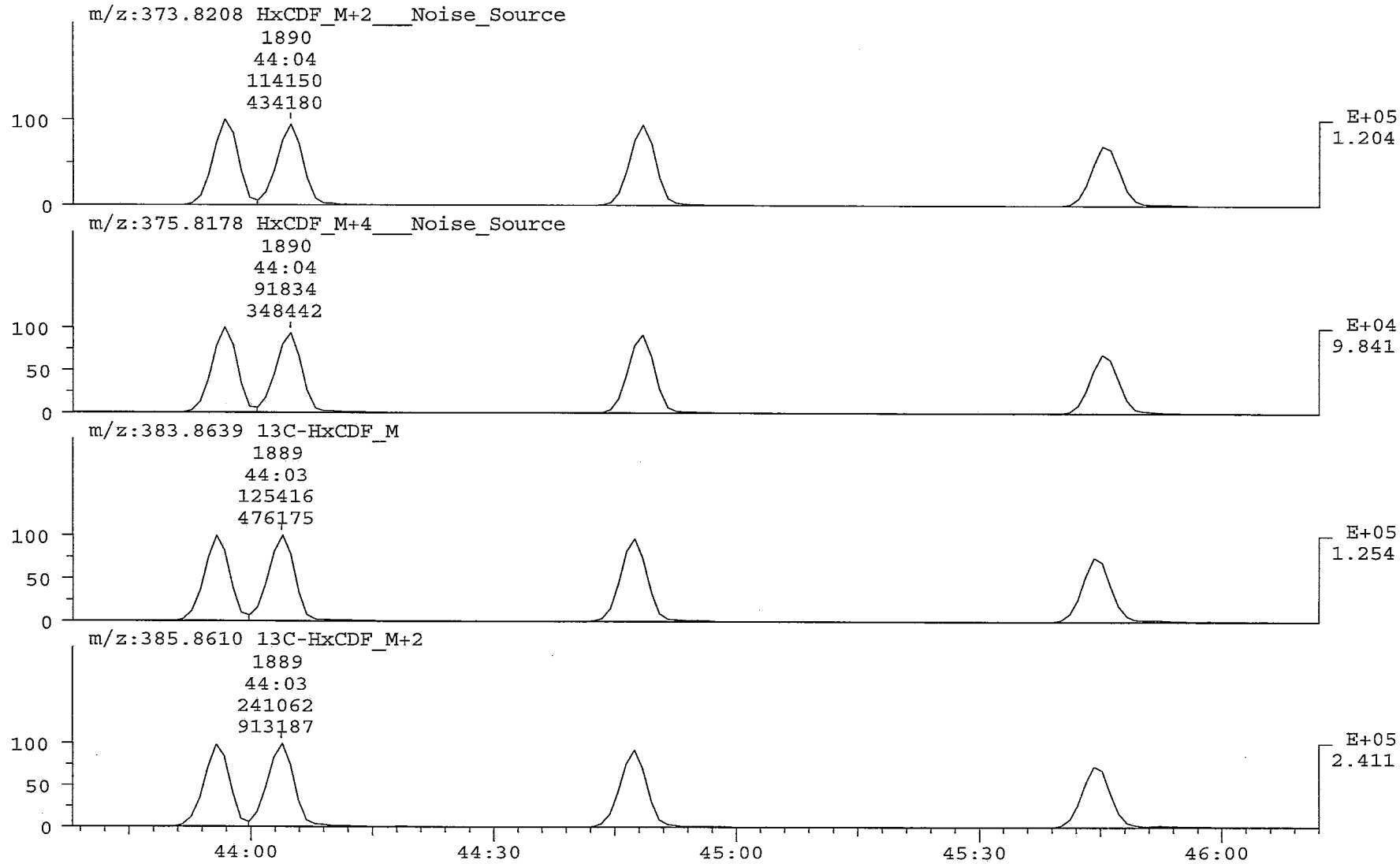
```
CHRO:  d1110819ss                                19-Aug-11  Elapse:  45:16       1961
Samp:  WO=4104:51 Meth=F8 Dil=1                             Start :  22:53:16    2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm      Label wndw:   1924 > 1999           Masses:  303 > 514
Area:  5, 0.50, 15      Baseline  :   100, 3                Label :  2, 5.0
Disp:  Height  Area
```



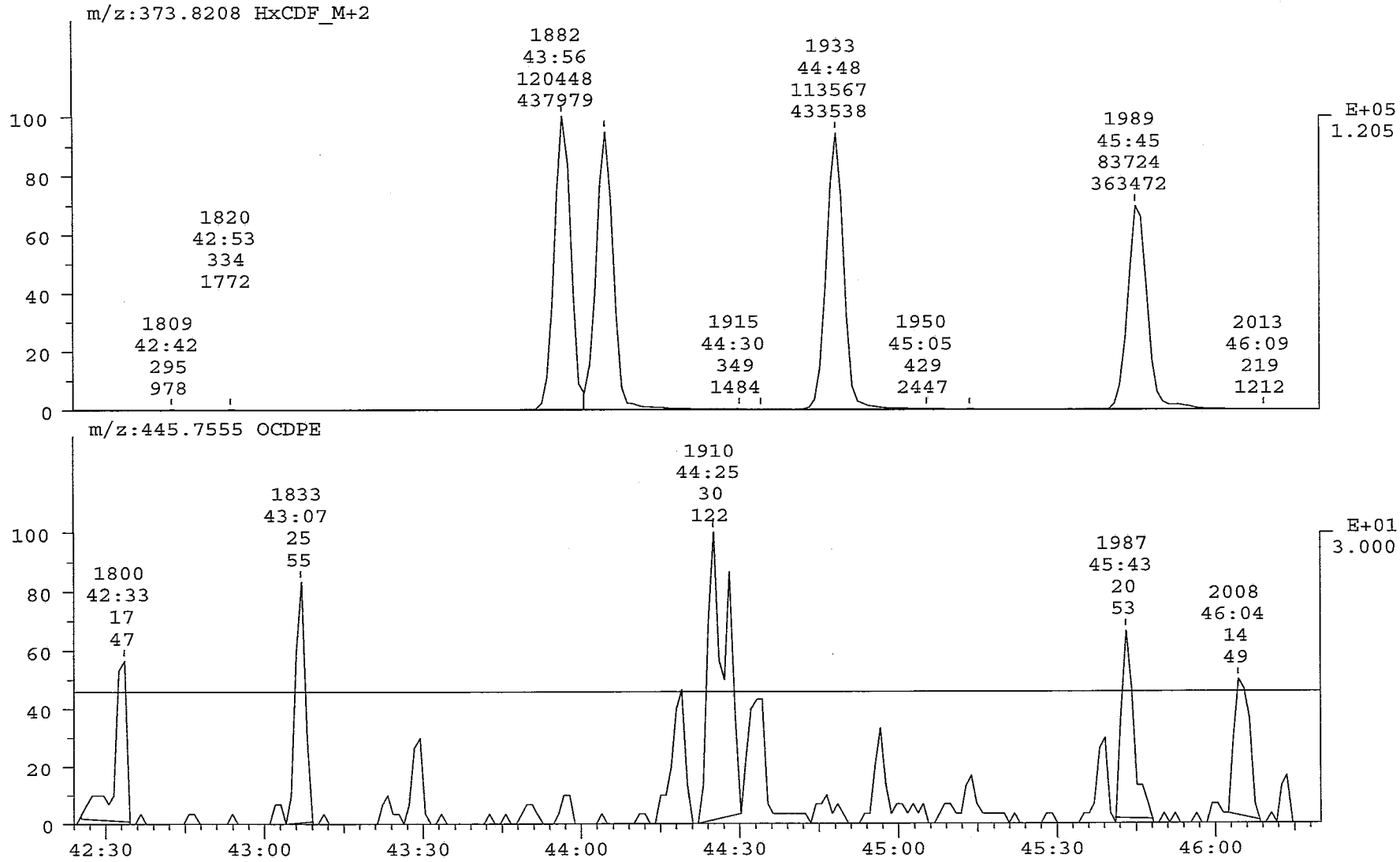
CHRO: d1110819ss 19-Aug-11 Elapse: 54:13 2481
Samp: WO=4104:51 Meth=F8 Dil=1 Start : 22:53:16 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1864 > 2016 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



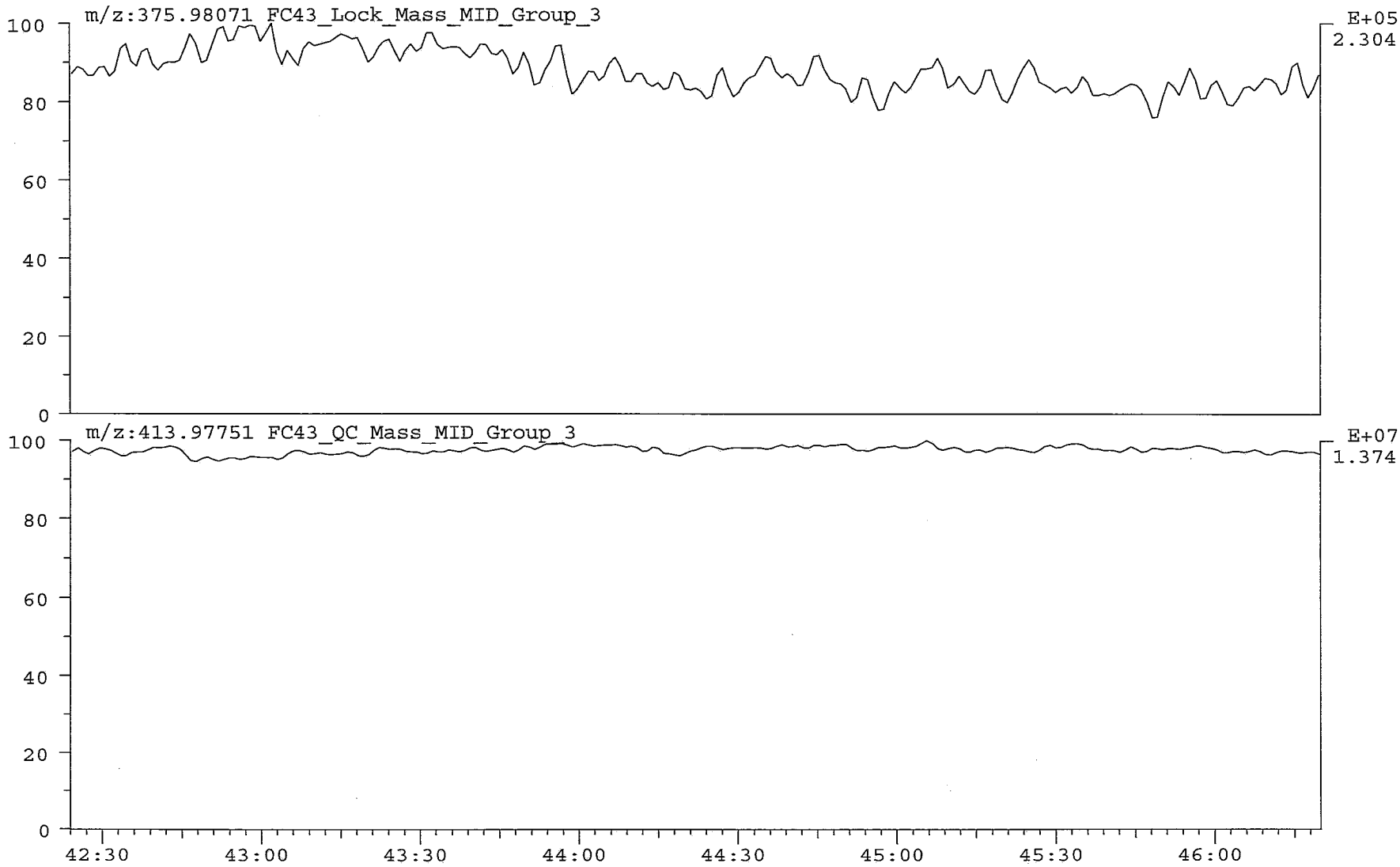
```
CHRO:  d1110819ss                          19-Aug-11  Elapse:  44:05      1891
Samp:  WO=4104:51 Meth=F8 Dil=1                       Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                            Study :  1613/8290 ICAL
Oper:  MSD                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1887 > 1895      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



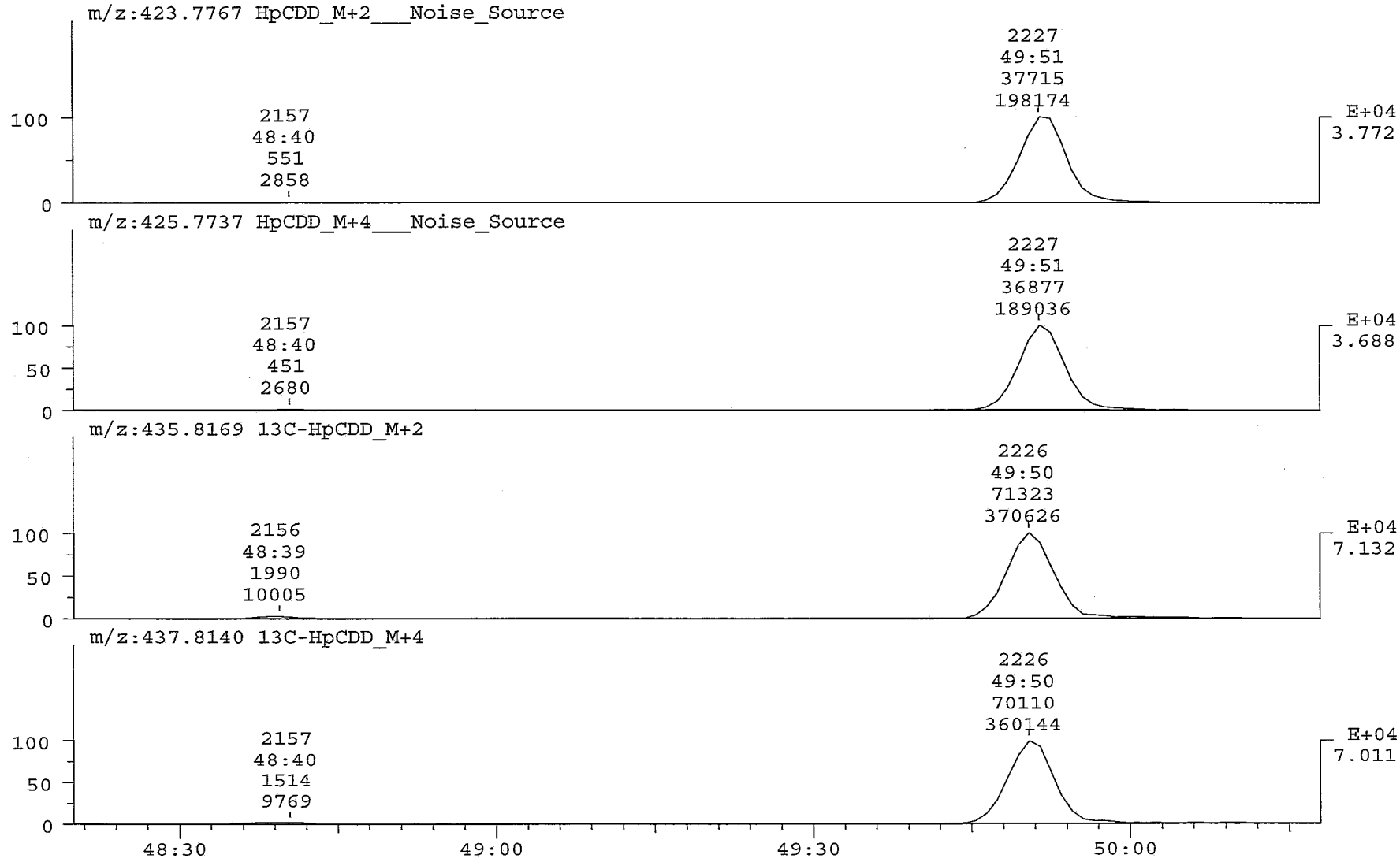
CHRO: d1110819ss 19-Aug-11 Elapse: 44:05 1891
Samp: WO=4104:51 Meth=F8 Dil=1 Start : 22:53:16 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290 ICAL
Oper: MSD Inlet : LC
Peak: 100.00 ppm Label wndw: 1791 > 2023 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



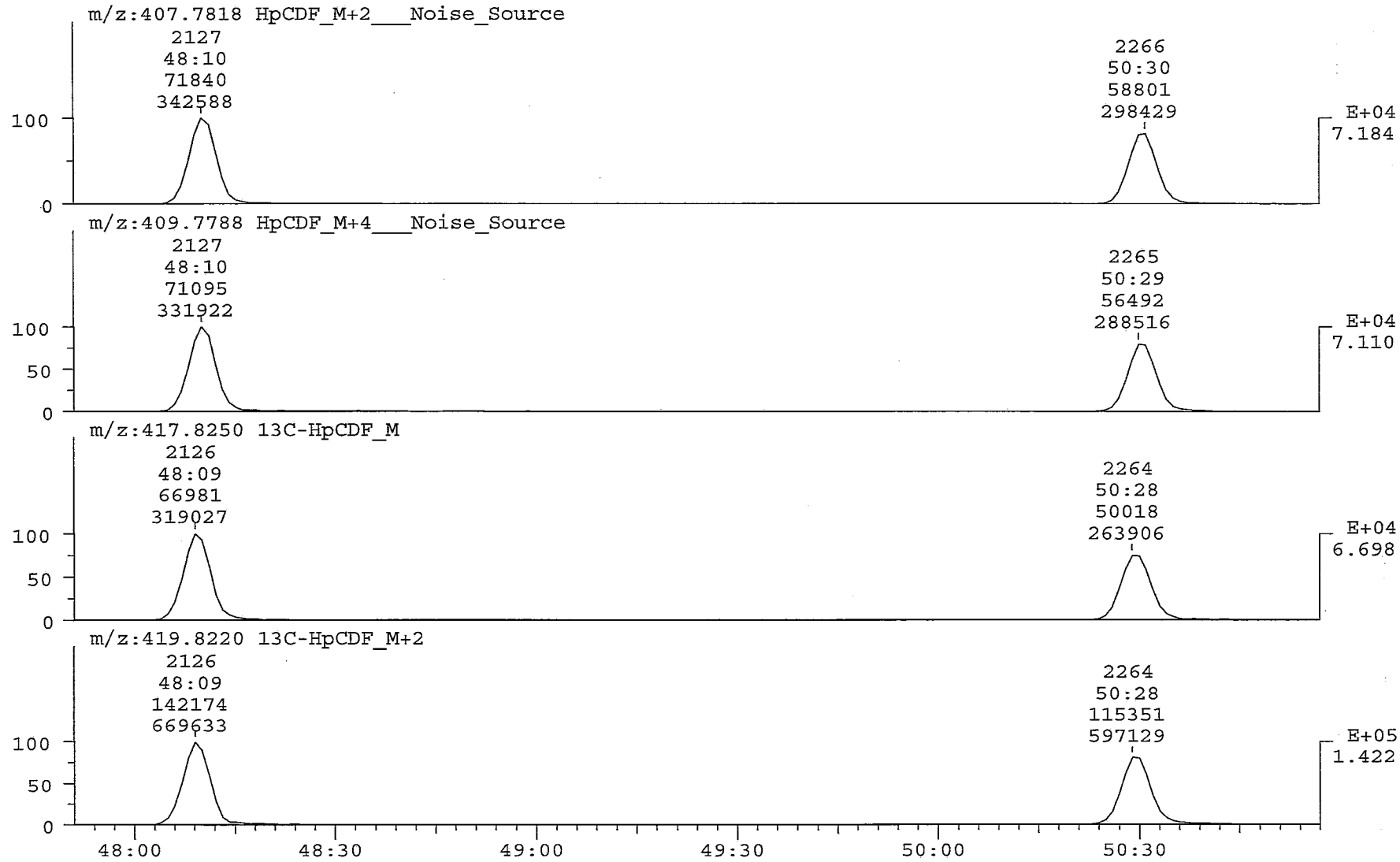
```
CHRO:  d1110819ss                          19-Aug-11   Elapse:  44:05      1891
Samp:  WO=4104:51 Meth=F8 Dil=1                        Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                             Study :  1613/8290 ICAL
Oper:  MSD                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1791 > 2023       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  0, 0.0
Disp:  Height  Area
```



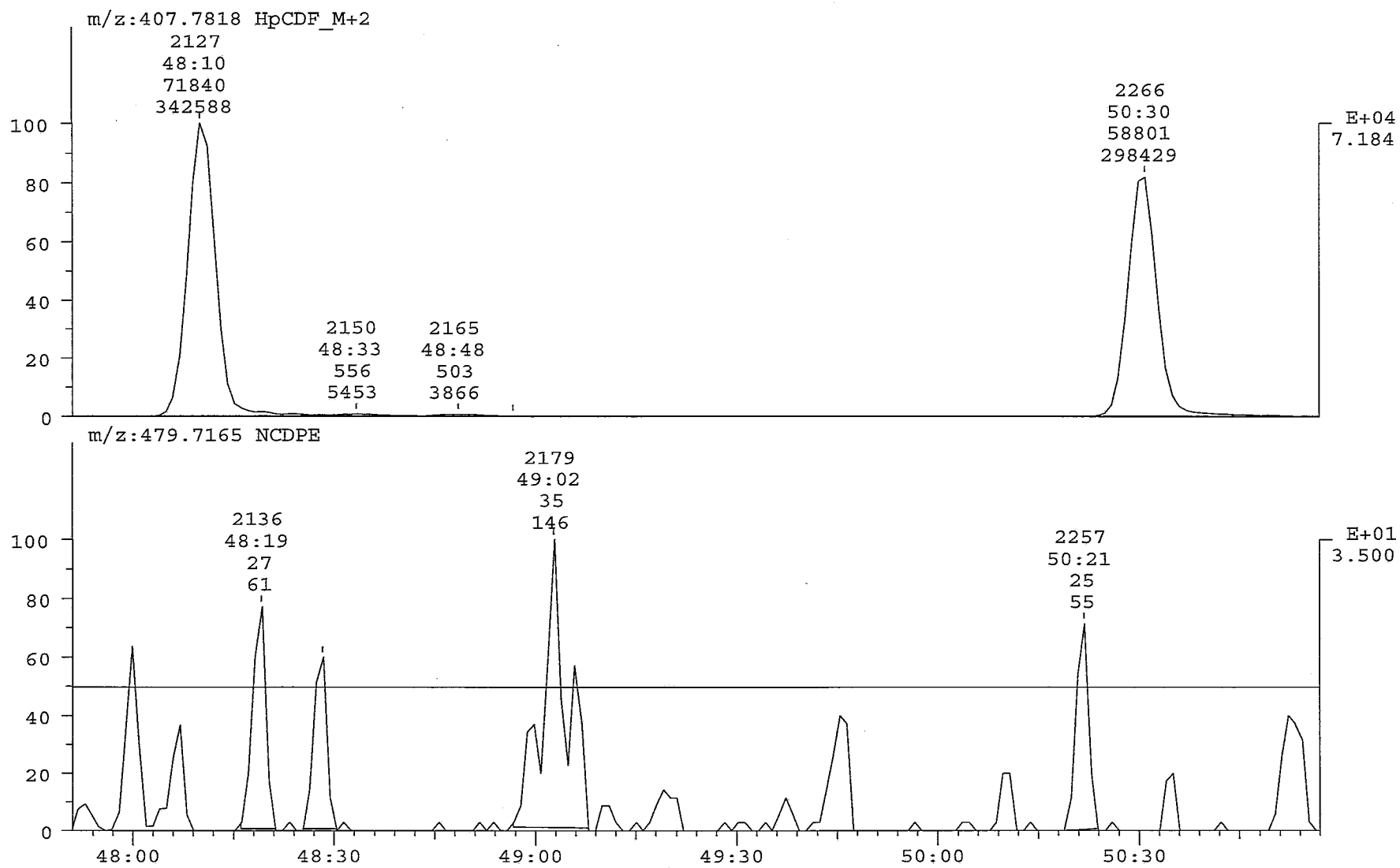
```
CHRO:  d1110819ss                          19-Aug-11  Elapse:  44:05      1891
Samp:  WO=4104:51 Meth=F8 Dil=1                       Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                            Study :  1613/8290 ICAL
Oper:  MSD                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2137 > 2253      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



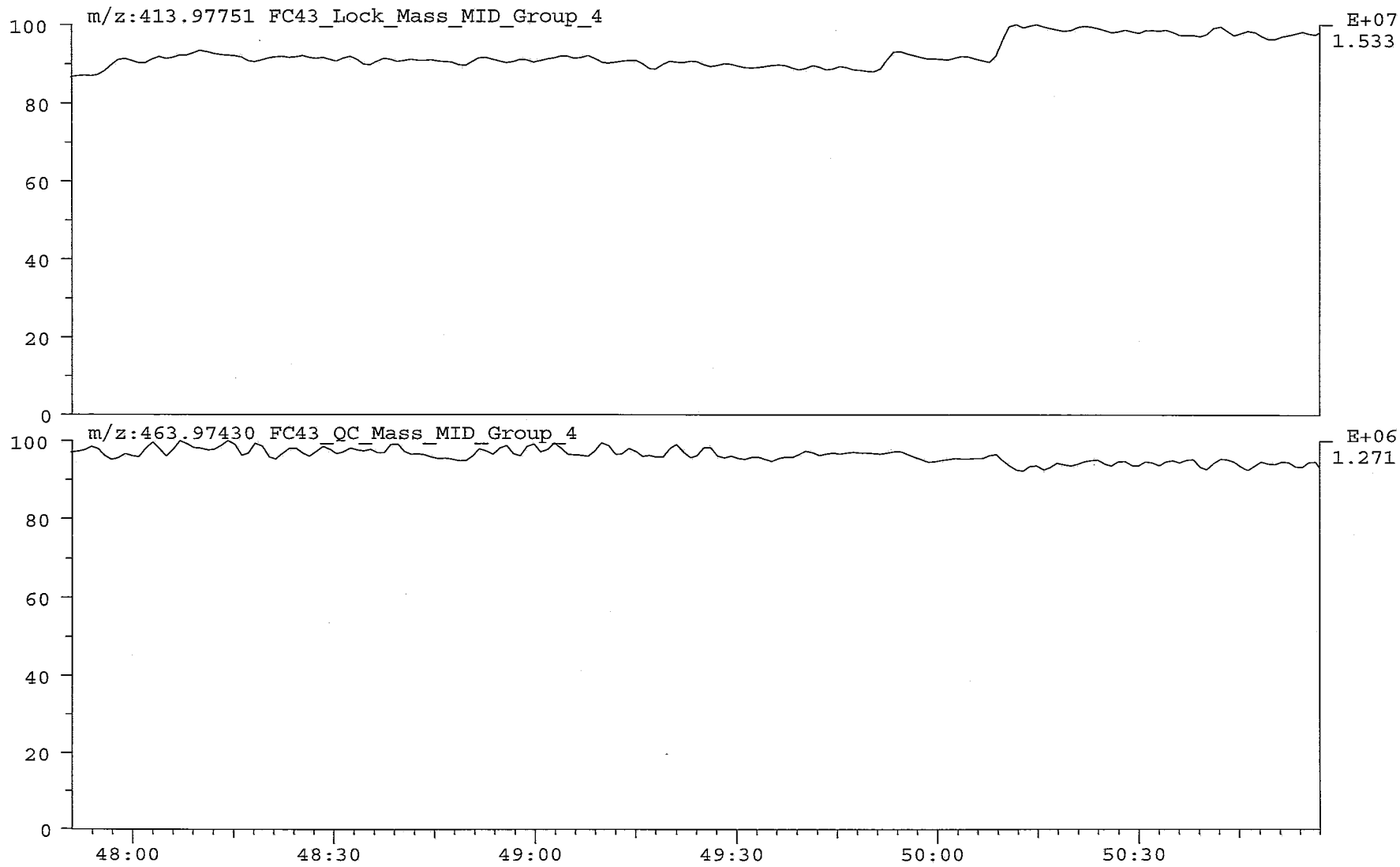
```
CHRO:  d1110819ss                          19-Aug-11  Elapse:  49:24      2200
Samp:  WO=4104:51 Meth=F8 Dil=1                       Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                            Study :  1613/8290 ICAL
Oper:  MSD                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2108 > 2292      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



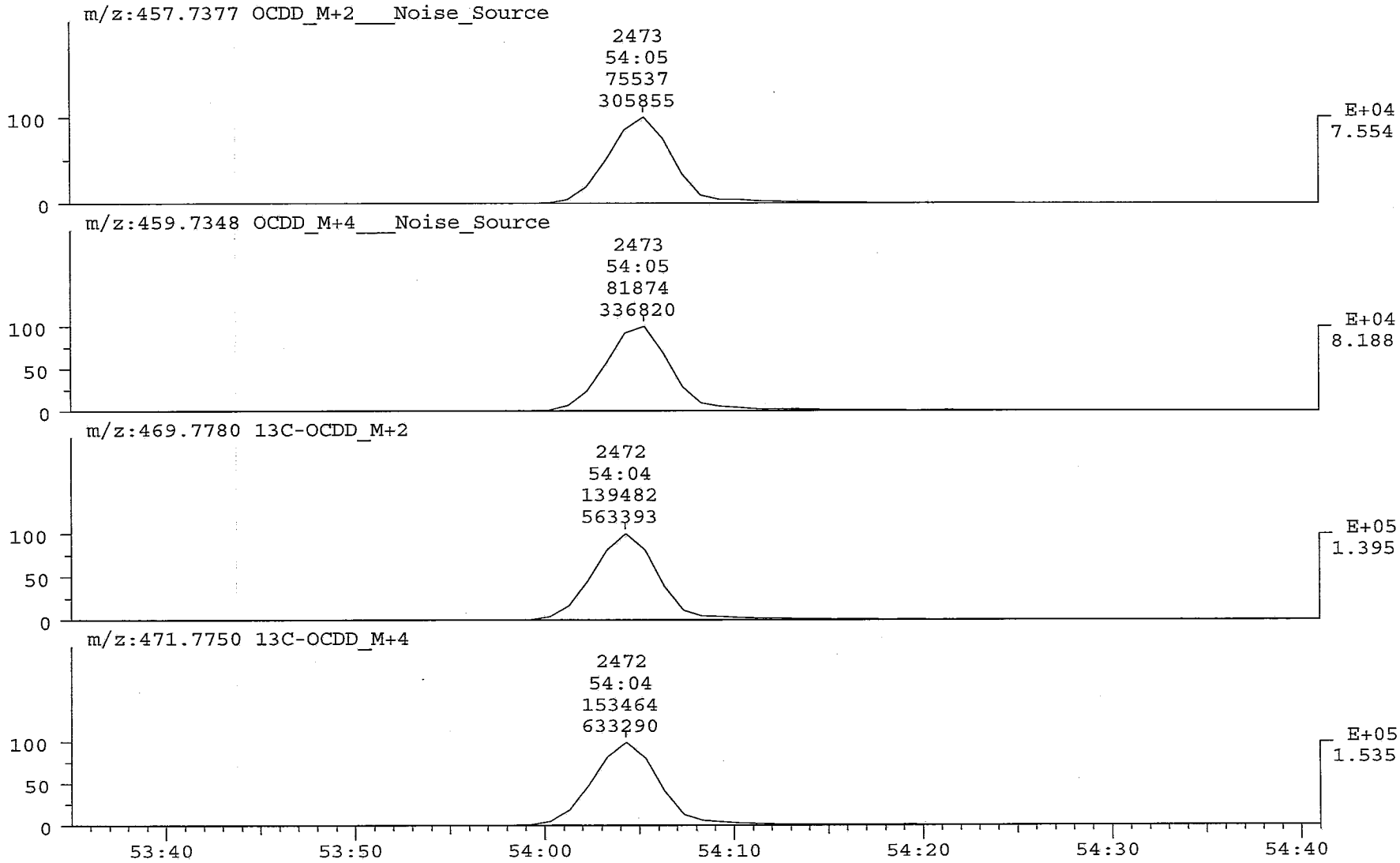
```
CHRO:  d1110819ss                                19-Aug-11  Elapse:  49:24      2200
Samp:  WO=4104:51 Meth=F8 Dil=1                             Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2108 > 2292            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



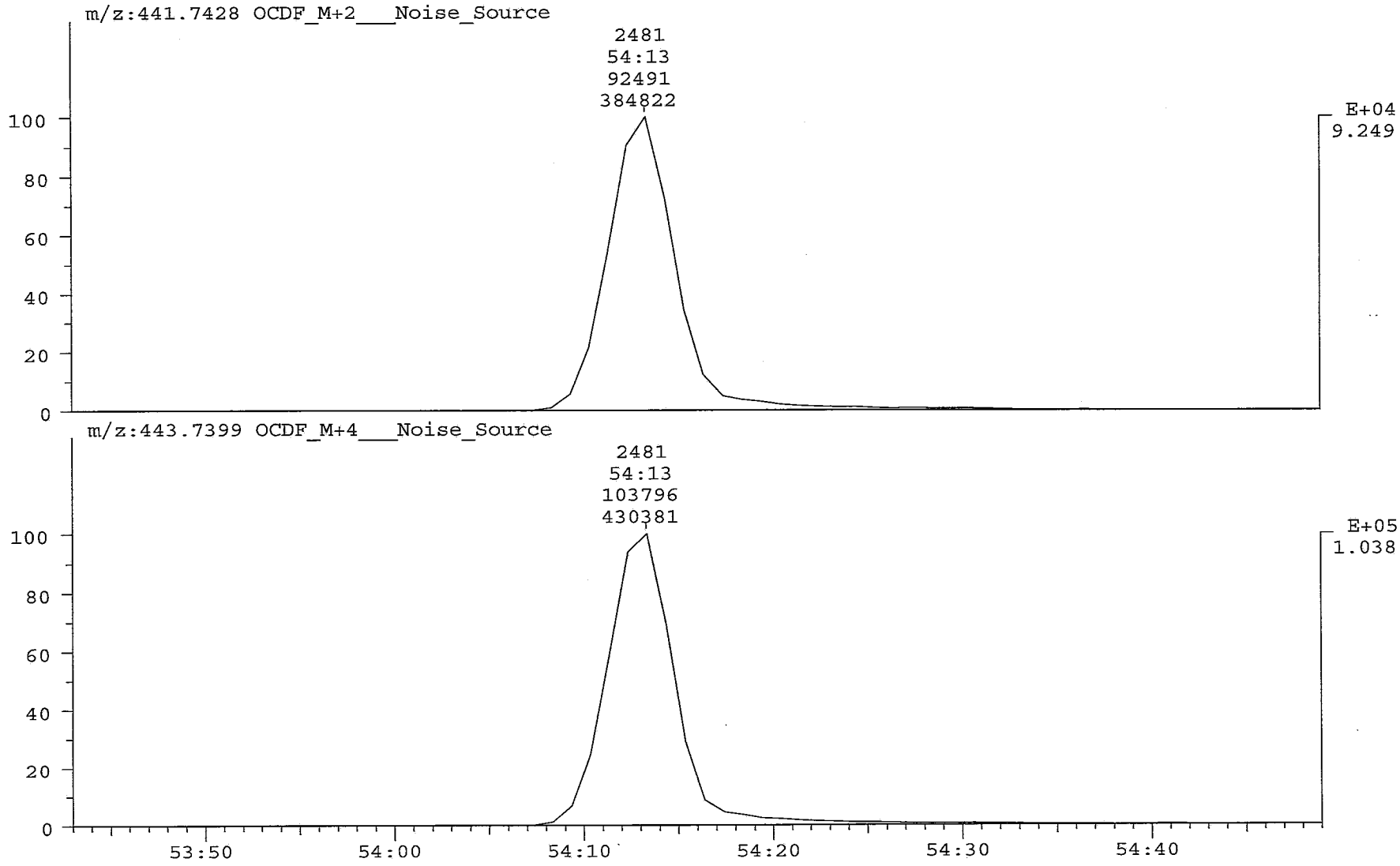
```
CHRO:  d1110819ss                          19-Aug-11  Elapse:  49:24      2200
Samp:  WO=4104:51 Meth=F8 Dil=1                       Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                            Study :  1613/8290 ICAL
Oper:  MSD                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2108 > 2292      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  0, 0.0
Disp:  Height  Area
```



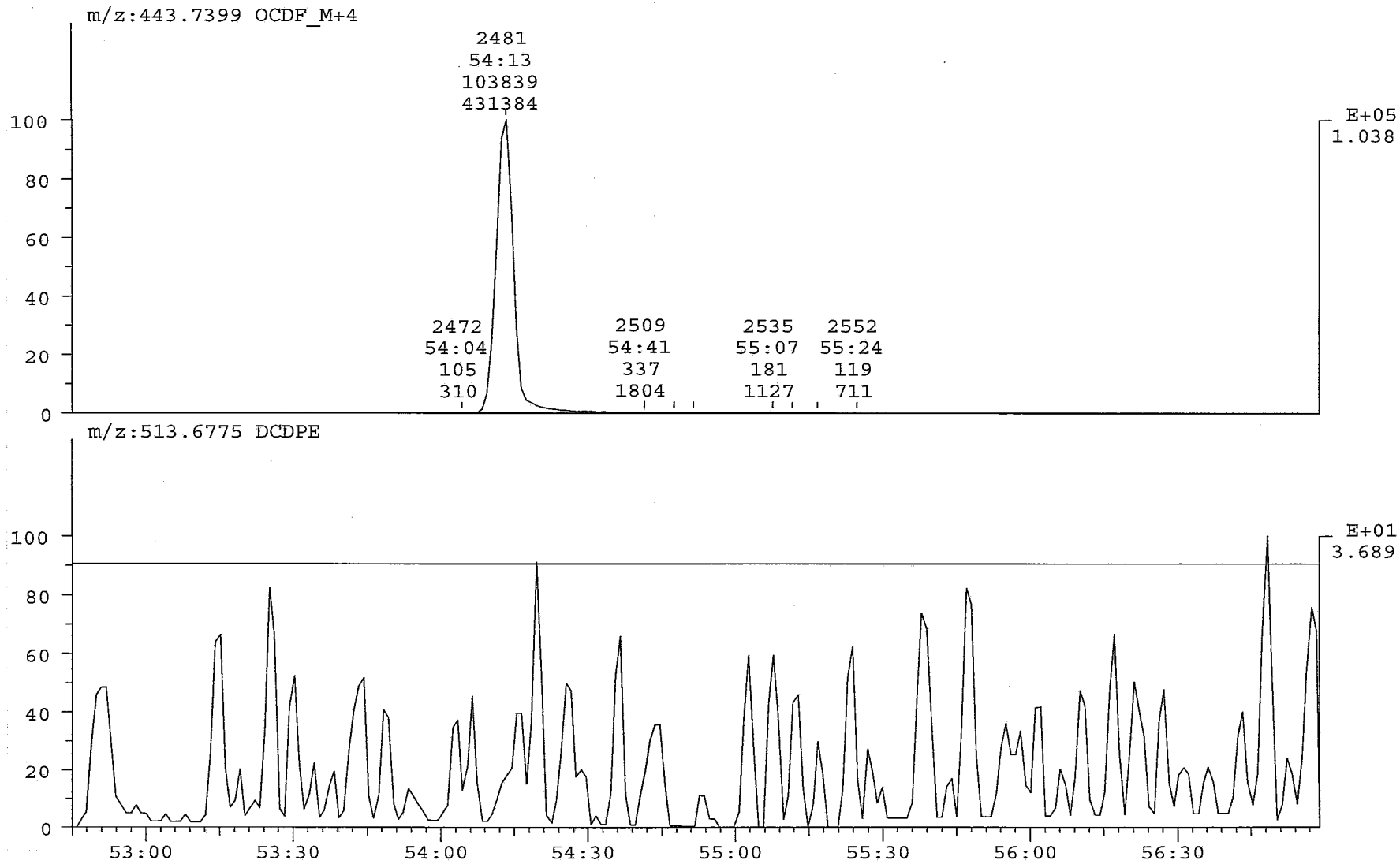
```
CHRO:  d1110819ss                                19-Aug-11  Elapse:  54:05      2473
Samp:  WO=4104:51 Meth=F8 Dil=1                             Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                                  Study :  1613/8290 ICAL
Oper:  MSD                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2443 > 2508            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



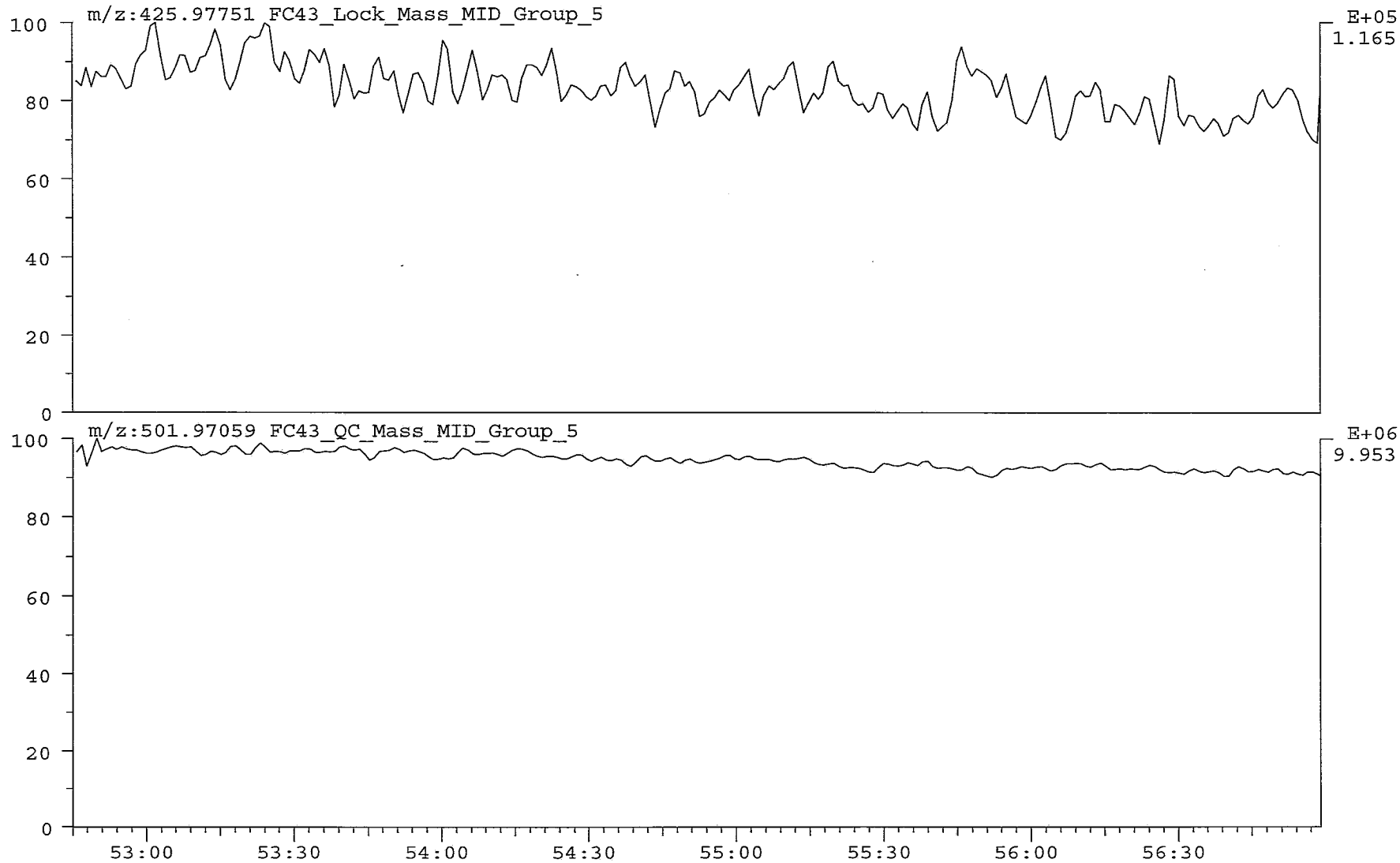
```
CHRO:  d1110819ss                          19-Aug-11   Elapse:  54:13      2481
Samp:  WO=4104:51 Meth=F8 Dil=1                        Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                             Study :  1613/8290 ICAL
Oper:  MSD                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2451 > 2516       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  -2, 5.0
Disp:  Height  Area
```



```
CHRO:  d1110819ss                          19-Aug-11  Elapse:  54:13      2481
Samp:  WO=4104:51 Meth=F8 Dil=1                       Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                            Study :  1613/8290 ICAL
Oper:  MSD                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2394 > 2646      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



```
CHRO:  d1110819ss                          19-Aug-11   Elapse:  54:13      2481
Samp:  WO=4104:51 Meth=F8 Dil=1                        Start :  22:53:16   2647
Comm:  Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode:  EI ESI + Q1MS UP LR                             Study :  1613/8290 ICAL
Oper:  MSD                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2394 > 2646       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  0, 0.0
Disp:  Height  Area
```



```
*** file opened Fri Aug 19 22:57:05 2011 ***

Started by                - Xcalibur
Instrument Internet name  - DFS MS
Instrument model          - DFS MS
Instrument service number - 0000
Workstation internet name - KNXDXNDFS01

  Analysis started at: 19-Aug-11 22:57:04

  Analysis will stop at user request

  Firmware Version: 1.03

  MCAL file name: mcal1.cal

  MID procedure: 5W_DB5_FC43_SINGLEGC


  Mid Time Windows:
        Start        Measure      End        Cycletime

  # 1  12:00 min  22:31 min  34:31 min   1.00 sec
  # 2  34:31 min   7:37 min  42:09 min   1.00 sec
  # 3  42:09 min   5:02 min  47:12 min   1.00 sec
  # 4  47:12 min   5:27 min  52:39 min   1.00 sec
  # 5  52:39 min   4:20 min  57:00 min   1.00 sec

  Mid Masses:
   Window # 1
        mass F  int  gr  time (ms)
    303.9016     1  1      124
    305.8987     1  1      124
    313.9834 l  20  1        6
    313.9834    20  1        6
    315.9419     5  1       24
    317.9389     5  1       24
    319.8965     1  1      124
    321.8936     1  1      124
    327.8847     1  1      124
    331.9368     5  1       24
    333.9338     5  1       24
    363.9802 c  20  1        6
    363.9802    20  1        6
    375.8364     1  1      124
   Window # 2
        mass F  int  gr  time (ms)
    313.9834 l  20  1        7
    313.9834    20  1        7
    339.8597     1  1      146
    341.8567     1  1      146
    351.9000     5  1       29
    353.8970     5  1       29
    355.8546     1  1      146
    357.8516     1  1      146
    367.8949     5  1       29
    369.8919     5  1       29
    375.9802 c  20  1        7
    375.9802    20  1        7
    409.7974     1  1      146
   Window # 3
        mass F  int  gr  time (ms)
    373.8208     1  1      146
    375.8178     1  1      146
    375.9802 l  20  1        7
    375.9802    20  1        7
    383.8639     5  1       29
```

```
  385.8610      5  1        29
  389.8158      1  1       146
  391.8127      1  1       146
  401.8559      5  1        29
  403.8529      5  1        29
  413.9770 c   20  1         7
  413.9770     20  1         7
  445.7555      1  1       146
 Window # 4
      mass F  int  gr  time (ms)
  407.7817      1  1       146
  409.7788      1  1       146
  413.9770 l   20  1         7
  413.9770     20  1         7
  417.8250      5  1        29
  419.8220      5  1        29
  423.7767      1  1       146
  425.7737      1  1       146
  435.8169      5  1        29
  437.8140      5  1        29
  463.9738 c   20  1         7
  463.9738     20  1         7
  479.7165      1  1       146
 Window # 5
      mass F  int  gr  time (ms)
  425.9770 l   20  1         7
  425.9770     20  1         7
  441.7428      1  1       159
  443.7399      1  1       159
  457.7377      1  1       159
  459.7348      1  1       159
  469.7780      5  1        31
  471.7750      5  1        31
  501.9706 c   20  1         7
  501.9706     20  1         7
  513.6775      1  1       159

MID Window terminated after 34.533333 minutes
MID Window end time was 34.530000 minutes
MID Window terminated after 42.166667 minutes
MID Window end time was 42.160000 minutes
MID Window terminated after 47.200000 minutes
MID Window end time was 47.200000 minutes
MID Window terminated after 52.666667 minutes
MID Window end time was 52.660000 minutes
MID Window terminated after 57.000000 minutes
MID Window end time was 57.000000 minutes

Tune file name: C:\Xcalibur\System\DFS\MSI\tune2.DFSTune

DFS - Parameter

 ACCU            333.0000   BCORRS            0.0169   BMASS          307.4834
 BQUAD            -5.5000   CAPIL             0.0000   CAPTSET          0.0000
 CCURR             0.0000   COUNTING          0.0000   DELAY            0.0000
 DRAW            -25.0000   DRAWC             0.0000   DRAWS            0.0000
 DYNVOLTAGE       15.0000   ECORR             1.0002   ECURR            0.8000
 EDAC        7969177.0000   EDACG             0.9998   EDACZ         1415.4000
 ELEN            -45.0000   EMULT          2044.0000   ENS            123.0000
 ENSBR            -5.5000   ERATIO            1.0000   ESA            679.0600
 ESIPAR            0.0000   EXS             168.0000   EXSBR           -1.0000
 FDMA       18000000.0000   FILTER          100.0000   FLENS            1.0000
 FM              375.8364   FMII             50.0000   FQUAD            4.4000
 FQUADGAIN         0.1000   FREQ           1201.2012   FSLOPE    36000000.0000
 FVANAL            0.0134   FVINLET           0.0546   FVSRC            0.0496
 FWIN              0.7000   HCURR             0.0000   HVANAL           0.0000
 HVSRC             0.0000   ICAL0             0.0011   ICAL1            0.4030
```

ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	742.0000
LENS_SYM	-6.2500	LM	375.8364	LMII	500.0000
LMASS	307.4834	LKM	425.9770	MASS	307.4834
MDAC	3587191.1565	MRANGE	1291.1210	NSAM	400.0000
NSCAN	2668.0000	NSMAX	8.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	0.0000	PSAM	10.0000
PUSHER	-4.0000	RECURR	0.7907	RELEN	0.0000
RES	13106.3214	RPUSHER	-4.1685	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	700.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	0.0000	SLOW	60.0000	SS	3.0000
SW	0.1036	TANAL	0.0000	TCURR	0.0000
TD	1.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	100.0000	TSAM	400.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	307.4834	XLENS_POT	826.0000
XLENS_SYM	-5.5000	YLENS_POT	406.0000	YLENS_SYM	3.0000

```
Source Gauge:        2.8e-005 mbar
Analyzer Penning:    1.0e-007 mbar
Pirani Analyse:      1.4e-002 mbar
Pirani Source:       5.0e-002 mbar
Pirani Inlet System: 5.5e-002 mbar

Scantype is electric

Sourcemode is EI POS

MID Time Window 1: Resolution is 10985.
MID Time Window 2: Resolution is 10727.
MID Time Window 3: Resolution is 11967.
MID Time Window 4: Resolution is 10108.
MID Time Window 5: Resolution is 13106.

Amplifier Offset: 88.


*** File closed Fri Aug 19 23:54:06 2011
  ***
```

QUAN: d1110819ss.q0 Entries: 92

Data file(s) used
File: d1110819ss 19-Aug-11
Samp: WO=4104:51 Meth=F8 Dil=1 Start : 22:53:16 2647
Comm: Inst=d11a/1027395 Batch=20110819i Ccal=D1110818W1
Mode: EI ESI + Q1MS UP LR Study : 1613/8290
Oper: MSD Inlet : LC

Disp: CHRO
Amount = (area * ref amnt) / (ref area * response factor); amount = f(reponse)
Response factors from quantitation file

Quan Masses	Actual Time	Area	Height	Peak Beginn	Peak End	Noise Value	La Pe	Lab Fac	Integration Baseline
319.8805	31:04	50388.	5273.	30:51	31:20	18.	1	1.0	AVV
321.8775	31:04	63510.	6851.	30:52	31:20	20.	1	1.0	AVV
319.8805	31:04	50388.	5273.	30:51	31:20	18.	2	5.0	AVV
321.8775	31:04	63510.	6851.	30:52	31:20	20.	2	5.0	AVV
331.9202	30:31	437905.	45552.	30:17	30:46	98.	2	5.0	ABV
331.9202	31:02	485957.	45922.	30:47	31:16	98.	2	5.0	AVV
333.9171	30:32	550627.	57018.	30:17	30:47	96.	2	5.0	AVV
333.9171	31:02	607038.	60532.	30:47	31:17	96.	2	5.0	AVV
327.8683	31:03	117825.	12519.	30:49	31:18	25.	1	1.0	ABV
327.8683	31:03	117825.	12519.	30:49	31:18	25.	2	5.0	ABV
303.8864	29:03	78834.	9001.	28:49	29:18	27.	1	1.0	ABV
305.8834	29:04	101383.	10816.	28:51	29:19	25.	1	1.0	ABV
303.8864	29:03	78834.	9001.	28:49	29:18	27.	2	5.0	ABV
305.8834	29:04	101383.	10816.	28:51	29:19	25.	2	5.0	ABV
315.9261	29:01	770354.	85249.	28:47	29:16	48.	2	5.0	ABV
317.9230	29:01	966757.	109904.	28:46	29:16	43.	2	5.0	ABV
355.8368	40:42	272944.	64174.	40:33	40:57	21.	1	1.0	ABV
357.8337	40:42	175225.	41496.	40:32	40:57	17.	1	1.0	ABV
355.8368	40:42	272944.	64174.	40:33	40:57	21.	2	5.0	ABV
357.8337	40:42	175225.	41496.	40:32	40:57	17.	2	5.0	ABV
367.8765	40:41	507116.	122654.	40:32	40:49	28.	2	5.0	ABV
369.8734	40:41	330296.	78279.	40:32	40:56	17.	2	5.0	ABV
339.8427	40:09	455759.	101560.	40:01	40:24	42.	1	1.0	AVV
341.8396	40:09	288120.	65103.	39:56	40:20	46.	1	1.0	ABV
339.8427	38:54	432432.	84604.	38:42	39:09	42.	2	5.0	ABV
339.8427	40:09	456039.	101560.	39:55	40:24	42.	2	5.0	ABV
341.8396	38:54	280728.	56078.	38:44	39:07	46.	2	5.0	ABV
341.8396	40:09	288120.	65103.	39:56	40:20	46.	2	5.0	ABV
351.8824	38:53	867610.	168966.	38:44	39:05	55.	2	5.0	ABV
351.8824	40:08	843020.	187477.	40:00	40:23	55.	2	5.0	ABV
353.8793	38:53	551338.	106977.	38:44	39:06	51.	2	5.0	ABV
353.8793	40:08	541458.	121156.	39:58	40:18	51.	2	5.0	ABV
389.7961	45:06	277217.	69832.	45:02	45:21	43.	1	1.0	AVV
391.7931	45:06	216847.	53820.	45:02	45:20	33.	1	1.0	AVV
389.7961	44:59	268791.	72044.	44:52	45:02	43.	2	5.0	ABV
389.7961	45:06	277217.	69832.	45:02	45:21	43.	2	5.0	AVV
389.7961	45:30	270849.	65074.	45:21	45:45	43.	2	5.0	AVV
391.7931	44:59	213729.	55735.	44:52	45:02	33.	2	5.0	ABV
391.7931	45:06	216847.	53820.	45:02	45:20	33.	2	5.0	AVV
391.7931	45:30	214113.	50356.	45:20	45:45	33.	2	5.0	AVV
401.8358	44:58	509225.	133108.	44:49	45:01	71.	2	5.0	ABV
401.8358	45:05	562891.	140695.	45:01	45:18	71.	2	5.0	AVV
401.8358	45:29	538409.	128570.	45:18	45:41	71.	2	5.0	AVV
403.8327	44:58	394487.	105813.	44:51	45:01	69.	2	5.0	ABV
403.8327	45:05	445258.	110305.	45:01	45:20	69.	2	5.0	AVV
403.8327	45:29	434314.	104255.	45:20	45:44	69.	2	5.0	AVV
373.8021	43:56	437862.	120437.	43:49	44:00	48.	1	1.0	ABV
375.7990	43:56	357125.	98401.	43:49	44:00	55.	1	1.0	ABV
373.8021	43:56	437862.	120437.	43:49	44:00	48.	2	5.0	ABV
373.8021	44:04	434179.	114150.	44:00	44:20	48.	2	5.0	AVV

373.8021	44:48	432554.	113530.	44:38	45:03	48.	2	5.0	AVV
373.8021	45:45	361243.	83655.	45:39	46:00	48.	2	5.0	ABV
375.7990	43:56	357125.	98401.	43:49	44:00	55.	2	5.0	ABV
375.7990	44:48	350720.	90277.	44:37	45:03	55.	2	5.0	AVV
383.8447	43:55	452657.	124398.	43:48	43:59	54.	2	5.0	ABV
383.8447	44:03	476175.	125416.	43:59	44:19	54.	2	5.0	AVV
383.8447	44:47	471041.	121314.	44:35	45:02	54.	2	5.0	AVV
383.8447	45:44	402280.	93652.	45:33	45:59	54.	2	5.0	ABV
385.8417	43:55	870148.	236608.	43:48	43:59	83.	2	5.0	ABV
385.8417	44:03	913187.	241062.	43:59	44:16	83.	2	5.0	AVV
385.8417	44:47	865936.	223017.	44:40	45:02	83.	2	5.0	AVV
385.8417	45:44	759180.	177839.	45:37	45:59	83.	2	5.0	ABV
423.7555	49:51	198174.	37715.	49:43	50:06	15.	1	1.0	ABV
425.7524	49:51	189036.	36877.	49:43	50:06	28.	1	1.0	ABV
423.7555	48:40	2858.	551.	48:34	48:51	15.	2	5.0	ABB
423.7555	49:51	198174.	37715.	49:43	50:06	15.	2	5.0	ABV
425.7524	48:40	2680.	451.	48:33	48:54	28.	2	5.0	ABB
425.7524	49:51	189036.	36877.	49:43	50:06	28.	2	5.0	ABV
435.7951	48:39	10005.	1990.	48:33	48:47	36.	2	5.0	ABB
435.7951	49:50	370626.	71323.	49:42	50:05	36.	2	5.0	ABV
437.7921	48:40	9769.	1514.	48:32	48:51	40.	2	5.0	ABB
437.7921	49:50	360144.	70110.	49:42	50:03	40.	2	5.0	ABV
407.7614	48:10	342588.	71840.	48:02	48:25	29.	1	1.0	ABV
409.7583	48:10	331922.	71095.	48:02	48:24	29.	1	1.0	ABV
407.7614	48:10	342588.	71840.	48:02	48:25	29.	2	5.0	ABV
407.7614	50:31	298429.	58801.	50:21	50:46	29.	2	5.0	ABV
409.7583	48:10	331922.	71095.	48:02	48:24	29.	2	5.0	ABV
409.7583	50:30	288516.	56492.	50:20	50:45	29.	2	5.0	ABV
417.8041	48:09	319027.	66981.	48:02	48:24	35.	2	5.0	ABV
417.8041	50:29	263906.	50018.	50:18	50:41	35.	2	5.0	ABV
419.8010	48:09	669633.	142174.	48:01	48:24	47.	2	5.0	ABV
419.8010	50:29	597128.	115351.	50:20	50:44	47.	2	5.0	ABV
457.7148	54:05	305855.	75537.	53:58	54:20	22.	1	1.0	ABV
459.7118	54:05	336820.	81874.	53:58	54:20	49.	1	1.0	ABV
457.7148	54:05	305855.	75537.	53:58	54:20	22.	2	5.0	ABV
459.7118	54:05	336820.	81874.	53:58	54:20	49.	2	5.0	ABV
469.7545	54:04	563393.	139482.	53:57	54:19	49.	2	5.0	ABV
471.7514	54:04	633290.	153464.	53:56	54:19	55.	2	5.0	ABV
441.7207	54:13	384822.	92491.	54:02	54:28	41.	1	1.0	ABV
443.7177	54:13	430381.	103796.	54:02	54:28	28.	1	1.0	ABV
441.7207	54:13	384822.	92491.	54:02	54:28	41.	2	5.0	ABV
443.7177	54:13	430381.	103796.	54:02	54:28	28.	2	5.0	ABV

TestAmerica Knoxville Dioxin GC/MS Continuing Calibration Review / Narrative Checklist
Method: 8290/8290A - KNOX-ID-0004-R11

Start Mass Res. ✓:	21:47	Ver Filename:	d112091852	Inst:	d11a
End Mass Res. ✓:	3:25	Win Filename:		ICAL Date:	8-19-11
		Col Perf Filename:			
		End Ver Filename:	d112091952		

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd Level
1. Was the mass resolution documented at both the beginning and end of the 12 hour shift?		✓			✓
2. Was the instrument resolution >10,000 (<100 ppm) on PFK m/z 304.9824 and m/z 380.9760 or FC43 m/z 313.9838 and m/z 363.9807?		✓			✓
3. Was the measured exact mass of m/z 380.9760 (PFK) or 363.9807 (FC43) within 5 ppm at reduced accelerating voltage?		✓			✓
4. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
5. Was the Window Defining Mixture analyzed and the MID switchpoints set to encompass the retention time windows of each congener group?		✓			✓
6. Was the Column Performance solution analyzed and the %Valley ≤25 for separation between 2378-TCDD/F and the closest eluting non-2378 isomer?		✓			✓
7. Were continuing calibrations performed at the beginning and end of the 12-hour period, with successful mass resolution and GC resolution performance checks?		✓			✓
8. Were the response factors calculated for each labeled standard and unlabeled native analyte using the SOP specified reference compound (Table 3), quantitation ions (Table 22), and formula (Section 10.2.6)?		✓			✓
9. Are the measured RRFs for each compound within the specified control limits in Table 7 for all PCDDs/PCDFs?		✓		2,3,7,8-TCDF 21%; ok to close	✓
10. Are the relative retention times of all PCDDs/PCDFs and all labeled compounds within the limits specified in Table 3?		✓			✓
11. Are all S/N ratios ≥10 for the GC signals in each EICP (extracted ion chromatographic profile) including internal standards?		✓			✓
12. Are the ion abundance ratios for all labeled and unlabeled analytes within the control limits specified in Table 22 of the SOP?		✓			✓
13. If manual integrations were performed, are they clearly identified, initialed and dated?	✓				✓
14. Were before/after chromatograms reviewed to determine whether the software and manual integrations were appropriate?.		✓			✓
15. Were manual integrations performed properly?.	✓				✓
16. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓				✓
17. Does the CCAL folder contain **complete** data in the following order: Data review checklist, a **complete** runlog, CCAL summary, Ratio summary, Calculation summary, PFK resolution/peak match documentation; Total RIC, EICP's and manual integration - for window and all standards?		✓			✓

Analyst:	**Date:** 8-18-12	**2nd Level Reviewer :**	**Date:** 9/19/12
Comments:		**Comments:**	

ID022R16.doc, 031212

TESTAMERICA KNOXVILLE
SPECIALTY ORGANICS INSTRUMENT DFS RUN LOG

Date	Time	Opr	Sample ID	Filename	Code	Matrix	Type	Tape	GC #	Lot#/Comments
9-18-12	2:14	L	nonane	rinse	ok	—	QC		2	flush
9-18-12	2:25	L	⊥	⊥	ok	—	QC		2	⊥
9-18-12	2:34	L	⊥	⊥	ok	—	QC		2	⊥
9-18-12	2:44	L	MWDP11AA	d2fmwdp1b	ok	Solid	QC		2	SystemBlank
9-18-12	3:23	L	MWJ6P1AA/C 9-18-12	d2fmwj6p x2	OK	wipe	SAM		2	H2I130444-001
9-18-12	3:53	L	MWJ6Q1AA/C	d2fmwj6q	OK	wipe	SAM		2	⊥ -002
9-18-12	4:24	L	MWCK31AD	d2fmwck3	OK	Solid	SAM		2	H2H280408-013
9-18-12	4:55	L	MV4WF1AE	d2fmwv4wt 9-18-12	OK	Solid	SAM		2	H2H140411-001
9-18-12	5:25	L	nonane	rinse	OK	—	QC		2	flush
9-18-12	5:45	L	HR0054C	d2120918s1	BF RR	—	Ver		2	8290 Ver
9-18-12	8:21	KLR	HR0054C	d2120918s2	DS	—	ver		2	8290 ver
9/18/12	9:06	KLR	HRW54C	d2120918s3	OK	—	ver		2	8290 ver
9/18/12	9:42	KLR	FC-43	d1120918r1	OK	—	Res		—	mass Res chk.
9/18/12	11:16	KLR	FC-43	d1120918r2	OK	—	Res		—	mass Res chk
9/18/12	11:27	KLR	HRW54C	d1120918s1	OK	—	ver win		1	ver/window
9/18/12	12:38	KLR	Nonane	Rinse	OK	—	QC		1	Flush
9/18/12	12:51	KLR	⊥	⊥	OK	—	⊥		1	⊥
9/18/12	13:18	KLR	MWFPG1AA	d1tmwfpgb	OK	Solid	QC		1	System Blk
9/18/12	14:23	KLR	MV4WG1AA	d1tmv4wg	OK		Sam		1	H2H140411-002
9/18/12	15:23	KLR	MV4WH1AA	d1tmv4wh	OK		Sam		1	H2H140412-001
9/18/12	16:31	KLR	MV4WJ1AA	d1tmv4wj	OK		Sam		1	-002
9/18/12	17:30	KLR	MV4WK1AA	d1tmv4wk	OK		Sam		1	-003
9/18/12	18:31	KLR	MV4WL1AA	d1tmv4wl	OK		Sam		1	-004
9/18/12	19:31	KLR	MV4WM1AA	d1tmv4wm	OK		Sam		1	-005
9/18/12	20:32	KLR	HRW54C	d1120918s2	OK	—	ver win		1	ver/window
9-18-12	21:47	L	FC-43	d1120918r3	OK	—	Res		—	Mass Res Check
9-18-12	22:03	L	nonane	rinse	OK	—	QC		1	flush
9-18-12	22:16	L	⊥	⊥	OK	—	QC		1	⊥
9-18-12	22:28	L	MWFPG1AA	d1tmwfpgba	OK	Solid	QC		1	SystemBlank
9-18-12	23:28	L	MV4WQ1AA	d1tmv4wq	OK	Solid	SAM		1	H2H140413-003
9-19-12	00:52	L	HR0054C	d1120919s1	DS	—	win ver		1	8290 Ver
9-19-12	2:11	L	HR0054C	d1120919s2	OK	—	ver		1	8290 Ver

Read and Understood by: _____ Date: 9-19-12

TESTAMERICA KNOXVILLE
SPECIALTY ORGANICS INSTRUMENT DFS RUN LOG

Date	Time	Opr	Sample ID	Filename	Code	Matrix	Type	Tape	GC #	Lot#/Comments
9-19-12	3:25	L	FC-43	d1120919r2	ok	—	Res		—	MSD Res Check
9-19-12	3:40	L	4104:58	d2120919w2	ok	—	WIN		2	Col Performance
9-19-12	4:11	L	nonane	— rinse	OK	—	QC		2	flush
9-19-12	4:30	L	HR0054C	d2120919s1	OK	—	Ver		2	Ver
9-19-12	5:00	L	nonane	— rinse	OK	—	QC		2	flush
9-19-12	5:19	L	↓	— ↓	OK	—	QC		2	↓
9-19-12	5:37	L	↓	— ↓	OK	—	QC		2	↓
9/19/12		KLR	MWFPG1HA	d2fmwfpgb		Solid	QC		2	System Blk
9/19/12		KLR	MV4WG1AE	d2fmv4wg		↓	Sam		2	H2H140411-002
9/19/12		KLR	MV4WQ1AE	d2fmv4wq		↓	Sam		2	H2H140413-003

Read and Understood by:_____ Date: _____

TestAmerica
Knoxville

IsoCalc Continuing Calibration Report

PCDD/PCDF by EPA Method 8290 w/15 IS's

CCAL ID: 52952 - D1120918S2
ICAL Date: 08/19/11
CCAL Filename: d1120918s2
Method: IN2 - DX8290_2
CCAL Sample ID: HR0054C
Instrument: D11A
CCAL Result Dir: /20120918s2/d1120918s2.d
Column SN: 1101912
CCAL Date/Time: 09/18/12 20:32
Column Desc: Rtx-5 60m x 0.32mm ID x 0.25um

Analytes	m/z's Forming Ratio	Ion Abund Ratio	QC Limits	Calc Conc (ng/mL)	ICAL RF	CCAL RF	%D	QC Limit	Valid?
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	10.8	1.115	1.200	7.6	20.0	True
2,3,7,8-TCDF	M/M+2	0.83	0.65-0.89	12.0	1.027	1.231	19.9	20.0	True
1,2,3,7,8-PeCDD	M+2/M+4	1.61	1.32-1.78	52	1.027	1.077	4.8	20.0	True
1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	55	1.116	1.233	10.4	20.0	True
2,3,4,7,8-PeCDF	M+2/M+4	1.50	1.32-1.78	53	1.044	1.108	6.1	20.0	True
1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	52	1.087	1.131	4.0	20.0	True
1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	50	1.113	1.114	0.1	20.0	True
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	52	1.181	1.233	4.5	20.0	True
1,2,3,4,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	58	1.317	1.534	16.5	20.0	True
1,2,3,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	57	1.233	1.401	13.6	20.0	True
2,3,4,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	56	1.237	1.382	11.7	20.0	True
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	53	1.229	1.314	6.9	20.0	True
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	51	1.082	1.112	2.8	20.0	True
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.07	0.88-1.20	58	1.450	1.686	16.3	20.0	True
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.10	0.88-1.20	57	1.340	1.531	14.2	20.0	True
OCDD	M+2/M+4	0.89	0.76-1.02	103	1.147	1.185	3.3	20.0	True
OCDF	M+2/M+4	0.92	0.76-1.02	101	1.462	1.477	1.0	20.0	True
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	101	1.056	1.064	0.8	30.0	True
13C-2,3,7,8-TCDF	M/M+2	0.82	0.65-0.89	114	1.582	1.798	13.6	30.0	True
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.61	1.32-1.78	95	0.888	0.845	-4.8	30.0	True
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	88	1.326	1.170	-11.8	30.0	True
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	84	1.361	1.140	-16.3	30.0	True
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	90	0.931	0.833	-10.5	30.0	True
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	101	0.896	0.908	1.4	30.0	True
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	92	1.206	1.113	-7.8	30.0	True
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	101	1.377	1.391	1.0	30.0	True
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	98	1.323	1.296	-2.0	30.0	True
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.54	0.43-0.59	107	1.130	1.209	7.0	30.0	True
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	110	0.734	0.808	10.1	30.0	True
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.48	0.37-0.51	118	0.882	1.038	17.7	30.0	True
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	120	0.753	0.904	20.1	30.0	True
13C-OCDD	M+2/M+4	0.90	0.76-1.02	242	0.587	0.711	21.2	30.0	True

Klu 9/19/12

L 9-18-12

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IsoCalc Continuing Calibration Report

PCDD/PCDF by EPA Method 8290 w/15 IS's

CCAL ID: 52952 - D1120918S2
CCAL Filename: d1120918s2
CCAL Sample ID: HR0054C
CCAL Result Dir: /20120918s2/d1120918s2.d
CCAL Date/Time: 09/18/12 20:32

ICAL Date: 08/19/11
Method: IN2 - DX8290_2
Instrument: D11A
Column SN: 1101912
Column Desc: Rtx-5 60m x 0.32mm ID x 0.25um

Analytes	ICAL RT	CCAL RT	RT Diff	ICAL RRT	CCAL RRT	RRT QC Limit	Valid?
2,3,7,8-TCDD	31:05	29:04	-121	1.001	1.002	-	
2,3,7,8-TCDF	29:04	27:13	-111	1.001	1.002	-	
1,2,3,7,8-PeCDD	40:42	39:47	-55	1.000	1.000	-	
1,2,3,7,8-PeCDF	38:55	37:48	-67	1.001	1.001	-	
2,3,4,7,8-PeCDF	40:09	39:11	-58	1.000	1.000	-	
1,2,3,4,7,8-HxCDD	44:59	44:13	-46	1.000	1.000	-	
1,2,3,6,7,8-HxCDD	45:06	44:20	-46	1.000	1.000	-	
1,2,3,7,8,9-HxCDD	45:30	44:42	-48	1.009	1.009	-	
1,2,3,4,7,8-HxCDF	43:57	43:14	-43	1.000	1.000	-	
1,2,3,6,7,8-HxCDF	44:05	43:21	-44	1.000	1.000	-	
2,3,4,6,7,8-HxCDF	44:48	44:03	-45	1.000	1.000	-	
1,2,3,7,8,9-HxCDF	45:46	44:56	-50	1.000	1.000	-	
1,2,3,4,6,7,8-HpCDD	49:51	48:48	-63	1.000	1.000	-	
1,2,3,4,6,7,8-HpCDF	48:10	47:13	-57	1.000	1.000	-	
1,2,3,4,7,8,9-HpCDF	50:30	49:25	-65	1.000	1.000	-	
OCDD	54:05	53:16	-49	1.000	1.000	-	
OCDF	54:13	53:24	-49	1.003	1.003	-	
13C-2,3,7,8-TCDD	31:03	29:01	-122	1.017	1.016	-	
13C-2,3,7,8-TCDF	29:02	27:10	-112	0.951	0.952	-	
13C-1,2,3,7,8-PeCDD	40:41	39:46	-55	1.332	1.393	-	
13C-1,2,3,7,8-PeCDF	38:54	37:46	-68	1.274	1.323	-	
13C-2,3,4,7,8-PeCDF	40:08	39:10	-58	1.314	1.372	-	
13C-1,2,3,4,7,8-HxCDD	44:58	44:12	-46	0.989	0.989	-	
13C-1,2,3,6,7,8-HxCDD	45:05	44:19	-46	0.991	0.992	-	
13C-1,2,3,4,7,8-HxCDF	43:56	43:13	-43	0.966	0.967	-	
13C-1,2,3,6,7,8-HxCDF	44:03	43:20	-43	0.969	0.970	-	
13C-2,3,4,6,7,8-HxCDF	44:47	44:02	-45	0.985	0.985	-	
13C-1,2,3,7,8,9-HxCDF	45:45	44:55	-50	1.006	1.005	-	
13C-1,2,3,4,6,7,8-HpCDD	49:50	48:47	-63	1.096	1.092	-	
13C-1,2,3,4,6,7,8-HpCDF	48:09	47:12	-57	1.059	1.056	-	
13C-1,2,3,4,7,8,9-HpCDF	50:29	49:24	-65	1.110	1.106	-	
13C-OCDD	54:04	53:15	-49	1.189	1.192	-	

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IsoCalc Continuing Calibration Report

PCDD/PCDF by EPA Method 8290 w/15 IS's

CCAL ID: 52952 - D1120918S2

WIN Filename: d1120918s2

Method: IN2 - DX8290_2

WIN Sample ID: HR0054C

Instrument: D11A

WIN Result Dir: /20120918s2/d1120918s2.d

Column SN: 1101912

WIN Date/Time: 09/18/12 20:32

Column Desc: Rtx-5 60m x 0.32mm ID x 0.25um

Window Defining First/Last Eluter Retention Times

Analyte	Reference	M/Z	Ref RT	First Eluter RT	First Eluter RRT	Last Eluter RT	Last Eluter RRT
Total TCDD	13C-2,3,7,8-TCDD	320	29:01	23:36	0.8133	32:00	1.1028
Total TCDF	13C-2,3,7,8-TCDF	304	27:10	21:22	0.7865	31:52	1.1730
Total PeCDD	13C-1,2,3,7,8-PeCDD	356	39:46	36:31	0.9183	40:31	1.0189
Total PeCDF	13C-1,2,3,7,8-PeCDF	340	37:46	32:45	0.8672	40:37	1.0755
Total HxCDD	13C-1,2,3,6,7,8-HxCDD	390	44:19	42:41	0.9631	44:42	1.0086
Total HxCDF	13C-1,2,3,4,7,8-HxCDF	374	43:13	41:57	0.9707	45:04	1.0428
Total HpCDD	13C-1,2,3,4,6,7,8-HpCDD	424	48:47	47:43	0.9781	48:48	1.0003
Total HpCDF	13C-1,2,3,4,6,7,8-HpCDF	408	47:12	47:13	1.0004	49:25	1.0470
OCDD	13C-OCDD	458	53:15	53:16	1.0003	53:16	1.0003
OCDF	13C-OCDD	442	53:15	53:24	1.0028	53:24	1.0028

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IsoCalc Preliminary Sample Report

PCDD/PCDF by EPA Method 1613B

Workorder	HR0054C	Prep Batch		Lot No	
Data File	/20120918s2/d1120918s2.d	Prep Date		SDG No	
Analysis ID	144870	Prep Exp Date		Date Received	
Analysis Date	9/18/2012	Matrix	UNKNOWN	Date Sampled	
Analysis Time	20:32	Initial Wt/Vol		Lims Test Code	
Anal Exp Date		Extract Vol		Method	DX1613B
Instrument	D11A	Dil Factor	1.00	Code	F8
Analyst	KLR				

Analyte	RT	Area	Height	RF	Std Amt	Amount	Rec	Conc (ng/mL)		DL (ng/mL)
2,3,7,8-TCDD	29:04	195784	21194	1.115	10.00	10.764621	107.65	10.764621	E	0.0987
Total TCDD		734619	83939	1.115		51.155536		51.155536	E	0.0987
2,3,7,8-TCDF	27:13	339369	39306	1.027	10.00	11.989148	119.89	11.989148	E	0.0500
Total TCDF		618846	83340	1.027		33.851594		33.851594	E	0.0500
1,2,3,7,8-PeCDD	39:47	697362	148347	1.027	50.00	52.408736	104.82	52.408736	E	0.0507
Total PeCDD		1267118	223689	1.027		147.636254		147.636254	E	0.0507
1,2,3,7,8-PeCDF	37:48	1105541	182399	1.116	50.00	55.207545	110.42	55.207545	E	0.0634
2,3,4,7,8-PeCDF	39:11	967688	189043	1.044	50.00	53.070181	106.14	53.070181	E	0.0613
Total PeCDF		2103402	307096	1.080		218.281409		218.281409	E	0.0622
1,2,3,4,7,8-HxCDD	44:13	924419	258136	1.087	50.00	52.001219	104.00	52.001219	E	0.0656
1,2,3,6,7,8-HxCDD	44:20	992860	241436	1.113	50.00	50.043147	100.09	50.043147	E	0.0675
1,2,3,7,8,9-HxCDD	44:42	1053514	251015	1.181	50.00	52.228749	104.46	52.228749	E	0.0620
Total HxCDD		1018411	260844	1.127		207.160097		207.160097	E	0.0649
1,2,3,4,7,8-HxCDF	43:14	1674155	448530	1.317	50.00	58.248214	116.50	58.248214	E	0.0582
1,2,3,6,7,8-HxCDF	43:21	1910853	462579	1.233	50.00	56.813517	113.63	56.813517	E	0.0549
2,3,4,6,7,8-HxCDF	44:03	1756332	437605	1.237	50.00	55.857563	111.72	55.857563	E	0.0580
1,2,3,7,8,9-HxCDF	44:56	1559014	375483	1.229	50.00	53.448193	106.90	53.448193	E	0.0698
Total HxCDF		3089341	712459	1.254		324.662219		324.662219	E	0.0597
1,2,3,4,6,7,8-HpCDD	48:48	881053	175249	1.082	50.00	51.379362	102.76	51.379362	E	0.104
Total HpCDD		960071	201515	1.082		107.366726		107.366726	E	0.104
1,2,3,4,6,7,8-HpCDF	47:13	1716805	374259	1.450	50.00	58.141285	116.28	58.141285	E	0.0432
1,2,3,4,7,8,9-HpCDF	49:25	1357203	254067	1.340	50.00	57.107561	114.22	57.107561	E	0.0639
Total HpCDF				1.395		115.248846		115.248846	E	0.0519
OCDD	53:16	1652609	385270	1.147	100.0	103.317535	103.32	103.317535	E	0.0835
OCDF	53:24	2059366	494582	1.462	100.0	101.030047	101.03	101.030047	E	0.0492
13C-2,3,7,8-TCDD	29:01	1631567	181699	1.056	100.0	100.818709	100.82	100.818709		0.0746
13C-2,3,7,8-TCDF	27:10	2756009	321399	1.582	100.0	113.644932	113.64	113.644932		0.0253
13C-1,2,3,7,8-PeCDD	39:46	1295502	273661	0.888	100.0	95.184951	95.18	95.184951		0.0296
13C-1,2,3,7,8-PeCDF	37:46	1793723	310904	1.326	100.0	88.224742	88.22	88.224742		0.0469
13C-2,3,4,7,8-PeCDF	39:10	1747309	343962	1.361	100.0	83.742352	83.74	83.742352		0.0457
13C-1,2,3,4,7,8-HxCDD	44:12	1634658	455774	0.931	100.0	89.509354	89.51	89.509354		0.0558
13C-1,2,3,6,7,8-HxCDD	44:19	1782134	432513	0.896	100.0	101.391702	101.39	101.391702		0.0580
13C-1,2,3,4,7,8-HxCDF	43:13	2183026	597476	1.206	100.0	92.230176	92.23	92.230176		0.0440
13C-1,2,3,6,7,8-HxCDF	43:20	2728608	675943	1.377	100.0	101.026407	101.03	101.026407		0.0385
13C-2,3,4,6,7,8-HxCDF	44:02	2541893	637349	1.323	100.0	97.959599	97.96	97.959599		0.0401
13C-1,2,3,7,8,9-HxCDF	44:55	2372440	533428	1.130	100.0	107.015813	107.02	107.015813		0.0470
13C-1,2,3,4,6,7,8-HpCDD	48:47	1584387	318725	0.734	100.0	110.052641	110.05	110.052641		0.0288
13C-1,2,3,4,6,7,8-HpCDF	47:12	2036945	447126	0.882	100.0	117.655127	117.66	117.655127		0.0663
13C-1,2,3,4,7,8,9-HpCDF	49:24	1773327	327122	0.753	100.0	120.110330	120.11	120.110330		0.0777
13C-OCDD	53:15	2789406	652997	0.587	200.0	242.322653	121.16	242.322653		0.0748
37Cl4-2,3,7,8-TCDD	29:04	178828	18861	1.202	10.00	9.701686	97.02	9.701686	E	0.0552
13C-1,2,3,4-TCDD	28:33	1532914	180931	1.000	100.0	100.000000	100.00	100.000000		0.0788
13C-1,2,3,7,8,9-HxCDD	44:41	1961997	461730	1.000	100.0	100.000000	100.00	100.000000		0.0520

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IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 1613B

Workorder	HR0054C	Prep Batch		Lot No	
Data File	/20120918s2/d1120918s2	Prep Date		SDG No	
Analysis ID	144870	Prep Exp Date		Date Received	
Analysis Date	09/18/12 20:32	Matrix	UNKNOWN	Date Sampled	
Anal Exp Date		Initial Wt/Vol		Lims Test Code	
Instrument	D11A	Extract Vol		Method	DX1613B
Analyst	KLR	Diluton Factor	1.00	Code	F8

View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
304					303.9016	305.8987	303.9016	305.8987	0.65-0.89		
	Noise	00:00	00:00	0	60	105	24	42	0.57 *	/	
	Unidentified	21:22	00:00	0	172961	209571	27324	32960	0.83	ABV/ABV	
	2,3,7,8-TCDF	27:13	26:59	14	154212	185157	18537	20769	0.83	ABV/ABV	M
	Unidentified	31:52	00:00	0	107003	129311	10425	12631	0.83	ABV/ABV	
316					315.9419	317.9389	315.9419	317.9389	0.65-0.89		
	Noise	00:00	00:00	0	40	33	16	13	1.23 *	/	
	13C-2,3,7,8-TCDF	27:10	26:56	14	1238508	1517501	145977	175422	0.82	ABV/ABV	
320					319.8965	321.8936	319.8965	321.8936	0.65-0.89		
	Noise	00:00	00:00	0	88	113	35	45	0.78	/	
	Unidentified	23:36	00:00	0	78898	97701	10217	14185	0.81	ABV/ABV	
	Unidentified	28:34	00:00	0	66832	85013	7374	9687	0.79	ABV/ABV	
	Unidentified	28:48	00:00	0	55108	76643	6624	8524	0.72	AVB/AVB	
	2,3,7,8-TCDD	29:04	29:16	-12	88163	107621	8864	12330	0.82	AVV/AVV	M
	Unidentified	29:29	00:00	0	74517	90548	7078	8734	0.82	AVV/AVV	
	Unidentified	32:00	00:00	0	45099	64260	4956	6560	0.70	ABB/ABB	
328					327.8847		327.8847				
	Noise	00:00	00:00	0	120		48				
	37Cl4-2,3,7,8-TCDD	29:04	29:16	-12	178828		18861			AVV	M
332					331.9368	333.9338	331.9368	333.9338	0.65-0.89		
	Noise	00:00	00:00	0	98	45	39	18	2.17 *	/	
	13C-1,2,3,4-TCDD	28:33	28:39	-6	685060	847854	82712	98219	0.81	AVV/ABV	
	13C-2,3,7,8-TCDD	29:01	29:14	-13	724512	907055	81584	100115	0.80	AVV/AVV	
340					339.8597	341.8567	339.8597	341.8567	1.32-1.78		
	Noise	00:00	00:00	0	125	95	50	38	1.32 *	/	
	Unidentified	32:45	00:00	0	668783	430430	62066	40066	1.55	ABV/ABV	
	1,2,3,7,8-PeCDF	37:48	37:51	-3	673926	431615	111386	71013	1.56	ABV/ABV	M
	2,3,4,7,8-PeCDF	39:11	39:10	1	580950	386738	112782	76261	1.50	ABV/AVV	
	Unidentified	40:37	00:00	0	613405	390784	124641	80323	1.57	AVV/ABV	
352					351.9000	353.8970	351.9000	353.8970	1.32-1.78		
	Noise	00:00	00:00	0	68	45	27	18	1.50	/	
	13C-1,2,3,7,8-PeCDF	37:46	37:50	-4	1100023	693700	184882	126022	1.59	ABV/ABV	
	13C-2,3,4,7,8-PeCDF	39:10	39:09	1	1078121	669188	212562	131400	1.61	ABV/ABV	
356					355.8546	357.8516	355.8546	357.8516	1.32-1.78		
	Noise	00:00	00:00	0	80	63	32	25	1.28 *	/	
	Unidentified	36:31	00:00	0	355886	225373	46758	30117	1.58	ABV/ABV	
	1,2,3,7,8-PeCDD	39:47	39:44	3	430290	267072	91402	56945	1.61	ABV/ABV	M
	Unidentified	40:31	00:00	0	421233	264626	89666	57148	1.59	ABB/ABV	
368					367.8949	369.8919	367.8949	369.8919	1.32-1.78		
	Noise	00:00	00:00	0	33	15	13	6	2.17 *	/	
	13C-1,2,3,7,8-PeCDD	39:46	39:43	3	798965	496537	169953	103708	1.61	ABV/ABV	
374					373.8208	375.8178	373.8208	375.8178	1.05-1.43		
	Noise	00:00	00:00	0	185	273	74	109	0.68 *	/	

Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

TestAmerica
Knoxville

IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 1613B

Workorder	HR0054C	Prep Batch		Lot No	
Data File	/20120918s2/d1120918s2	Prep Date		SDG No	
Analysis ID	144870	Prep Exp Date		Date Received	
Analysis Date	09/18/12 20:32	Matrix	UNKNOWN	Date Sampled	
Anal Exp Date		Initial Wt/Vol		Lims Test Code	
Instrument	D11A	Extract Vol		Method	DX1613B
Analyst	KLR	Diluton Factor	1.00	Code	F8

View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
374					373.8208	375.8178	373.8208	375.8178	1.05-1.43		
	Unidentified	41:57	00:00	0	884526	671322	217248	161606	1.32	ABV/ABV	
	1,2,3,4,7,8-HxCDF	43:14	43:07	7	945133	729022	256217	192313	1.30	ABV/ABV	M
	1,2,3,6,7,8-HxCDF	43:21	43:15	6	1085192	825661	261135	201444	1.31	AVB/AVB	M
	2,3,4,6,7,8-HxCDF	44:03	43:59	4	994398	761934	252309	185296	1.31	AVV/AVV	M
	1,2,3,7,8,9-HxCDF	44:56	44:57	-1	871091	687923	209157	166326	1.27	ABV/ABV	
	Unidentified	45:04	00:00	0	863487	670006	188178	145427	1.29	AVB/AVB	
384					383.8639	385.8610	383.8639	385.8610	0.43-0.59		
	Noise	00:00	00:00	0	93	153	37	61	0.61 *	/	
	13C-1,2,3,4,7,8-HxCDF	43:13	43:06	7	752757	1430269	203963	393513	0.53	ABV/ABV	
	13C-1,2,3,6,7,8-HxCDF	43:20	43:13	7	943777	1784831	232680	443263	0.53	AVV/AVV	
	13C-2,3,4,6,7,8-HxCDF	44:02	43:58	4	864552	1677341	220303	417046	0.52	AVV/AVV	
	13C-1,2,3,7,8,9-HxCDF	44:55	44:56	-1	830483	1541957	185269	348159	0.54	ABV/ABV	
390					389.8156	391.8127	389.8156	391.8127	1.05-1.43		
	Noise	00:00	00:00	0	188	138	75	55	1.36	/	
	Unidentified	42:41	00:00	0	564833	453578	145848	114996	1.25	ABV/ABV	
	1,2,3,4,7,8-HxCDD	44:13	44:10	3	513635	410784	143610	114526	1.25	ABV/ABV	M
	1,2,3,6,7,8-HxCDD	44:20	44:17	3	556743	436117	135040	106396	1.28	AVV/AVV	M
	1,2,3,7,8,9-HxCDD	44:42	44:41	1	588067	465447	138640	112375	1.26	AVV/AVV	
402					401.8559	403.8529	401.8559	403.8529	1.05-1.43		
	Noise	00:00	00:00	0	160	80	64	32	2.00 *	/	
	13C-1,2,3,4,7,8-HxCDD	44:12	44:09	3	921943	712715	253922	201852	1.29	ABV/ABV	
	13C-1,2,3,6,7,8-HxCDD	44:19	44:16	3	1001577	780557	239326	193187	1.28	AVV/AVV	
	13C-1,2,3,7,8,9-HxCDD	44:41	44:40	1	1086863	875134	256253	205477	1.24	AVV/AVV	
408					407.7818	409.7788	407.7818	409.7788	0.88-1.20		
	Noise	00:00	00:00	0	150	130	60	52	1.15	/	
	1,2,3,4,6,7,8-HpCDF	47:13	47:21	-8	885626	831179	191086	183173	1.07	ABV/ABV	M
	1,2,3,4,7,8,9-HpCDF	49:25	49:38	-13	709836	647367	132505	121562	1.10	ABV/ABV	M
418					417.8250	419.8220	417.8250	419.8220	0.37-0.51		
	Noise	00:00	00:00	0	120	150	48	60	0.80 *	/	
	13C-1,2,3,4,6,7,8-HpCDF	47:12	47:20	-8	659334	1377611	143296	303830	0.48	ABV/ABV	
	13C-1,2,3,4,7,8,9-HpCDF	49:24	49:37	-13	549207	1224120	99373	227749	0.45	ABV/ABV	
424					423.7767	425.7737	423.7767	425.7737	0.88-1.20		
	Noise	00:00	00:00	0	163	195	65	78	0.83 *	/	
	Unidentified	47:43	00:00	0	496010	464061	105755	95760	1.07	ABV/ABV	
	1,2,3,4,6,7,8-HpCDD	48:48	49:00	-12	452448	428605	89491	85758	1.06	ABV/ABV	M
436					435.8169	437.8140	435.8169	437.8140	0.88-1.20		
	Noise	00:00	00:00	0	48	50	19	20	0.95	/	
	13C-1,2,3,4,6,7,8-HpCDD	48:47	48:59	-12	820822	763565	165802	152923	1.07	ABV/ABV	
442					441.7428	443.7399	441.7428	443.7399	0.76-1.02		
	Noise	00:00	00:00	0	115	120	46	48	0.96	/	
	OCDF	53:24	53:11	13	984722	1074644	237934	256648	0.92	ABV/ABV	M
458					457.7377	459.7348	457.7377	459.7348	0.76-1.02		

Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

TestAmerica
Knoxville

IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 1613B

Workorder	HR0054C	Prep Batch		Lot No	
Data File	/20120918s2/d1120918s2	Prep Date		SDG No	
Analysis ID	144870	Prep Exp Date		Date Received	
Analysis Date	09/18/12 20:32	Matrix	UNKNOWN	Date Sampled	
Anal Exp Date		Initial Wt/Vol		Lims Test Code	
Instrument	D11A	Extract Vol		Method	DX1613B
Analyst	KLR	Diluton Factor	1.00	Code	F8

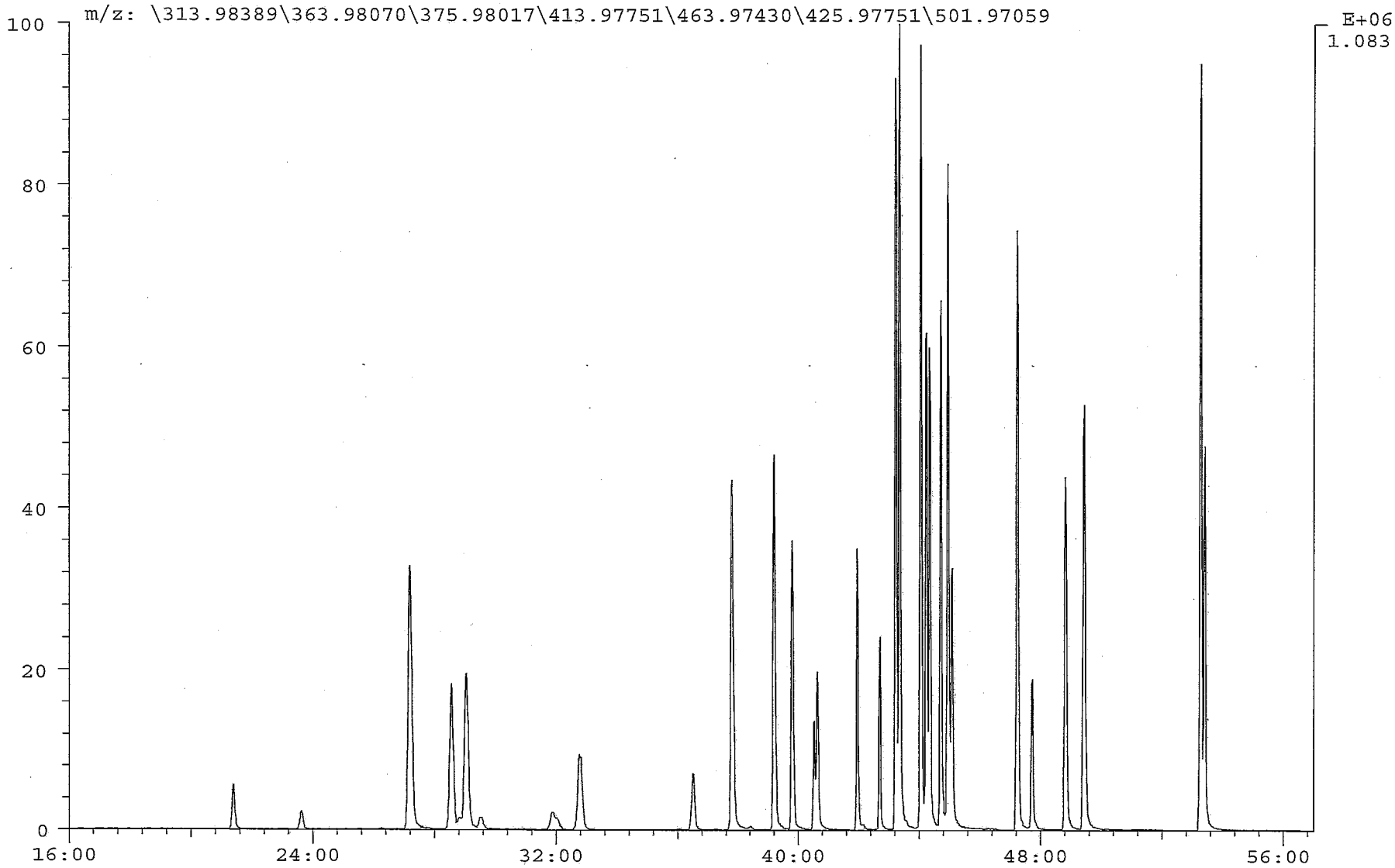
View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
458					457.7377	459.7348	457.7377	459.7348	0.76-1.02		
	Noise	00:00	00:00	0	160	153	64	61	1.05 *	/	
	OCDD	53:16	53:03	13	780086	872523	183184	202086	0.89	ABV/ABV	M
470					469.7780	471.7750	469.7780	471.7750	0.76-1.02		
	Noise	00:00	00:00	0	123	80	49	32	1.53 *	/	
	13C-OCDD	53:15	53:02	13	1320720	1468686	307521	345476	0.90	ABV/ABV	

Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

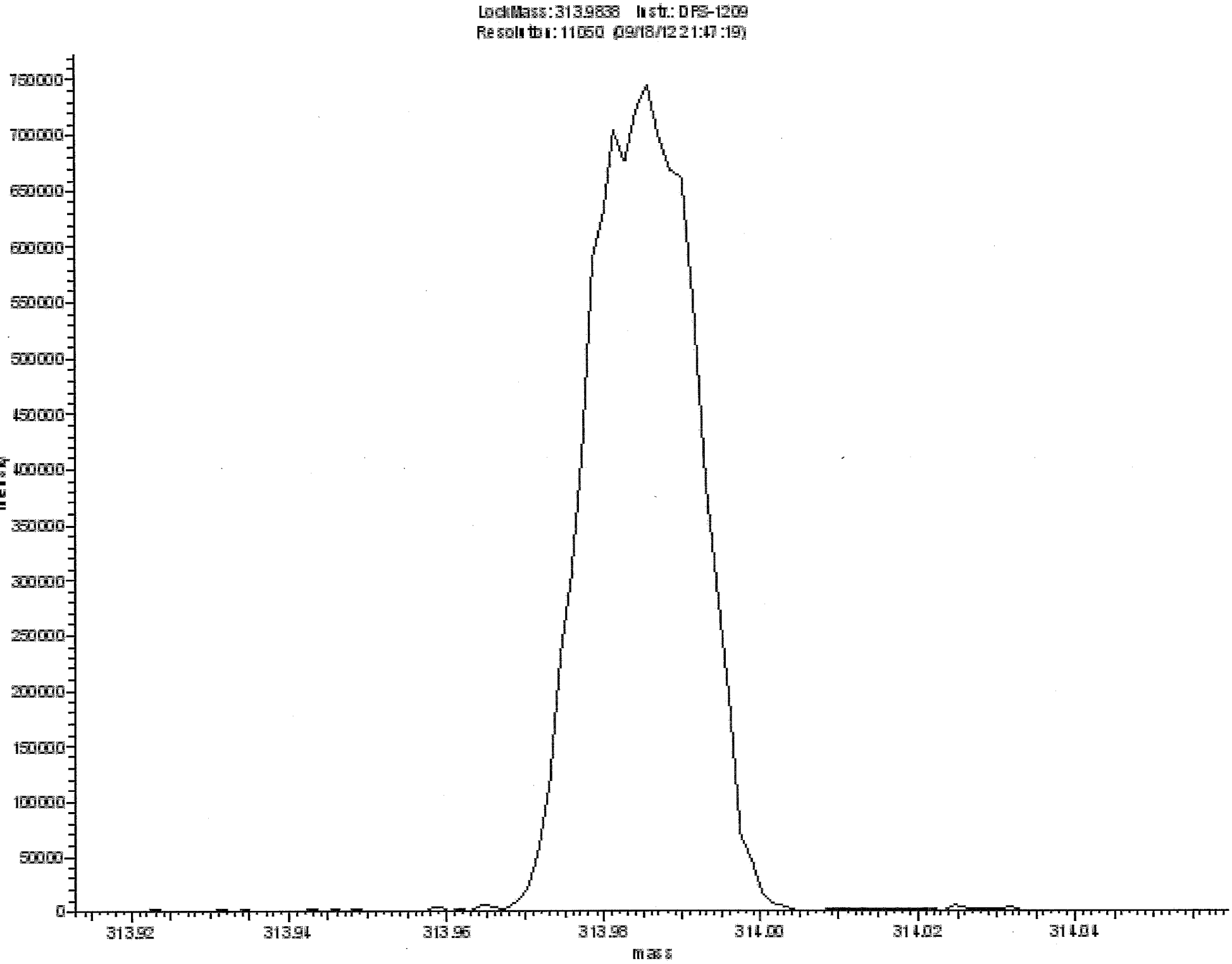
dat/lab L 9-18-12
QC KL 9/19/12

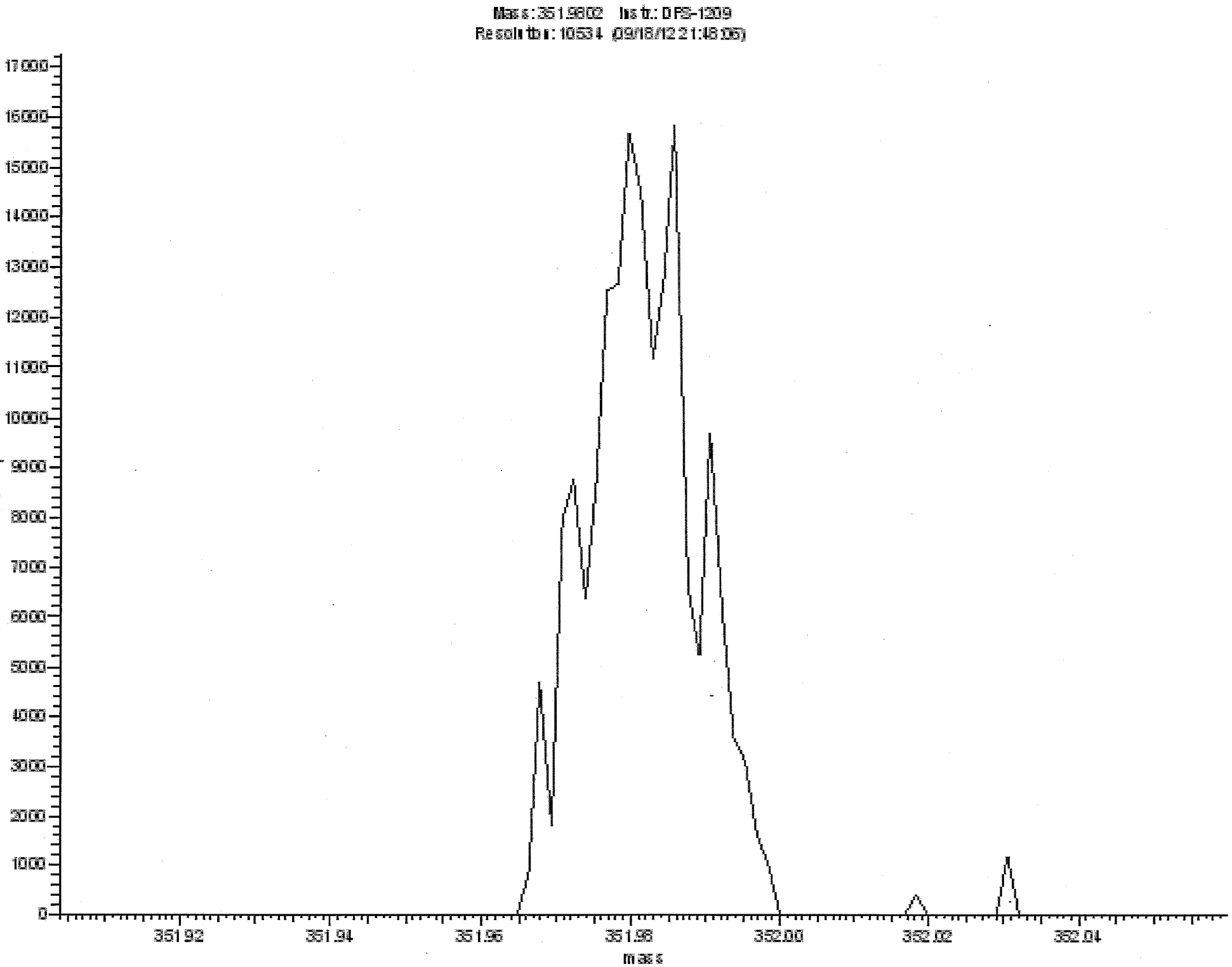
CHRO: d1120918s2 18-Sep-12 Elapse: 53:26 2419
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 234 > 2628 Masses: 303 > 514
Area: 5, 0.50, 0 Baseline : 100, 3 Label : 0, 0.0
Disp: Height Area

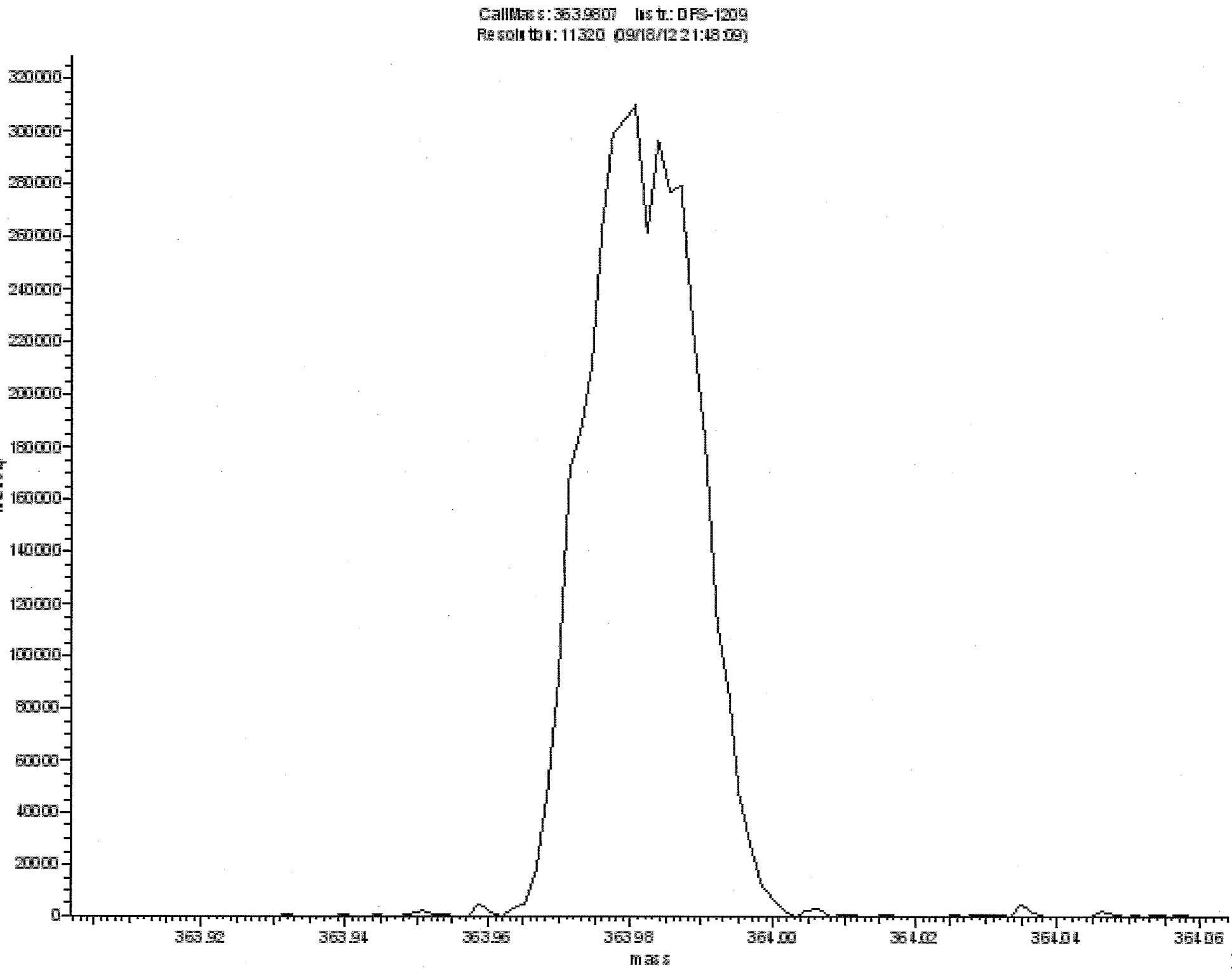


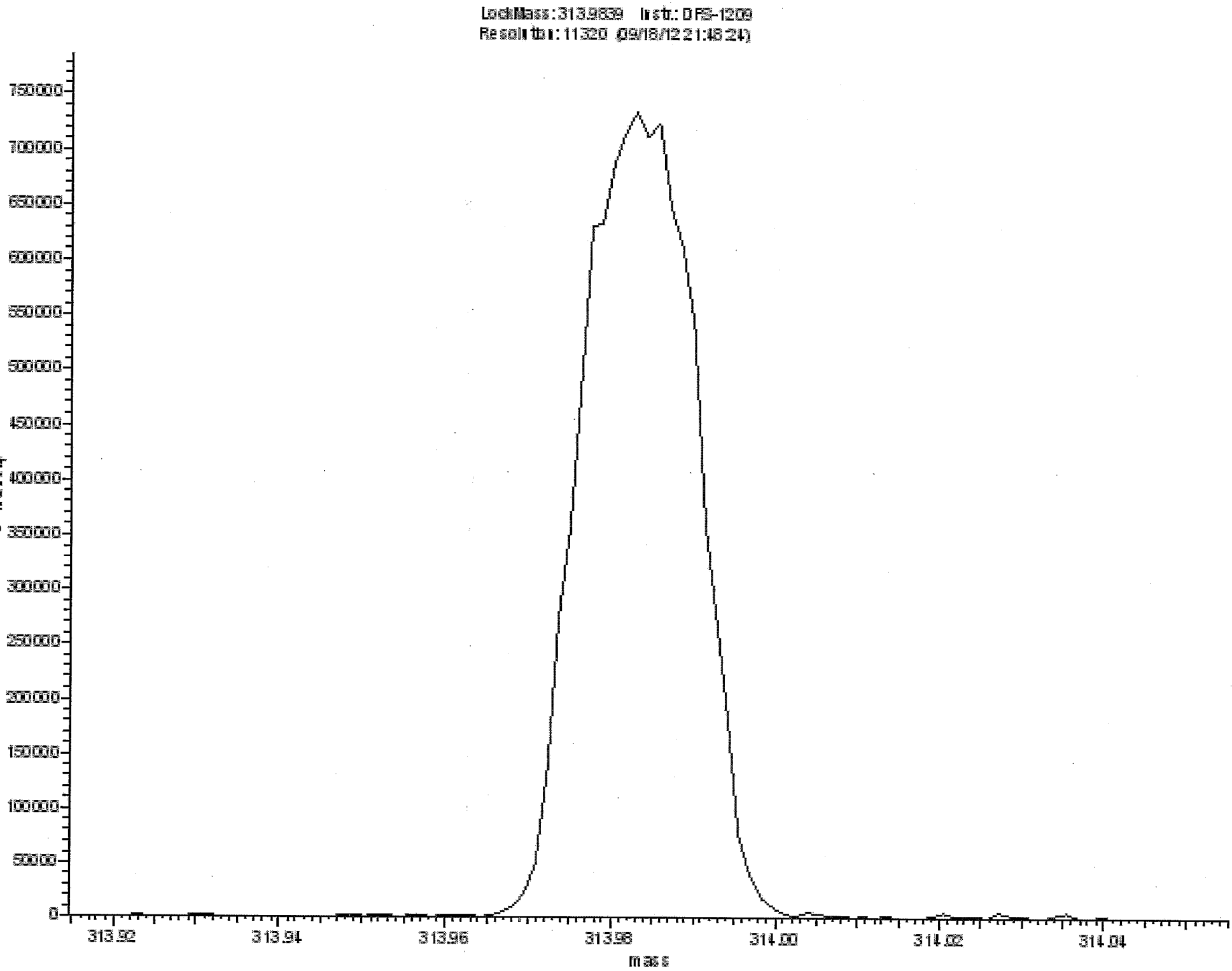
```
Reports
21:56:39:  Peak matching procedure started
21:56:39:
21:56:40:  Reference mass: 313.98336
21:56:40:  Sample mass: 364.0
21:56:41:
21:56:41:  Finding reference mass
21:56:42:  Finding sample mass
21:56:43:
21:56:48:  [1]   363.9781 amu, mean: 363.9781
21:56:52:  [2]   363.9777 amu, mean: 363.9779     SD: 0.31 mmu or: 0.85 ppm
21:56:55:  [3]   363.9782 amu, mean: 363.9780     SD: 0.28 mmu or: 0.76 ppm
21:56:58:  [4]   363.9786 amu, mean: 363.9782     SD: 0.36 mmu or: 1.00 ppm
21:57:01:  [5]   363.9787 amu, mean: 363.9783     SD: 0.39 mmu or: 1.06 ppm
21:57:04:  [6]   363.9783 amu, mean: 363.9783     SD: 0.35 mmu or: 0.95 ppm
21:57:07:  [7]   363.9782 amu, mean: 363.9783     SD: 0.32 mmu or: 0.87 ppm
21:57:10:  [8]   363.9787 amu, mean: 363.9783     SD: 0.34 mmu or: 0.93 ppm
21:57:13:  [9]   363.9783 amu, mean: 363.9783     SD: 0.32 mmu or: 0.87 ppm
21:57:17:  [10]   363.9780 amu, mean: 363.9783     SD: 0.32 mmu or: 0.87 ppm
21:57:18:
21:57:18:  Stop requested. Please wait for procedure to finish.
21:57:18:
21:57:20:  [11]   363.9780 amu, mean: 363.9783     SD: 0.31 mmu or: 0.85 ppm
21:57:21:
21:57:22:  Peakmatching stopped
```

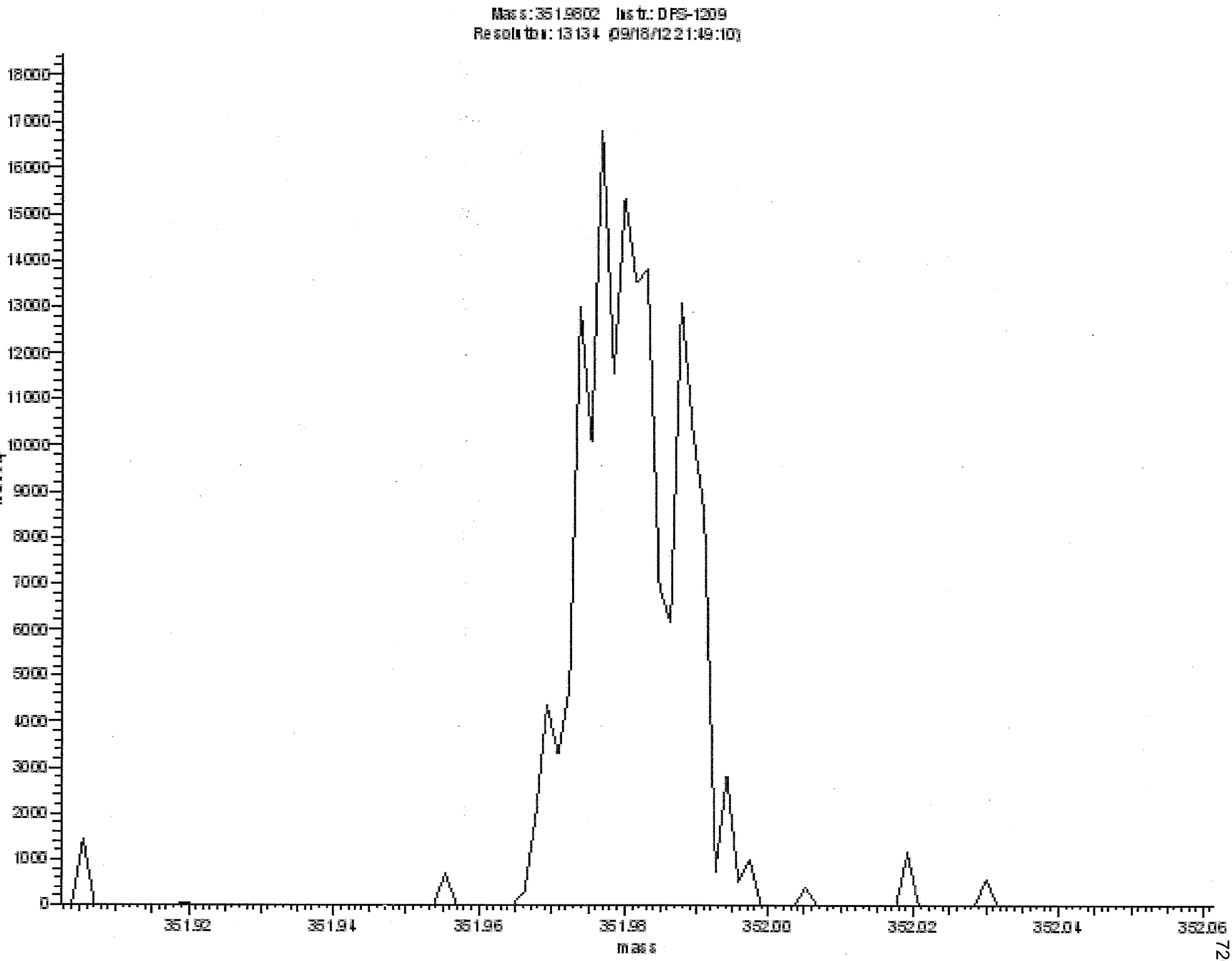
Signature 9-18-12

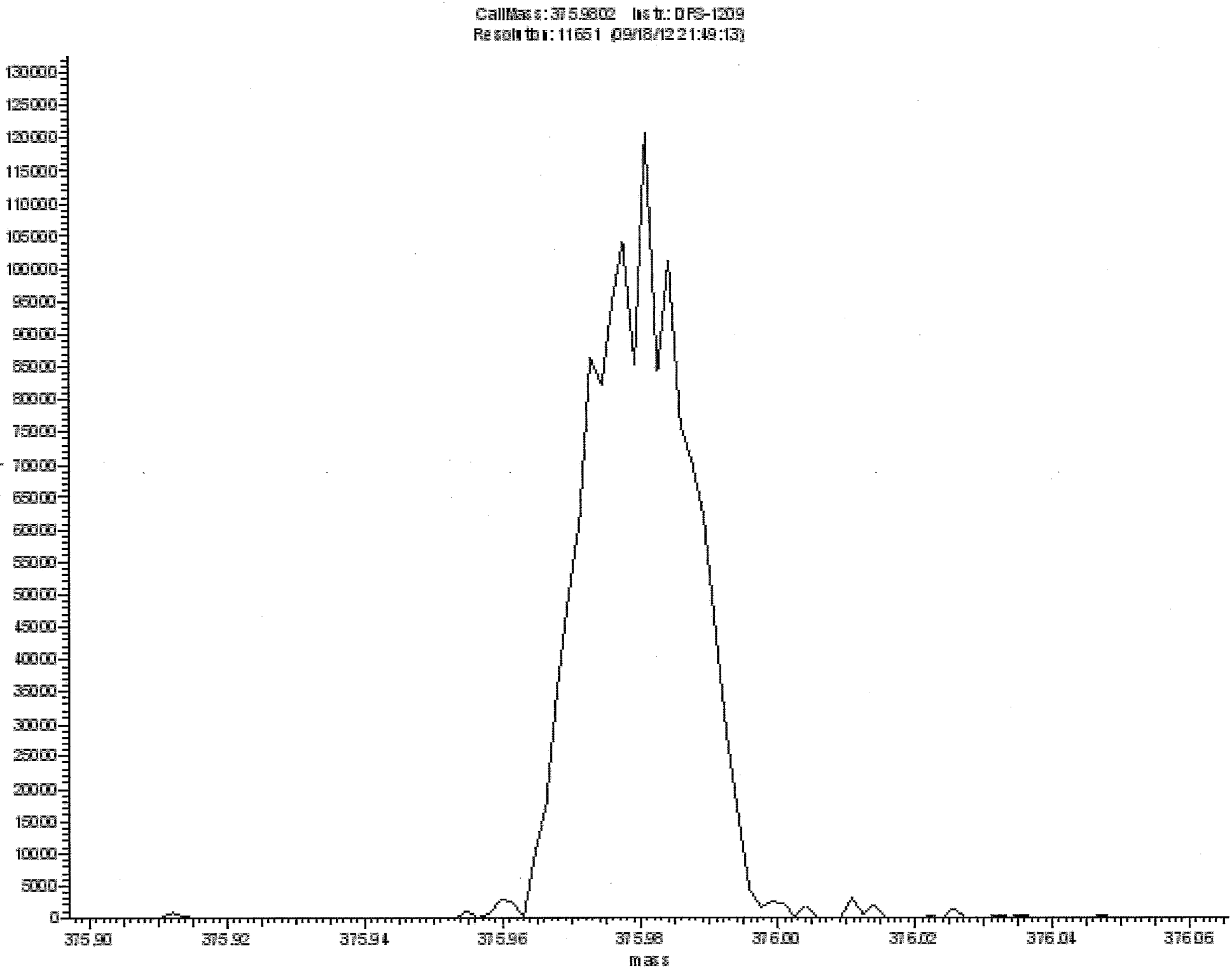

LockMass: 313.9838 Instr.: DFS-1209
Resolution: 11050 (09/18/12 21:47:19)
750000
700000
650000
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
313.92
313.94
313.96
313.98
314.00
314.02
314.04
mass

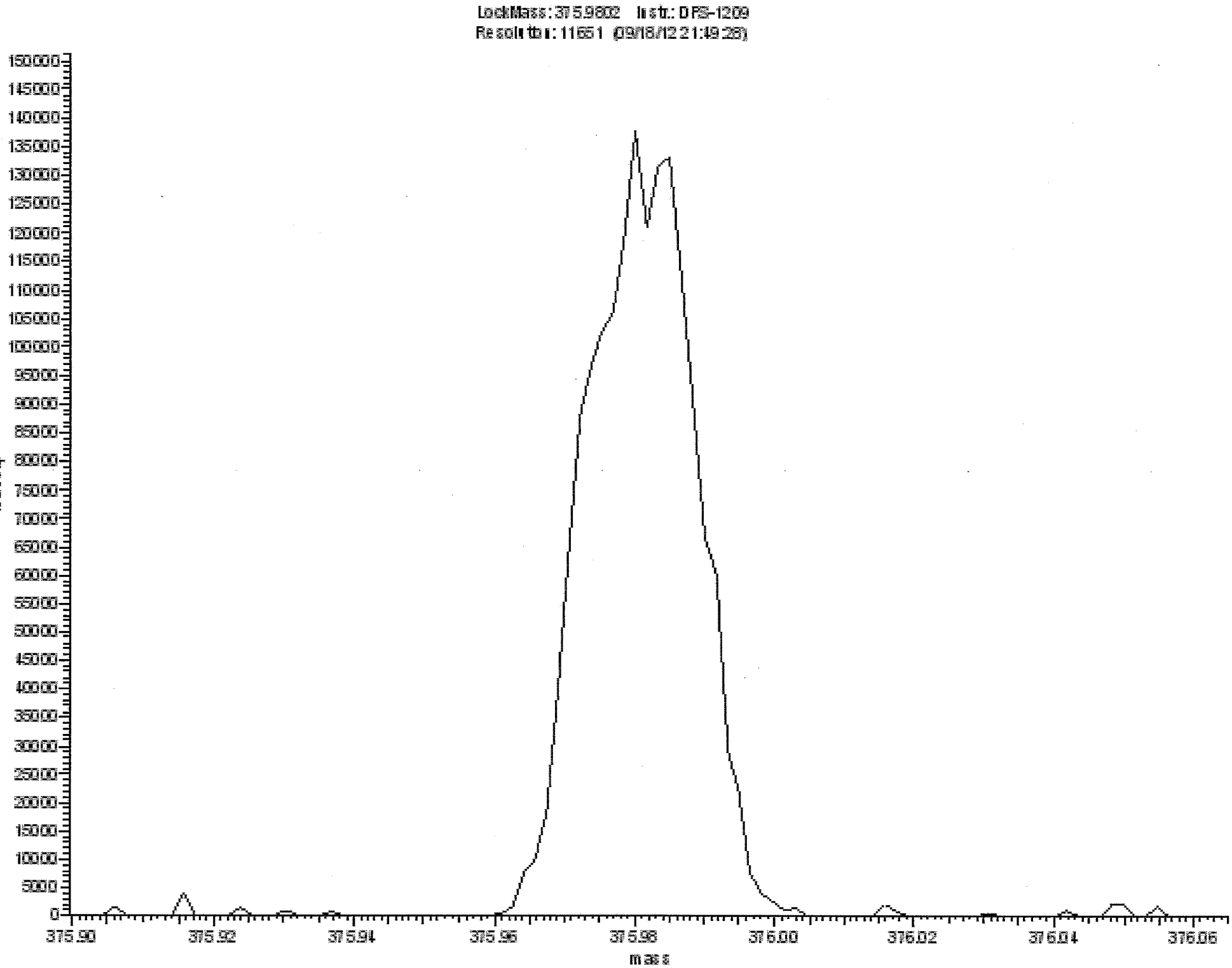

Mass: 351.98002 Instr.: DPS-1309
Resolution: 10534 (09/18/12 21:48:06)
17000
16000
15000
14000
13000
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
351.92
351.94
351.96
351.98
352.00
352.02
352.04
mass

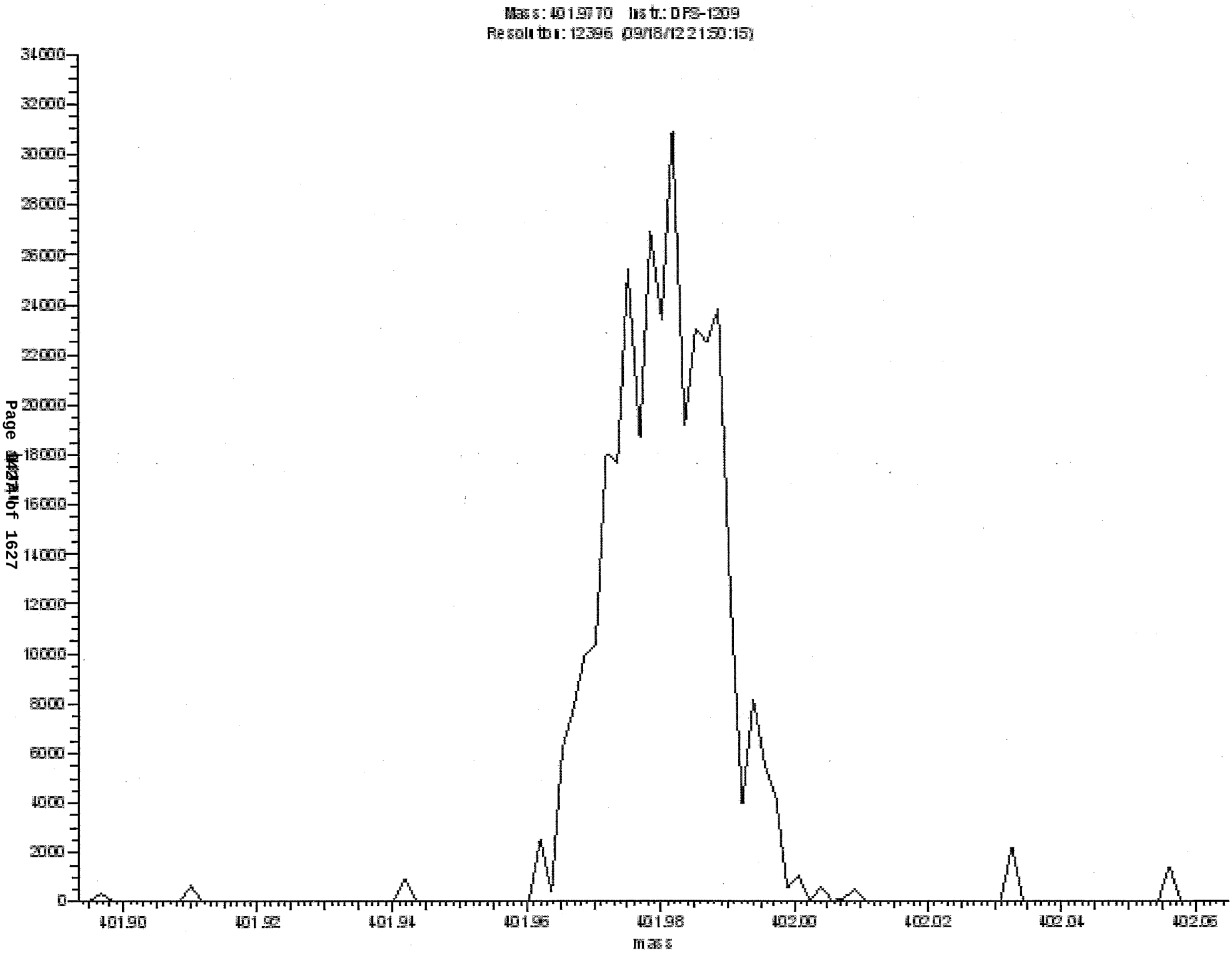

CalibMass: 363.9807 Instr.: DFS-1209
Resolution: 11320 (09/18/12 21:48:09)
320000
300000
280000
260000
240000
220000
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
363.92
363.94
363.96
363.98
364.00
364.02
364.04
364.06
mass

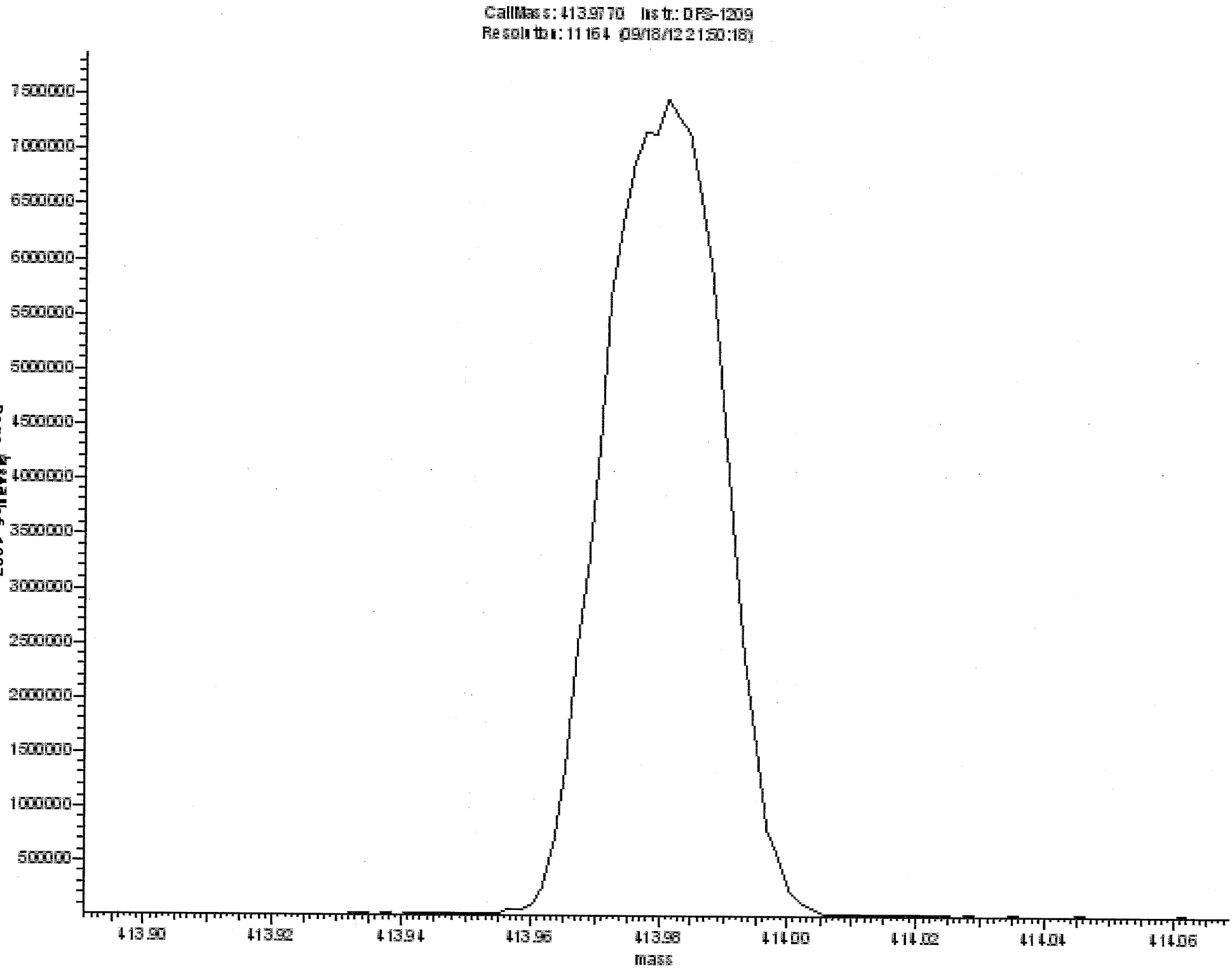

LockMass: 313.9839 Instr.: DFS-1209
Resolution: 11320 (09/18/12 21:48:24)
750000
700000
650000
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
313.92
313.94
313.96
313.98
314.00
314.02
314.04
mass

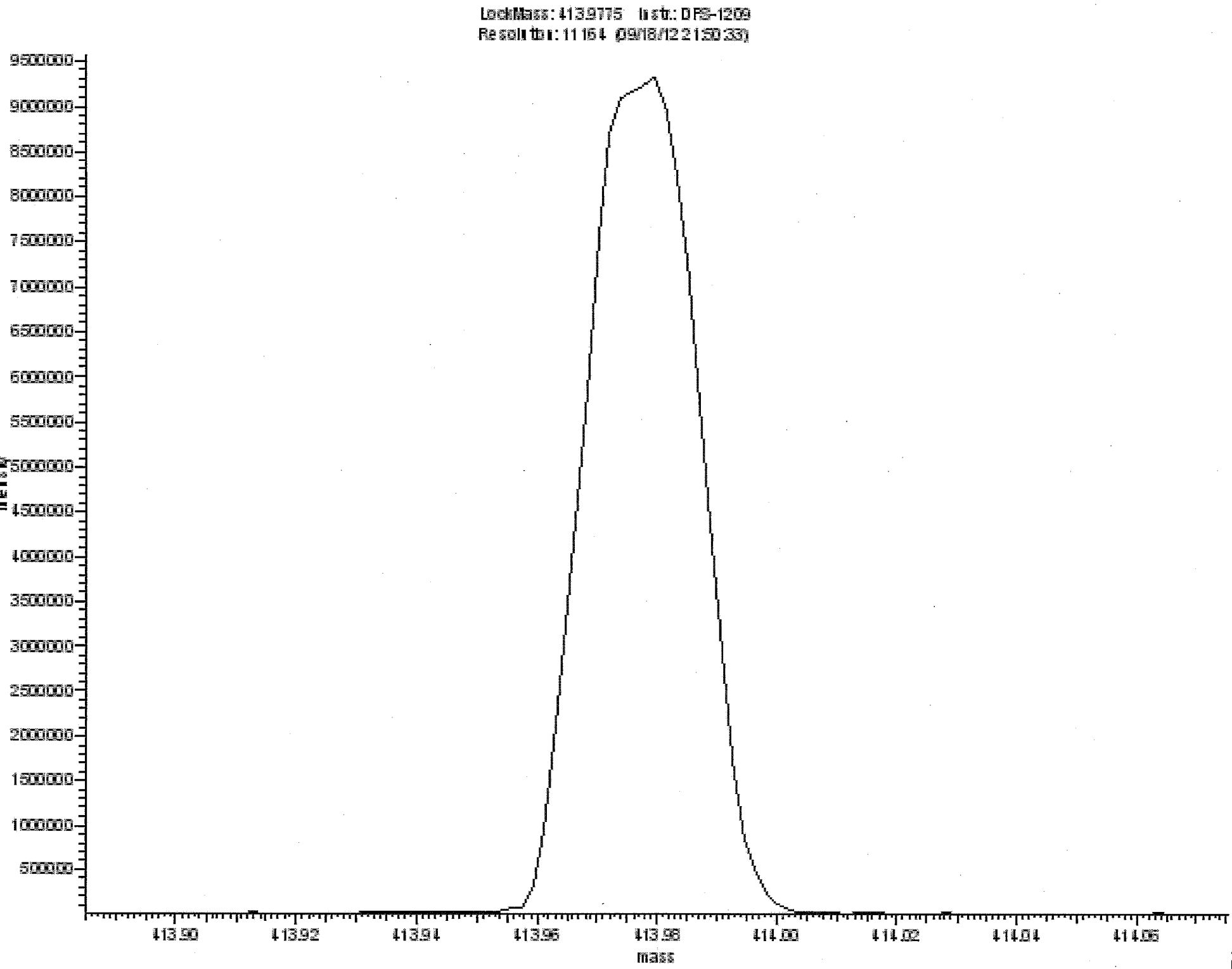

Mass: 351.98002 Instr.: DFS-1209
Resolution: 13134 (09/18/12 21:49:10)
18000
17000
16000
15000
14000
13000
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
351.92
351.94
351.96
351.98
352.00
352.02
352.04
352.06
mass


CalMass: 375.9802 Instr.: DFS-1209
Resolution: 11651 (09/18/12 21:49:13)
130000
125000
120000
115000
110000
105000
100000
95000
90000
85000
80000
75000
70000
65000
60000
55000
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
375.90
375.92
375.94
375.96
375.98
376.00
376.02
376.04
376.06
mass


LockMass: 375.9802 Instr.: DPS-1209
Resolution: 116551 (09/18/12 21:49:28)
150000
145000
140000
135000
130000
125000
120000
115000
110000
105000
100000
95000
90000
85000
80000
75000
70000
65000
60000
55000
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
375.90
375.92
375.94
375.96
375.98
376.00
376.02
376.04
376.06
mass


Mass: 401.9770 Instr.: DFS-1209
Resolution: 12396 (09/18/12 21:50:15)
34000
32000
30000
28000
26000
24000
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
401.90
401.92
401.94
401.96
401.98
402.00
402.02
402.04
402.06
mass


CalcMass: 413.9770 Instr.: DFS-12009
Resolution: 11164 (09/18/12 21:50:18)
7500000
7000000
6500000
6000000
5500000
5000000
4500000
4000000
3500000
3000000
2500000
2000000
1500000
1000000
500000
413.90
413.92
413.94
413.96
413.98
414.00
414.02
414.04
414.06
mass


LockMass: 413.9775 Instr.: DFS-1209
Resolution: 11164 (09/18/12 21:50:33)
9500000
9000000
8500000
8000000
7500000
7000000
6500000
6000000
5500000
5000000
4500000
4000000
3500000
3000000
2500000
2000000
1500000
1000000
500000
Intensity
413.90
413.92
413.94
413.96
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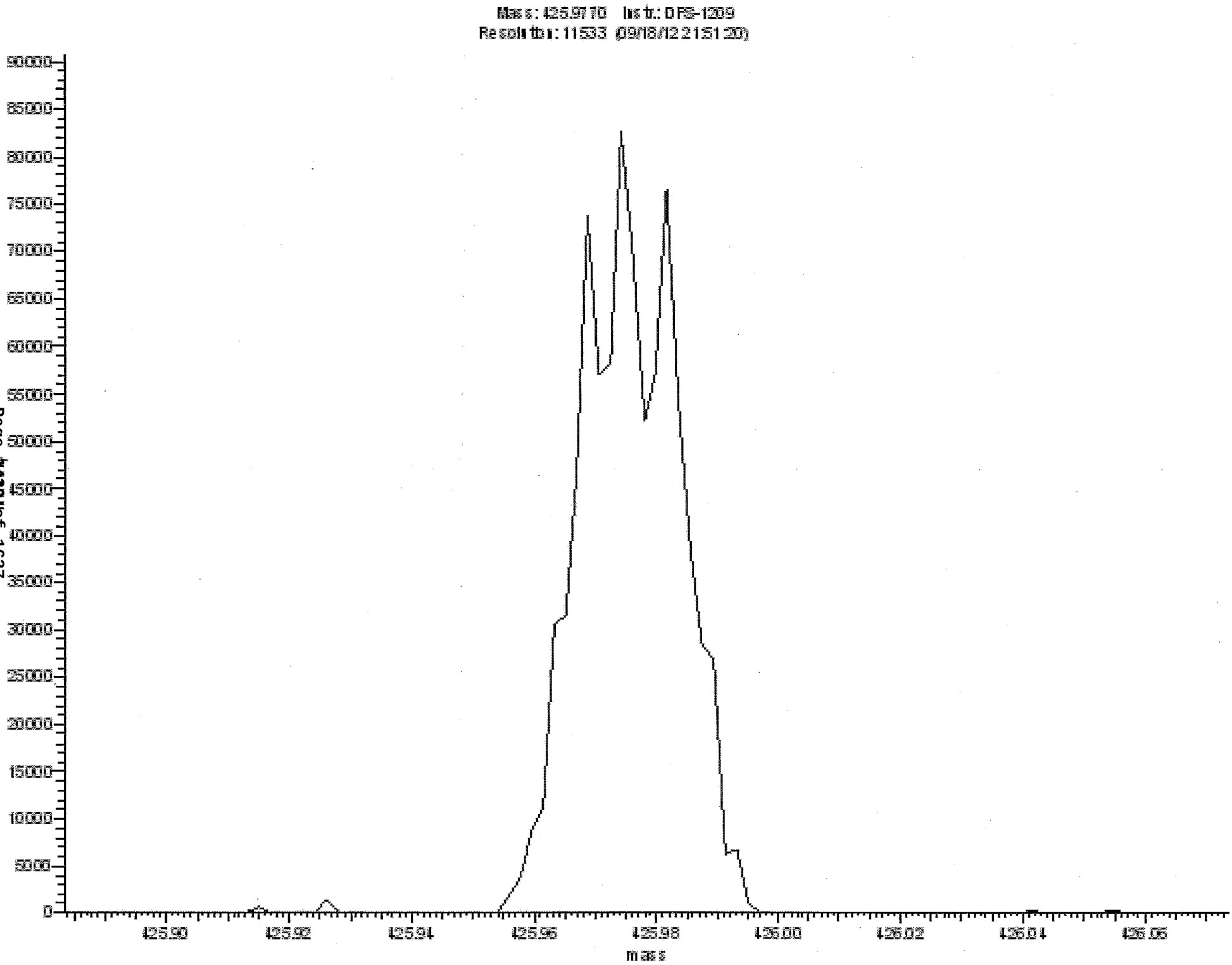
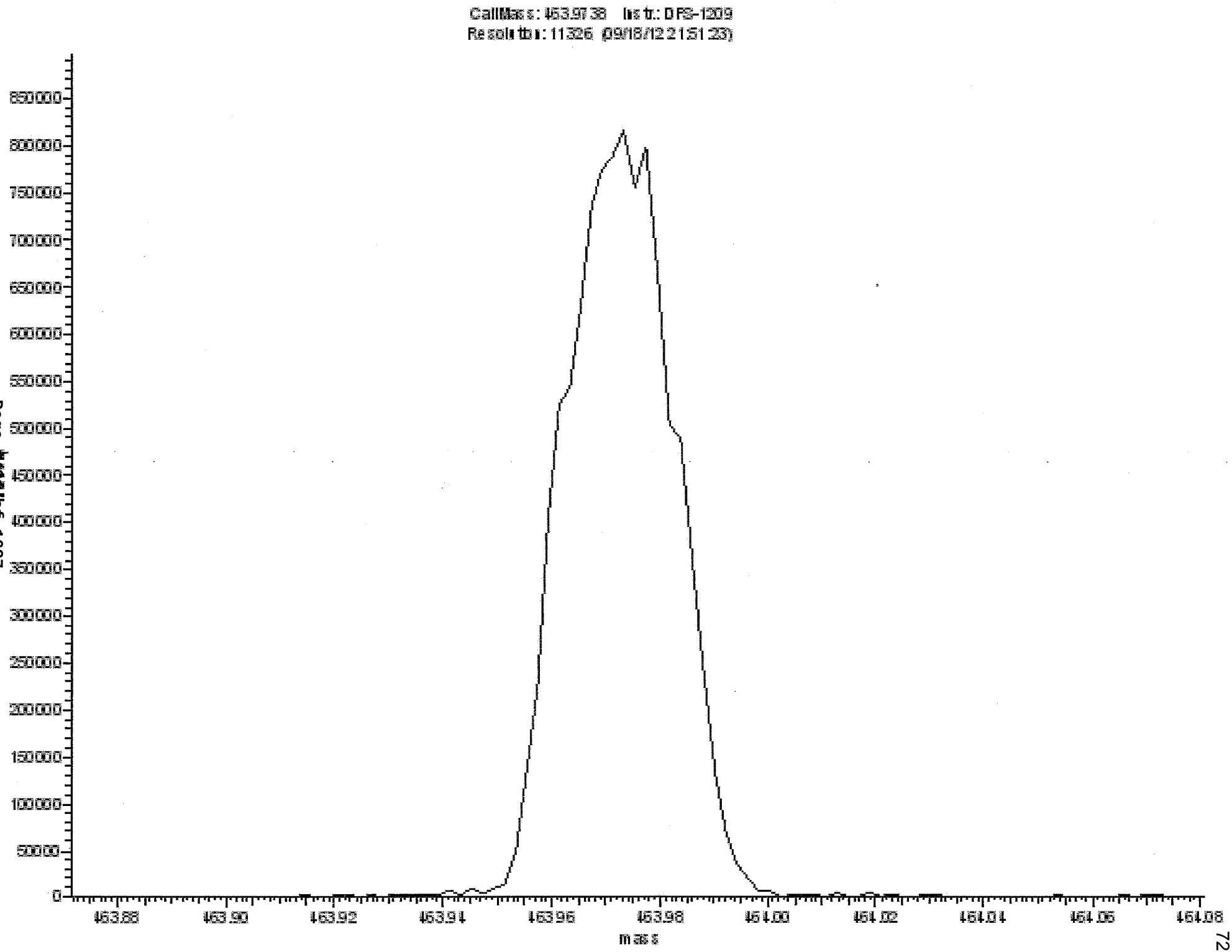
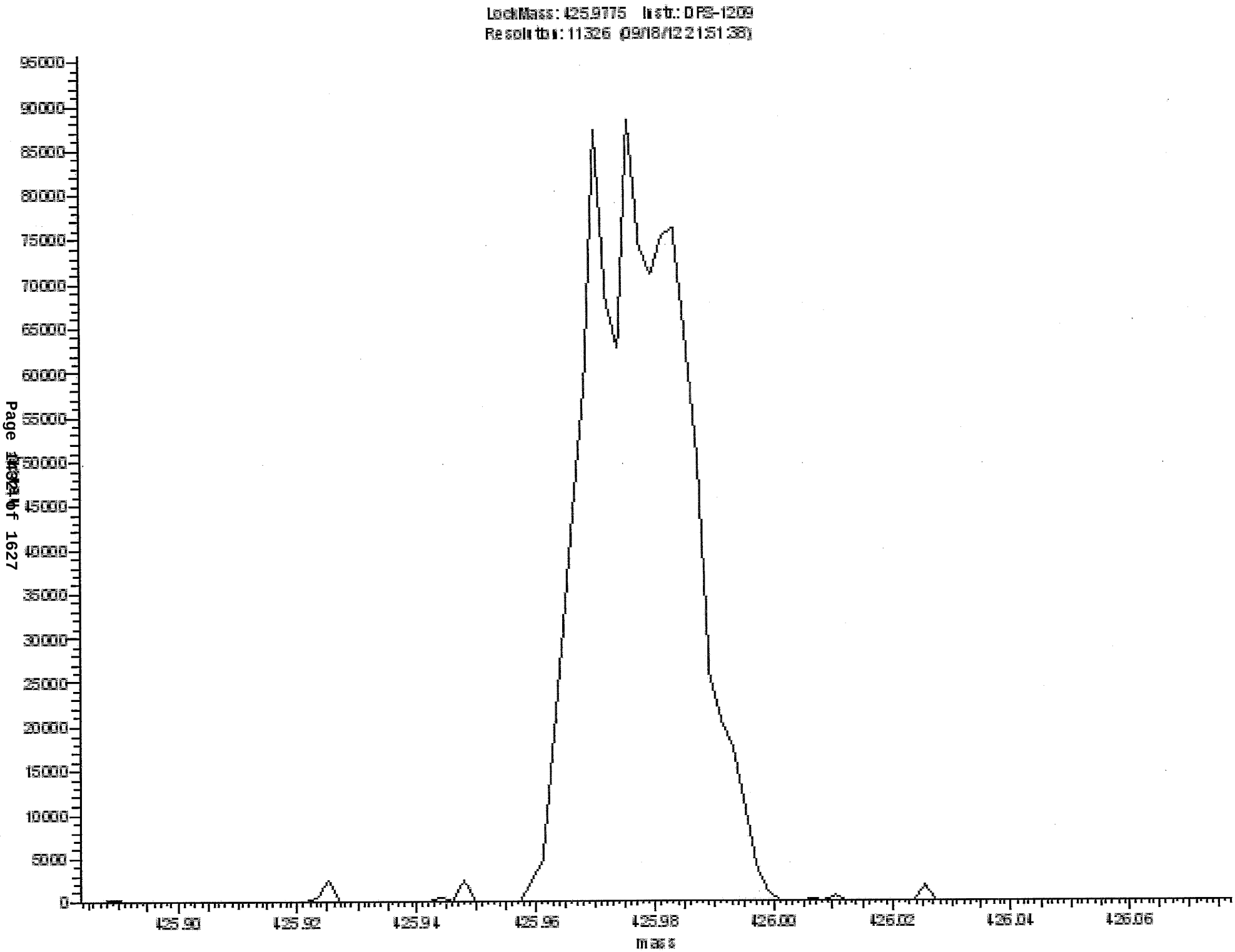
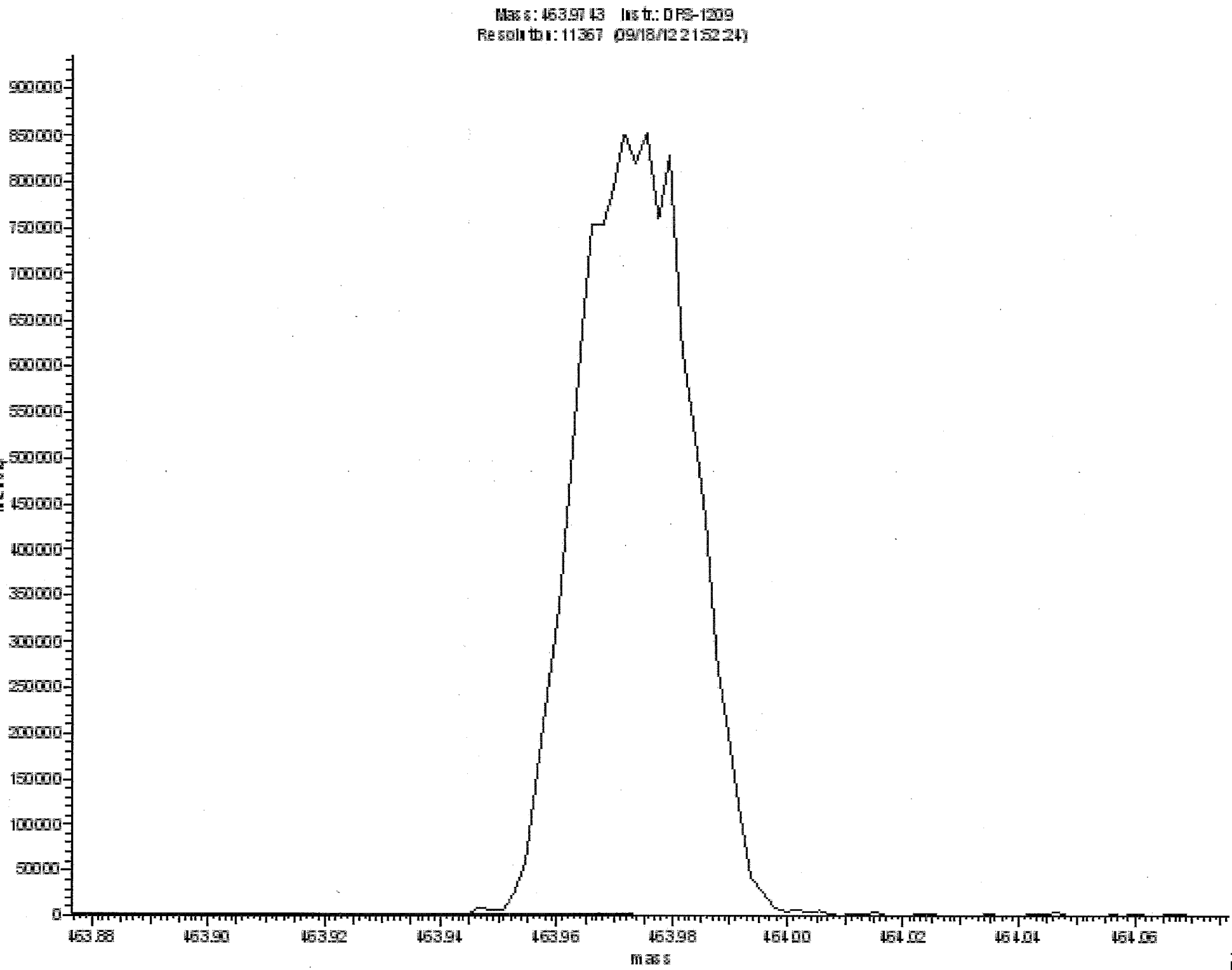
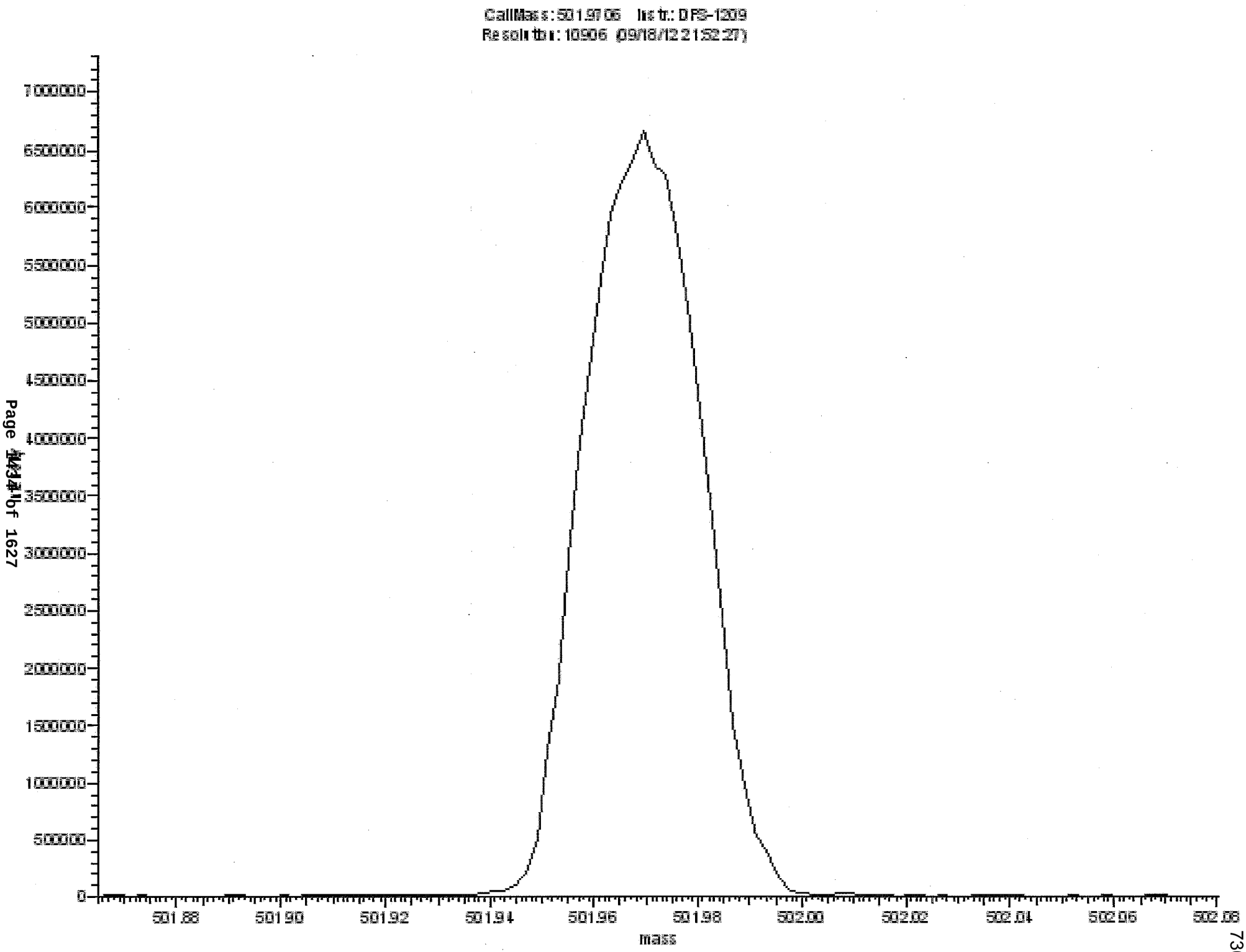
414.00
414.02
414.04
414.06
mass


Mass: 425.9770 Instr.: DFS-1209
Resolution: 11533 (09/18/12 21:51:20)
90000
85000
80000
75000
70000
65000
60000
55000
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
425.90
425.92
425.94
425.96
425.98
426.00
426.02
426.04
426.06
mass


CalcMass: 453.9738 Instr.: DFS-1209
Resolution: 11326 (09/18/12 21:51:23)
850000
800000
750000
700000
650000
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
453.88
453.90
453.92
453.94
453.96
453.98
454.00
454.02
454.04
454.06
454.08
mass


LockMass: 425.9775 Instr.: DFS-1209
Resolution: 11326 (09/18/12 21:51:38)
95000
90000
85000
80000
75000
70000
65000
60000
55000
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
425.90
425.92
425.94
425.96
425.98
426.00
426.02
426.04
426.06
mass


Mass: 463.9743 Instr.: DFS-1209
Resolution: 11367 (09/18/12 21:52:24)
900000
850000
800000
750000
700000
650000
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
463.88
463.90
463.92
463.94
463.96
463.98
464.00
464.02
464.04
464.06
mass

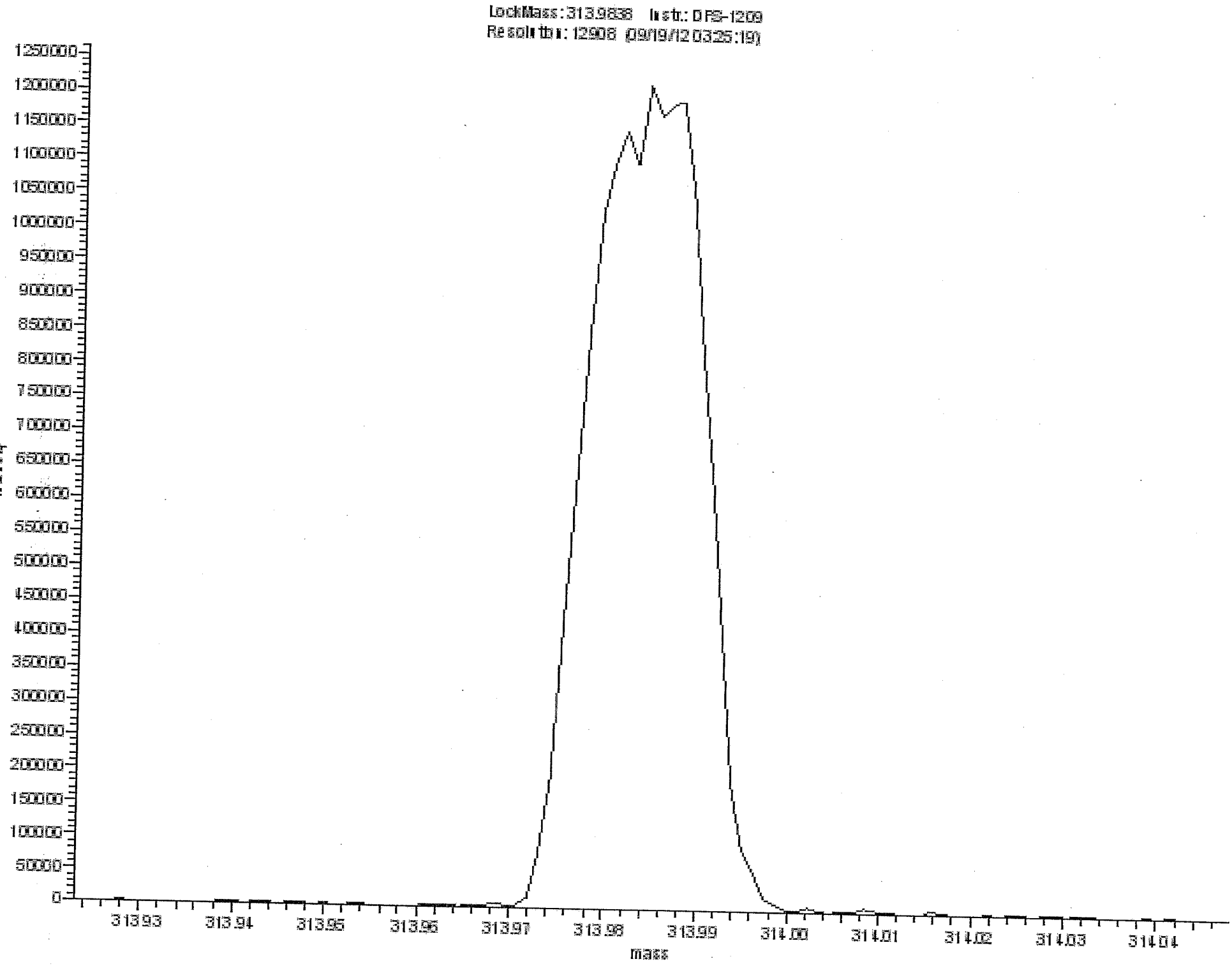

CalMass: 501.9706 Instr.: DFS-1209
Resolution: 10906 (09/18/12 21:52:27)
7000000
6500000
6000000
5500000
5000000
4500000
4000000
3500000
3000000
2500000
2000000
1500000
1000000
500000
0
501.88
501.90
501.92
501.94
501.96
501.98
502.00
502.02
502.04
502.06
502.08
mass

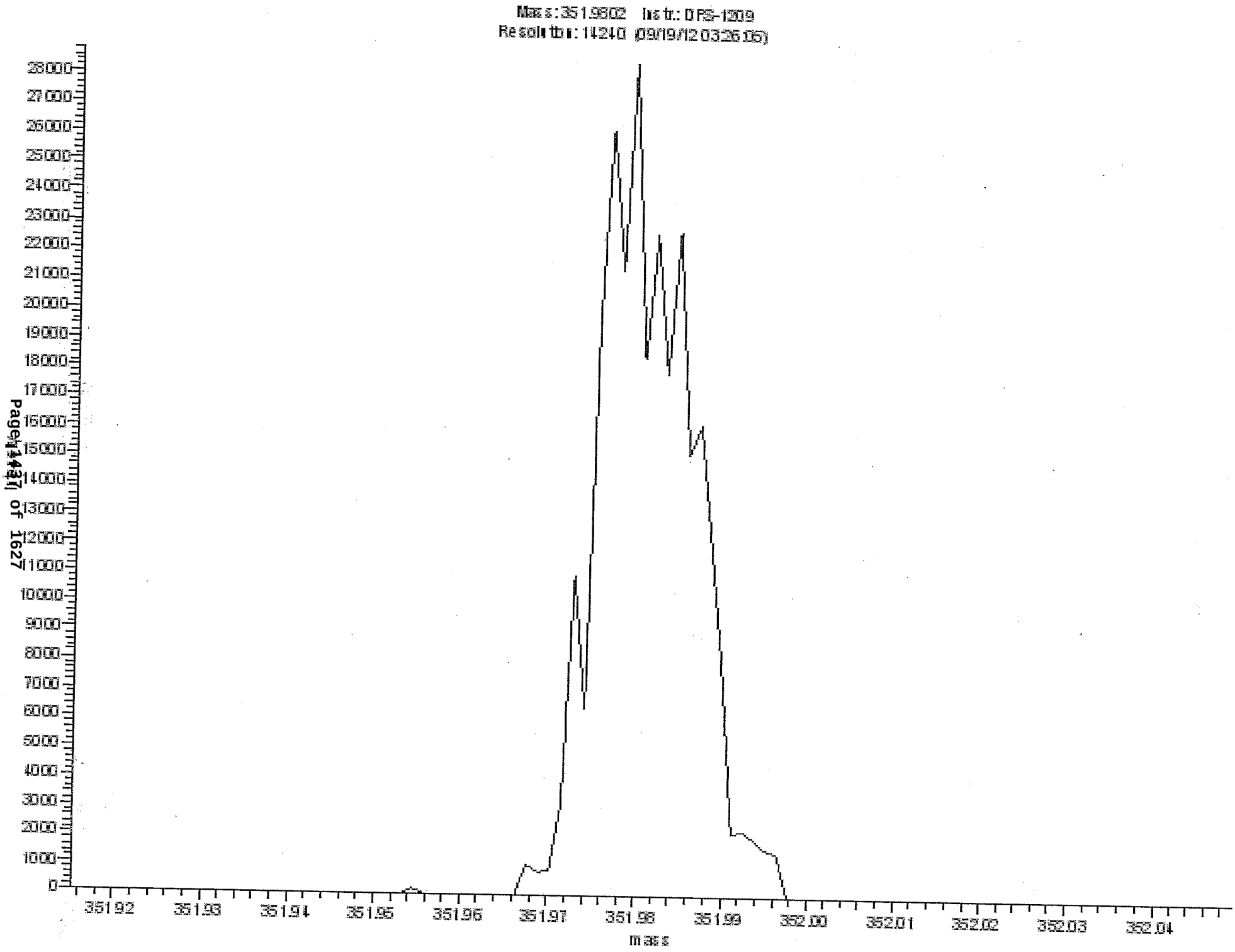
DFS Peak Matching results

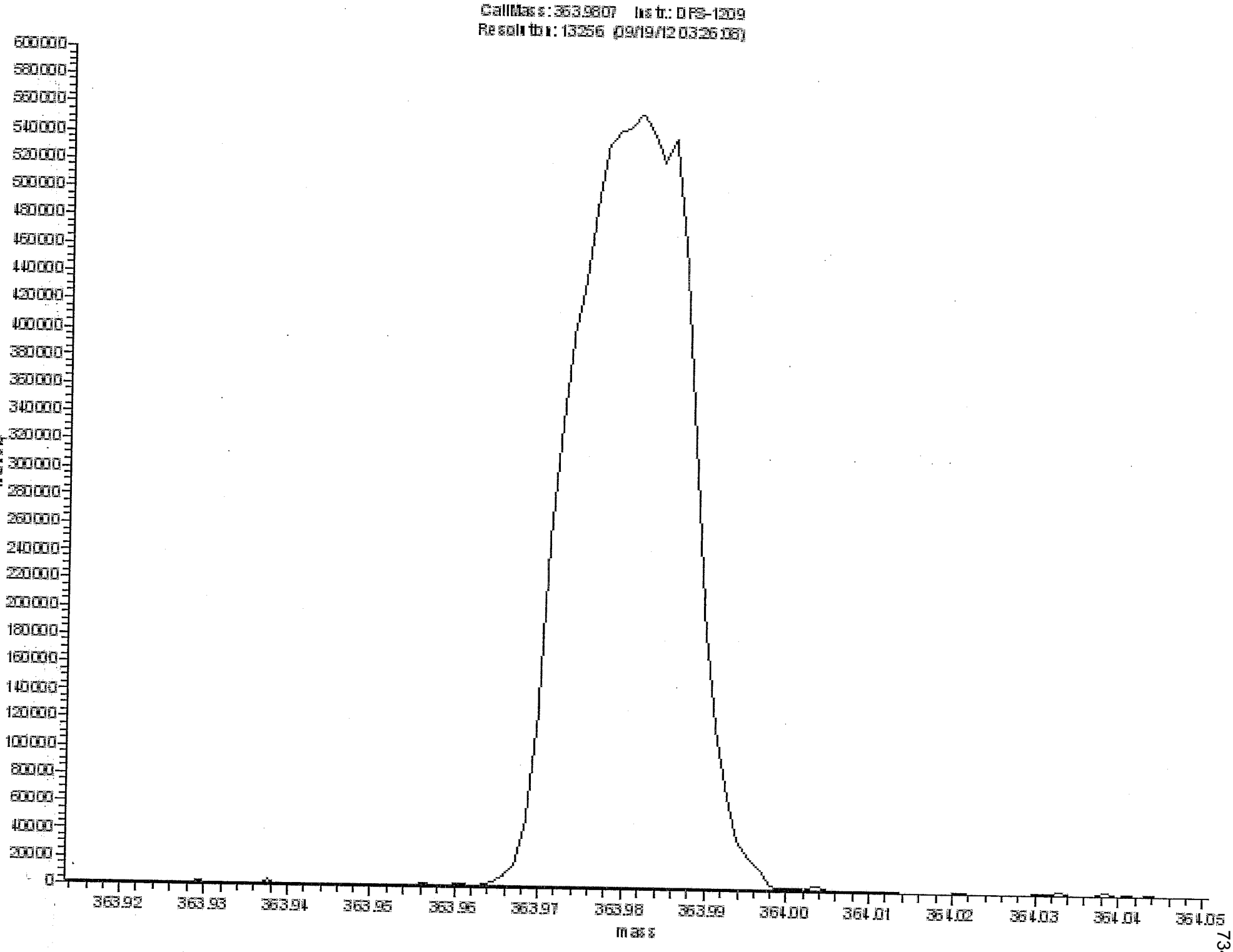
Reports

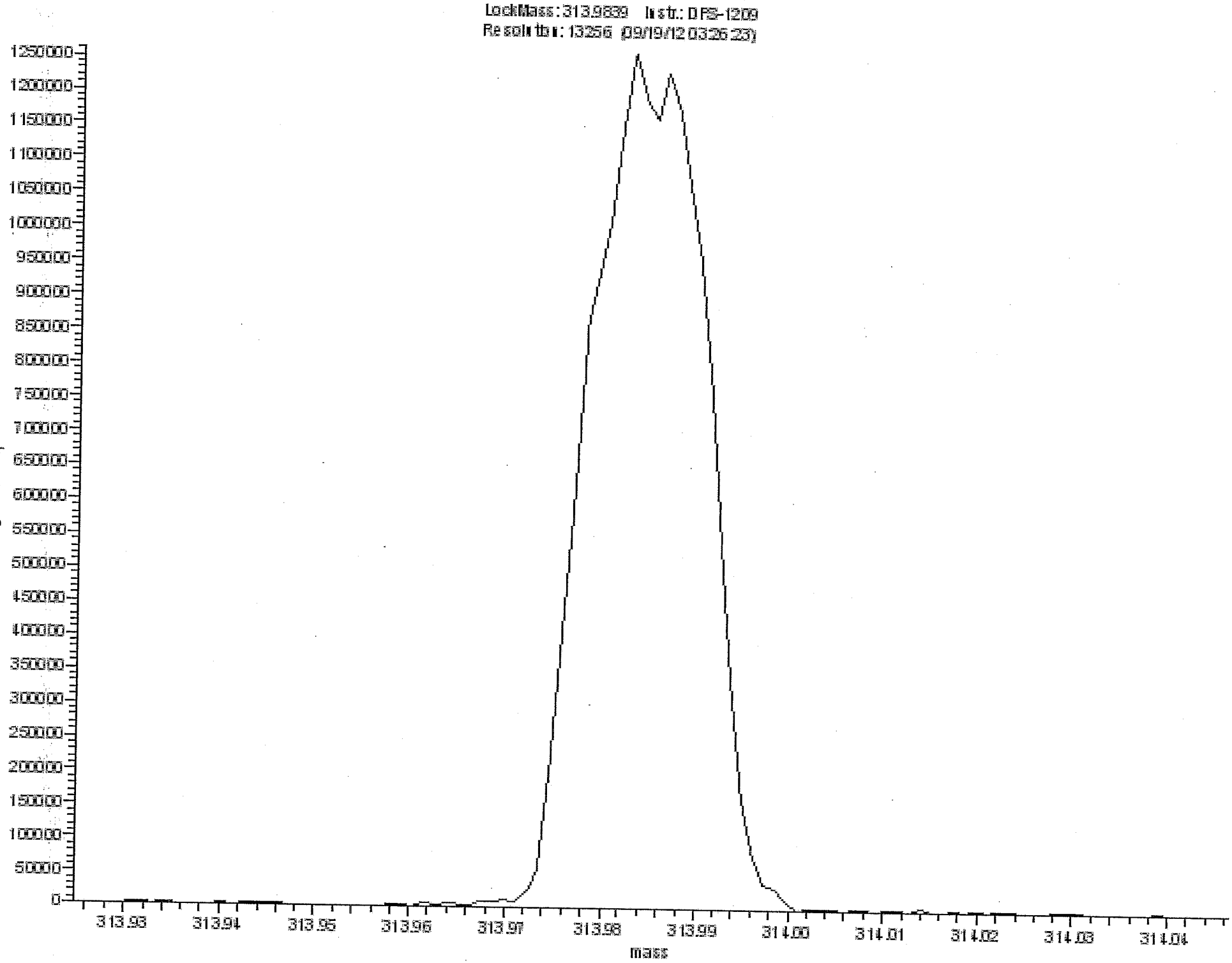
```
03:34:03:  Peak matching procedure started
03:34:04:
03:34:04:  Reference mass: 313.98336
03:34:05:  Sample mass: 364.0
03:34:05:
03:34:06:  Finding reference mass
03:34:07:  Finding sample mass
03:34:07:
03:34:13:  [1]   363.9790 amu, mean: 363.9790
03:34:16:  [2]   363.9790 amu, mean: 363.9790     SD: 0.01 mmu or: 0.03 ppm
03:34:19:  [3]   363.9784 amu, mean: 363.9788     SD: 0.33 mmu or: 0.91 ppm
03:34:22:  [4]   363.9786 amu, mean: 363.9788     SD: 0.28 mmu or: 0.78 ppm
03:34:25:  [5]   363.9788 amu, mean: 363.9788     SD: 0.24 mmu or: 0.67 ppm
03:34:28:  [6]   363.9787 amu, mean: 363.9788     SD: 0.22 mmu or: 0.61 ppm
03:34:32:  [7]   363.9788 amu, mean: 363.9788     SD: 0.20 mmu or: 0.55 ppm
03:34:35:  [8]   363.9784 amu, mean: 363.9787     SD: 0.22 mmu or: 0.61 ppm
03:34:38:  [9]   363.9787 amu, mean: 363.9787     SD: 0.21 mmu or: 0.57 ppm
03:34:41:  [10]   363.9790 amu, mean: 363.9788     SD: 0.22 mmu or: 0.60 ppm
03:34:43:
03:34:43:  Stop requested. Please wait for procedure to finish.
03:34:43:
03:34:44:  [11]   363.9788 amu, mean: 363.9788     SD: 0.21 mmu or: 0.57 ppm
03:34:46:
03:34:46:  Peakmatching stopped
```

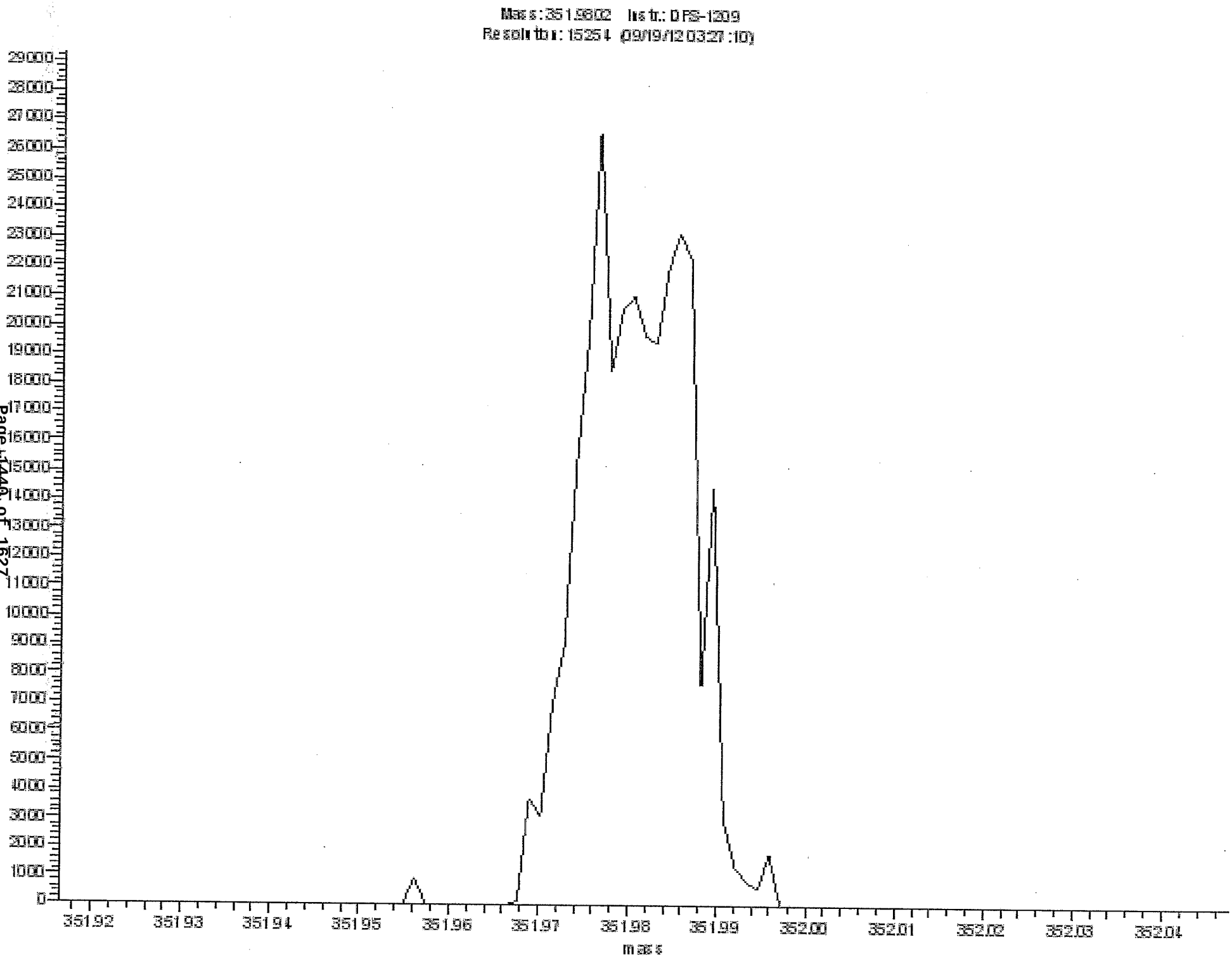
Signature 9-19-12

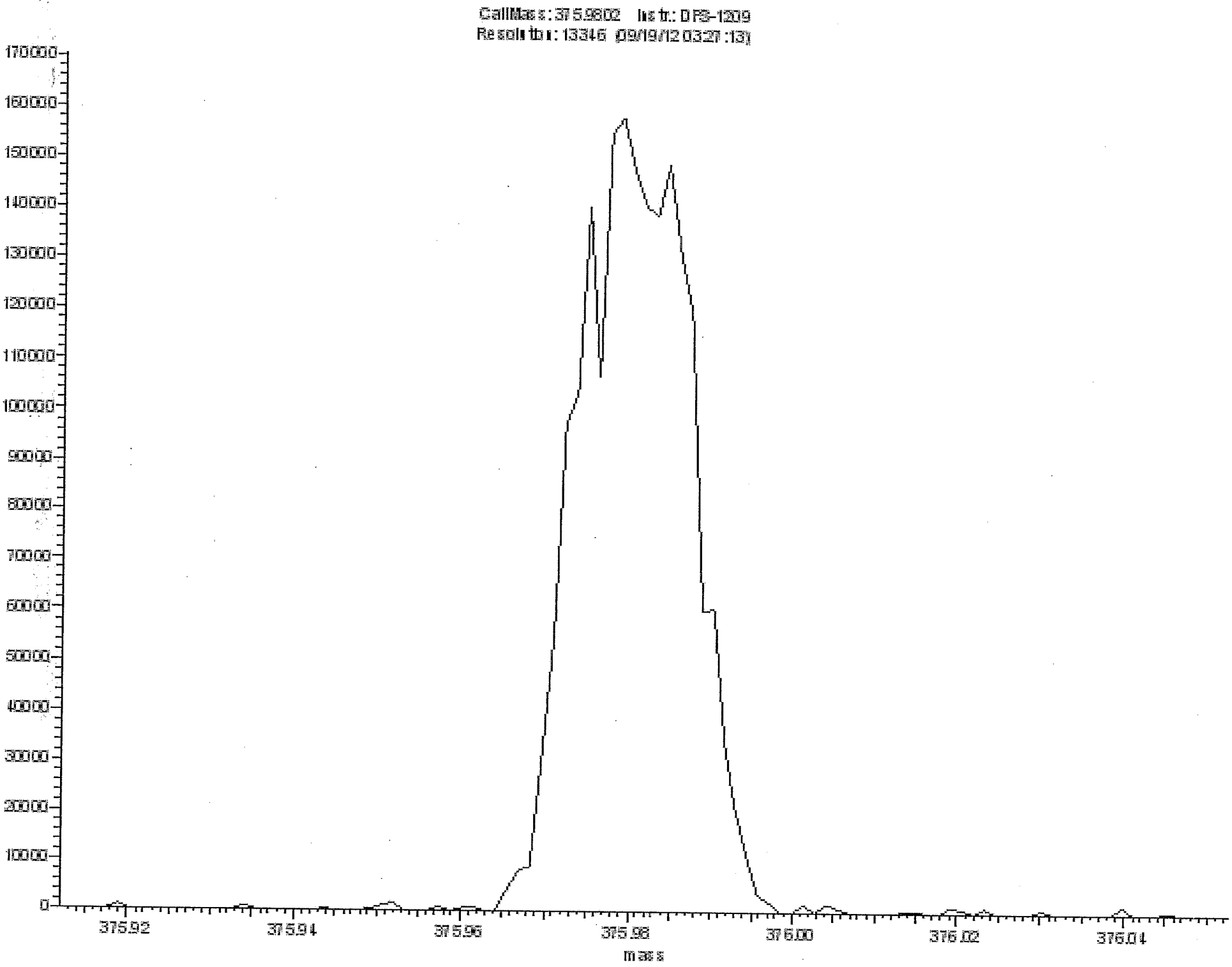

LockMass: 313.9838 Instr.: DFS-1209
Resolution: 12908 (09/19/12 03:25:19)
1250000
1200000
1150000
1100000
1050000
1000000
950000
900000
850000
800000
750000
700000
650000
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
313.93
313.94
313.95
313.96
313.97
313.98
313.99
314.00
314.01
314.02
314.03
314.04
mass

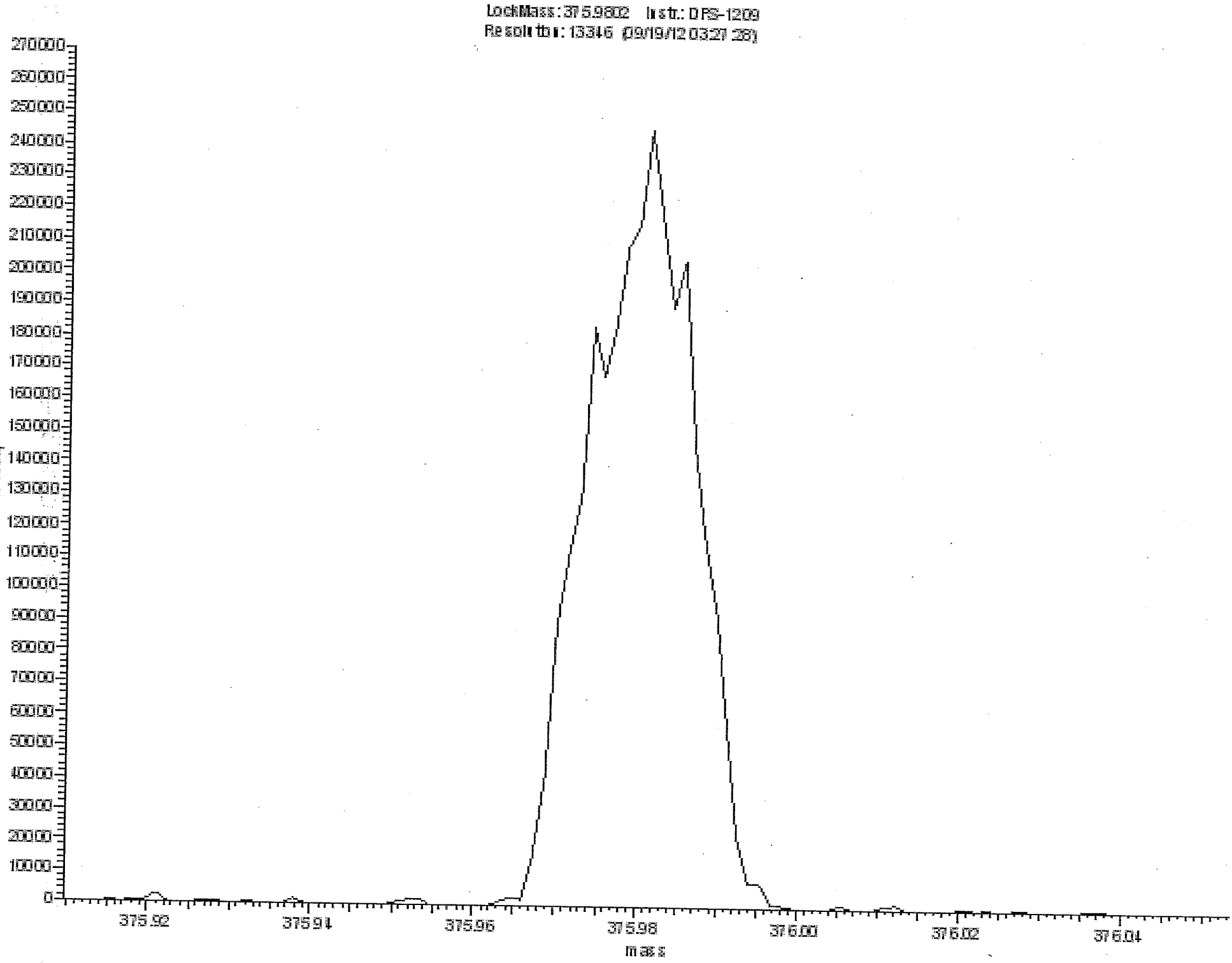

Mass: 351.9802 Instr.: DFS-12019
Resolution: 14240 (09/19/12 03:26:05)
28000
27000
26000
25000
24000
23000
22000
21000
20000
19000
18000
17000
16000
15000
14000
13000
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
351.92
351.93
351.94
351.95
351.96
351.97
351.98
351.99
352.00
352.01
352.02
352.03
352.04
mass

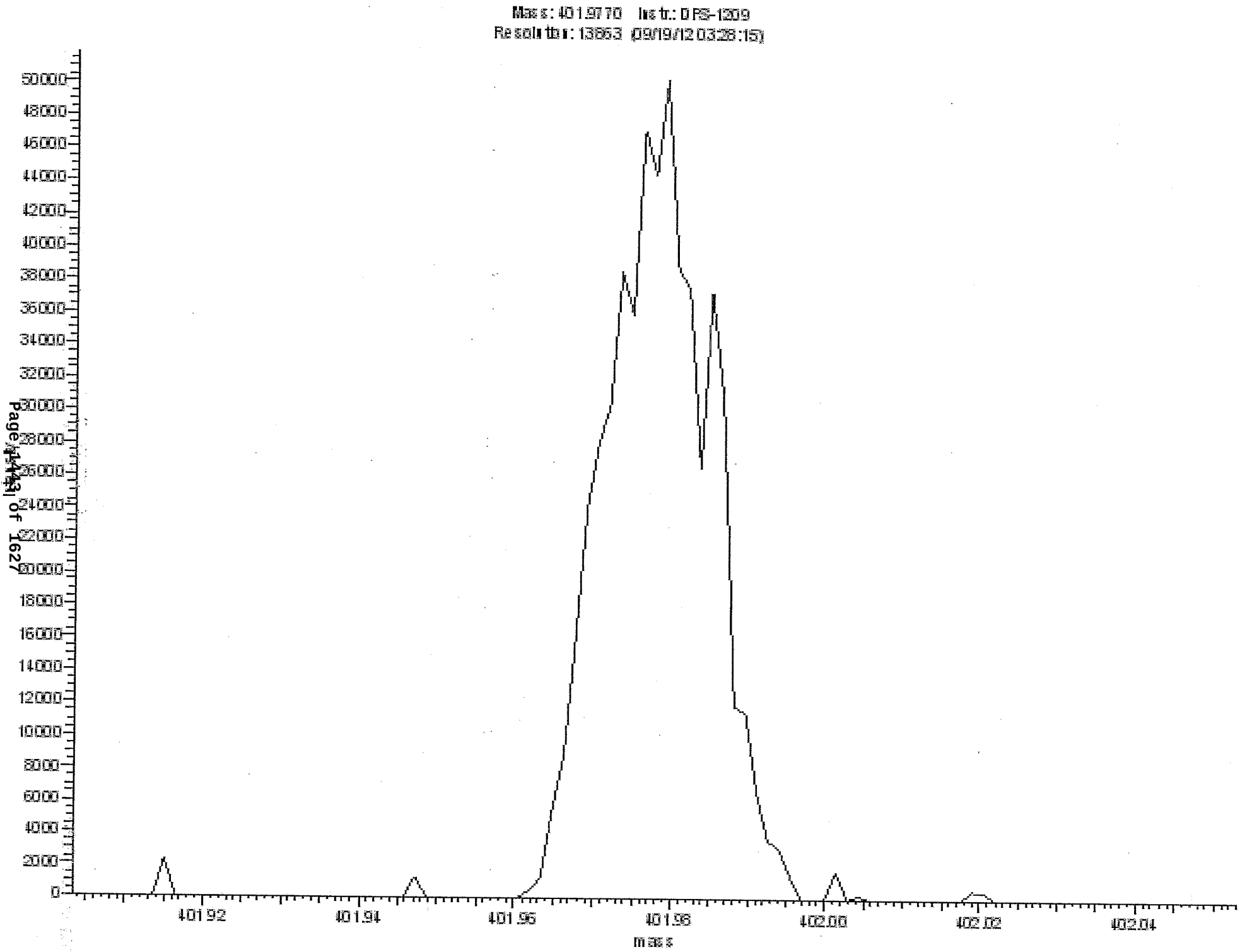

CalcMass: 363.9807 Instr.: DFS-1209
Resolution: 13256 (09/19/12 03:26:08)
600000
580000
560000
540000
520000
500000
480000
460000
440000
420000
400000
380000
360000
340000
320000
300000
280000
260000
240000
220000
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
363.92
363.93
363.94
363.95
363.96
363.97
363.98
363.99
364.00
364.01
364.02
364.03
364.04
364.05
mass

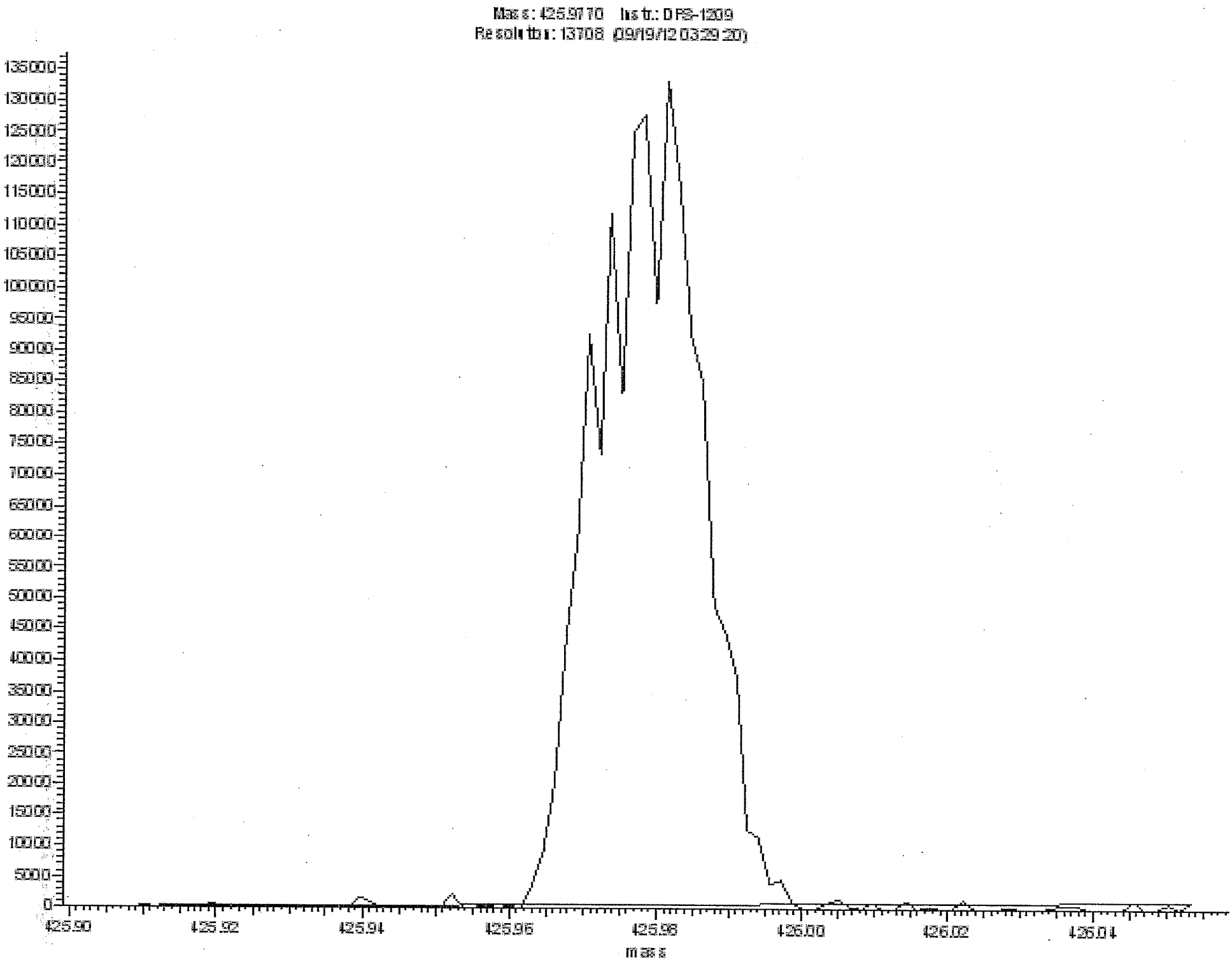

LockMass: 313.9839 Instr.: DFS-1209
Resolution: 13256 (09/19/12 03:26:23)
1250000
1200000
1150000
1100000
1050000
1000000
950000
900000
850000
800000
750000
700000
650000
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
313.93
313.94
313.95
313.96
313.97
313.98
313.99
314.00
314.01
314.02
314.03
314.04
mass

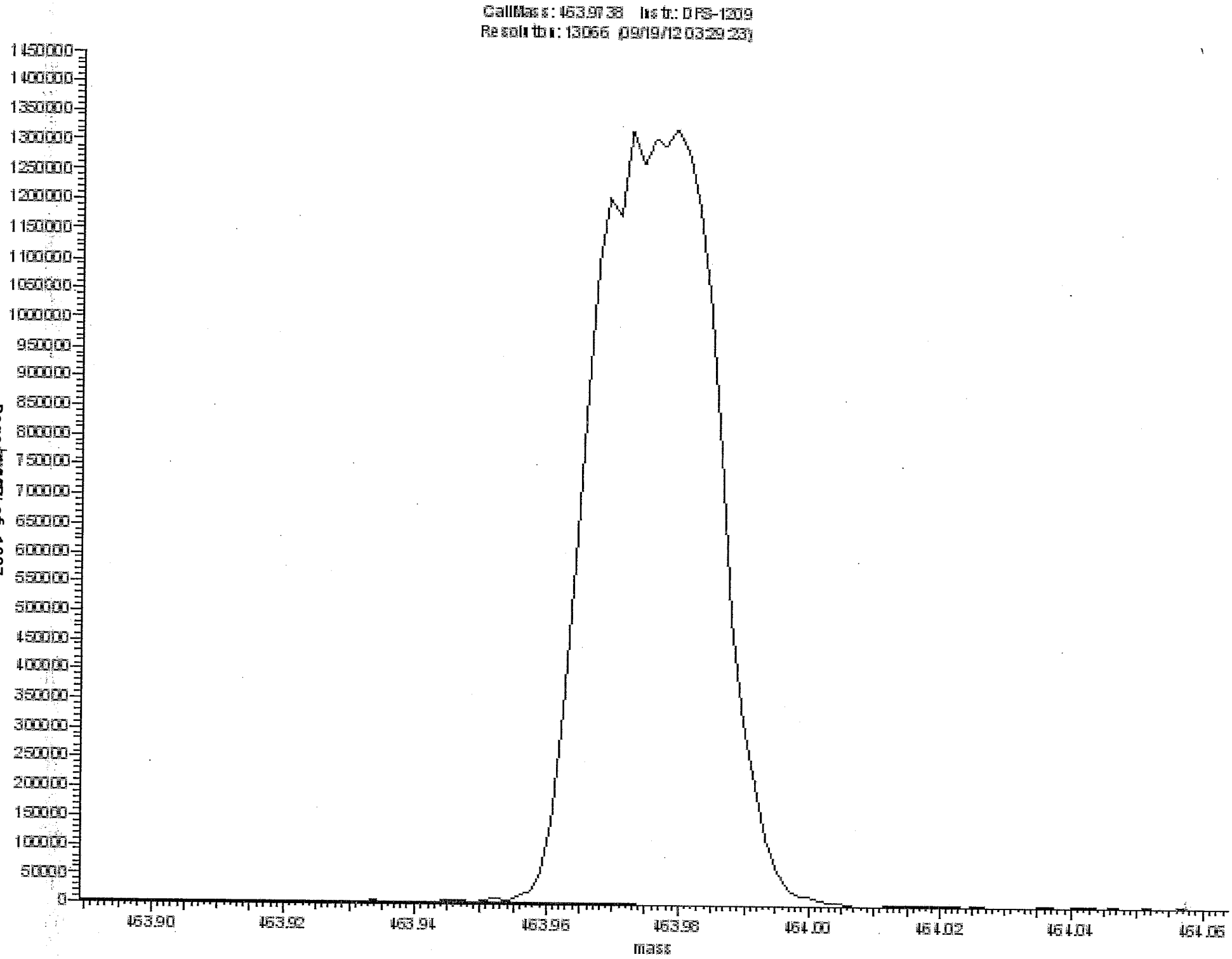

Mass: 351.98002 Instr.: DFS-1209
Resolution: 15254 (09/19/12 03:27:10)
29000
28000
27000
26000
25000
24000
23000
22000
21000
20000
19000
18000
17000
16000
15000
14000
13000
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
351.92
351.93
351.94
351.95
351.96
351.97
351.98
351.99
352.00
352.01
352.02
352.03
352.04
mass

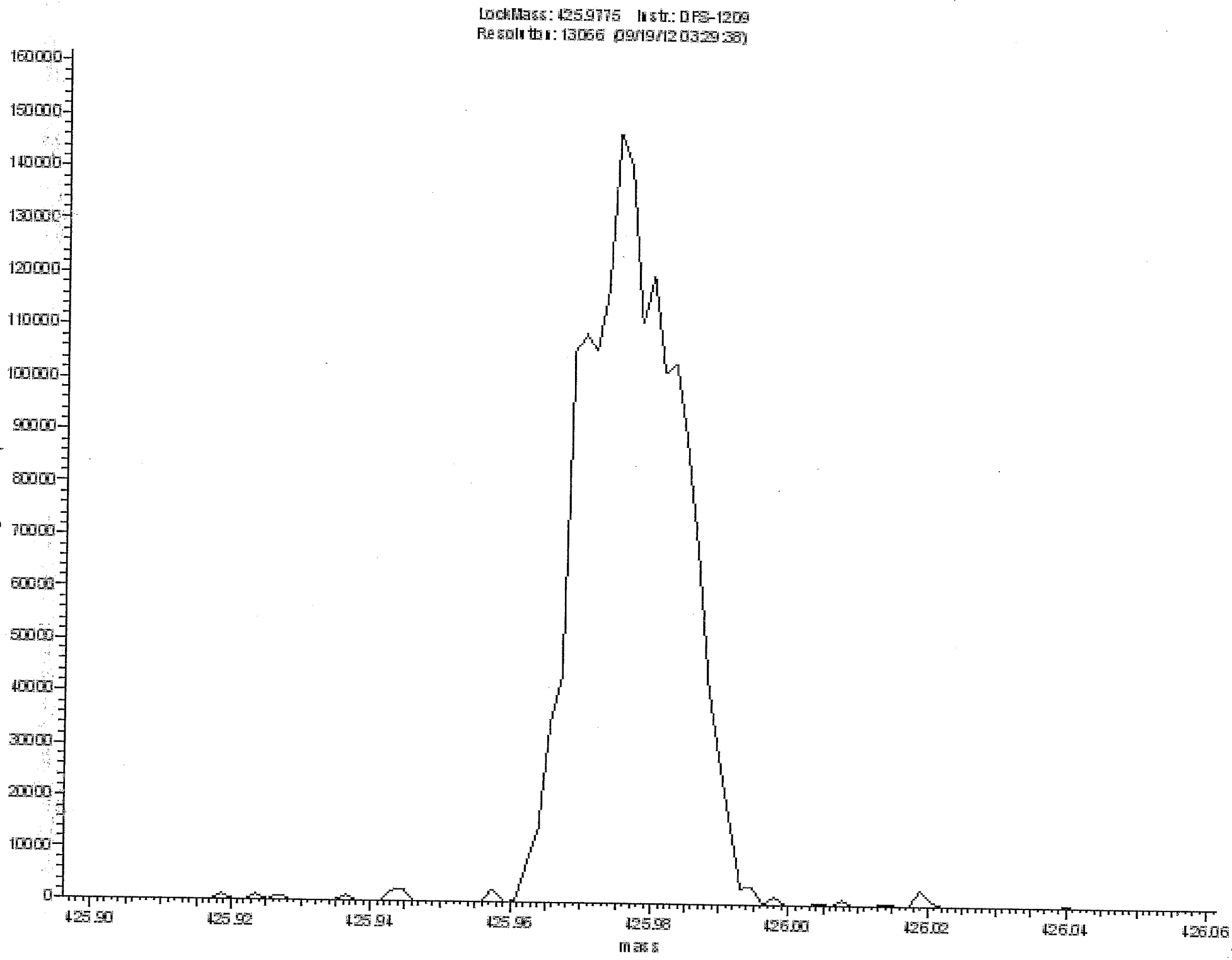

CalcMass: 375.9802 Instr.: DFS-1209
Resolution: 13346 (09/19/12 03:27:13)
170000
160000
150000
140000
130000
120000
110000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
375.92
375.94
375.96
375.98
376.00
376.02
376.04
mass

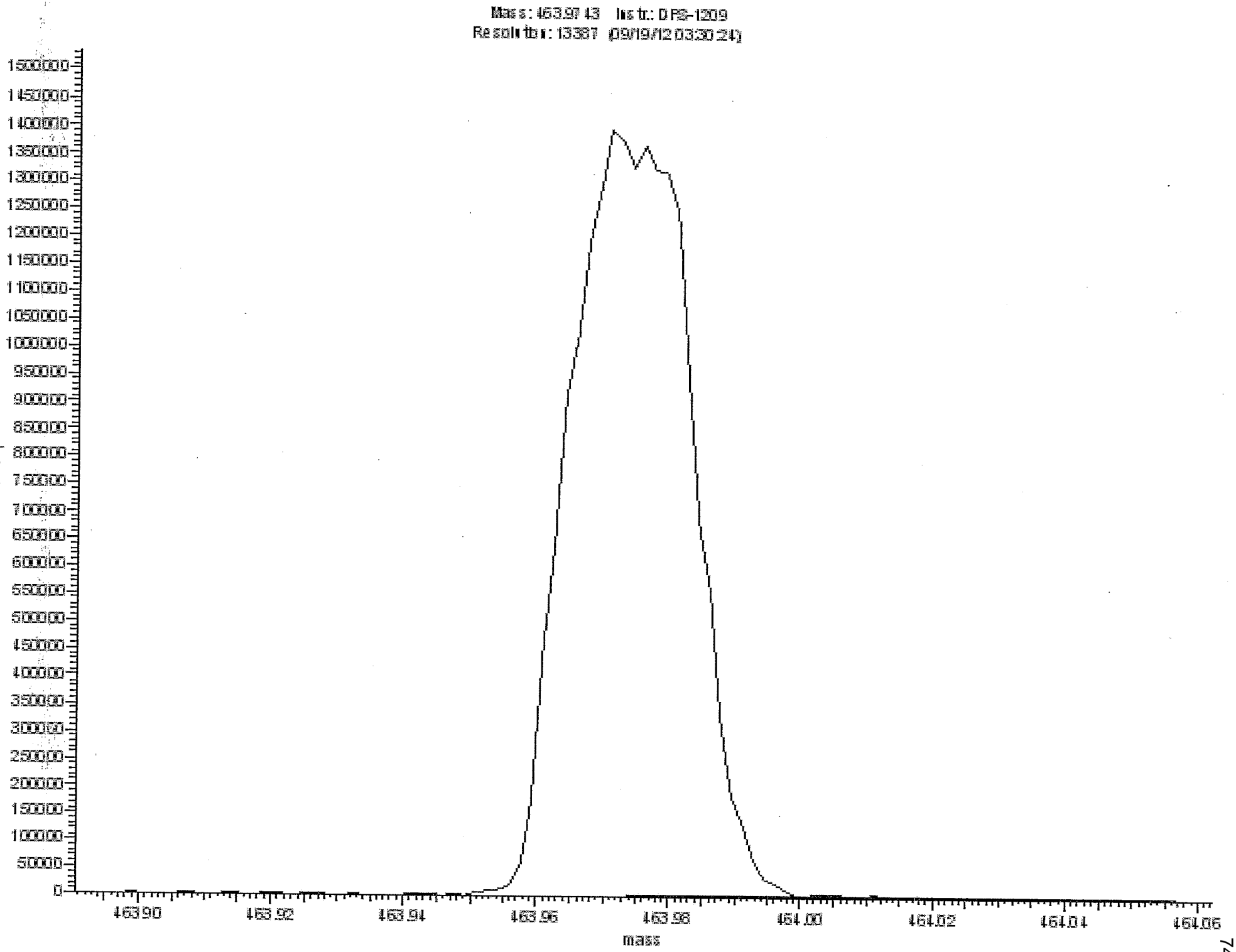

LockMass: 375.9802 Instr.: DPS-1209
Resolution: 13346 (09/19/12 03:27:28)
270000
260000
250000
240000
230000
220000
210000
200000
190000
180000
170000
160000
150000
140000
130000
120000
110000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
375.92
375.94
375.96
375.98
376.00
376.02
376.04
mass

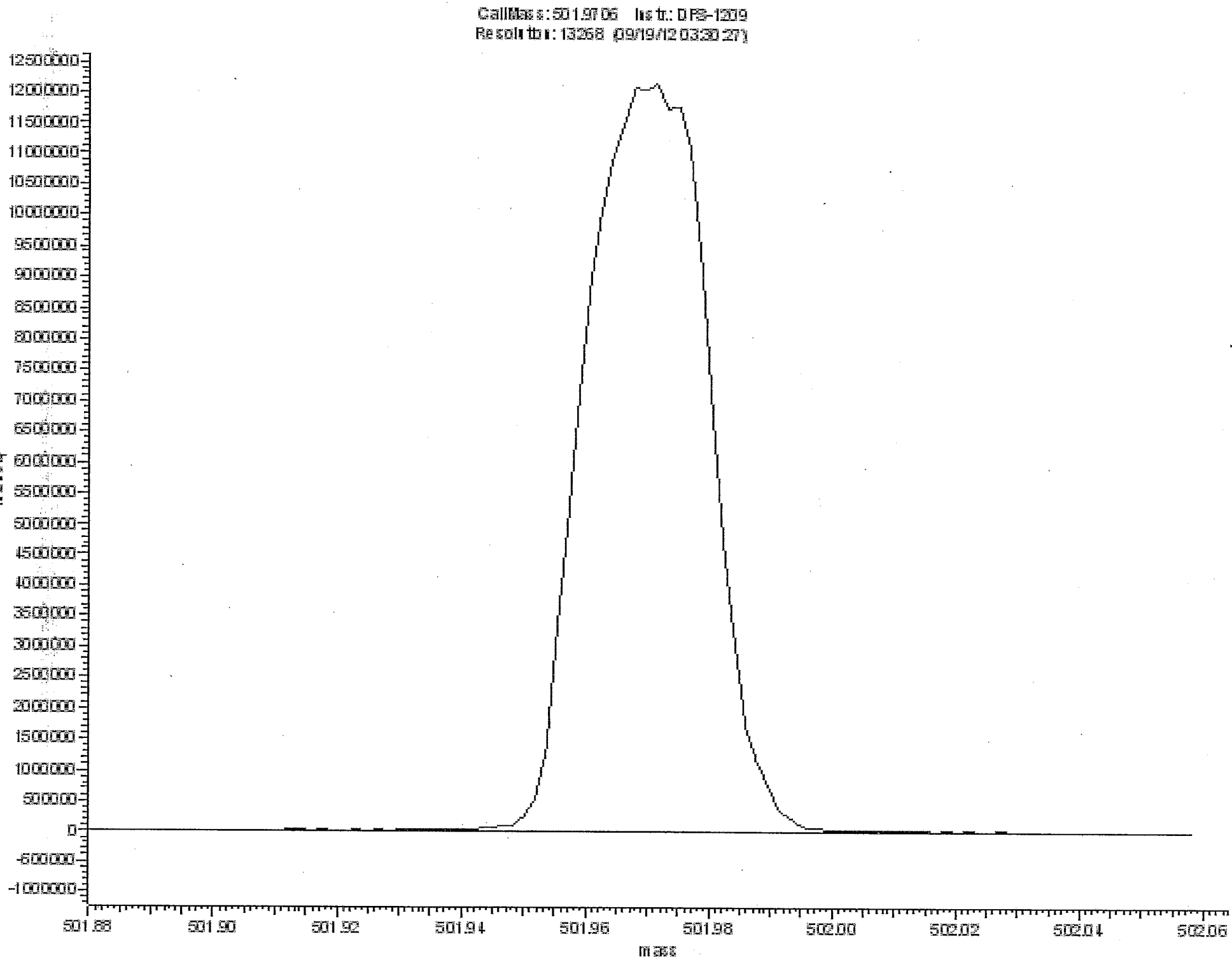

Mass: 401.9770 Instr.: DPS-1209
Resolution: 138863 (09/19/12 03:28:15)
50000
48000
46000
44000
42000
40000
38000
36000
34000
32000
30000
28000
26000
24000
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
401.92
401.94
401.96
401.98
402.00
402.02
402.04
mass

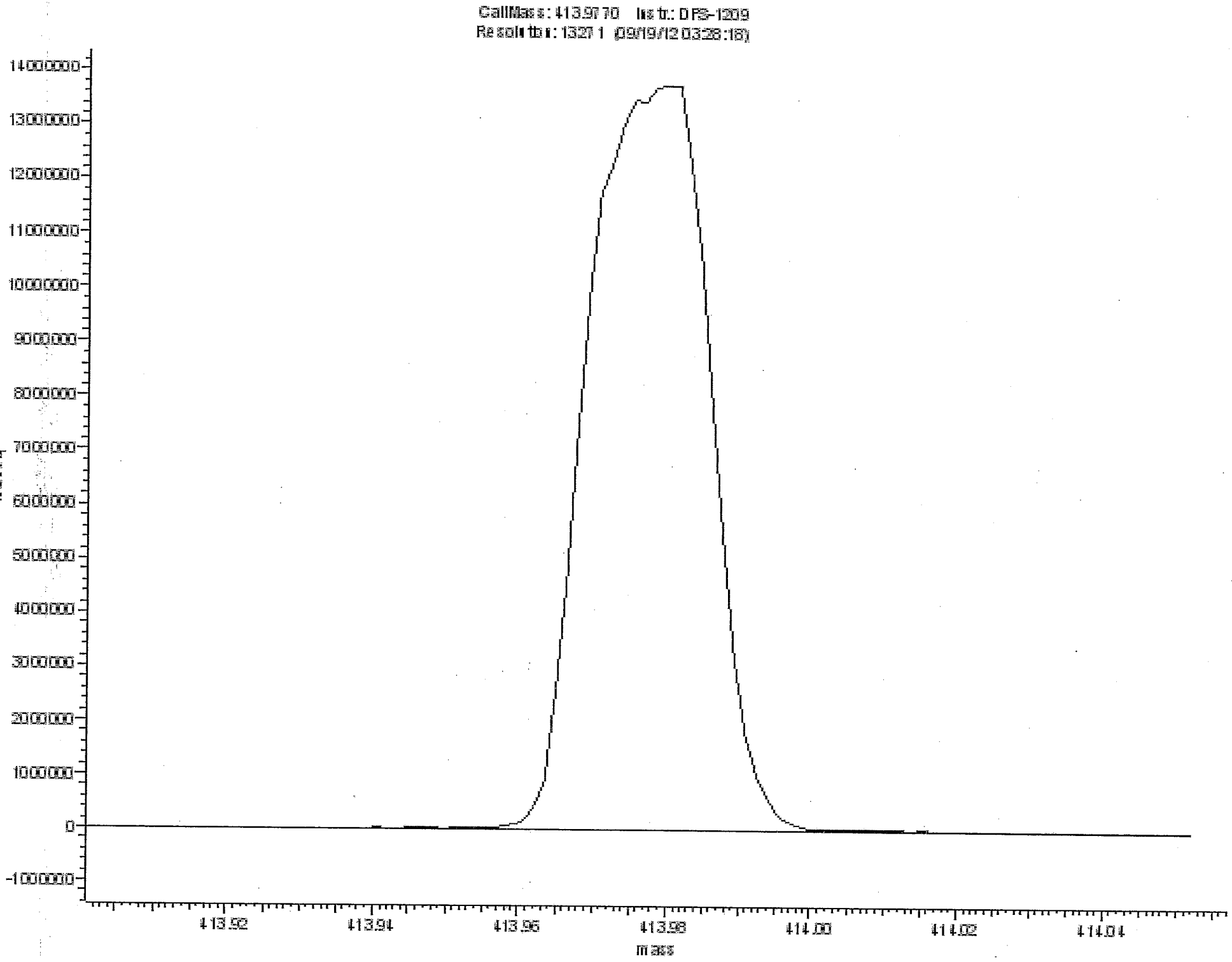

Mass: 425.9770 Instr.: DFS-1209
Resolution: 13708 (09/19/12 03:29:20)
135000
130000
125000
120000
115000
110000
105000
100000
95000
90000
85000
80000
75000
70000
65000
60000
55000
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
425.90
425.92
425.94
425.96
425.98
426.00
426.02
426.04
mass

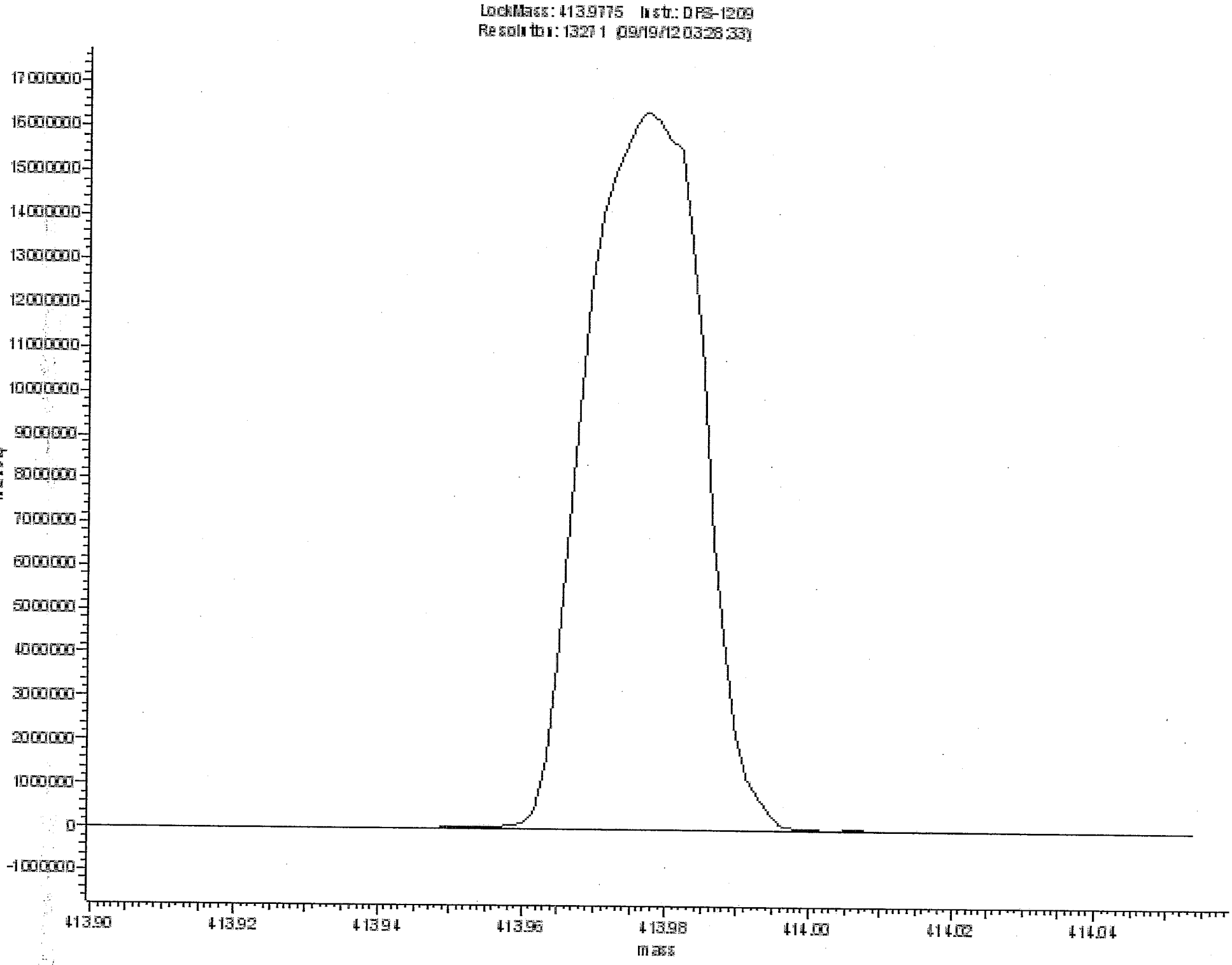

CalcMass: 463.9738 Instr.: DFS-1209
Resolution: 13066 (09/19/12 03:29:23)
1450000
1400000
1350000
1300000
1250000
1200000
1150000
1100000
1050000
1000000
950000
900000
850000
800000
750000
700000
650000
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
463.90
463.92
463.94
463.96
463.98
464.00
464.02
464.04
464.06
mass


LockMass: 425.9775 Instr.: DFS-1209
Resolution: 13066 (09/19/12 03:29:38)
160000
150000
140000
130000
120000
110000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
425.90
425.92
425.94
425.96
425.98
426.00
426.02
426.04
426.06
mass

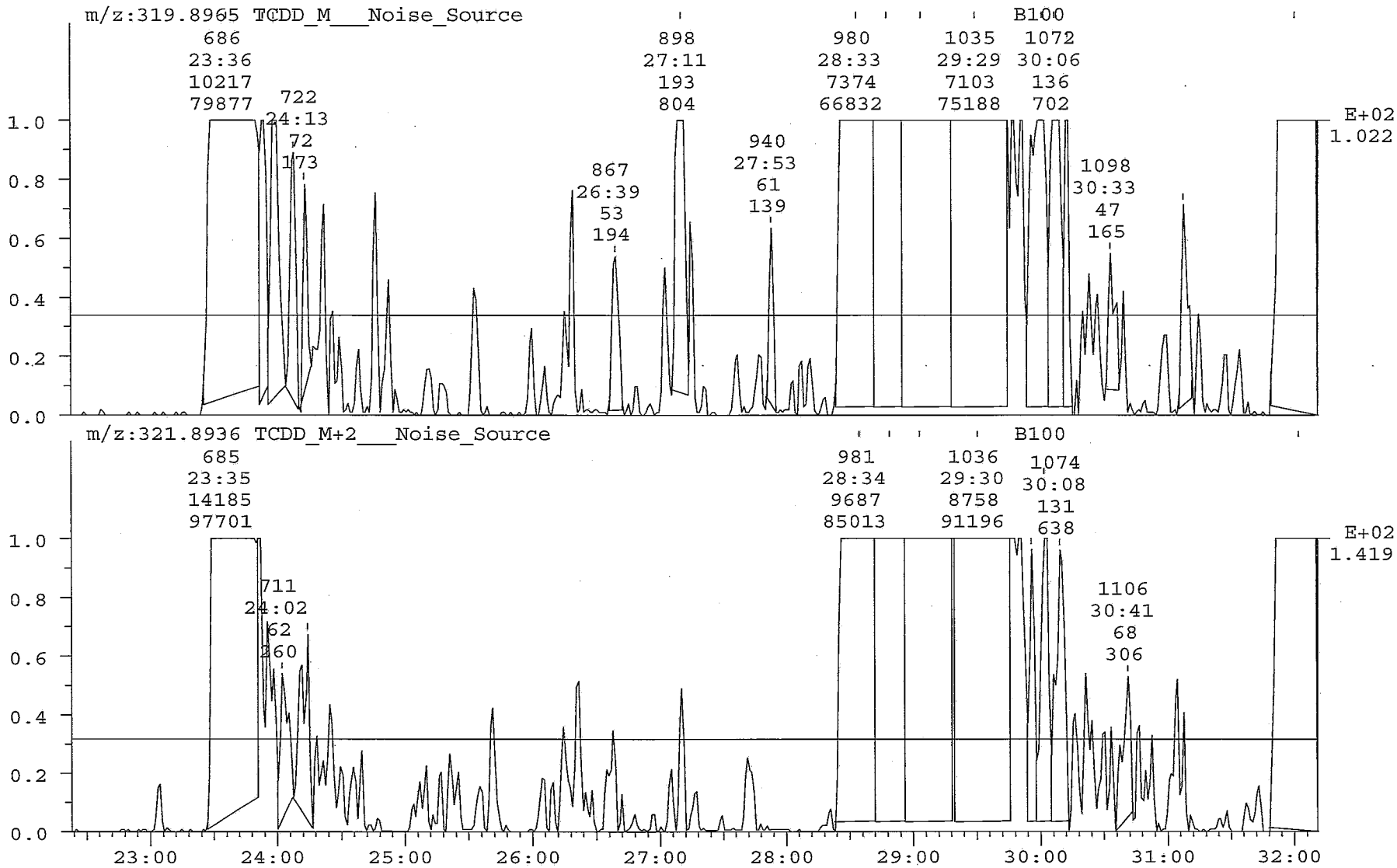

Mass: 463.9743 Instr.: DPS-1209
Resolution: 13387 (09/19/12 03:30:24)
1500000
1450000
1400000
1350000
1300000
1250000
1200000
1150000
1100000
1050000
1000000
950000
900000
850000
800000
750000
700000
650000
600000
550000
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
463.90
463.92
463.94
463.96
463.98
464.00
464.02
464.04
464.06
mass


CalMass: 501.9706 Instr.: DFS-1209
Resolution: 13268 (09/19/12 03:30:27)
12500000
12000000
11500000
11000000
10500000
10000000
9500000
9000000
8500000
8000000
7500000
7000000
6500000
6000000
5500000
5000000
4500000
4000000
3500000
3000000
2500000
2000000
1500000
1000000
500000
0
-500000
-1000000
501.88
501.90
501.92
501.94
501.96
501.98
502.00
502.02
502.04
502.06
mass

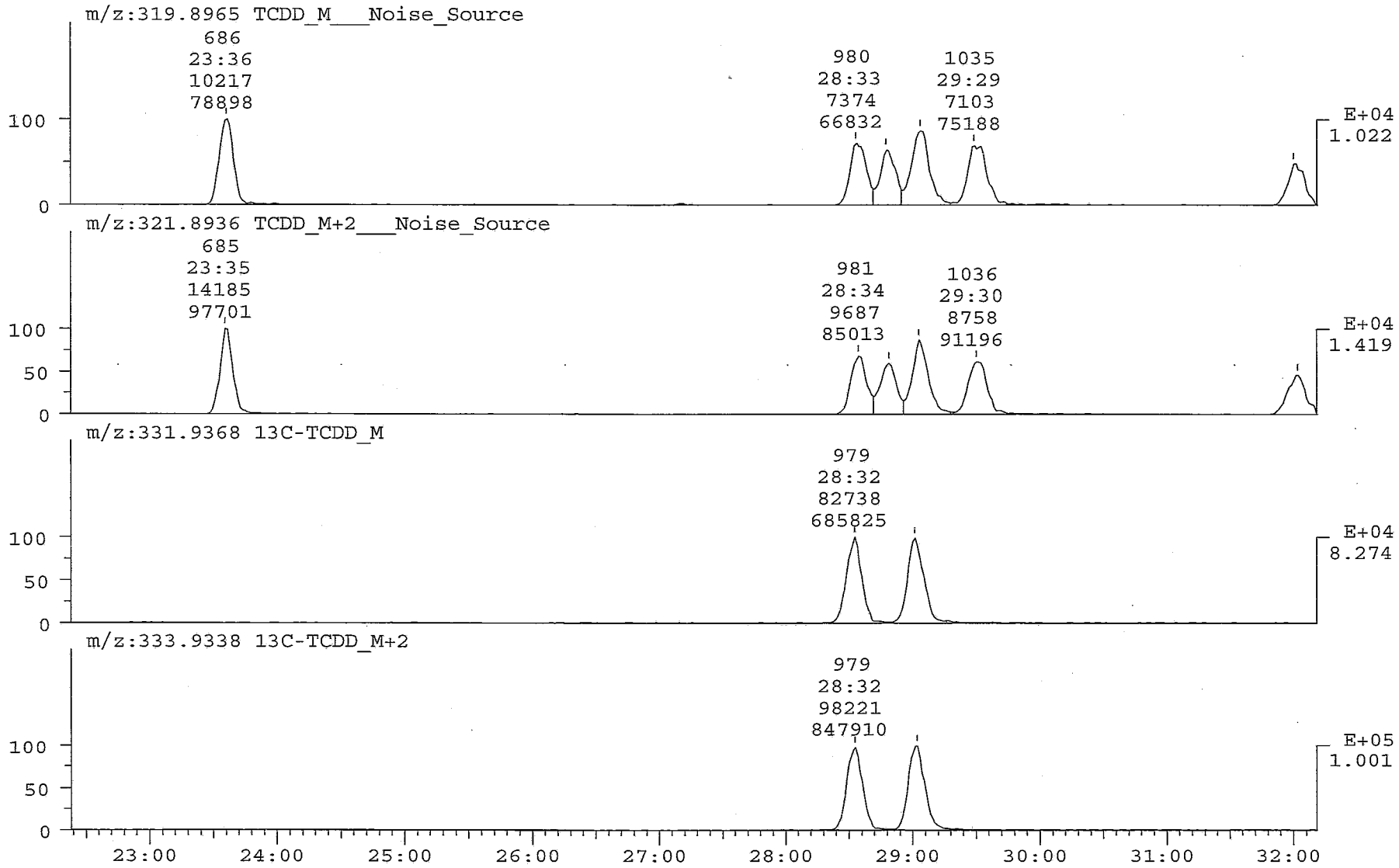

CalcMass: 413.9770 Instr.: DFS-12009
Resolution: 13271 (09/19/12 03:28:18)
14000000
13000000
12000000
11000000
10000000
9000000
8000000
7000000
6000000
5000000
4000000
3000000
2000000
1000000
0
-1000000
413.92
413.94
413.96
413.98
414.00
414.02
414.04
mass


LockMass: 413.9775 Instr.: DFS-1209
Resolution: 13271 (09/19/12 03:28:33)
17000000
16000000
15000000
14000000
13000000
12000000
11000000
10000000
9000000
8000000
7000000
6000000
5000000
4000000
3000000
2000000
1000000
0
-1000000
413.90
413.92
413.94
413.96
413.98
414.00
414.02
414.04
mass

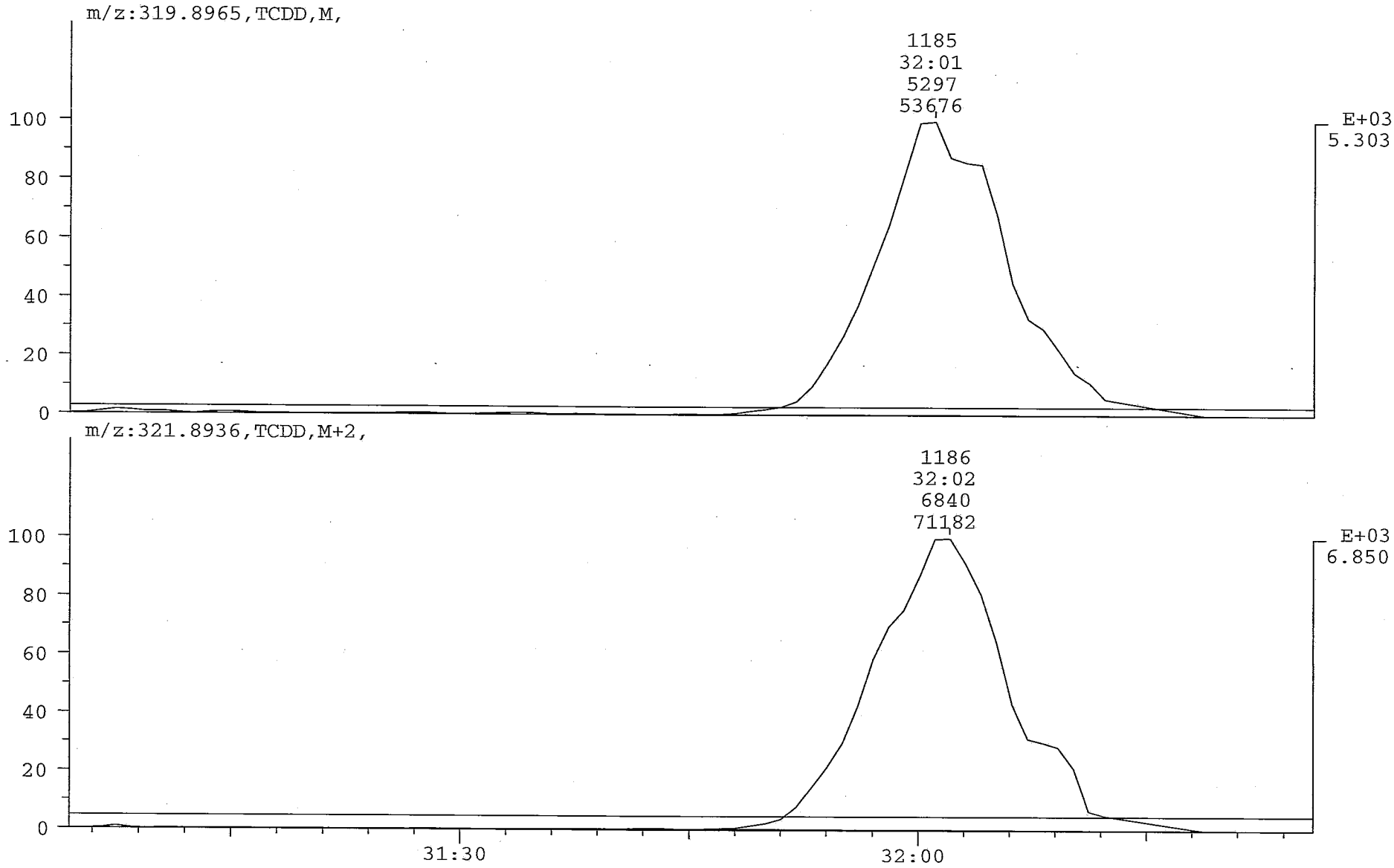
CHRO: d1120918s2 18-Sep-12 Elapse: 53:26 2419
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 613 > 1195 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -3, 1.0
Disp: Height Area



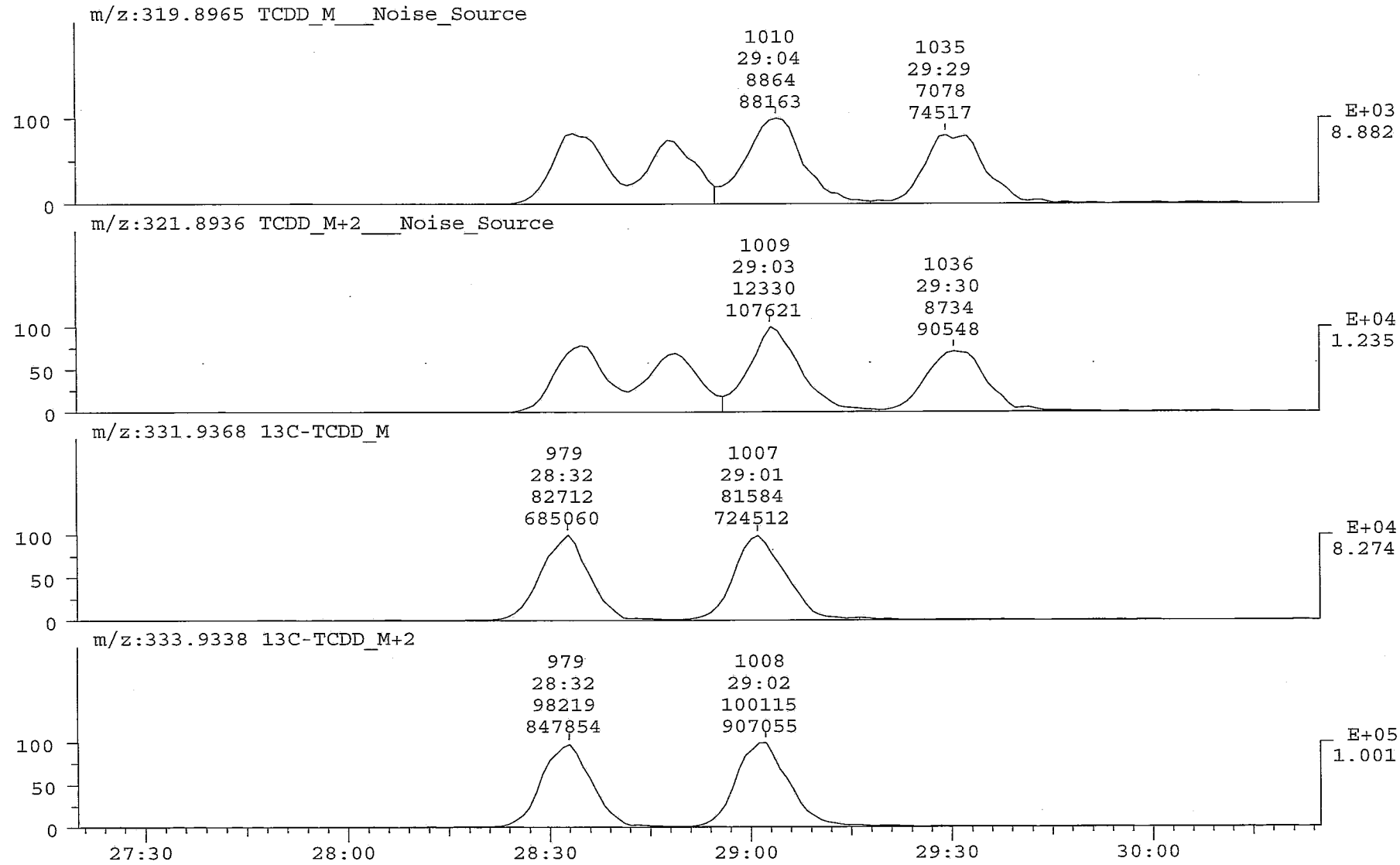
```
CHRO:  d1120918s2                          18-Sep-12   Elapse:  53:26      2419
Samp:  WO=HR0054C Meth=F8 Dil=1                        Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                             Study :  VER/WIN
Oper:  KLR                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   613 > 1195        Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  2, 5.0
Disp:  Height  Area
```



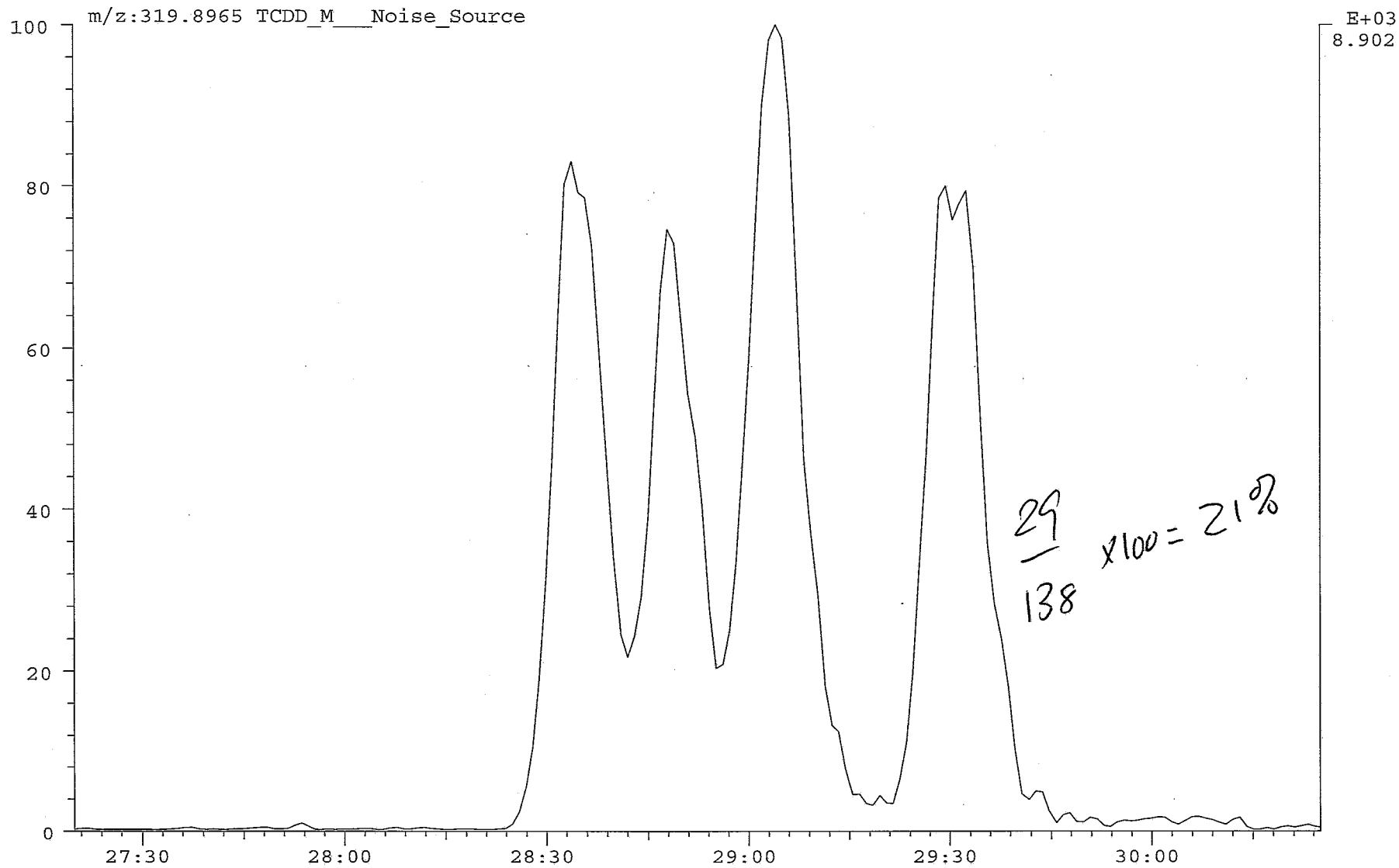
```
CHRO:  d1120918s2                                  18-Sep-12   Elapse:  53:25      2418
Samp:  WO=HR0054C Meth=F8 Dil=1                                Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                                     Study :  VER/WIN
Oper:  KLR                                                     Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1129 > 1204               Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                    Label :  -2, 5.0
Disp:  Height  Area
```



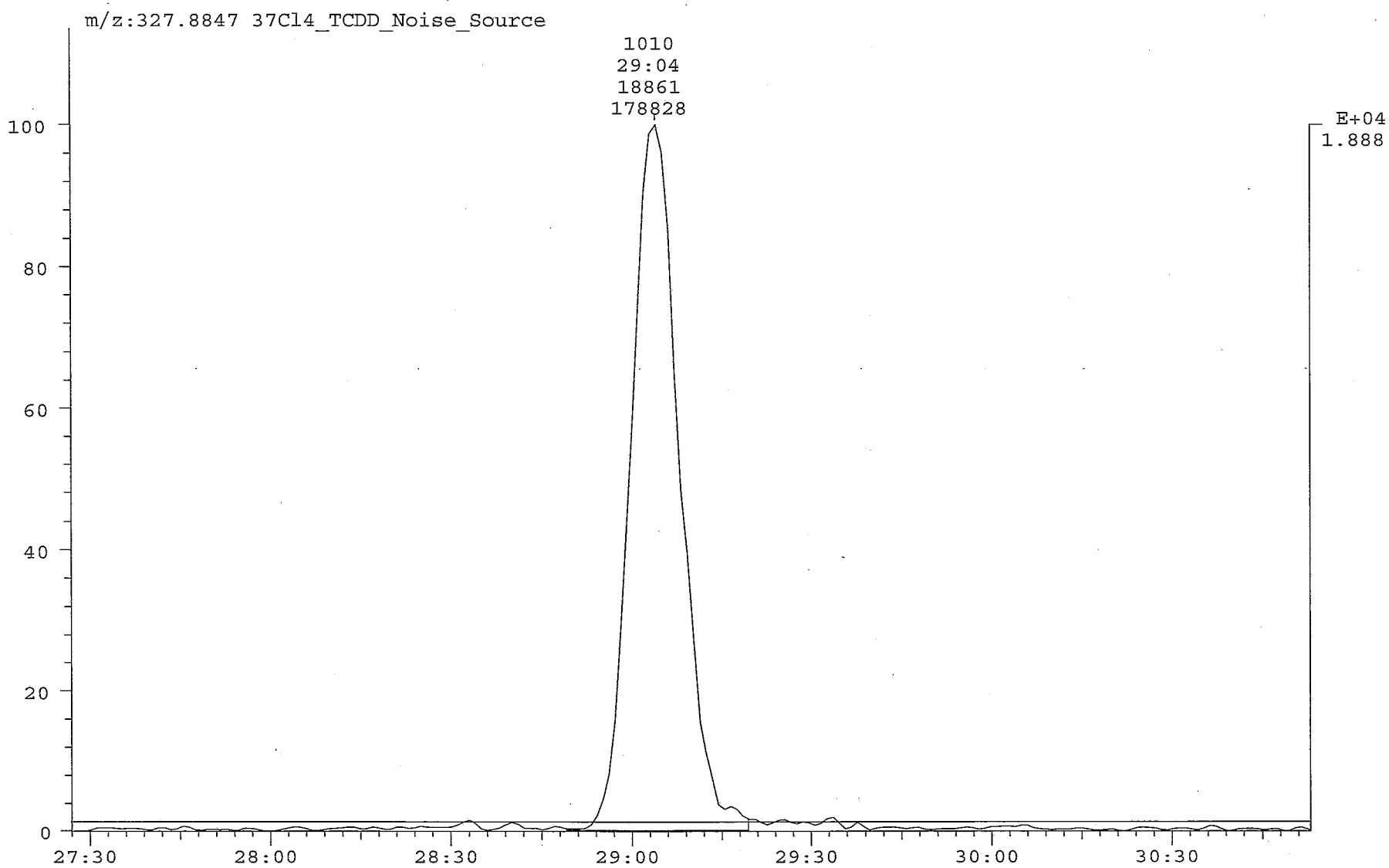
CHRO: d1120918s2 18-Sep-12 Elapse: 28:52.1 998
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 907 > 1090 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



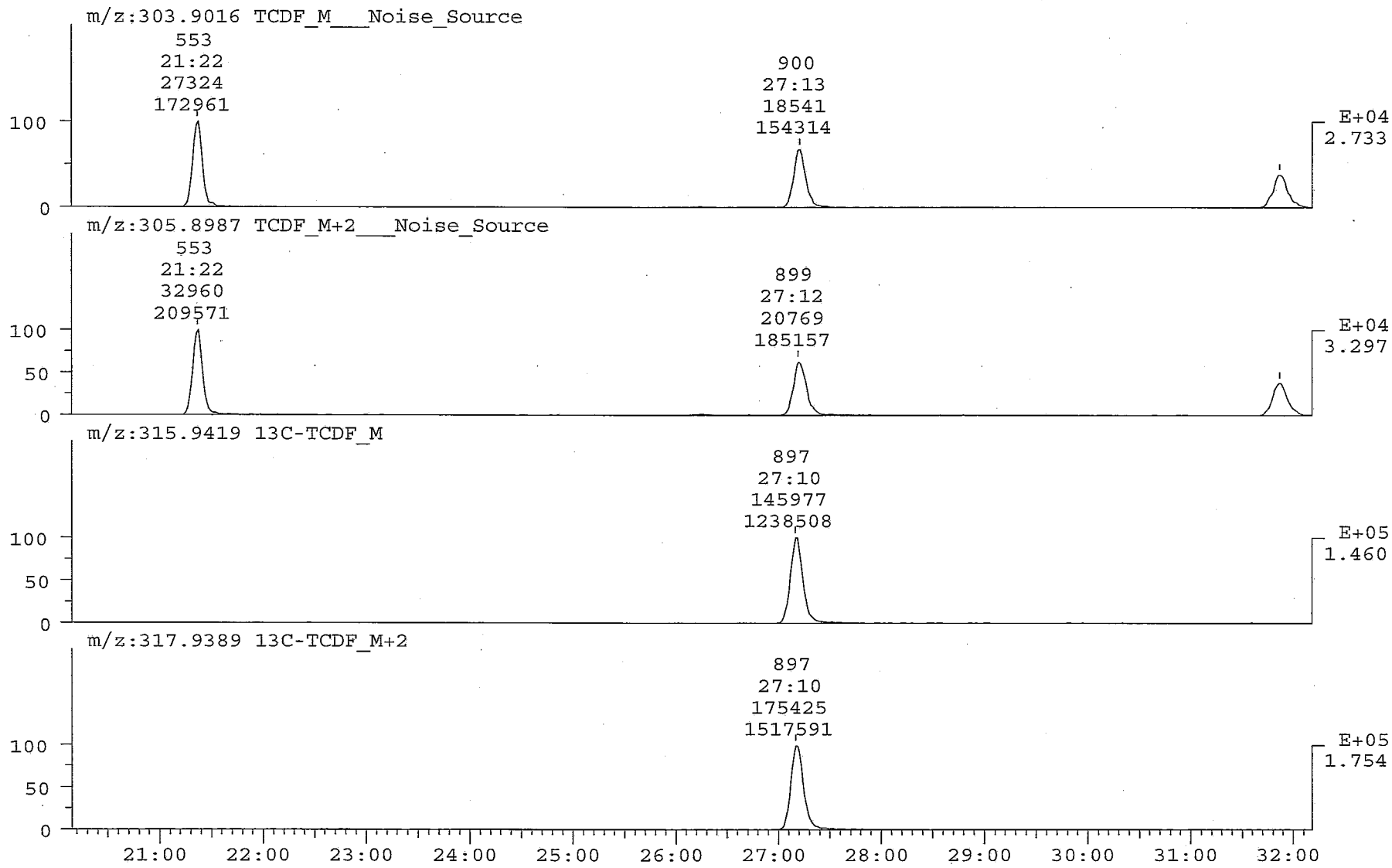
```
CHRO:  d1120918s2                          18-Sep-12   Elapse:  28:52.1      998
Samp:  WO=HR0054C Meth=F8 Dil=1                        Start :  20:32:37    2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                             Study :  VER/WIN
Oper:  KLR                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   907 > 1090        Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  0, 0.0
Disp:  Height  Area
```



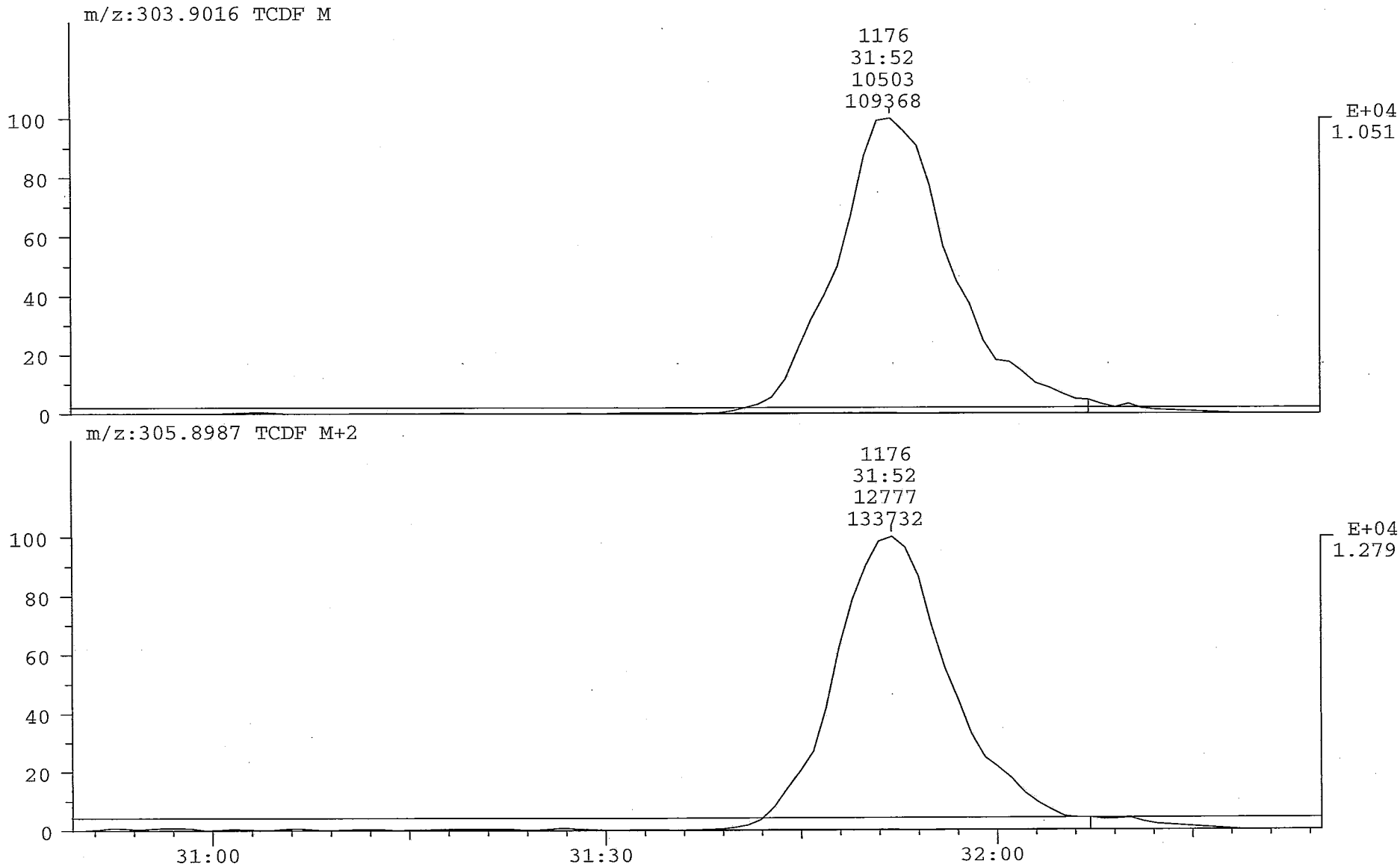
```
CHRO:  d1120918s2                          18-Sep-12   Elapse:  29:07      1013
Samp:  WO=HR0054C Meth=F8 Dil=1                        Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                             Study :  VER/WIN
Oper:  KLR                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   914 > 1118        Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  -2, 5.0
Disp:  Height  Area
```



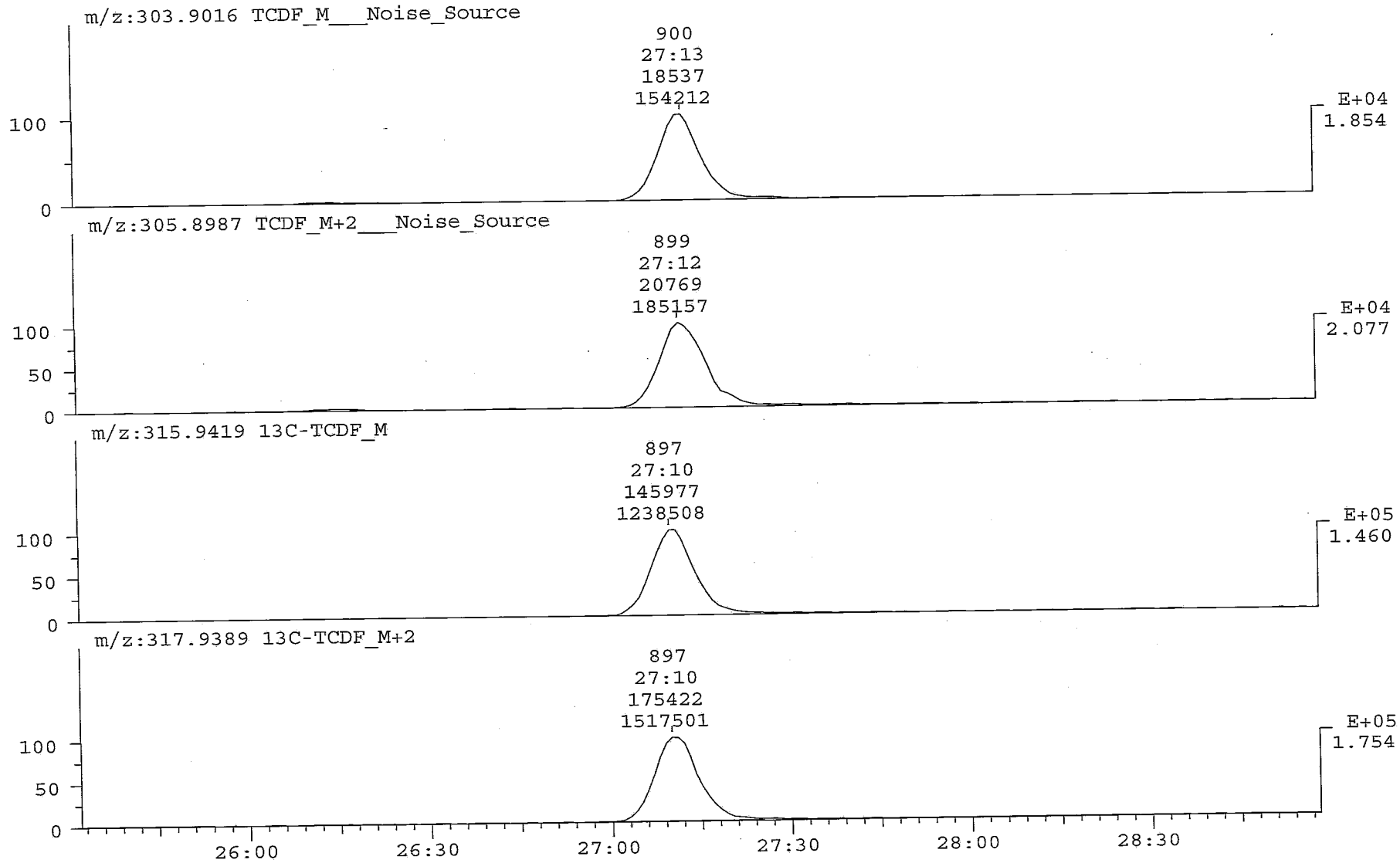
```
CHRO:  d1120918s2                              18-Sep-12  Elapse:  29:07      1013
Samp:  WO=HR0054C Meth=F8 Dil=1                           Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                                Study :  VER/WIN
Oper:  KLR                                                Inlet :  LC
Peak:  100.00  ppm     Label wndw:   480 > 1195           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3               Label :  2, 5.0
Disp:  Height  Area
```



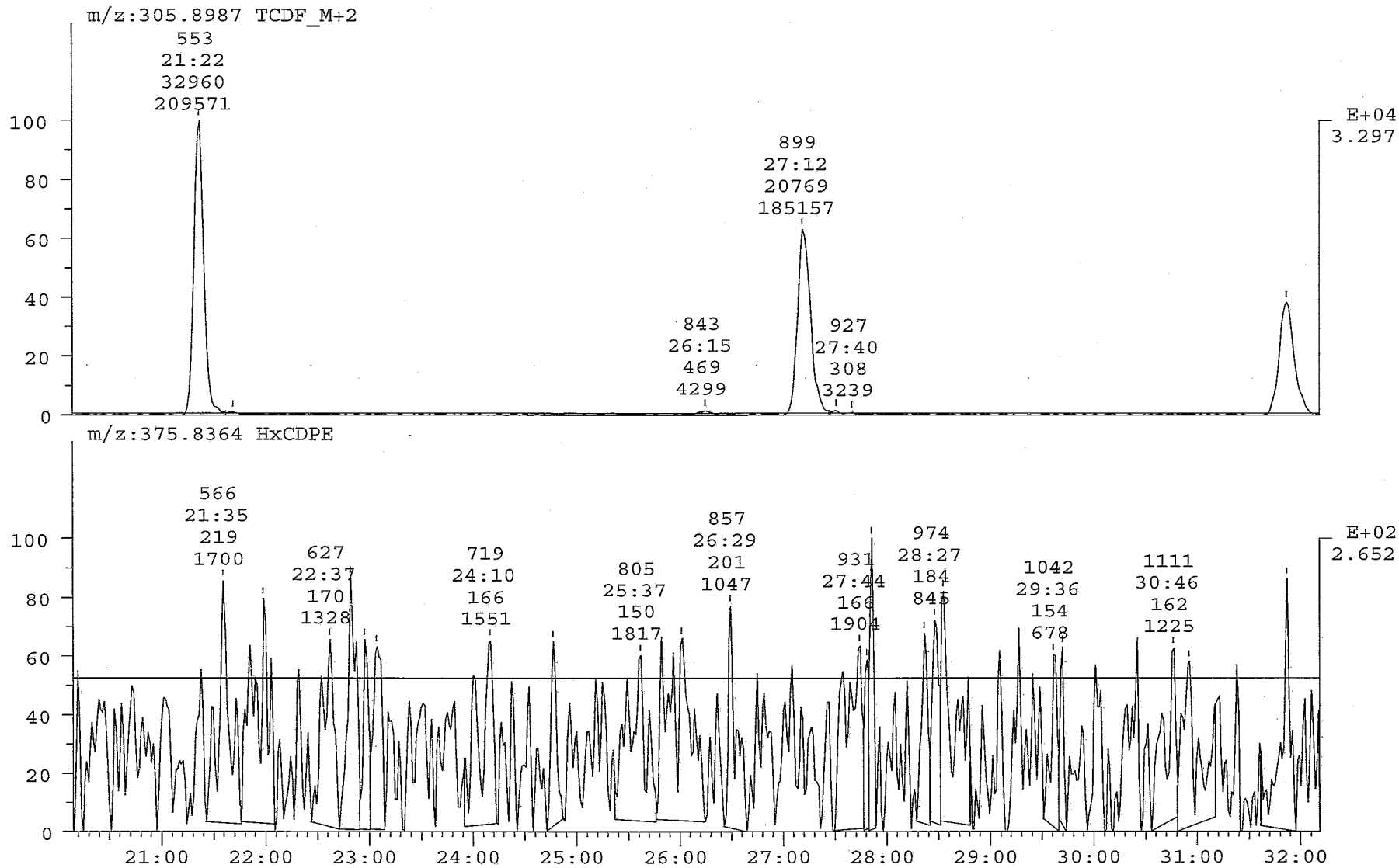
CHRO: d1120918s2 18-Sep-12 Elapse: 53:25 2418
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 1114 > 1203 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



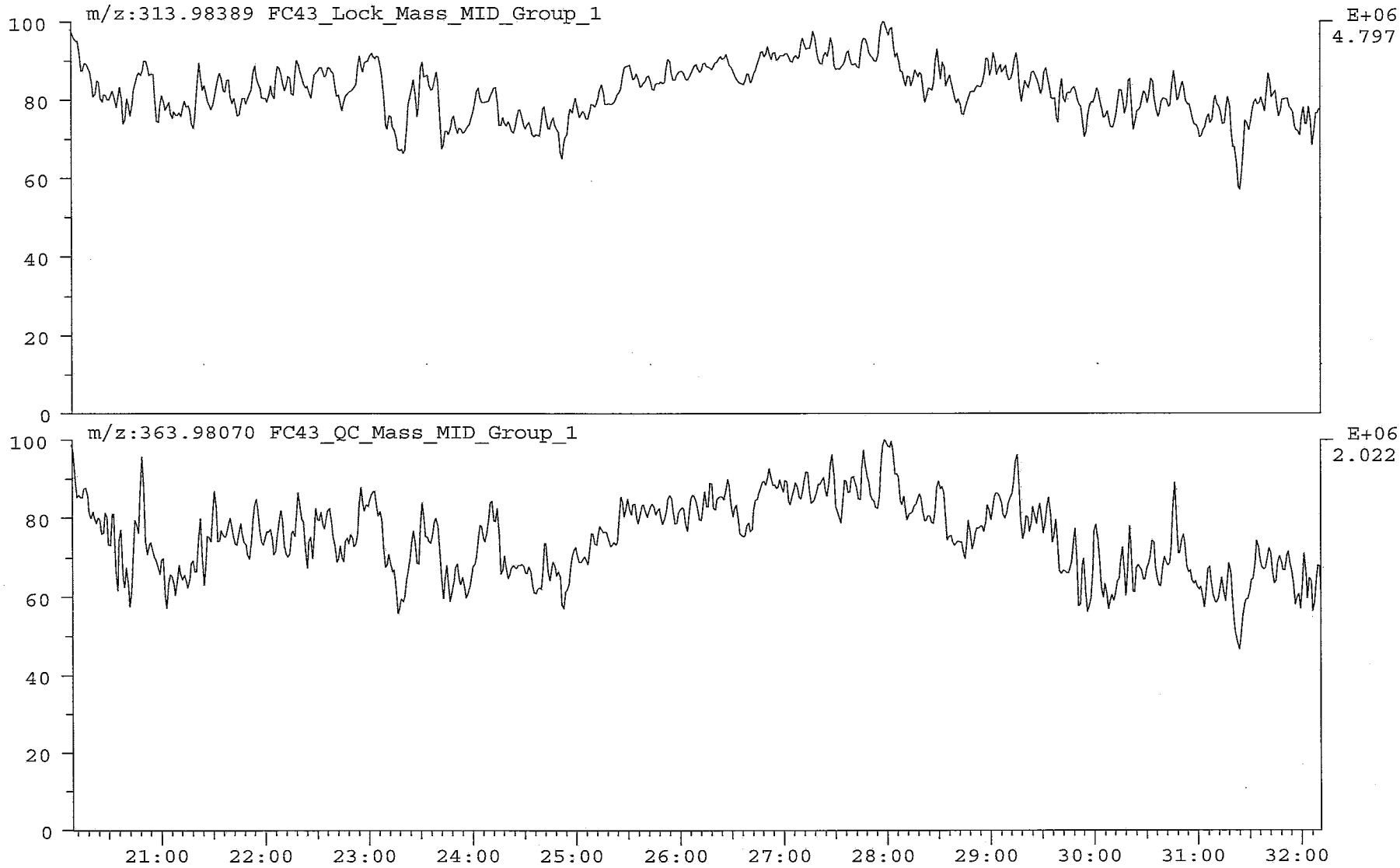
CHRO: d1120918s2 18-Sep-12 Elapse: 27:12.1 899
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 800 > 1004 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



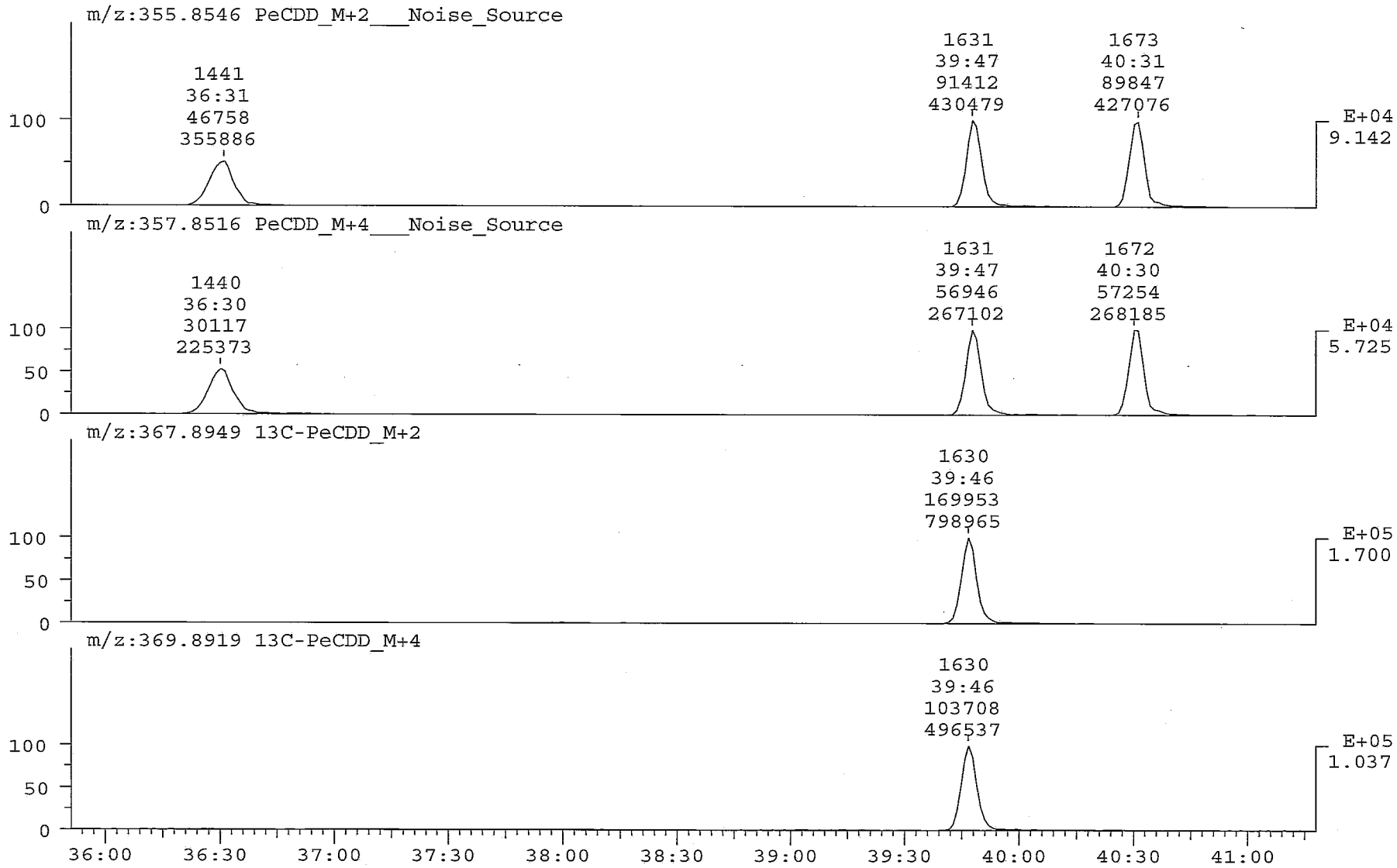
```
CHRO:  d1120918s2                                18-Sep-12  Elapse:  27:12.1     899
Samp:  WO=HR0054C Meth=F8 Dil=1                             Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                                  Study :  VER/WIN
Oper:  KLR                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   480 > 1195             Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



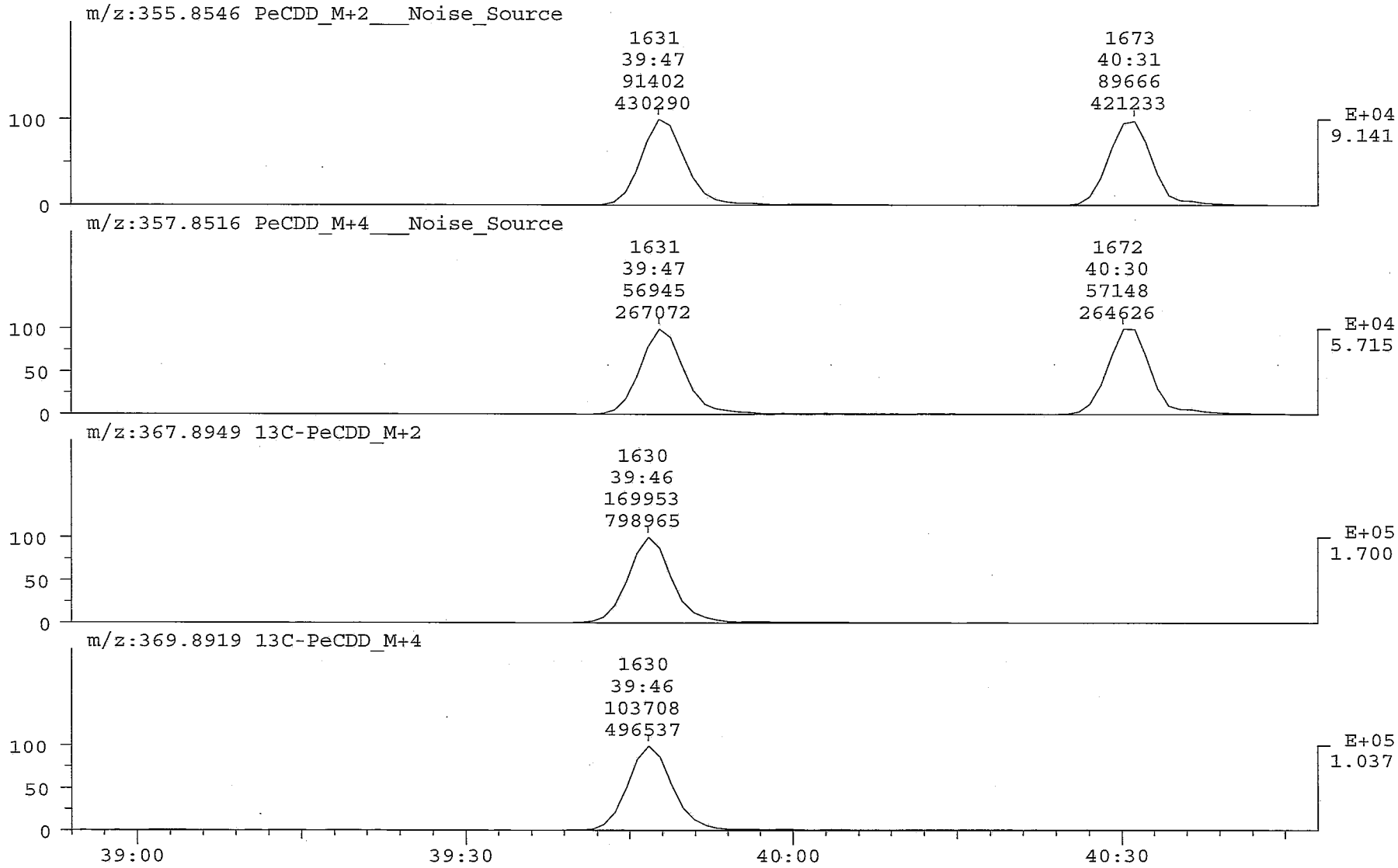
```
CHRO:  d1120918s2                          18-Sep-12  Elapse:  27:12.1     899
Samp:  WO=HR0054C Meth=F8 Dil=1                       Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                            Study :  VER/WIN
Oper:  KLR                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   480 > 1195       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  0, 0.0
Disp:  Height  Area
```



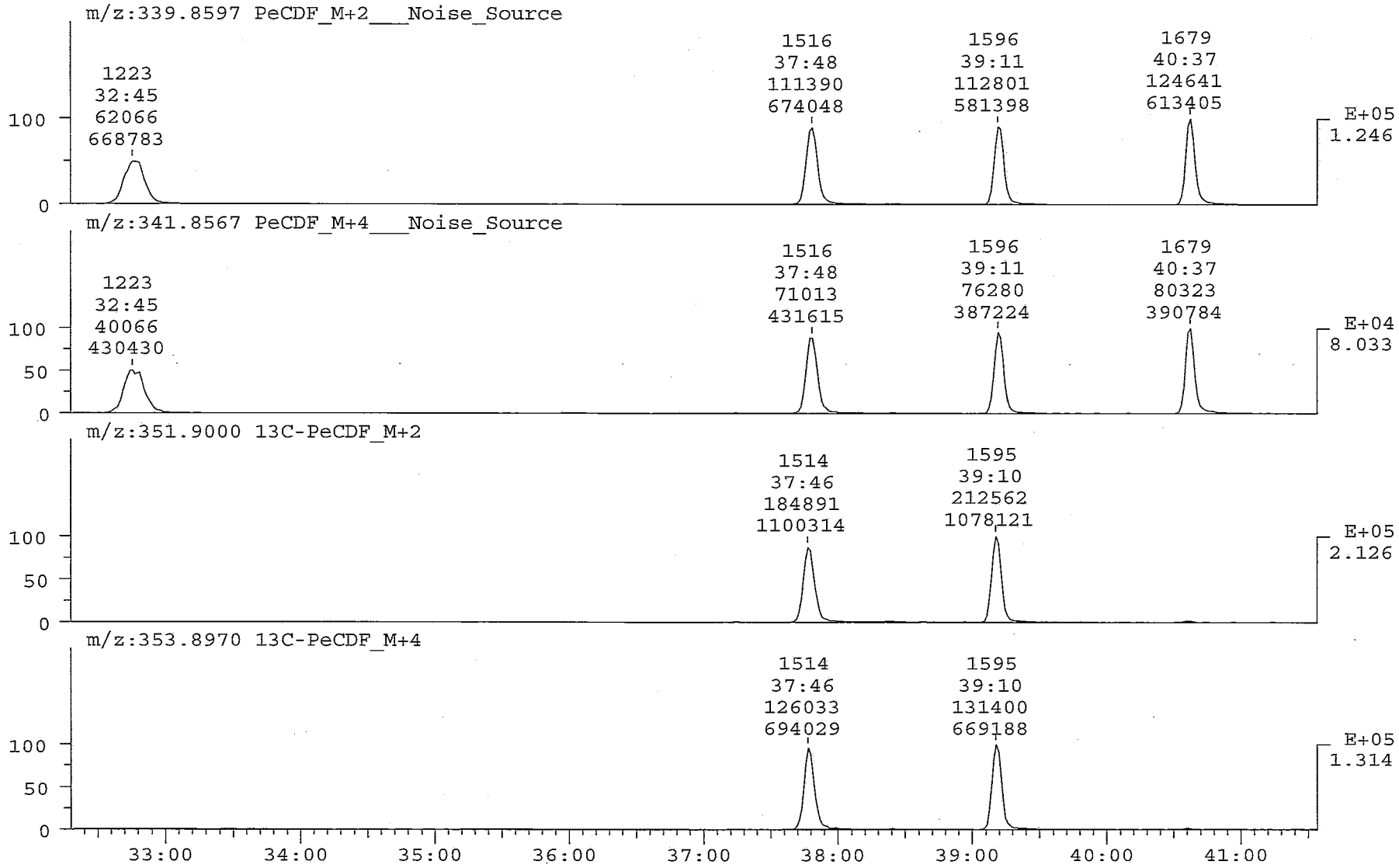
CHRO: d1120918s2 18-Sep-12 Elapse: 27:12.1 899
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 1402 > 1718 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



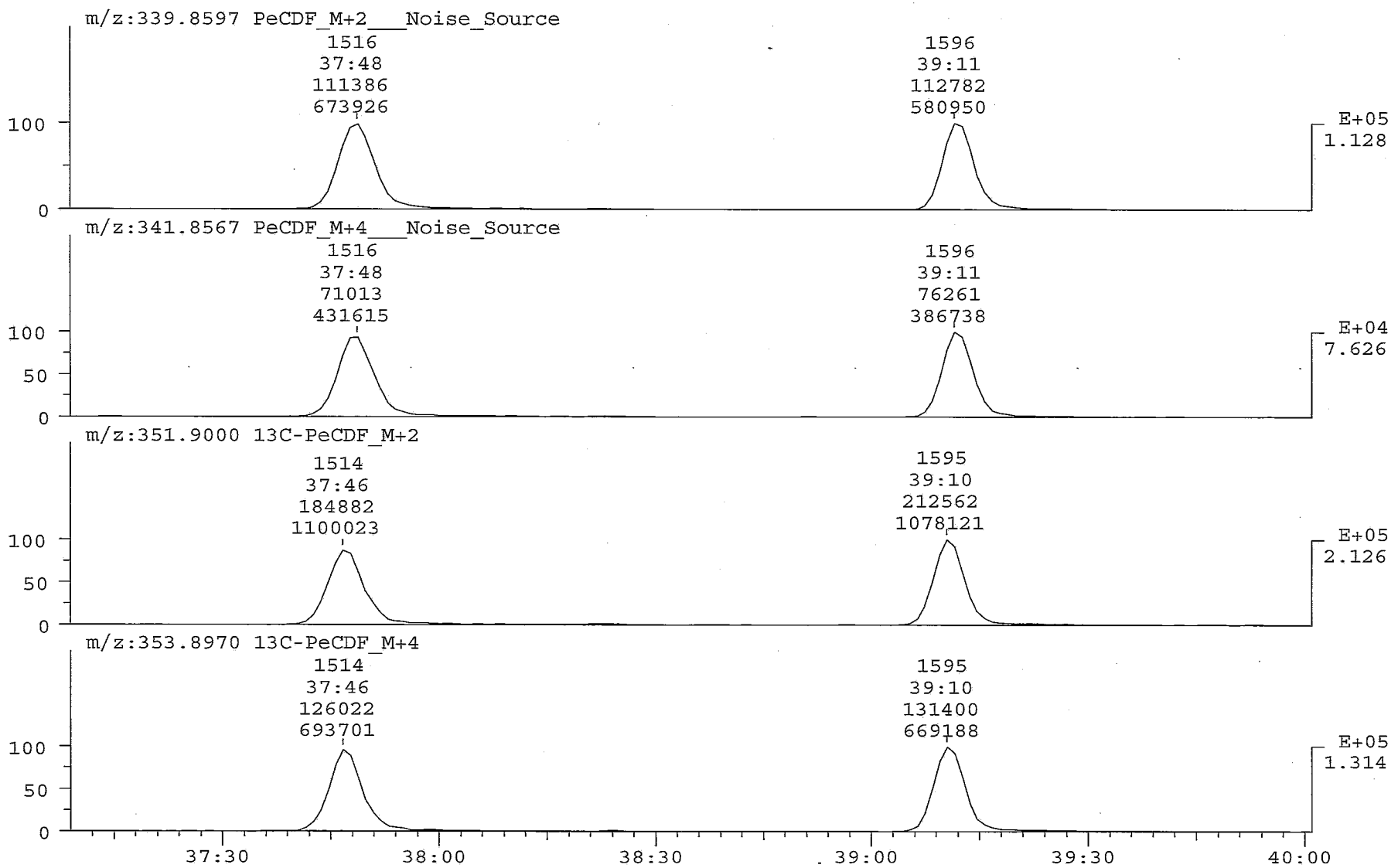
```
CHRO:  d1120918s2                          18-Sep-12  Elapse:  39:47      1631
Samp:  WO=HR0054C Meth=F8 Dil=1                       Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                            Study :  VER/WIN
Oper:  KLR                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1579 > 1689      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  2, 5.0
Disp:  Height  Area
```



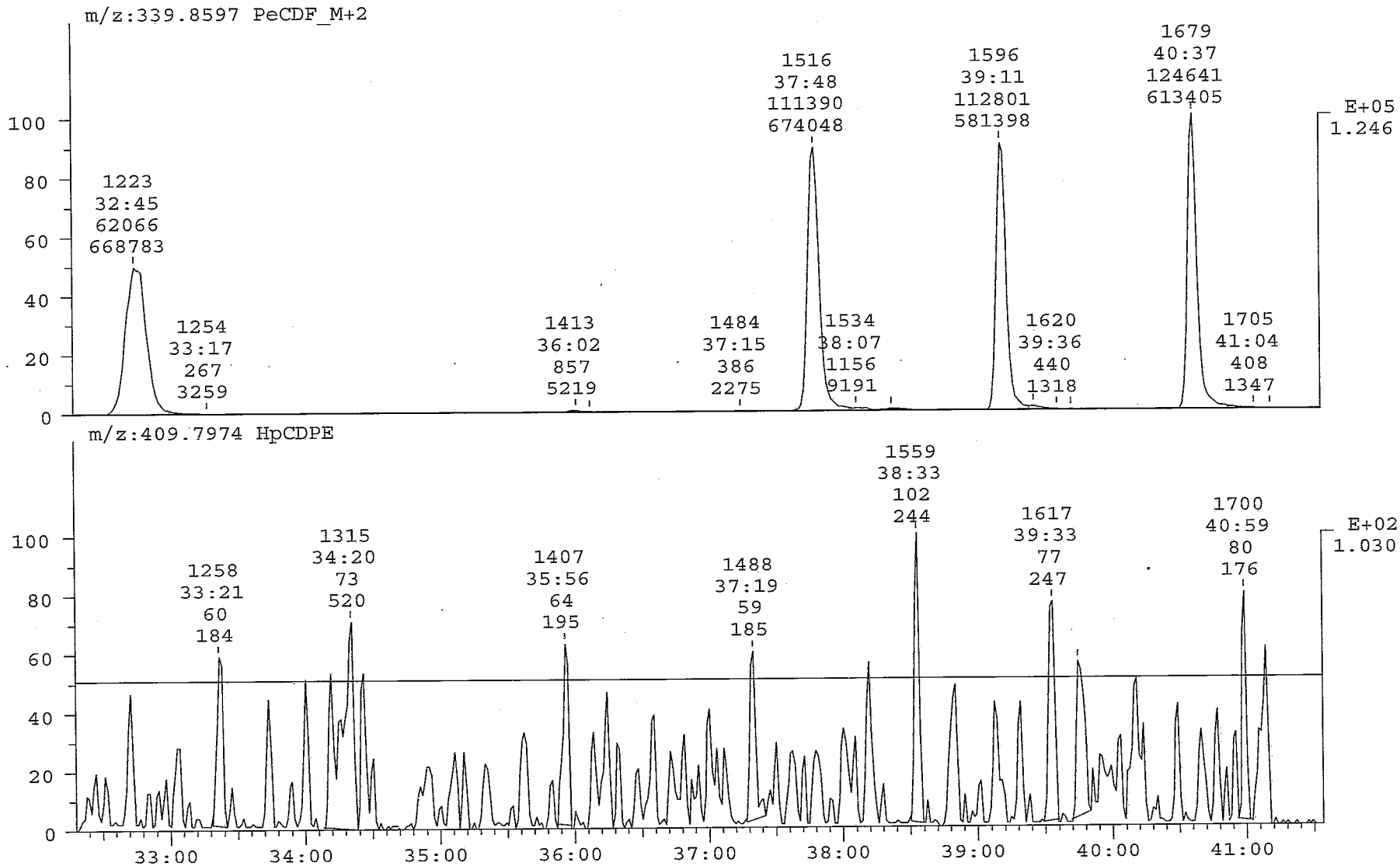
```
CHRO:  d1120918s2                          18-Sep-12  Elapse:  39:47      1631
Samp:  WO=HR0054C Meth=F8 Dil=1                       Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                            Study :  VER/WIN
Oper:  KLR                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1197 > 1734      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  2, 5.0
Disp:  Height  Area
```



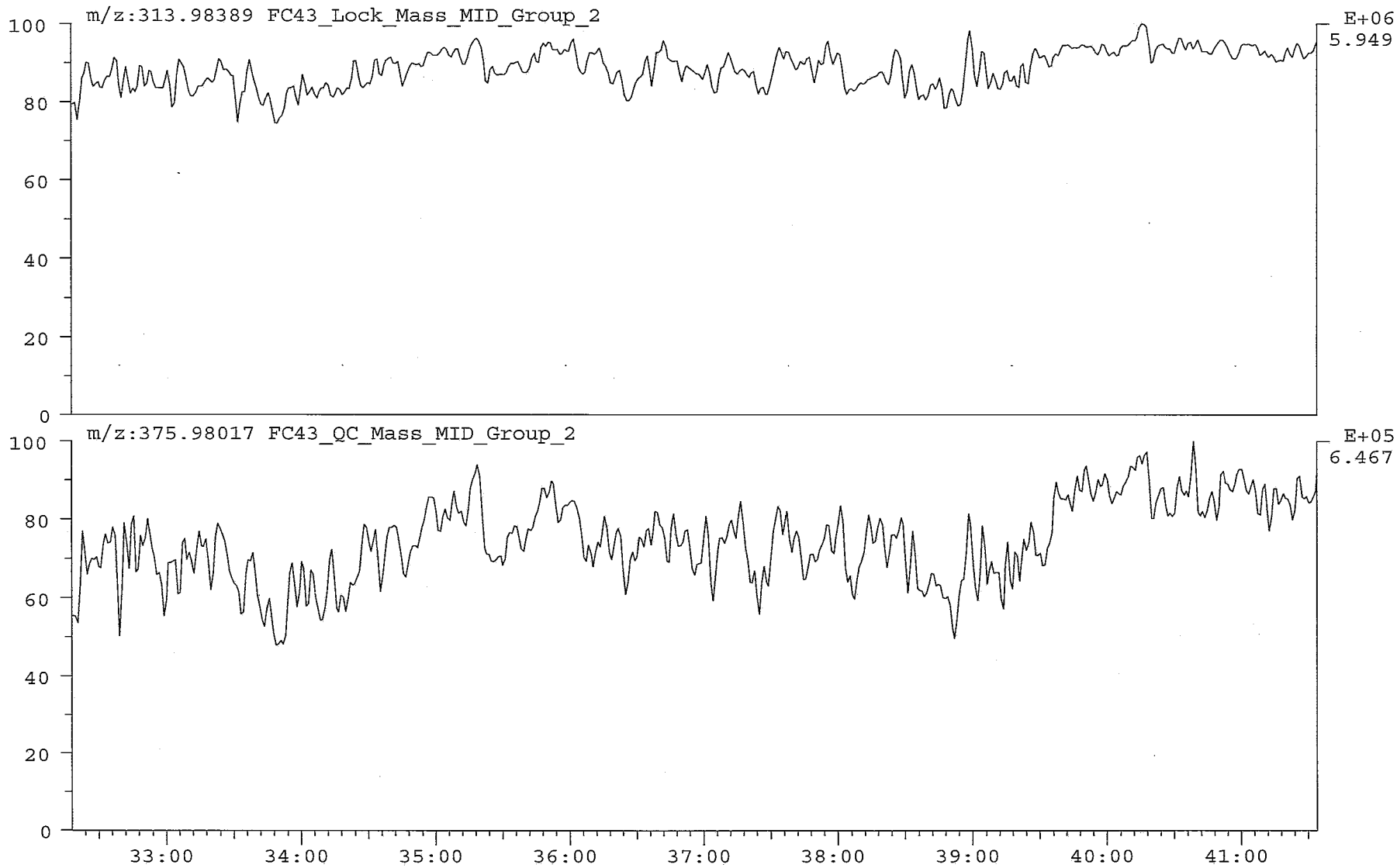
```
CHRO:  d1120918s2                          18-Sep-12  Elapse:  38:35      1561
Samp:  WO=HR0054C Meth=F8 Dil=1                       Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                            Study :  VER/WIN
Oper:  KLR                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1478 > 1644      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  2, 5.0
Disp:  Height  Area
```



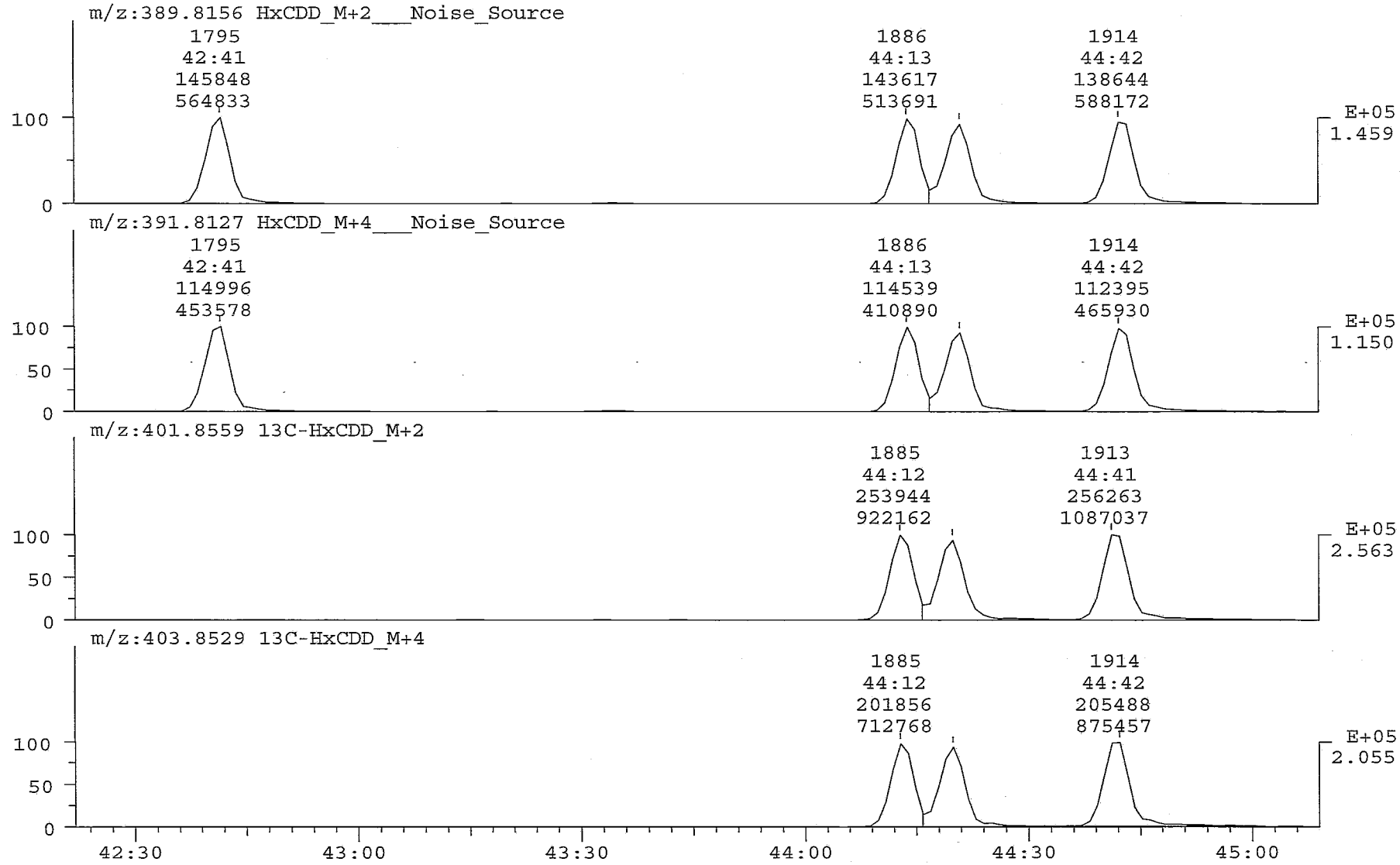
CHRO: d1120918s2 18-Sep-12 Elapse: 38:35 1561
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 1197 > 1734 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



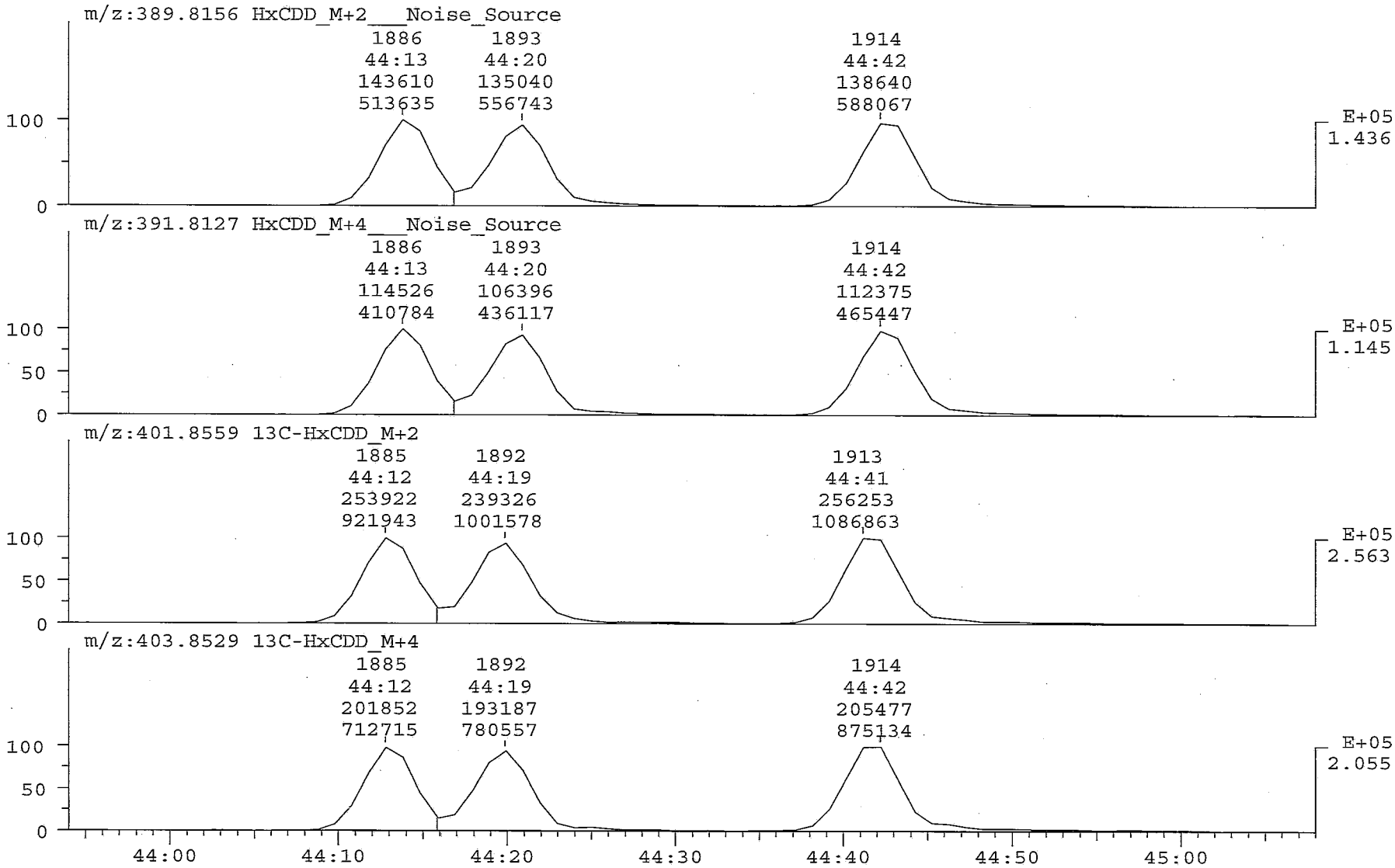
```
CHRO:  d1120918s2                          18-Sep-12  Elapse:  38:35      1561
Samp:  WO=HR0054C Meth=F8 Dil=1                       Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                            Study :  VER/WIN
Oper:  KLR                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1197 > 1734      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  0, 0.0
Disp:  Height  Area
```



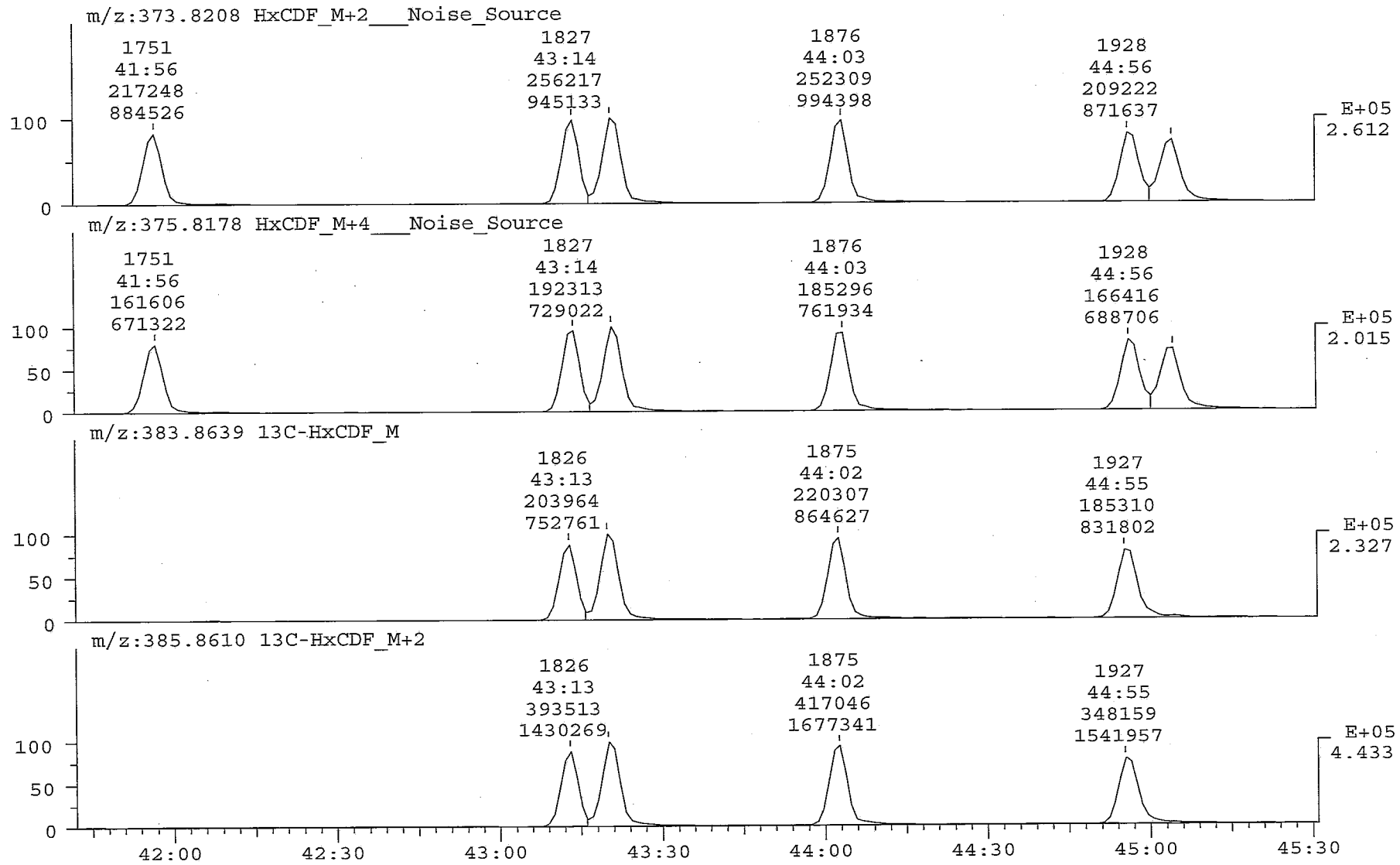
```
CHRO:  d1120918s2                          18-Sep-12   Elapse:  38:35      1561
Samp:  WO=HR0054C Meth=F8 Dil=1                        Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                             Study :  VER/WIN
Oper:  KLR                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1776 > 1940       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  2, 5.0
Disp:  Height  Area
```



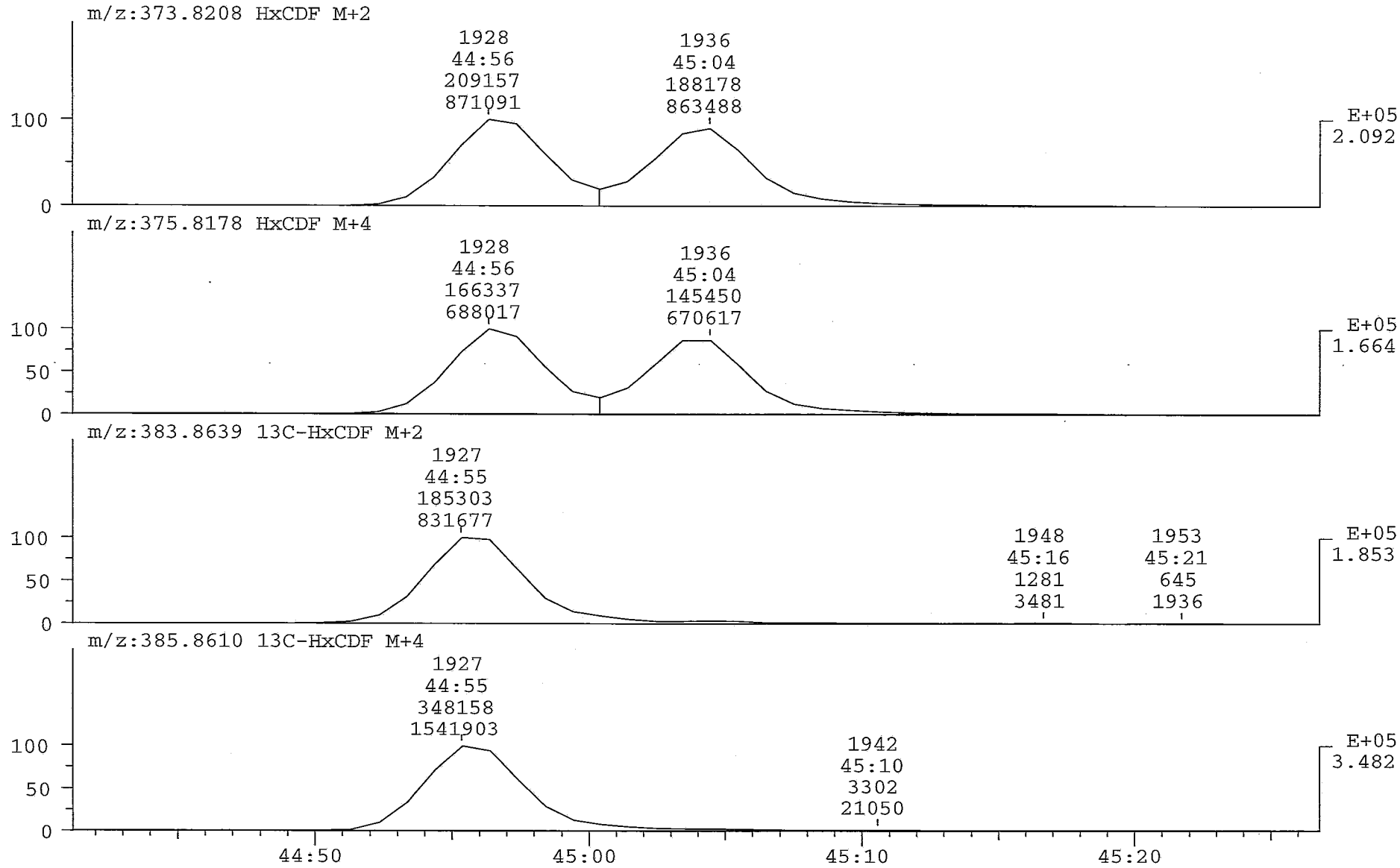
CHRO: d1120918s2 18-Sep-12 Elapse: 44:31 1903
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 1866 > 1939 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



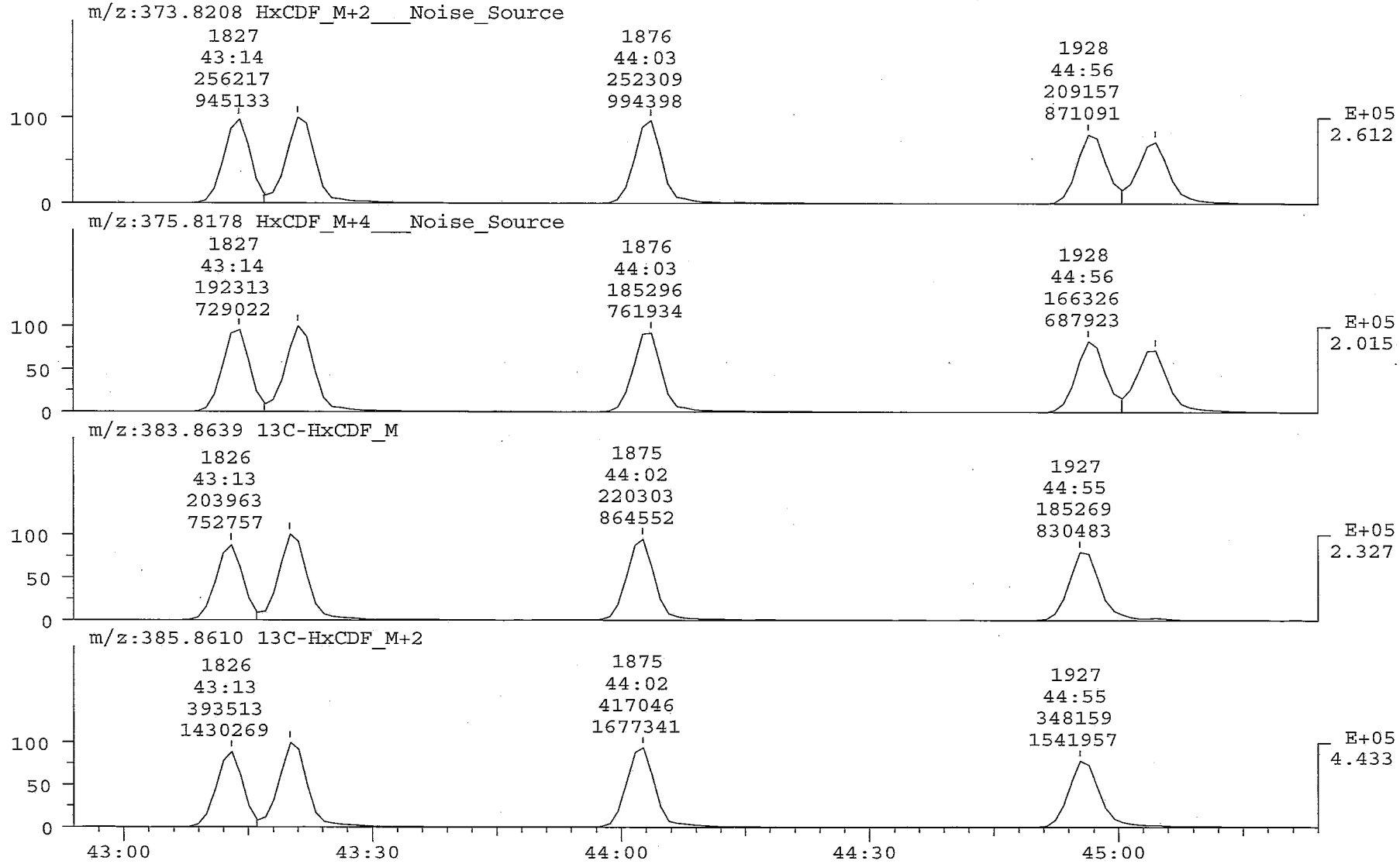
CHRO: d1120918s2 18-Sep-12 Elapse: 44:31 1903
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 1737 > 1962 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



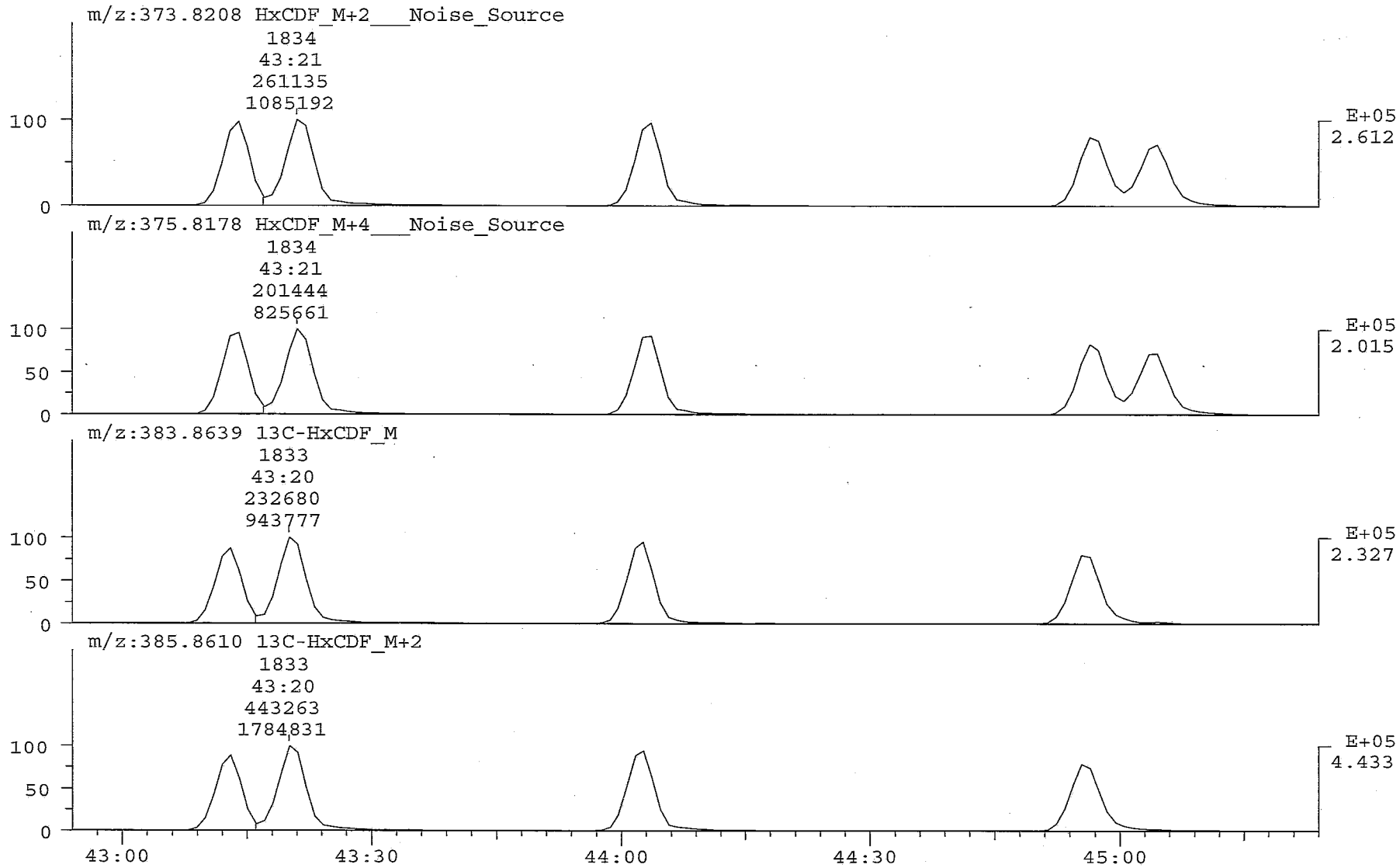
CHRO: d1120918s2 18-Sep-12 Elapse: 53:25 2418
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 1913 > 1958 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



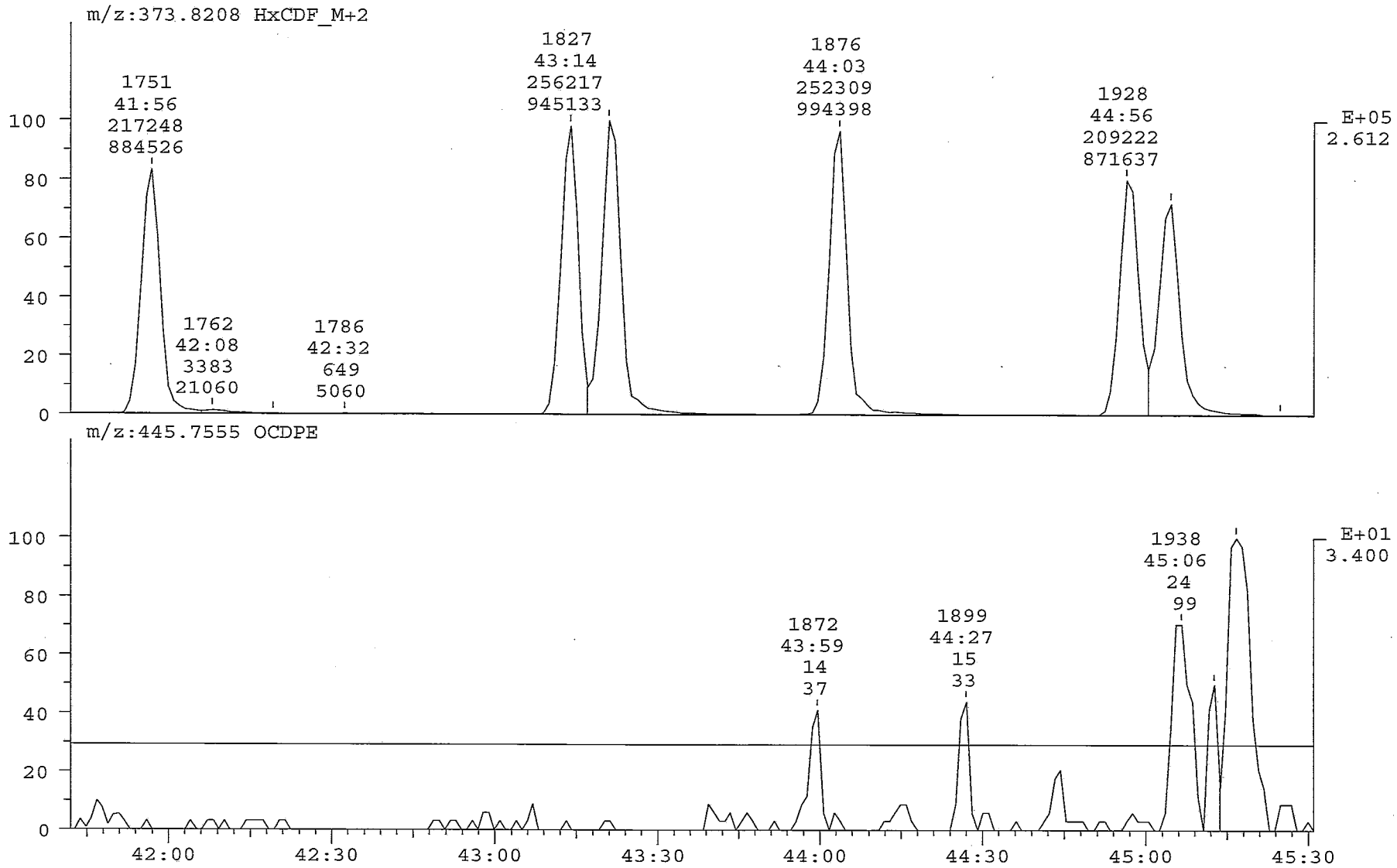
CHRO: d1120918s2 18-Sep-12 Elapse: 44:08 1881
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 1807 > 1955 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



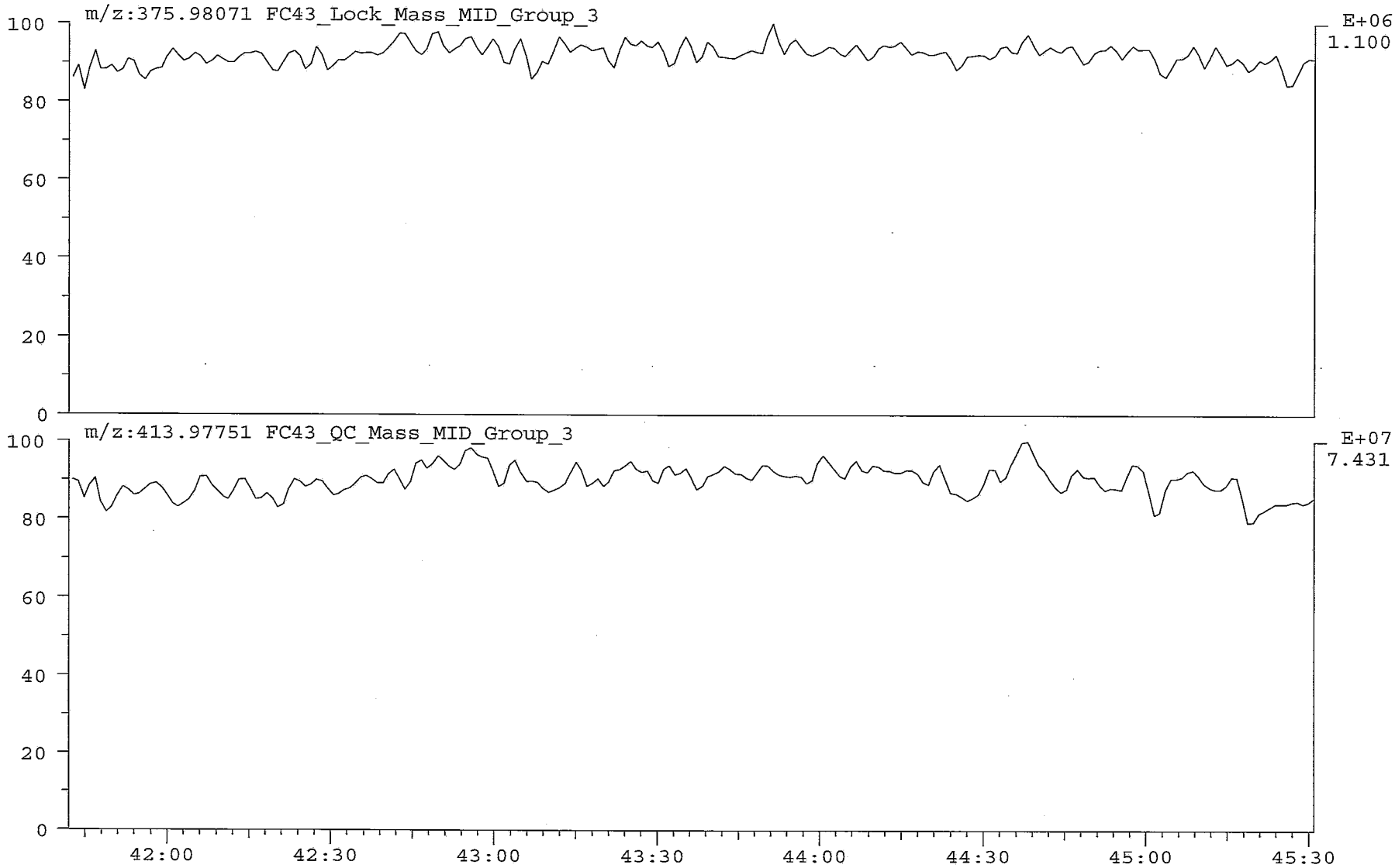
```
CHRO:  d1120918s2                          18-Sep-12  Elapse:  43:22      1835
Samp:  WO=HR0054C Meth=F8 Dil=1                       Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                            Study :  VER/WIN
Oper:  KLR                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1831 > 1839      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



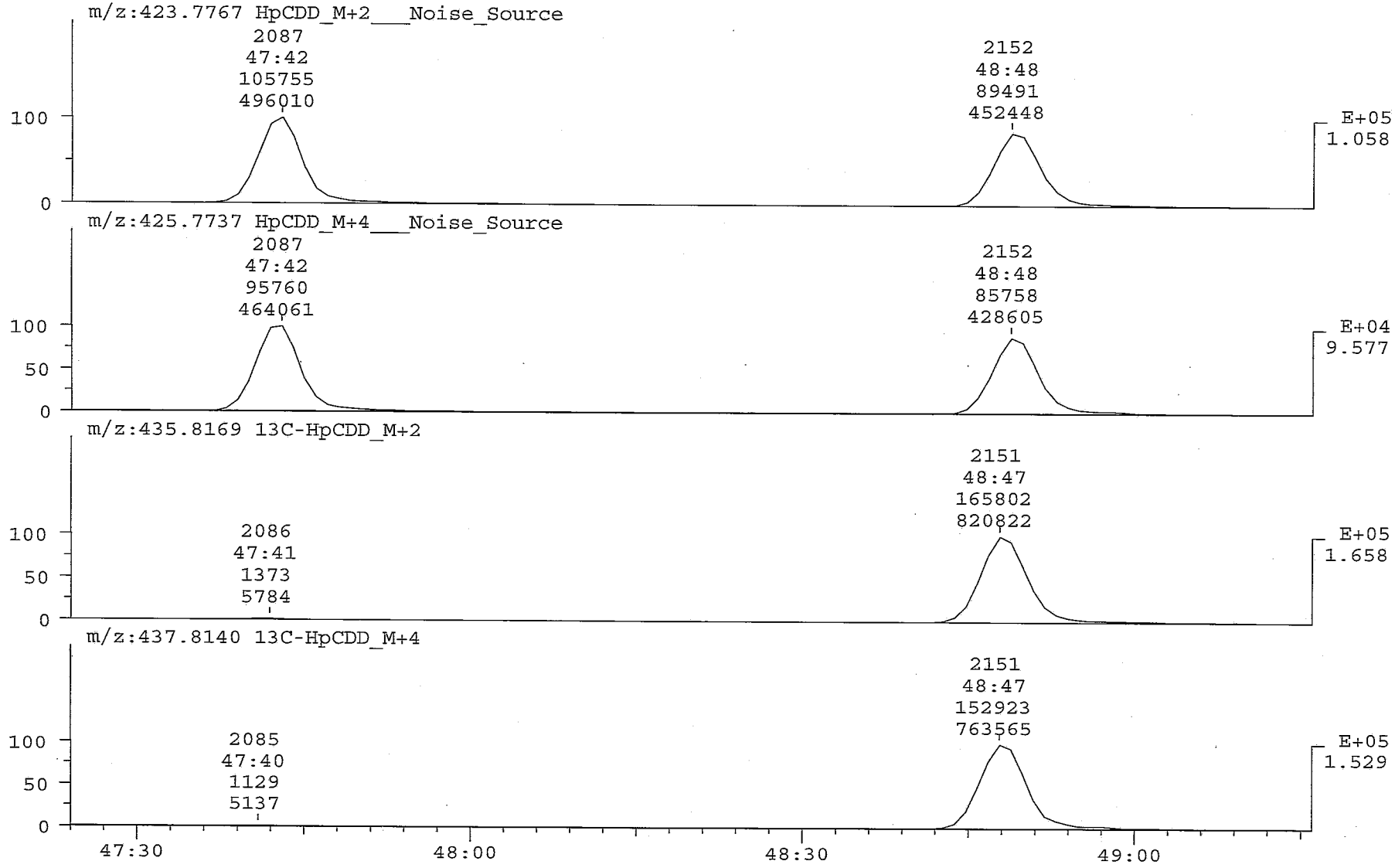
```
CHRO:  d1120918s2                                18-Sep-12  Elapse:  43:22      1835
Samp:  WO=HR0054C Meth=F8 Dil=1                             Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                                  Study :  VER/WIN
Oper:  KLR                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1737 > 1962            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



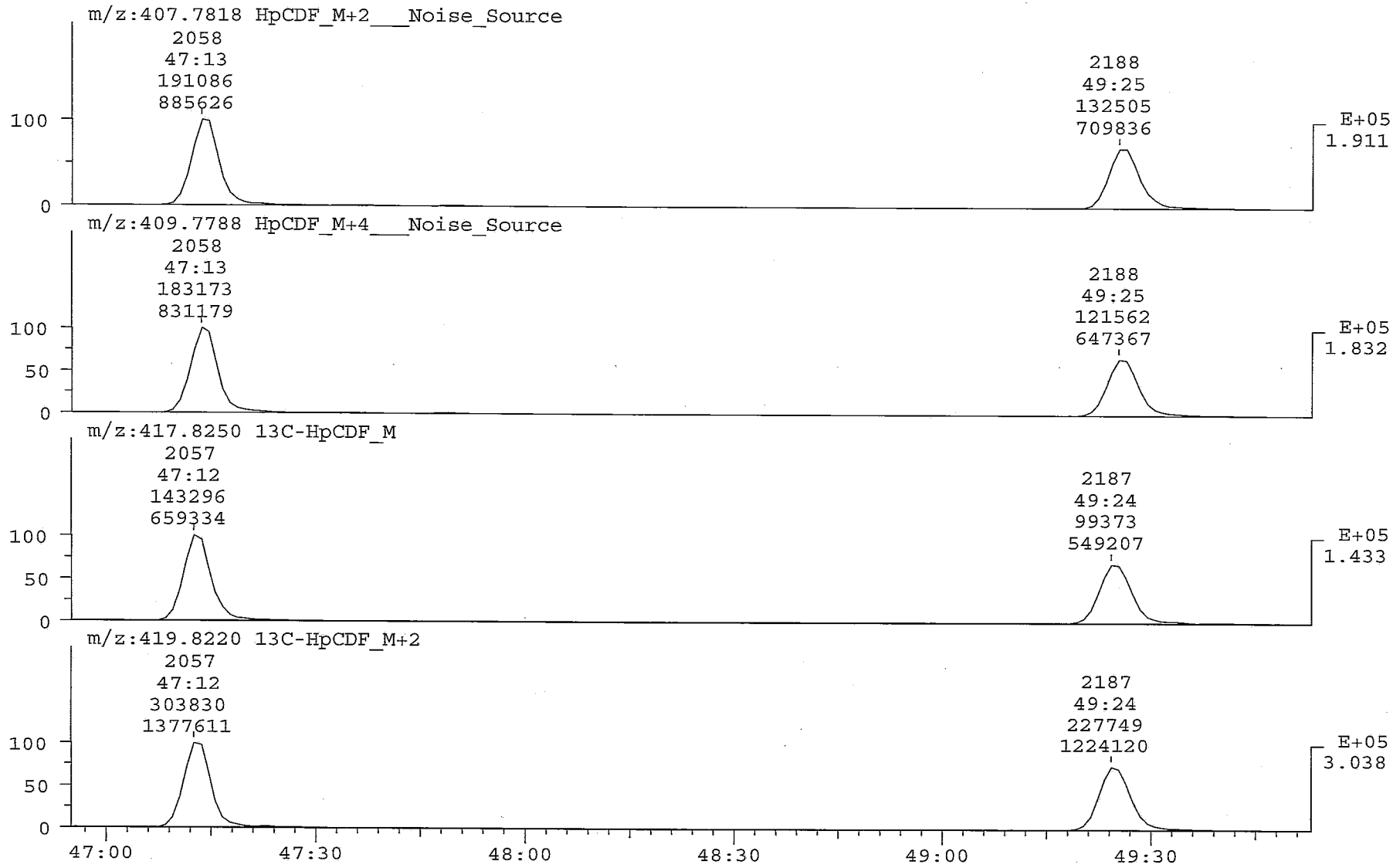
CHRO: d1120918s2 18-Sep-12 Elapse: 43:22 1835
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 1737 > 1962 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 0, 0.0
Disp: Height Area



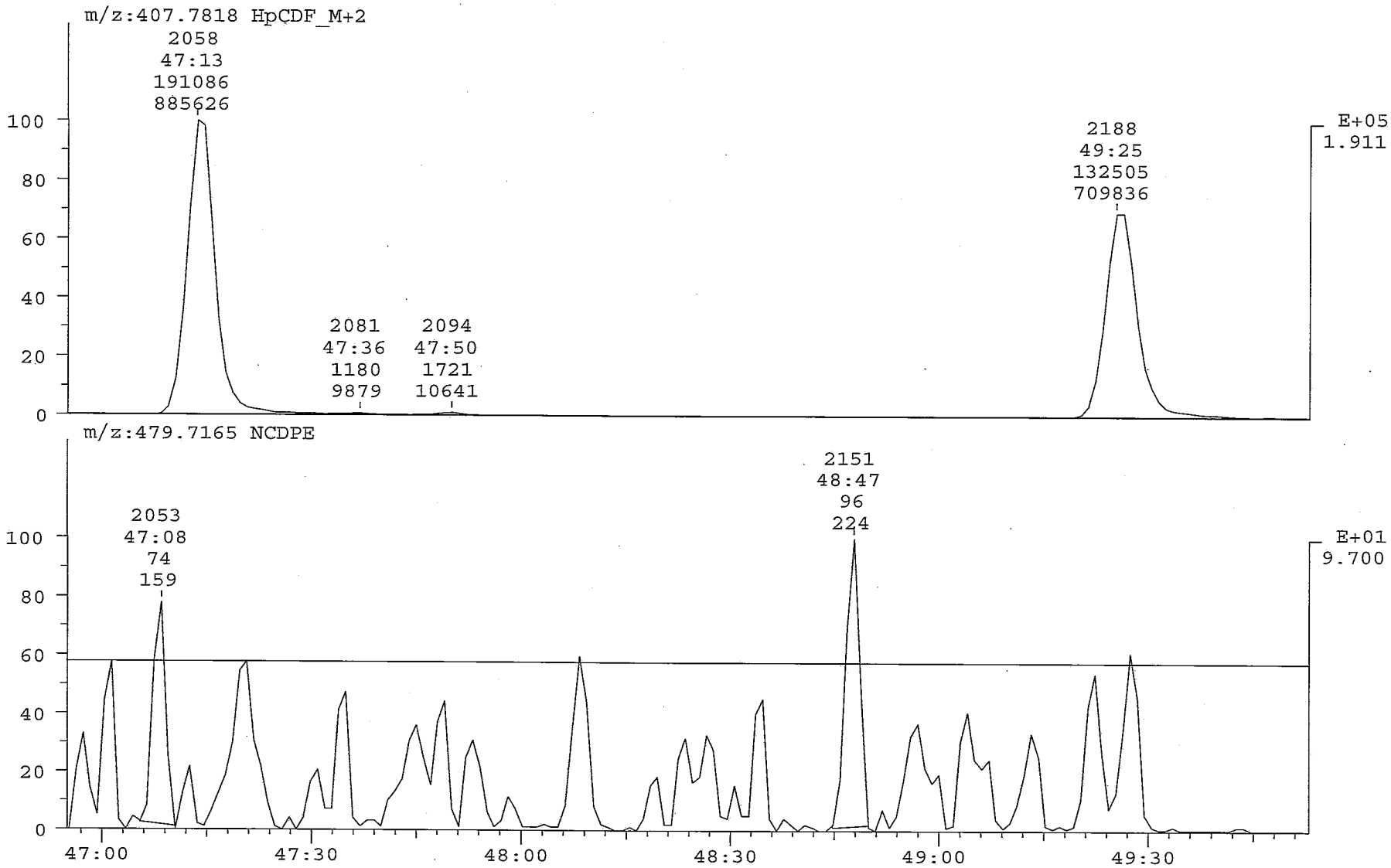
CHRO: d1120918s2 18-Sep-12 Elapse: 43:22 1835
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 2068 > 2179 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



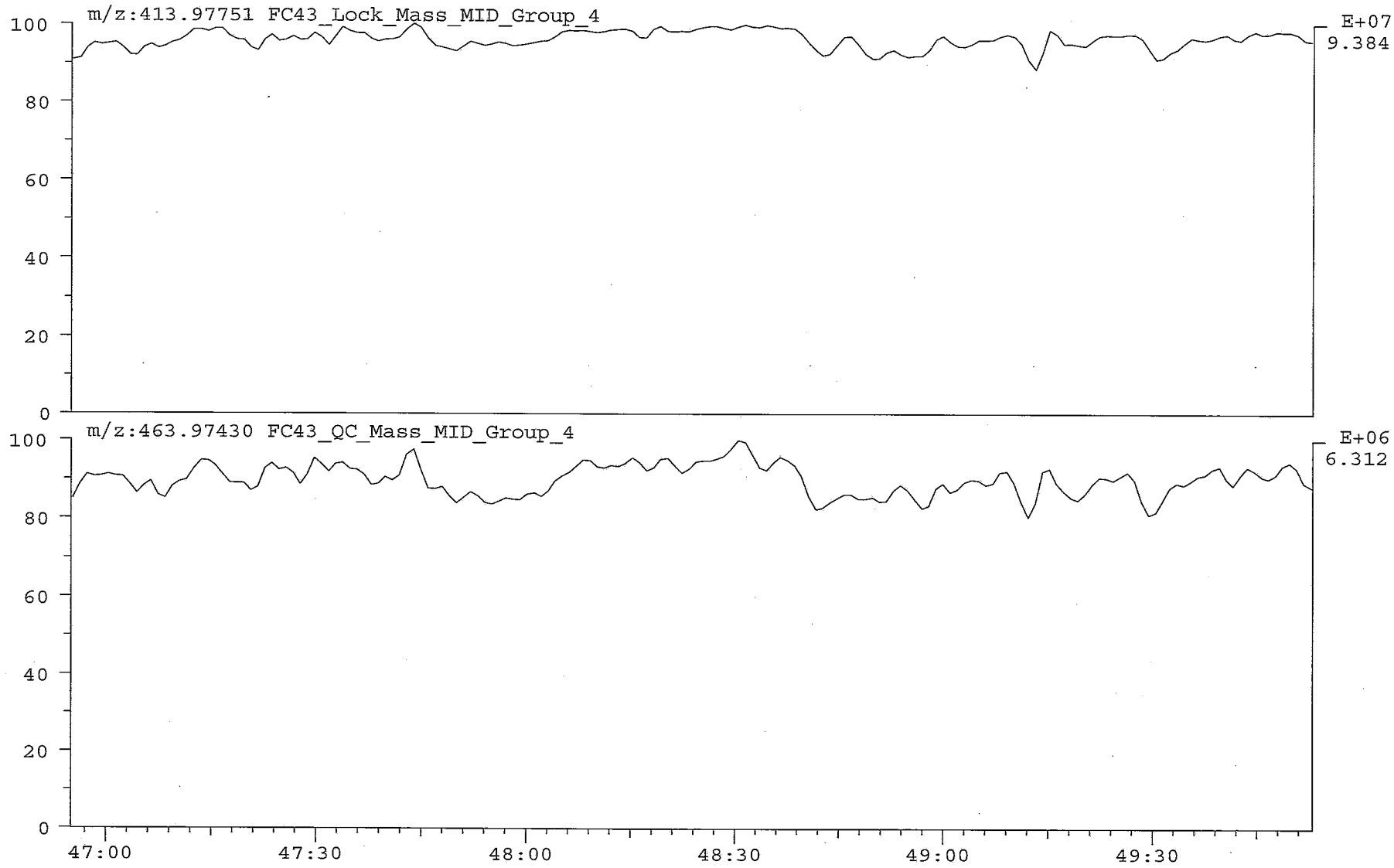
```
CHRO:  d1120918s2                                18-Sep-12   Elapse:  48:24      2128
Samp:  WO=HR0054C Meth=F8 Dil=1                              Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                                   Study :  VER/WIN
Oper:  KLR                                                   Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2040 > 2215             Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                  Label :  -2, 5.0
Disp:  Height  Area
```



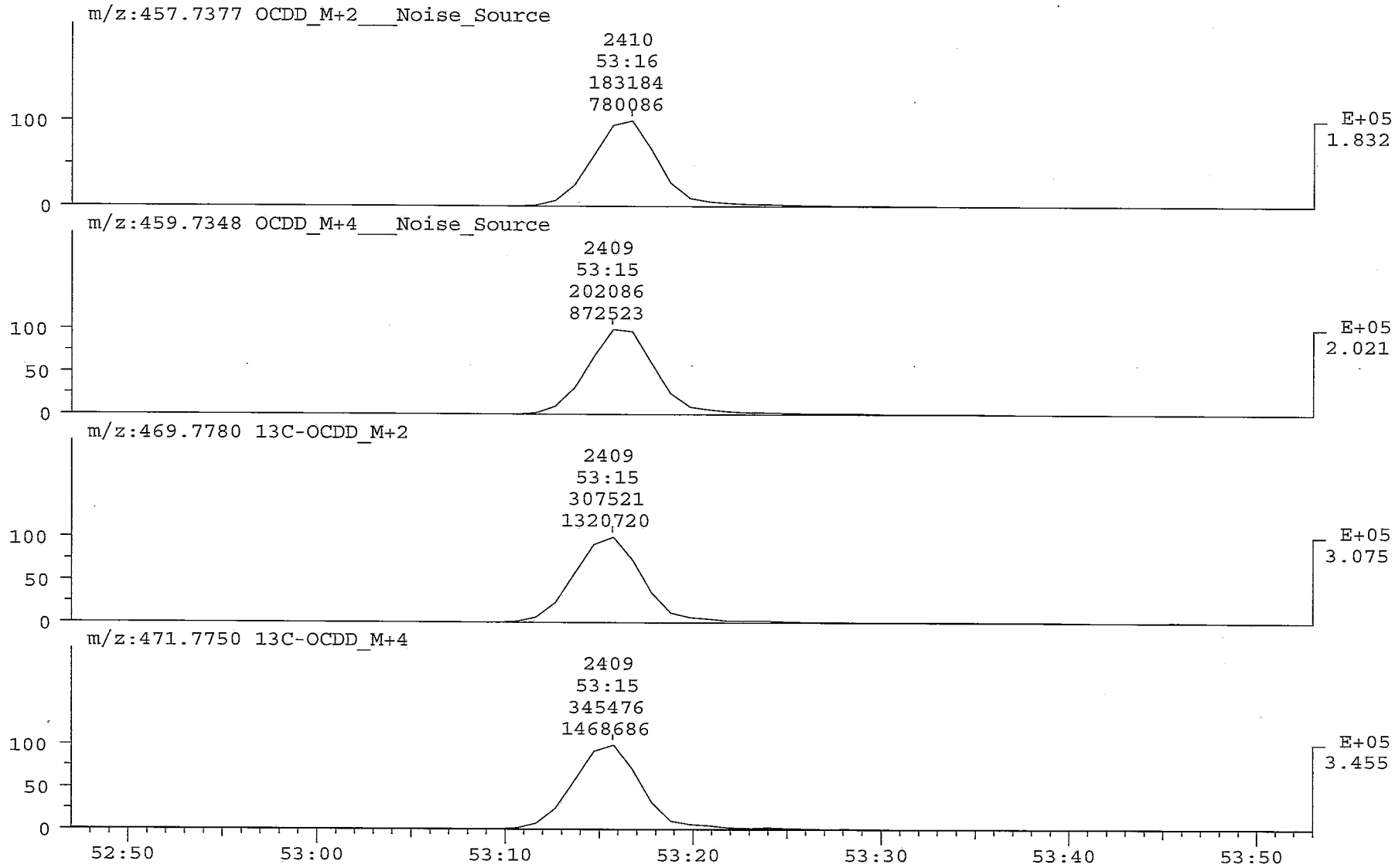
CHRO: d1120918s2 18-Sep-12 Elapse: 48:24 2128
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC
Peak: 100.00 ppm Label wndw: 2040 > 2215 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



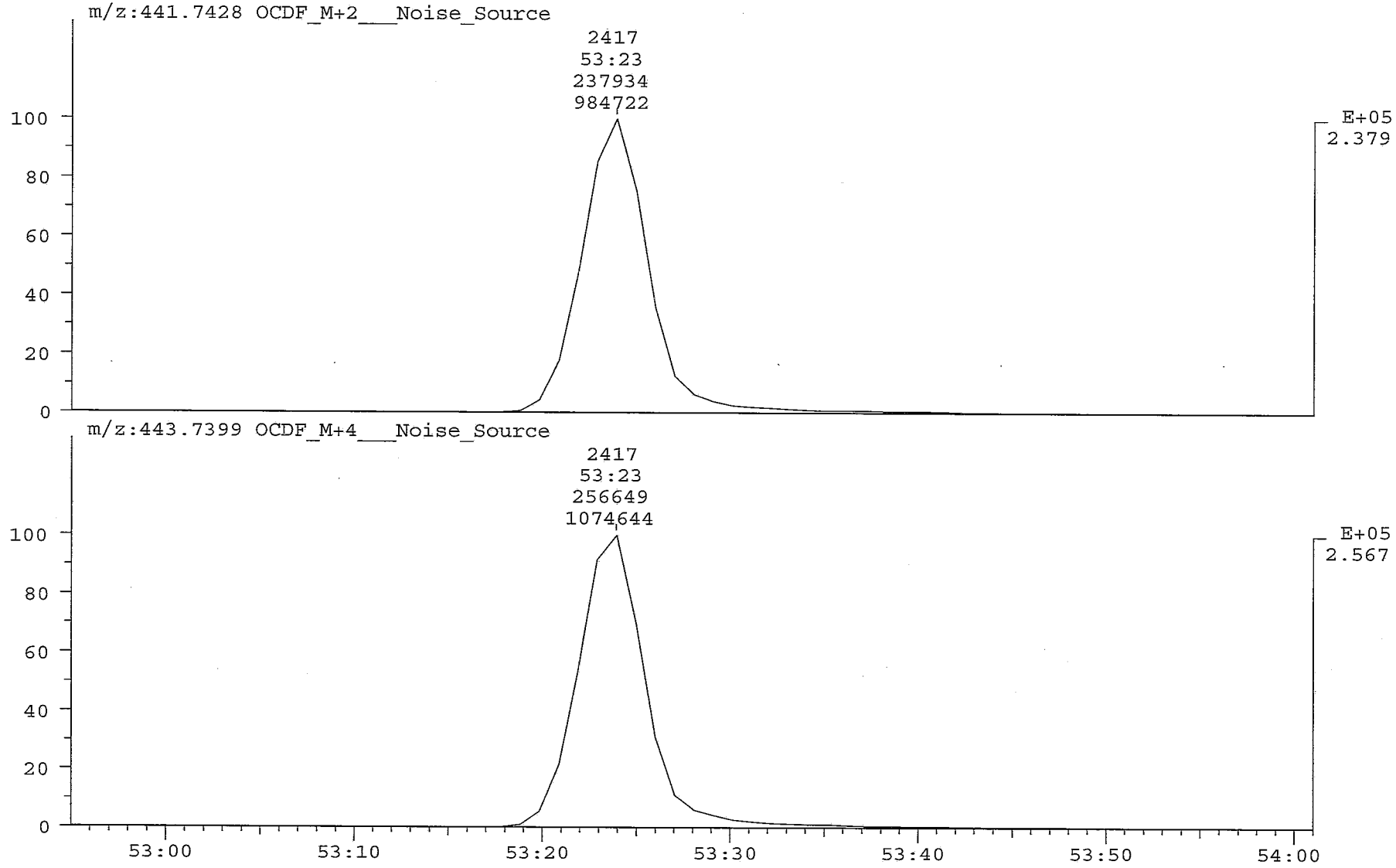
```
CHRO:  d1120918s2                                18-Sep-12  Elapse:  48:24      2128
Samp:  WO=HR0054C Meth=F8 Dil=1                             Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                                  Study :  VER/WIN
Oper:  KLR                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2040 > 2215            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  0, 0.0
Disp:  Height  Area
```



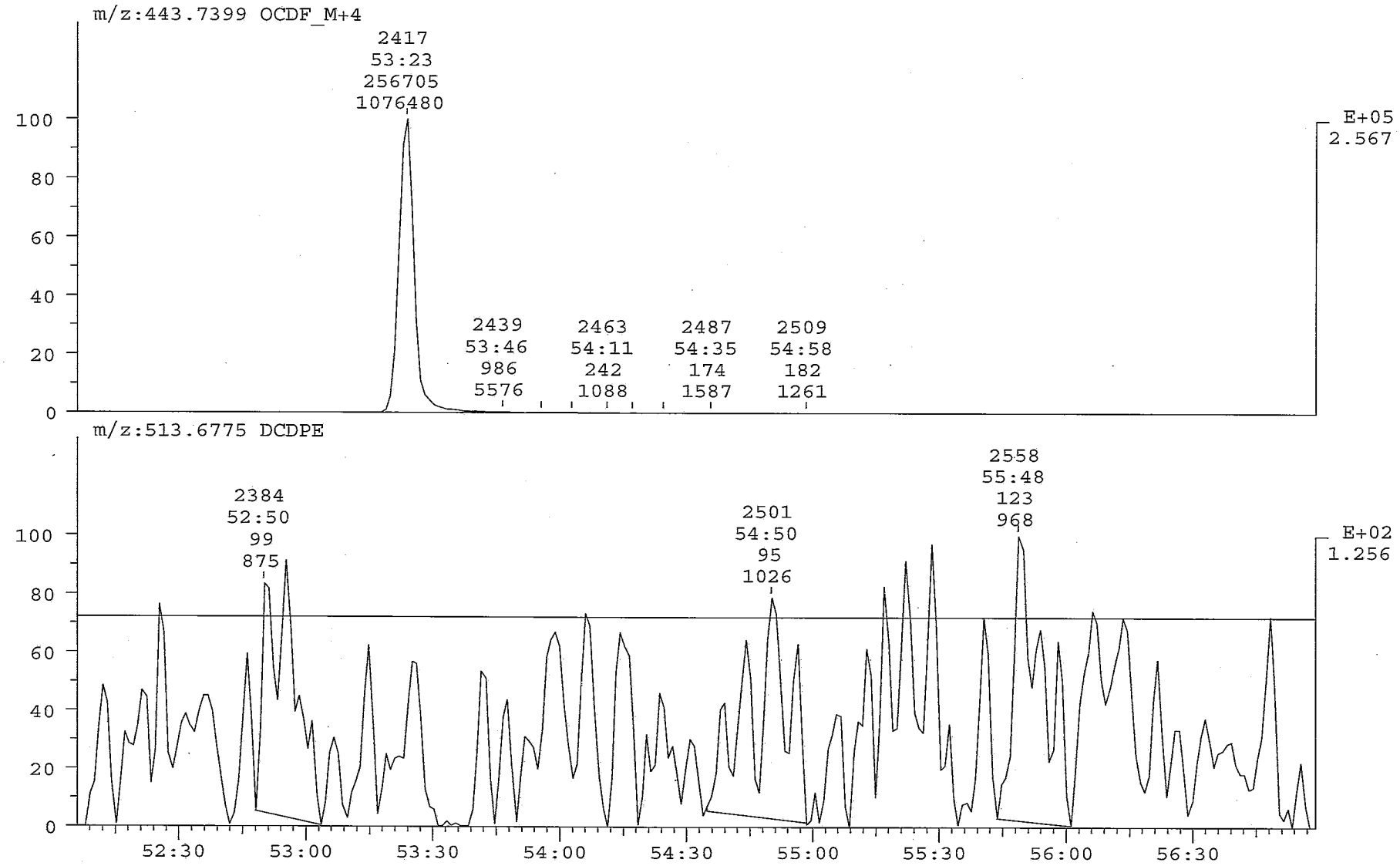
```
CHRO:  d1120918s2                                18-Sep-12  Elapse:  53:16      2410
Samp:  WO=HR0054C Meth=F8 Dil=1                             Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                                  Study :  VER/WIN
Oper:  KLR                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2381 > 2445            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



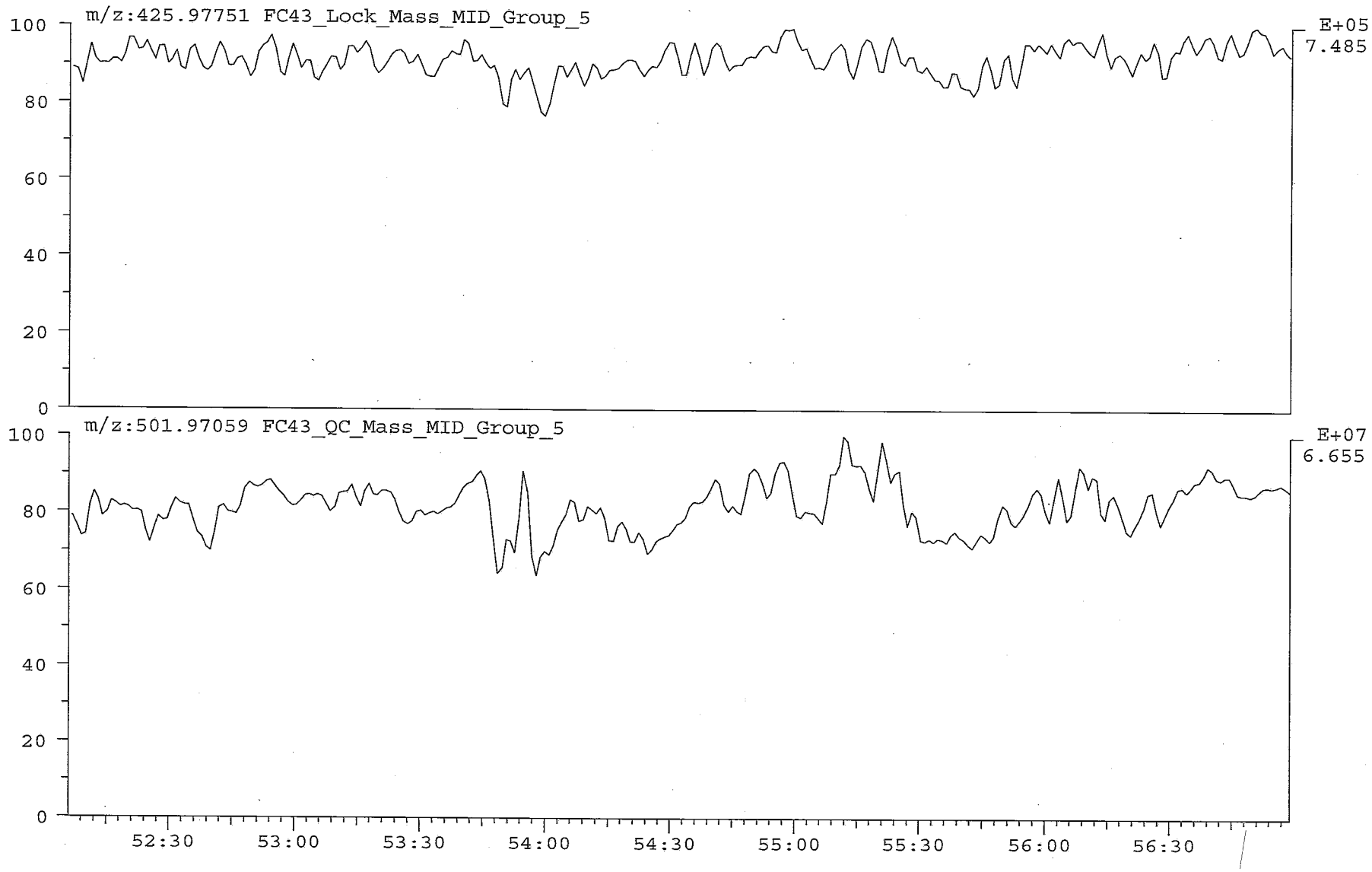
```
CHRO:  d1120918s2                          18-Sep-12  Elapse:  53:25      2418
Samp:  WO=HR0054C Meth=F8 Dil=1                       Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                            Study :  VER/WIN
Oper:  KLR                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2389 > 2453      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



```
CHRO:  d1120918s2                              18-Sep-12   Elapse:  53:25      2418
Samp:  WO=HR0054C Meth=F8 Dil=1                            Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                                 Study :  VER/WIN
Oper:  KLR                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2342 > 2626           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



```
CHRO:  d1120918s2                                18-Sep-12  Elapse:  53:25      2418
Samp:  WO=HR0054C Meth=F8 Dil=1                             Start :  20:32:37   2628
Comm:  Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode:  EI ESI + Q1MS UP LR                                  Study :  VER/WIN
Oper:  KLR                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2342 > 2626            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  0, 0.0
Disp:  Height  Area
```



*** file opened Tue Sep 18 20:35:50 2012 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - KNXDXNDFS01

Analysis started at: 18-Sep-12 20:35:50

Analysis will stop at user request

Firmware Version: 1.03

MCAL file name: mcal1.cal

Sequence :

MID procedure: 5W_DB5_FC43_SINGLEGC

Mid Time Windows:

	Start	Measure	End	Cycletime
# 1	12:00 min	20:12 min	32:12 min	1.00 sec
# 2	32:12 min	9:23 min	41:36 min	1.00 sec
# 3	41:36 min	4:53 min	46:30 min	1.00 sec
# 4	46:30 min	5:30 min	52:00 min	1.00 sec
# 5	52:00 min	5:00 min	57:00 min	1.00 sec

Mid Masses:

Window # 1

mass	F	int	gr	time (ms)
303.9016		1	1	124
305.8987		1	1	124
313.9834	l	20	1	6
313.9834		20	1	6
315.9419		5	1	24
317.9389		5	1	24
319.8965		1	1	124
321.8936		1	1	124
327.8847		1	1	124
331.9368		5	1	24
333.9338		5	1	24
363.9802	c	20	1	6
363.9802		20	1	6
375.8364		1	1	124

Window # 2

mass	F	int	gr	time (ms)
313.9834	l	20	1	7
313.9834		20	1	7
339.8597		1	1	146
341.8567		1	1	146
351.9000		5	1	29
353.8970		5	1	29
355.8546		1	1	146
357.8516		1	1	146
367.8949		5	1	29
369.8919		5	1	29
375.9802	c	20	1	7
375.9802		20	1	7
409.7974		1	1	146

Window # 3

mass	F	int	gr	time (ms)
373.8208		1	1	146
375.8178		1	1	146
375.9802	l	20	1	7

```
  375.9802     20  1        7
  383.8639      5  1       29
  385.8610      5  1       29
  389.8158      1  1      146
  391.8127      1  1      146
  401.8559      5  1       29
  403.8529      5  1       29
  413.9770 c   20  1        7
  413.9770     20  1        7
  445.7555      1  1      146
 Window # 4
      mass F  int  gr  time (ms)
  407.7817      1  1      146
  409.7788      1  1      146
  413.9770 l   20  1        7
  413.9770     20  1        7
  417.8250      5  1       29
  419.8220      5  1       29
  423.7767      1  1      146
  425.7737      1  1      146
  435.8169      5  1       29
  437.8140      5  1       29
  463.9738 c   20  1        7
  463.9738     20  1        7
  479.7165      1  1      146
 Window # 5
      mass F  int  gr  time (ms)
  425.9770 l   20  1        7
  425.9770     20  1        7
  441.7428      1  1      159
  443.7399      1  1      159
  457.7377      1  1      159
  459.7348      1  1      159
  469.7780      5  1       31
  471.7750      5  1       31
  501.9706 c   20  1        7
  501.9706     20  1        7
  513.6775      1  1      159

MID Window terminated after 32.200000 minutes
MID Window end time was 32.200000 minutes
MID Window terminated after 41.600000 minutes
MID Window end time was 41.600000 minutes
MID Window terminated after 46.500000 minutes
MID Window end time was 46.500000 minutes
MID Window terminated after 52.000000 minutes
MID Window end time was 52.000000 minutes
MID Window terminated after 57.000000 minutes
MID Window end time was 57.000000 minutes

Tune file name: C:\Xcalibur\System\DFS\MSI\tune2.DFSTune

DFS - Parameter

 ACCU          1000.0000   BCORRS          0.0169   BMASS          311.4834
 BQUAD           -1.4000   CAPIL           0.0000   CAPTSET        200.0000
 CCURR            0.0000   COUNTING        0.0000   DELAY            0.0000
 DRAW           -25.0000   DRAWC           0.0000   DRAWS            0.0000
 DYNVOLTAGE      15.0000   ECORR           1.0007   ECURR            0.9000
 EDAC        7969177.0000  EDACG           0.9998   EDACZ         1378.7226
 ELEN           -45.0000   EMULT        1710.0000   ENS            215.0000
 ENSBR           -1.4000   ERATIO          1.0000   ESA            679.0600
 ESIPAR           0.0000   EXS           173.0000   EXSBR           -0.7000
 FDMA       18000000.0000  FILTER        100.0000   FLENS            1.0000
 FM             375.8364   FMII           50.0000   FQUAD            5.5000
 FQUADGAIN        4.6000   FREQ          400.0000   FSLOPE    36000000.0000
 FVANAL           0.0292   FVINLET         0.0631   FVSRC            0.0536
```

FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSRC	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	614.0000
LENS_SYM	4.5000	LM	375.8364	LMII	500.0000
LMASS	311.4834	LKM	425.9770	MASS	311.4834
MDAC	3588327.5475	MRANGE	1245.7874	NSAM	200.0000
NSCAN	2649.0000	NSMAX	8.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-12.0000	RECURR	0.8825	RELEN	0.0000
RES	11462.5476	RPUSHER	-12.1978	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	690.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.1600	TANAL	0.0000	TCURR	0.0000
TD	30.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	110.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	311.4834	XLENS_POT	698.0000
XLENS_SYM	4.5000	YLENS_POT	668.0000	YLENS_SYM	14.8000

```
Source Gauge:          3.3e-005 mbar
Analyzer Penning:      9.4e-008 mbar
Pirani Analyse:        2.9e-002 mbar
Pirani Source:         5.3e-002 mbar
Pirani Inlet System:   6.3e-002 mbar

Scantype is electric

Sourcemode is EI POS

MID Time Window 1: Resolution is 11094.
MID Time Window 2: Resolution is 11246.
MID Time Window 3: Resolution is 11298.
MID Time Window 4: Resolution is 11557.
MID Time Window 5: Resolution is 11462.

Amplifier Offset: 88.


*** File closed Tue Sep 18 21:32:52 2012
  ***
```

QUAN: d1120918s2.q0 Entries: 178

Data file(s) used
File: d1120918s2 18-Sep-12
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 20:32:37 2628
Comm: Inst=d11a/1101912 Batch=20120918s2 Ccal=D1120918S1
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: KLR Inlet : LC

Disp: CHRO
Amount = (area * ref amnt) / (ref area * response factor); amount = f(reponse)
Response factors from quantitation file

Quan Masses	Actual Time	Area	Height	Peak Beginn	Peak End	Noise Value	La Pe	Lab Fac	Integration Baseline
319.8805	29:04	88539.	8879.	28:55	29:18	35.	1	1.0	AVV
321.8775	29:03	108005.	12346.	28:56	29:18	45.	1	1.0	AVV
319.8805	23:36	78898.	10217.	23:25	23:46	35.	2	5.0	ABV
319.8805	28:34	66832.	7374.	28:23	28:42	35.	2	5.0	ABV
319.8805	28:48	55108.	6624.	28:42	28:55	35.	2	5.0	AVB
319.8805	29:04	88539.	8879.	28:55	29:18	35.	2	5.0	AVV
319.8805	29:29	75188.	7103.	29:18	29:44	35.	2	5.0	AVB
319.8805	32:00	45099.	4956.	31:49	32:11	35.	2	5.0	ABB
321.8775	23:35	97701.	14185.	23:26	23:51	45.	2	5.0	ABV
321.8775	28:35	85013.	9687.	28:22	28:42	45.	2	5.0	ABV
321.8775	28:49	76643.	8524.	28:42	28:56	45.	2	5.0	AVB
321.8775	29:03	108005.	12346.	28:56	29:18	45.	2	5.0	AVB
321.8775	29:30	91196.	8758.	29:19	29:45	45.	2	5.0	AVB
321.8775	32:02	64260.	6560.	31:48	32:11	45.	2	5.0	ABB
331.9202	28:33	685825.	82738.	28:17	28:48	39.	2	5.0	AVV
331.9202	29:01	724887.	81599.	28:50	29:16	39.	2	5.0	AVV
333.9171	28:33	847910.	98221.	28:17	28:48	18.	2	5.0	ABV
333.9171	29:02	907082.	100116.	28:49	29:17	18.	2	5.0	AVV
319.8805	29:04	88163.	8864.	28:55	29:18	88.	2	5.0	AVV
319.8805	29:29	74517.	7078.	29:18	29:44	88.	2	5.0	AVV
321.8775	29:03	107621.	12330.	28:56	29:18	93.	2	5.0	AVV
321.8775	29:30	90548.	8734.	29:19	29:45	93.	2	5.0	AVV
331.9202	28:33	685060.	82712.	28:17	28:48	87.	2	5.0	AVV
331.9202	29:01	724512.	81584.	28:50	29:16	87.	2	5.0	AVV
333.9171	28:33	847854.	98219.	28:18	28:48	64.	2	5.0	ABV
333.9171	29:02	907055.	100115.	28:49	29:17	64.	2	5.0	AVV
327.8683	29:04	178784.	18861.	28:50	29:19	48.	1	1.0	AVV
327.8683	29:04	178828.	18861.	28:49	29:19	48.	2	5.0	AVV
303.8864	21:22	172961.	27324.	21:10	21:37	24.	1	1.0	ABV
305.8834	21:22	209571.	32960.	21:12	21:37	42.	1	1.0	ABV
303.8864	21:22	172961.	27324.	21:10	21:37	24.	2	5.0	ABV
303.8864	27:13	154314.	18541.	27:00	27:28	24.	2	5.0	ABV
303.8864	31:52	107003.	10425.	31:37	32:07	24.	2	5.0	ABV
305.8834	21:22	209571.	32960.	21:12	21:37	42.	2	5.0	ABV
305.8834	27:12	185157.	20769.	27:00	27:27	42.	2	5.0	ABV
305.8834	31:52	129311.	12631.	31:37	32:07	42.	2	5.0	ABV
315.9261	27:10	1238508.	145977.	26:56	27:25	16.	2	5.0	ABV
317.9230	27:10	1517591.	175424.	26:56	27:25	13.	2	5.0	ABV
303.8864	27:13	154212.	18537.	27:01	27:28	31.	2	5.0	ABV
305.8834	27:12	185157.	20769.	27:00	27:27	54.	2	5.0	ABV
315.9261	27:10	1238508.	145977.	26:56	27:25	47.	2	5.0	ABV
317.9230	27:10	1517501.	175422.	26:56	27:25	49.	2	5.0	ABV
355.8368	39:47	430479.	91412.	39:40	39:59	32.	1	1.0	ABV
357.8337	40:30	268185.	57254.	40:21	40:45	25.	1	1.0	ABV
355.8368	36:31	355886.	46758.	36:18	36:46	32.	2	5.0	ABV
355.8368	39:47	430479.	91412.	39:40	39:59	32.	2	5.0	ABV
355.8368	40:31	427076.	89847.	40:21	40:46	32.	2	5.0	AVV
357.8337	36:30	225373.	30117.	36:17	36:45	25.	2	5.0	ABV
357.8337	39:47	267102.	56946.	39:40	40:01	25.	2	5.0	ABV
357.8337	40:30	268185.	57254.	40:21	40:45	25.	2	5.0	ABV

367.8765	39:46	798965.	169953.	39:38	40:01	13.	2	5.0 ABV
369.8734	39:46	496537.	103708.	39:39	40:02	6.	2	5.0 ABV
355.8368	39:47	430290.	91402.	39:40	39:59	39.	2	5.0 ABV
355.8368	40:31	421233.	89666.	40:21	40:46	39.	2	5.0 ABB
357.8337	39:47	267072.	56945.	39:40	40:01	30.	2	5.0 ABV
357.8337	40:30	264626.	57148.	40:23	40:45	30.	2	5.0 ABV
367.8765	39:46	798965.	169953.	39:38	40:01	37.	2	5.0 ABV
369.8734	39:46	496537.	103708.	39:39	40:02	16.	2	5.0 ABV
339.8427	37:48	674048.	111390.	37:35	38:04	50.	1	1.0 ABV
341.8396	37:48	431615.	71013.	37:34	38:04	38.	1	1.0 ABV
339.8427	32:45	668783.	62066.	32:31	33:01	50.	2	5.0 ABV
339.8427	37:48	674048.	111390.	37:35	38:04	50.	2	5.0 ABV
339.8427	39:11	581398.	112801.	39:01	39:24	50.	2	5,0 ABV
339.8427	40:37	613405.	124641.	40:21	40:53	50.	2	5.0 AVV
341.8396	32:45	430430.	40066.	32:30	33:01	38.	2	5.0 ABV
341.8396	37:48	431615.	71013.	37:34	38:04	38.	2	5.0 ABV
341.8396	39:11	387224.	76280.	38:56	39:24	38.	2	5.0 AVV
341.8396	40:37	390784.	80323.	40:26	40:53	38.	2	5.0 ABV
351.8824	37:46	1100314.	184891.	37:35	38:02	27.	2	5.0 ABV
351.8824	39:10	1078121.	212562.	39:03	39:26	27.	2	5.0 ABV
353.8793	37:46	694029.	126033.	37:35	38:02	18.	2	5.0 ABV
353.8793	39:10	669188.	131400.	39:02	39:26	18.	2	5.0 ABV
339.8427	37:48	673926.	111386.	37:35	38:04	69.	2	5.0 ABV
339.8427	39:11	580950.	112782.	39:03	39:24	69.	2	5.0 ABV
341.8396	37:48	431615.	71013.	37:34	38:04	50.	2	5.0 ABV
341.8396	39:11	386738.	76261.	38:56	39:24	50.	2	5.0 AVV
351.8824	37:46	1100023.	184882.	37:36	38:02	113.	2	5.0 ABV
351.8824	39:10	1078121.	212562.	39:03	39:26	113.	2	5.0 ABV
353.8793	37:46	693700.	126022.	37:37	38:02	71.	2	5.0 ABV
353.8793	39:10	669188.	131400.	39:02	39:26	71.	2	5.0 ABV
389.7961	44:42	588172.	138644.	44:33	44:57	75.	1	1.0 AVV
391.7931	44:42	465930.	112395.	44:35	44:57	55.	1	1.0 AVV
389.7961	42:41	564833.	145848.	42:34	42:56	75.	2	5.0 ABV
389.7961	44:13	513691.	143617.	44:07	44:16	75.	2	5.0 ABV
389.7961	44:20	556835.	135046.	44:16	44:33	75.	2	5.0 AVV
389.7961	44:42	588172.	138644.	44:33	44:57	75.	2	5.0 AVV
391.7931	42:41	453578.	114996.	42:32	42:56	55.	2	5.0 ABV
391.7931	44:13	410890.	114539.	44:07	44:16	55.	2	5.0 ABV
391.7931	44:20	436410.	106411.	44:16	44:35	55.	2	5.0 AVV
391.7931	44:42	465930.	112395.	44:35	44:57	55.	2	5.0 AVV
401.8358	44:12	922162.	253944.	44:05	44:15	64.	2	5.0 ABV
401.8358	44:19	1001904.	239346.	44:15	44:35	64.	2	5.0 AVV
401.8358	44:41	1087037.	256263.	44:36	44:56	64.	2	5.0 AVV
403.8327	44:12	712768.	201856.	44:05	44:15	32.	2	5.0 ABV
403.8327	44:19	780667.	193193.	44:15	44:31	32.	2	5.0 AVV
403.8327	44:42	875457.	205488.	44:31	44:57	32.	2	5.0 AVV
389.7961	44:13	513635.	143610.	44:07	44:16	120.	2	5.0 ABV
389.7961	44:20	556743.	135040.	44:16	44:33	120.	2	5.0 AVV
389.7961	44:42	588067.	138640.	44:33	44:57	120.	2	5.0 AVV
391.7931	44:13	410784.	114526.	44:07	44:16	75.	2	5.0 ABV
391.7931	44:20	436117.	106396.	44:16	44:35	75.	2	5.0 AVV
391.7931	44:42	465447.	112375.	44:35	44:57	75.	2	5.0 AVV
401.8358	44:12	921943.	253922.	44:05	44:15	114.	2	5.0 ABV
401.8358	44:19	1001577.	239326.	44:15	44:35	114.	2	5.0 AVV
401.8358	44:41	1086863.	256253.	44:36	44:56	114.	2	5.0 AVV
403.8327	44:12	712715.	201852.	44:06	44:15	110.	2	5.0 ABV
403.8327	44:19	780557.	193187.	44:15	44:31	110.	2	5.0 AVV
403.8327	44:42	875134.	205477.	44:31	44:57	110.	2	5.0 AVV
373.8021	43:21	1085192.	261135.	43:17	43:36	74.	1	1.0 AVV
375.7990	43:21	825661.	201444.	43:17	43:36	109.	1	1.0 AVV
373.8021	41:57	884526.	217248.	41:49	42:06	74.	2	5.0 ABV
373.8021	43:14	945133.	256217.	43:06	43:17	74.	2	5.0 ABV
373.8021	43:21	1085192.	261135.	43:17	43:36	74.	2	5.0 AVV
373.8021	44:03	994398.	252309.	43:51	44:18	74.	2	5.0 AVV
373.8021	44:56	871637.	209222.	44:50	45:00	74.	2	5.0 ABV
373.8021	45:04	867528.	188328.	45:00	45:19	74.	2	5.0 AVV
375.7990	41:57	671322.	161606.	41:47	42:07	109.	2	5.0 ABV

375.7990	43:14	729022.	192313.	43:01	43:17	109.	2	5.0 ABV
375.7990	43:21	825661.	201444.	43:17	43:36	109.	2	5.0 AVV
375.7990	44:03	761934.	185296.	43:56	44:18	109.	2	5.0 AVV
375.7990	44:56	688706.	166416.	44:50	45:00	109.	2	5.0 ABV
375.7990	45:04	674653.	145606.	45:00	45:19	109.	2	5.0 AVV
383.8447	43:13	752761.	203964.	43:04	43:16	37.	2	5.0 ABV
383.8447	43:20	943802.	232681.	43:16	43:35	37.	2	5.0 AVV
383.8447	44:02	864627.	220307.	43:54	44:14	37.	2	5.0 AVV
383.8447	44:55	831802.	185310.	44:48	45:10	37.	2	5.0 ABV
385.8417	43:13	1430269.	393513.	43:04	43:16	61.	2	5.0 ABV
385.8417	43:20	1784831.	443263.	43:16	43:35	61.	2	5.0 AVV
385.8417	44:02	1677341.	417046.	43:52	44:17	61.	2	5.0 AVV
385.8417	44:55	1541957.	348159.	44:49	45:08	61.	2	5.0 ABV
373.8021	43:14	945133.	256217.	43:06	43:17	76.	2	5.0 ABV
373.8021	43:21	1085192.	261135.	43:17	43:36	76.	2	5.0 AVB
373.8021	44:03	994398.	252309.	43:51	44:18	76.	2	5.0 AVV
373.8021	44:56	871091.	209157.	44:50	45:00	76.	2	5.0 ABV
373.8021	45:04	863487.	188178.	45:00	45:19	76.	2	5.0 AVB
375.7990	43:14	729022.	192313.	43:01	43:17	132.	2	5.0 ABV
375.7990	43:21	825661.	201444.	43:17	43:36	132.	2	5.0 AVB
375.7990	44:03	761934.	185296.	43:56	44:18	132.	2	5.0 AVV
375.7990	44:56	687923.	166326.	44:50	45:00	132.	2	5.0 ABV
375.7990	45:04	670006.	145427.	45:00	45:19	132.	2	5.0 AVB
383.8447	43:13	752757.	203963.	43:04	43:16	74.	2	5.0 ABV
383.8447	43:20	943777.	232680.	43:16	43:35	74.	2	5.0 AVV
383.8447	44:02	864552.	220303.	43:54	44:14	74.	2	5.0 AVV
383.8447	44:55	830483.	185269.	44:48	45:10	74.	2	5.0 ABV
385.8417	43:13	1430269.	393513.	43:04	43:16	117.	2	5.0 ABV
385.8417	43:20	1784831.	443263.	43:16	43:35	117.	2	5.0 AVV
385.8417	44:02	1677341.	417046.	43:52	44:17	117.	2	5.0 AVV
385.8417	44:55	1541957.	348159.	44:49	45:08	117.	2	5.0 ABV
423.7555	47:43	496010.	105755.	47:34	47:58	65.	1	1.0 ABV
425.7524	47:43	464061.	95760.	47:32	47:58	78.	1	1.0 ABV
423.7555	47:43	496010.	105755.	47:34	47:58	65.	2	5.0 ABV
423.7555	48:48	452448.	89491.	48:39	49:04	65.	2	5.0 ABV
425.7524	47:43	464061.	95760.	47:32	47:58	78.	2	5.0 ABV
425.7524	48:48	428605.	85758.	48:41	49:04	78.	2	5.0 ABV
435.7951	47:42	5784.	1373.	47:35	47:50	19.	2	5.0 ABB
435.7951	48:47	820822.	165802.	48:39	49:03	19.	2	5.0 ABV
437.7921	47:40	5137.	1129.	47:34	47:53	20.	2	5.0 ABB
437.7921	48:47	763565.	152923.	48:40	49:03	20.	2	5.0 ABV
407.7614	47:13	885626.	191086.	47:06	47:28	60.	1	1.0 ABV
409.7583	47:13	831179.	183173.	47:06	47:28	52.	1	1.0 ABV
407.7614	47:13	885626.	191086.	47:06	47:28	60.	2	5.0 ABV
407.7614	49:25	709836.	132505.	49:16	49:40	60.	2	5.0 ABV
409.7583	47:13	831179.	183173.	47:06	47:28	52.	2	5.0 ABV
409.7583	49:25	647367.	121562.	49:18	49:40	52.	2	5.0 ABV
417.8041	47:12	659334.	143296.	47:05	47:27	48.	2	5.0 ABV
417.8041	49:24	549207.	99373.	49:16	49:36	48.	2	5.0 ABV
419.8010	47:12	1377611.	303830.	47:05	47:27	60.	2	5.0 ABV
419.8010	49:24	1224120.	227749.	49:16	49:39	60.	2	5.0 ABV
457.7148	53:16	780086.	183184.	53:09	53:32	64.	1	1.0 ABV
459.7118	53:15	872523.	202086.	53:09	53:31	61.	1	1.0 ABV
457.7148	53:16	780086.	183184.	53:09	53:32	64.	2	5.0 ABV
459.7118	53:15	872523.	202086.	53:09	53:31	61.	2	5.0 ABV
469.7545	53:15	1320720.	307521.	53:07	53:31	49.	2	5.0 ABV
471.7514	53:15	1468686.	345476.	53:08	53:30	32.	2	5.0 ABV
441.7207	53:24	984722.	237934.	53:12	53:39	46.	1	1.0 ABV
443.7177	53:24	1074644.	256648.	53:16	53:39	48.	1	1.0 ABV
441.7207	53:24	984722.	237934.	53:12	53:39	46.	2	5.0 ABV
443.7177	53:24	1074644.	256648.	53:16	53:39	48.	2	5.0 ABV

TestAmerica Knoxville

IsoCalc Continuing Calibration Report

PCDD/PCDF by EPA Method 8290 w/15 IS's

CCAL ID: 52964 - D1120919S2
ICAL Date: 08/19/11
CCAL Filename: d1120919s2
Method: IN2 - DX8290_2
CCAL Sample ID: HR0054C
Instrument: D11A
CCAL Result Dir: /20120919s2/d1120919s2.d
Column SN: 1101912
CCAL Date/Time: 09/19/12 02:11
Column Desc: Rtx-5 60m x 0.32mm ID x 0.25um

Analytes	m/z's Forming Ratio	Ion Abund Ratio	QC Limits	Calc Conc (ng/mL)	ICAL RF	CCAL RF	%D	QC Limit	Valid?
2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	9.7	1.115	1.085	-2.7	20.0	True
2,3,7,8-TCDF	M/M+2	0.81	0.65-0.89	12.1	1.027	1.244	21.1	20.0	False
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	48	1.027	0.985	-4.1	20.0	True
1,2,3,7,8-PeCDF	M+2/M+4	1.53	1.32-1.78	50	1.116	1.117	0.0	20.0	True
2,3,4,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	50	1.044	1.042	-0.2	20.0	True
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	50	1.087	1.094	0.6	20.0	True
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	49	1.113	1.084	-2.6	20.0	True
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	52	1.181	1.230	4.1	20.0	True
1,2,3,4,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	56	1.317	1.488	13.0	20.0	True
1,2,3,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	55	1.233	1.363	10.6	20.0	True
2,3,4,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	55	1.237	1.365	10.3	20.0	True
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05-1.43	51	1.229	1.265	2.9	20.0	True
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	48	1.082	1.047	-3.3	20.0	True
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	55	1.450	1.584	9.3	20.0	True
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	56	1.340	1.499	11.8	20.0	True
OCDD	M+2/M+4	0.89	0.76-1.02	100	1.147	1.148	0.1	20.0	True
OCDF	M+2/M+4	0.92	0.76-1.02	97	1.462	1.416	-3.1	20.0	True
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	98	1.056	1.033	-2.2	30.0	True
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	97	1.582	1.537	-2.8	30.0	True
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	85	0.888	0.758	-14.7	30.0	True
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	90	1.326	1.191	-10.2	30.0	True
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	88	1.361	1.192	-12.4	30.0	True
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	90	0.931	0.839	-9.9	30.0	True
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.20	1.05-1.43	98	0.896	0.874	-2.4	30.0	True
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	92	1.206	1.116	-7.5	30.0	True
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	97	1.377	1.341	-2.6	30.0	True
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	93	1.323	1.236	-6.6	30.0	True
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	108	1.130	1.224	8.3	30.0	True
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	114	0.734	0.839	14.3	30.0	True
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	112	0.882	0.985	11.6	30.0	True
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.47	0.37-0.51	114	0.753	0.854	13.5	30.0	True
13C-OCDD	M+2/M+4	0.91	0.76-1.02	243	0.587	0.714	21.7	30.0	True

okay to close

Klm 9/19/12

h 9-19-12

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IsoCalc Continuing Calibration Report

PCDD/PCDF by EPA Method 8290 w/15 IS's

CCAL ID: 52964 - D1120919S2
CCAL Filename: d1120919s2
CCAL Sample ID: HR0054C
CCAL Result Dir: /20120919s2/d1120919s2.d
CCAL Date/Time: 09/19/12 02:11

ICAL Date: 08/19/11
Method: IN2 - DX8290_2
Instrument: D11A
Column SN: 1101912
Column Desc: Rtx-5 60m x 0.32mm ID x 0.25um

Analytes	ICAL RT	CCAL RT	RT Diff	ICAL RRT	CCAL RRT	RRT QC Limit	Valid?
2,3,7,8-TCDD	31:05	29:03	-122	1.001	1.002	-	
2,3,7,8-TCDF	29:04	27:11	-113	1.001	1.001	-	
1,2,3,7,8-PeCDD	40:42	39:48	-54	1.000	1.001	-	
1,2,3,7,8-PeCDF	38:55	37:48	-67	1.001	1.001	-	
2,3,4,7,8-PeCDF	40:09	39:11	-58	1.000	1.000	-	
1,2,3,4,7,8-HxCDD	44:59	44:14	-45	1.000	1.000	-	
1,2,3,6,7,8-HxCDD	45:06	44:21	-45	1.000	1.000	-	
1,2,3,7,8,9-HxCDD	45:30	44:43	-47	1.009	1.009	-	
1,2,3,4,7,8-HxCDF	43:57	43:14	-43	1.000	1.000	-	
1,2,3,6,7,8-HxCDF	44:05	43:22	-43	1.000	1.000	-	
2,3,4,6,7,8-HxCDF	44:48	44:03	-45	1.000	1.000	-	
1,2,3,7,8,9-HxCDF	45:46	44:57	-49	1.000	1.000	-	
1,2,3,4,6,7,8-HpCDD	49:51	48:49	-62	1.000	1.000	-	
1,2,3,4,6,7,8-HpCDF	48:10	47:14	-56	1.000	1.000	-	
1,2,3,4,7,8,9-HpCDF	50:30	49:26	-64	1.000	1.000	-	
OCDD	54:05	53:16	-49	1.000	1.000	-	
OCDF	54:13	53:24	-49	1.003	1.003	-	
13C-2,3,7,8-TCDD	31:03	29:00	-123	1.017	1.016	-	
13C-2,3,7,8-TCDF	29:02	27:09	-113	0.951	0.952	-	
13C-1,2,3,7,8-PeCDD	40:41	39:46	-55	1.332	1.394	-	
13C-1,2,3,7,8-PeCDF	38:54	37:46	-68	1.274	1.324	-	
13C-2,3,4,7,8-PeCDF	40:08	39:10	-58	1.314	1.373	-	
13C-1,2,3,4,7,8-HxCDD	44:58	44:13	-45	0.989	0.989	-	
13C-1,2,3,6,7,8-HxCDD	45:05	44:20	-45	0.991	0.992	-	
13C-1,2,3,4,7,8-HxCDF	43:56	43:13	-43	0.966	0.967	-	
13C-1,2,3,6,7,8-HxCDF	44:03	43:21	-42	0.969	0.970	-	
13C-2,3,4,6,7,8-HxCDF	44:47	44:02	-45	0.985	0.985	-	
13C-1,2,3,7,8,9-HxCDF	45:45	44:56	-49	1.006	1.005	-	
13C-1,2,3,4,6,7,8-HpCDD	49:50	48:48	-62	1.096	1.092	-	
13C-1,2,3,4,6,7,8-HpCDF	48:09	47:13	-56	1.059	1.056	-	
13C-1,2,3,4,7,8,9-HpCDF	50:29	49:25	-64	1.110	1.106	-	
13C-OCDD	54:04	53:15	-49	1.189	1.191	-	

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IsoCalc Continuing Calibration Report

PCDD/PCDF by EPA Method 8290 w/15 IS's

CCAL ID: 52964 - D1120919S2

WIN Filename: d1120919s2

Method: IN2 - DX8290_2

WIN Sample ID: HR0054C

Instrument: D11A

WIN Result Dir: /20120919s2/d1120919s2.d

Column SN: 1101912

WIN Date/Time: 09/19/12 02:11

Column Desc: Rtx-5 60m x 0.32mm ID x 0.25um

Window Defining First/Last Eluter Retention Times

Analyte	Reference	M/Z	Ref RT	First Eluter RT	First Eluter RRT	Last Eluter RT	Last Eluter RRT
Total TCDD	13C-2,3,7,8-TCDD	320	29:00	23:36	0.8138	32:00	1.1034
Total TCDF	13C-2,3,7,8-TCDF	304	27:09	21:21	0.7864	31:51	1.1731
Total PeCDD	13C-1,2,3,7,8-PeCDD	356	39:46	36:29	0.9174	40:31	1.0189
Total PeCDF	13C-1,2,3,7,8-PeCDF	340	37:46	32:45	0.8672	40:37	1.0755
Total HxCDD	13C-1,2,3,6,7,8-HxCDD	390	44:20	42:41	0.9628	44:43	1.0086
Total HxCDF	13C-1,2,3,4,7,8-HxCDF	374	43:13	41:57	0.9707	45:04	1.0428
Total HpCDD	13C-1,2,3,4,6,7,8-HpCDD	424	48:48	47:43	0.9778	48:49	1.0003
Total HpCDF	13C-1,2,3,4,6,7,8-HpCDF	408	47:13	47:14	1.0004	49:26	1.0469
OCDD	13C-OCDD	458	53:15	53:16	1.0003	53:16	1.0003
OCDF	13C-OCDD	442	53:15	53:24	1.0028	53:24	1.0028

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IsoCalc Preliminary Sample Report

PCDD/PCDF by EPA Method 1613B

Workorder	HR0054C	Prep Batch		Lot No	
Data File	/20120919s2/d1120919s2.d	Prep Date		SDG No	
Analysis ID	144885	Prep Exp Date		Date Received	
Analysis Date	9/19/2012	Matrix	UNKNOWN	Date Sampled	
Analysis Time	02:11	Initial Wt/Vol		Lims Test Code	
Anal Exp Date		Extract Vol		Method	DX1613B
Instrument	D11A	Dil Factor	1.00	Code	F8
Analyst	LKM				

Analyte	RT	Area	Height	RF	Std Amt	Amount	Rec	Conc (ng/mL)		DL (ng/mL)
2,3,7,8-TCDD	29:03	155156	16602	1.115	10.00	9.730240	97.30	9.730240	E	0.0988
Total TCDD		693189	81413	1.115		53.201942		53.201942	E	0.0988
2,3,7,8-TCDF	27:11	264967	30822	1.027	10.00	12.114555	121.15	12.114555	E	0.0404
Total TCDF		553949	73485	1.027		37.441655		37.441655	E	0.0404
1,2,3,7,8-PeCDD	39:48	516801	108365	1.027	50.00	47.939804	95.88	47.939804	E	0.0607
Total PeCDD		1101538	194849	1.027		150.121333		150.121333	E	0.0607
1,2,3,7,8-PeCDF	37:48	921414	154317	1.116	50.00	50.024769	100.05	50.024769	E	0.0735
2,3,4,7,8-PeCDF	39:11	860397	169751	1.044	50.00	49.923736	99.85	49.923736	E	0.0646
Total PeCDF		1780352	260483	1.080		199.816865		199.816865	E	0.0685
1,2,3,4,7,8-HxCDD	44:14	666203	175775	1.087	50.00	50.296898	100.59	50.296898	E	0.0770
1,2,3,6,7,8-HxCDD	44:21	688680	175818	1.113	50.00	48.706176	97.41	48.706176	E	0.0799
1,2,3,7,8,9-HxCDD	44:43	764846	189580	1.181	50.00	52.071840	104.14	52.071840	E	0.0731
Total HxCDD		714786	187752	1.127		202.050397		202.050397	E	0.0766
1,2,3,4,7,8-HxCDF	43:14	1205100	331091	1.317	50.00	56.494088	112.99	56.494088	E	0.0643
1,2,3,6,7,8-HxCDF	43:22	1327830	335970	1.233	50.00	55.293381	110.59	55.293381	E	0.0609
2,3,4,6,7,8-HxCDF	44:03	1224792	321661	1.237	50.00	55.174443	110.35	55.174443	E	0.0630
1,2,3,7,8,9-HxCDF	44:57	1123932	281926	1.229	50.00	51.441457	102.88	51.441457	E	0.0714
Total HxCDF		2262548	533383	1.254		319.488133		319.488133	E	0.0646
1,2,3,4,6,7,8-HpCDD	48:49	637653	130106	1.082	50.00	48.350159	96.70	48.350159	E	0.0868
Total HpCDD		665123	144058	1.082		98.783235		98.783235	E	0.0868
1,2,3,4,6,7,8-HpCDF	47:14	1132977	253416	1.450	50.00	54.628289	109.26	54.628289	E	0.0578
1,2,3,4,7,8,9-HpCDF	49:26	930109	178357	1.340	50.00	55.924143	111.85	55.924143	E	0.0859
Total HpCDF				1.395		110.552433		110.552433	E	0.0695
OCDD	53:16	1190661	287841	1.147	100.0	100.090354	100.09	100.090354	E	0.0590
OCDF	53:24	1468747	344129	1.462	100.0	96.886705	96.89	96.886705	E	0.0541
13C-2,3,7,8-TCDD	29:00	1430446	161186	1.056	100.0	97.805400	97.81	97.805400		0.0482
13C-2,3,7,8-TCDF	27:09	2129517	253147	1.582	100.0	97.164070	97.16	97.164070		0.0205
13C-1,2,3,7,8-PeCDD	39:46	1049568	228412	0.888	100.0	85.328857	85.33	85.328857		0.0312
13C-1,2,3,7,8-PeCDF	37:46	1649866	271260	1.326	100.0	89.792247	89.79	89.792247		0.0302
13C-2,3,4,7,8-PeCDF	39:10	1651493	330063	1.361	100.0	87.580480	87.58	87.580480		0.0294
13C-1,2,3,4,7,8-HxCDD	44:13	1217971	331348	0.931	100.0	90.093024	90.09	90.093024		0.0413
13C-1,2,3,6,7,8-HxCDD	44:20	1270078	311798	0.896	100.0	97.612435	97.61	97.612435		0.0429
13C-1,2,3,4,7,8-HxCDF	43:13	1620190	436982	1.206	100.0	92.468278	92.47	92.468278		0.0529
13C-1,2,3,6,7,8-HxCDF	43:21	1948206	492608	1.377	100.0	97.440910	97.44	97.440910		0.0464
13C-2,3,4,6,7,8-HxCDF	44:02	1794556	474884	1.323	100.0	93.424212	93.42	93.424212		0.0483
13C-1,2,3,7,8,9-HxCDF	44:56	1777072	421643	1.130	100.0	108.285533	108.29	108.285533		0.0565
13C-1,2,3,4,6,7,8-HpCDD	48:48	1218525	244701	0.734	100.0	114.336881	114.34	114.336881		0.0290
13C-1,2,3,4,6,7,8-HpCDF	47:13	1430693	328161	0.882	100.0	111.632513	111.63	111.632513		0.0654
13C-1,2,3,4,7,8,9-HpCDF	49:25	1241001	238924	0.753	100.0	113.547182	113.55	113.547182		0.0767
13C-OCDD	53:15	2074491	480544	0.587	200.0	243.448182	121.72	243.448182		0.101
37Cl4-2,3,7,8-TCDD	29:02	155221	16079	1.202	10.00	9.317885	93.18	9.317885	E	0.0551
13C-1,2,3,4-TCDD	28:32	1385360	162224	1.000	100.0	100.000000	100.00	100.000000		0.0509
13C-1,2,3,7,8,9-HxCDD	44:42	1452398	364064	1.000	100.0	100.000000	100.00	100.000000		0.0385

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IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 1613B

Workorder	HR0054C	Prep Batch		Lot No	
Data File	/20120919s2/d1120919s2	Prep Date		SDG No	
Analysis ID	144885	Prep Exp Date		Date Received	
Analysis Date	09/19/12 02:11	Matrix	UNKNOWN	Date Sampled	
Anal Exp Date		Initial Wt/Vol		Lims Test Code	
Instrument	D11A	Extract Vol		Method	DX1613B
Analyst	LKM	Diluton Factor	1.00	Code	F8

View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
304					303.9016	305.8987	303.9016	305.8987	0.65-0.89		
	Noise	00:00	00:00	0	40	65	16	26	0.62 *	/	
	Unidentified	21:21	00:00	0	151814	183435	23797	27521	0.83	ABV/ABV	
	2,3,7,8-TCDF	27:11	26:57	14	118327	146640	13496	17326	0.81	ABV/ABV	M
	Unidentified	31:51	00:00	0	96872	121828	10009	12158	0.80	ABV/ABV	
316					315.9419	317.9389	315.9419	317.9389	0.65-0.89		
	Noise	00:00	00:00	0	25	28	10	11	0.91 *	/	
	13C-2,3,7,8-TCDF	27:09	26:55	14	948518	1180999	115777	137370	0.80	ABV/ABV	
320					319.8965	321.8936	319.8965	321.8936	0.65-0.89		
	Noise	00:00	00:00	0	93	85	37	34	1.09 *	/	
	Unidentified	23:36	00:00	0	69219	90705	9567	12679	0.76	ABV/ABV	
	Unidentified	28:33	00:00	0	61074	78769	7393	9402	0.78	ABV/ABV	
	Unidentified	28:47	00:00	0	57822	68582	6279	8379	0.84	AVB/AVB	
	2,3,7,8-TCDD	29:03	29:15	-12	69713	85443	7130	9472	0.82	AVV/AVV	M
	Unidentified	29:29	00:00	0	62599	83490	6207	8705	0.75	AVV/AVV	
	Unidentified	32:00	00:00	0	50960	69969	5395	7407	0.73	ABB/ABB	
328					327.8847		327.8847				
	Noise	00:00	00:00	0	108		43				
	37Cl4-2,3,7,8-TCDD	29:02	29:15	-13	155221		16079			ABV	M
332					331.9368	333.9338	331.9368	333.9338	0.65-0.89		
	Noise	00:00	00:00	0	40	43	16	17	0.94 *	/	
	13C-1,2,3,4-TCDD	28:32	28:38	-6	602970	782390	71802	90422	0.77	ABV/ABV	
	13C-2,3,7,8-TCDD	29:00	29:13	-13	630349	800097	69588	91598	0.79	AVV/AVV	
340					339.8597	341.8567	339.8597	341.8567	1.32-1.78		
	Noise	00:00	00:00	0	113	110	45	44	1.02 *	/	
	Unidentified	32:45	00:00	0	600476	393393	57704	39374	1.53	ABV/ABV	
	1,2,3,7,8-PeCDF	37:48	37:52	-4	557230	364184	92939	61378	1.53	ABV/ABV	M
	2,3,4,7,8-PeCDF	39:11	39:10	1	523288	337109	102604	67147	1.55	ABV/ABV	
	Unidentified	40:37	00:00	0	477248	309235	99633	63772	1.54	ABV/AVV	
352					351.9000	353.8970	351.9000	353.8970	1.32-1.78		
	Noise	00:00	00:00	0	38	28	15	11	1.36	/	
	13C-1,2,3,7,8-PeCDF	37:46	37:51	-5	999408	650458	165241	106019	1.54	ABV/ABV	
	13C-2,3,4,7,8-PeCDF	39:10	39:09	1	1010776	640717	201115	128948	1.58	ABV/ABV	
356					355.8546	357.8516	355.8546	357.8516	1.32-1.78		
	Noise	00:00	00:00	0	80	63	32	25	1.28 *	/	
	Unidentified	36:29	00:00	0	318695	211012	41661	27556	1.51	ABV/ABV	
	1,2,3,7,8-PeCDD	39:48	39:45	3	314256	202545	65544	42821	1.55	ABV/ABV	M
	Unidentified	40:31	00:00	0	350190	221641	77778	47854	1.58	ABB/ABB	
368					367.8949	369.8919	367.8949	369.8919	1.32-1.78		
	Noise	00:00	00:00	0	25	20	10	8	1.25 *	/	
	13C-1,2,3,7,8-PeCDD	39:46	39:44	2	638537	411031	137650	90762	1.55	ABV/ABV	
374					373.8208	375.8178	373.8208	375.8178	1.05-1.43		
	Noise	00:00	00:00	0	185	185	74	74	1.00 *	/	

Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

TestAmerica
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IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 1613B

Workorder	HR0054C	Prep Batch		Lot No	
Data File	/20120919s2/d1120919s2	Prep Date		SDG No	
Analysis ID	144885	Prep Exp Date		Date Received	
Analysis Date	09/19/12 02:11	Matrix	UNKNOWN	Date Sampled	
Anal Exp Date		Initial Wt/Vol		Lims Test Code	
Instrument	D11A	Extract Vol		Method	DX1613B
Analyst	LKM	Diluton Factor	1.00	Code	F8

View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
374					373.8208	375.8178	373.8208	375.8178	1.05-1.43		
	Unidentified	41:57	00:00	0	614057	484653	152486	119418	1.27	ABV/ABV	
	1,2,3,4,7,8-HxCDF	43:14	43:07	7	680057	525043	187812	143279	1.30	ABV/ABV	M
	1,2,3,6,7,8-HxCDF	43:22	43:15	7	745510	582320	190302	145668	1.28	AVV/AVV	M
	2,3,4,6,7,8-HxCDF	44:03	43:59	4	688237	536555	181091	140570	1.28	AVV/AVB	M
	1,2,3,7,8,9-HxCDF	44:57	44:58	-1	632247	491685	159363	122563	1.29	ABV/ABV	
	Unidentified	45:04	00:00	0	658576	505262	146931	114548	1.30	AVV/AVV	
384					383.8639	385.8610	383.8639	385.8610	0.43-0.59		
	Noise	00:00	00:00	0	103	130	41	52	0.79 *	/	
	13C-1,2,3,4,7,8-HxCDF	43:13	43:06	7	566658	1053532	152460	284522	0.54	ABV/ABV	
	13C-1,2,3,6,7,8-HxCDF	43:21	43:13	8	684939	1263267	173723	318885	0.54	AVV/AVV	
	13C-2,3,4,6,7,8-HxCDF	44:02	43:58	4	621235	1173321	164514	310370	0.53	AVV/AVV	
	13C-1,2,3,7,8,9-HxCDF	44:56	44:57	-1	613138	1163934	146205	275438	0.53	ABV/ABV	
390					389.8156	391.8127	389.8156	391.8127	1.05-1.43		
	Noise	00:00	00:00	0	145	133	58	53	1.09	/	
	Unidentified	42:41	00:00	0	396871	317915	104704	83048	1.25	ABV/ABV	
	1,2,3,4,7,8-HxCDD	44:14	44:10	4	373939	292264	99893	75882	1.28	ABV/ABV	M
	1,2,3,6,7,8-HxCDD	44:21	44:17	4	385021	303659	96367	79451	1.27	AVV/AVV	M
	1,2,3,7,8,9-HxCDD	44:43	44:42	1	428516	336330	106772	82808	1.27	AVV/AVV	
402					401.8559	403.8529	401.8559	403.8529	1.05-1.43		
	Noise	00:00	00:00	0	105	35	42	14	3.00 *	/	
	13C-1,2,3,4,7,8-HxCDD	44:13	44:09	4	681184	536787	184643	146705	1.27	ABV/ABV	
	13C-1,2,3,6,7,8-HxCDD	44:20	44:16	4	692059	578019	170683	141115	1.20	AVV/AVV	
	13C-1,2,3,7,8,9-HxCDD	44:42	44:41	1	800224	652174	200589	163475	1.23	AVV/AVV	
408					407.7818	409.7788	407.7818	409.7788	0.88-1.20		
	Noise	00:00	00:00	0	145	130	58	52	1.12	/	
	1,2,3,4,6,7,8-HpCDF	47:14	47:22	-8	580394	552583	132087	121329	1.05	ABV/ABV	M
	1,2,3,4,7,8,9-HpCDF	49:26	49:39	-13	479595	450514	92912	85445	1.06	ABV/ABV	M
418					417.8250	419.8220	417.8250	419.8220	0.37-0.51		
	Noise	00:00	00:00	0	75	135	30	54	0.56 *	/	
	13C-1,2,3,4,6,7,8-HpCDF	47:13	47:21	-8	449226	981467	102151	226010	0.46	ABV/ABV	
	13C-1,2,3,4,7,8,9-HpCDF	49:25	49:38	-13	395332	845669	76631	162293	0.47	ABV/ABV	
424					423.7767	425.7737	423.7767	425.7737	0.88-1.20		
	Noise	00:00	00:00	0	95	135	38	54	0.70 *	/	
	Unidentified	47:43	00:00	0	339749	325374	73185	70873	1.04	ABV/ABV	
	1,2,3,4,6,7,8-HpCDD	48:49	49:01	-12	326635	311018	66491	63615	1.05	ABV/ABV	M
436					435.8169	437.8140	435.8169	437.8140	0.88-1.20		
	Noise	00:00	00:00	0	50	28	20	11	1.82 *	/	
	13C-1,2,3,4,6,7,8-HpCDD	48:48	49:00	-12	627125	591400	126874	117827	1.06	ABV/ABV	
442					441.7428	443.7399	441.7428	443.7399	0.76-1.02		
	Noise	00:00	00:00	0	110	80	44	32	1.38 *	/	
	OCDF	53:24	53:11	13	704670	764077	163721	180408	0.92	ABV/ABV	M
458					457.7377	459.7348	457.7377	459.7348	0.76-1.02		

Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

TestAmerica
Knoxville

IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 1613B

Workorder	HR0054C	Prep Batch		Lot No	
Data File	/20120919s2/d1120919s2	Prep Date		SDG No	
Analysis ID	144885	Prep Exp Date		Date Received	
Analysis Date	09/19/12 02:11	Matrix	UNKNOWN	Date Sampled	
Anal Exp Date		Initial Wt/Vol		Lims Test Code	
Instrument	D11A	Extract Vol		Method	DX1613B
Analyst	LKM	Diluton Factor	1.00	Code	F8

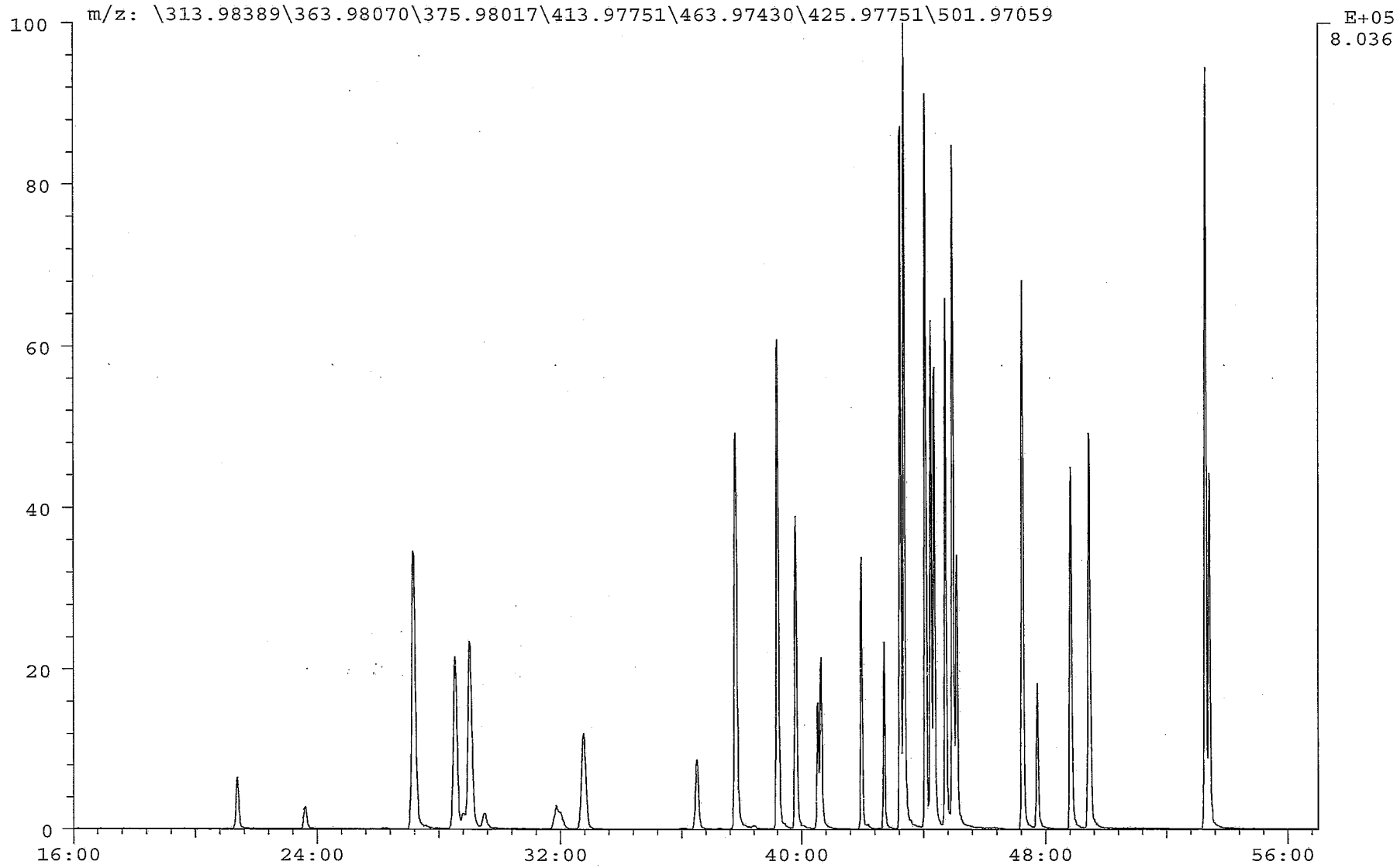
View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
458					457.7377	459.7348	457.7377	459.7348	0.76-1.02		
	Noise	00:00	00:00	0	65	98	26	39	0.67 *	/	
	OCDD	53:16	53:04	12	561331	629330	134884	152957	0.89	ABV/ABV	M
470					469.7780	471.7750	469.7780	471.7750	0.76-1.02		
	Noise	00:00	00:00	0	100	115	40	46	0.87	/	
	13C-OCDD	53:15	53:03	12	989138	1085353	229384	251160	0.91	ABV/ABV	

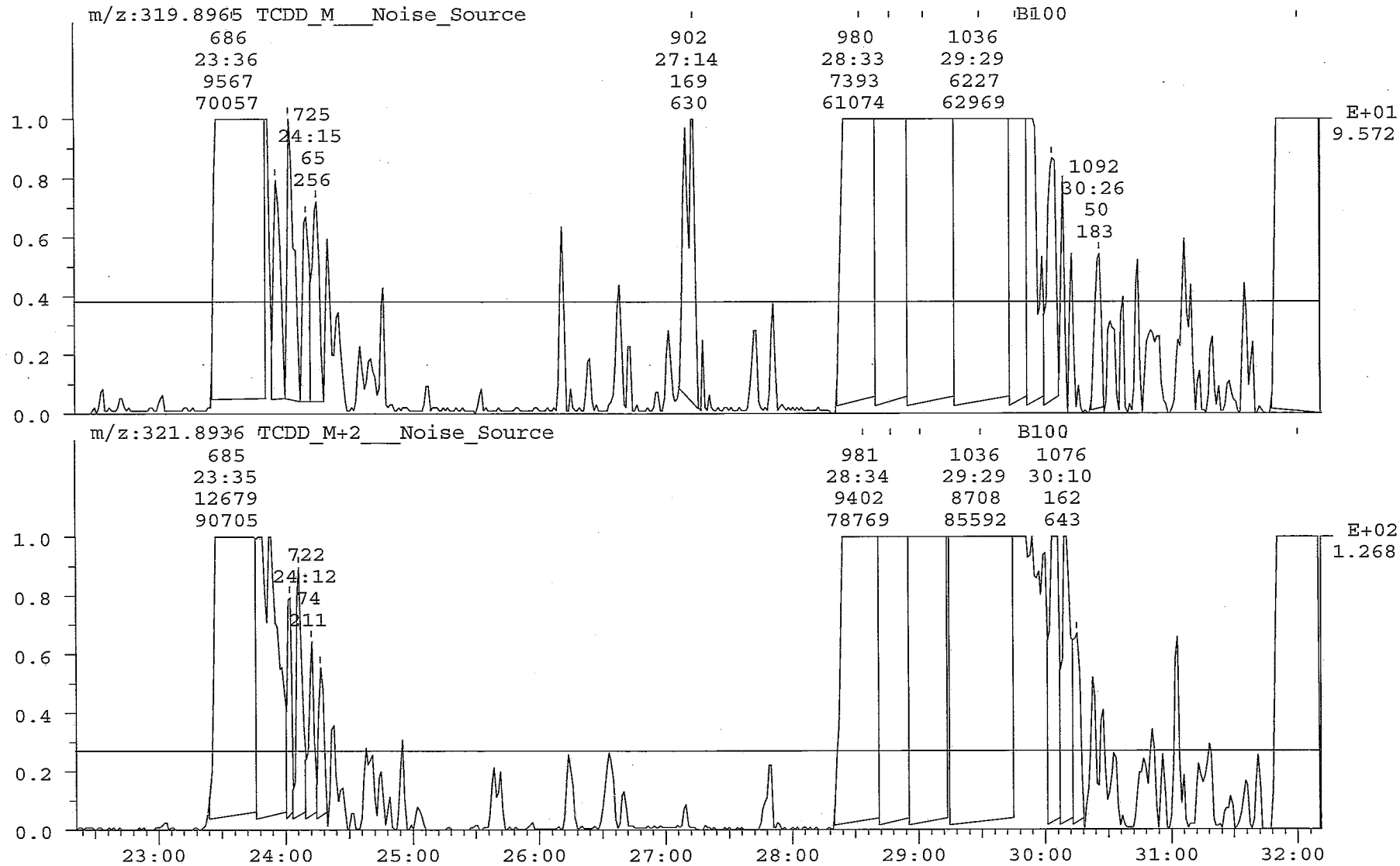
Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

dt/cal L 9-19-12
QC KL 9/19/12

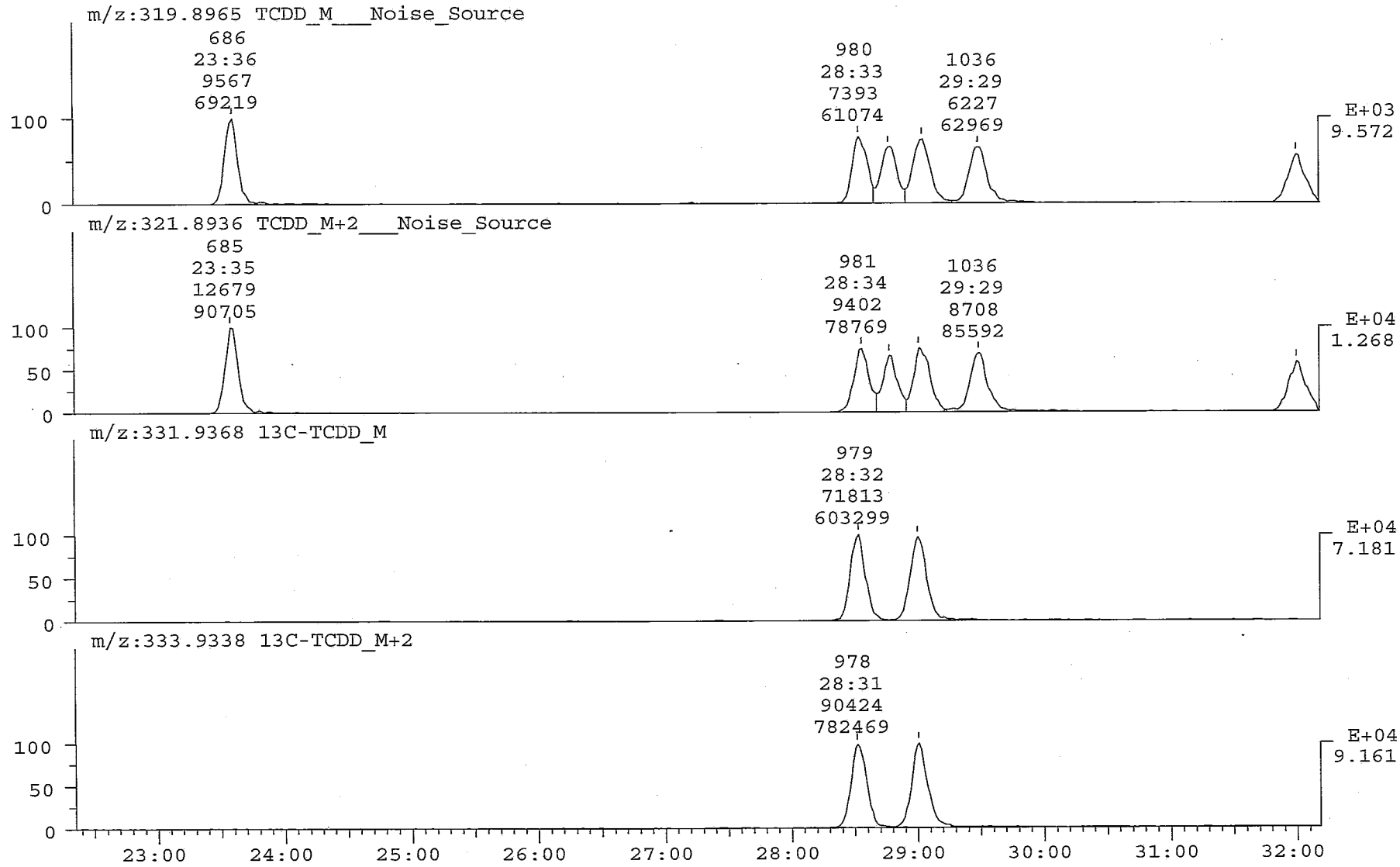
CHRO:	d1120919s2	19-Sep-12	Elapse:	53:23	2418
Samp:	WO=HR0054C Meth=F8 Dil=1		Start :	02:11:27	2629
Comm:	Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2				
Mode:	EI ESI + Q1MS UP LR		Study :	VER/WIN	
Oper:	LKM		Inlet :	LC	
Peak:	100.00 ppm	Label wndw: 235 > 2629	Masses:	303 > 514	
Area:	5, 0.50, 0	Baseline : 100, 3	Label :	0, 0.0	
Disp:	Height Area				



CHRO: d1120919s2 19-Sep-12 Elapse: 53:23 2418
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 612 > 1196 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -3, 1.0
Disp: Height Area



CHRO: d1120919s2 19-Sep-12 Elapse: 53:23 2418
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 612 > 1196 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



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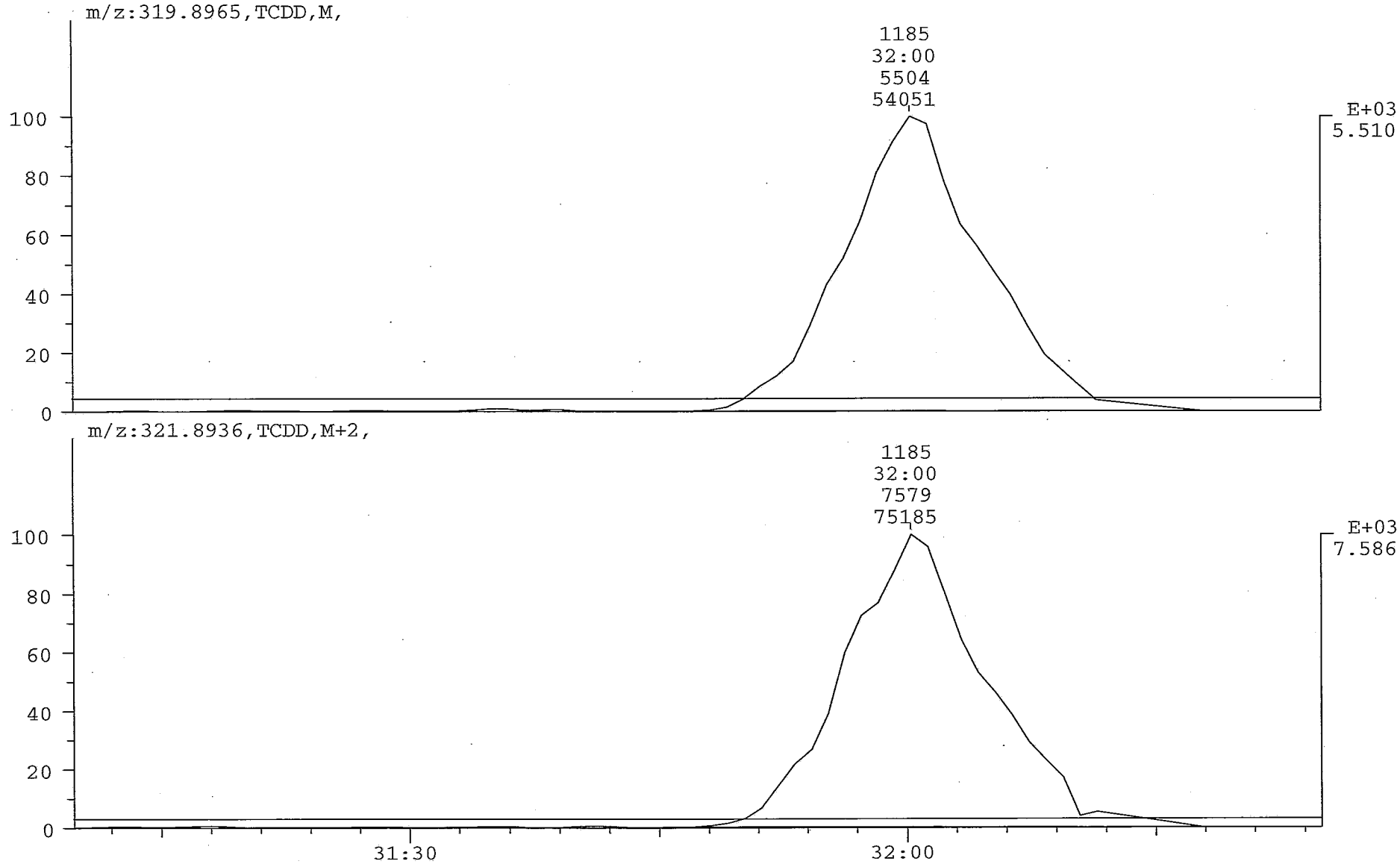
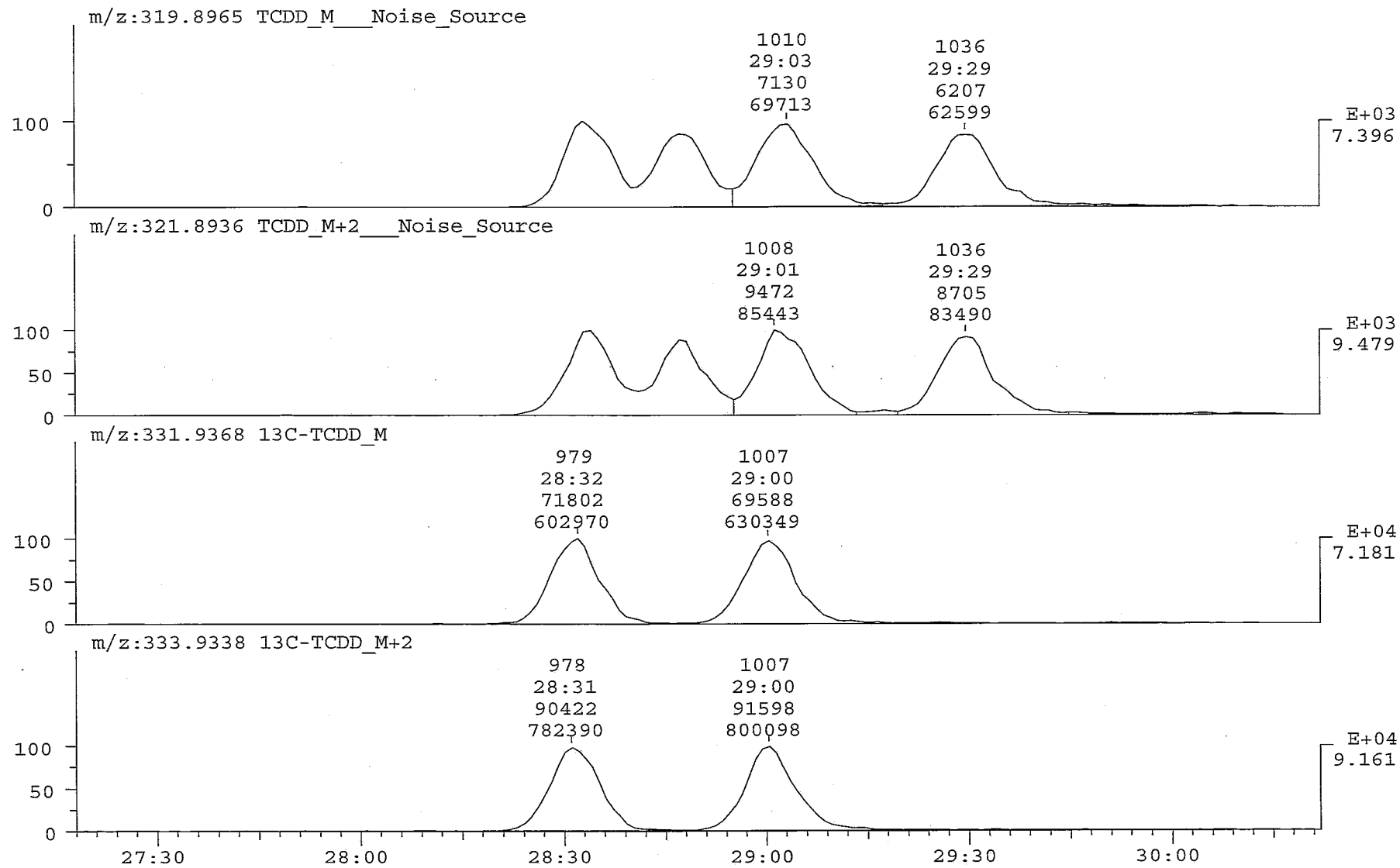
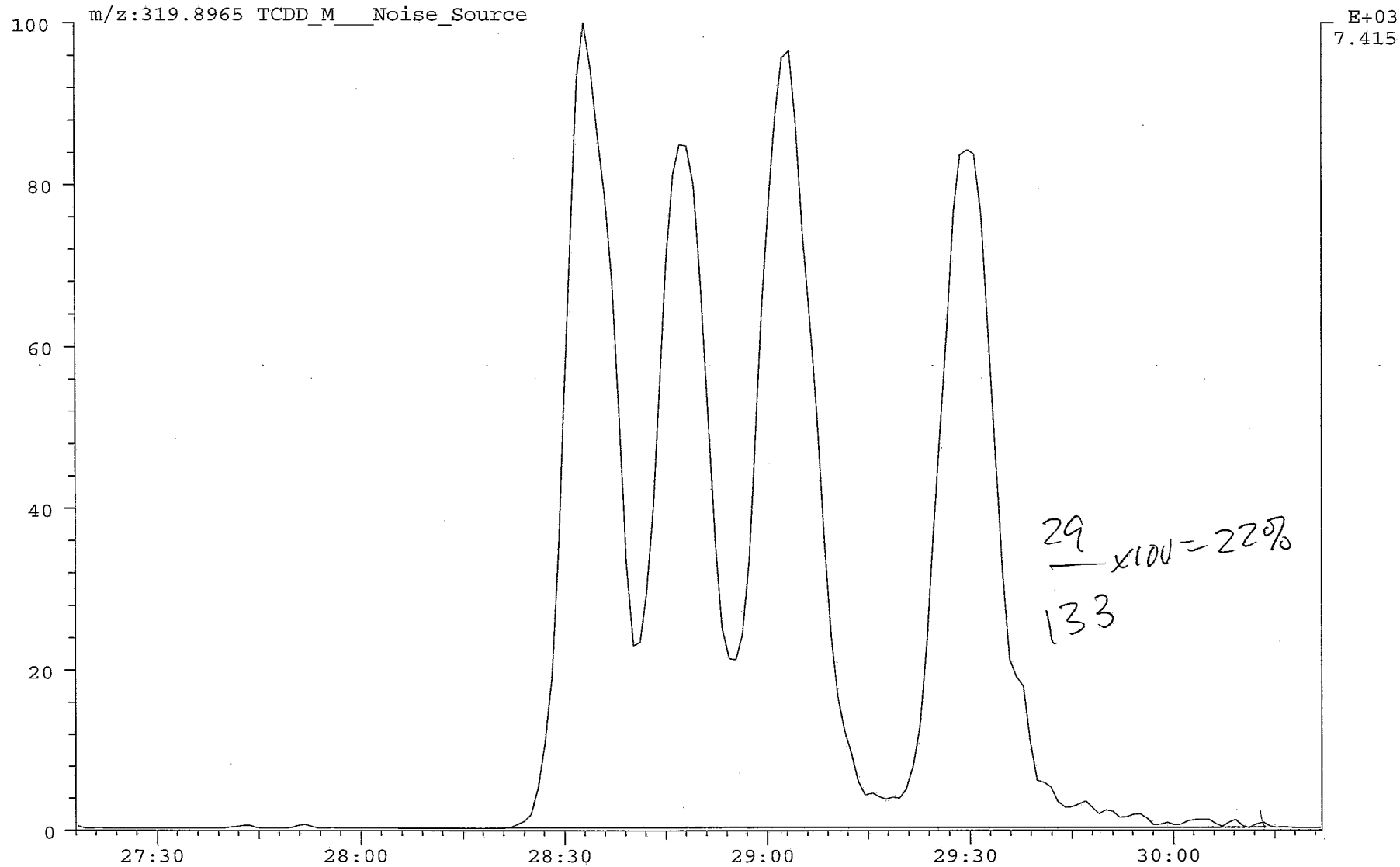
CHRO:  d1120919s2                          19-Sep-12   Elapse:  53:23      2418
Samp:  WO=HR0054C Meth=F8 Dil=1                        Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                             Study :  VER/WIN
Oper:  LKM                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1135 > 1204       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  -2, 5.0
Disp:  Height  Area
```



CHRO: d1120919s2 19-Sep-12 Elapse: 28:50.3 997
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 906 > 1088 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



CHRO: d1120919s2 19-Sep-12 Elapse: 28:50.3 997
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 906 > 1088 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 0, 0.0
Disp: Height Area



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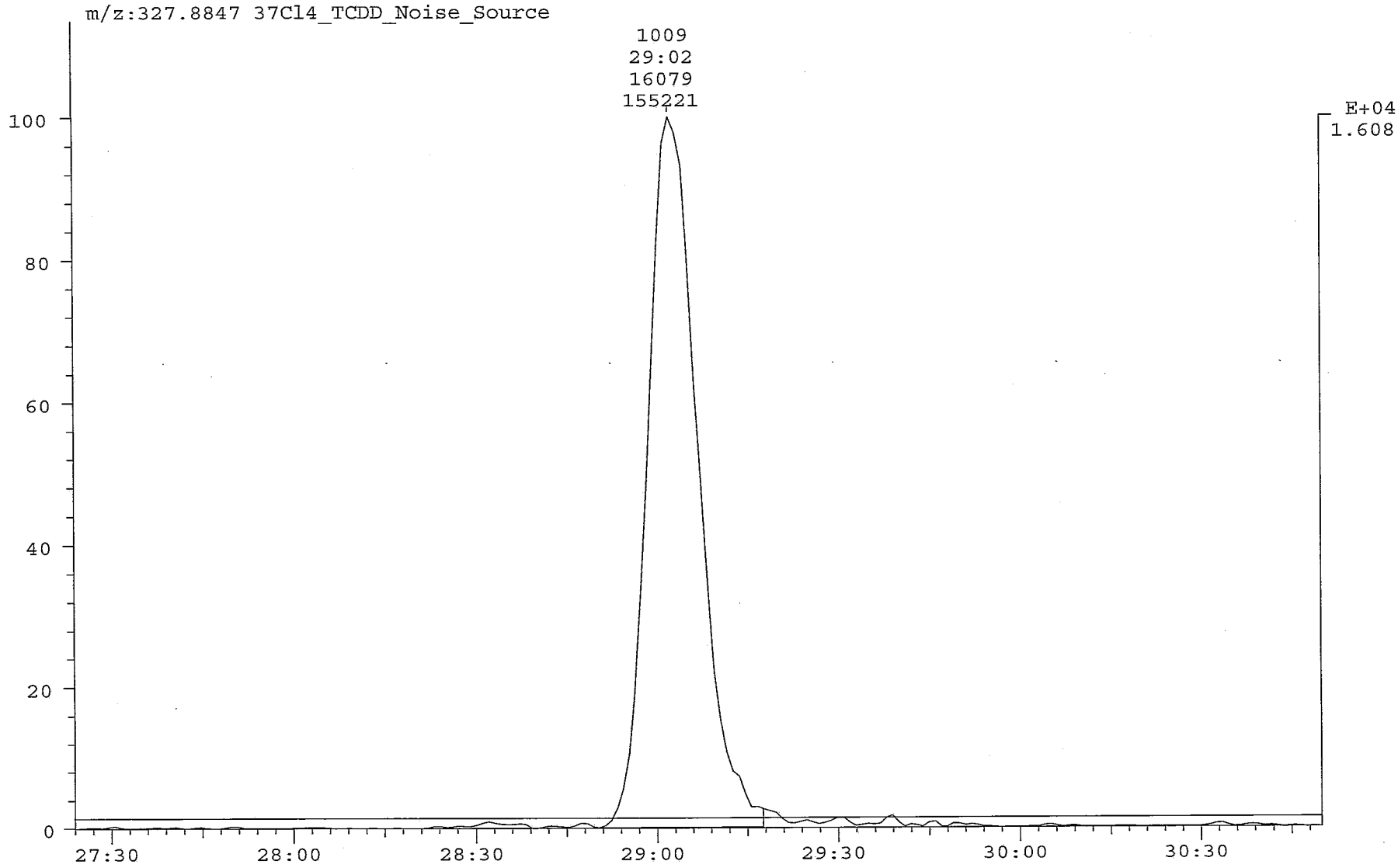
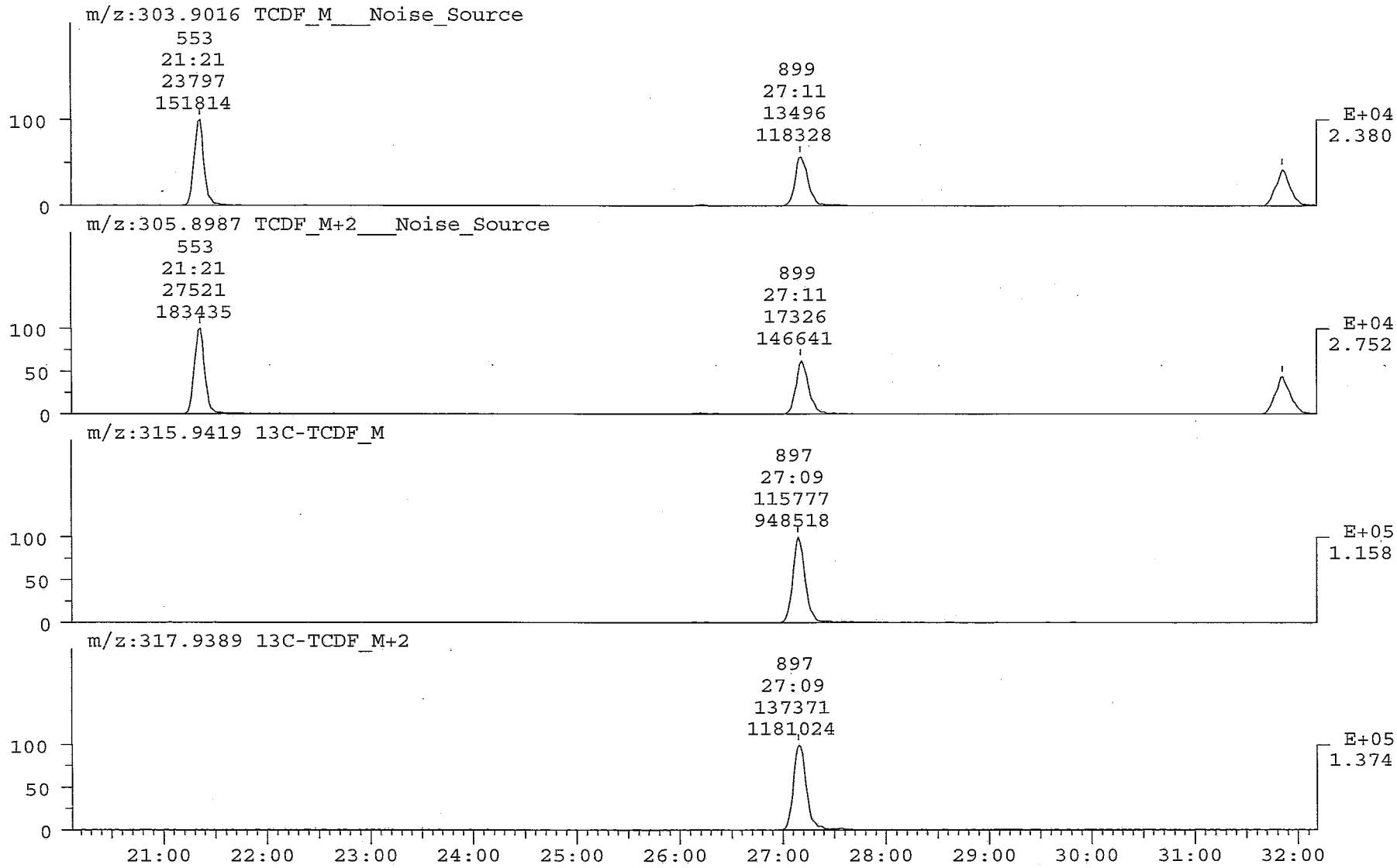
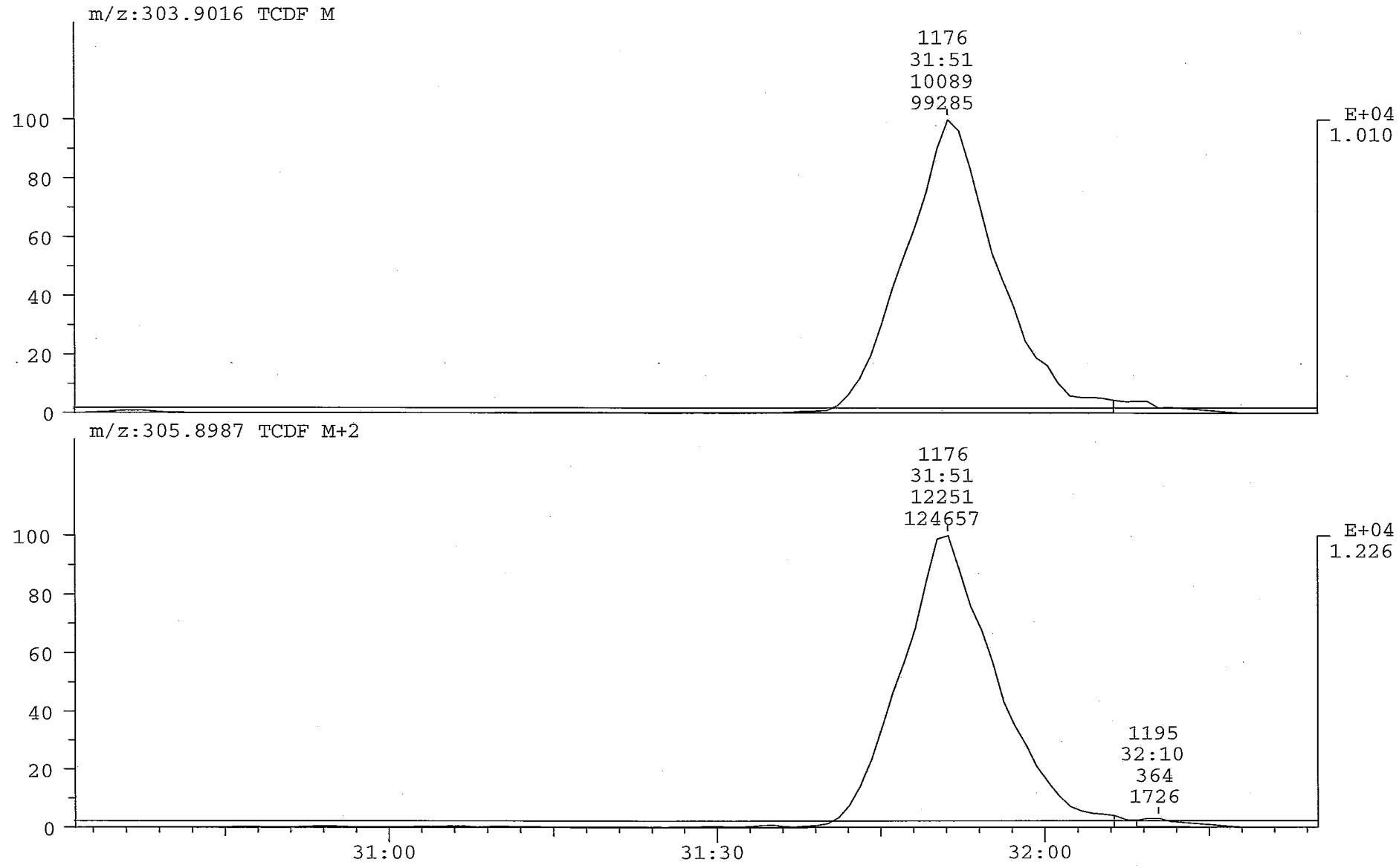
CHRO:  d1120919s2                          19-Sep-12  Elapse:  29:04      1011
Samp:  WO=HR0054C Meth=F8 Dil=1                       Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                            Study :  VER/WIN
Oper:  LKM                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   912 > 1115       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



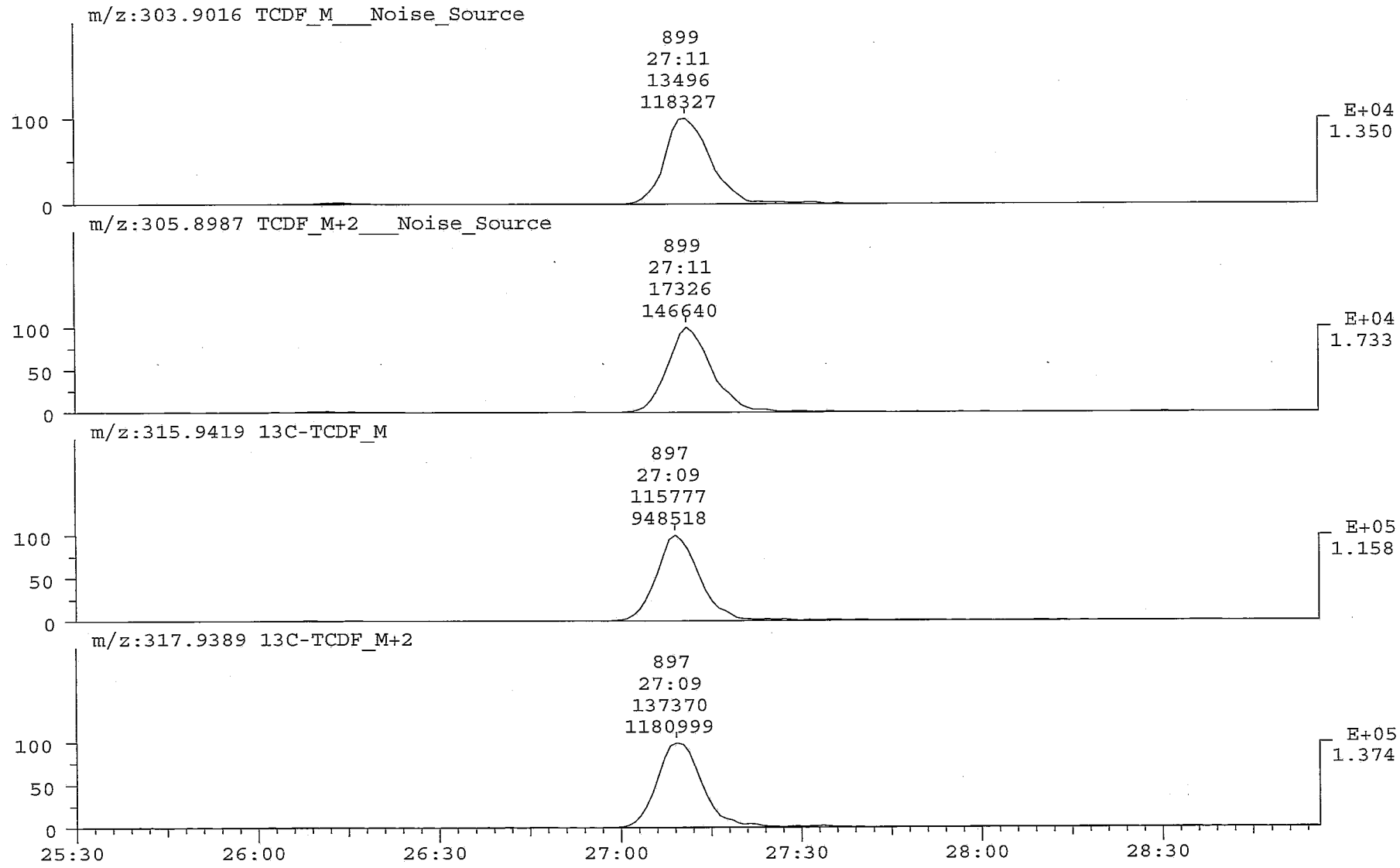
```
CHRO:  d1120919s2                          19-Sep-12  Elapse:  29:04      1011
Samp:  WO=HR0054C Meth=F8 Dil=1                       Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                            Study :  VER/WIN
Oper:  LKM                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   479 > 1196       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  2, 5.0
Disp:  Height  Area
```



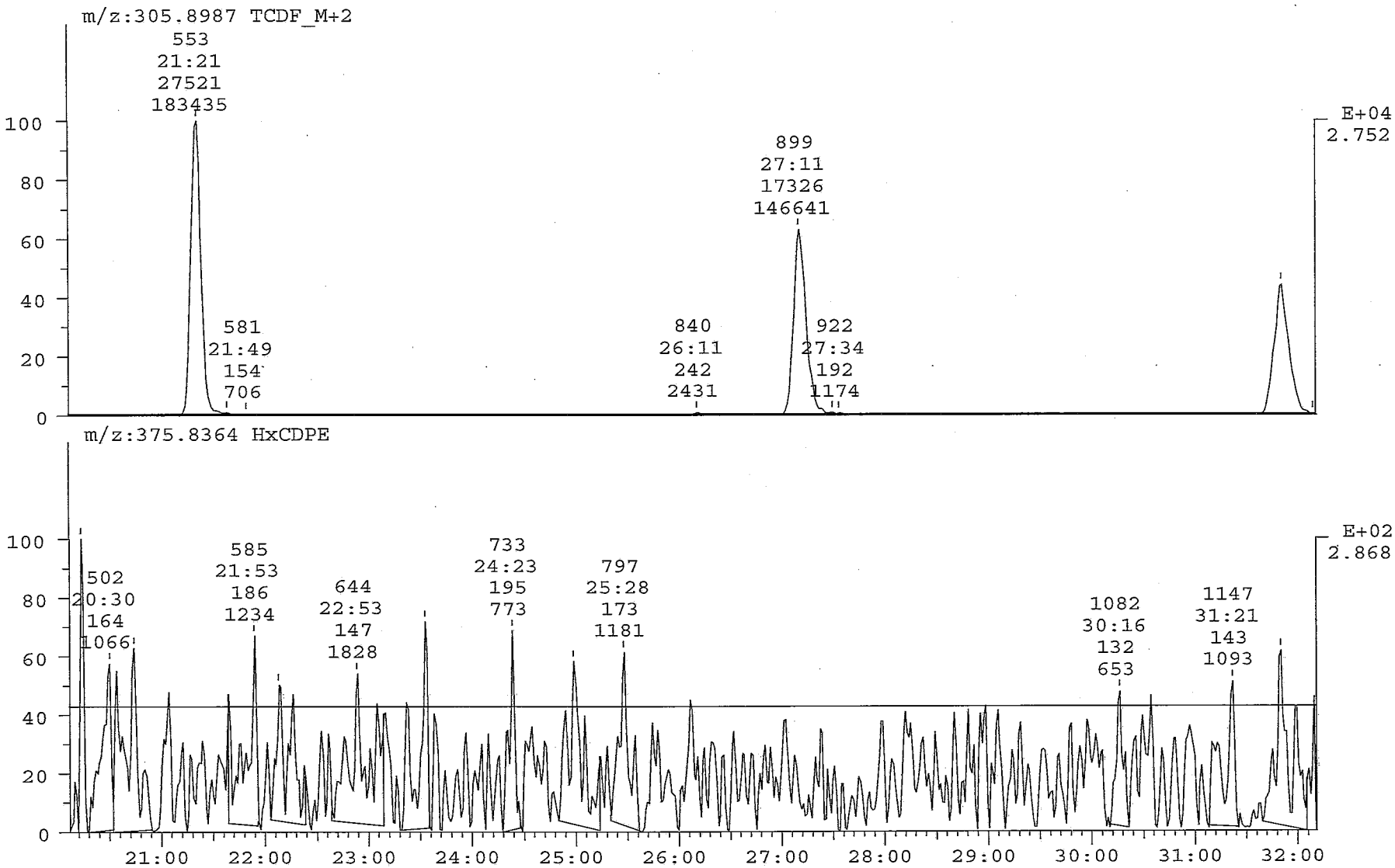
CHRO: d1120919s2 19-Sep-12 Elapse: 53:23 2418
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 1097 > 1204 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



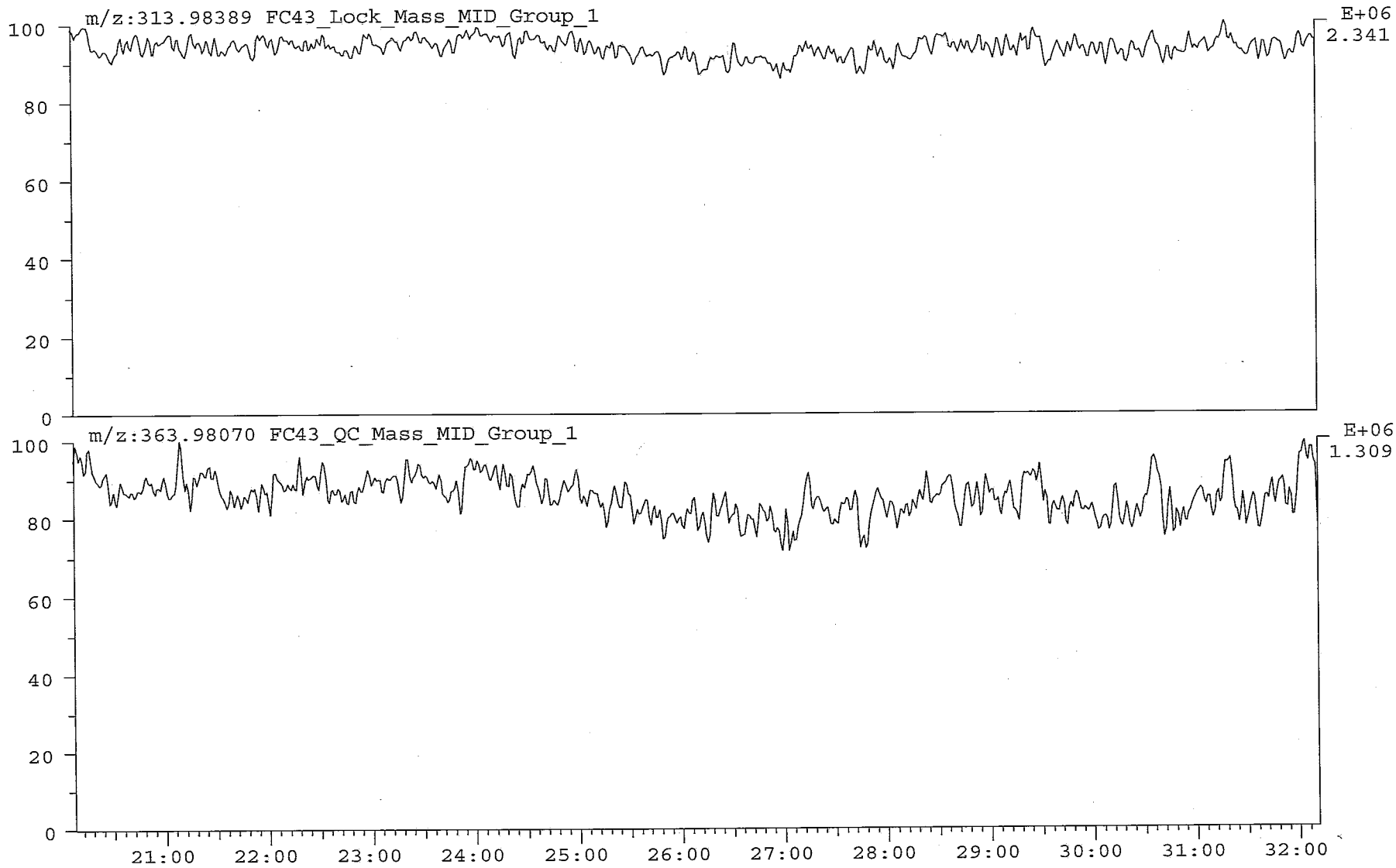
CHRO: d1120919s2 19-Sep-12 Elapse: 27:10.2 898
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 799 > 1003 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



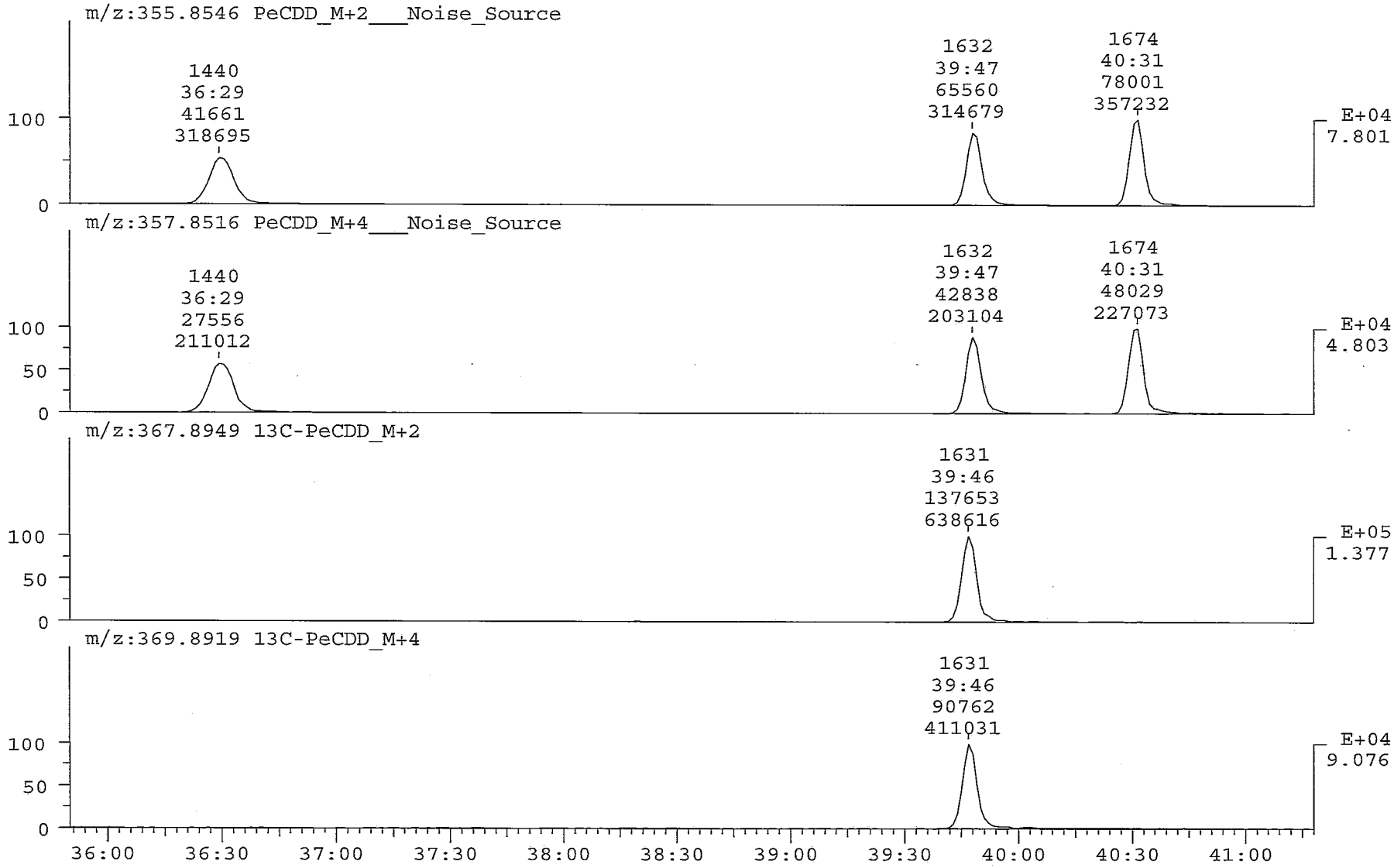
CHRO: d1120919s2 19-Sep-12 Elapse: 27:10.2 898
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 479 > 1196 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



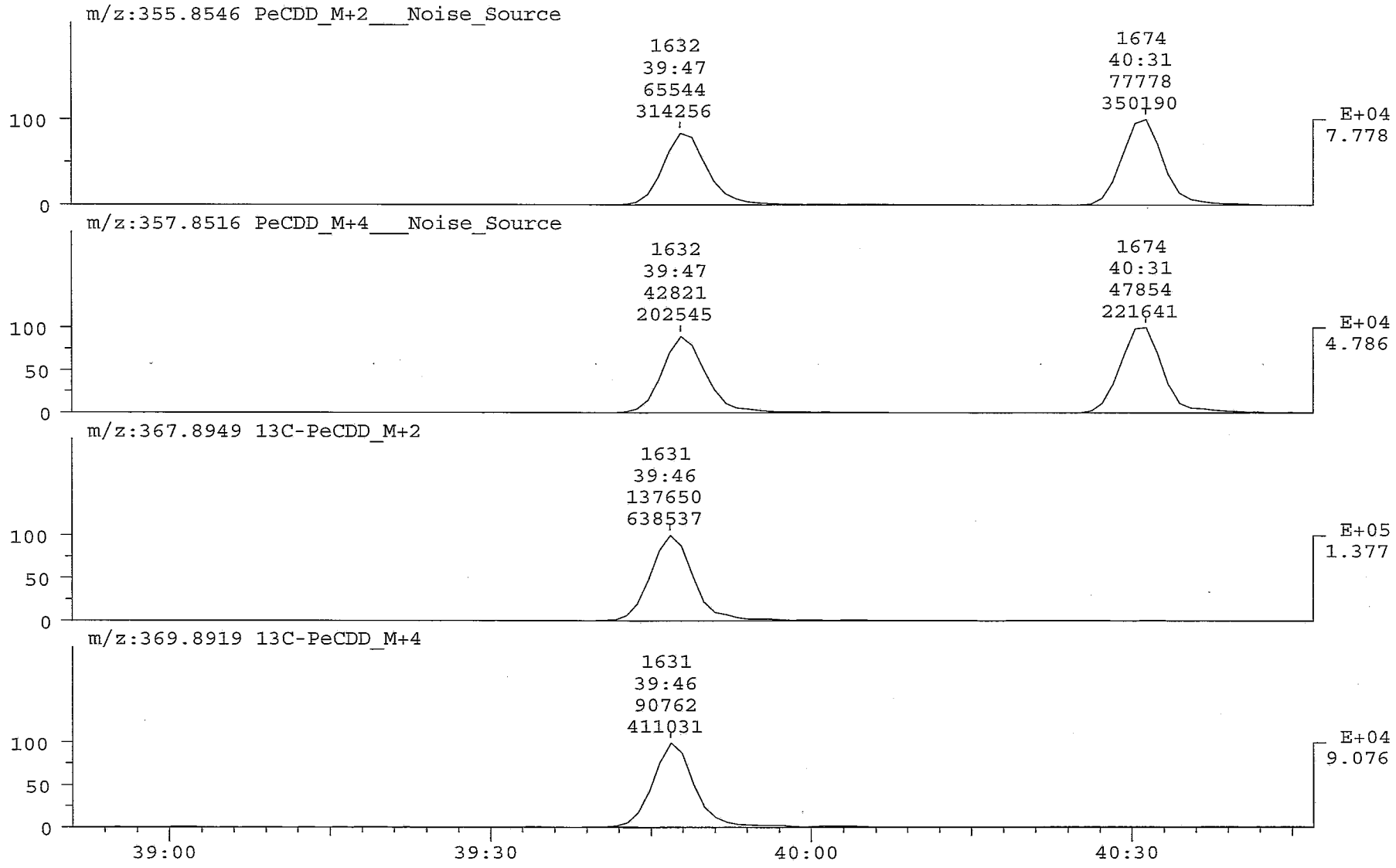
```
CHRO:  d1120919s2                                19-Sep-12   Elapse:  27:10.2      898
Samp:  WO=HR0054C Meth=F8 Dil=1                              Start :  02:11:27    2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                                   Study :  VER/WIN
Oper:  LKM                                                   Inlet :  LC
Peak:  100.00  ppm      Label wndw:   479 > 1196             Masses:  303 > 514
Area:  5, 0.50, 15      Baseline  :   100, 3                 Label :  0, 0.0
Disp:  Height  Area
```



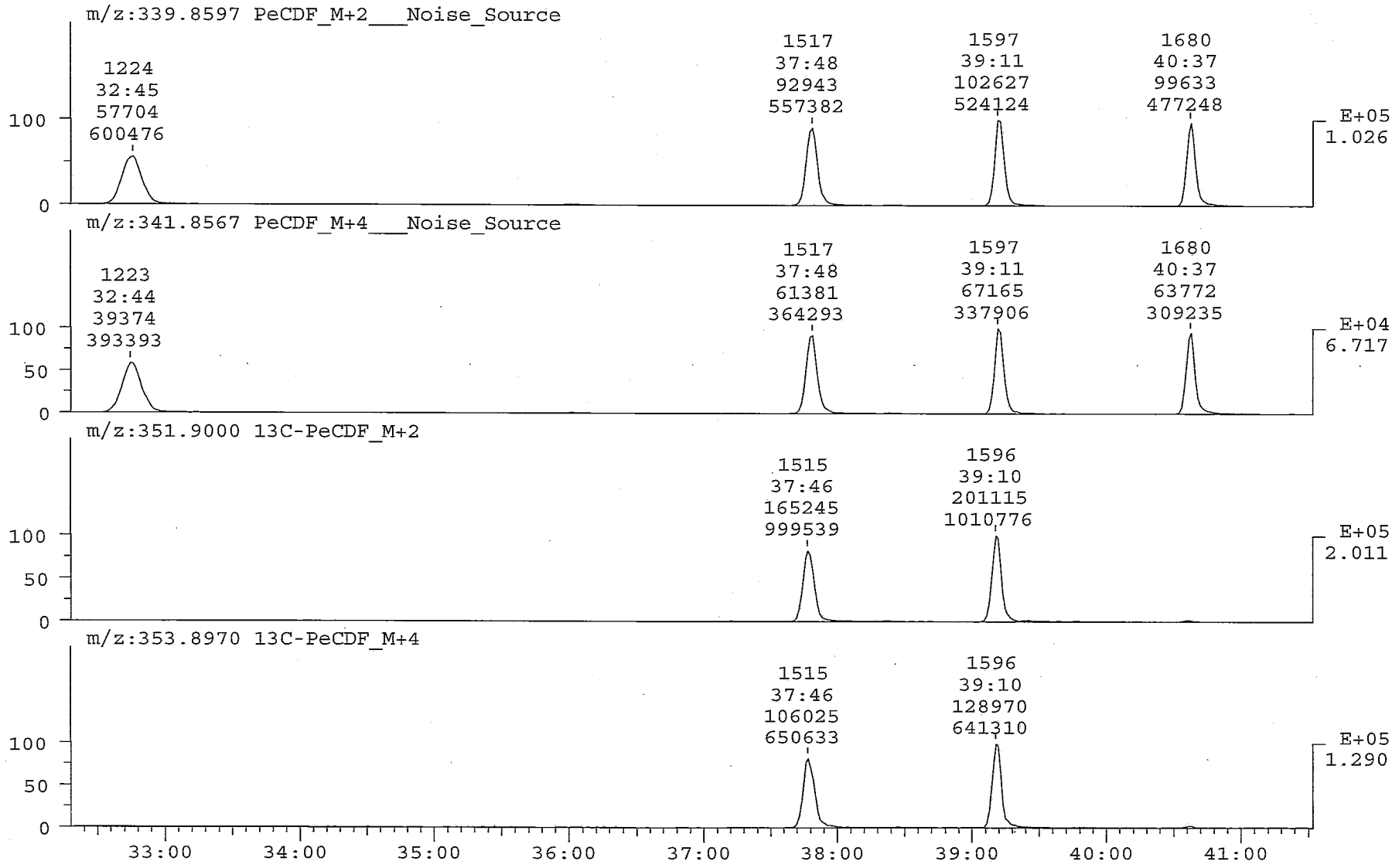
```
CHRO:  d1120919s2                                19-Sep-12   Elapse:  27:10.2     898
Samp:  WO=HR0054C Meth=F8 Dil=1                              Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                                   Study :  VER/WIN
Oper:  LKM                                                   Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1402 > 1719             Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                  Label :  2, 5.0
Disp:  Height  Area
```



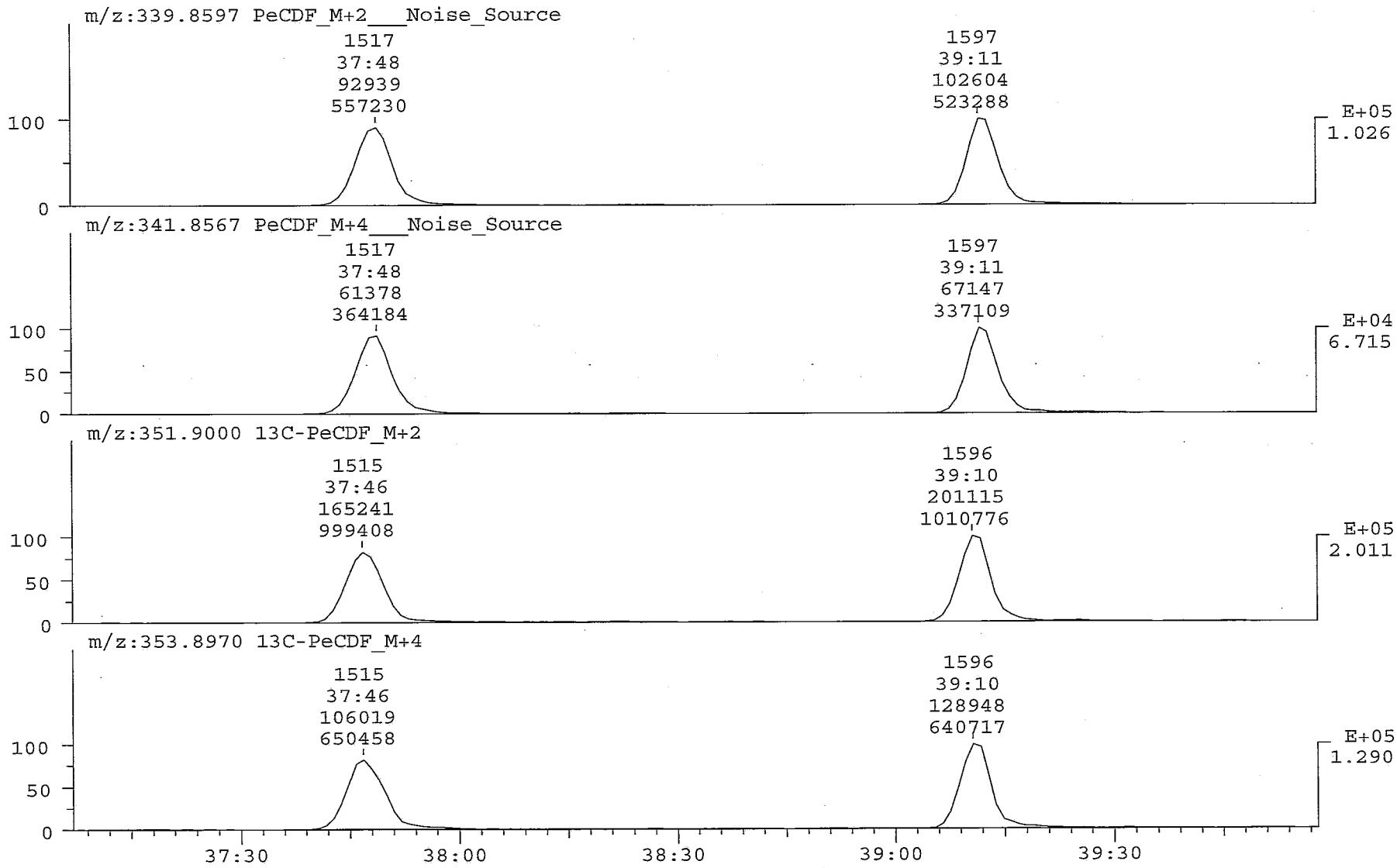
```
CHRO:  d1120919s2                          19-Sep-12  Elapse:  39:45      1630
Samp:  WO=HR0054C Meth=F8 Dil=1                       Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                            Study :  VER/WIN
Oper:  LKM                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1577 > 1689      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  2, 5.0
Disp:  Height  Area
```



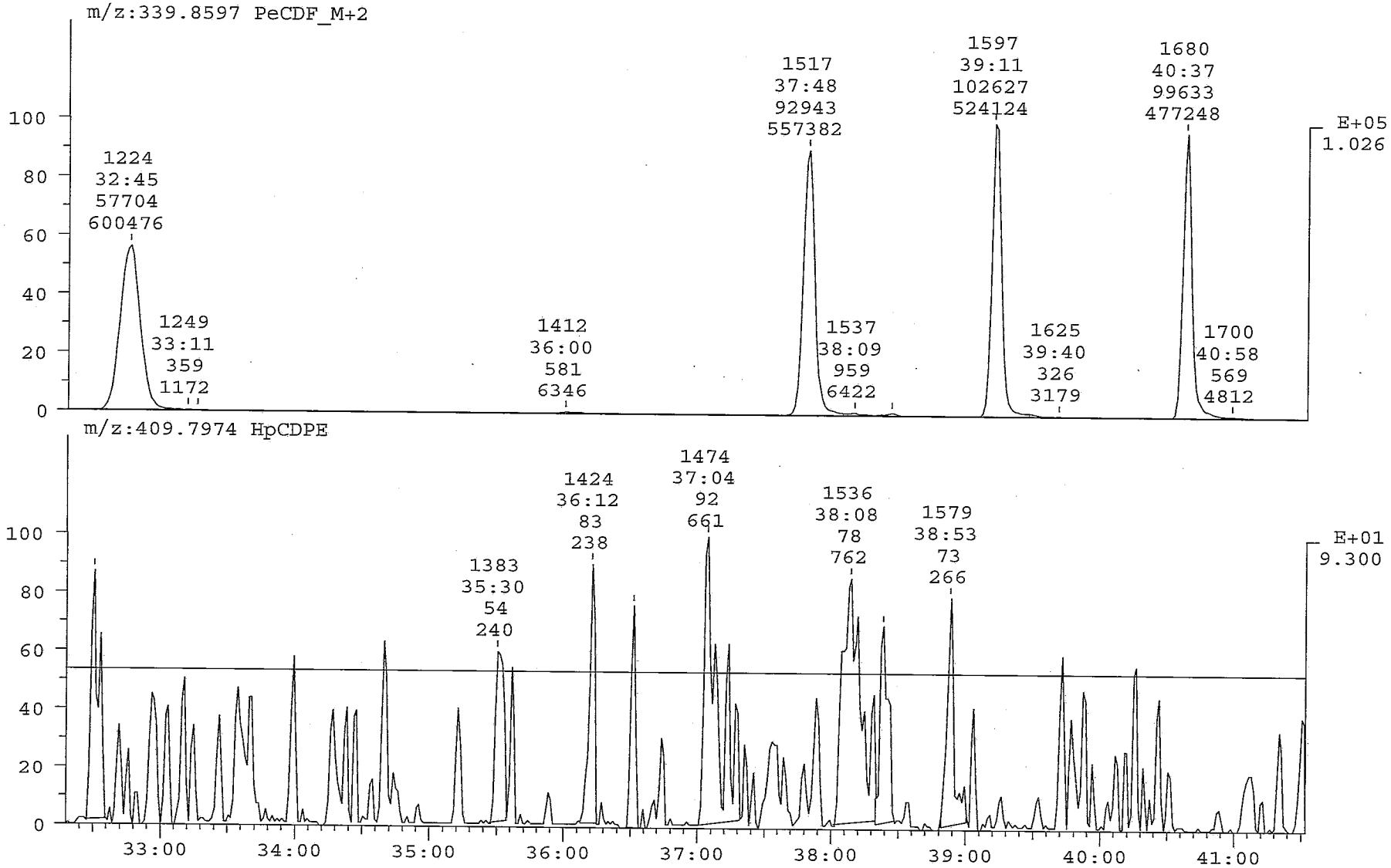
```
CHRO:  d1120919s2                          19-Sep-12   Elapse:  39:45      1630
Samp:  WO=HR0054C Meth=F8 Dil=1                        Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                             Study :  VER/WIN
Oper:  LKM                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1197 > 1733       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  2, 5.0
Disp:  Height  Area
```



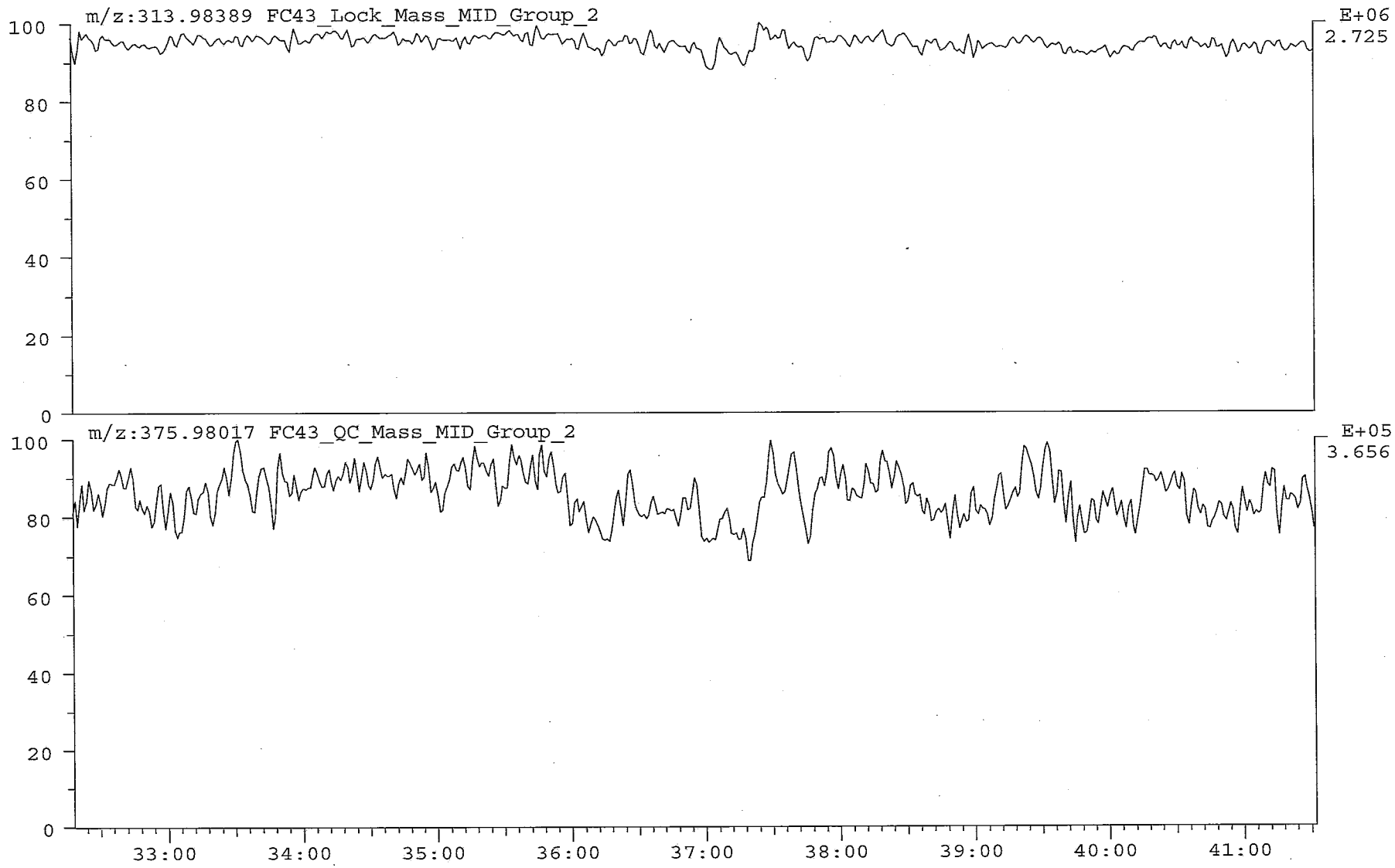
```
CHRO:  d1120919s2                                19-Sep-12   Elapse:  38:32      1559
Samp:  WO=HR0054C Meth=F8 Dil=1                              Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                                   Study :  VER/WIN
Oper:  LKM                                                   Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1477 > 1642             Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                  Label :  2, 5.0
Disp:  Height  Area
```



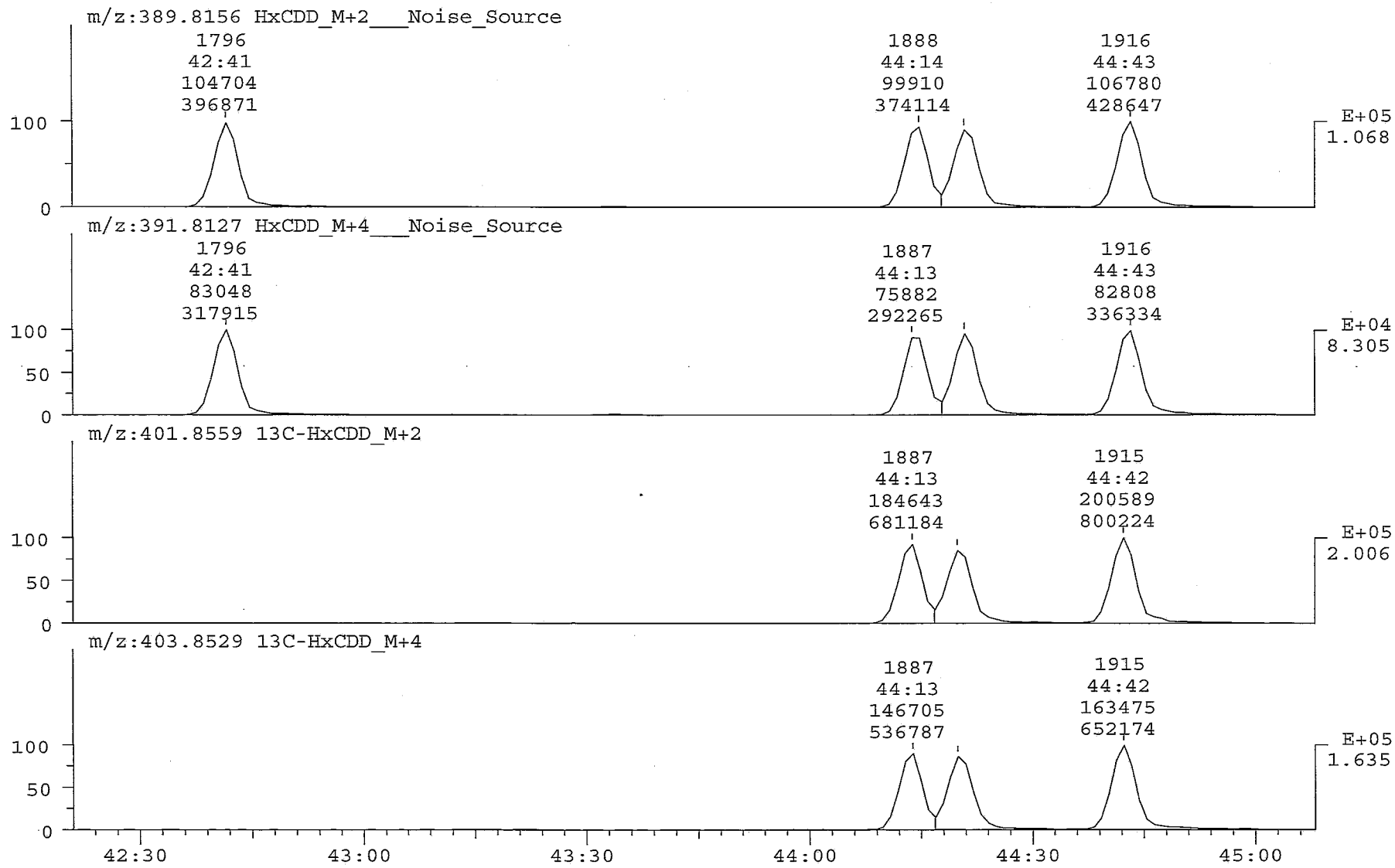
CHRO: d1120919s2 19-Sep-12 Elapse: 38:32 1559
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 1197 > 1733 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



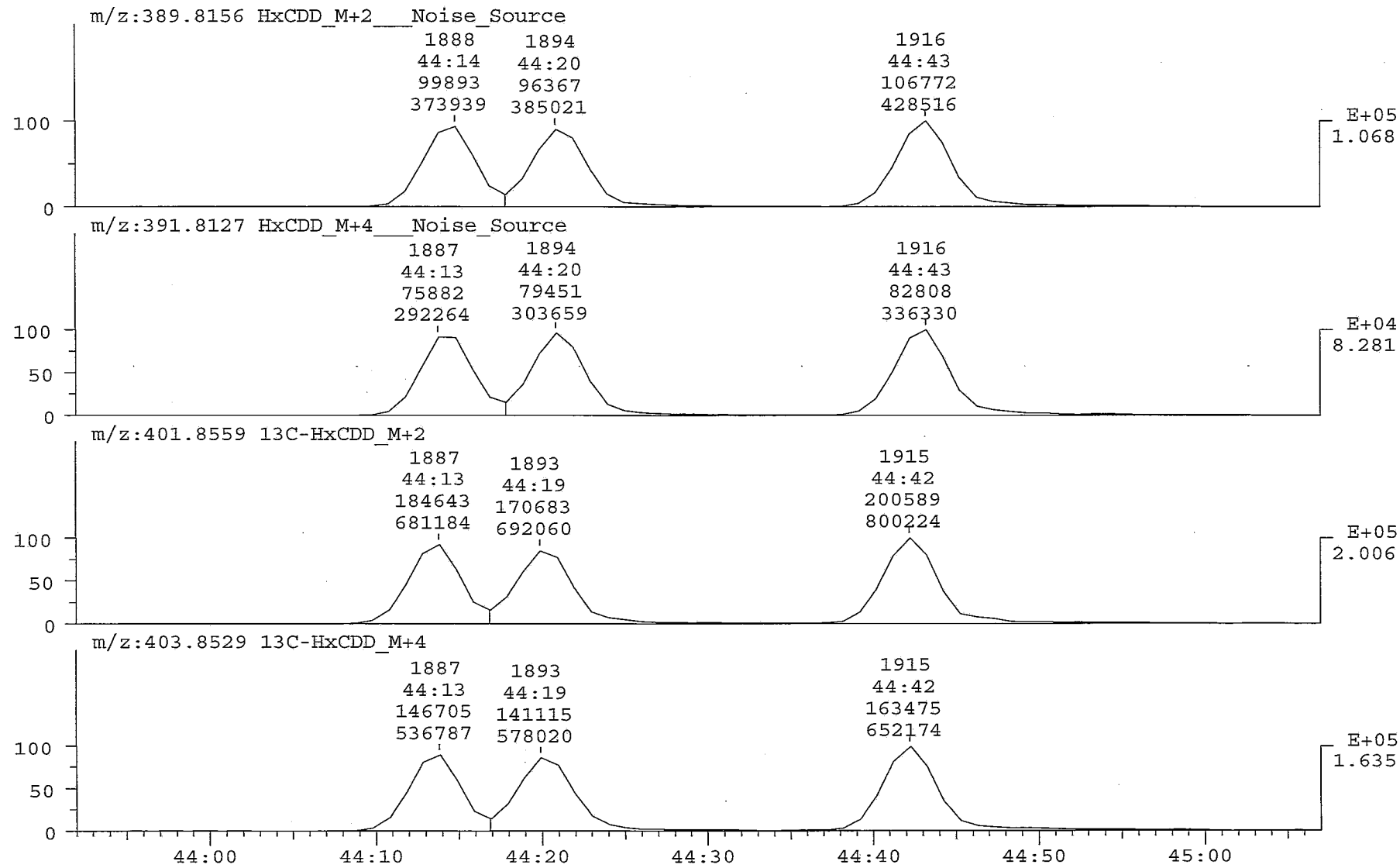
```
CHRO:  d1120919s2                                19-Sep-12  Elapse:  38:32      1559
Samp:  WO=HR0054C Meth=F8 Dil=1                             Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                                  Study :  VER/WIN
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1197 > 1733            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  0, 0.0
Disp:  Height  Area
```



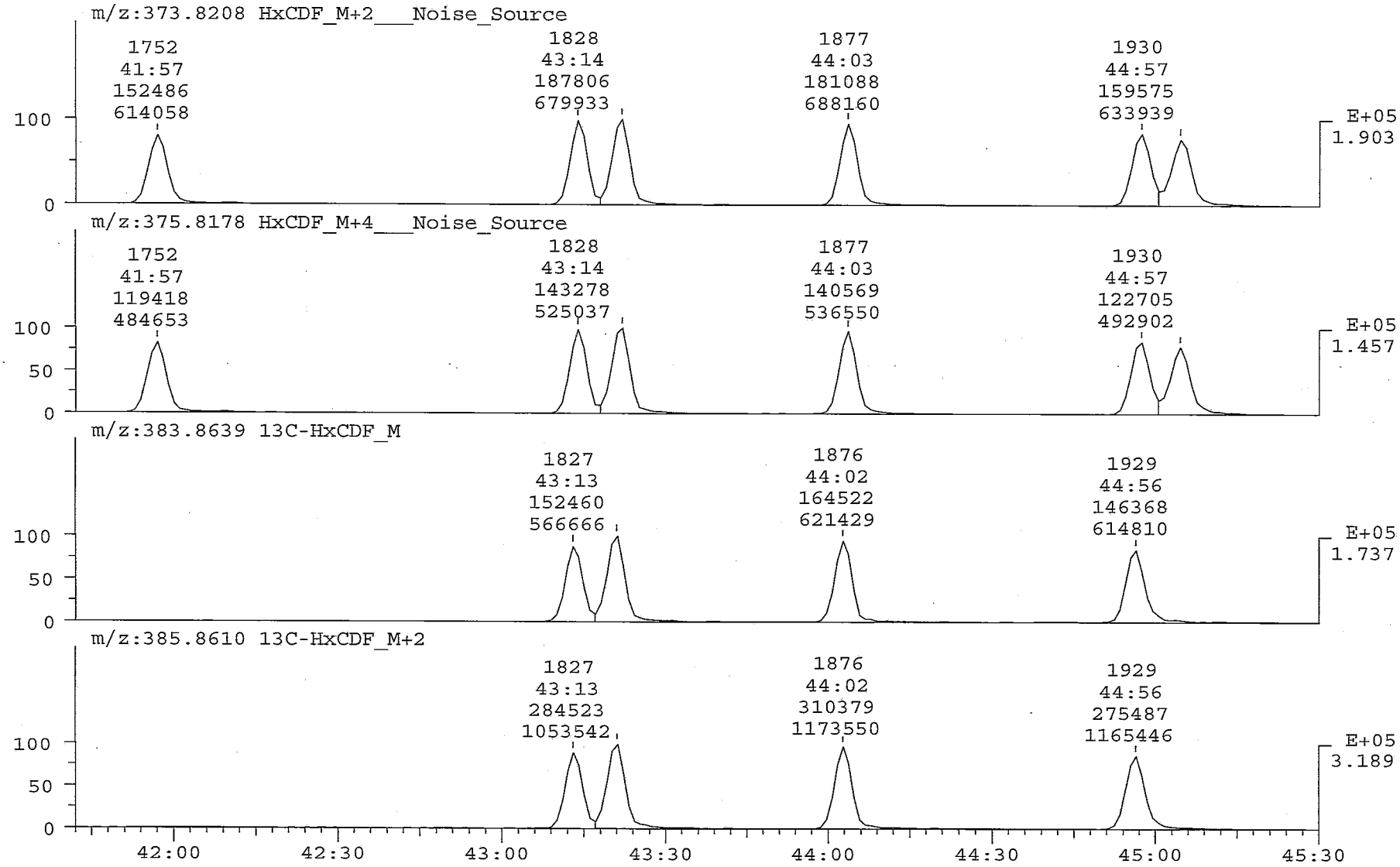
CHRO: d1120919s2 19-Sep-12 Elapse: 38:32 1559
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 1776 > 1940 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



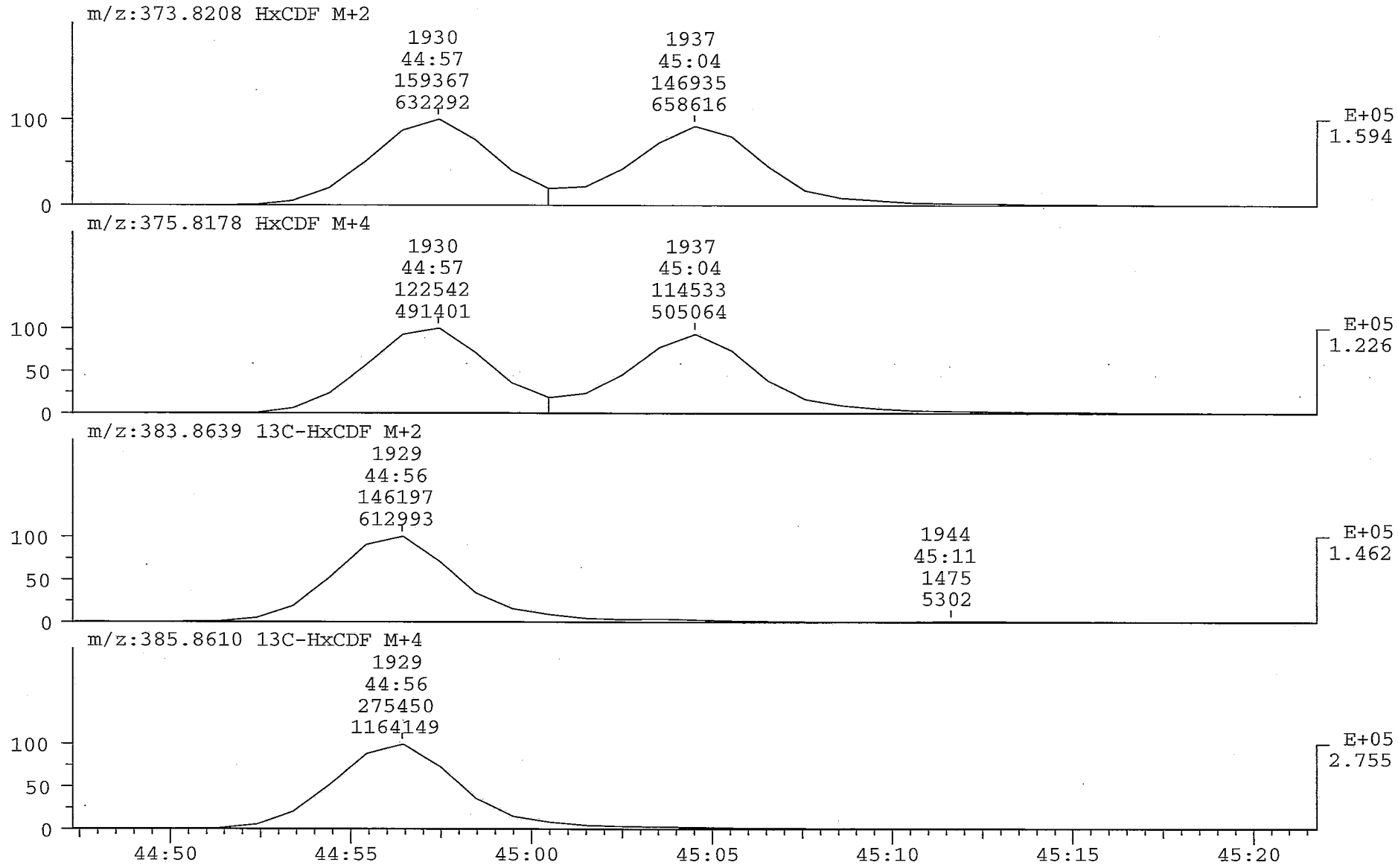
CHRO: d1120919s2 19-Sep-12 Elapse: 44:29 1902
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 1865 > 1939 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



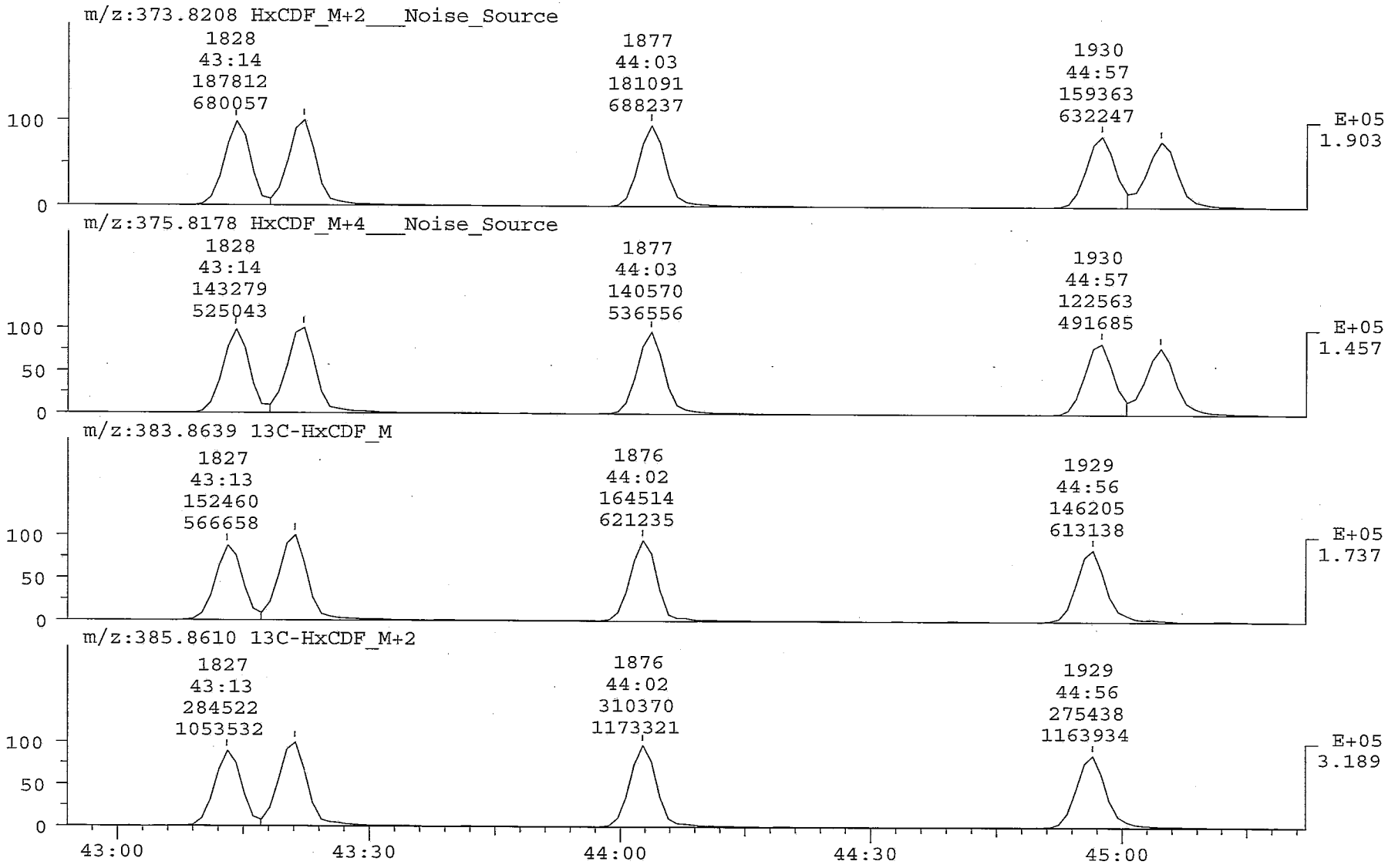
CHRO: d1120919s2 19-Sep-12 Elapse: 44:29 1902
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 1737 > 1962 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



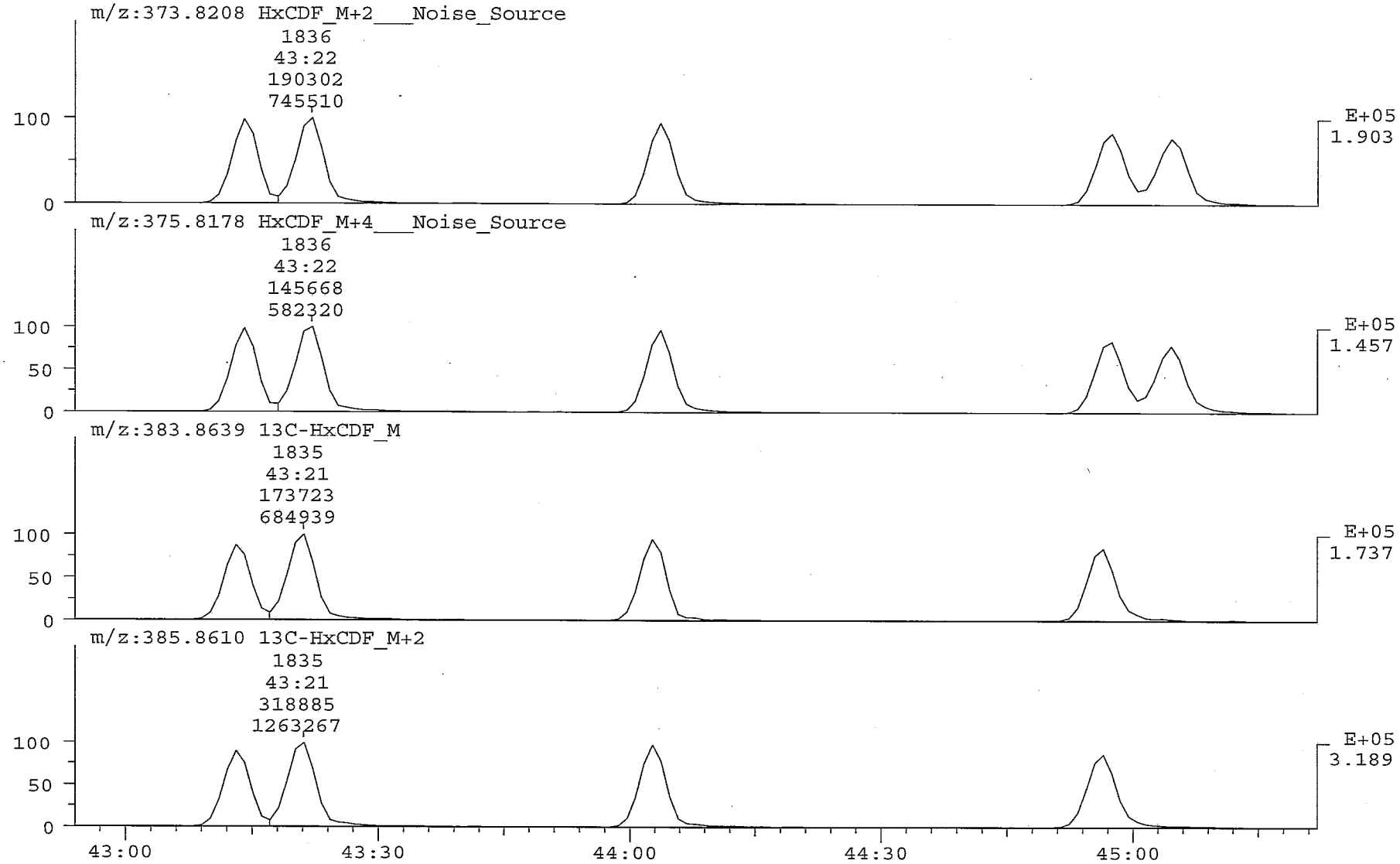
CHRO: d1120919s2 19-Sep-12 Elapse: 53:23 2418
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 1920 > 1954 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



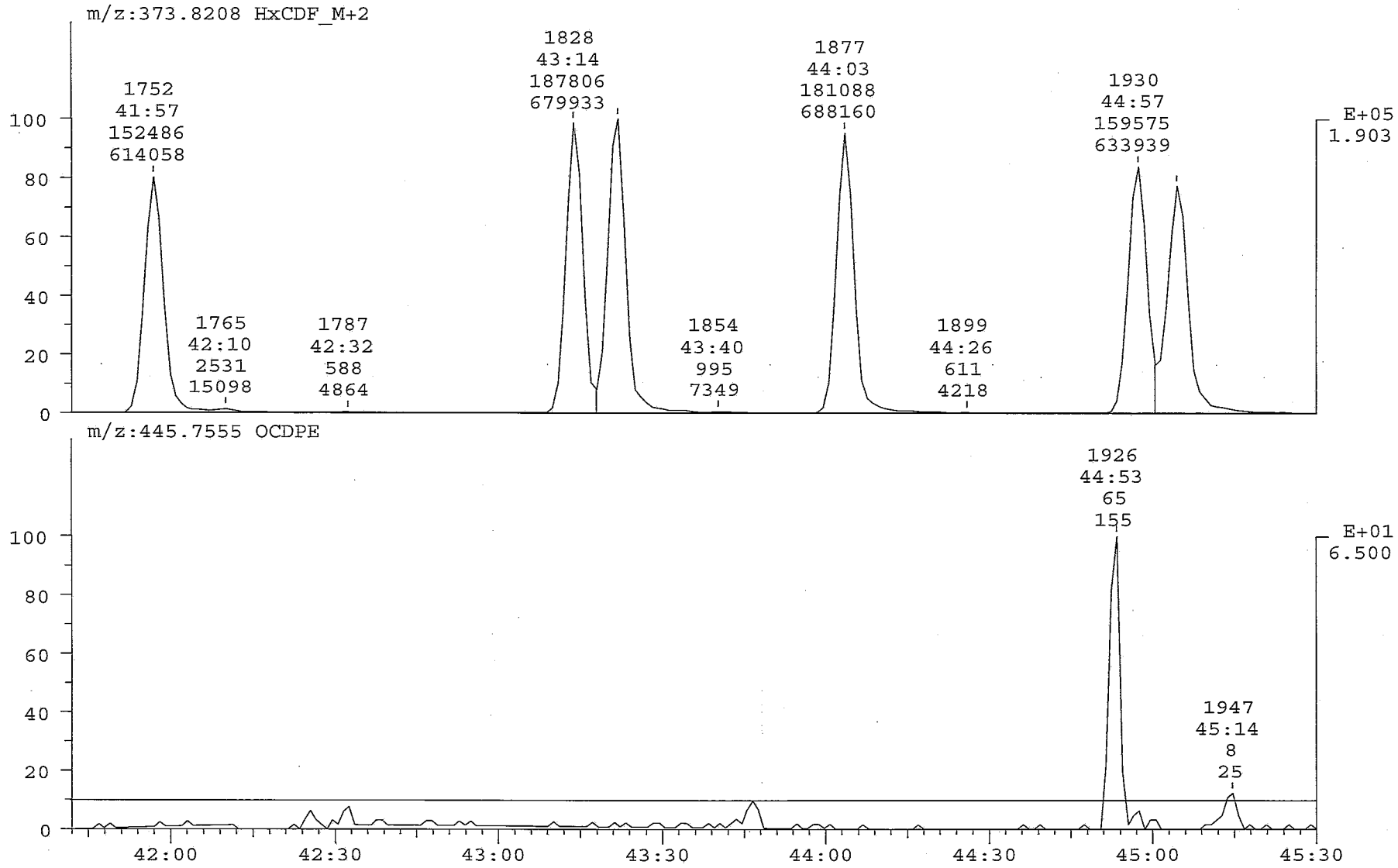
CHRO: d1120919s2 19-Sep-12 Elapse: 44:07 1881
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 1808 > 1954 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : 2, 5.0
Disp: Height Area



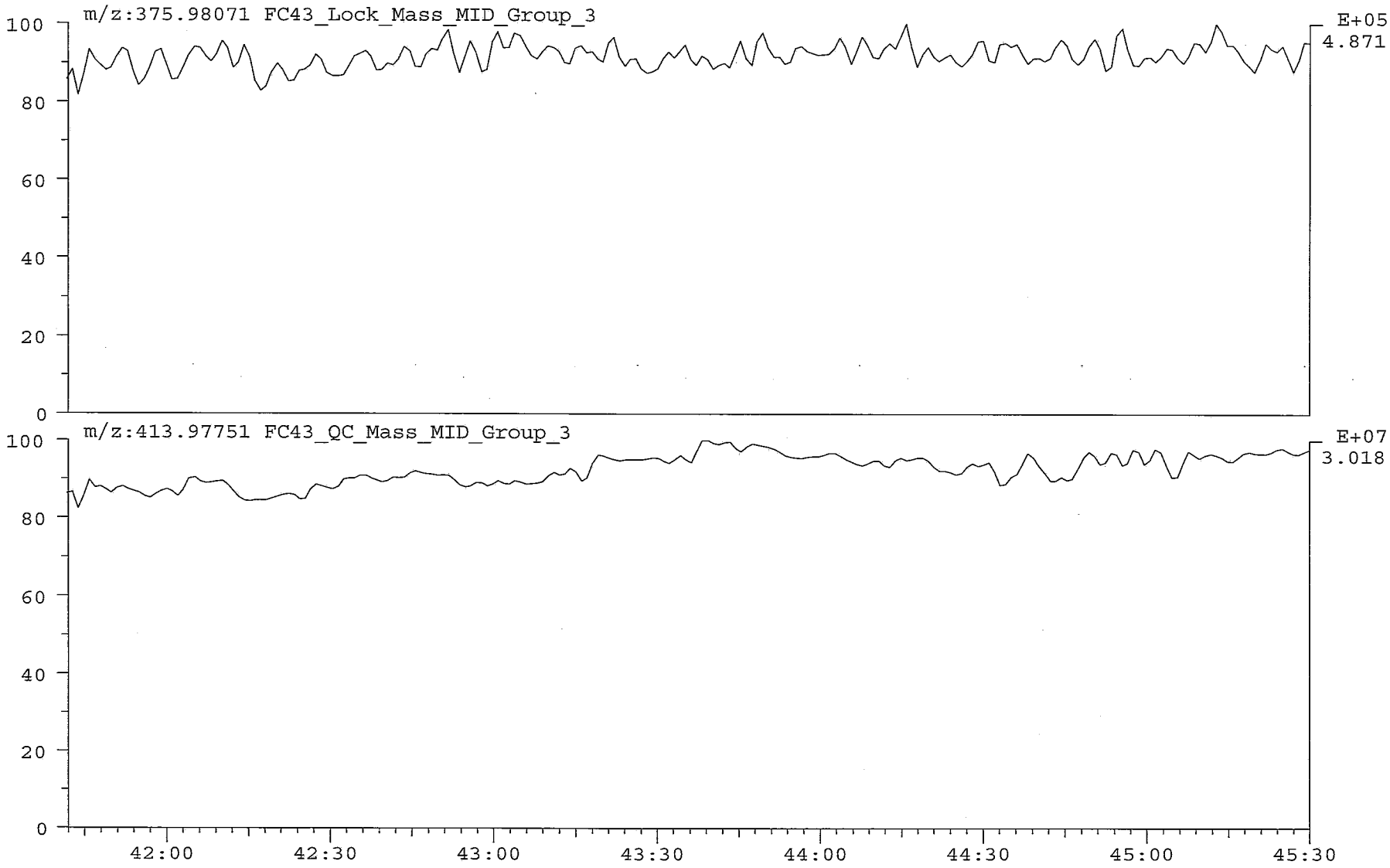
```
CHRO:  d1120919s2                          19-Sep-12  Elapse:  43:21      1835
Samp:  WO=HR0054C Meth=F8 Dil=1                       Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                            Study :  VER/WIN
Oper:  LKM                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1831 > 1839      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



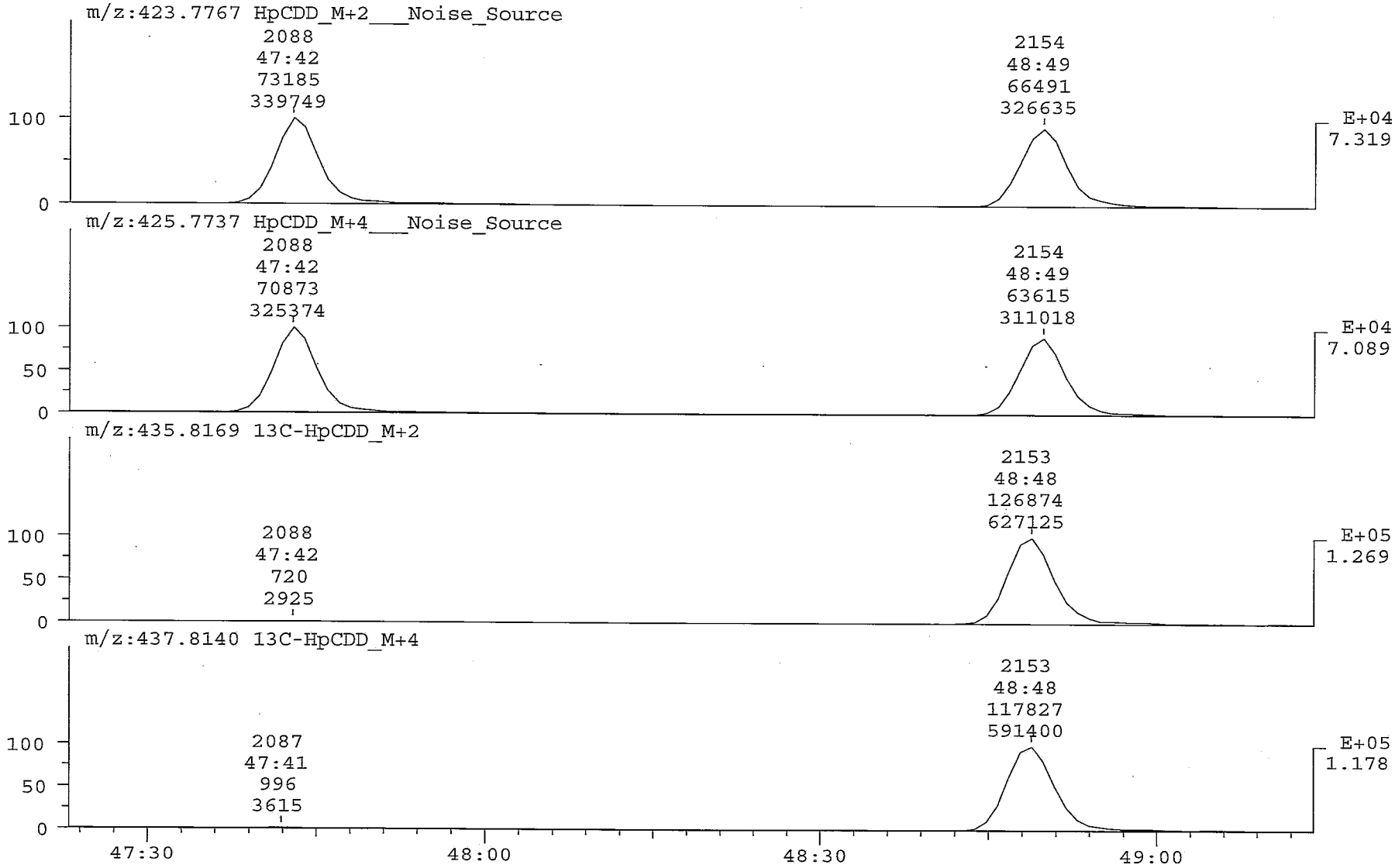
```
CHRO:  d1120919s2                          19-Sep-12   Elapse:  43:21      1835
Samp:  WO=HR0054C Meth=F8 Dil=1                        Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                             Study :  VER/WIN
Oper:  LKM                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1737 > 1962       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  -2, 5.0
Disp:  Height  Area
```



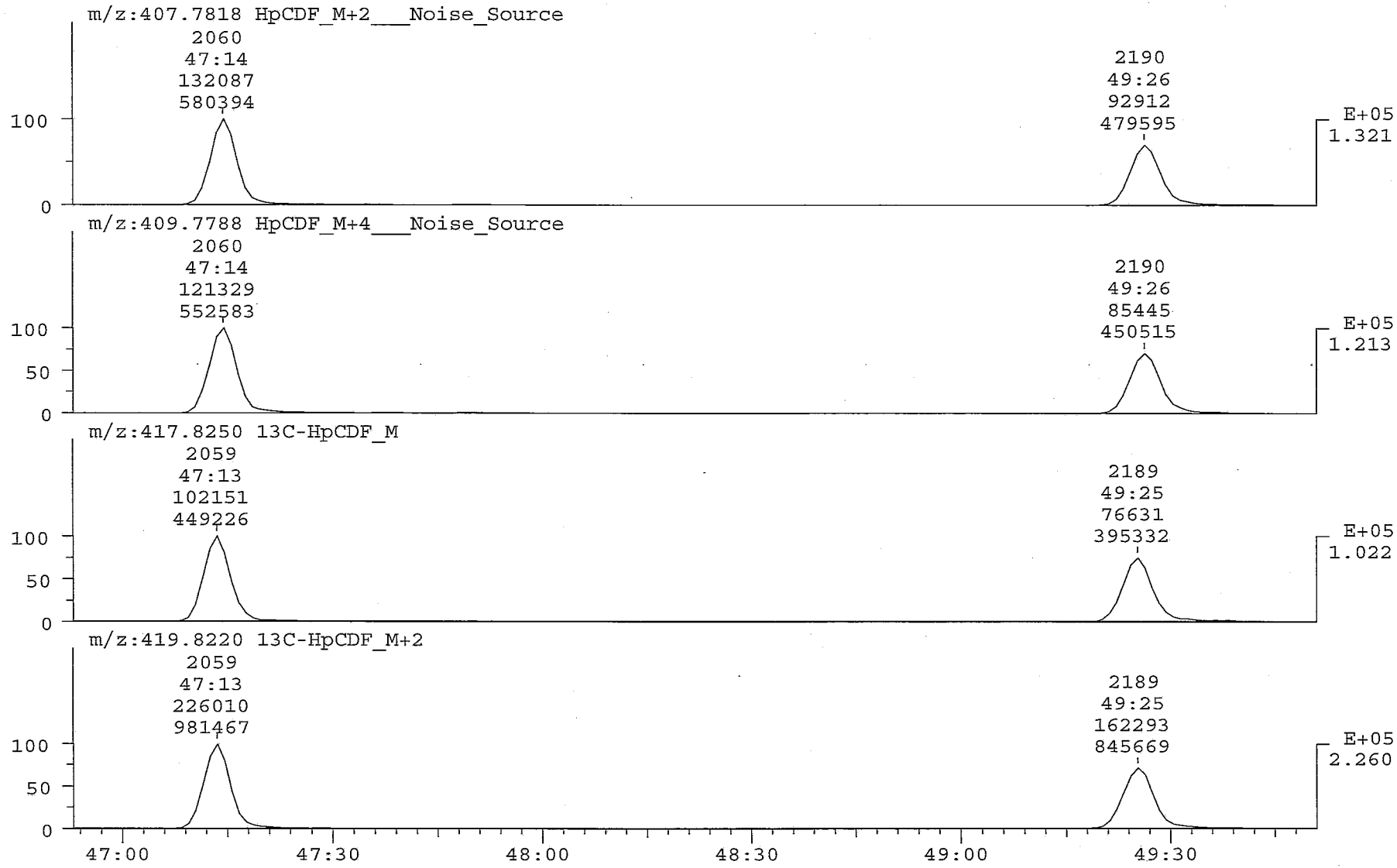
```
CHRO:  d1120919s2                                19-Sep-12   Elapse:  43:21      1835
Samp:  WO=HR0054C Meth=F8 Dil=1                              Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                                   Study :  VER/WIN
Oper:  LKM                                                   Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1737 > 1962             Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                  Label :  0, 0.0
Disp:  Height  Area
```



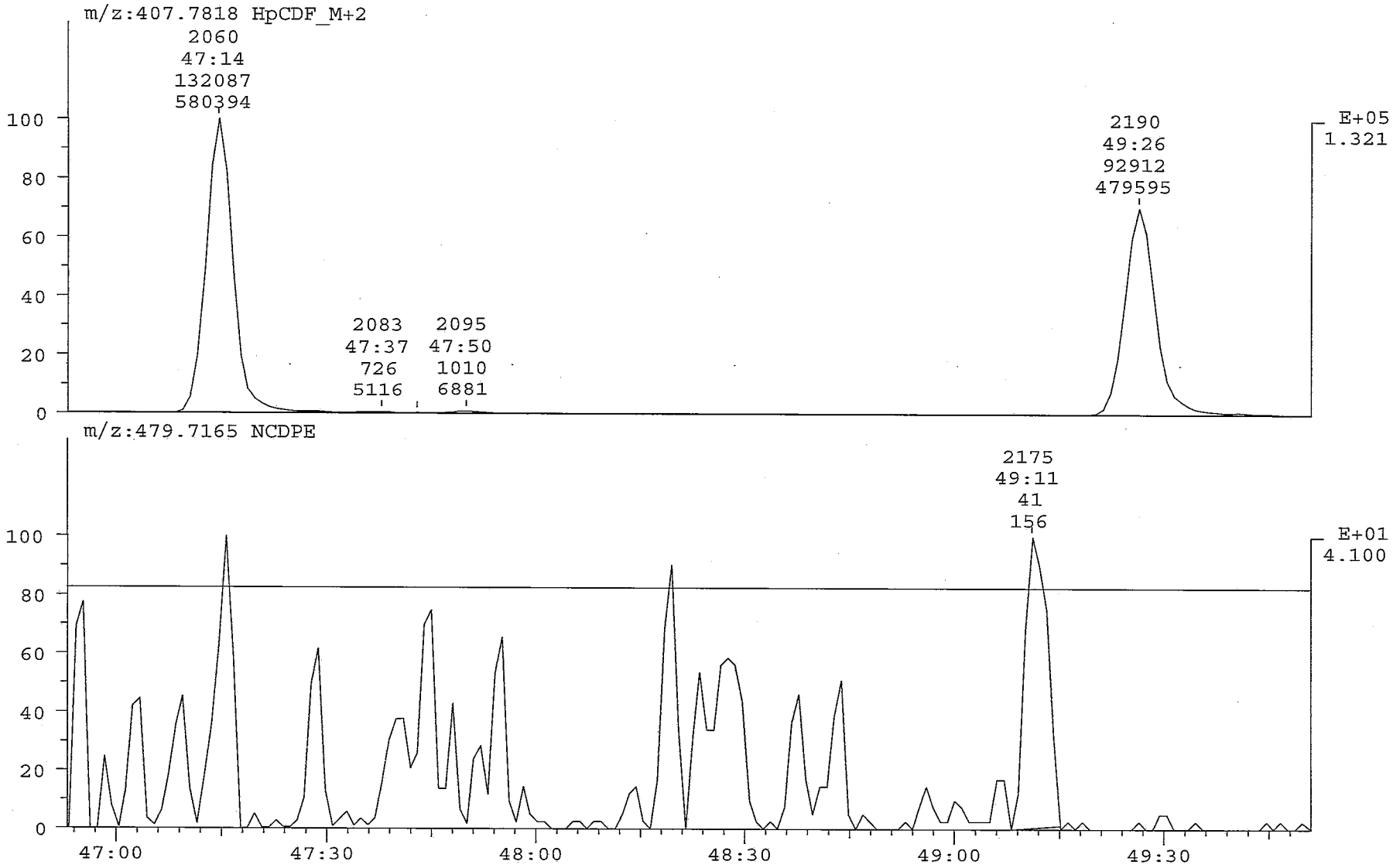
CHRO: d1120919s2 19-Sep-12 Elapse: 43:21 1835
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 2068 > 2178 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



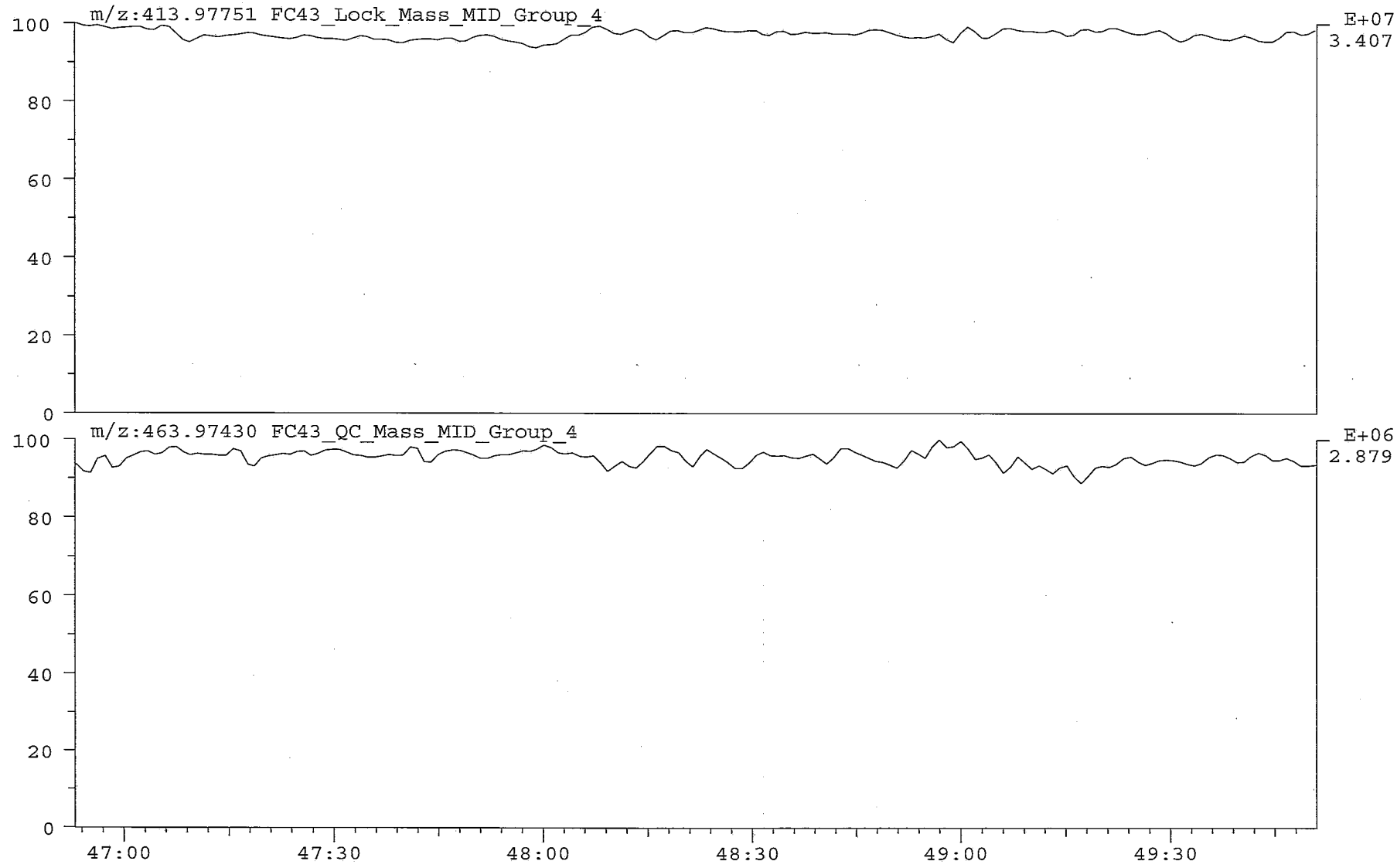
```
CHRO:  d1120919s2                          19-Sep-12  Elapse:  48:22      2127
Samp:  WO=HR0054C Meth=F8 Dil=1                       Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                            Study :  VER/WIN
Oper:  LKM                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2039 > 2214      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



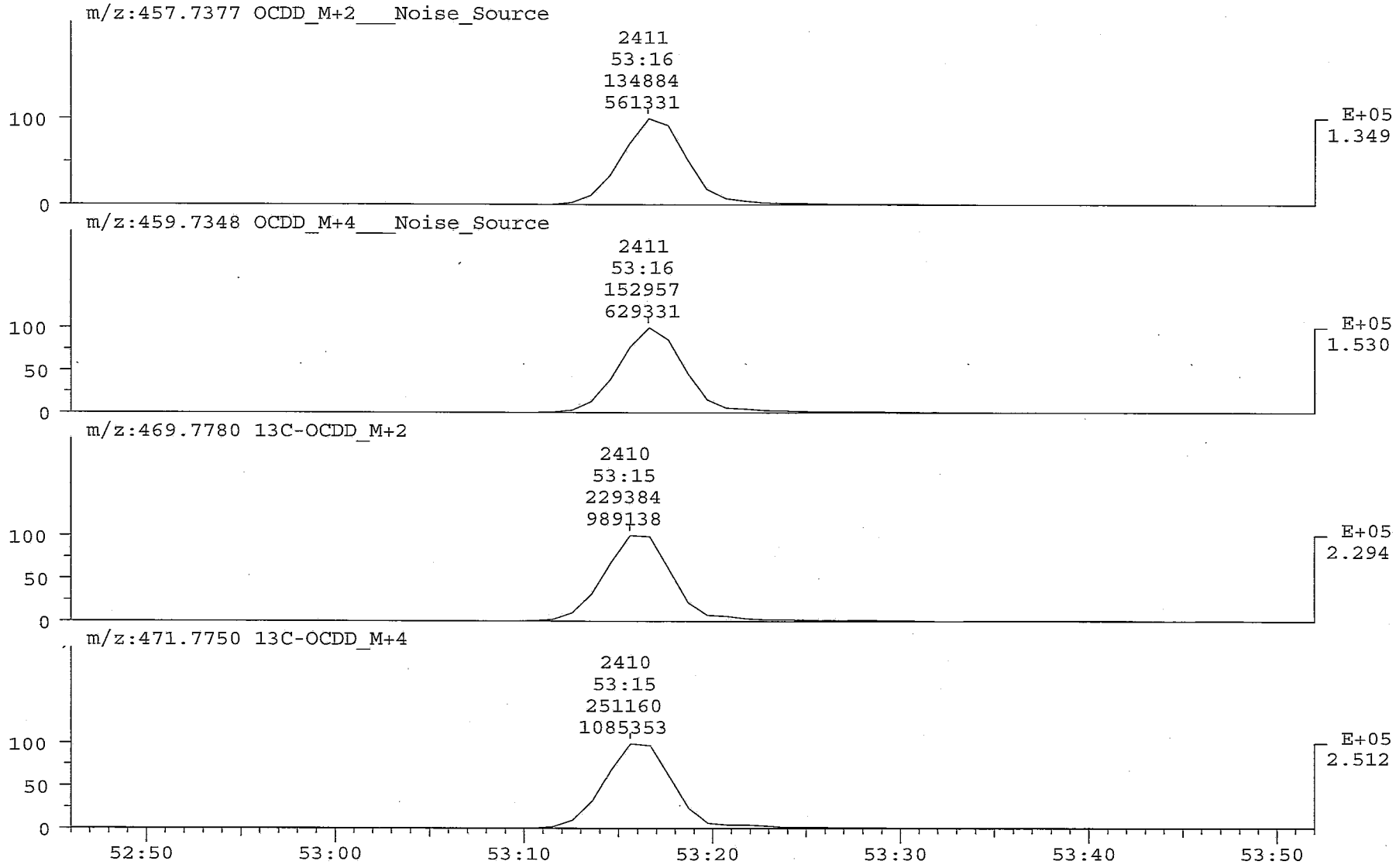
```
CHRO:  d1120919s2                                19-Sep-12  Elapse:  48:22      2127
Samp:  WO=HR0054C Meth=F8 Dil=1                             Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                                  Study :  VER/WIN
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2039 > 2214            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



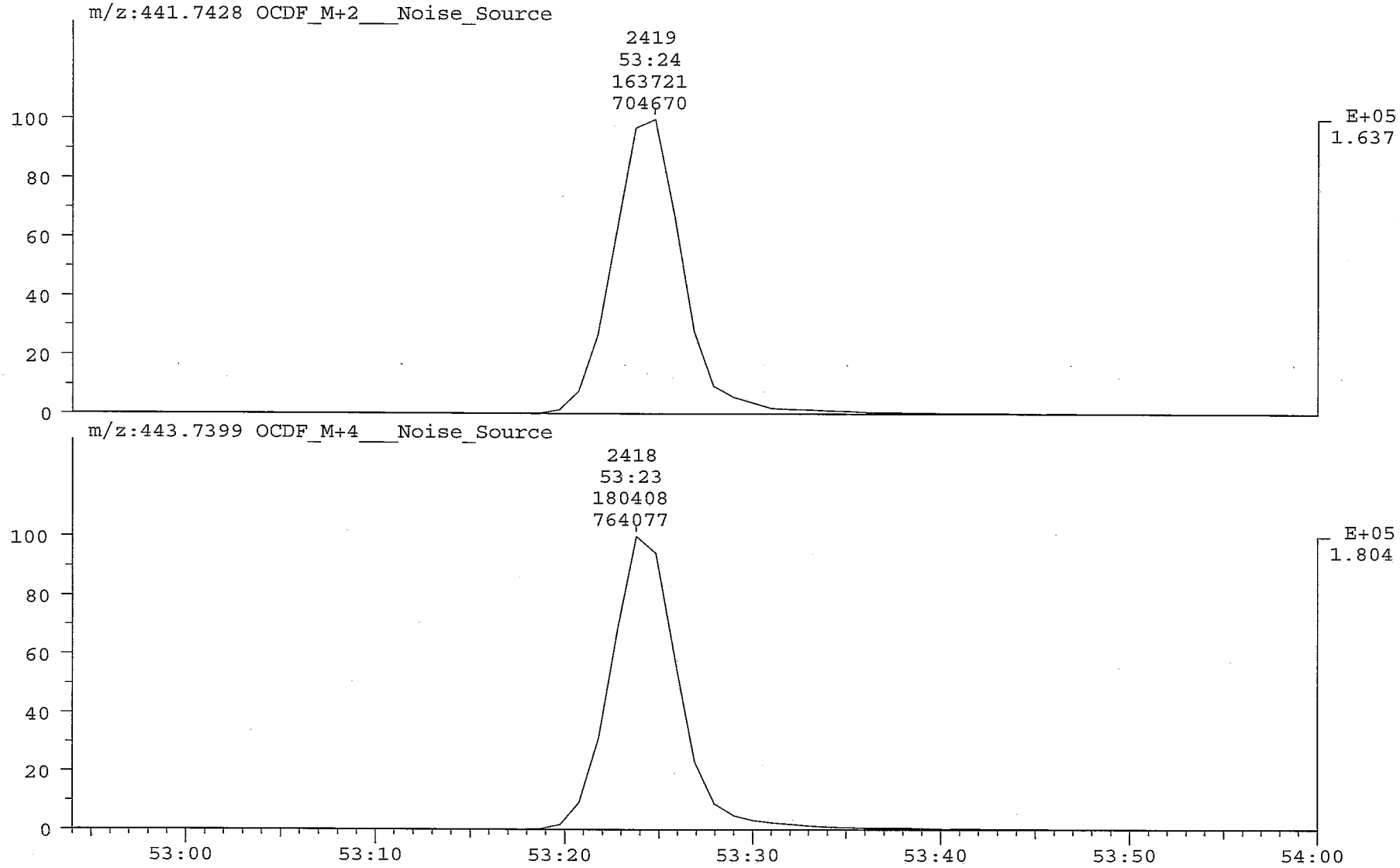
```
CHRO:  d1120919s2                          19-Sep-12   Elapse:  48:22      2127
Samp:  WO=HR0054C Meth=F8 Dil=1                        Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                             Study :  VER/WIN
Oper:  LKM                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2039 > 2214       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  0, 0.0
Disp:  Height  Area
```



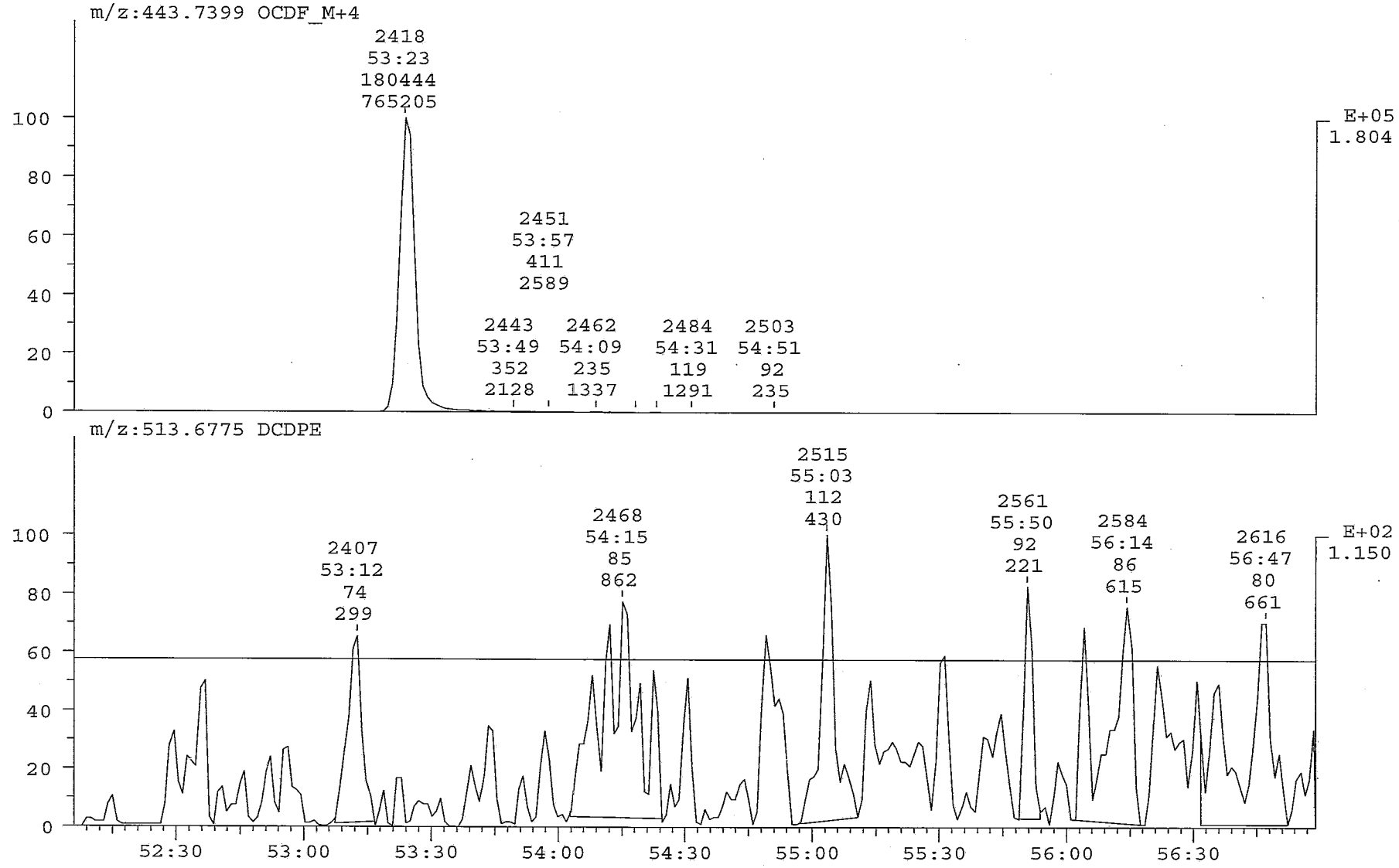
```
CHRO:  d1120919s2                          19-Sep-12   Elapse:  53:15      2410
Samp:  WO=HR0054C Meth=F8 Dil=1                        Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D112091 8S2
Mode:  EI ESI + Q1MS UP LR                             Study :  VER/WIN
Oper:  LKM                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2381 > 2445       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  -2, 5.0
Disp:  Height  Area
```



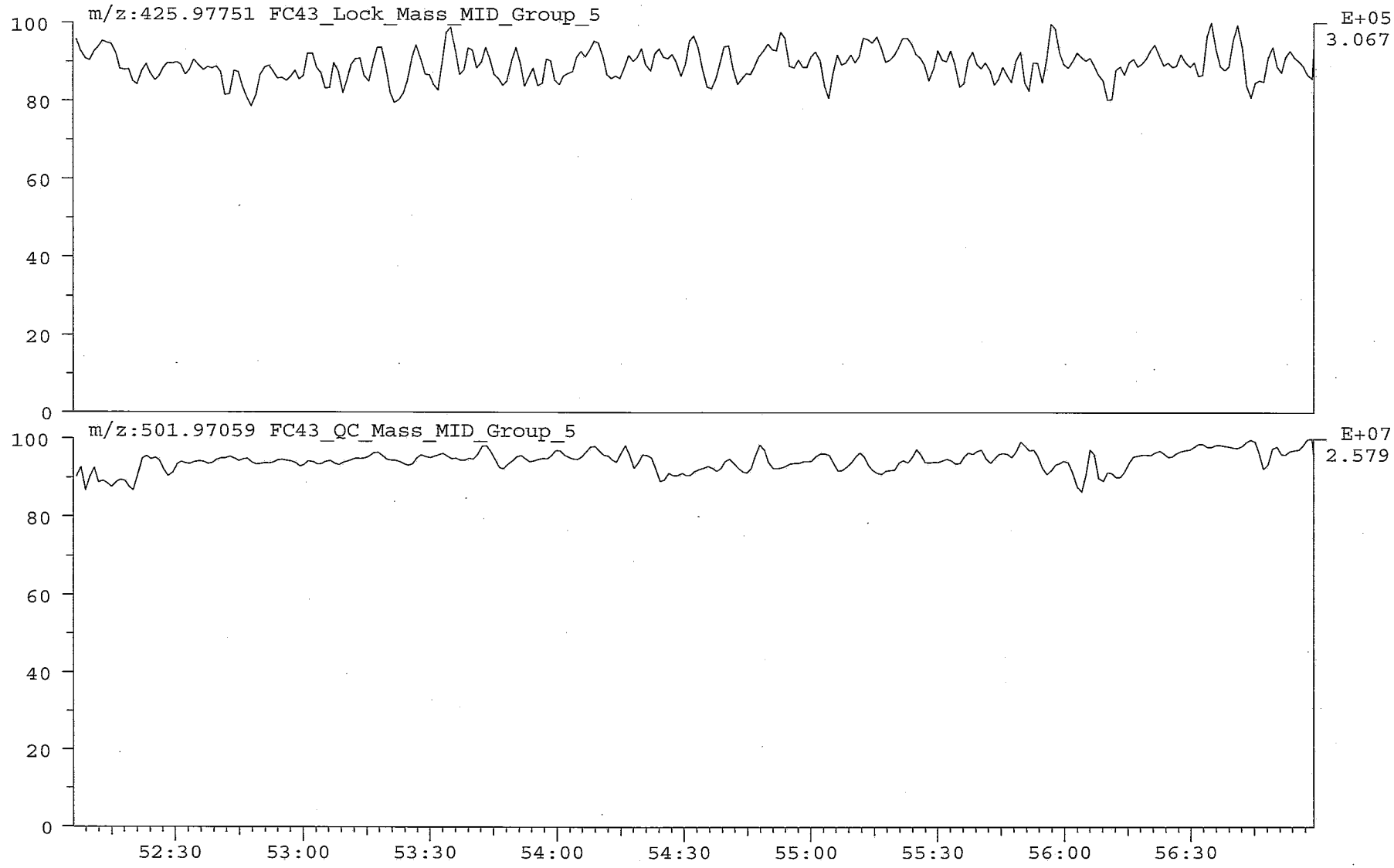
```
CHRO:  d1120919s2                          19-Sep-12  Elapse:  53:23      2418
Samp:  WO=HR0054C Meth=F8 Dil=1                       Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                            Study :  VER/WIN
Oper:  LKM                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2389 > 2453      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



CHRO: d1120919s2 19-Sep-12 Elapse: 53:23 2418
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 2343 > 2628 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



```
CHRO:  d1120919s2                          19-Sep-12   Elapse:  53:23      2418
Samp:  WO=HR0054C Meth=F8 Dil=1                        Start :  02:11:27   2629
Comm:  Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode:  EI ESI + Q1MS UP LR                             Study :  VER/WIN
Oper:  LKM                                             Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2343 > 2628       Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3            Label :  0, 0.0
Disp:  Height  Area
```



*** file opened Wed Sep 19 02:13:02 2012 ***

```
Started by                  - Xcalibur
Instrument Internet name    - DFS MS
Instrument model            - DFS MS
Instrument service number   - 0000
Workstation internet name   - KNXDXNDFS01
```

Analysis started at: 19-Sep-12 02:13:01

Analysis will stop at user request

Firmware Version: 1.03

MCAL file name: mcal1.cal

Sequence :

MID procedure: 5W_DB5_FC43_SINGLEGC

Mid Time Windows:

	Start	Measure	End	Cycletime
# 1	12:00 min	20:12 min	32:12 min	1.00 sec
# 2	32:12 min	9:23 min	41:36 min	1.00 sec
# 3	41:36 min	4:53 min	46:30 min	1.00 sec
# 4	46:30 min	5:30 min	52:00 min	1.00 sec
# 5	52:00 min	5:00 min	57:00 min	1.00 sec

Mid Masses:

Window # 1

mass	F	int	gr	time (ms)
303.9016		1	1	124
305.8987		1	1	124
313.9834	l	20	1	6
313.9834		20	1	6
315.9419		5	1	24
317.9389		5	1	24
319.8965		1	1	124
321.8936		1	1	124
327.8847		1	1	124
331.9368		5	1	24
333.9338		5	1	24
363.9802	c	20	1	6
363.9802		20	1	6
375.8364		1	1	124

Window # 2

mass	F	int	gr	time (ms)
313.9834	l	20	1	7
313.9834		20	1	7
339.8597		1	1	146
341.8567		1	1	146
351.9000		5	1	29
353.8970		5	1	29
355.8546		1	1	146
357.8516		1	1	146
367.8949		5	1	29
369.8919		5	1	29
375.9802	c	20	1	7
375.9802		20	1	7
409.7974		1	1	146

Window # 3

mass	F	int	gr	time (ms)
373.8208		1	1	146
375.8178		1	1	146
375.9802	l	20	1	7

```
  375.9802     20  1        7
  383.8639      5  1       29
  385.8610      5  1       29
  389.8158      1  1      146
  391.8127      1  1      146
  401.8559      5  1       29
  403.8529      5  1       29
  413.9770 c   20  1        7
  413.9770     20  1        7
  445.7555      1  1      146
 Window # 4
      mass F  int  gr  time (ms)
  407.7817      1  1      146
  409.7788      1  1      146
  413.9770 l   20  1        7
  413.9770     20  1        7
  417.8250      5  1       29
  419.8220      5  1       29
  423.7767      1  1      146
  425.7737      1  1      146
  435.8169      5  1       29
  437.8140      5  1       29
  463.9738 c   20  1        7
  463.9738     20  1        7
  479.7165      1  1      146
 Window # 5
      mass F  int  gr  time (ms)
  425.9770 l   20  1        7
  425.9770     20  1        7
  441.7428      1  1      159
  443.7399      1  1      159
  457.7377      1  1      159
  459.7348      1  1      159
  469.7780      5  1       31
  471.7750      5  1       31
  501.9706 c   20  1        7
  501.9706     20  1        7
  513.6775      1  1      159

MID Window terminated after 32.200000 minutes
MID Window end time was 32.200000 minutes
MID Window terminated after 41.600000 minutes
MID Window end time was 41.600000 minutes
MID Window terminated after 46.500000 minutes
MID Window end time was 46.500000 minutes
MID Window terminated after 52.000000 minutes
MID Window end time was 52.000000 minutes
MID Window terminated after 57.000000 minutes
MID Window end time was 57.000000 minutes

Tune file name: C:\Xcalibur\System\DFS\MSI\tune2.DFSTune

DFS - Parameter

 ACCU          1000.0000   BCORRS          0.0169   BMASS          313.4834
 BQUAD           -1.4000   CAPIL           0.0000   CAPTSET        200.0000
 CCURR            0.0000   COUNTING        0.0000   DELAY            0.0000
 DRAW           -25.0000   DRAWC           0.0000   DRAWS            0.0000
 DYNVOLTAGE      15.0000   ECORR           1.0008   ECURR            0.9000
 EDAC        7969177.0000  EDACG           0.9998   EDACZ         1378.7226
 ELEN           -45.0000   EMULT        1710.0000   ENS            210.0000
 ENSBR           -1.4000   ERATIO          1.0000   ESA            679.0600
 ESIPAR           0.0000   EXS           170.0000   EXSBR           -0.7000
 FDMA       18000000.0000  FILTER        100.0000   FLENS            1.0000
 FM             375.8364   FMII           50.0000   FQUAD            5.5000
 FQUADGAIN        4.6000   FREQ          400.0000   FSLOPE    36000000.0000
 FVANAL           0.0291   FVINLET         0.0635   FVSRC            0.0533
```

FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSRC	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	610.0000
LENS_SYM	1.7500	LM	375.8364	LMII	500.0000
LMASS	313.4834	LKM	425.9770	MASS	313.4834
MDAC	3604632.7183	MRANGE	1245.7874	NSAM	200.0000
NSCAN	2651.0000	NSMAX	8.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-11.0000	RECURR	0.8845	RELEN	0.0000
RES	13647.0911	RPUSHER	-11.2161	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	690.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.1590	TANAL	0.0000	TCURR	0.0000
TD	30.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	110.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	313.4834	XLENS_POT	720.0000
XLENS_SYM	5.0000	YLENS_POT	668.0000	YLENS_SYM	14.8000

```
Source Gauge:         3.3e-005 mbar
Analyzer Penning:     9.5e-008 mbar
Pirani Analyse:       2.9e-002 mbar
Pirani Source:        5.4e-002 mbar
Pirani Inlet System: 6.4e-002 mbar

Scantype is electric

Sourcemode is EI POS

MID Time Window 1: Resolution is 13588.
MID Time Window 2: Resolution is 13247.
MID Time Window 3: Resolution is 13232.
MID Time Window 4: Resolution is 13228.
MID Time Window 5: Resolution is 13647.

Amplifier Offset: 87.


*** File closed Wed Sep 19 03:10:03 2012
  ***
```

QUAN: d1120919s2.q0 Entries: 178

Data file(s) used
File: d1120919s2 19-Sep-12
Samp: WO=HR0054C Meth=F8 Dil=1 Start : 02:11:27 2629
Comm: Inst=d11a/1101912 Batch=20120919s2 Ccal=D1120918S2
Mode: EI ESI + Q1MS UP LR Study : VER/WIN
Oper: LKM Inlet : LC

Disp: CHRO
Amount = (area * ref amnt) / (ref area * response factor); amount = f(reponse)
Response factors from quantitation file

Quan Masses	Actual Time	Area	Height	Peak Beginn	Peak End	Noise Value	La Pe	Lab Fac	Integration Baseline
319.8805	23:36	70057.	9567.	23:25	23:51	37.	1	1.0	ABV
321.8775	23:35	90705.	12679.	23:23	23:46	34.	1	1.0	ABV
319.8805	23:36	69219.	9567.	23:25	23:47	37.	2	5.0	ABV
319.8805	28:33	61074.	7393.	28:22	28:40	37.	2	5.0	ABV
319.8805	28:47	57822.	6279.	28:40	28:55	37.	2	5.0	AVB
319.8805	29:03	70009.	7142.	28:55	29:17	37.	2	5.0	AVV
319.8805	29:29	62969.	6227.	29:17	29:43	37.	2	5.0	AVV
319.8805	32:00	50960.	5395.	31:48	32:11	37.	2	5.0	ABB
321.8775	23:35	90705.	12679.	23:23	23:46	34.	2	5.0	ABV
321.8775	28:34	78769.	9402.	28:20	28:41	34.	2	5.0	ABV
321.8775	28:47	68582.	8379.	28:41	28:55	34.	2	5.0	AVB
321.8775	29:01	85518.	9476.	28:55	29:13	34.	2	5.0	AVB
321.8775	29:29	85592.	8708.	29:14	29:44	34.	2	5.0	AVB
321.8775	32:00	69969.	7407.	31:47	32:10	34.	2	5.0	ABB
331.9202	28:32	603299.	71813.	28:17	28:46	16.	2	5.0	ABV
331.9202	29:00	630968.	69609.	28:46	29:15	16.	2	5.0	AVB
333.9171	28:31	782469.	90424.	28:18	28:46	17.	2	5.0	ABV
333.9171	29:00	800334.	91606.	28:48	29:15	17.	2	5.0	AVV
319.8805	29:03	69713.	7130.	28:55	29:17	77.	2	5.0	AVV
319.8805	29:29	62599.	6207.	29:17	29:44	77.	2	5.0	AVV
321.8775	29:01	85443.	9472.	28:55	29:13	76.	2	5.0	AVV
321.8775	29:29	83490.	8705.	29:19	29:44	76.	2	5.0	AVV
331.9202	28:32	602970.	71802.	28:18	28:46	51.	2	5.0	ABV
331.9202	29:00	630349.	69588.	28:46	29:15	51.	2	5.0	AVV
333.9171	28:31	782390.	90422.	28:18	28:46	64.	2	5.0	ABV
333.9171	29:00	800097.	91598.	28:48	29:15	64.	2	5.0	AVV
327.8683	29:02	155221.	16079.	28:50	29:17	43.	1	1.0	ABV
327.8683	29:02	155221.	16079.	28:50	29:17	43.	2	5.0	ABV
303.8864	21:21	151814.	23797.	21:08	21:36	16.	1	1.0	ABV
305.8834	21:21	183435.	27521.	21:11	21:36	26.	1	1.0	ABV
303.8864	21:21	151814.	23797.	21:08	21:36	16.	2	5.0	ABV
303.8864	27:11	118328.	13496.	27:00	27:26	16.	2	5.0	ABV
303.8864	31:51	96872.	10009.	31:36	32:06	16.	2	5.0	ABV
305.8834	21:21	183435.	27521.	21:11	21:36	26.	2	5.0	ABV
305.8834	27:11	146641.	17326.	27:00	27:26	26.	2	5.0	ABV
305.8834	31:51	121828.	12158.	31:37	32:06	26.	2	5.0	ABV
315.9261	27:09	948518.	115777.	26:55	27:24	10.	2	5.0	ABV
317.9230	27:09	1181024.	137371.	26:57	27:24	11.	2	5.0	ABV
303.8864	27:11	118327.	13496.	27:00	27:26	19.	2	5.0	ABV
305.8834	27:11	146640.	17326.	27:00	27:26	32.	2	5.0	ABV
315.9261	27:09	948518.	115777.	26:55	27:24	24.	2	5.0	ABV
317.9230	27:09	1180999.	137370.	26:57	27:24	40.	2	5.0	ABV
355.8368	40:31	357232.	78001.	40:22	40:47	32.	1	1.0	AVV
357.8337	40:31	227073.	48029.	40:20	40:47	25.	1	1.0	AVV
355.8368	36:29	318695.	41661.	36:16	36:44	32.	2	5.0	ABV
355.8368	39:48	314679.	65560.	39:39	40:01	32.	2	5.0	ABV
355.8368	40:31	357232.	78001.	40:22	40:47	32.	2	5.0	AVV
357.8337	36:29	211012.	27556.	36:18	36:44	25.	2	5.0	ABV
357.8337	39:48	203104.	42838.	39:38	40:03	25.	2	5.0	ABV
357.8337	40:31	227073.	48029.	40:20	40:47	25.	2	5.0	AVB

367.8765	39:46	638616.	137653.	39:38	40:02	10.	2	5.0 ABV
369.8734	39:46	411031.	90762.	39:38	39:59	8.	2	5.0 ABV
355.8368	39:48	314256.	65544.	39:40	40:01	46.	2	5.0 ABV
355.8368	40:31	350190.	77778.	40:23	40:44	46.	2	5.0 ABB
357.8337	39:48	202545.	42821.	39:40	40:03	30.	2	5.0 ABV
357.8337	40:31	221641.	47854.	40:24	40:47	30.	2	5.0 ABB
367.8765	39:46	638537.	137650.	39:39	40:02	28.	2	5.0 ABV
369.8734	39:46	411031.	90762.	39:38	39:59	18.	2	5.0 ABV
339.8427	32:45	600476.	57704.	32:30	33:01	45.	1	1.0 ABV
341.8396	32:44	393393.	39374.	32:30	33:00	44.	1	1.0 ABV
339.8427	32:45	600476.	57704.	32:30	33:01	45.	2	5.0 ABV
339.8427	37:48	557382.	92943.	37:35	38:04	45.	2	5.0 ABV
339.8427	39:11	524124.	102627.	38:56	39:27	45.	2	5.0 AVV
339.8427	40:37	477248.	99633.	40:22	40:53	45.	2	5.0 ABV
341.8396	32:44	393393.	39374.	32:30	33:00	44.	2	5.0 ABV
341.8396	37:48	364293.	61381.	37:34	38:04	44.	2	5.0 ABV
341.8396	39:11	337906.	67165.	38:56	39:27	44.	2	5.0 AVV
341.8396	40:37	309235.	63772.	40:22	40:53	44.	2	5.0 AVV
351.8824	37:46	999539.	165245.	37:36	38:02	15.	2	5.0 ABV
351.8824	39:10	1010776.	201115.	39:01	39:21	15.	2	5.0 ABV
353.8793	37:46	650633.	106025.	37:35	38:02	11.	2	5.0 ABV
353.8793	39:10	641310.	128970.	39:00	39:26	11.	2	5.0 AVV
339.8427	37:48	557230.	92939.	37:36	38:04	56.	2	5.0 ABV
339.8427	39:11	523288.	102604.	39:04	39:27	56.	2	5.0 ABV
341.8396	37:48	364184.	61378.	37:34	38:04	44.	2	5.0 ABV
341.8396	39:11	337109.	67147.	39:03	39:27	44.	2	5.0 ABV
351.8824	37:46	999408.	165241.	37:37	38:02	55.	2	5.0 ABV
351.8824	39:10	1010776.	201115.	39:01	39:21	55.	2	5.0 ABV
353.8793	37:46	650458.	106019.	37:36	38:02	43.	2	5.0 ABV
353.8793	39:10	640717.	128948.	39:01	39:26	43.	2	5.0 ABV
389.7961	44:43	428647.	106780.	44:37	44:58	58.	1	1.0 AVV
391.7931	44:43	336334.	82808.	44:34	44:58	53.	1	1.0 AVV
389.7961	42:41	396871.	104704.	42:33	42:56	58.	2	5.0 ABV
389.7961	44:14	374114.	99910.	44:07	44:17	58.	2	5.0 ABV
389.7961	44:21	385264.	96382.	44:17	44:36	58.	2	5.0 AVV
389.7961	44:43	428647.	106780.	44:37	44:58	58.	2	5.0 AVB
391.7931	42:41	317915.	83048.	42:34	42:56	53.	2	5.0 ABV
391.7931	44:13	292265.	75882.	44:08	44:17	53.	2	5.0 ABV
391.7931	44:21	303660.	79451.	44:17	44:34	53.	2	5.0 AVB
391.7931	44:43	336334.	82808.	44:34	44:58	53.	2	5.0 AVB
401.8358	44:13	681184.	184643.	44:06	44:16	42.	2	5.0 ABV
401.8358	44:20	692059.	170683.	44:16	44:34	42.	2	5.0 AVV
401.8358	44:42	800224.	200589.	44:34	44:57	42.	2	5.0 AVV
403.8327	44:13	536787.	146705.	44:07	44:16	14.	2	5.0 ABV
403.8327	44:20	578019.	141115.	44:16	44:33	14.	2	5.0 AVV
403.8327	44:42	652174.	163475.	44:33	44:57	14.	2	5.0 AVV
389.7961	44:14	373939.	99893.	44:07	44:17	83.	2	5.0 ABV
389.7961	44:21	385021.	96367.	44:17	44:36	83.	2	5.0 AVV
389.7961	44:43	428516.	106772.	44:37	44:58	83.	2	5.0 AVV
391.7931	44:13	292264.	75882.	44:08	44:17	74.	2	5.0 ABV
391.7931	44:21	303659.	79451.	44:17	44:34	74.	2	5.0 AVV
391.7931	44:43	336330.	82808.	44:34	44:58	74.	2	5.0 AVV
401.8358	44:13	681184.	184643.	44:06	44:16	106.	2	5.0 ABV
401.8358	44:20	692059.	170683.	44:16	44:34	106.	2	5.0 AVV
401.8358	44:42	800224.	200589.	44:34	44:57	106.	2	5.0 AVV
403.8327	44:13	536787.	146705.	44:07	44:16	41.	2	5.0 ABV
403.8327	44:20	578019.	141115.	44:16	44:33	41.	2	5.0 AVV
403.8327	44:42	652174.	163475.	44:33	44:57	41.	2	5.0 AVV
373.8021	43:22	745408.	190296.	43:18	43:37	74.	1	1.0 AVV
375.7990	43:22	582311.	145668.	43:18	43:36	74.	1	1.0 AVV
373.8021	41:57	614057.	152486.	41:49	42:07	74.	2	5.0 ABV
373.8021	43:14	679933.	187806.	42:58	43:18	74.	2	5.0 ABV
373.8021	43:22	745408.	190296.	43:18	43:37	74.	2	5.0 AVB
373.8021	44:03	688160.	181088.	43:50	44:19	74.	2	5.0 AVV
373.8021	44:57	633939.	159575.	44:49	45:00	74.	2	5.0 ABV
373.8021	45:04	668598.	147317.	45:00	45:19	74.	2	5.0 AVV
375.7990	41:57	484653.	119418.	41:48	42:06	74.	2	5.0 ABV

375.7990	43:14	525037.	143278.	43:06	43:18	74.	2	5.0 ABV
375.7990	43:22	582311.	145668.	43:18	43:36	74.	2	5.0 AVB
375.7990	44:03	536550.	140569.	43:53	44:19	74.	2	5.0 AVV
375.7990	44:57	492902.	122705.	44:48	45:00	74.	2	5.0 ABV
375.7990	45:04	511358.	114788.	45:00	45:19	74.	2	5.0 AVV
383.8447	43:13	566666.	152460.	43:06	43:17	41.	2	5.0 ABV
383.8447	43:21	684985.	173726.	43:17	43:34	41.	2	5.0 AVV
383.8447	44:02	621429.	164522.	43:53	44:17	41.	2	5.0 AVV
383.8447	44:56	614810.	146368.	44:49	45:07	41.	2	5.0 AVV
385.8417	43:13	1053542.	284523.	43:06	43:17	52.	2	5.0 ABV
385.8417	43:21	1263307.	318887.	43:17	43:31	52.	2	5.0 AVV
385.8417	44:02	1173550.	310379.	43:53	44:17	52.	2	5.0 AVV
385.8417	44:56	1165446.	275487.	44:49	45:11	52.	2	5.0 ABV
373.8021	43:14	680057.	187812.	42:58	43:18	74.	2	5.0 ABV
373.8021	43:22	745510.	190302.	43:18	43:37	74.	2	5.0 AVV
373.8021	44:03	688237.	181091.	43:50	44:19	74.	2	5.0 AVV
373.8021	44:57	632247.	159363.	44:50	45:00	74.	2	5.0 ABV
373.8021	45:04	658576.	146931.	45:00	45:19	74.	2	5.0 AVV
375.7990	43:14	525043.	143279.	43:06	43:18	80.	2	5.0 ABV
375.7990	43:22	582320.	145668.	43:18	43:36	80.	2	5.0 AVV
375.7990	44:03	536555.	140570.	43:53	44:19	80.	2	5.0 AVB
375.7990	44:57	491685.	122563.	44:49	45:00	80.	2	5.0 ABV
375.7990	45:04	505262.	114548.	45:00	45:19	80.	2	5.0 AVV
383.8447	43:13	566658.	152460.	43:06	43:17	82.	2	5.0 ABV
383.8447	43:21	684939.	173723.	43:17	43:34	82.	2	5.0 AVV
383.8447	44:02	621235.	164514.	43:53	44:17	82.	2	5.0 AVV
383.8447	44:56	613138.	146205.	44:49	45:09	82.	2	5.0 ABV
385.8417	43:13	1053532.	284522.	43:06	43:17	97.	2	5.0 ABV
385.8417	43:21	1263267.	318885.	43:17	43:31	97.	2	5.0 AVV
385.8417	44:02	1173321.	310370.	43:53	44:17	97.	2	5.0 AVV
385.8417	44:56	1163934.	275438.	44:49	45:11	97.	2	5.0 ABV
423.7555	47:43	339749.	73185.	47:35	47:58	38.	1	1.0 ABV
425.7524	47:43	325374.	70873.	47:35	47:58	54.	1	1.0 ABV
423.7555	47:43	339749.	73185.	47:35	47:58	38.	2	5.0 ABV
423.7555	48:49	326635.	66491.	48:40	49:05	38.	2	5.0 ABV
425.7524	47:43	325374.	70873.	47:35	47:58	54.	2	5.0 ABV
425.7524	48:49	311018.	63615.	48:42	49:05	54.	2	5.0 ABV
435.7951	47:43	2925.	720.	47:35	47:48	20.	2	5.0 ABB
435.7951	48:48	627125.	126874.	48:40	49:04	20.	2	5.0 ABV
437.7921	47:41	3615.	996.	47:36	47:49	11.	2	5.0 ABB
437.7921	48:48	591400.	117827.	48:40	49:04	11.	2	5.0 ABV
407.7614	47:14	580394.	132087.	47:07	47:29	58.	1	1.0 ABV
409.7583	47:14	552583.	121329.	47:07	47:29	52.	1	1.0 ABV
407.7614	47:14	580394.	132087.	47:07	47:29	58.	2	5.0 ABV
407.7614	49:26	479595.	92912.	49:18	49:41	58.	2	5.0 ABV
409.7583	47:14	552583.	121329.	47:07	47:29	52.	2	5.0 ABV
409.7583	49:26	450514.	85445.	49:18	49:41	52.	2	5.0 ABV
417.8041	47:13	449226.	102151.	47:06	47:26	30.	2	5.0 ABV
417.8041	49:25	395332.	76631.	49:16	49:40	30.	2	5.0 ABV
419.8010	47:13	981467.	226010.	47:06	47:28	54.	2	5.0 ABV
419.8010	49:25	845669.	162293.	49:17	49:40	54.	2	5.0 ABV
457.7148	53:16	561331.	134884.	53:09	53:32	26.	1	1.0 ABV
459.7118	53:16	629330.	152957.	53:09	53:32	39.	1	1.0 ABV
457.7148	53:16	561331.	134884.	53:09	53:32	26.	2	5.0 ABV
459.7118	53:16	629330.	152957.	53:09	53:32	39.	2	5.0 ABV
469.7545	53:15	989138.	229384.	53:09	53:31	40.	2	5.0 ABV
471.7514	53:15	1085353.	251160.	53:07	53:31	46.	2	5.0 ABV
441.7207	53:24	704670.	163721.	53:17	53:40	44.	1	1.0 ABV
443.7177	53:23	764077.	180408.	53:13	53:39	32.	1	1.0 ABV
441.7207	53:24	704670.	163721.	53:17	53:40	44.	2	5.0 ABV
443.7177	53:23	764077.	180408.	53:13	53:39	32.	2	5.0 ABV

Raw QC Data

Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	H2I050000 - 033B	**Work Order #....:**	MWFPG1AA	**Matrix....:**	SOLID
Dilution Factor:	1				
Prep Date....:	09/05/12	**Analysis Date....:**	09/12/12	**Percent Moisture:**	0.0
Prep Batch # ....:	2249033				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.027	pg/g
1,2,3,7,8-PeCDD	ND		5.0	0.021	pg/g
1,2,3,4,7,8-HxCDD	ND		5.0	0.022	pg/g
1,2,3,6,7,8-HxCDD	ND		5.0	0.024	pg/g
1,2,3,7,8,9-HxCDD	**0.066**	**Q J**	**5.0**	**0.021**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**0.063**	**Q J**	**5.0**	**0.024**	**pg/g**
OCDD	**0.26**	**J**	**10**	**0.022**	**pg/g**
2,3,7,8-TCDF	**0.067**	**Q J**	**1.0**	**0.026**	**pg/g**
1,2,3,7,8-PeCDF	ND		5.0	0.020	pg/g
2,3,4,7,8-PeCDF	**0.032**	**Q J**	**5.0**	**0.019**	**pg/g**
1,2,3,4,7,8-HxCDF	ND		5.0	0.016	pg/g
1,2,3,6,7,8-HxCDF	**0.028**	**Q J**	**5.0**	**0.017**	**pg/g**
2,3,4,6,7,8-HxCDF	**0.041**	**Q J**	**5.0**	**0.019**	**pg/g**
1,2,3,7,8,9-HxCDF	**0.037**	**Q J**	**5.0**	**0.024**	**pg/g**
1,2,3,4,6,7,8-HpCDF	**0.042**	**Q J**	**5.0**	**0.013**	**pg/g**
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.020	pg/g
OCDF	**0.093**	**J**	**10**	**0.020**	**pg/g**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	79	40 - 135
13C-1,2,3,7,8-PeCDD	70	40 - 135
13C-1,2,3,4,7,8-HxCDD	80	40 - 135
13C-1,2,3,6,7,8-HxCDD	84	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	78	40 - 135
13C-OCDD	71	40 - 135
13C-2,3,7,8-TCDF	90	40 - 135
13C-1,2,3,7,8-PeCDF	81	40 - 135
13C-2,3,4,7,8-PeCDF	79	40 - 135
13C-1,2,3,4,7,8-HxCDF	93	40 - 135
13C-1,2,3,6,7,8-HxCDF	95	40 - 135
13C-2,3,4,6,7,8-HxCDF	92	40 - 135
13C-1,2,3,7,8,9-HxCDF	92	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	88	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	86	40 - 135

Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	H2I050000 - 033B	**Work Order #....:**	MWFPG1AA	**Matrix....:**	SOLID
Dilution Factor:	1				
Prep Date....:	09/05/12	**Analysis Date....:**	09/12/12	**Percent Moisture:**	0.0
Prep Batch # ....:	2249033				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	D2A	**Method:**	SW846 8290A
Analyst ID....:	Linda K. McWhirter				

QUALIFIERS

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...:	H2H140413	**Work Order # ...:**	MWFPG1AC-LCS	**Matrix .....:**	SOLID
LCS Lot-Sample# :	H2I050000 - 033				
Prep Date .....:	09/05/12	**Analysis Date ..:**	09/12/12		
Prep Batch # ...:	2249033				
Dilution Factor :	1				
Analyst ID.....:	Linda K. McWhirter	**Instrument ID..:**	D2A	**Method.....:**	SW846 8290A
Initial Wgt/Vol:	10 g				

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY		RECOVERY LIMITS
2,3,7,8-TCDD	**20.0**	**22.0**	**pg/g**	**110**		**(79 - 129)**
1,2,3,7,8-PeCDD	**100**	**117**	**pg/g**	**117**		**(79 - 129)**
1,2,3,4,7,8-HxCDD	**100**	**109**	**pg/g**	**109**		**(73 - 123)**
1,2,3,6,7,8-HxCDD	**100**	**110**	**pg/g**	**110**		**(74 - 124)**
1,2,3,7,8,9-HxCDD	**100**	**115**	**pg/g**	**115**	**B**	**(70 - 124)**
1,2,3,4,6,7,8-HpCDD	**100**	**110**	**pg/g**	**110**	**B**	**(73 - 123)**
OCDD	**200**	**212**	**pg/g**	**106**	**B**	**(75 - 125)**
2,3,7,8-TCDF	**20.0**	**23.3**	**pg/g**	**116**	**B**	**(75 - 125)**
1,2,3,7,8-PeCDF	**100**	**110**	**pg/g**	**110**		**(74 - 124)**
2,3,4,7,8-PeCDF	**100**	**111**	**pg/g**	**111**	**B**	**(75 - 125)**
1,2,3,4,7,8-HxCDF	**100**	**110**	**pg/g**	**110**		**(75 - 125)**
1,2,3,6,7,8-HxCDF	**100**	**111**	**pg/g**	**111**	**B**	**(76 - 126)**
2,3,4,6,7,8-HxCDF	**100**	**113**	**pg/g**	**113**	**B**	**(76 - 126)**
1,2,3,7,8,9-HxCDF	**100**	**112**	**pg/g**	**112**	**B**	**(77 - 127)**
1,2,3,4,6,7,8-HpCDF	**100**	**115**	**pg/g**	**115**	**B**	**(77 - 127)**
1,2,3,4,7,8,9-HpCDF	**100**	**111**	**pg/g**	**111**		**(73 - 123)**
OCDF	**200**	**220**	**pg/g**	**110**	**B**	**(49 - 128)**

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	78	(40 - 135)
13C-1,2,3,7,8-PeCDD	71	(40 - 135)
13C-1,2,3,4,7,8-HxCDD	81	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	80	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	77	(40 - 135)
13C-OCDD	73	(40 - 135)
13C-2,3,7,8-TCDF	88	(40 - 135)
13C-1,2,3,7,8-PeCDF	82	(40 - 135)
13C-2,3,4,7,8-PeCDF	80	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	92	(40 - 135)
13C-1,2,3,6,7,8-HxCDF	93	(40 - 135)
13C-2,3,4,6,7,8-HxCDF	90	(40 - 135)
13C-1,2,3,7,8,9-HxCDF	91	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	87	(40 - 135)
13C-1,2,3,4,7,8,9-HpCDF	82	(40 - 135)

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Notes:

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

TestAmerica
Knoxville

IsoCalc Preliminary Sample Report

PCDD/PCDF by EPA Method 8290 w/15 IS's

Workorder	MWFPG1AA	Prep Batch	2249033	Lot No	H2I050000-033
Data File	/20120911w3/d2tmwfpgb.d	Prep Date	09/05/12	SDG No	
Analysis ID	144890	Prep Exp Date	09/08/12	Date Received	09/05/12
Analysis Date	9/12/2012	Matrix	SOLID	Date Sampled	08/09/12
Analysis Time	03:45	Initial Wt/Vol	10.0 g	Lims Test Code	XXA11Q&01
Anal Exp Date	10/20/12	Extract Vol	20 uL	Method	DX8290_2
Instrument	D2A	Dil Factor	1.00	Code	IN2
Analyst	LKM				

Analyte	RT	Area	Height	RF	Std Amt	Amount	Rec	Conc (pg/g)		DL (pg/g)
2,3,7,8-TCDD				1.077				ND		0.0267
Total TCDD				1.077				ND		0.0267
2,3,7,8-TCDF	27:27	1416	211	1.011		0.666409		0.066641	QJ	0.0260
Total TCDF				1.011		0.666409		0.066641	QJ	0.0260
1,2,3,7,8-PeCDD				0.937				ND		0.0209
Total PeCDD				0.937				ND		0.0209
1,2,3,7,8-PeCDF				1.085				ND		0.0198
2,3,4,7,8-PeCDF	39:21	559	137	1.022		0.323048		0.032305	QJ	0.0185
Total PeCDF				1.054		0.323048		0.032305	QJ	0.0191
1,2,3,4,7,8-HxCDD				1.066				ND		0.0224
1,2,3,6,7,8-HxCDD				1.055				ND		0.0237
1,2,3,7,8,9-HxCDD	44:50	880	199	1.171		0.656112		0.065611	QJ	0.0209
Total HxCDD				1.098		0.656112		0.065611	QJ	0.0223
1,2,3,4,7,8-HxCDF				1.316				ND		0.0164
1,2,3,6,7,8-HxCDF	43:27	632	220	1.210		0.278084		0.027808	QJ	0.0167
2,3,4,6,7,8-HxCDF	44:11	847	193	1.209		0.411540		0.041154	QJ	0.0187
1,2,3,7,8,9-HxCDF	45:04	703	202	1.224		0.370081		0.037008	QJ	0.0240
Total HxCDF				1.240		1.059704		0.105970	QJ	0.0185
1,2,3,4,6,7,8-HpCDD	49:00	712	149	1.054		0.628667		0.062867	QJ	0.0238
Total HpCDD		787	216	1.054		1.323907		0.132391	QJ	0.0238
1,2,3,4,6,7,8-HpCDF	47:27	789	196	1.481		0.419958		0.041996	QJ	0.0126
1,2,3,4,7,8,9-HpCDF				1.367				ND		0.0196
Total HpCDF				1.424		0.419958		0.041996	QJ	0.0155
OCDD	53:26	2504	553	1.144		2.635919		0.263592	J	0.0216
OCDF	53:34	968	231	1.251		0.931850		0.093185	J	0.0197
13C-2,3,7,8-TCDD	29:17	1330810	130390	1.038	1000	791.485312	79.15	79.148531		0.321
13C-2,3,7,8-TCDF	27:23	2102088	218840	1.443	1000	899.263556	89.93	89.926356		0.198
13C-1,2,3,7,8-PeCDD	39:55	1102564	217069	0.968	1000	703.460769	70.35	70.346077		0.104
13C-1,2,3,7,8-PeCDF	37:56	1712940	267135	1.311	1000	806.705029	80.67	80.670503		0.174
13C-2,3,4,7,8-PeCDF	39:19	1694801	303550	1.327	1000	788.415493	78.84	78.841549		0.172
13C-1,2,3,4,7,8-HxCDD	44:20	1116169	293501	0.875	1000	798.223624	79.82	79.822362		0.173
13C-1,2,3,6,7,8-HxCDD	44:27	1174443	279545	0.878	1000	836.811724	83.68	83.681172		0.172
13C-1,2,3,4,7,8-HxCDF	43:19	1548432	418313	1.044	1000	927.887176	92.79	92.788718		0.155
13C-1,2,3,6,7,8-HxCDF	43:27	1879669	446352	1.235	1000	952.189452	95.22	95.218945		0.131
13C-2,3,4,6,7,8-HxCDF	44:09	1702392	398766	1.159	1000	919.455972	91.95	91.945597		0.140
13C-1,2,3,7,8,9-HxCDF	45:04	1551240	305948	1.055	1000	920.462745	92.05	92.046275		0.153
13C-1,2,3,4,6,7,8-HpCDD	48:59	1074522	199194	0.862	1000	780.282154	78.03	78.028215		0.0646
13C-1,2,3,4,6,7,8-HpCDF	47:22	1269712	267194	0.899	1000	884.017070	88.40	88.401707		0.0813
13C-1,2,3,4,7,8,9-HpCDF	49:37	1100514	186547	0.800	1000	860.561144	86.06	86.056114		0.0914
13C-OCDD	53:25	1660916	384940	0.737	2000	1410.79982	70.54	141.079982		0.0913
13C-1,2,3,4-TCDD	28:46	3238838	356877	1.000	2000	2000.00000	100.00	200.000000		0.333
13C-1,2,3,7,8,9-HxCDD	44:49	3196222	772896	1.000	2000	2000.00000	100.00	200.000000		0.151

KL 9/19/12
KM 9-19-12

TestAmerica
Knoxville

IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 8290 w/15 IS's

Workorder	MWFPG1AA	Prep Batch	2249033	Lot No	H2I050000-033
Data File	/20120911w3/d2tmwfpgb.	Prep Date	09/05/12	SDG No	
Analysis ID	144890	Prep Exp Date	09/08/12	Date Received	09/05/12
Analysis Date	09/12/12 03:45	Matrix	SOLID	Date Sampled	08/09/12
Anal Exp Date	10/20/12	Initial Wt/Vol	10.0 g	Lims Test Code	XXA11Q&01
Instrument	D2A	Extract Vol	20 uL	Method	DX8290_2
Analyst	LKM	Diluton Factor	1.00	Code	IN2

View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
304					303.9016	305.8987	303.9016	305.8987	0.65-0.89		
	Noise	00:00	00:00	0	25	33	10	13	0.77	/	
	2,3,7,8-TCDF	27:27	27:25	2	743	800	139	119	0.93 *		RM
316					315.9419	317.9389	315.9419	317.9389	0.65-0.89		
	Noise	00:00	00:00	0	280	230	112	92	1.22 *	/	
	13C-2,3,7,8-TCDF	27:23	27:23	0	940134	1161954	99965	118875	0.81	ABV/ABV	
320					319.8965	321.8936	319.8965	321.8936	0.65-0.89		
	Noise	00:00	00:00	0	18	20	7	8	0.88	/	
332					331.9368	333.9338	331.9368	333.9338	0.65-0.89		
	Noise	00:00	00:00	0	268	328	107	131	0.82	/	
	13C-1,2,3,4-TCDD	28:46	28:48	-2	1447946	1790892	160711	196166	0.81	AVV/ABV	
	13C-2,3,7,8-TCDD	29:17	29:17	0	594295	736515	58371	72019	0.81	AVV/AVV	
340					339.8597	341.8567	339.8597	341.8567	1.32-1.78		
	Noise	00:00	00:00	0	20	38	8	15	0.53 *	/	
	2,3,4,7,8-PeCDF	39:21	39:19	2	340	295	83	79	1.15 *		RM
352					351.9000	353.8970	351.9000	353.8970	1.32-1.78		
	Noise	00:00	00:00	0	218	190	87	76	1.14 *	/	
	13C-1,2,3,7,8-PeCDF	37:56	37:57	-1	1058616	654324	164099	103036	1.62	ABV/ABV	
	13C-2,3,4,7,8-PeCDF	39:19	39:18	1	1045726	649075	186375	117175	1.61	ABV/ABV	
356					355.8546	357.8516	355.8546	357.8516	1.32-1.78		
	Noise	00:00	00:00	0	25	18	10	7	1.43	/	
368					367.8949	369.8919	367.8949	369.8919	1.32-1.78		
	Noise	00:00	00:00	0	103	78	41	31	1.32	/	
	13C-1,2,3,7,8-PeCDD	39:55	39:53	2	674489	428075	133989	83080	1.58	ABV/ABV	
374					373.8208	375.8178	373.8208	375.8178	1.05-1.43		
	Noise	00:00	00:00	0	35	55	14	22	0.64 *	/	
	1,2,3,6,7,8-HxCDF	43:27	43:26	1	350	451	122	159	0.78 *	AVB/ABV	RM
	2,3,4,6,7,8-HxCDF	44:11	44:10	1	469	484	107	113	0.97 *	ABB/AVB	RM
	1,2,3,7,8,9-HxCDF	45:04	45:04	0	389	522	112	122	0.75 *	AVB/AVB	RM
384					383.8639	385.8610	383.8639	385.8610	0.43-0.59		
	Noise	00:00	00:00	0	280	345	112	138	0.81 *	/	
	13C-1,2,3,4,7,8-HxCDF	43:19	43:18	1	534809	1013623	143853	274460	0.53	ABV/ABV	
	13C-1,2,3,6,7,8-HxCDF	43:27	43:25	2	655067	1224602	157677	288675	0.53	AVV/AVV	
	13C-2,3,4,6,7,8-HxCDF	44:09	44:09	0	598193	1104199	139490	259276	0.54	AVV/AVV	
	13C-1,2,3,7,8,9-HxCDF	45:04	45:03	1	543004	1008236	108624	197324	0.54	ABV/ABV	
390					389.8156	391.8127	389.8156	391.8127	1.05-1.43		
	Noise	00:00	00:00	0	40	30	16	12	1.33	/	
	1,2,3,7,8,9-HxCDD	44:50	44:49	1	771	393	111	89	1.96 *	ABV/ABV	RM
402					401.8559	403.8529	401.8559	403.8529	1.05-1.43		
	Noise	00:00	00:00	0	270	315	108	126	0.86 *	/	
	13C-1,2,3,4,7,8-HxCDD	44:20	44:20	0	646254	469915	166839	126662	1.38	ABV/ABV	
	13C-1,2,3,6,7,8-HxCDD	44:27	44:27	0	638724	535719	154845	124700	1.19	AVV/AVV	
	13C-1,2,3,7,8,9-HxCDD	44:49	44:48	1	1786464	1409758	434131	338765	1.27	AVV/AVV	

Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

TestAmerica
Knoxville

IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 8290 w/15 IS's

Workorder	MWFPG1AA	Prep Batch	2249033	Lot No	H2I050000-033
Data File	/20120911w3/d2tmwfpgb.	Prep Date	09/05/12	SDG No	
Analysis ID	144890	Prep Exp Date	09/08/12	Date Received	09/05/12
Analysis Date	09/12/12 03:45	Matrix	SOLID	Date Sampled	08/09/12
Anal Exp Date	10/20/12	Initial Wt/Vol	10.0 g	Lims Test Code	XXA11Q&01
Instrument	D2A	Extract Vol	20 uL	Method	DX8290_2
Analyst	LKM	Diluton Factor	1.00	Code	IN2

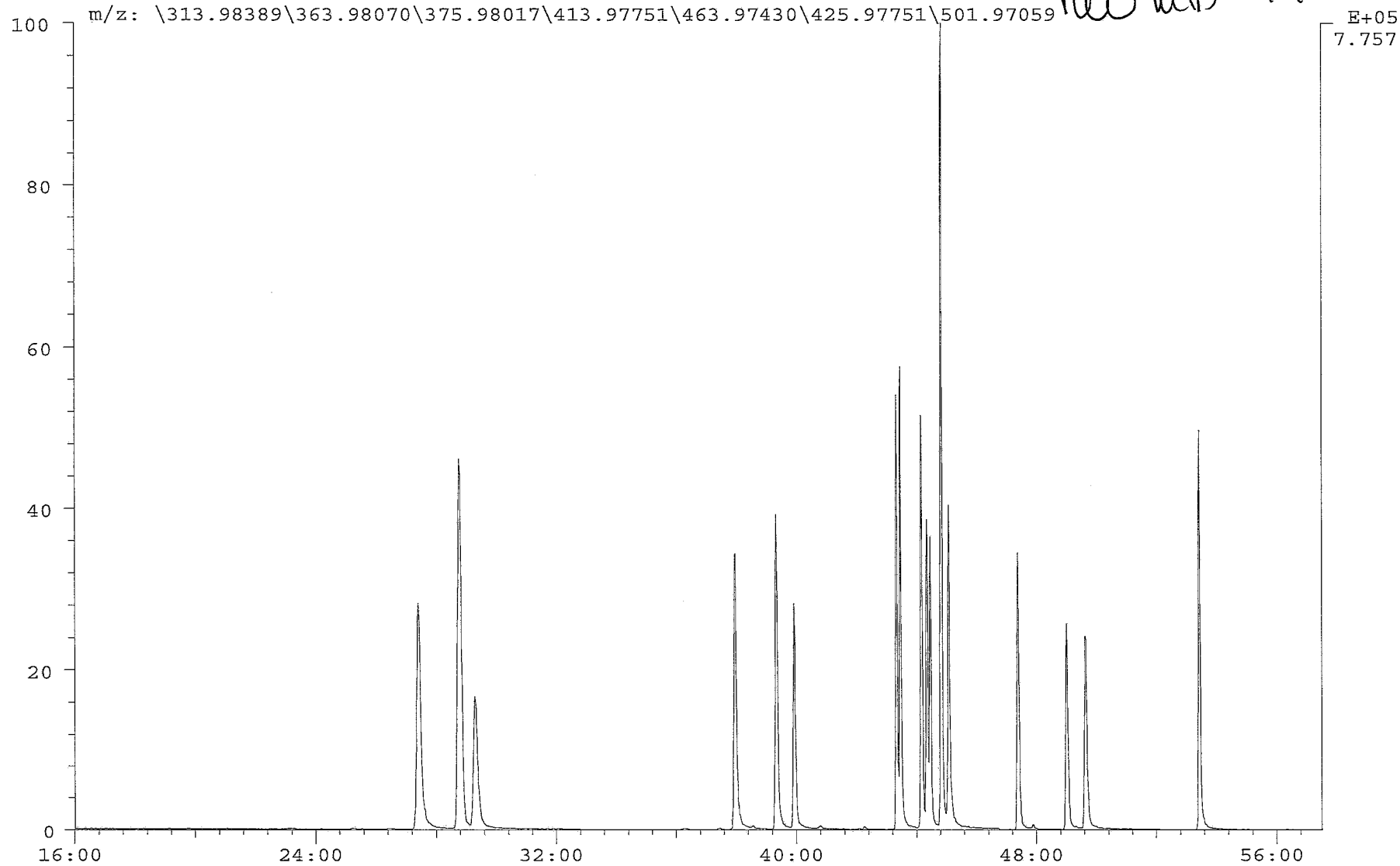
View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
408					407.7818	409.7788	407.7818	409.7788	0.88-1.20		
	Noise	00:00	00:00	0	33	18	13	7	1.86 *	/	
	1,2,3,4,6,7,8-HpCDF	47:27	47:23	4	899	387	147	96	2.32 *	ABB/ABB	RTM
418					417.8250	419.8220	417.8250	419.8220	0.37-0.51		
	Noise	00:00	00:00	0	125	158	50	63	0.79 *	/	
	13C-1,2,3,4,6,7,8-HpCDF	47:22	47:22	0	403224	866488	85421	181773	0.47	ABV/ABV	
	13C-1,2,3,4,7,8,9-HpCDF	49:37	49:38	-1	342766	757748	58234	128313	0.45	ABV/ABV	
424					423.7767	425.7737	423.7767	425.7737	0.88-1.20		
	Noise	00:00	00:00	0	18	33	7	13	0.54 *	/	
	Unidentified	47:54	00:00	0	612	386	123	106	1.59 *	ABV/ABB	R
	1,2,3,4,6,7,8-HpCDD	49:00	49:01	-1	363	507	76	95	0.72 *	ABB/ABV	RM
436					435.8169	437.8140	435.8169	437.8140	0.88-1.20		
	Noise	00:00	00:00	0	98	118	39	47	0.83 *	/	
	Unidentified	47:53	00:00	0	11329	9775	2201	1861	1.16	ABB/ABB	
	13C-1,2,3,4,6,7,8-HpCDD	48:59	49:00	-1	552067	522455	102884	96310	1.06	ABV/ABV	
442					441.7428	443.7399	441.7428	443.7399	0.76-1.02		
	Noise	00:00	00:00	0	25	23	10	9	1.11 *	/	
	OCDF	53:34	53:34	0	436	532	143	88	0.82	ABB/ABV	M
458					457.7377	459.7348	457.7377	459.7348	0.76-1.02		
	Noise	00:00	00:00	0	20	28	8	11	0.73 *	/	
	OCDD	53:26	53:27	-1	1098	1406	238	315	0.78	ABB/ABB	
470					469.7780	471.7750	469.7780	471.7750	0.76-1.02		
	Noise	00:00	00:00	0	128	133	51	53	0.96	/	
	13C-OCDD	53:25	53:26	-1	789150	871766	182039	202901	0.91	ABV/ABV	
	Unidentified	53:49	00:00	0	8008	2987	811	557	2.68 *	AVB/AVB	RT

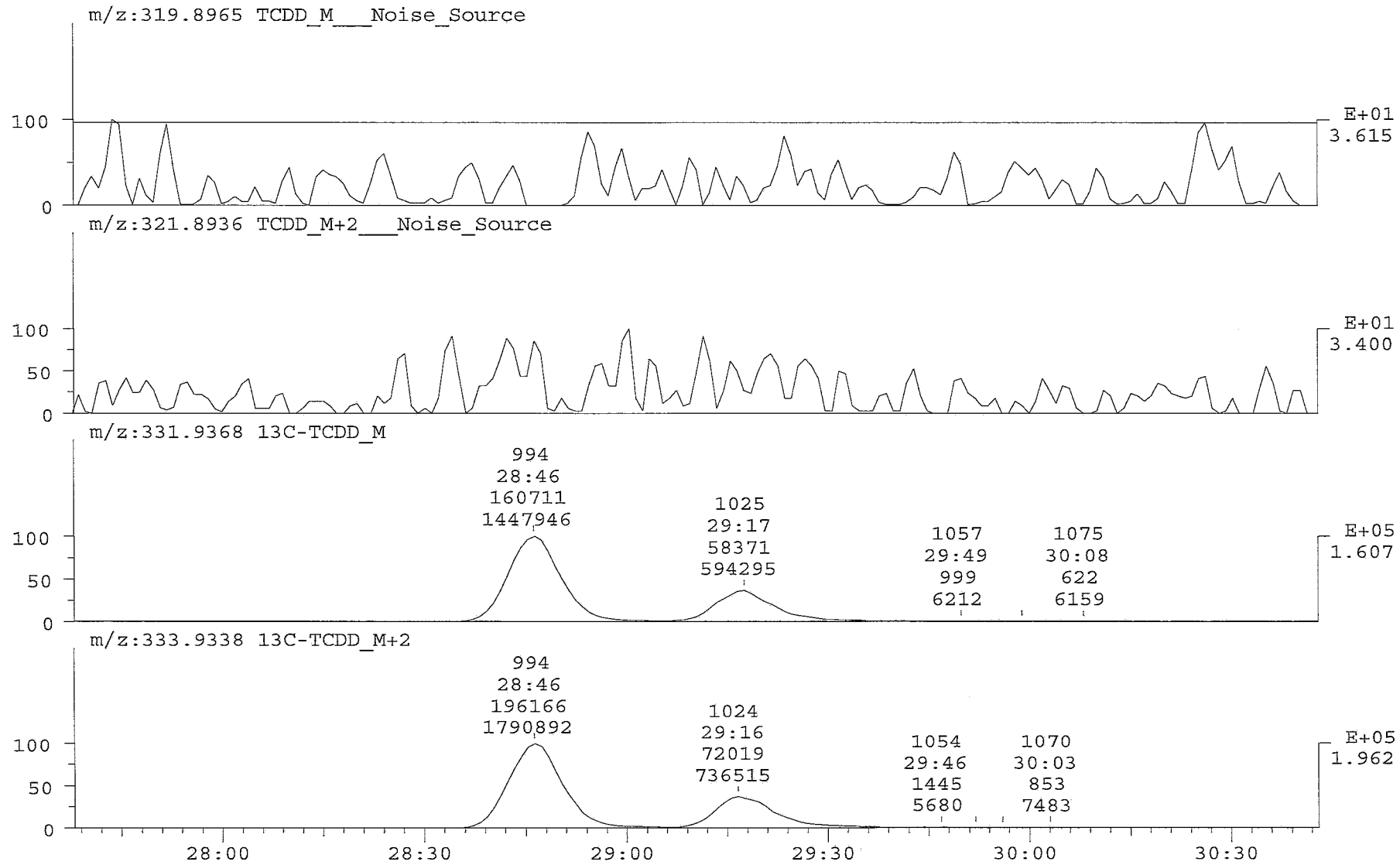
Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

Int. KLa 9/12/12
Calc. KLa 9/19/12
QCXM 9-19-12
New MSD 9-19-12

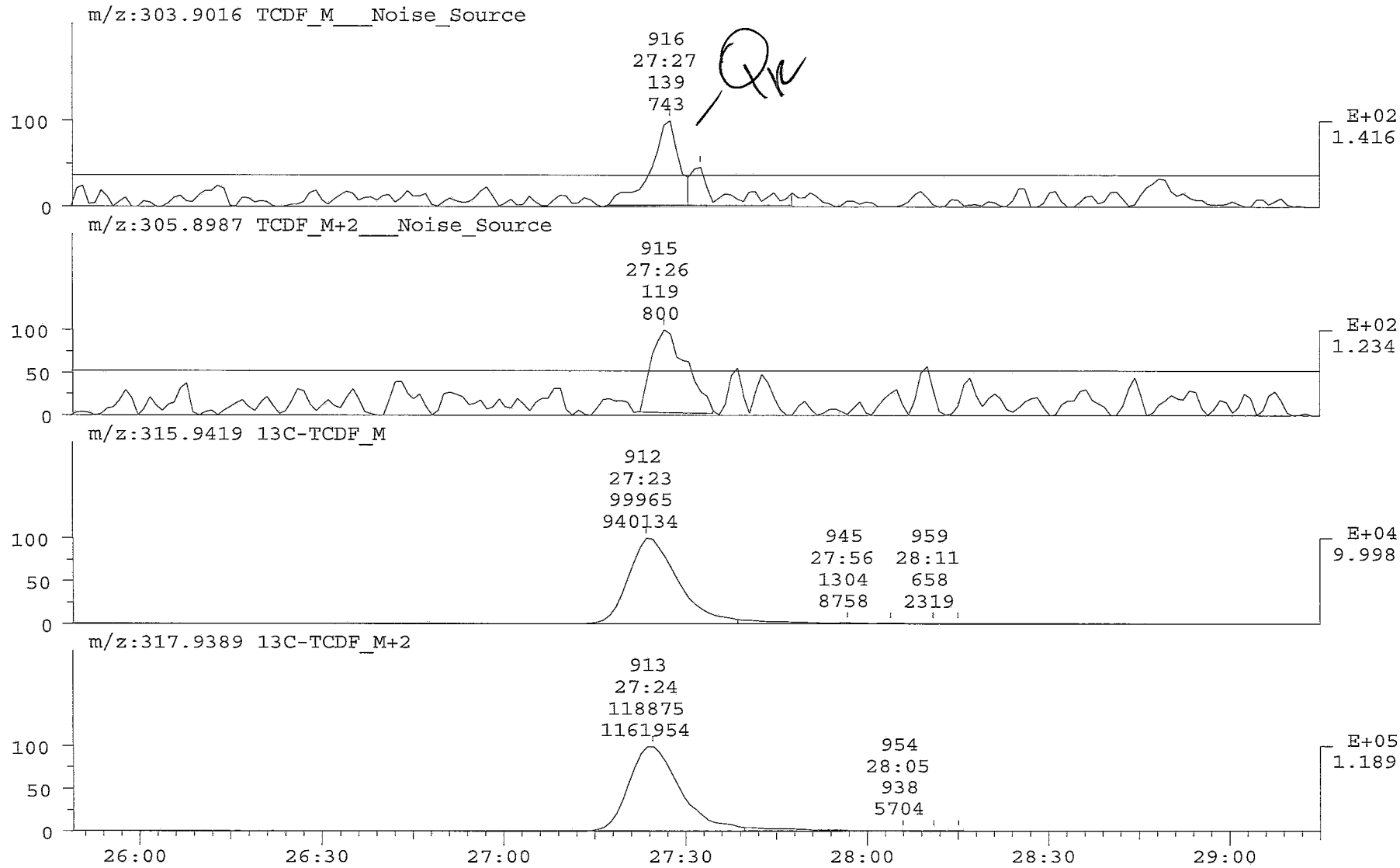
```
CHRO:  d2tmwfpgb                                12-Sep-12   Elapse:  53:32      2430
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                           Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   235 > 2662             Masses:  303 > 514
Area:  5, 0.50, 0      Baseline  :   100, 3                 Label :  0, 0.0
Disp:  Height  Area
```



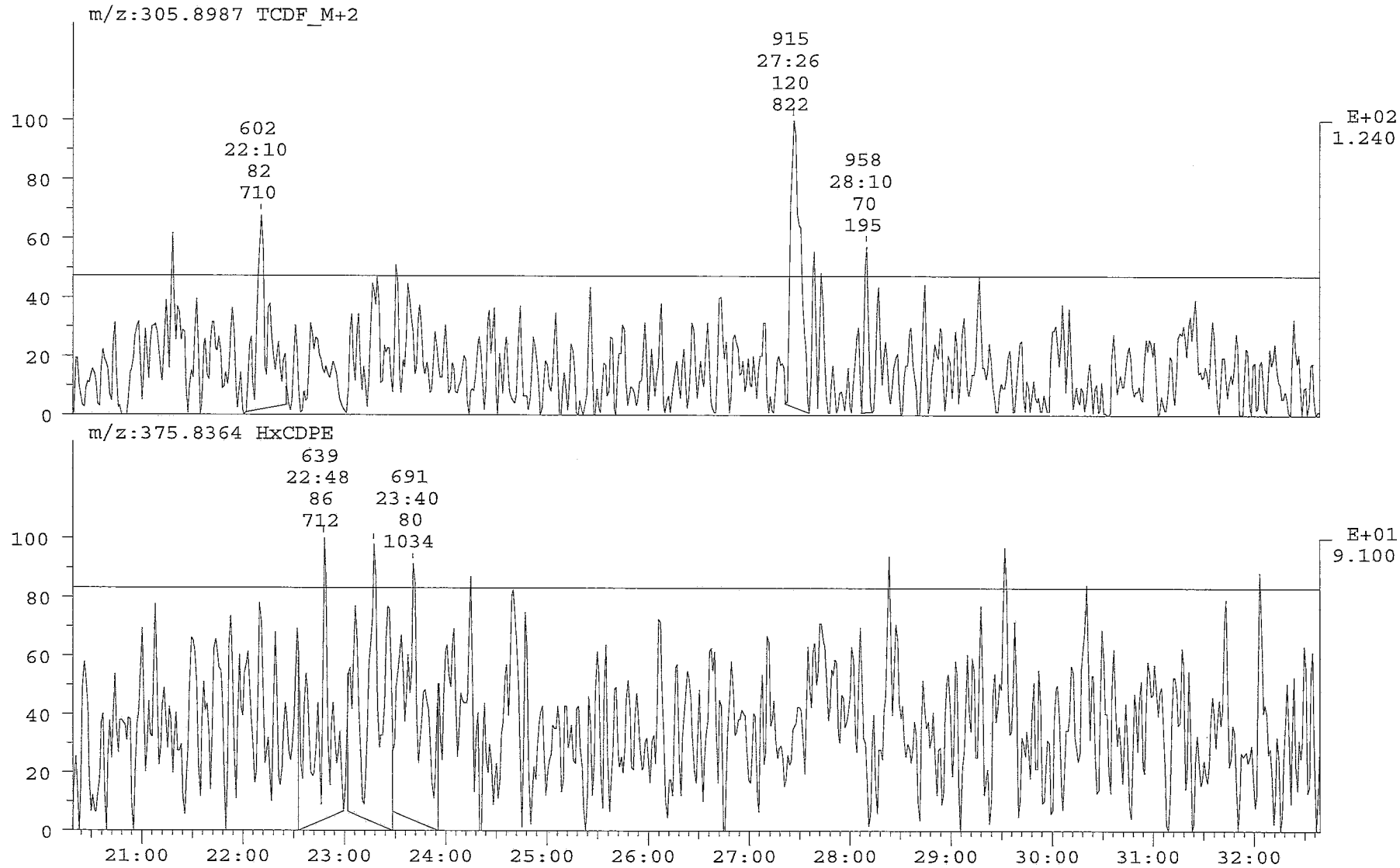
```
CHRO:  d2tmwfpgb                                12-Sep-12  Elapse:  29:09      1017
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                          Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   926 > 1110            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



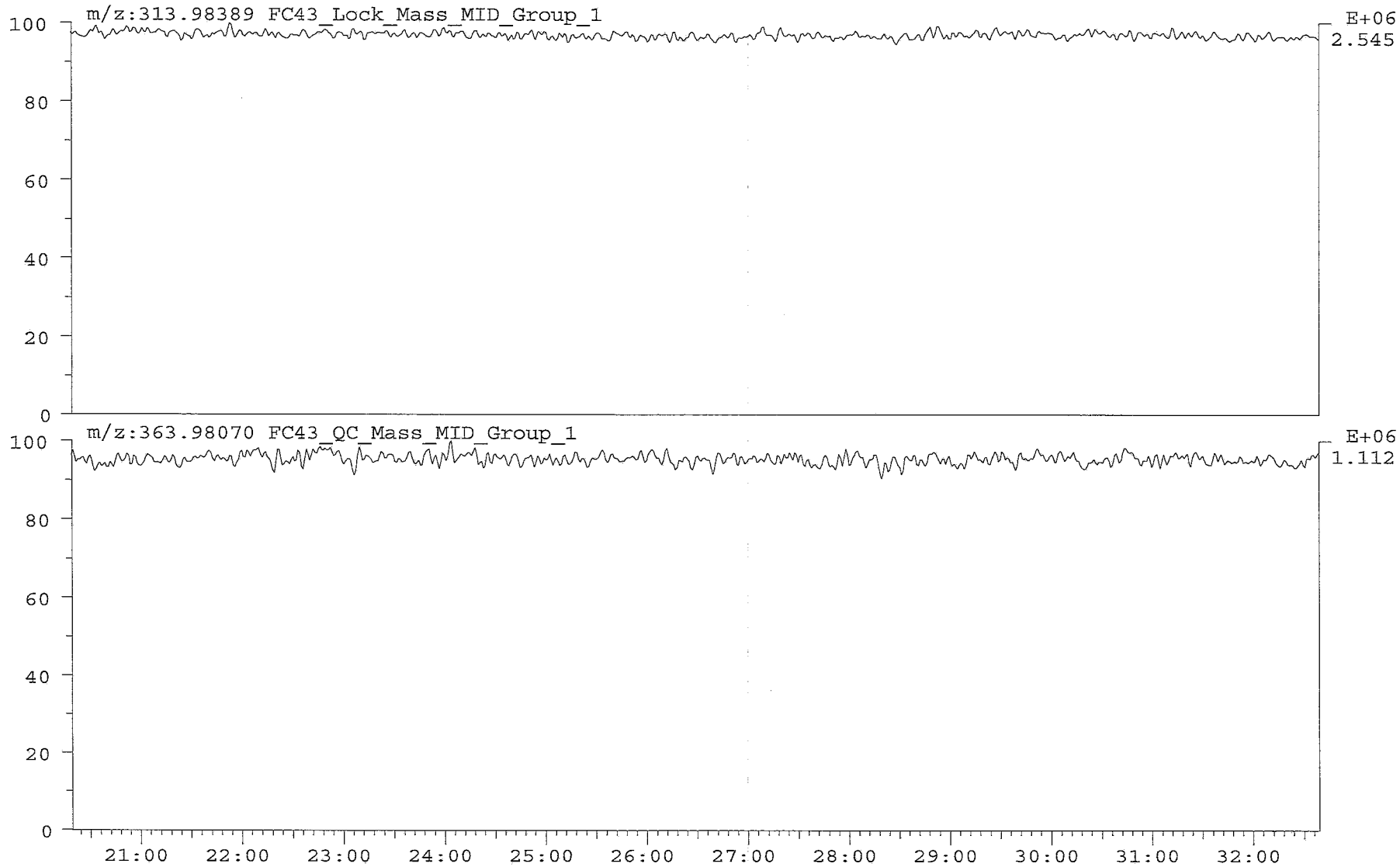
```
CHRO:  d2tmwfpgb                                12-Sep-12   Elapse:  27:28.6      917
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                           Start :  03:45:35    2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   818 > 1022             Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



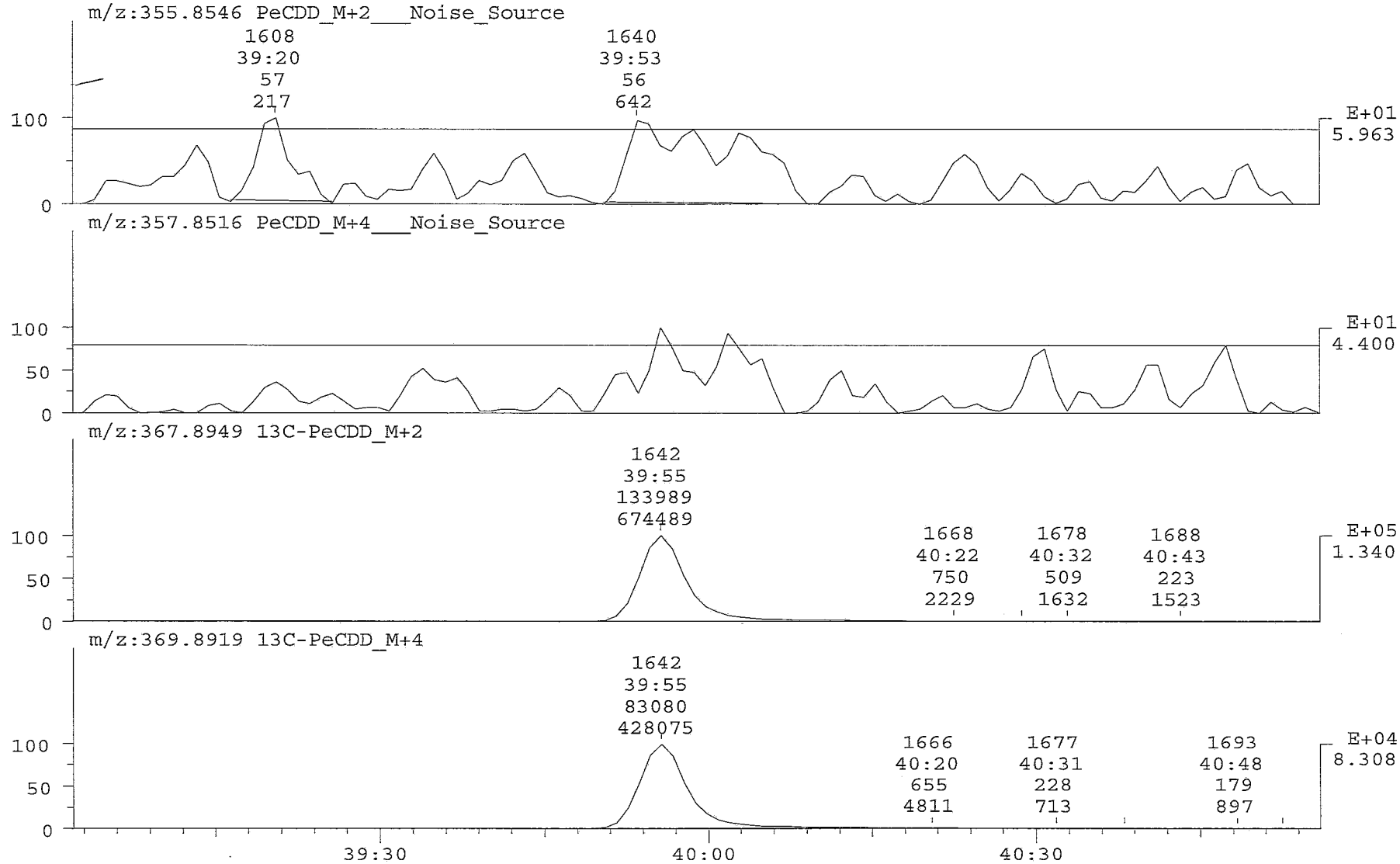
```
CHRO:  d2tmwfpgb                                12-Sep-12  Elapse:  27:28.6      917
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                          Start :  03:45:35    2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   491 > 1225            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



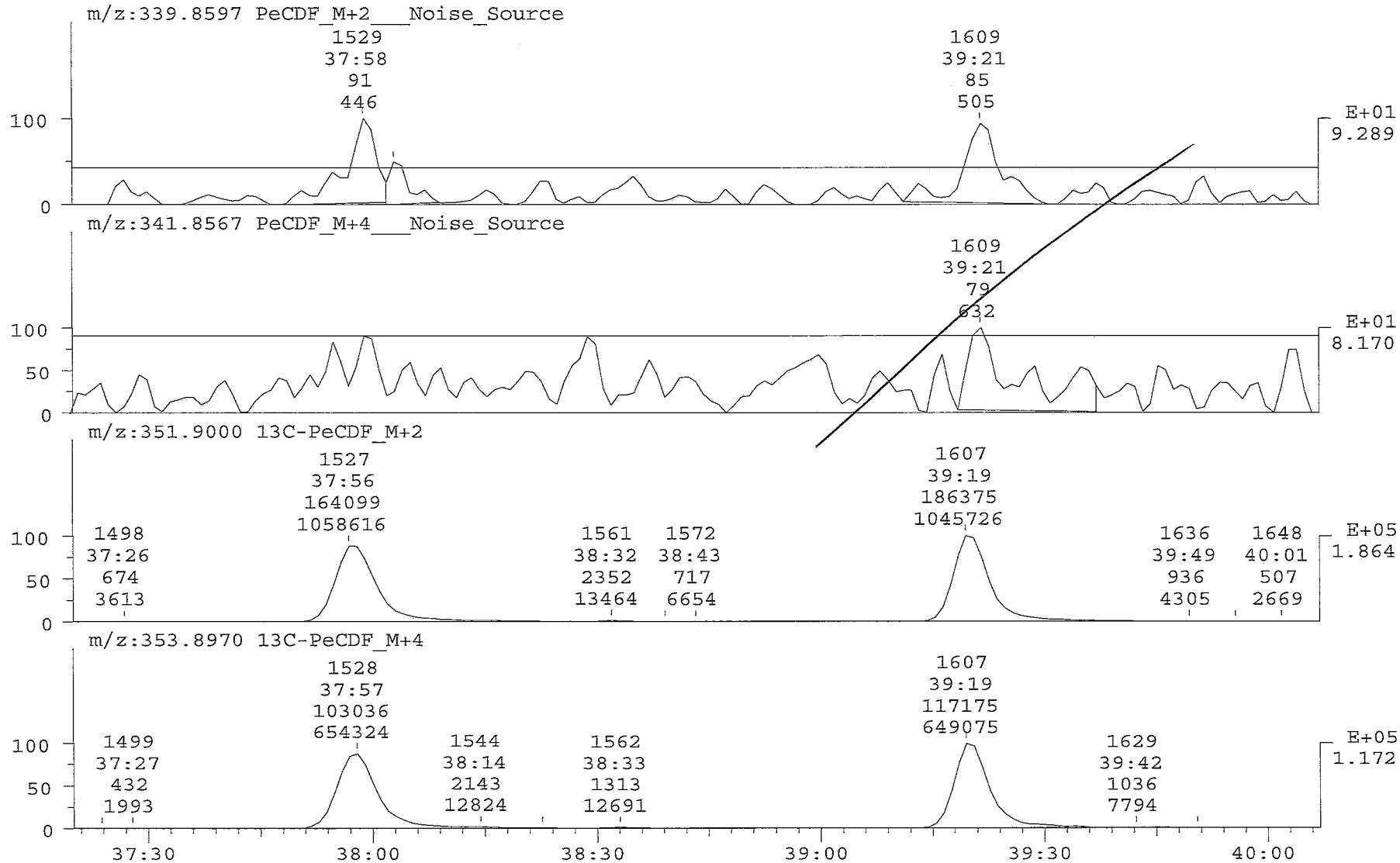
```
CHRO:  d2tmwfpgb                              12-Sep-12   Elapse:  27:28.6      917
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                         Start :  03:45:35    2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                Study :  2249033 (10.0g)
Oper:  LKM                                                Inlet :  LC
Peak:  100.00  ppm     Label wndw:   491 > 1225           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3               Label :  0, 0.0
Disp:  Height  Area
```



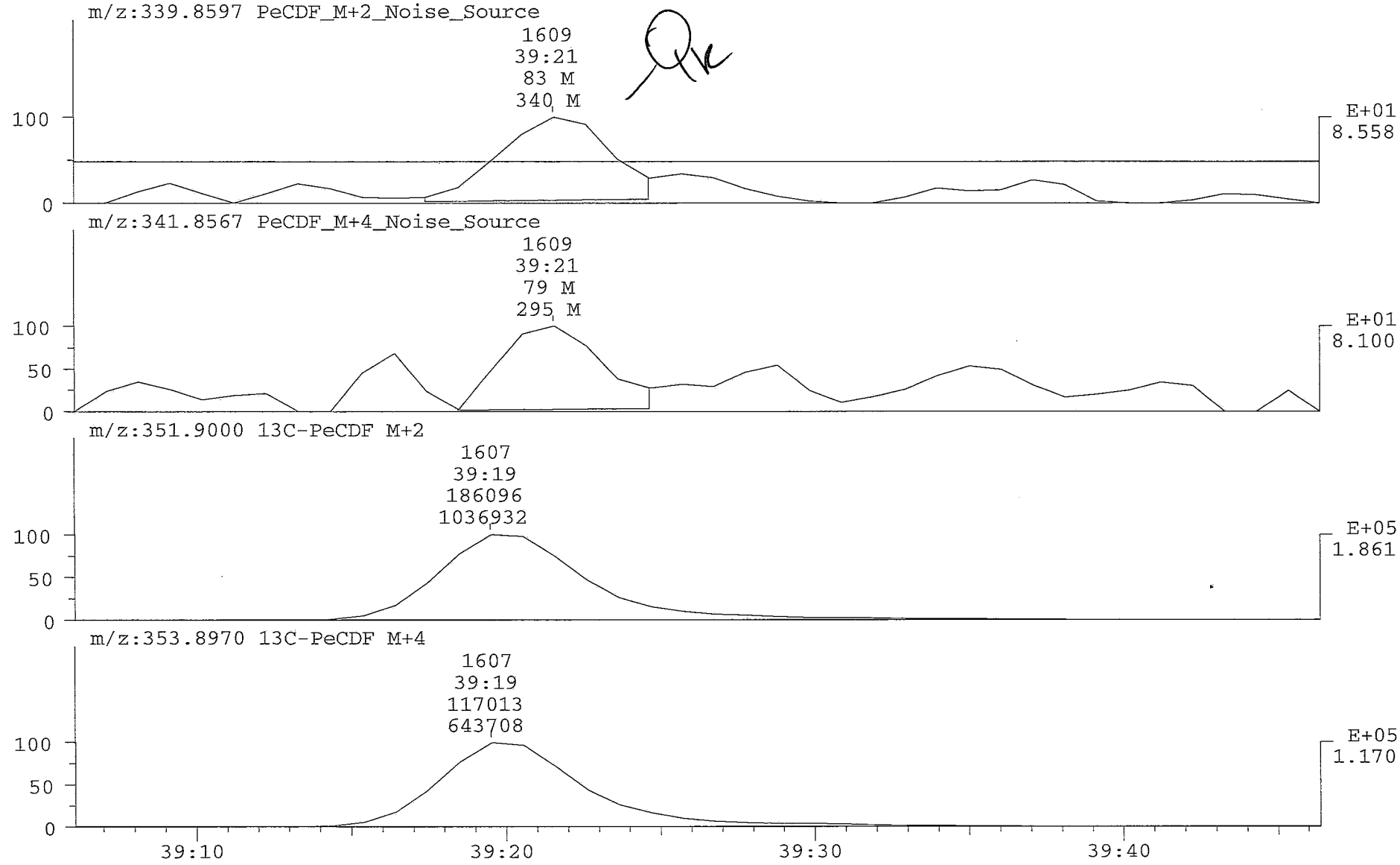
```
CHRO:  d2tmwfpgb                                12-Sep-12  Elapse:  39:55      1642
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                          Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1590 > 1700           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



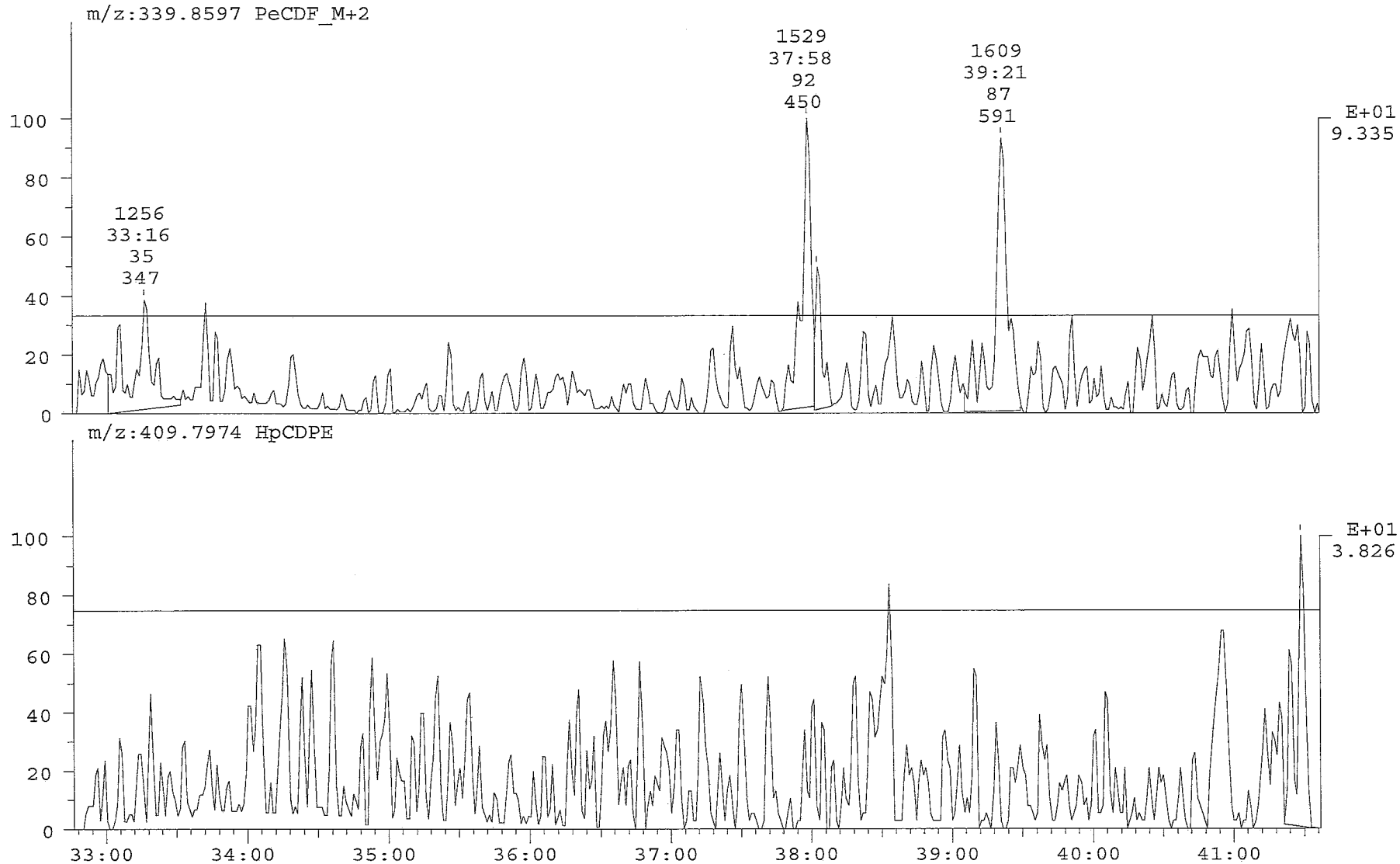
```
CHRO:  d2tmwfpgb                                12-Sep-12  Elapse:  38:43      1572
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                          Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1491 > 1653           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



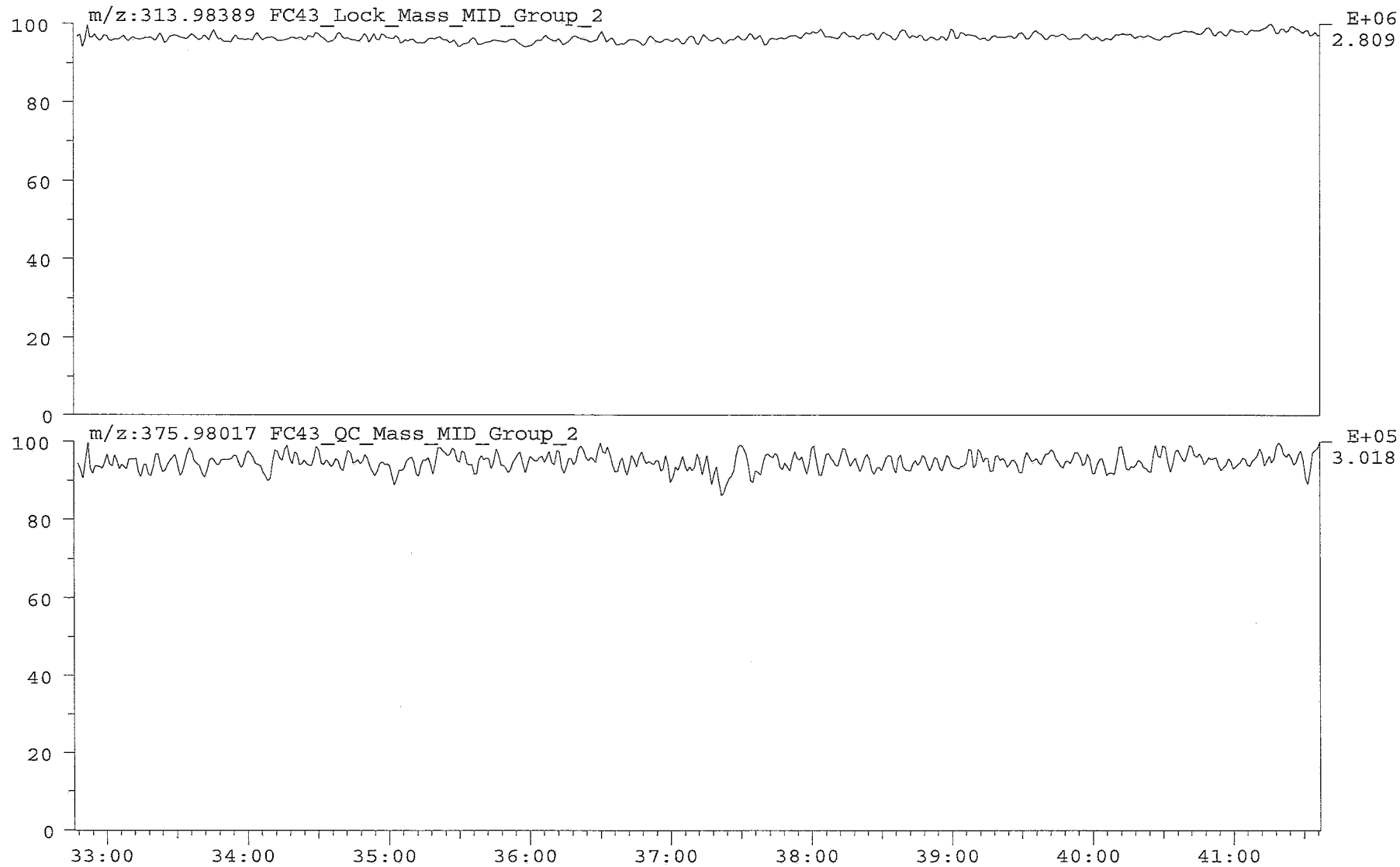
```
CHRO:  d2tmwfpgb                                12-Sep-12   Elapse:  53:49      2446
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                           Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1594 > 1633            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



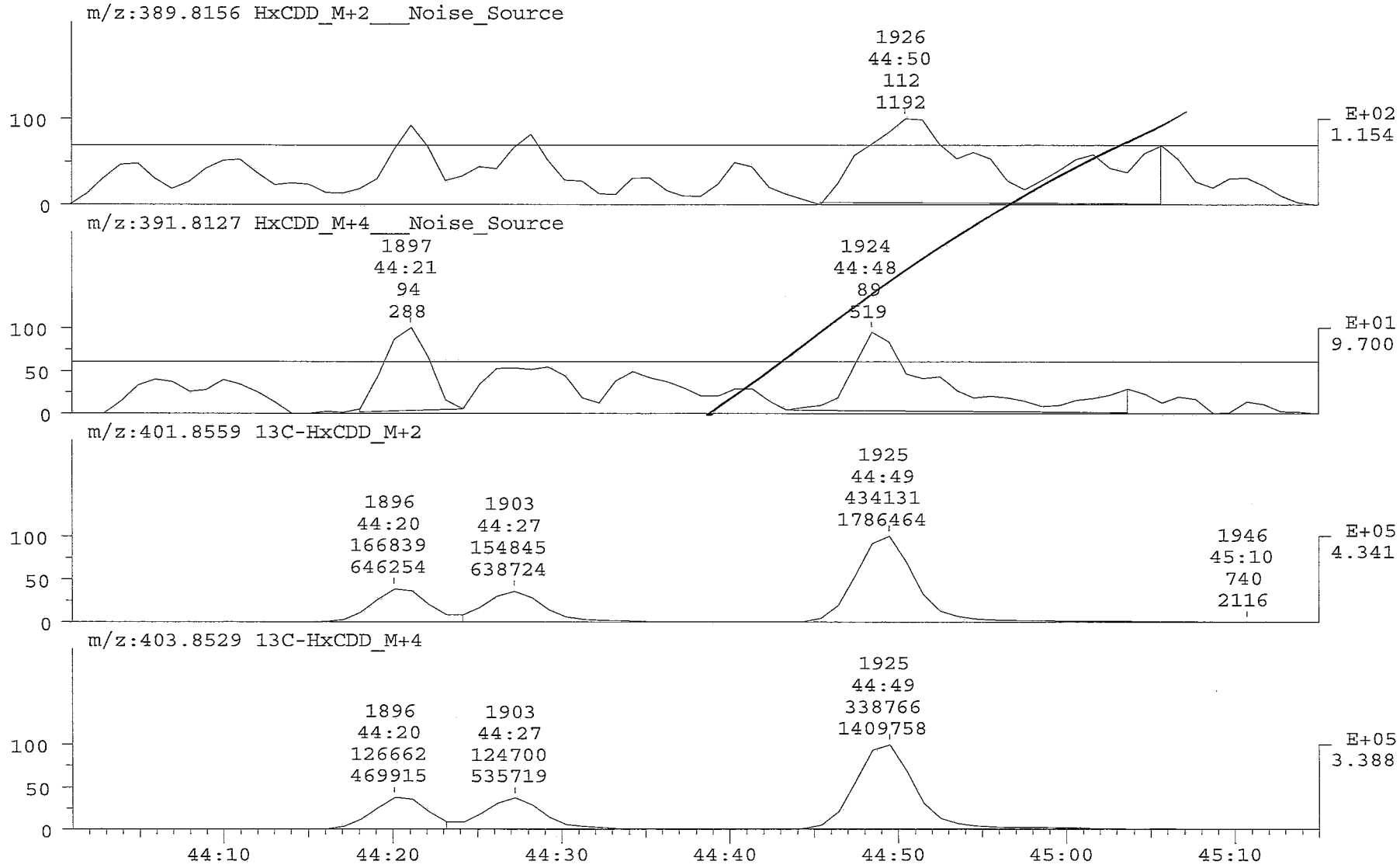
```
CHRO:  d2tmwfpgb                                12-Sep-12   Elapse:  38:43       1572
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                           Start :  03:45:35    2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1228 > 1740            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



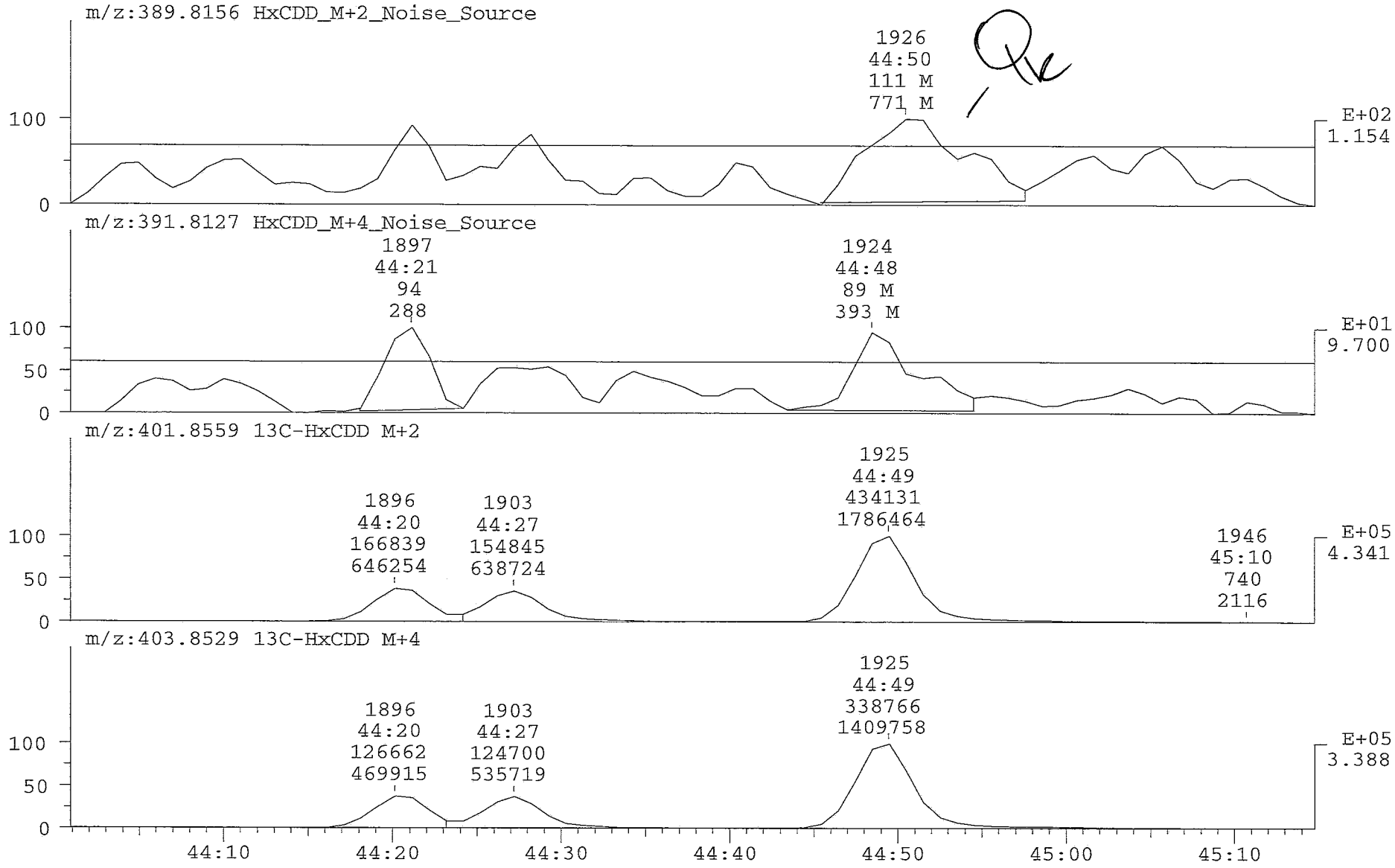
```
CHRO:  d2tmwfpgb                                12-Sep-12  Elapse:  38:43      1572
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                          Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1228 > 1740           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  0, 0.0
Disp:  Height  Area
```



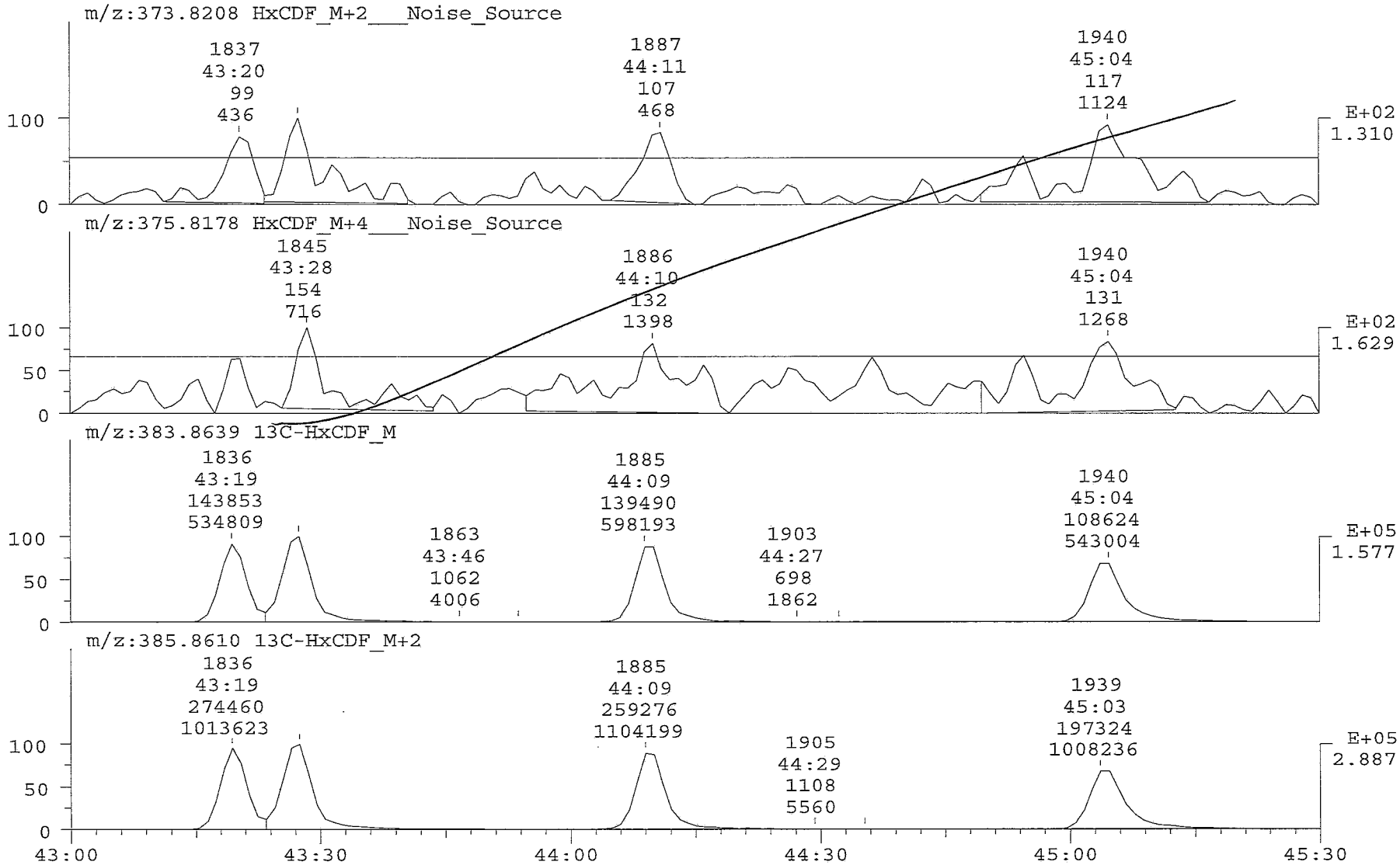
```
CHRO:  d2tmwfpgb                                12-Sep-12   Elapse:  44:38      1914
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                           Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1877 > 1950            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



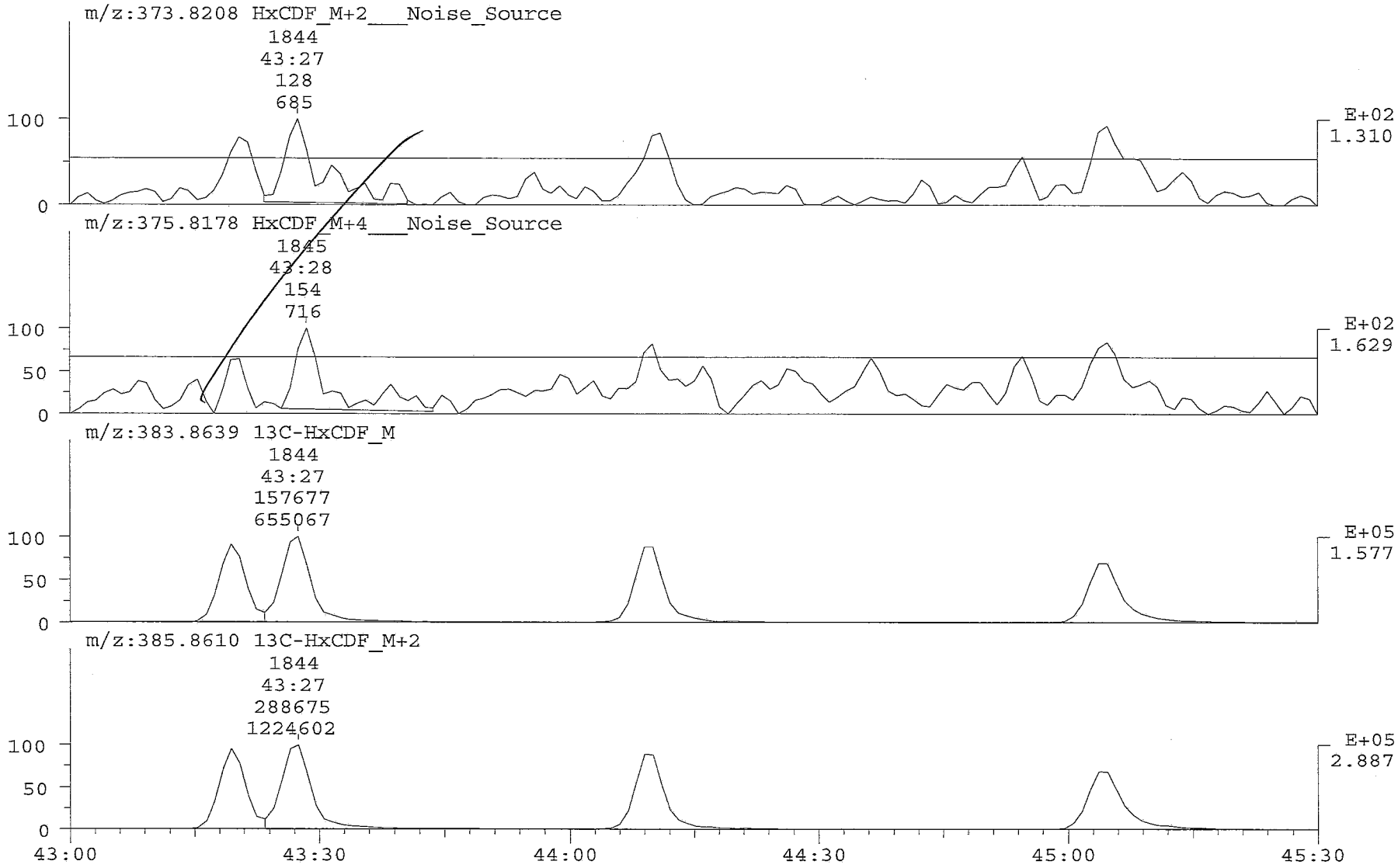
```
CHRO:  d2tmwfpgb                                12-Sep-12   Elapse:  53:49      2446
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                           Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1877 > 1950            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



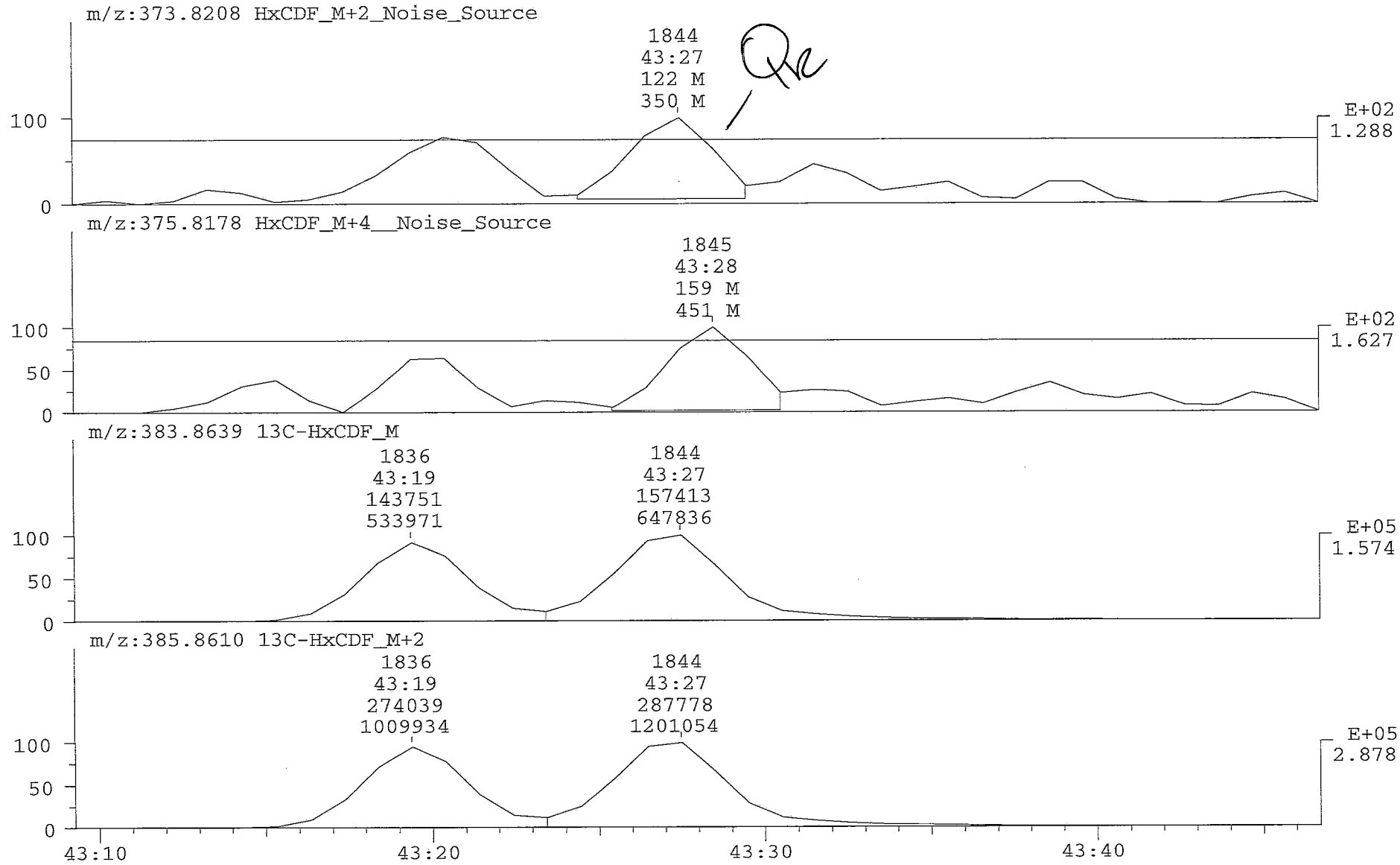
CHRO: d2tmwfpgb 12-Sep-12 Elapse: 44:15 1891
Samp: WO=mwfpg1aa Meth=IN2 Dil=1 Start : 03:45:35 2662
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 1817 > 1965 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



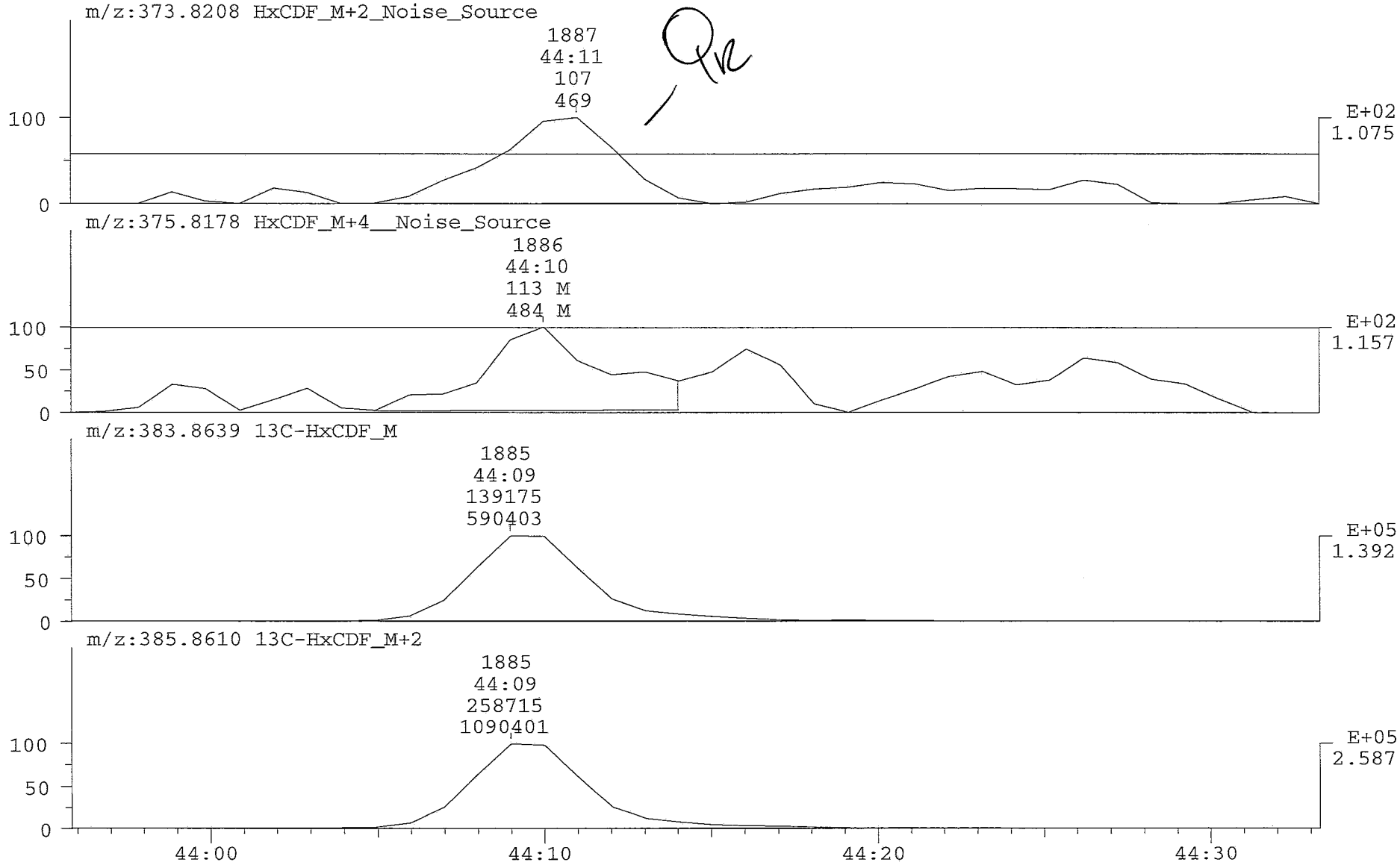
```
CHRO:  d2tmwfpgb                                12-Sep-12  Elapse:  43:27      1844
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                          Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1840 > 1848           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



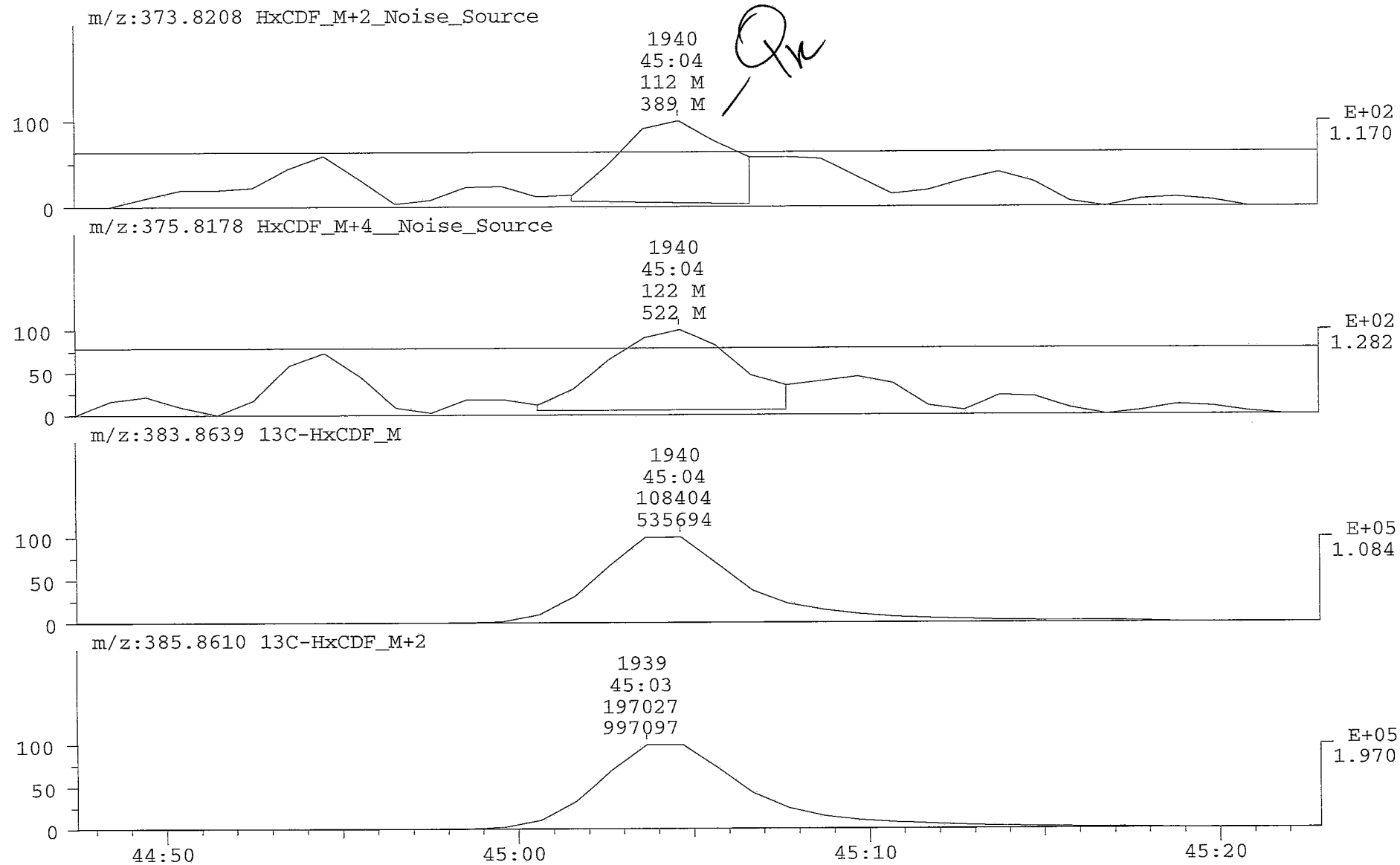
```
CHRO:  d2tmwfpgb                                12-Sep-12  Elapse:  53:49      2446
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                          Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1826 > 1863           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



```
CHRO:  d2tmwfpgb                                12-Sep-12   Elapse:  53:49      2446
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                           Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1872 > 1909            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```

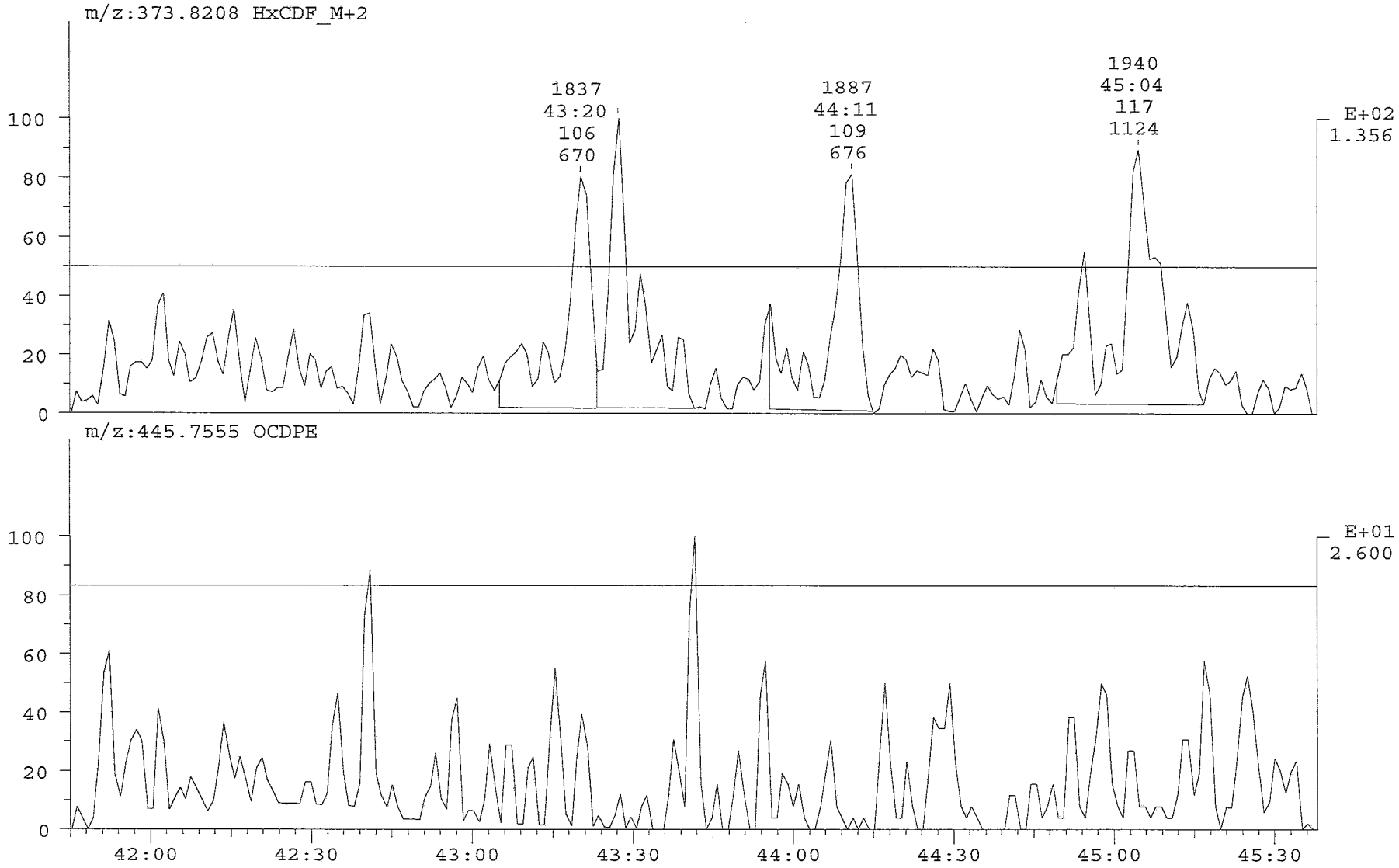


CHRO: d2tmwfpgb 12-Sep-12 Elapse: 53:49 2446
Samp: WO=mwfpg1aa Meth=IN2 Dil=1 Start : 03:45:35 2662
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 1923 > 1958 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area

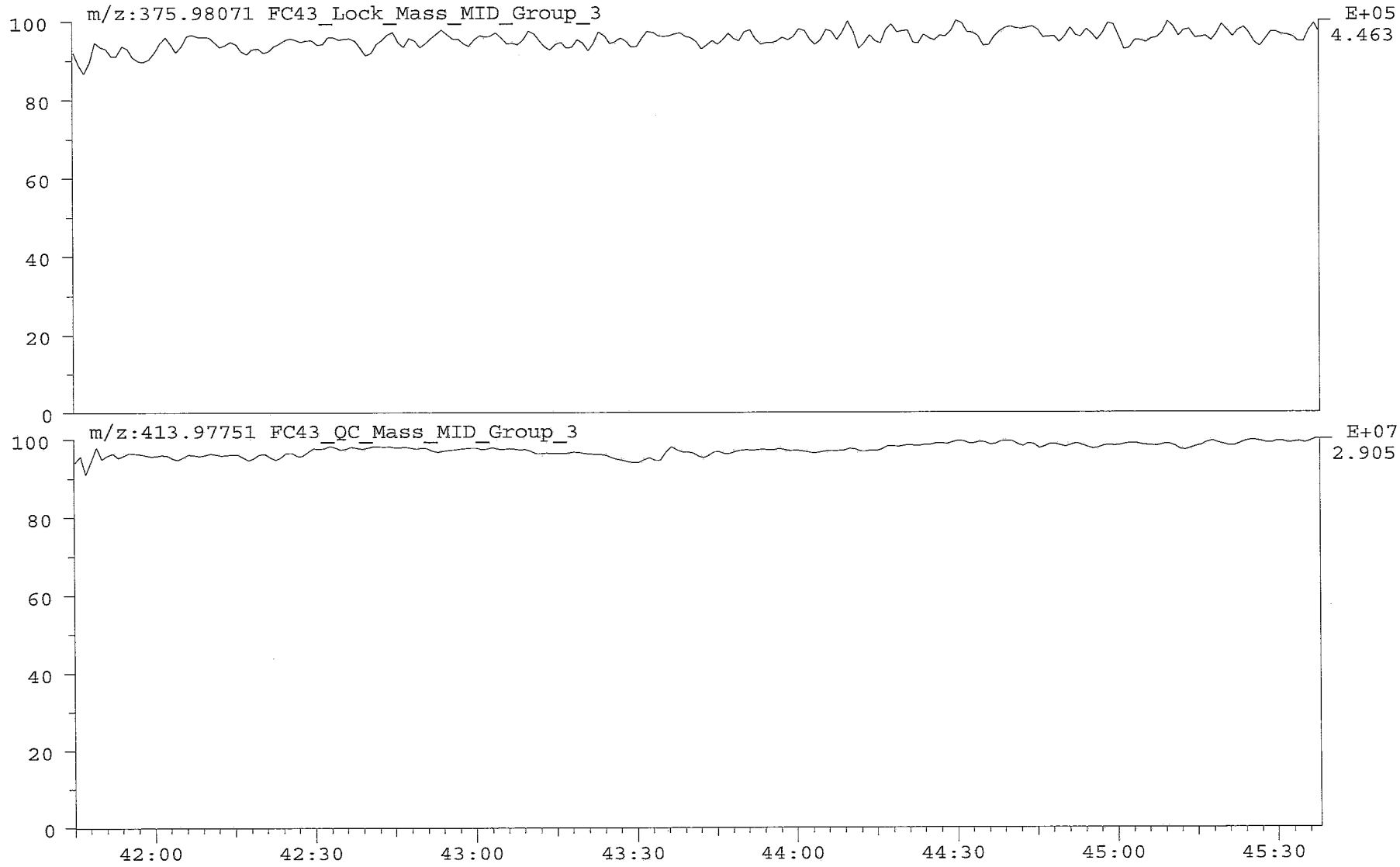


Qn

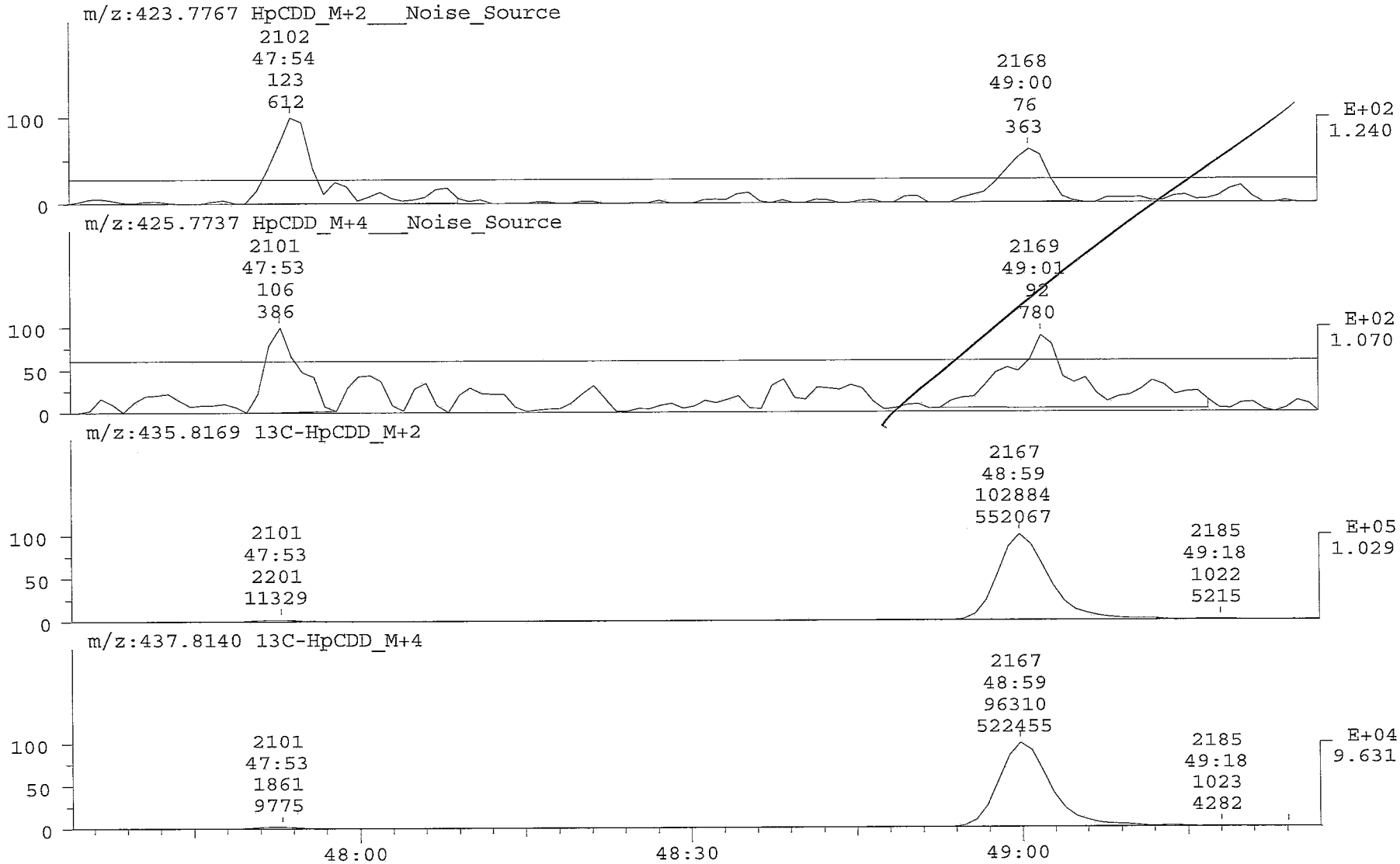
```
CHRO:  d2tmwfpgb                                12-Sep-12  Elapse:  43:27      1844
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                          Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1743 > 1973           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



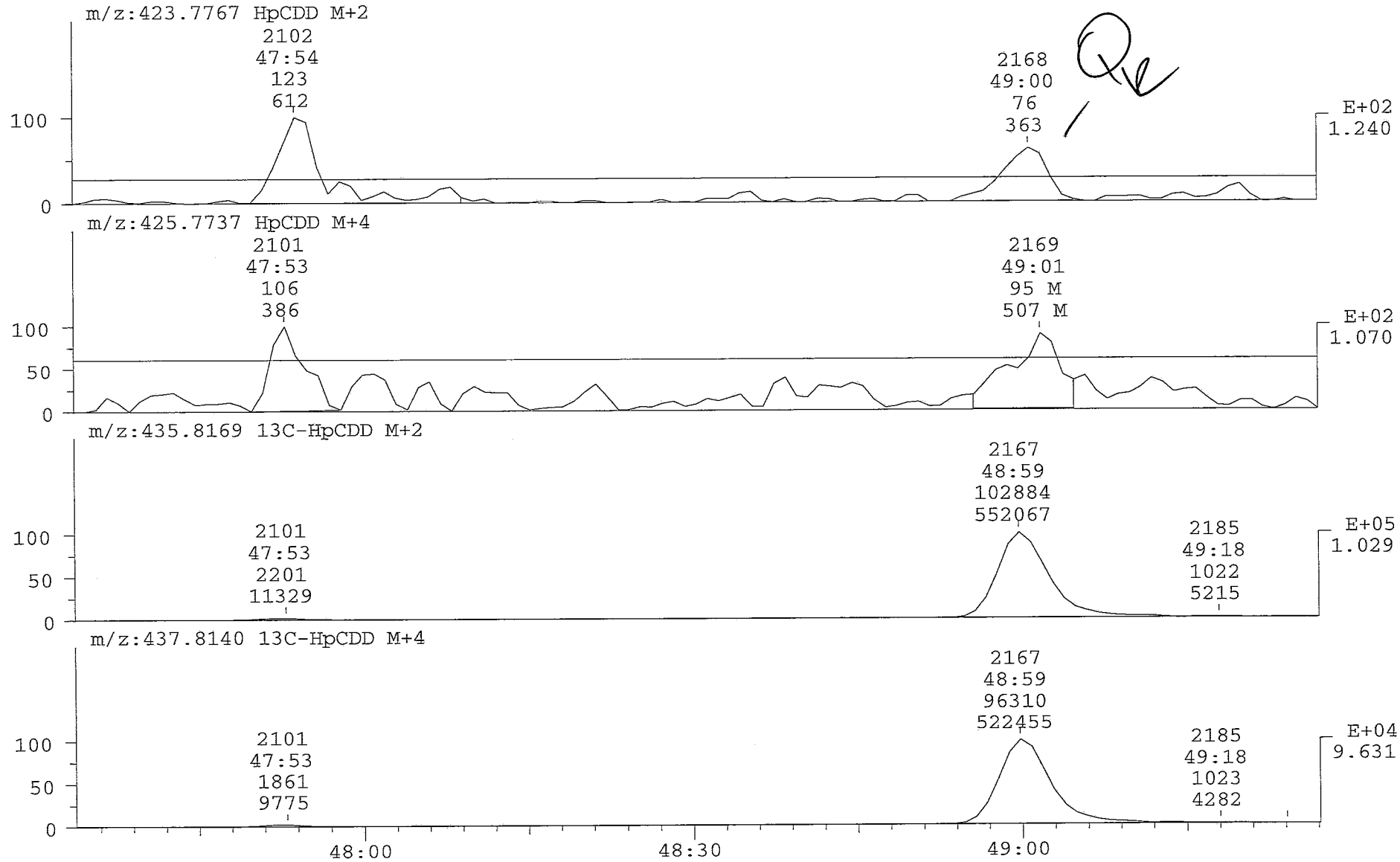
```
CHRO:  d2tmwfpgb                                12-Sep-12  Elapse:  43:27      1844
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                          Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1743 > 1973           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  0, 0.0
Disp:  Height  Area
```



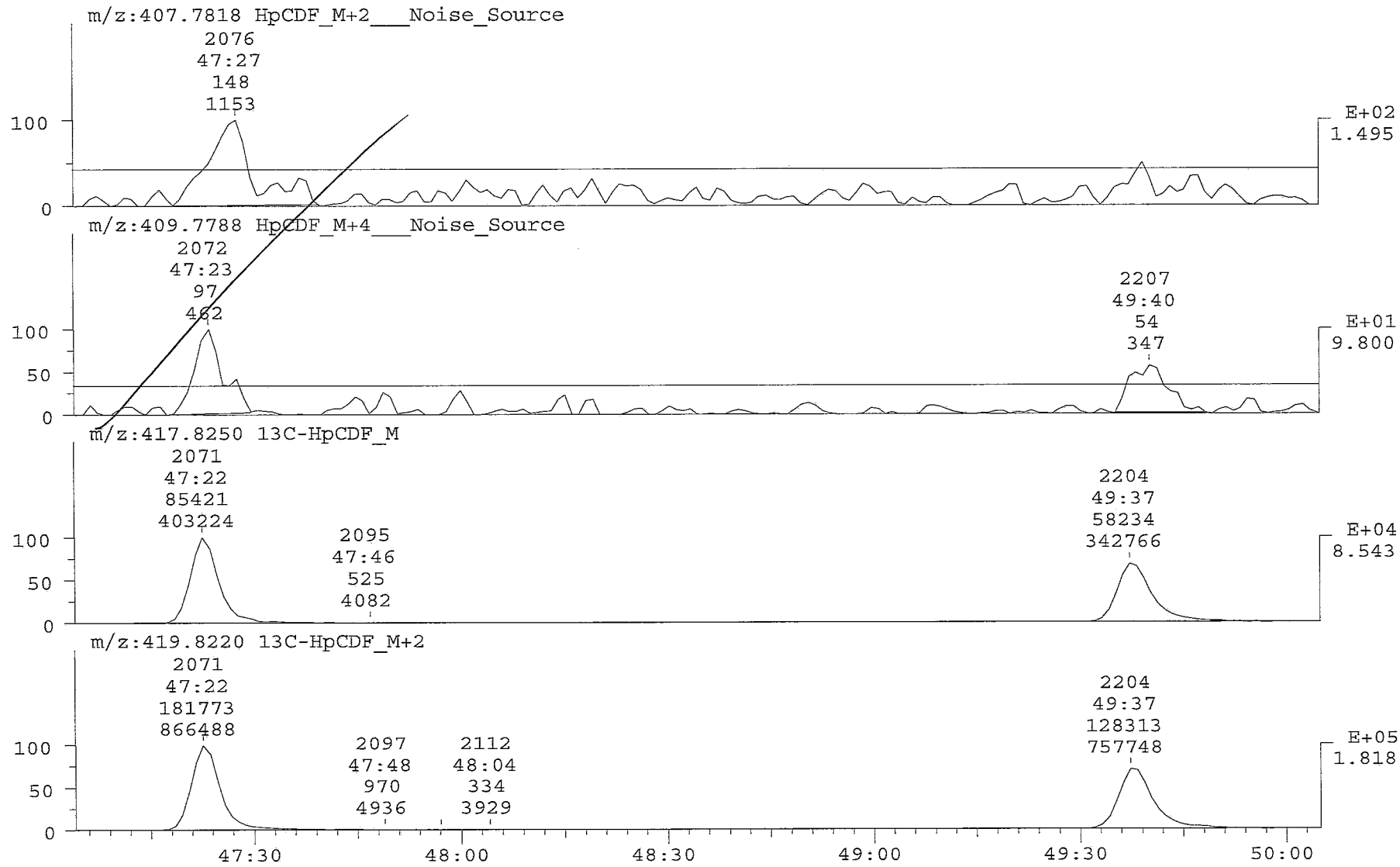
CHRO: d2tmwfpgb 12-Sep-12 Elapse: 43:27 1844
Samp: WO=mwfpg1aa Meth=IN2 Dil=1 Start : 03:45:35 2662
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 2082 > 2194 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



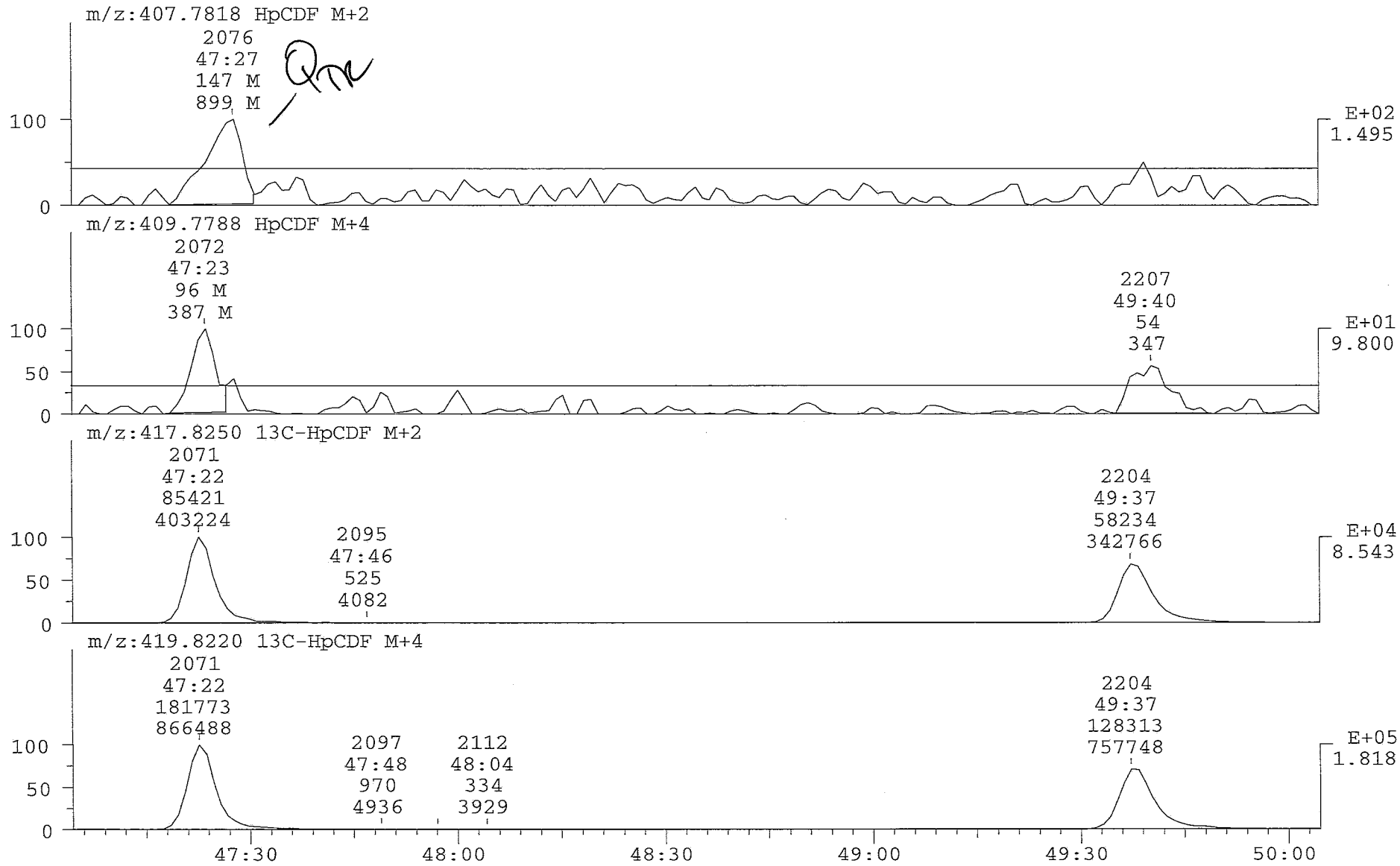
CHRO: d2tmwfpgb 12-Sep-12 Elapse: 53:49 2446
Samp: WO=mwfpg1aa Meth=IN2 Dil=1 Start : 03:45:35 2662
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 1 > 3000 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



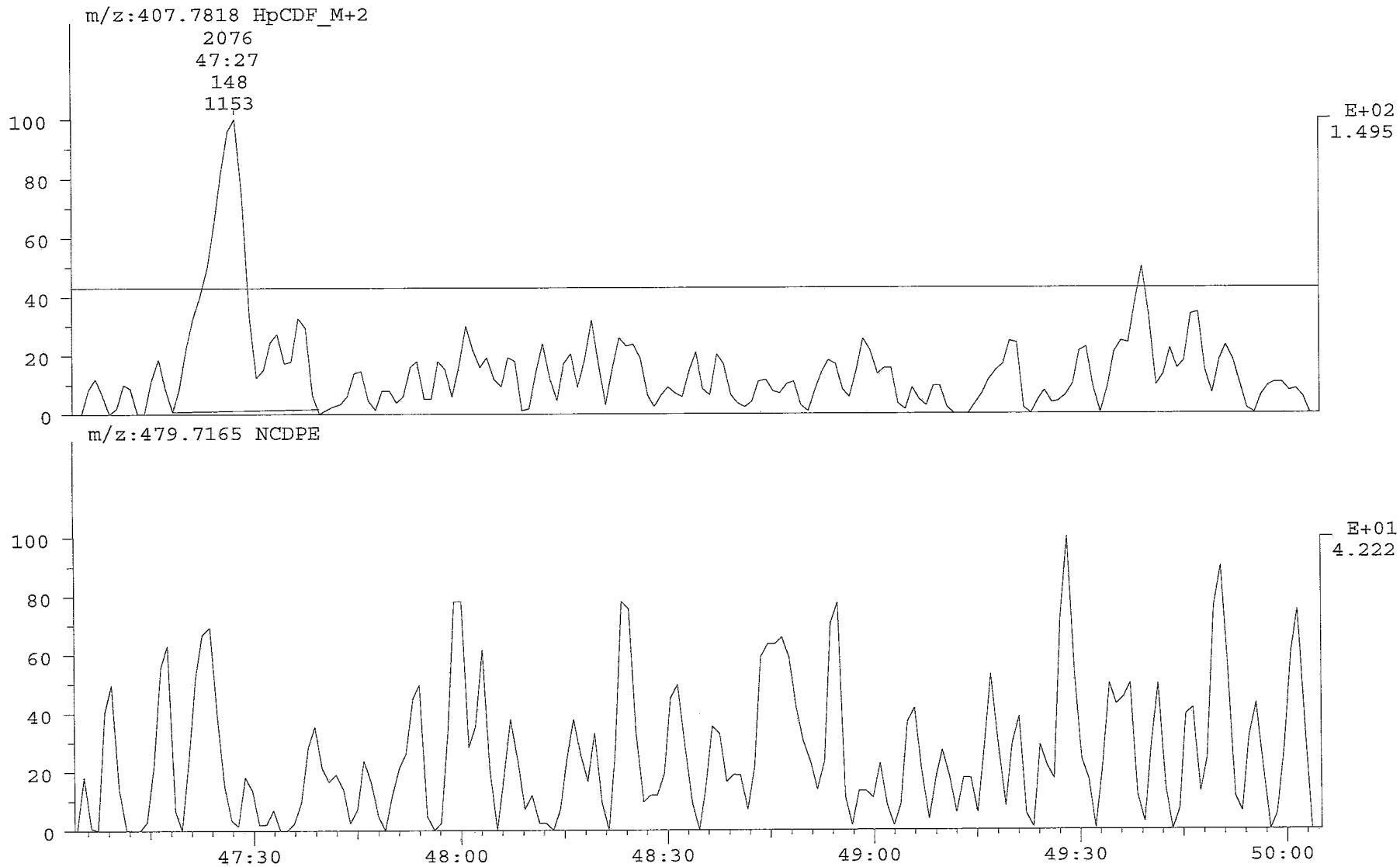
CHRO: d2tmwfpgb 12-Sep-12 Elapse: 48:34 2142
Samp: WO=mwfpg1aa Meth=IN2 Dil=1 Start : 03:45:35 2662
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 2053 > 2231 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



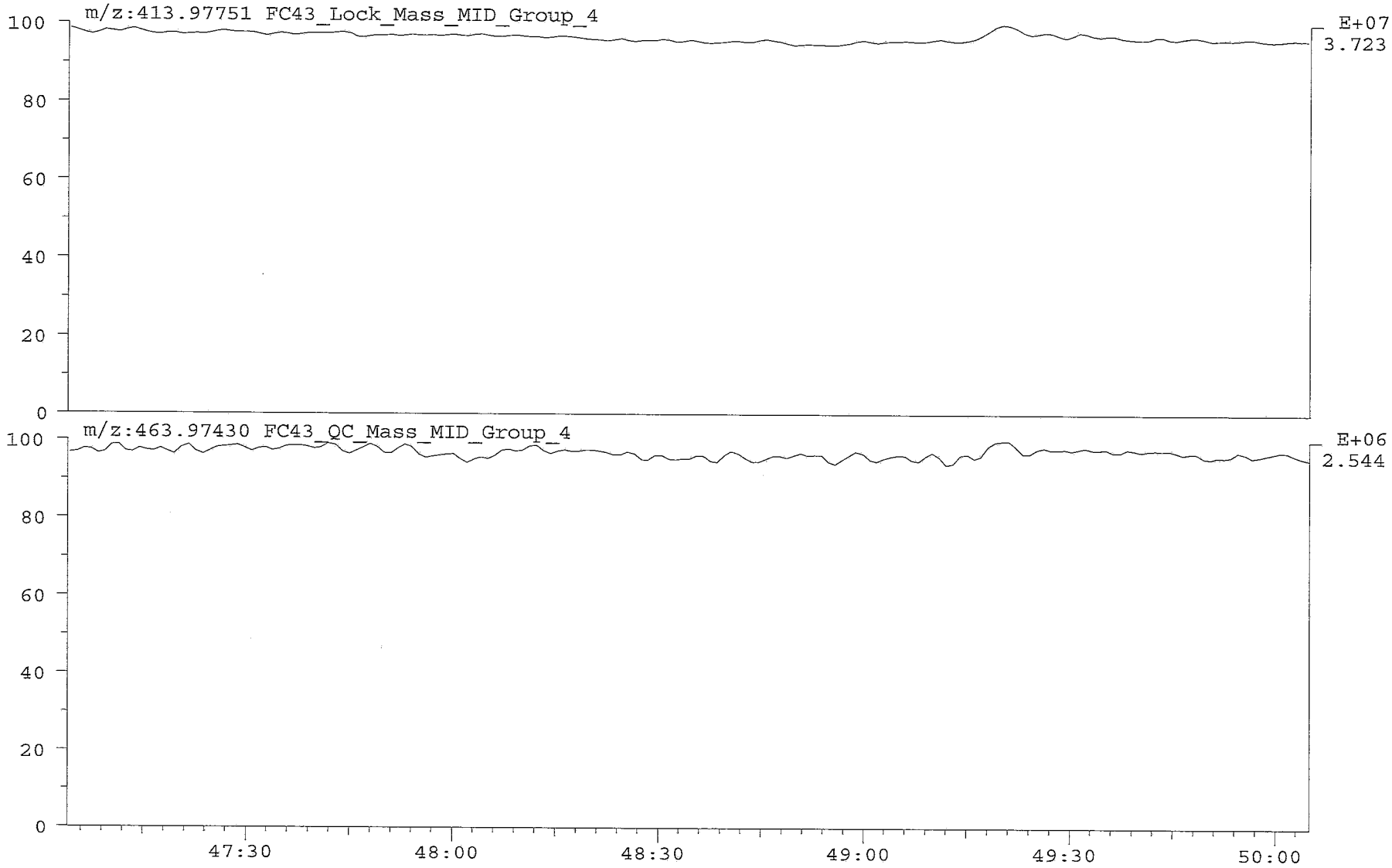
CHRO: d2tmwfpgb 12-Sep-12 Elapse: 53:49 2446
Samp: WO=mwfpg1aa Meth=IN2 Dil=1 Start : 03:45:35 2662
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 2053 > 2231 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



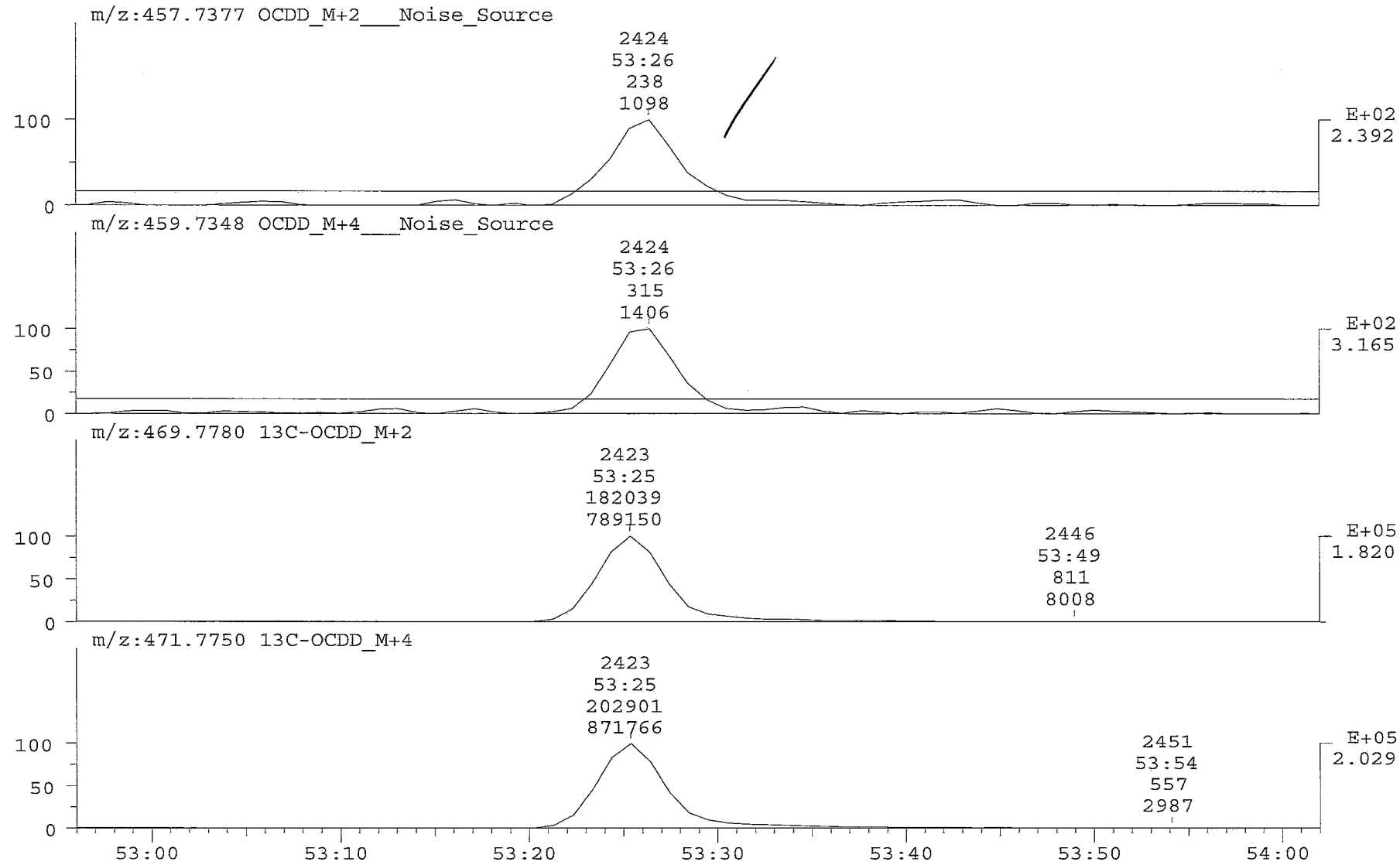
```
CHRO:  d2tmwfpgb                                12-Sep-12  Elapse:  48:34      2142
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                          Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2053 > 2231           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



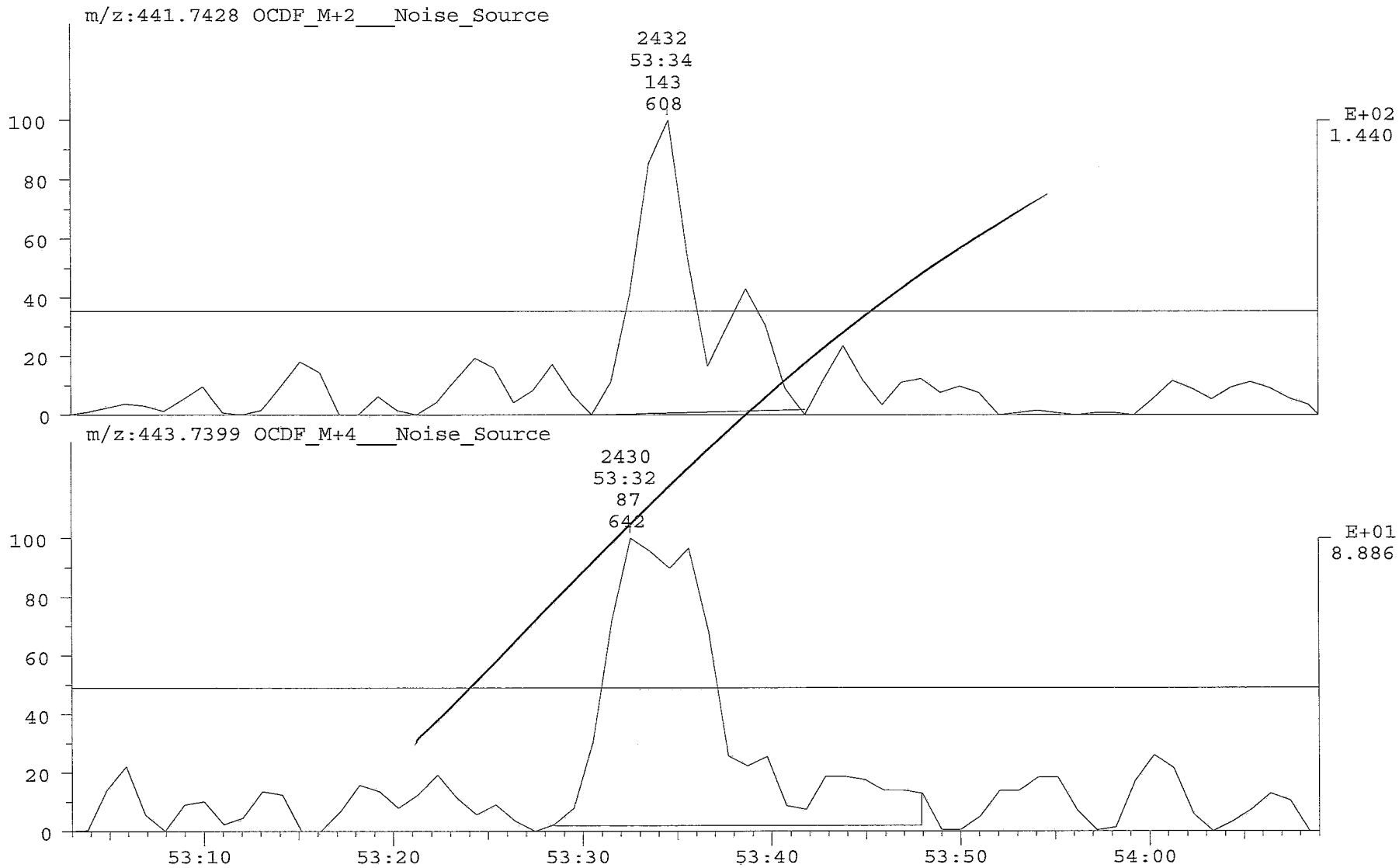
```
CHRO:  d2tmwfpgb                                12-Sep-12  Elapse:  48:34       2142
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                          Start :  03:45:35    2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2053 > 2231           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  0, 0.0
Disp:  Height  Area
```



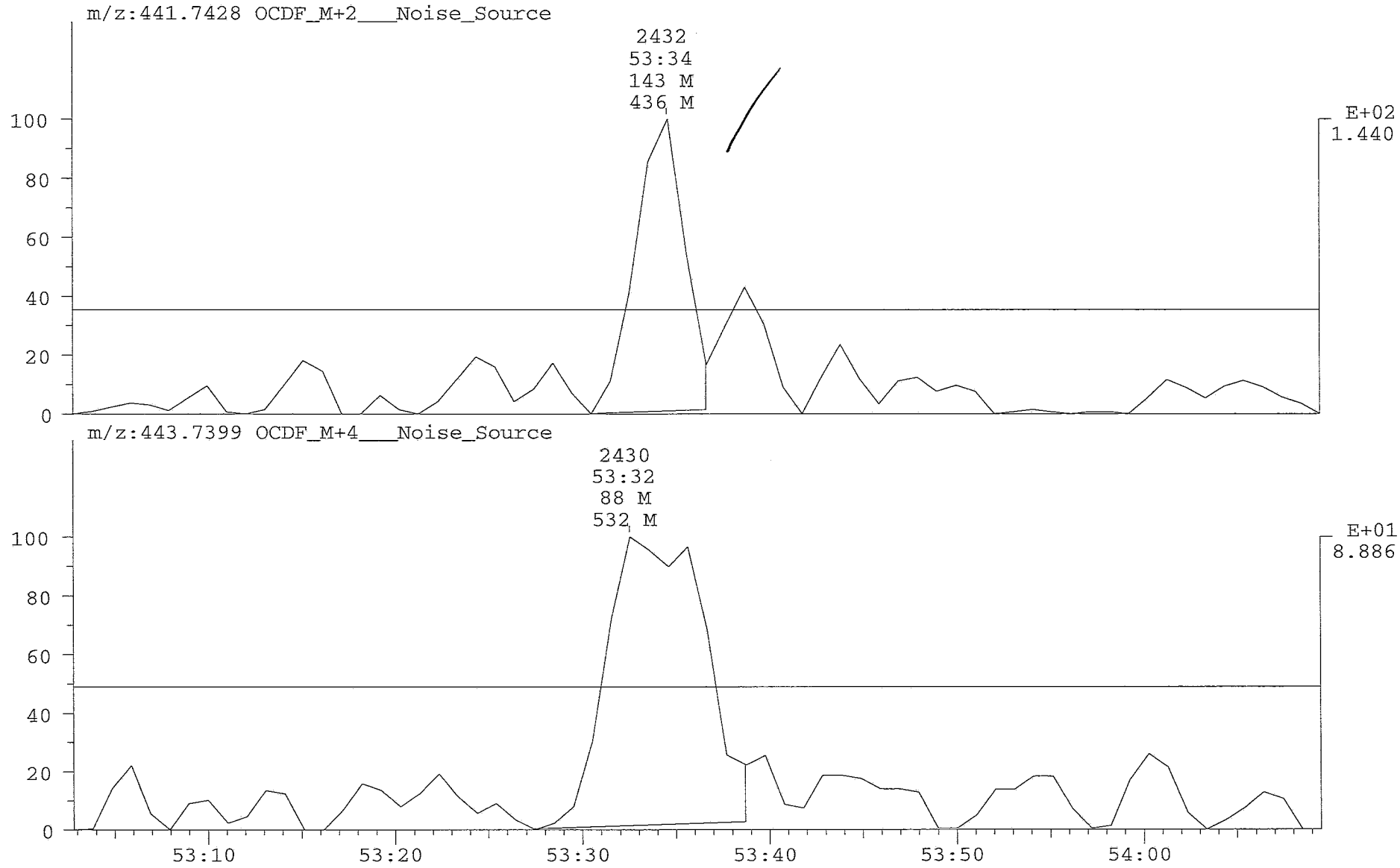
```
CHRO:  d2tmwfpgb                                12-Sep-12  Elapse:  53:26      2424
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                          Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2394 > 2459           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



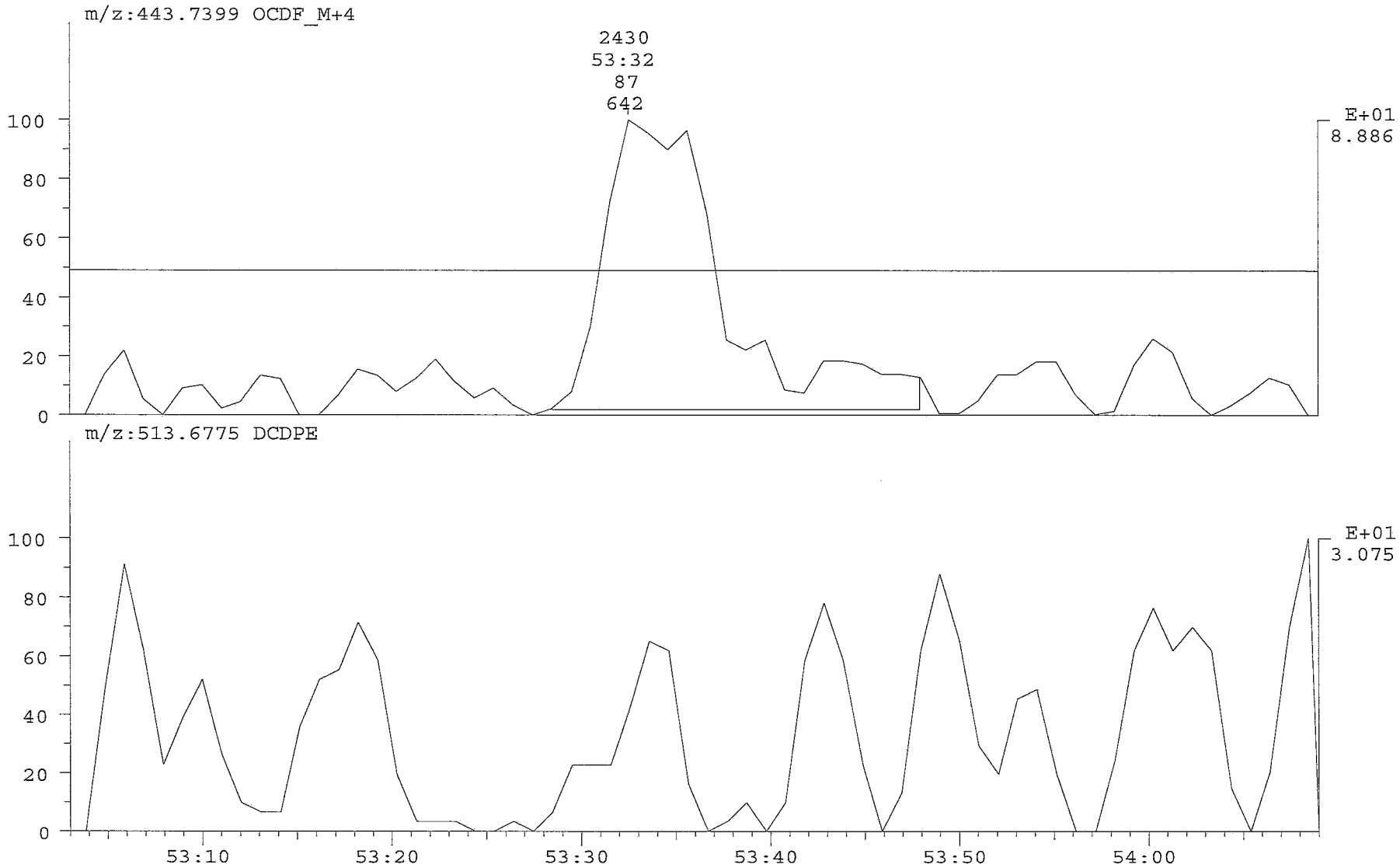
```
CHRO:  d2tmwfpgb                              12-Sep-12   Elapse:  53:32      2430
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                         Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                Study :  2249033 (10.0g)
Oper:  LKM                                                Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2401 > 2466          Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3               Label :  -2, 5.0
Disp:  Height  Area
```



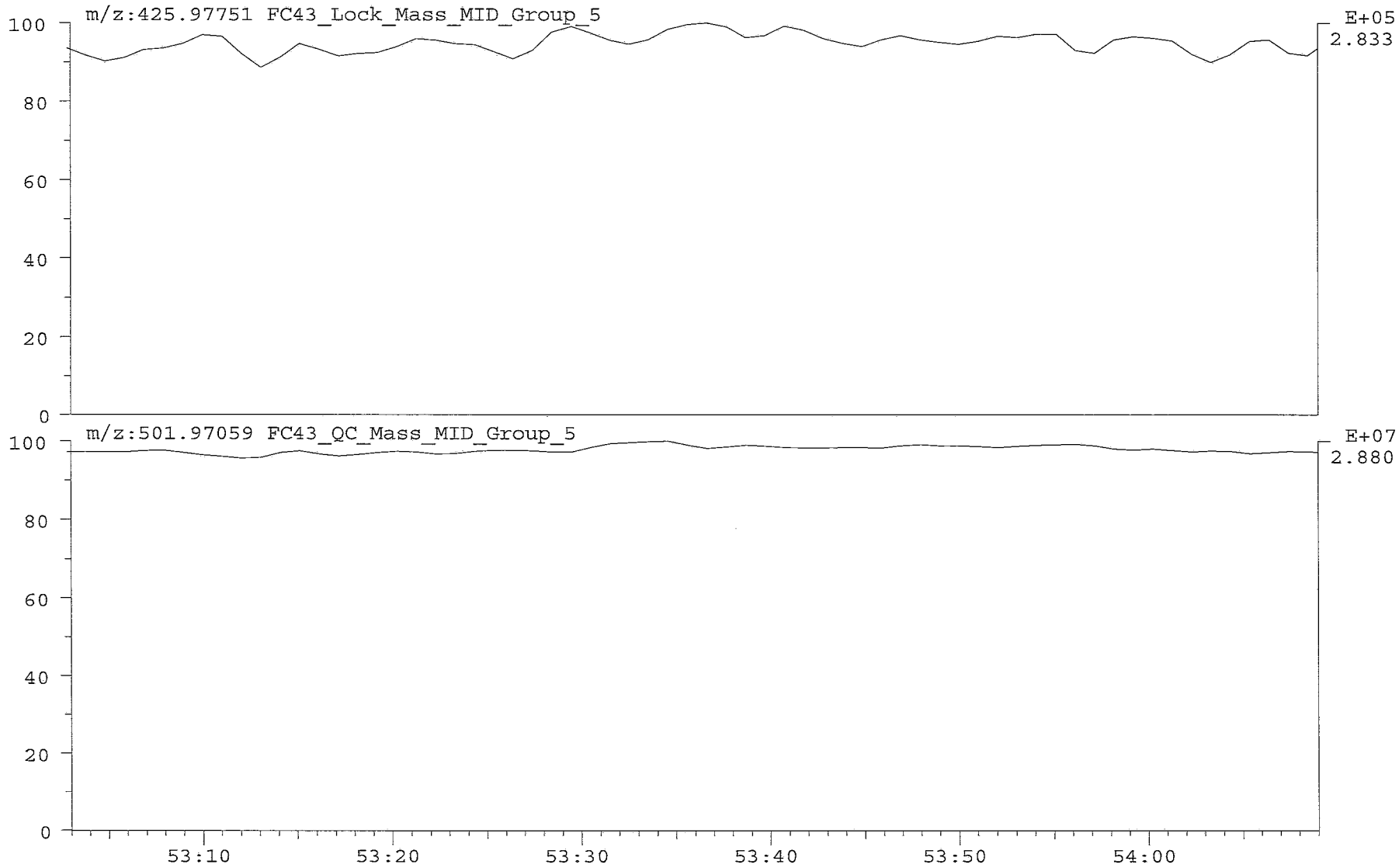
```
CHRO:  d2tmwfpgb                          12-Sep-12   Elapse:  53:49      2446
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                     Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                            Study :  2249033 (10.0g)
Oper:  LKM                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2401 > 2466      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  -2, 5.0
Disp:  Height  Area
```



```
CHRO:  d2tmwfpgb                                12-Sep-12  Elapse:  53:32      2430
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                          Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2401 > 2466           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



```
CHRO:  d2tmwfpgb                          12-Sep-12   Elapse:  53:32      2430
Samp:  WO=mwfpg1aa Meth=IN2 Dil=1                     Start :  03:45:35   2662
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                            Study :  2249033 (10.0g)
Oper:  LKM                                            Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2401 > 2466      Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3           Label :  0, 0.0
Disp:  Height  Area
```



*** file opened Wed Sep 12 03:47:25 2012 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - D5FBM84J

Analysis started at: 12-Sep-12 03:47:25

Analysis will stop at user request

Firmware Version: 1.03

MCAL file name: mcal1.cal

Sequence :

MID procedure: 5W_DB5_FC43_SINGLEGC

Mid Time Windows:

	Start	Measure	End	Cycletime
# 1	12:00 min	20:40 min	32:40 min	1.00 sec
# 2	32:40 min	8:58 min	41:38 min	1.00 sec
# 3	41:38 min	5:00 min	46:38 min	1.00 sec
# 4	46:38 min	5:21 min	52:00 min	1.00 sec
# 5	52:00 min	5:30 min	57:30 min	1.00 sec

Mid Masses:

Window # 1

mass	F	int	gr	time (ms)
303.9016		1	1	124
305.8987		1	1	124
313.9834	l	20	1	6
313.9834		20	1	6
315.9419		5	1	24
317.9389		5	1	24
319.8965		1	1	124
321.8936		1	1	124
327.8847		1	1	124
331.9368		5	1	24
333.9338		5	1	24
363.9802	c	20	1	6
363.9802		20	1	6
375.8364		1	1	124

Window # 2

mass	F	int	gr	time (ms)
313.9834	l	20	1	7
313.9834		20	1	7
339.8597		1	1	146
341.8567		1	1	146
351.9000		5	1	29
353.8970		5	1	29
355.8546		1	1	146
357.8516		1	1	146
367.8949		5	1	29
369.8919		5	1	29
375.9802	c	20	1	7

```
  375.9802     20  1        7
  409.7974      1  1      146
 Window # 3
      mass F  int  gr  time (ms)
  373.8208      1  1      146
  375.8178      1  1      146
  375.9802 l   20  1        7
  375.9802     20  1        7
  383.8639      5  1       29
  385.8610      5  1       29
  389.8158      1  1      146
  391.8127      1  1      146
  401.8559      5  1       29
  403.8529      5  1       29
  413.9770 c   20  1        7
  413.9770     20  1        7
  445.7555      1  1      146
 Window # 4
      mass F  int  gr  time (ms)
  407.7817      1  1      146
  409.7788      1  1      146
  413.9770 l   20  1        7
  413.9770     20  1        7
  417.8250      5  1       29
  419.8220      5  1       29
  423.7767      1  1      146
  425.7737      1  1      146
  435.8169      5  1       29
  437.8140      5  1       29
  463.9738 c   20  1        7
  463.9738     20  1        7
  479.7165      1  1      146
 Window # 5
      mass F  int  gr  time (ms)
  425.9770 l   20  1        7
  425.9770     20  1        7
  441.7428      1  1      159
  443.7399      1  1      159
  457.7377      1  1      159
  459.7348      1  1      159
  469.7780      5  1       31
  471.7750      5  1       31
  501.9706 c   20  1        7
  501.9706     20  1        7
  513.6775      1  1      159

MID Window terminated after 32.683333 minutes
MID Window end time was 32.670000 minutes
MID Window terminated after 41.650000 minutes
MID Window end time was 41.650000 minutes
MID Window terminated after 46.650000 minutes
MID Window end time was 46.650000 minutes
MID Window terminated after 52.000000 minutes
MID Window end time was 52.000000 minutes
MID Window terminated after 57.500000 minutes
MID Window end time was 57.500000 minutes

Tune file name: C:\Xcalibur\System\DFS\MSI\Tune2.DFSTune

DFS - Parameter
```

ACCU	1000.0000	BCORRS	0.0177	BMASS	309.4834
BQUAD	1.2000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	15.0000	ECORR	1.0011	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9998	EDACZ	1714.2381
ELEN	-45.0000	EMULT	1544.0000	ENS	185.0000
ENSBR	1.2000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	175.0000	EXSBR	3.5000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	375.8364	FMII	50.0000	FQUAD	18.5000
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0132	FVINLET	0.0875	FVSRC	0.0558
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSRC	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	692.0000
LENS_SYM	-3.2500	LM	375.8364	LMII	500.0000
LMASS	309.4834	LKM	425.9770	MASS	309.4834
MDAC	3497003.0617	MRANGE	1272.3339	NSAM	200.0000
NSCAN	2683.0000	NSMAX	8.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-3.0000	RECURR	0.9021	RELEN	0.0000
RES	13441.0379	RPUSHER	-2.8938	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	696.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.1270	TANAL	0.0000	TCURR	0.0000
TD	1.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	110.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	309.4834	XLENS_POT	838.0000
XLENS_SYM	-6.0000	YLENS_POT	576.0000	YLENS_SYM	15.7500

```
Source Gauge:          1.7e-005 mbar
Analyzer Penning:      8.2e-008 mbar
Pirani Analyse:        1.3e-002 mbar
Pirani Source:         5.6e-002 mbar
Pirani Inlet System:   8.8e-002 mbar

Scantype is electric

Sourcemode is EI POS

MID Time Window 1: Resolution is 12936.
MID Time Window 2: Resolution is 12958.
MID Time Window 3: Resolution is 12344.
MID Time Window 4: Resolution is 12797.
MID Time Window 5: Resolution is 13441.

Amplifier Offset: 94.


*** File closed Wed Sep 12 04:44:57 2012
  ***
```

User: finnigan
Host: knx-alpha5.stl-inc.com
Class: knx-alpha5.stl-inc.com
Job: d2tmwfpgb.log

TestAmerica
Knoxville

IsoCalc Preliminary Sample Report

PCDD/PCDF by EPA Method 8290 w/15 IS's

Workorder	MWFPG1AC	Prep Batch	2249033	Lot No	H2I050000-033
Data File	/20120911w3/d2tmwfpgc.d	Prep Date	09/05/12	SDG No	
Analysis ID	144643	Prep Exp Date	09/08/12	Date Received	09/05/12
Analysis Date	9/12/2012	Matrix	SOLID	Date Sampled	08/09/12
Analysis Time	01:32	Initial Wt/Vol	10.0 g	Lims Test Code	XXA11Q&01
Anal Exp Date	10/20/12	Extract Vol	20 uL	Method	DX8290_2
Instrument	D2A	Dil Factor	1.00	Code	IN2
Analyst	LKM				

Analyte	RT	Area	Height	RF	Std Amt	Amount	Rec	Conc (pg/g)		DL (pg/g)
2,3,7,8-TCDD	29:18	409783	40544	1.077	200.0	219.582841	109.79	21.958284		0.113
Total TCDD				1.077		219.582841		21.958284		0.113
2,3,7,8-TCDF	27:24	640273	66611	1.011	200.0	232.809722	116.40	23.280972	B	0.0750
Total TCDF		11883	1430	1.011		237.130577		23.713058	QB	0.0750
1,2,3,7,8-PeCDD	39:55	1617213	334854	0.937	1000	1170.65189	117.07	117.065189		0.0496
Total PeCDD		4728	622	0.937		1174.07413		117.407413	Q	0.0496
1,2,3,7,8-PeCDF	37:57	2745282	455775	1.085	1000	1101.32267	110.13	110.132267		0.0912
2,3,4,7,8-PeCDF	39:19	2569730	488159	1.022	1000	1106.18225	110.62	110.618225	B	0.0841
Total PeCDF		66143	8400	1.054		2234.97835		223.497835	B	0.0874
1,2,3,4,7,8-HxCDD	44:20	1806203	468703	1.066	1000	1091.30026	109.13	109.130026		0.105
1,2,3,6,7,8-HxCDD	44:27	1794080	452871	1.055	1000	1100.61886	110.06	110.061886		0.110
1,2,3,7,8,9-HxCDD	44:49	2084502	518617	1.171	1000	1149.16338	114.92	114.916338	B	0.0974
Total HxCDD				1.098		3341.08250		334.108250	B	0.104
1,2,3,4,7,8-HxCDF	43:19	3060521	833537	1.316	1000	1103.44223	110.34	110.344223		0.0644
1,2,3,6,7,8-HxCDF	43:27	3396141	835387	1.210	1000	1109.25201	110.93	110.925201	B	0.0640
2,3,4,6,7,8-HxCDF	44:10	3114963	754241	1.209	1000	1132.09951	113.21	113.209951	B	0.0735
1,2,3,7,8,9-HxCDF	45:03	2881627	617233	1.224	1000	1115.14896	111.51	111.514896	B	0.0865
Total HxCDF		9701	1041	1.240		4463.41074		446.341074	QB	0.0710
1,2,3,4,6,7,8-HpCDD	48:59	1695829	330985	1.054	1000	1101.54599	110.15	110.154599	B	0.0527
Total HpCDD		42769	8221	1.054		1129.32710		112.932710	B	0.0527
1,2,3,4,6,7,8-HpCDF	47:22	2925433	623592	1.481	1000	1146.76207	114.68	114.676207	B	0.0543
1,2,3,4,7,8,9-HpCDF	49:37	2180018	391948	1.367	1000	1112.12806	111.21	111.212806		0.0842
Total HpCDF		209995	35257	1.424		2352.32827		235.232827	B	0.0665
OCDD	53:25	2857941	682031	1.144	2000	2116.18822	105.81	211.618822	B	0.0792
OCDF	53:32	3255151	767953	1.251	2000	2204.17055	110.21	220.417055	B	0.0641
13C-2,3,7,8-TCDD	29:15	1732765	174296	1.038	1000	781.949456	78.19	78.194946		0.269
13C-2,3,7,8-TCDF	27:22	2720774	296626	1.443	1000	883.162824	88.32	88.316282		0.111
13C-1,2,3,7,8-PeCDD	39:54	1473871	317569	0.968	1000	713.522641	71.35	71.352264		0.116
13C-1,2,3,7,8-PeCDF	37:55	2296463	396376	1.311	1000	820.624118	82.06	82.062412		0.140
13C-2,3,4,7,8-PeCDF	39:18	2273839	456578	1.327	1000	802.617011	80.26	80.261701		0.138
13C-1,2,3,4,7,8-HxCDD	44:19	1552218	407158	0.875	1000	808.776304	80.88	80.877630		0.144
13C-1,2,3,6,7,8-HxCDD	44:26	1544554	394365	0.878	1000	801.825736	80.18	80.182574		0.143
13C-1,2,3,4,7,8-HxCDF	43:18	2108267	589914	1.044	1000	920.470190	92.05	92.047019		0.0932
13C-1,2,3,6,7,8-HxCDF	43:26	2531153	646331	1.235	1000	934.203451	93.42	93.420345		0.0788
13C-2,3,4,6,7,8-HxCDF	44:09	2275310	562759	1.159	1000	895.350388	89.54	89.535039		0.0840
13C-1,2,3,7,8,9-HxCDF	45:02	2111078	472425	1.055	1000	912.667495	91.27	91.266750		0.0923
13C-1,2,3,4,6,7,8-HpCDD	48:58	1460535	292332	0.862	1000	772.732919	77.27	77.273292		0.0312
13C-1,2,3,4,6,7,8-HpCDF	47:21	1723005	379592	0.899	1000	874.023375	87.40	87.402337		0.0637
13C-1,2,3,4,7,8,9-HpCDF	49:36	1433959	265063	0.800	1000	816.965991	81.70	81.696599		0.0716
13C-OCDD	53:24	2361263	574131	0.737	2000	1461.31275	73.07	146.131275		0.0801
13C-1,2,3,4-TCDD	28:45	4268517	466458	1.000	2000	2000.00000	100.00	200.000000		0.280
13C-1,2,3,7,8,9-HxCDD	44:48	4386881	1135049	1.000	2000	2000.00000	100.00	200.000000		0.126

Klu 9/19/12
KMM 9-19-12

TestAmerica
Knoxville

IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 8290 w/15 IS's

Workorder	MWFPG1AC	Prep Batch	2249033	Lot No	H2I050000-033
Data File	/20120911w3/d2tmwfpgc.	Prep Date	09/05/12	SDG No	
Analysis ID	144643	Prep Exp Date	09/08/12	Date Received	09/05/12
Analysis Date	09/12/12 01:32	Matrix	SOLID	Date Sampled	08/09/12
Anal Exp Date	10/20/12	Initial Wt/Vol	10.0 g	Lims Test Code	XXA11Q&01
Instrument	D2A	Extract Vol	20 uL	Method	DX8290_2
Analyst	LKM	Diluton Factor	1.00	Code	IN2

View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
304					303.9016	305.8987	303.9016	305.8987	0.65-0.89		
	Noise	00:00	00:00	0	120	105	48	42	1.14 *	/	
	Unidentified	26:26	00:00	0	3356	3973	423	487	0.84	ABB/ABB	
	2,3,7,8-TCDF	27:24	27:24	0	283330	356943	29453	37158	0.79	ABV/ABV	
	Unidentified	27:55	00:00	0	3521	2573	302	294	1.37 *	AVV/AVV	RT
316					315.9419	317.9389	315.9419	317.9389	0.65-0.89		
	Noise	00:00	00:00	0	213	160	85	64	1.33 *	/	
	13C-2,3,7,8-TCDF	27:22	27:22	0	1211502	1509272	133613	163013	0.80	ABV/ABV	
320					319.8965	321.8936	319.8965	321.8936	0.65-0.89		
	Noise	00:00	00:00	0	113	100	45	40	1.13 *	/	
	2,3,7,8-TCDD	29:18	29:18	0	182598	227185	18134	22410	0.80	ABV/ABV	
332					331.9368	333.9338	331.9368	333.9338	0.65-0.89		
	Noise	00:00	00:00	0	370	283	148	113	1.31 *	/	
	13C-1,2,3,4-TCDD	28:45	28:46	-1	1909116	2359401	208645	257813	0.81	AVV/AVV	
	13C-2,3,7,8-TCDD	29:15	29:15	0	766713	966052	76888	97408	0.79	AVV/AVV	
340					339.8597	341.8567	339.8597	341.8567	1.32-1.78		
	Noise	00:00	00:00	0	223	170	89	68	1.31 *	/	
	Unidentified	37:25	00:00	0	11081	6451	1639	994	1.72	ABB/ABB	
	1,2,3,7,8-PeCDF	37:57	37:57	0	1696058	1049224	282489	173286	1.62	ABV/ABV	
	Unidentified	38:33	00:00	0	25504	16710	2887	1995	1.53	AVV/AVV	
	2,3,4,7,8-PeCDF	39:19	39:18	1	1579752	989978	298012	190147	1.60	ABV/ABV	
	Unidentified	39:54	00:00	0	3657	2740	525	360	1.33	AVB/AVB	
352					351.9000	353.8970	351.9000	353.8970	1.32-1.78		
	Noise	00:00	00:00	0	245	183	98	73	1.34	/	
	Unidentified	37:23	00:00	0	6661	6397	1162	1175	1.04 *	ABB/ABB	R
	13C-1,2,3,7,8-PeCDF	37:55	37:56	-1	1405488	890975	241699	154677	1.58	ABV/ABV	
	Unidentified	38:31	00:00	0	21020	11769	2670	1669	1.79 *	AVV/AVV	R
	13C-2,3,4,7,8-PeCDF	39:18	39:17	1	1408857	864982	281754	174824	1.63	ABV/ABV	
356					355.8546	357.8516	355.8546	357.8516	1.32-1.78		
	Noise	00:00	00:00	0	68	80	27	32	0.84 *	/	
	1,2,3,7,8-PeCDD	39:55	39:54	1	988270	628943	204385	130469	1.57	ABV/ABV	
	Unidentified	40:37	00:00	0	3938	1854	338	244	2.12 *	AVV/AVV	R
368					367.8949	369.8919	367.8949	369.8919	1.32-1.78		
	Noise	00:00	00:00	0	158	105	63	42	1.50	/	
	13C-1,2,3,7,8-PeCDD	39:54	39:52	2	907764	566107	196909	120660	1.60	ABV/ABV	
374					373.8208	375.8178	373.8208	375.8178	1.05-1.43		
	Noise	00:00	00:00	0	270	230	108	92	1.17	/	
	1,2,3,4,7,8-HxCDF	43:19	43:18	1	1732618	1327903	470820	362717	1.30	ABV/ABV	
	1,2,3,6,7,8-HxCDF	43:27	43:25	2	1919922	1476219	476814	358573	1.30	AVV/AVV	
	2,3,4,6,7,8-HxCDF	44:10	44:09	1	1758024	1356939	424580	329661	1.30	AVV/AVV	
	Unidentified	44:38	00:00	0	5370	6243	576	576	0.86 *	AVV/AVV	RT
	1,2,3,7,8,9-HxCDF	45:03	45:03	0	1634991	1246636	349020	268213	1.31	ABV/ABV	
384					383.8639	385.8610	383.8639	385.8610	0.43-0.59		

Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

TestAmerica
Knoxville

IsoCalc Preliminary Peak Report

PCDD/PCDF by EPA Method 8290 w/15 IS's

Workorder	MWFPG1AC	Prep Batch	2249033	Lot No	H2I050000-033
Data File	/20120911w3/d2tmwfpgc.	Prep Date	09/05/12	SDG No	
Analysis ID	144643	Prep Exp Date	09/08/12	Date Received	09/05/12
Analysis Date	09/12/12 01:32	Matrix	SOLID	Date Sampled	08/09/12
Anal Exp Date	10/20/12	Initial Wt/Vol	10.0 g	Lims Test Code	XXA11Q&01
Instrument	D2A	Extract Vol	20 uL	Method	DX8290_2
Analyst	LKM	Diluton Factor	1.00	Code	IN2

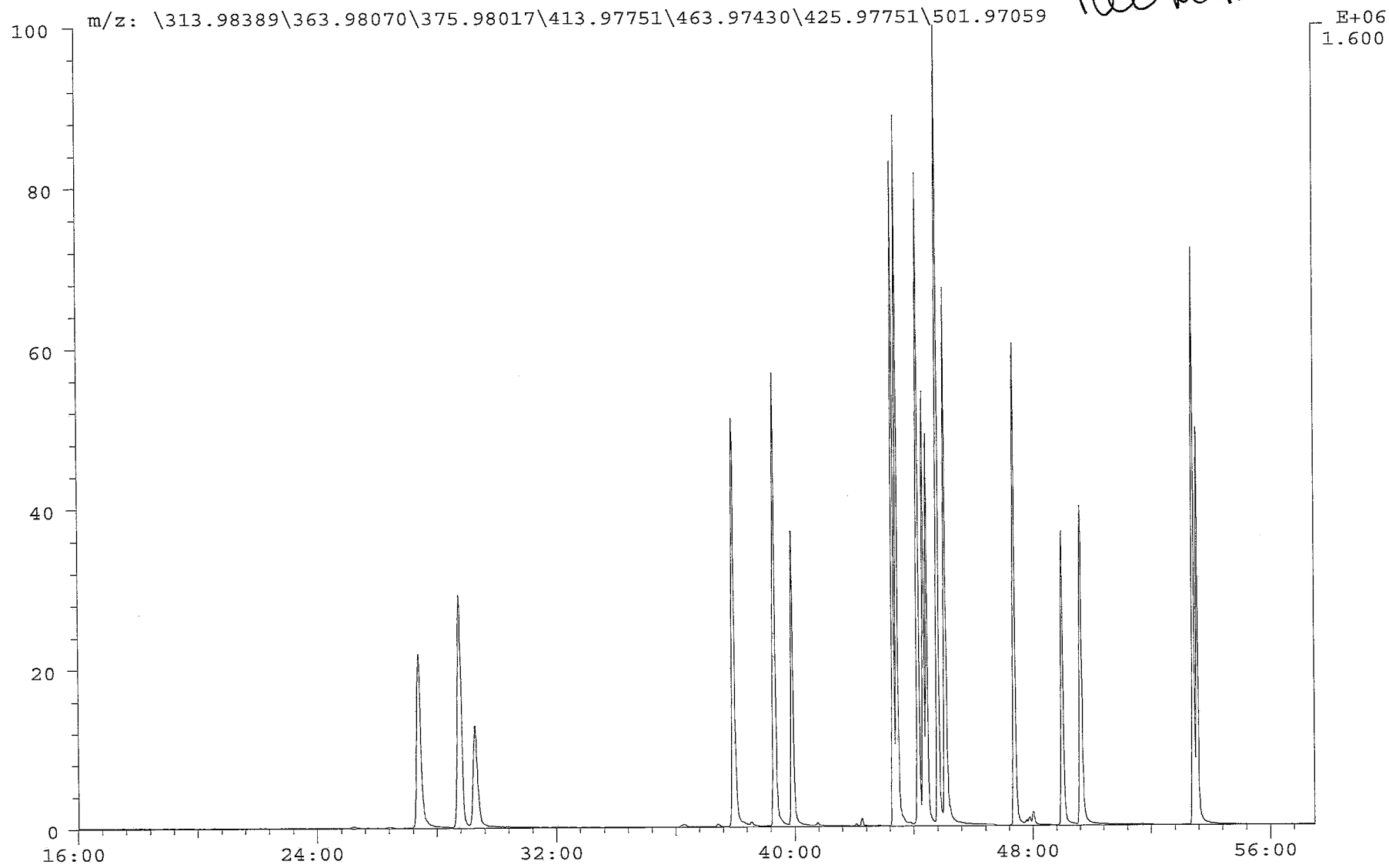
View Small Peaks? False View deleted peaks? False

Mass	Peak Name	RT	Pred RT	Δ	Area 1	Area 2	Height1	Height2	Ratio	Integration	Flags
384					383.8639	385.8610	383.8639	385.8610	0.43-0.59		
	Noise	00:00	00:00	0	275	278	110	111	0.99 *	/	
	13C-1,2,3,4,7,8-HxCDF	43:18	43:17	1	737055	1371212	206573	383341	0.54	ABV/ABV	
	13C-1,2,3,6,7,8-HxCDF	43:26	43:24	2	878453	1652700	226356	419975	0.53	AVV/AVV	
	13C-2,3,4,6,7,8-HxCDF	44:09	44:08	1	791069	1484241	196468	366291	0.53	AVV/AVV	
	13C-1,2,3,7,8,9-HxCDF	45:02	45:02	0	738516	1372562	166200	306225	0.54	ABV/ABV	
390					389.8156	391.8127	389.8156	391.8127	1.05-1.43		
	Noise	00:00	00:00	0	280	178	112	71	1.58 *	/	
	1,2,3,4,7,8-HxCDD	44:20	44:20	0	1005652	800551	259318	209385	1.26	ABV/ABV	
	1,2,3,6,7,8-HxCDD	44:27	44:27	0	1006905	787175	253418	199453	1.28	AVV/AVV	
	1,2,3,7,8,9-HxCDD	44:49	44:48	1	1164769	919733	290435	228182	1.27	AVV/AVV	
402					401.8559	403.8529	401.8559	403.8529	1.05-1.43		
	Noise	00:00	00:00	0	415	300	166	120	1.38	/	
	13C-1,2,3,4,7,8-HxCDD	44:19	44:19	0	871528	680690	229021	178137	1.28	ABV/ABV	
	13C-1,2,3,6,7,8-HxCDD	44:26	44:26	0	862357	682197	219474	174891	1.26	AVV/AVV	
	13C-1,2,3,7,8,9-HxCDD	44:48	44:47	1	2442462	1944419	634264	500785	1.26	AVV/AVV	
408					407.7818	409.7788	407.7818	409.7788	0.88-1.20		
	Noise	00:00	00:00	0	143	163	57	65	0.88	/	
	1,2,3,4,6,7,8-HpCDF	47:22	47:22	0	1512819	1412614	320023	303569	1.07	ABV/ABV	
	Unidentified	47:46	00:00	0	30577	28746	4732	4332	1.06	AVV/AVV	
	Unidentified	48:00	00:00	0	78780	71892	13782	12411	1.10	AVV/AVV	
	1,2,3,4,7,8,9-HpCDF	49:37	49:38	-1	1129489	1050529	202361	189587	1.08	ABV/ABV	
418					417.8250	419.8220	417.8250	419.8220	0.37-0.51		
	Noise	00:00	00:00	0	178	148	71	59	1.20 *	/	
	13C-1,2,3,4,6,7,8-HpCDF	47:21	47:21	0	548096	1174909	119649	259943	0.47	ABV/ABV	
	13C-1,2,3,4,7,8,9-HpCDF	49:36	49:37	-1	458295	975664	84487	180576	0.47	ABV/ABV	
424					423.7767	425.7737	423.7767	425.7737	0.88-1.20		
	Noise	00:00	00:00	0	88	75	35	30	1.17	/	
	Unidentified	47:53	00:00	0	21355	21414	4320	3901	1.00	ABV/ABV	
	1,2,3,4,6,7,8-HpCDD	48:59	49:00	-1	867866	827963	169073	161912	1.05	ABV/ABV	
436					435.8169	437.8140	435.8169	437.8140	0.88-1.20		
	Noise	00:00	00:00	0	80	73	32	29	1.10	/	
	13C-1,2,3,4,6,7,8-HpCDD	48:58	48:59	-1	753946	706589	151430	140902	1.07	ABV/ABV	
	Unidentified	49:18	00:00	0	3594	3913	880	978	0.92	AVB/AVV	
442					441.7428	443.7399	441.7428	443.7399	0.76-1.02		
	Noise	00:00	00:00	0	95	135	38	54	0.70 *	/	
	OCDF	53:32	53:33	-1	1576573	1678578	368088	399865	0.94	ABV/ABV	
458					457.7377	459.7348	457.7377	459.7348	0.76-1.02		
	Noise	00:00	00:00	0	155	105	62	42	1.48 *	/	
	OCDD	53:25	53:26	-1	1356718	1501223	325294	356737	0.90	ABV/ABV	
470					469.7780	471.7750	469.7780	471.7750	0.76-1.02		
	Noise	00:00	00:00	0	153	183	61	73	0.84	/	
	13C-OCDD	53:24	53:25	-1	1126544	1234719	275086	299045	0.91	ABV/ABV	

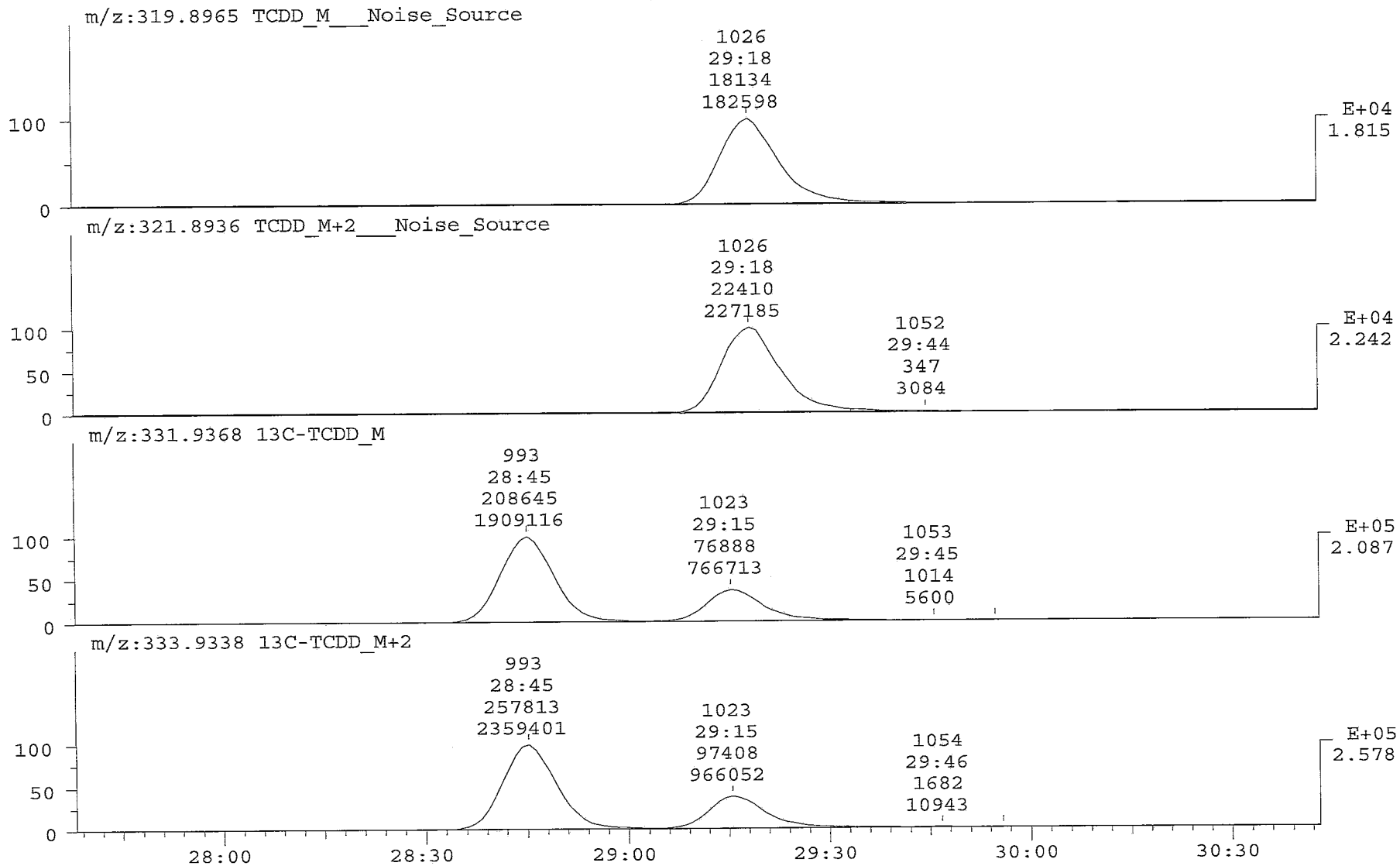
Notes:
R = ratio is outside limits M = data changed manually N = Peak not reported S = peak less than 2.5x S/N
T = peaks outside comax limit D = peak outside RT window W = peak outside first/last X = peak has dup match

Int L 9-12-12
Cdr. Kln 9/19/12
QC KM 9-19-12
Rev MD 9-19-12

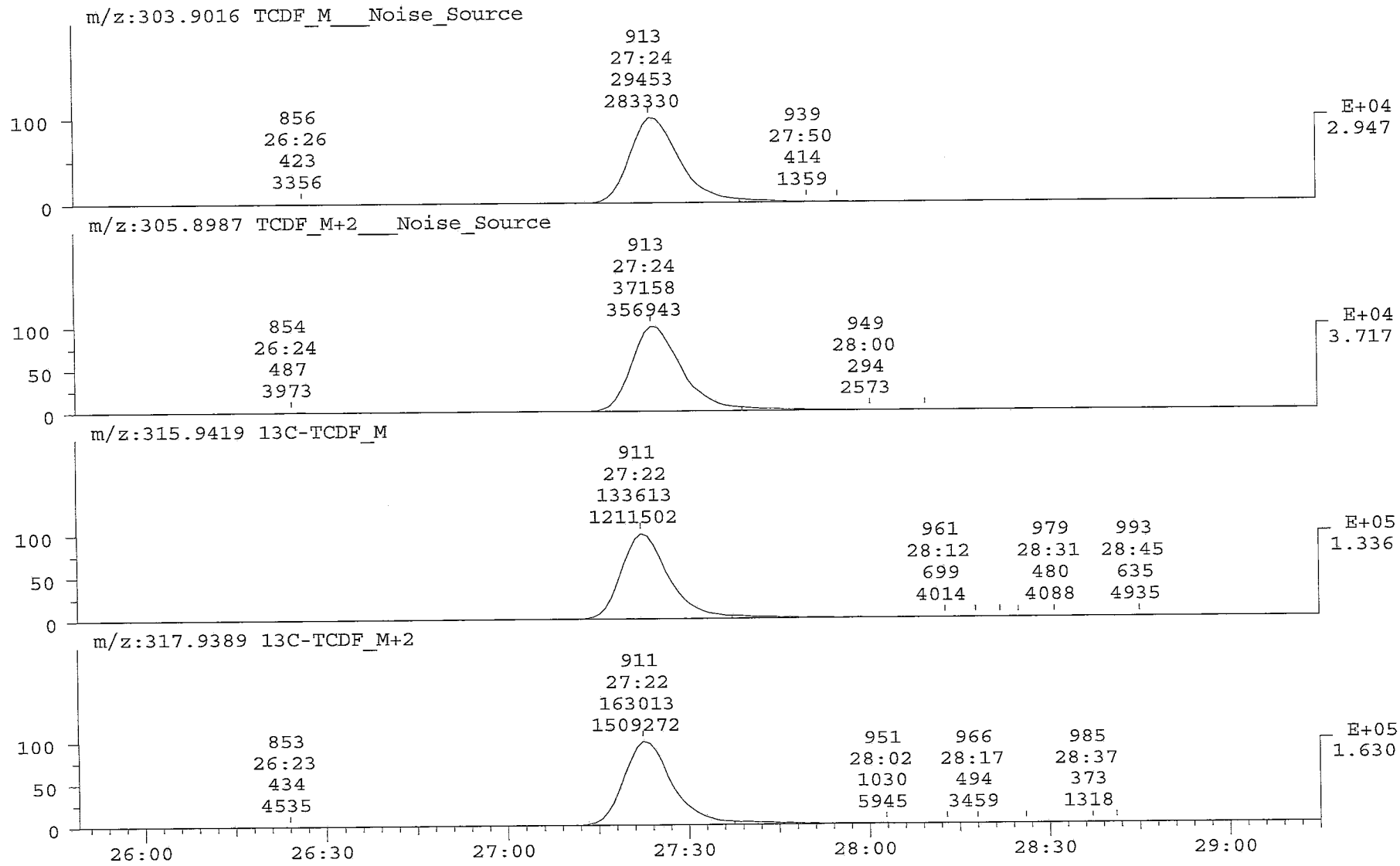
CHRO:	d2tmwfpgc	12-Sep-12	Elapse:	53:33	2431
Samp:	WO=mwfpg1ac Meth=IN2 Dil=1		Start :	01:32:26	2661
Comm:	Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3				
Mode:	EI ESI + Q1MS UP LR		Study :	2249033 (10.0g)	
Oper:	LKM		Inlet :	LC	
Peak:	100.00 ppm	Label wndw: 235 > 2661	Masses:	303 > 514	
Area:	5, 0.50, 0	Baseline : 100, 3	Label :	0, 0.0	
Disp:	Height Area				



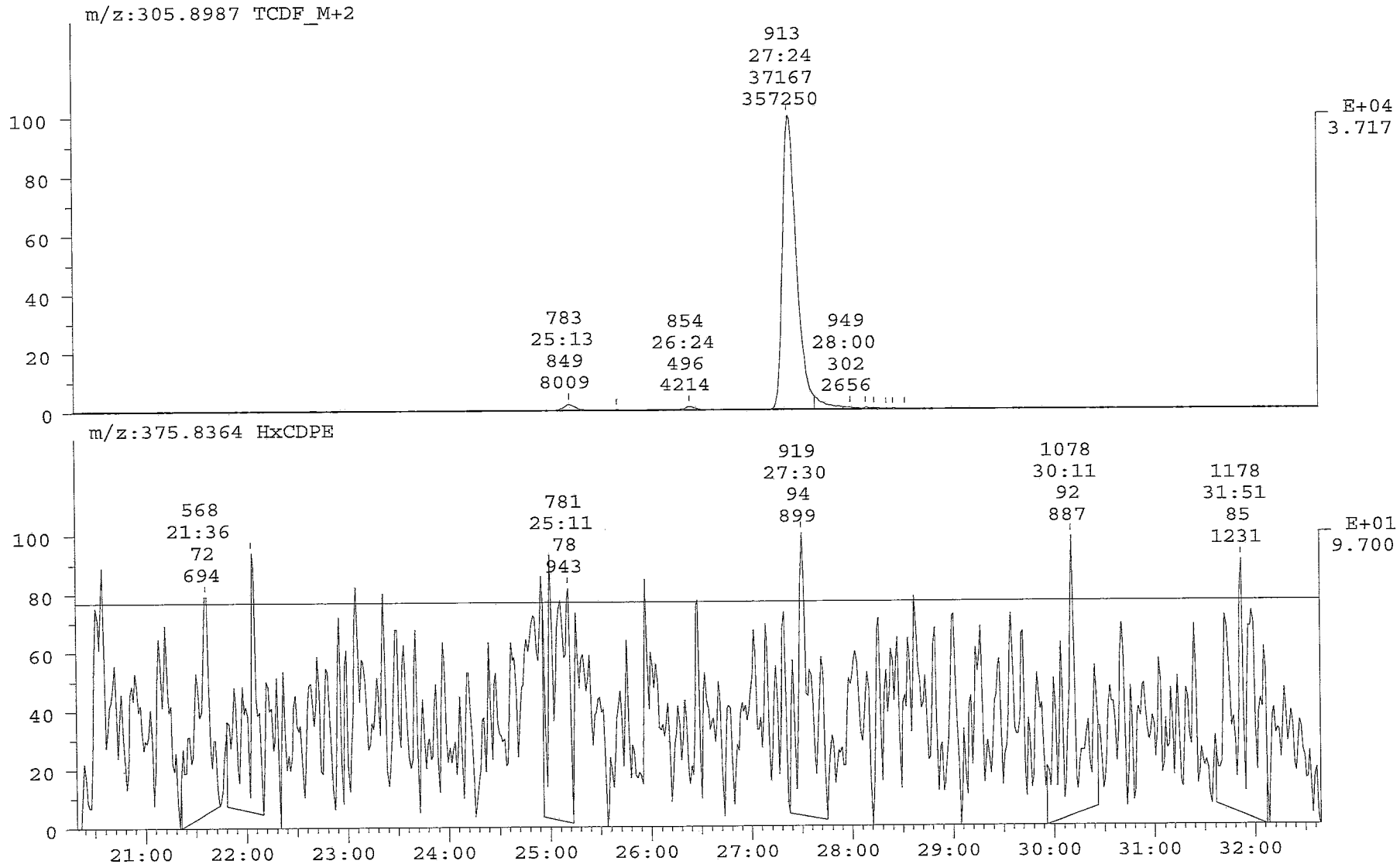
CHRO: d2tmwfpgc 12-Sep-12 Elapse: 29:10 1018
Samp: WO=mwfpg1ac Meth=IN2 Dil=1 Start : 01:32:26 2661
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 926 > 1110 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



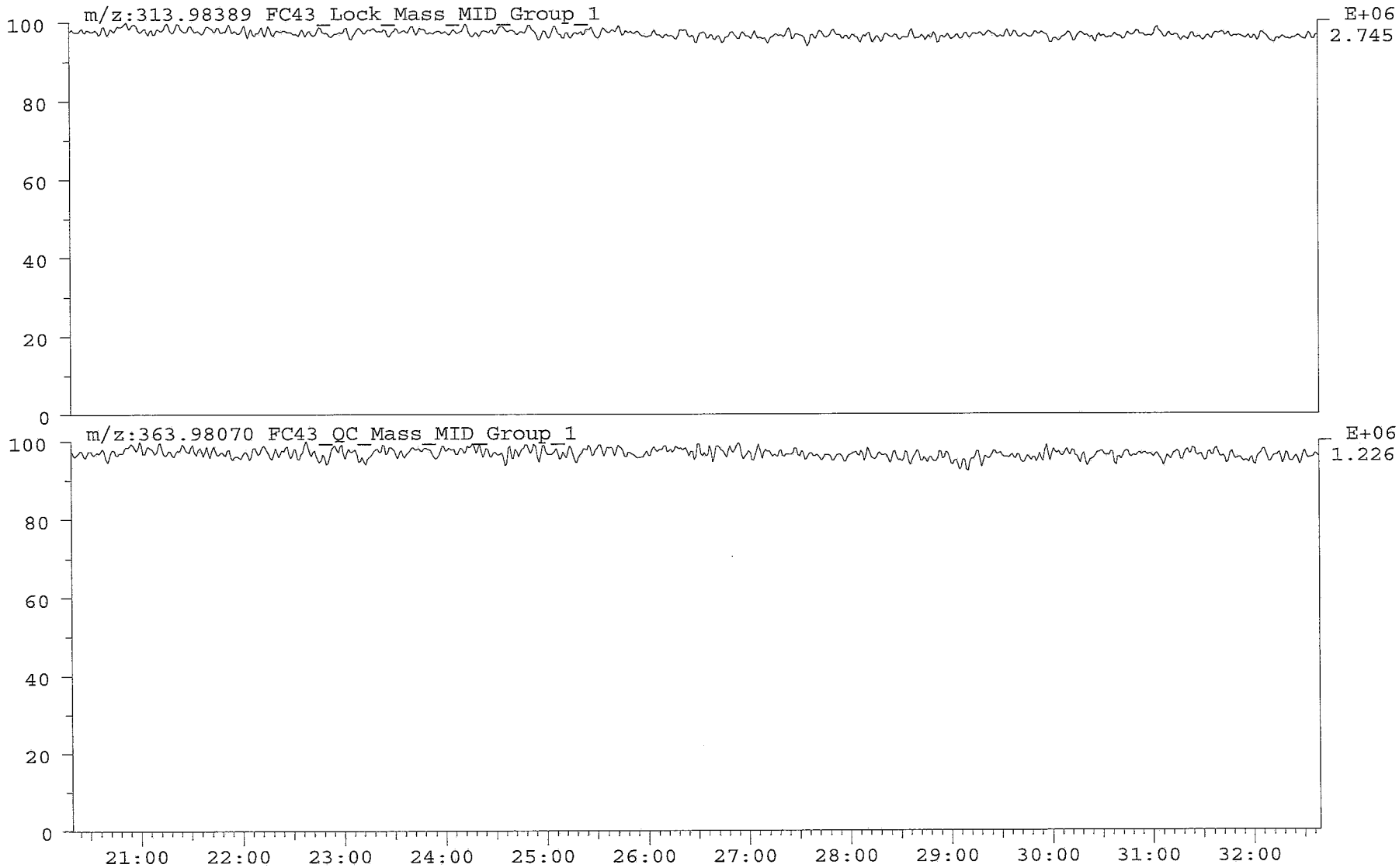
CHRO: d2tmwfpgc 12-Sep-12 Elapse: 27:29.5 918
Samp: WO=mwfpg1ac Meth=IN2 Dil=1 Start : 01:32:26 2661
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 818 > 1023 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



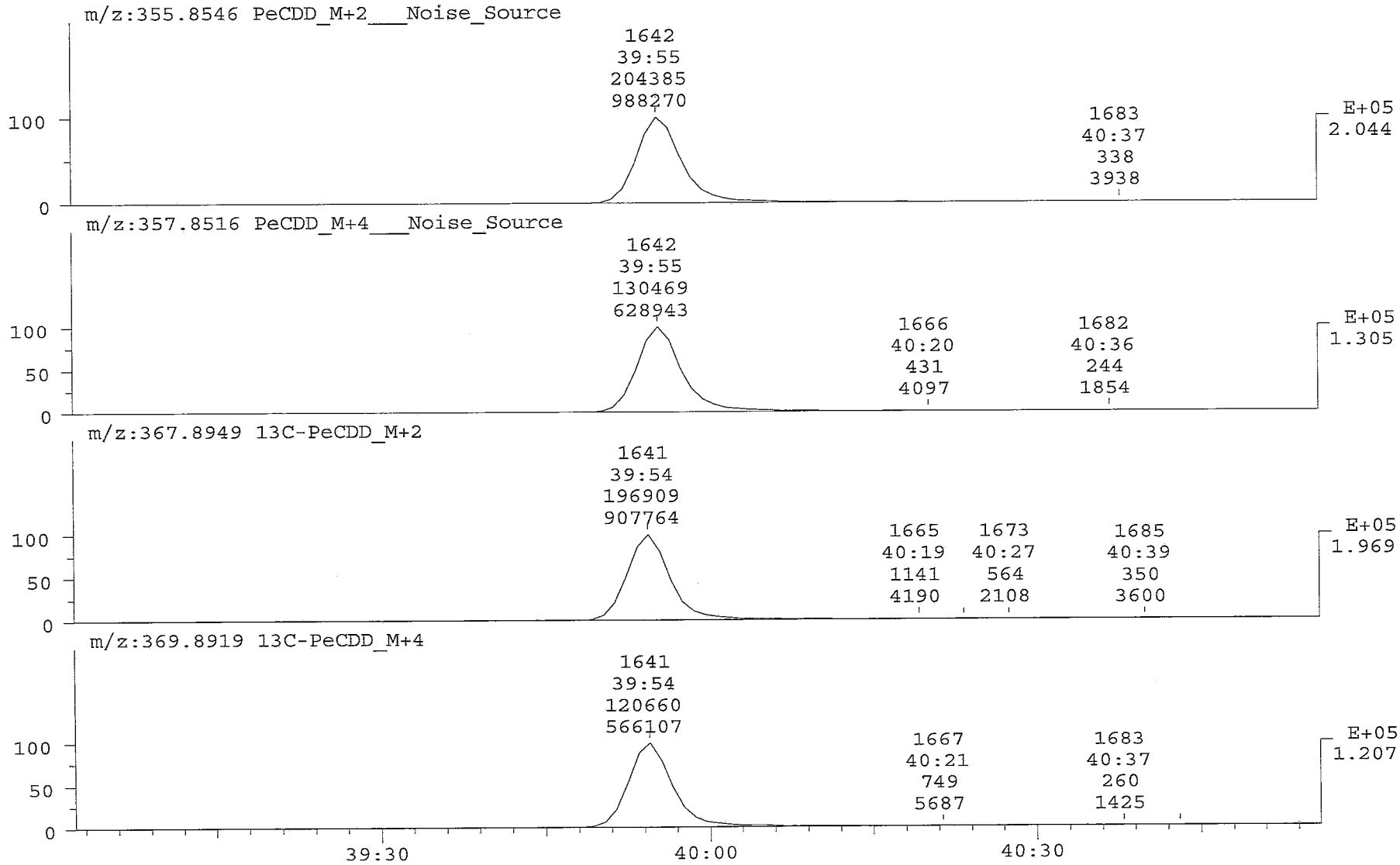
CHRO: d2tmwfpgc 12-Sep-12 Elapse: 27:29.5 918
Samp: WO=mwfpg1ac Meth=IN2 Dil=1 Start : 01:32:26 2661
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 492 > 1225 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



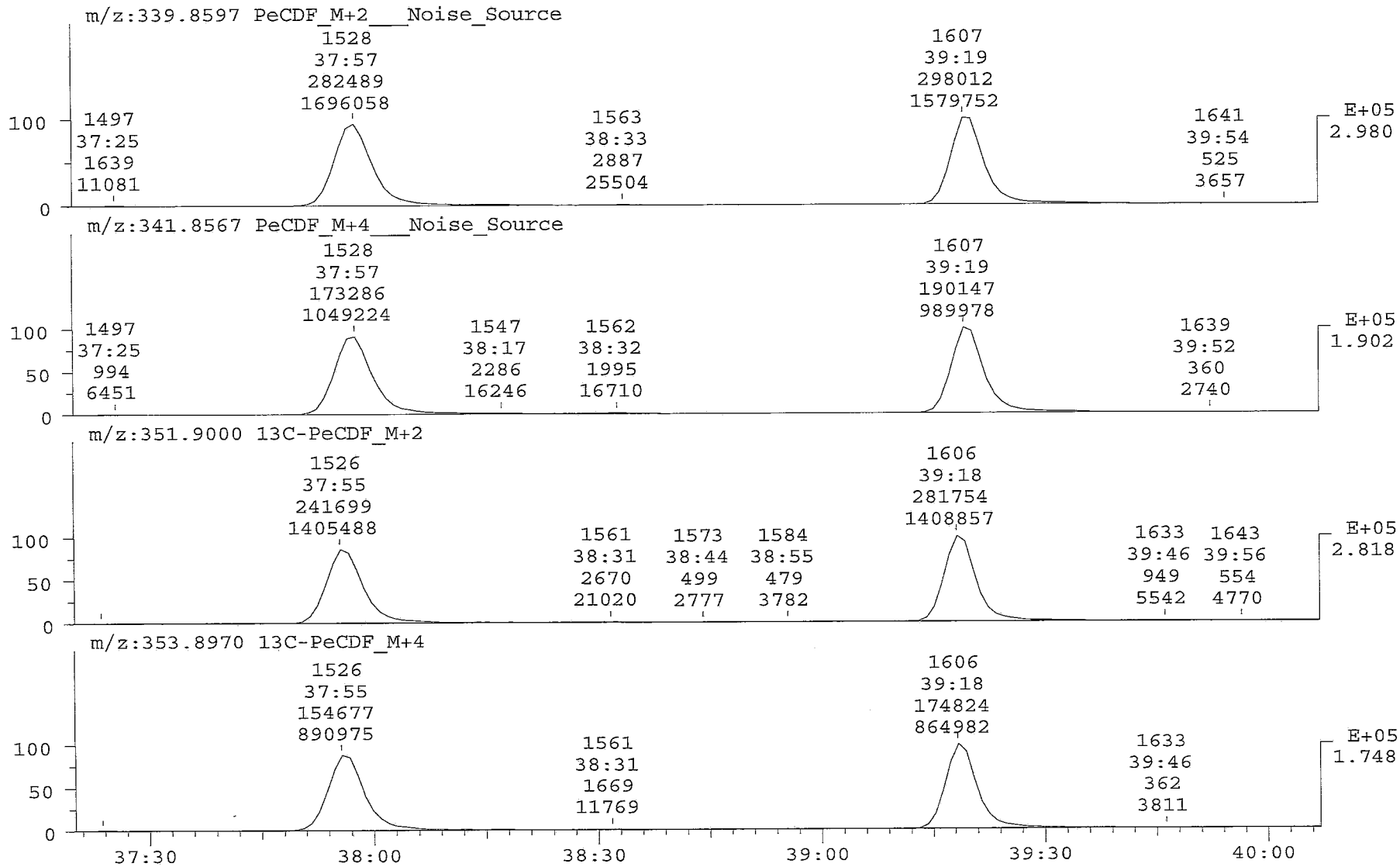
```
CHRO:  d2tmwfpgc                                12-Sep-12   Elapse:  27:29.5      918
Samp:  WO=mwfpg1ac Meth=IN2 Dil=1                           Start :  01:32:26    2661
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm      Label wndw:   492 > 1225            Masses:  303 > 514
Area:  5, 0.50, 15      Baseline  :   100, 3                Label :  0, 0.0
Disp:  Height  Area
```



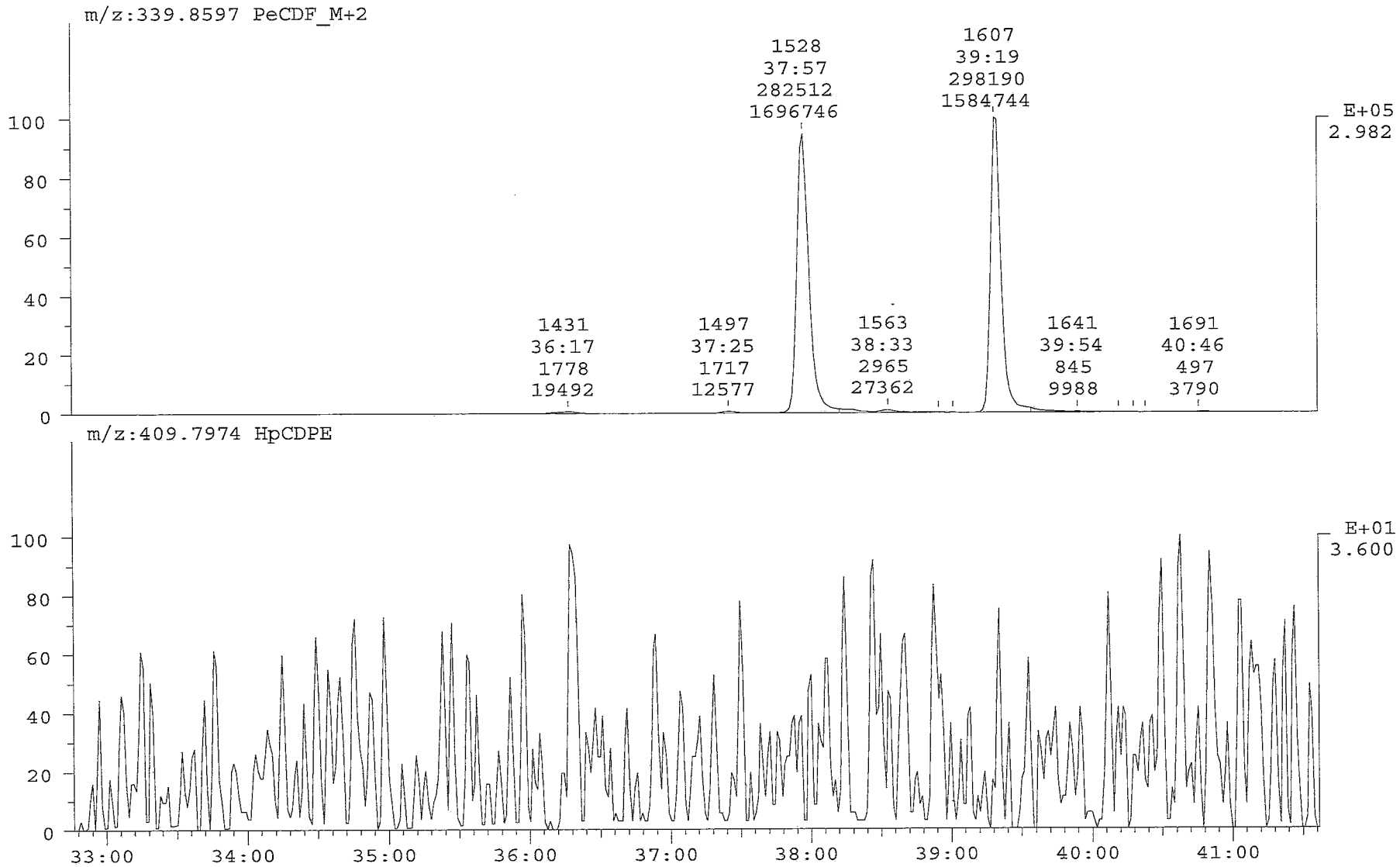
CHRO: d2tmwfpgc 12-Sep-12 Elapse: 39:55 1642
Samp: WO=mwfpg1ac Meth=IN2 Dil=1 Start : 01:32:26 2661
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 1590 > 1701 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



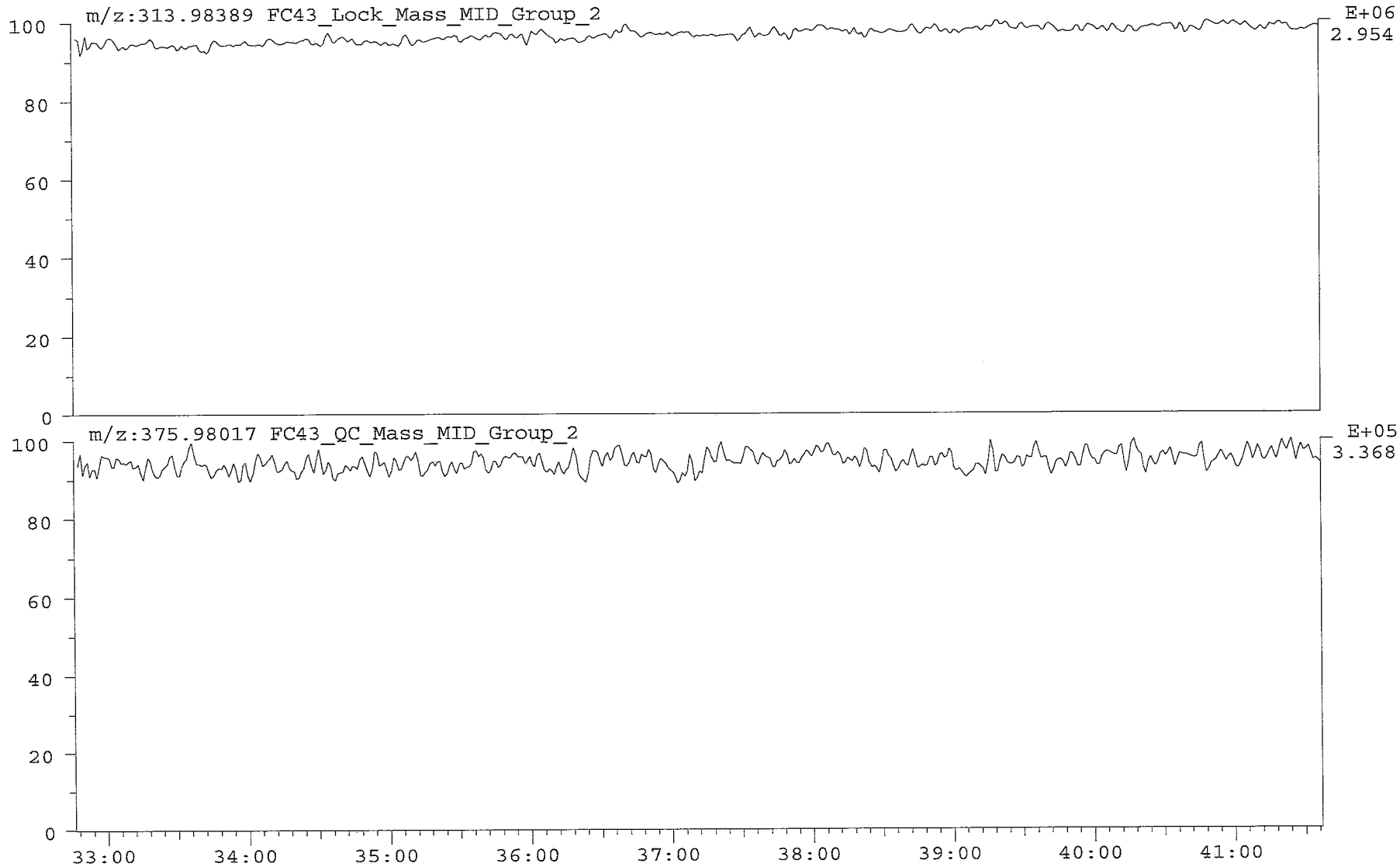
```
CHRO:  d2tmwfpgc                                12-Sep-12  Elapse:  38:43      1572
Samp:  WO=mwfpg1ac Meth=IN2 Dil=1                          Start :  01:32:26   2661
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1491 > 1653           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



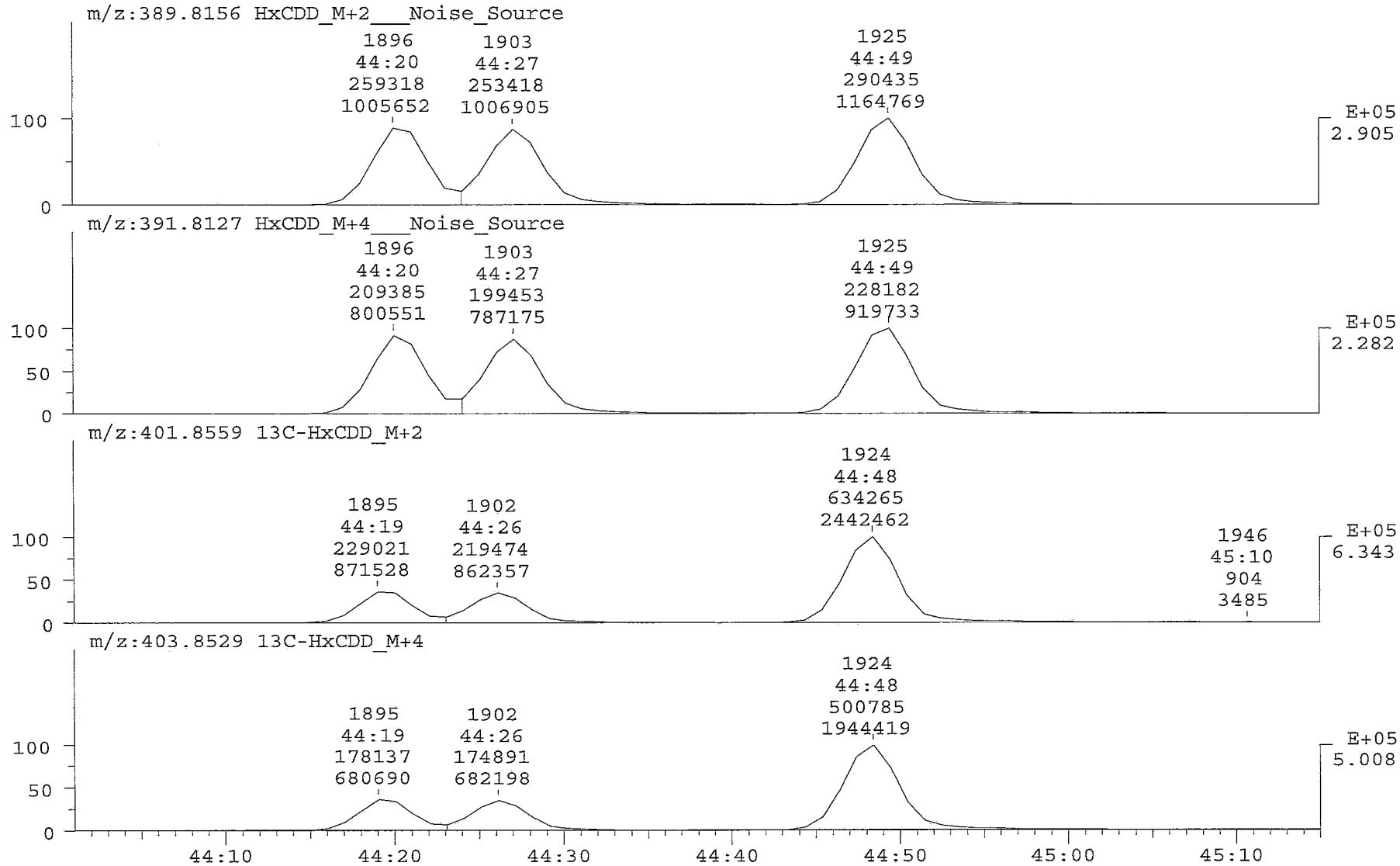
```
CHRO:  d2tmwfpgc                                12-Sep-12  Elapse:  38:43      1572
Samp:  WO=mwfpg1ac Meth=IN2 Dil=1                          Start :  01:32:26   2661
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1228 > 1740           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



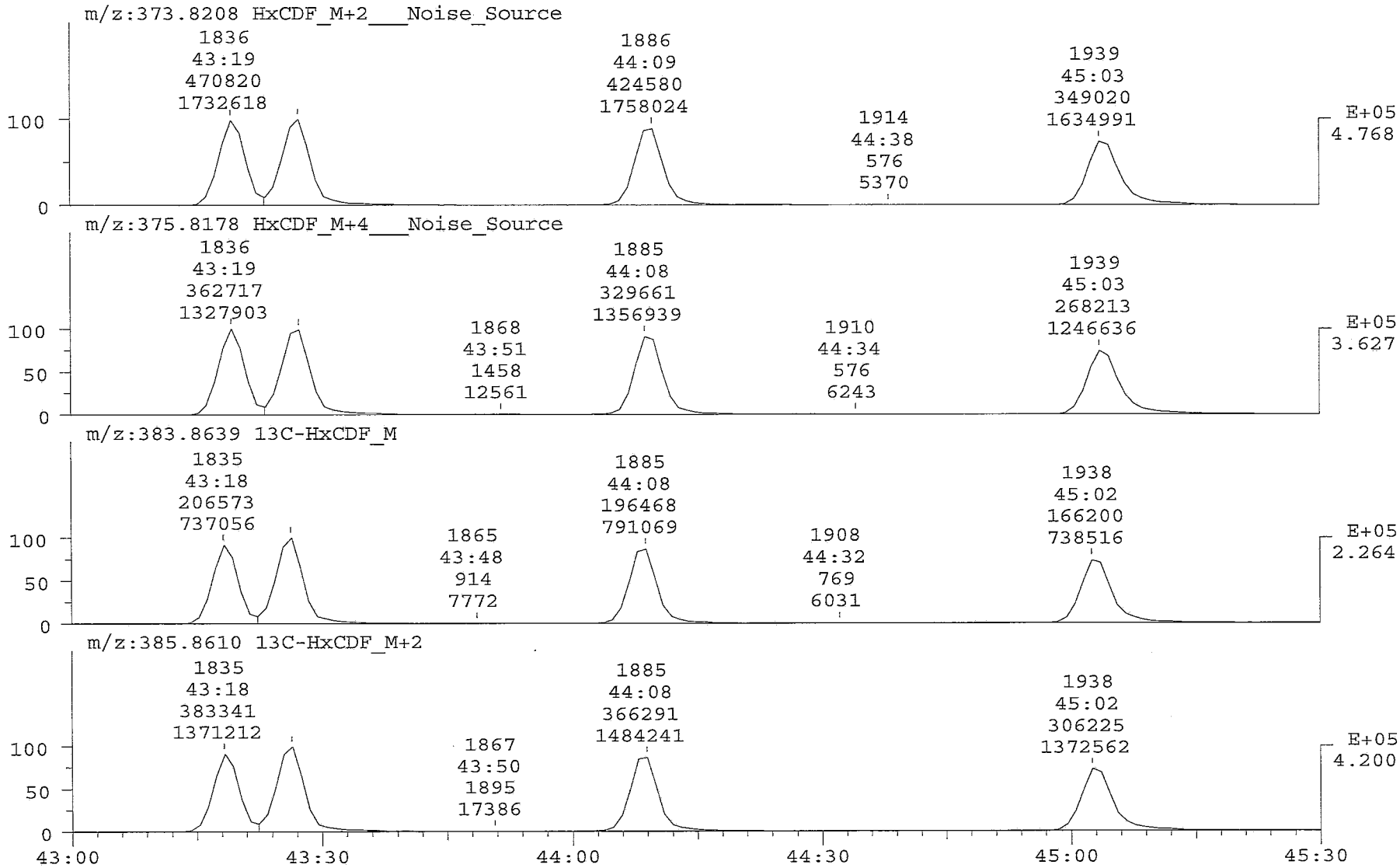
```
CHRO:  d2tmwfpgc                                12-Sep-12  Elapse:  38:43      1572
Samp:  WO=mwfpg1ac Meth=IN2 Dil=1                          Start :  01:32:26   2661
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1228 > 1740           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  0, 0.0
Disp:  Height  Area
```



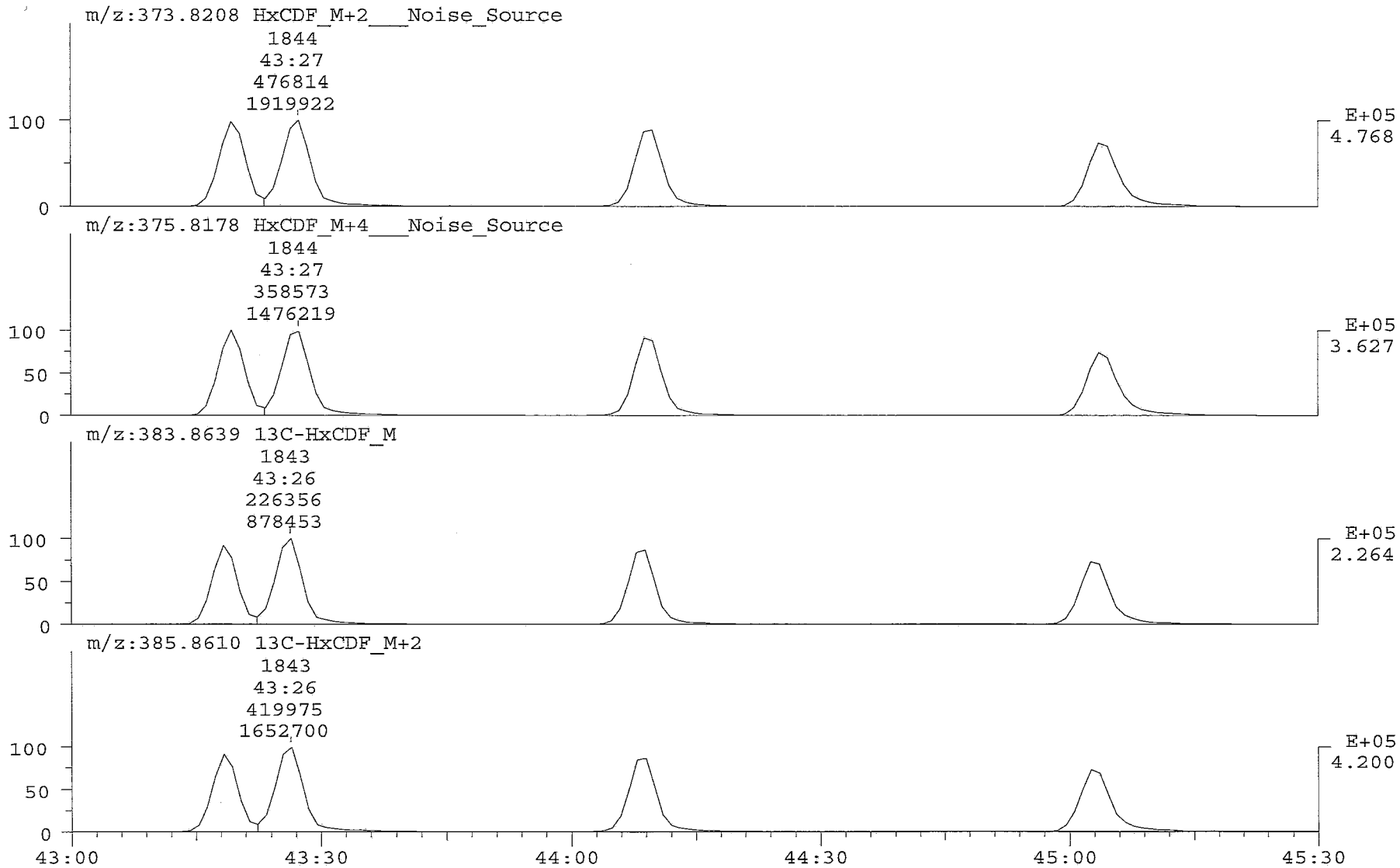
CHRO: d2tmwfpgc 12-Sep-12 Elapse: 44:38 1914
Samp: WO=mwfpg1ac Meth=IN2 Dil=1 Start : 01:32:26 2661
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 1877 > 1950 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



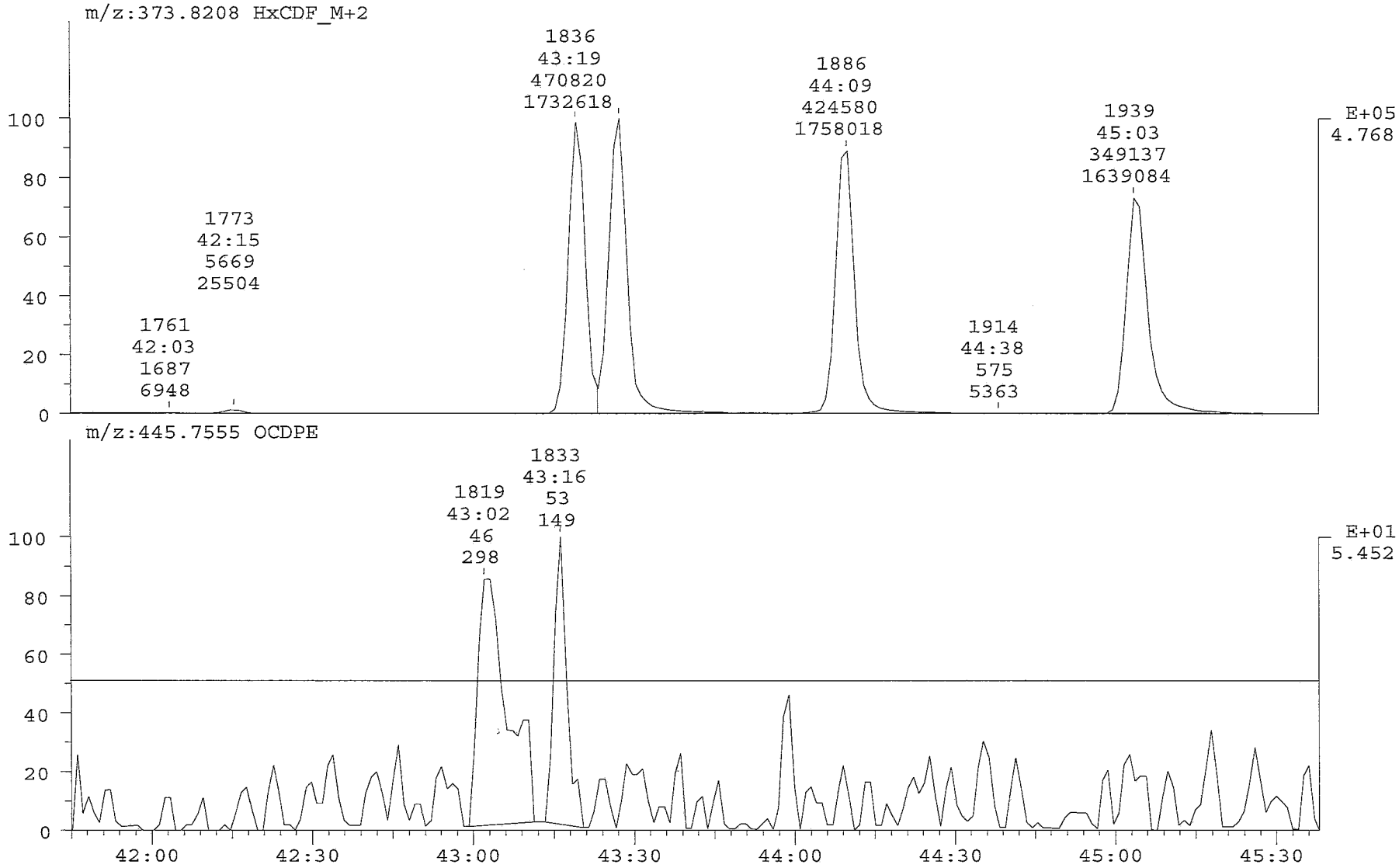
CHRO: d2tmwfpgc 12-Sep-12 Elapse: 44:15 1891
Samp: WO=mwfpg1ac Meth=IN2 Dil=1 Start : 01:32:26 2661
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 1817 > 1965 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



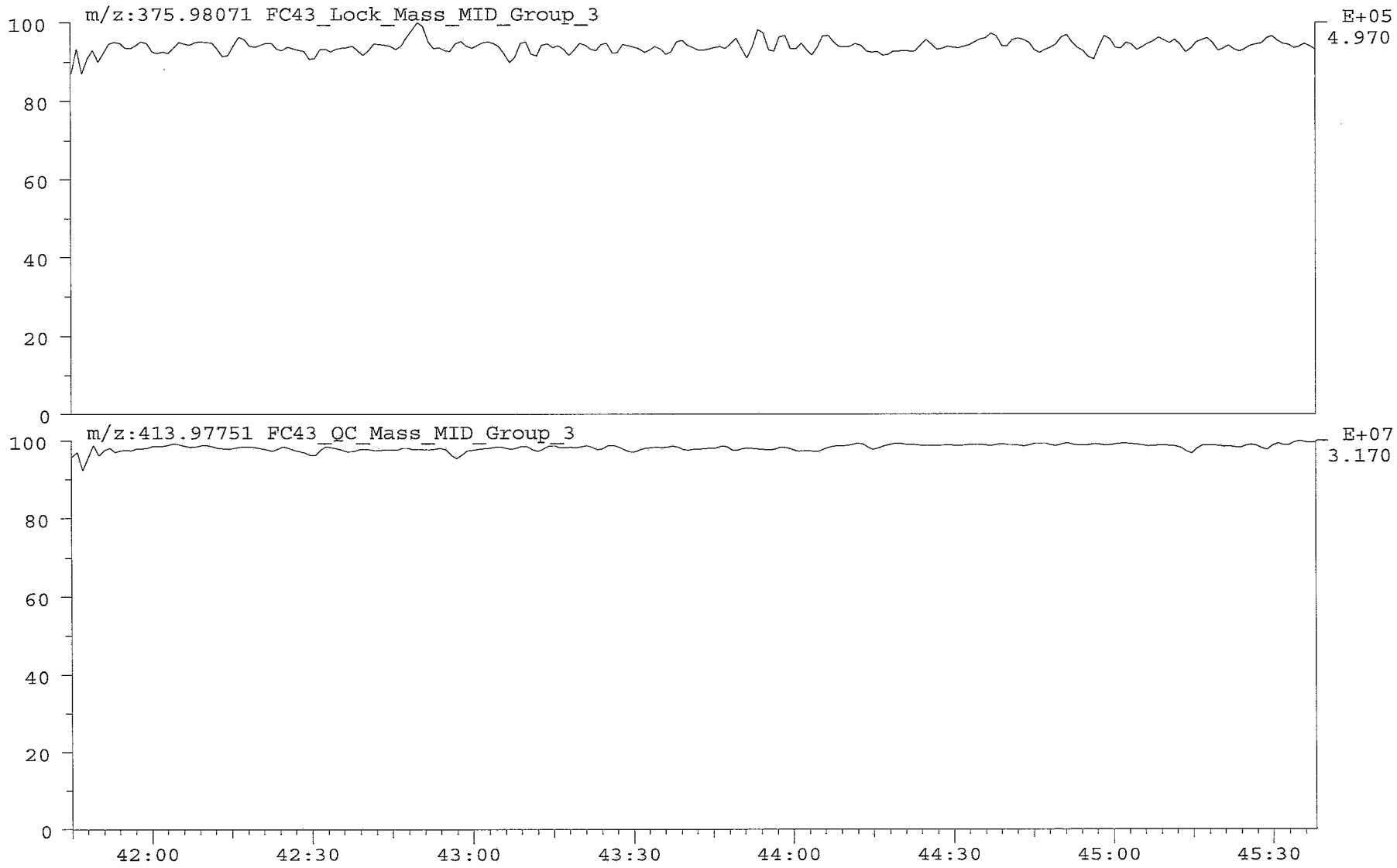
```
CHRO:  d2tmwfpgc                                12-Sep-12   Elapse:  43:27      1844
Samp:  WO=mwfpg1ac Meth=IN2 Dil=1                           Start :  01:32:26   2661
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1840 > 1848            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



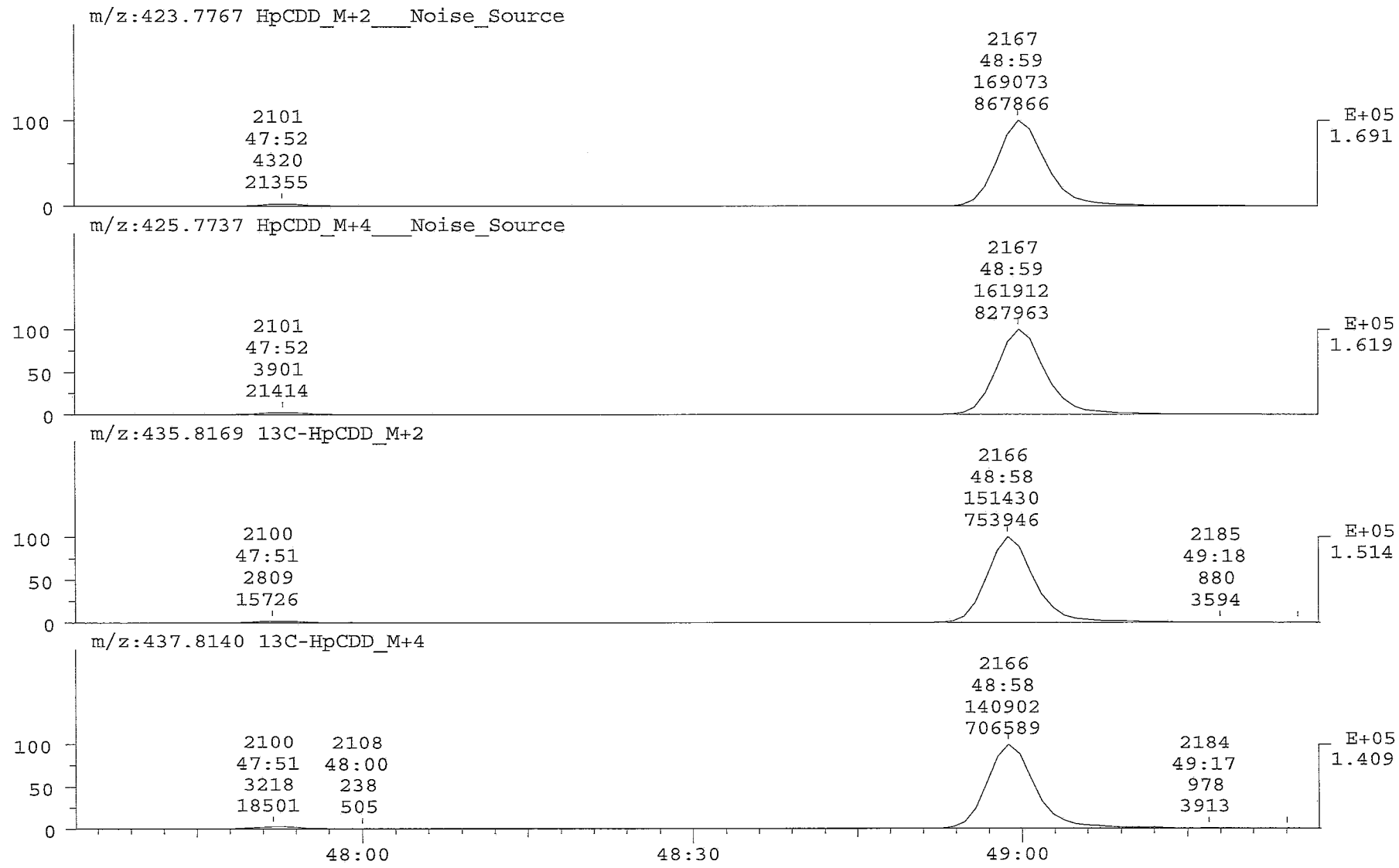
```
CHRO:  d2tmwfpgc                                12-Sep-12   Elapse:  43:27      1844
Samp:  WO=mwfpg1ac Meth=IN2 Dil=1                           Start :  01:32:26   2661
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1743 > 1973            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



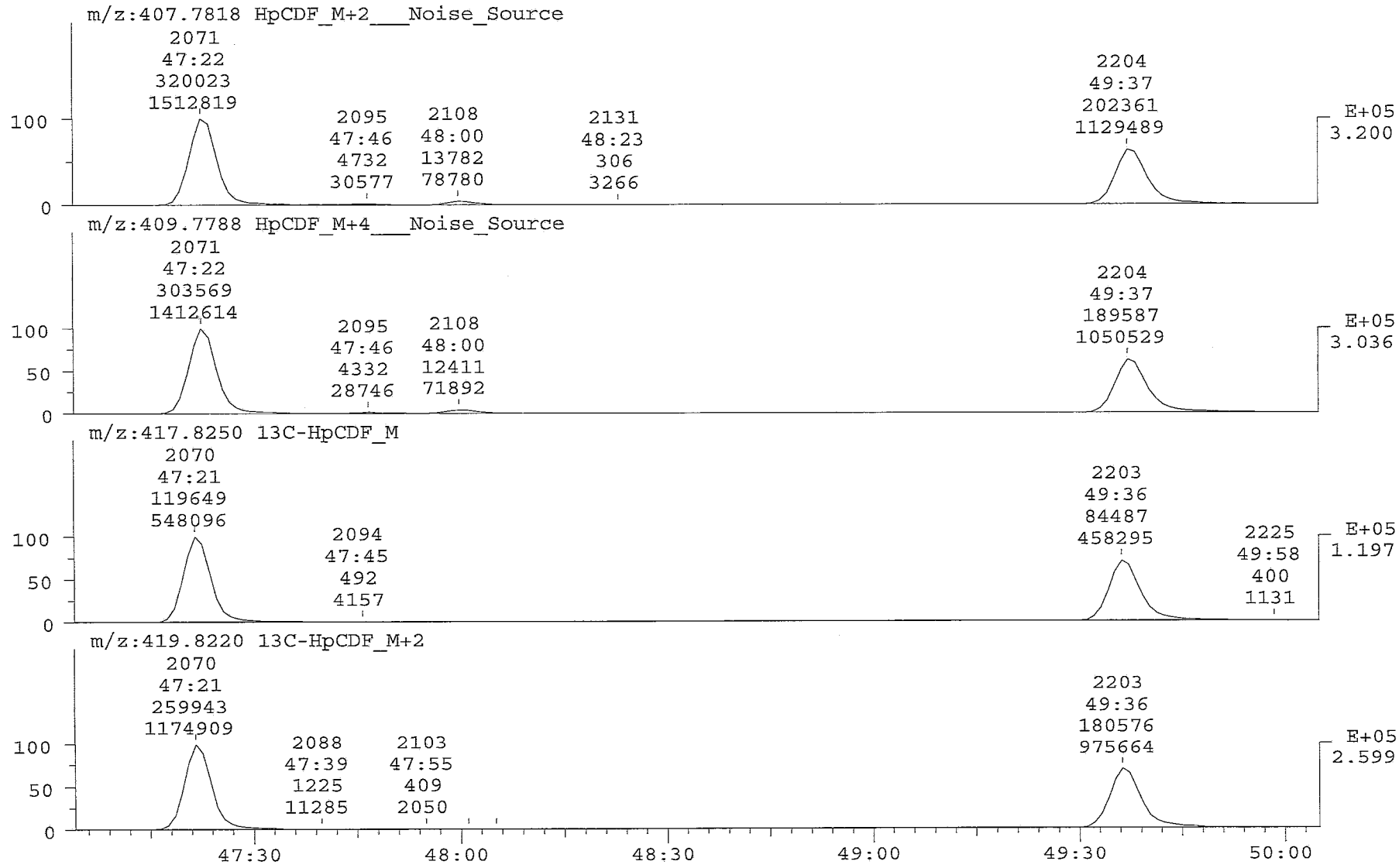
```
CHRO:  d2tmwfpgc                                12-Sep-12   Elapse:  43:27      1844
Samp:  WO=mwfpg1ac Meth=IN2 Dil=1                           Start :  01:32:26   2661
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   1743 > 1973            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  0, 0.0
Disp:  Height  Area
```



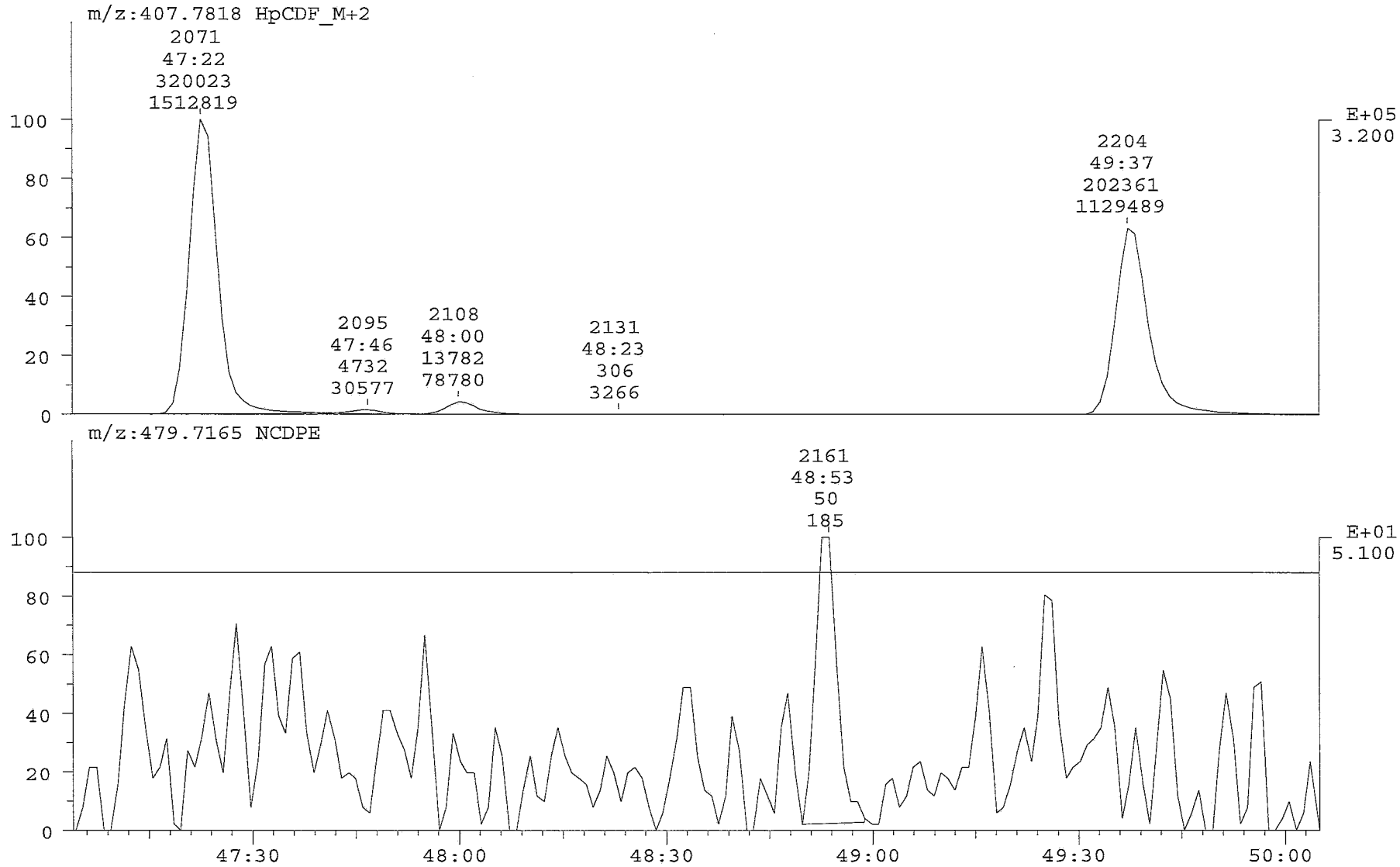
```
CHRO:  d2tmwfpgc                                12-Sep-12   Elapse:  43:27      1844
Samp:  WO=mwfpg1ac Meth=IN2 Dil=1                           Start :  01:32:26   2661
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2082 > 2194            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



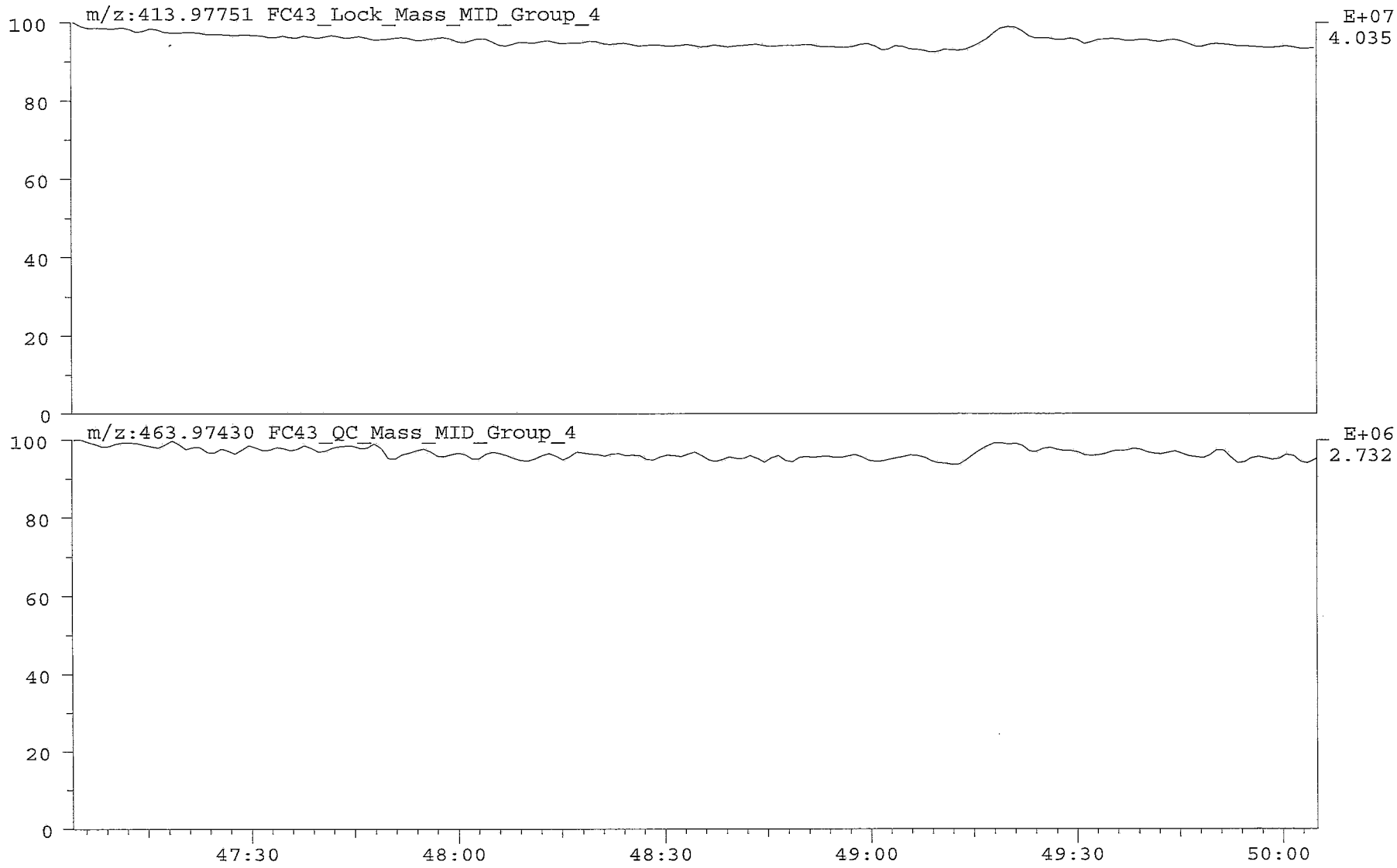
CHRO: d2tmwfpgc 12-Sep-12 Elapse: 48:34 2142
Samp: WO=mwfpg1ac Meth=IN2 Dil=1 Start : 01:32:26 2661
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 2053 > 2231 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



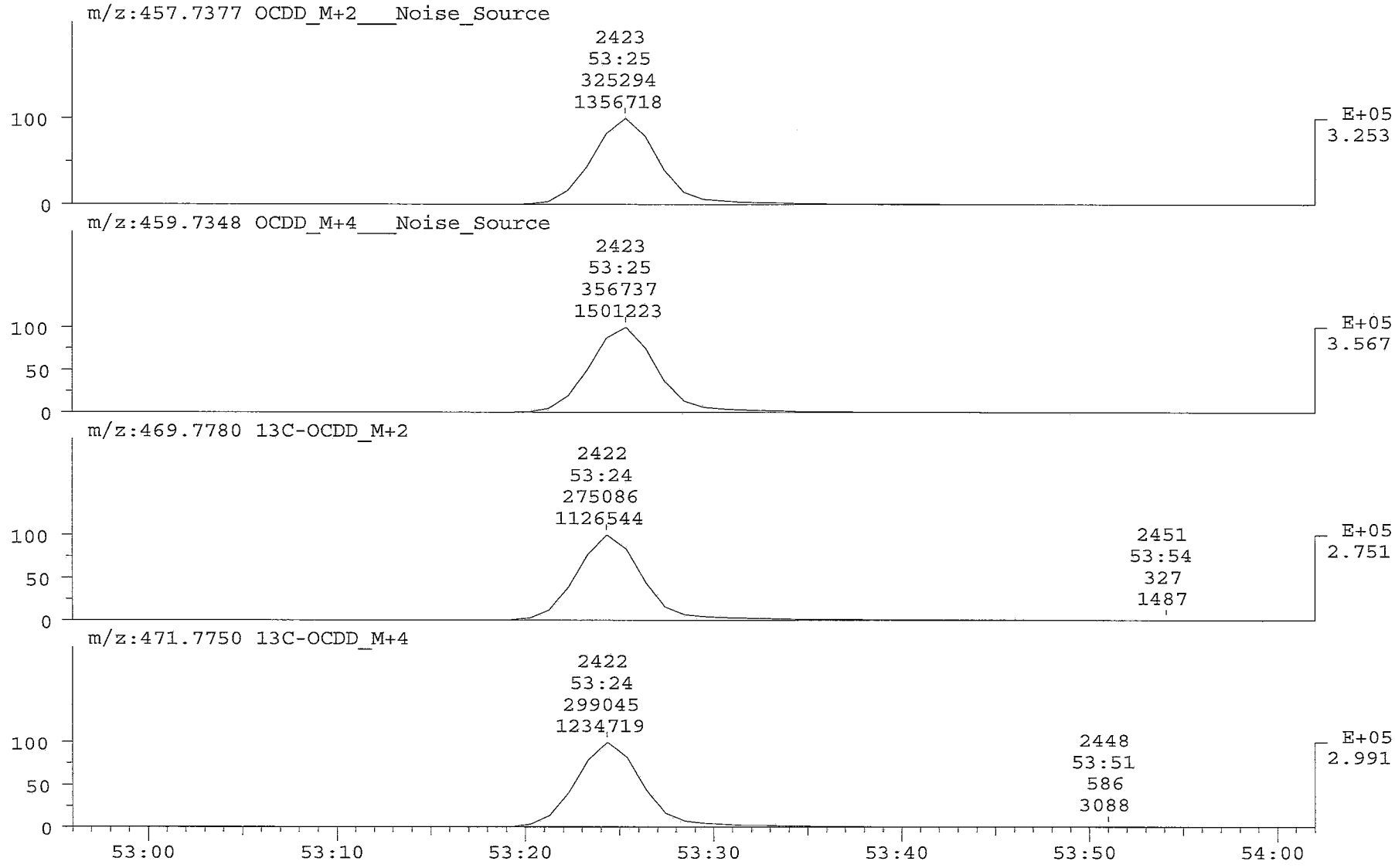
CHRO: d2tmwfpgc 12-Sep-12 Elapse: 48:34 2142
Samp: WO=mwfpg1ac Meth=IN2 Dil=1 Start : 01:32:26 2661
Comm: Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode: EI ESI + Q1MS UP LR Study : 2249033 (10.0g)
Oper: LKM Inlet : LC
Peak: 100.00 ppm Label wndw: 2053 > 2231 Masses: 303 > 514
Area: 5, 0.50, 15 Baseline : 100, 3 Label : -2, 5.0
Disp: Height Area



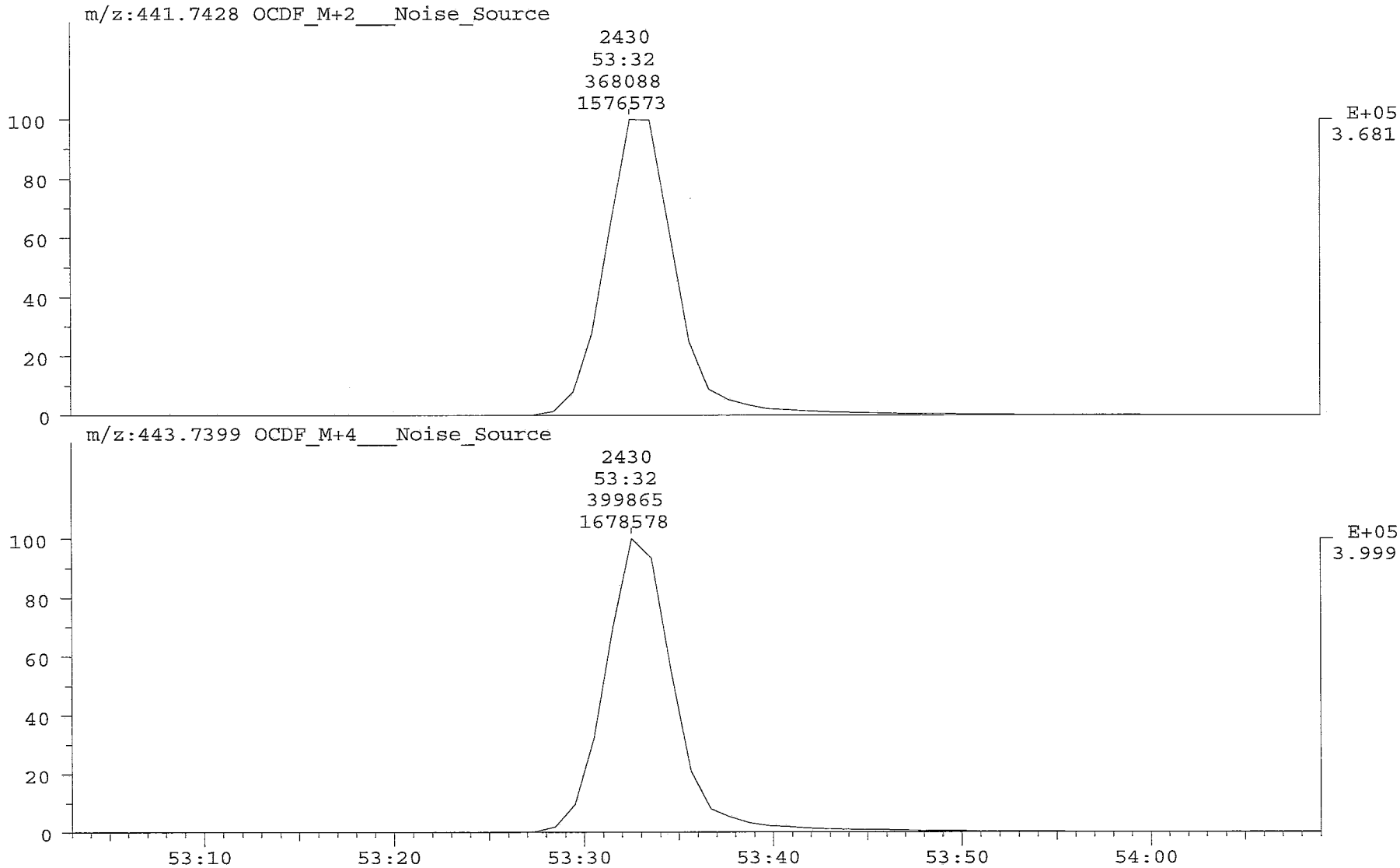
```
CHRO:  d2tmwfpgc                              12-Sep-12   Elapse:  48:34      2142
Samp:  WO=mwfpg1ac Meth=IN2 Dil=1                         Start :  01:32:26   2661
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                Study :  2249033 (10.0g)
Oper:  LKM                                                Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2053 > 2231          Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3               Label :  0, 0.0
Disp:  Height  Area
```



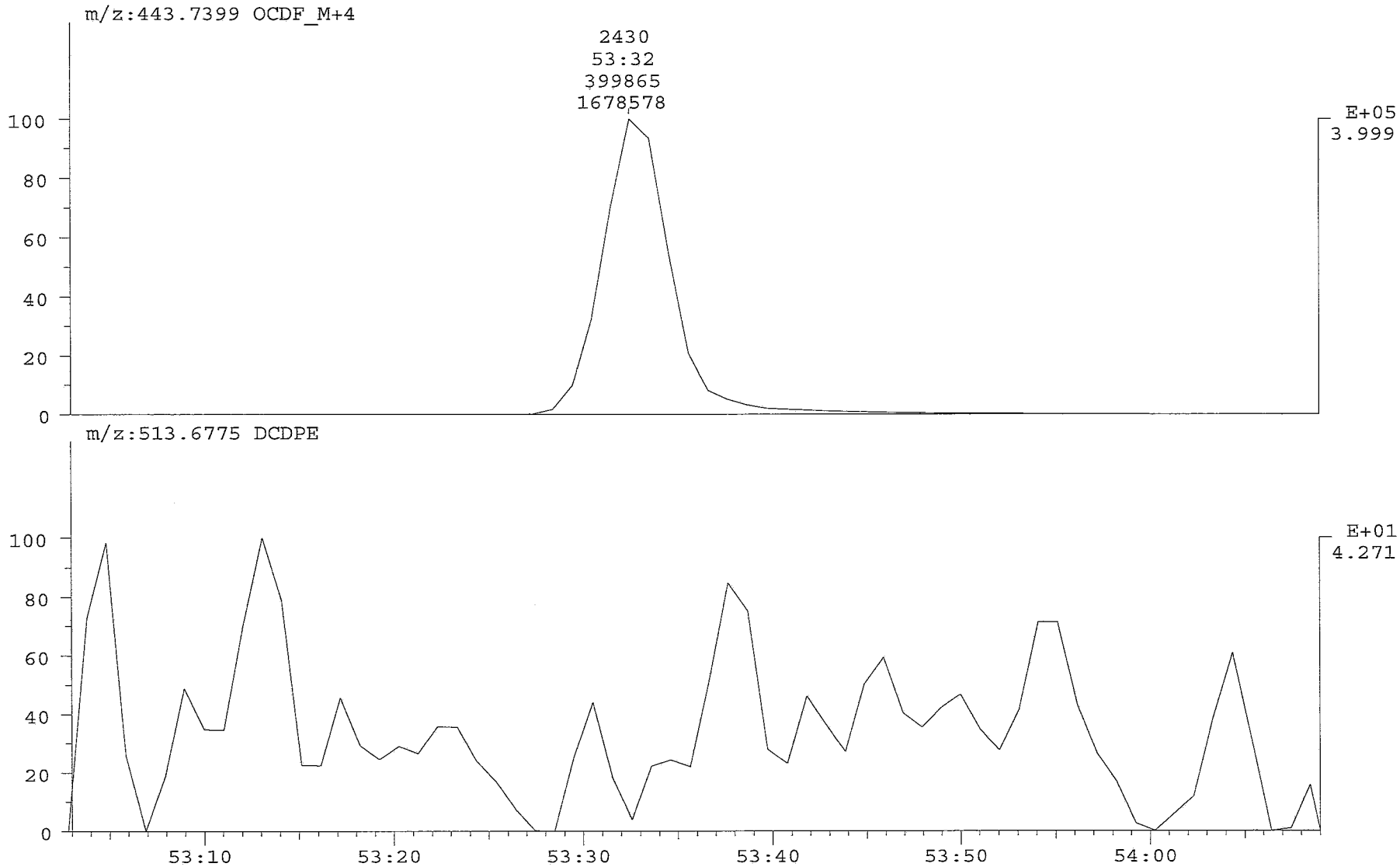
```
CHRO:  d2tmwfpgc                                12-Sep-12   Elapse:  53:26      2424
Samp:  WO=mwfpg1ac Meth=IN2 Dil=1                           Start :  01:32:26   2661
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2394 > 2459            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



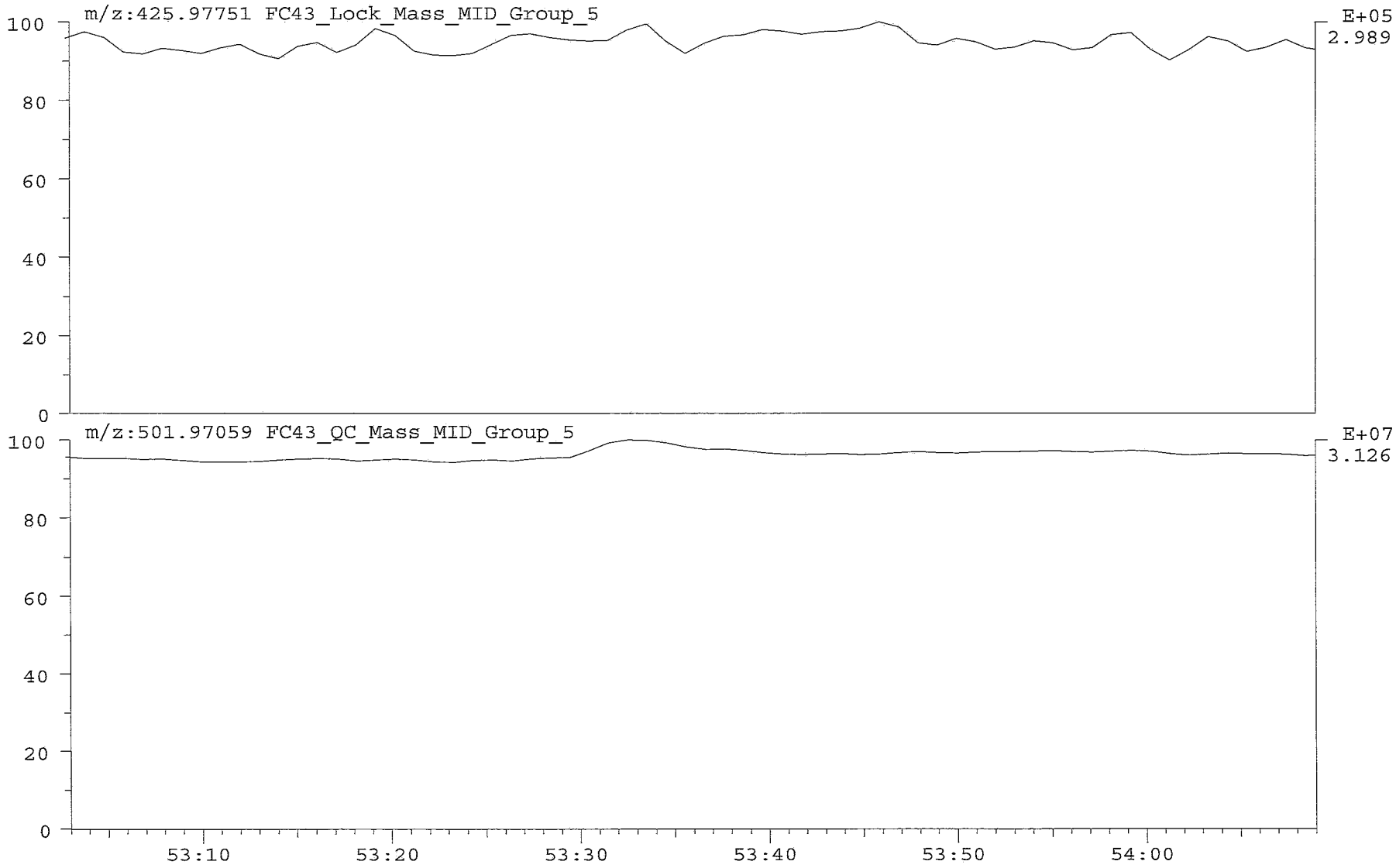
```
CHRO:  d2tmwfpgc                                12-Sep-12   Elapse:  53:32      2430
Samp:  WO=mwfpg1ac Meth=IN2 Dil=1                           Start :  01:32:26   2661
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                  Study :  2249033 (10.0g)
Oper:  LKM                                                  Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2401 > 2466            Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                 Label :  -2, 5.0
Disp:  Height  Area
```



```
CHRO:  d2tmwfpgc                                12-Sep-12  Elapse:  53:32      2430
Samp:  WO=mwfpg1ac Meth=IN2 Dil=1                          Start :  01:32:26   2661
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                 Study :  2249033 (10.0g)
Oper:  LKM                                                 Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2401 > 2466           Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3                Label :  -2, 5.0
Disp:  Height  Area
```



```
CHRO:  d2tmwfpgc                              12-Sep-12   Elapse:  53:32      2430
Samp:  WO=mwfpg1ac Meth=IN2 Dil=1                         Start :  01:32:26   2661
Comm:  Inst=d2a/1101919 Batch=20120911w3 Ccal=D3120911W3
Mode:  EI ESI + Q1MS UP LR                                Study :  2249033 (10.0g)
Oper:  LKM                                                Inlet :  LC
Peak:  100.00  ppm     Label wndw:   2401 > 2466          Masses:  303 > 514
Area:  5, 0.50, 15     Baseline  :   100, 3               Label :  0, 0.0
Disp:  Height  Area
```



*** file opened Wed Sep 12 01:36:26 2012 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - D5FBM84J

Analysis started at: 12-Sep-12 01:36:25

Analysis will stop at user request

Firmware Version: 1.03

MCAL file name: mcal1.cal

Sequence :

MID procedure: 5W_DB5_FC43_SINGLEGC

Mid Time Windows:

	Start	Measure	End	Cycletime
# 1	12:00 min	20:40 min	32:40 min	1.00 sec
# 2	32:40 min	8:58 min	41:38 min	1.00 sec
# 3	41:38 min	5:00 min	46:38 min	1.00 sec
# 4	46:38 min	5:21 min	52:00 min	1.00 sec
# 5	52:00 min	5:30 min	57:30 min	1.00 sec

Mid Masses:

Window # 1

mass	F	int	gr	time (ms)
303.9016		1	1	124
305.8987		1	1	124
313.9834	l	20	1	6
313.9834		20	1	6
315.9419		5	1	24
317.9389		5	1	24
319.8965		1	1	124
321.8936		1	1	124
327.8847		1	1	124
331.9368		5	1	24
333.9338		5	1	24
363.9802	c	20	1	6
363.9802		20	1	6
375.8364		1	1	124

Window # 2

mass	F	int	gr	time (ms)
313.9834	l	20	1	7
313.9834		20	1	7
339.8597		1	1	146
341.8567		1	1	146
351.9000		5	1	29
353.8970		5	1	29
355.8546		1	1	146
357.8516		1	1	146
367.8949		5	1	29
369.8919		5	1	29
375.9802	c	20	1	7

```
  375.9802     20  1        7
  409.7974      1  1      146
 Window # 3
      mass F  int  gr  time (ms)
  373.8208      1  1      146
  375.8178      1  1      146
  375.9802 l   20  1        7
  375.9802     20  1        7
  383.8639      5  1       29
  385.8610      5  1       29
  389.8158      1  1      146
  391.8127      1  1      146
  401.8559      5  1       29
  403.8529      5  1       29
  413.9770 c   20  1        7
  413.9770     20  1        7
  445.7555      1  1      146
 Window # 4
      mass F  int  gr  time (ms)
  407.7817      1  1      146
  409.7788      1  1      146
  413.9770 l   20  1        7
  413.9770     20  1        7
  417.8250      5  1       29
  419.8220      5  1       29
  423.7767      1  1      146
  425.7737      1  1      146
  435.8169      5  1       29
  437.8140      5  1       29
  463.9738 c   20  1        7
  463.9738     20  1        7
  479.7165      1  1      146
 Window # 5
      mass F  int  gr  time (ms)
  425.9770 l   20  1        7
  425.9770     20  1        7
  441.7428      1  1      159
  443.7399      1  1      159
  457.7377      1  1      159
  459.7348      1  1      159
  469.7780      5  1       31
  471.7750      5  1       31
  501.9706 c   20  1        7
  501.9706     20  1        7
  513.6775      1  1      159

MID Window terminated after 32.683333 minutes
MID Window end time was 32.670000 minutes
MID Window terminated after 41.650000 minutes
MID Window end time was 41.650000 minutes
MID Window terminated after 46.650000 minutes
MID Window end time was 46.650000 minutes
MID Window terminated after 52.000000 minutes
MID Window end time was 52.000000 minutes
MID Window terminated after 57.500000 minutes
MID Window end time was 57.500000 minutes

Tune file name: C:\Xcalibur\System\DFS\MSI\Tune2.DFSTune

DFS - Parameter
```

ACCU	1000.0000	BCORRS	0.0177	BMASS	311.9834
BQUAD	1.2000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	15.0000	ECORR	1.0011	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9998	EDACZ	1714.2381
ELEN	-45.0000	EMULT	1544.0000	ENS	185.0000
ENSBR	1.2000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	175.0000	EXSBR	3.5000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	375.8364	FMII	50.0000	FQUAD	18.5000
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0135	FVINLET	0.0870	FVSRC	0.0555
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSRC	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	692.0000
LENS_SYM	-3.2500	LM	375.8364	LMII	500.0000
LMASS	311.9834	LKM	425.9770	MASS	311.9834
MDAC	3517433.5834	MRANGE	1272.3339	NSAM	200.0000
NSCAN	2682.0000	NSMAX	8.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-3.0000	RECURR	0.9011	RELEN	0.0000
RES	12670.3946	RPUSHER	-2.9231	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	696.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.1270	TANAL	0.0000	TCURR	0.0000
TD	1.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	110.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	311.9834	XLENS_POT	838.0000
XLENS_SYM	-6.0000	YLENS_POT	576.0000	YLENS_SYM	15.7500

Source Gauge: 1.8e-005 mbar
Analyzer Penning: 8.2e-008 mbar
Pirani Analyse: 1.4e-002 mbar
Pirani Source: 5.5e-002 mbar
Pirani Inlet System: 8.7e-002 mbar

Scantype is electric

Sourcemode is EI POS

MID Time Window 1: Resolution is 12503.
MID Time Window 2: Resolution is 12299.
MID Time Window 3: Resolution is 12869.
MID Time Window 4: Resolution is 12696.
MID Time Window 5: Resolution is 12670.

Amplifier Offset: 94.

*** File closed Wed Sep 12 02:33:57 2012 ***

User: finnigan
Host: knx-alpha5.stl-inc.com
Class: knx-alpha5.stl-inc.com
Job: d2tmwfpgc.log

Miscellaneous Data

TestAmerica Knoxville Dioxin GC/MS Data Review / Narrative Checklist **LOT #** H2H 140413
Method: 8290/8290A- KNOX-ID-0004-R11 **Page 1 of 1** **Batch#** 2249033

Review Items A. Initial Calibration	N/A	Yes	No	Why is data reportable?	2nd Level
1. Was the correct ICAL used for quantitation? (Check 1-2 compounds for batch by manually calculating concentration using the ICAL avg. RF.)		✓			✓
B. Continuing Calibration	**N/A**	**Yes**	**No**		**2nd**
1. Has a Continuing Calibration Checklist been completed for each analytical batch?		✓			✓
C. Client Sample AND QC Sample Results	**N/A**	**Yes**	**No**		**2nd**
1. Were all special project requirements met?		✓			✓
2. Were the header information, prep factors, and dilution factors verified?		✓			✓
3. Is logbook date/time of analysis correct?		✓			✓
4. Sample analyses done within preparation and analytical holding time (HT)? *If no, list samples:* _____		✓		☐ HT expired upon receipt. ☐* Client requested analysis after HT expired. ☐ Re-extraction done after HT expired.	✓
5. Are internal standards within QC limits specified in Table 13? *If no, list samples and reason (e.g.,* **sur1***):* Sample Reason Sample Reason		✓		☐* **[sup]** Ion suppression due to matrix. ☐* **[low]** Low recovery. S/N >10 and EDL<ML. ☐ **[sam]** Not enough sample to re-extract. ☐ **[dil]** Dilution showed acceptable %R. ☐ **[mtx]** Obvious matrix interference. Further cleanup not possible. ☐* **[unk]** At client's request, data was flagged as estimated and released without further investigation.	✓
6. Were reported PCDD/Fs which did not meet the criteria below, properly calculated and reported as EMPCs?: • RT of 2378 isomers within -1 to +3 seconds of associated labeled isomer. • RT of non-2378 isomers within established first/last windows. • Both native ions maximized within ±2 seconds. • Ion abundance ratios within the control limits specified in Table 22. • No corresponding peak at PCDPE mass.		✓			✓
7. Were all 2378-TCDF hits ≥ ML confirmed by analysis on DB-225?	✓				✓
8. Are positive results > ML within calibration range? *If no, list samples:* _____		✓		☐ OCDD/F or non-2378 exceeded calibration range ☐ Sample extracted at lowest possible volume	✓
9. Are all manual integrations performed properly and clearly identified and approved?		✓			✓
10. Were before/after chromatograms reviewed to determine whether the software and manual integrations were appropriate?.		✓			✓
11. Final report acceptable? (Results correct, DLs calculated correctly, units correct, IS %R correct, appropriate flags used, dilution factor correct, and extraction/ analysis dates correct.)		✓			✓
12. Was a narrative prepared and all deviations noted?		✓			✓
D. Preparation/Matrix QC	**N/A**	**Yes**	**No**	**Why is data reportable?**	**2nd**
1. LCS/LCSD done per prep batch and all analytes within the limits specified in QuantIMS reference data?		✓		☐* Reanalysis not possible-insufficient sample. ☐LCS/LCSD %R high and affected analyte(s) were <ML in associated samples. ☐ See comment/narrative	✓
2. Method blank done per prep batch, method/instrument blank analyzed with each sequence and analytes present in the method blank ≤ ML? *If no, list blank ID:* _____		✓		☐ Sample results are > 10x higher than blank. ☐* There is no analyte > RL in the samples associated with method blank. ☐* Reanalysis not possible-insufficient sample	✓
3. MS/MSD recoveries and RPDs within laboratory generated QC limits? *If no, list MS/MSD* _____	✓			☐ LCS acceptable, indicating sample matrix effects. ☐ LCS acceptable, high analyte concentration. ☐ LCS acceptable, lack of sample homogeneity.	✓
E. Other	**N/A**	**Yes**	**No**		**2nd**
1. Are all nonconformances documented appropriately and copy included with deliverable?	✓				✓

Analyst: [signature]	**Date:** 9/19/12	**Analyst:** [signature]	**Date:** 9-19-12
Comments:		**Comments:**	

* Avg DRF used for 2378-TCDF
12091852
9 MSN 9/19/12 +21.1%D

* Such action must be taken in consultation with client.

ID022R16.doc, 031212

TestAmerica Knoxville Prep Batch Review Checklist Batch # 2249033

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd Level
1. Were the samples extracted within the required holding times?		✓		If No, NCM #: _____	—
2. Are the final extracts free of water, precipitates, multiple phases, and for HRMS - color?		✓			—
3. Were all project specific requirements met as noted on the Lot Checklists (L40) and the Sample List report?		✓			—
4. Were MS Run numbers assigned properly?	✓				—
5. Were the correct weights and volumes entered into QuantIMS for all samples and QC?		✓			—
6. Was the correct completion date entered into QuantIMS?		✓			—
7. Were the spike IDs and volumes entered correctly into QuantIMS?		✓			—
8. Were all appropriate notes and observations recorded on the extraction benchsheet and in QuantIMS?		✓			—
9. Was the extraction batch reviewed in QuantIMS using LIM L21?		✓			—
10. Does the prep batch paperwork package contain all required documentation which has been properly and completely filled out, including: • Extraction Benchsheet • QuantIMS Benchsheet • Lot Checklists (L40) for all lots in batch • Sample List • Compound List Report • SOG Sample Tracking Sheet		✓			—
11. Are all nonconformances documented appropriately and copy included with deliverable?	✓			If Yes, NCM#: _____	✓

Analyst : ES Date: 9/10/12

Comments:

2nd Level Reviewer: AU Date: 9/10/12

Comments:

ID025R14.doc 030811

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

FM

Run Date: 9/10/12
Time: 14:16:35

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
—	—	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets computer batch: correct & all match
			—	—	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
Y Package Submitted to AnalyticalGroup
Y Bench Sheet Copied per COC

Extractionist: 044305 David R. McNeil
004403 Cornelia Apahidean

Concentrationist: 403968 Emayet Spencer

QC BATCH: 2249033

PREP DATE: 9/05/12 16:00
COMP DATE: 9/10/12 17:00

Reviewer/Date: SPENCERE / 9/10/12

Dioxins/Furans, HRGC/HRMS (8290A)
SOXHLET (NONE,Na2SO4)

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJI	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
9/08/12	9/28/12	H2H140411-001 **MV4WF-1-AA**		11	Q&	SOLID	**10.0g** 20.00uL	NA	NA	NA	TOLUENE	350.0	HEXANE	10.0	DF0171 1.0ML HR 13C
COMMENTS:															
9/08/12	9/28/12	H2H140411-002 **MV4WG-1-AA**		11	Q&	SOLID	**10.1g** 20.00uL	NA	NA	NA	TOLUENE	350.0	HEXANE	10.0	DF0171 1.0ML HR 13C
COMMENTS:															
9/08/12	9/28/12	H2H140412-001 **MV4WH-1-AA**		11	Q&	SOLID	**10.2g** 20.00uL	NA	NA	NA	TOLUENE	350.0	HEXANE	10.0	DF0171 1.0ML HR 13C
COMMENTS:															
9/08/12	9/28/12	H2H140412-002 **MV4WJ-1-AA**		11	Q&	SOLID	**10.1g** 20.00uL	NA	NA	NA	TOLUENE	350.0	HEXANE	10.0	DF0171 1.0ML HR 13C
COMMENTS:															
9/08/12	9/28/12	H2H140412-003 **MV4WK-1-AA**		11	Q&	SOLID	**10.0g** 20.00uL	NA	NA	NA	TOLUENE	350.0	HEXANE	10.0	DF0171 1.0ML HR 13C
COMMENTS:															
9/08/12	9/28/12	H2H140412-004 **MV4WL-1-AA**		11	Q&	SOLID	**10.3g** 20.00uL	NA	NA	NA	TOLUENE	350.0	HEXANE	10.0	DF0171 1.0ML HR 13C
COMMENTS:															
9/08/12	9/28/12	H2H140412-005 **MV4WM-1-AA**		11	Q&	SOLID	**10.2g** 20.00uL	NA	NA	NA	TOLUENE	350.0	HEXANE	10.0	DF0171 1.0ML HR 13C
COMMENTS:															

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 9/10/12
Time: 14:16:35

QC BATCH: 2249033

PREP DATE: 9/05/12 16:00
COMP DATE: 9/10/12 17:00

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJI	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
9/07/12	9/28/12	H2H140413-003 **MV4WQ-1-AA**		11	Q&	SOLID	**10.0g** 20.00uL	NA	NA	NA	TOLUENE	350.0	HEXANE	10.0	DF0171 1.0ML HR 13C
COMMENTS:															
9/08/12	0/00/00	H2I050000-033 **MWFPG-1-AAB** 5		11	Q&	SOLID	**10.0g** 20.00uL	NA	NA	NA	TOLUENE	350.0	HEXANE	10.0	DF0171 1.0ML HR 13C
COMMENTS:															
9/08/12	0/00/00	H2I050000-033 **MWFPG-1-ACC** 4		11	Q&	SOLID	**10.0g** 20.00uL	NA	NA	NA	TOLUENE	350.0	HEXANE	10.0	DF0176 1.0ML NATIVE DF0171 1.0ML HR 13C
COMMENTS:															

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD
↕

NUMBER OF WORK ORDERS IN BATCH: 10

TestAmerica Knoxville
Specialty Organics Group - Sample Tracking Sheet - GC/MS Analysis Group

QC Batch No: 2249033

Work Order #		Column: RTX-5				Column: RTX-5				Column: DB-225				
		Date	Instrument	Analyst	Code	Date	Instrument	Analyst	Code	Date	Instrument	Analyst	Code	
MV4WF 1AA		9-12-12	D2A	LKM	OK					9/18/12	D12C	LKM	OK	IAE 9
MV4WG 1AA		9-18-12	D11A	KLR	OK					9/19/12	~~d12C~~ J-level	KLK	NA	-IAE 6
MV4WH 1AA		↓	↓	↓	OK						J level			
MV4WJ 1AA		↓	↓	↓	OK						—			
MV4WK 1AA		↓	↓	↓	OK						J-level			
MV4WL 1AA		↓	↓	↓	OK						J-level			
MV4WM 1AA		↓	↓	↓	OK						J-level			
MV4WQ 1AA		9-18-12	d11a	LKM	OK					9/19/12	~~d12C~~ J-level	KLK	NA.	-IAE 7
MWFPG 1AA	B	9-12-12	D2A	LKM	OK						—			
MWFPG 1AC	C	↓	↓	↓	OK						—			

Comments:

ID035R3.doc 12/05/07

1613B ☐ 8290 ☐ 8290A ☒

TestAmerica Knoxville Extraction Sheet

1613B/8290/8290A Sediment/Soil/Wipes by Soxhlet - KNOX-OP-0001

Batch Number: 2249033 | Native Spike (0.20/1.0/2.0 ng/mL) ID: DF0176 | Spiked by: DH | Witness: CA | Date: 9-5-12 | Delivered: ES 9/10/12 (Initials/Date/Time)

Soxhlet Start Date/Time: 9-5-12, 16:15 | Internal Std (1.0/2.0 ng/mL) ID: DF0171 | Spiked by: DH | Witness: CA | Date: 9-5-12

Soxhlet Stop Date/Time: 9-6-12, 9:00 | Cleanup Std (0.20 ng/mL) ID: NA | Spiked by: NA | Witness: NA | Date: NA | Received: KL 9/10/12 (Initials/Date/Time)

Soil ☒ Sediment ☐ | Recovery Std (100 ng/mL) ID: DF0180 | Spiked by: ES | Witness: ES | Date: 9/10/12

Lot Sample Number	Work Order Number	Suf	Add sample to Soxhlet thimble. Record weight (g).	Water layer decanted? (Y/N/NA)	Add IS to all samples & QC. Record volume (mL).	Add native spike to LCS, LCSD, MS, MSD. Record volume (mL).	Extract for a minimum of 16 hr in toluene.	Concentrate extracts on heating mantles.	Add 100 µL tetradecane to rinsed 40 mL vials.	Concentrate/exchange to the appropriate solvent on N-EVAP.	Add cleanup std to all 1613B extracts. Record volume (mL).	Perform GPC if needed. Record % of extract cleaned.	Concentrate/solvent exchange to hexane after GPC.	Acid/Base wash extracts if needed.	Concentrate extracts on N-EVAP to appropriate volume in hexane.	Perform silica gel/alumina column cleanup.	Concentrate to ~2 mL on N-EVAP for carbon cleanup.	Perform carbon cleanup.	Concentrate to <1 mL.	Add recovery std to mini-vial. Record volume added (µL).	Transfer extract to vial.	Conc to delivery volume in nonane. Record delivery vol (µL).
H2H140411 - 001	MV4WF1AA		10.0	NA	1.0	NA	Y	Y	Y	✓	NA	NA	NA	NA	✓	✓	✓	✓	✓	20		20
H2H140411 - 002	MV4WG1AA		10.1	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓
H2H140412 - 001	MV4WH1AA		10.2	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓
H2H140412 - 002	MV4WJ1AA		10.1	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓
H2H140412 - 003	MV4WK1AA		10.0	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓
H2H140412 - 004	MV4WL1AA		10.3	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓
H2H140412 - 005	MV4WM1AA		10.2	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓
H2H140413 - 003	MV4WQ1AA		10.0	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓
H2I050000 - 033	MWFPG1AA	B	10.0	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓
H2I050000 - 033	MWFPG1AC	C	10.0	↓	↓	↓	1.0	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓		↓
			DH	DH	DH	DH	DH	DH	DH	SA	ALS	→	→	→	→	→	ALS	MGN	ES	→		→
			9-5-12	→	→	→	→	9-6	→	9/6/12	9/7/12	→	→	→	→	→	9/7/12	9/10	9/10/12	→		→

ES 9/10/12

Extr Toluene Lot #: K42N69 | 20% KOH ID: NA | Alumina ID: 4442-10 | 95/5 Hex/$MeCl_2$ ID: 4531-122 | 75/20/5 $MeCl_2$/MeOH/Benz ID: 4531-112

Tetradecane Lot #: STB87395 | 5% NaCl ID: ↓ | Deact Silica ID: 4531-127 | 65/35 $MeCl_2$/Hex ID: 4531-129 | Carbon Col Toluene Lot #: K42N69

Conc Hexane Lot #: 0000013019 | H_2SO_4 Lot #: | Acid Silica ID: 4531-134 | Carbon ID: 4531-131 | Benzene Lot #: NA

Extr Na_2SO_4 ID: C4434:41 | A/B Na_2SO_4 ID: | SG/A Col Na_2SO_4 ID: 4442-2F | 50/50 $MeCl_2$/Cyclo ID: 4531-130

SG/A Col Hex Lot #: 0000013019

Balance ID: D1 | Comments:

Percent Moisture

TestAmerica Knoxville
Sample Moisture Raw Data Worksheet

Batch #:	2249034	Date Into Oven:	9-4-12	Project:	—
Initiated by:	BTD	Time Into Oven:	15:45	SDG #:	—
Final Weight by:	TSN	Date Out of Oven:	9/5/12	Balance ID:	S1
		Time Out of Oven:	0900	Oven ID:	O23

	Lot #	Work Order #	Decant?	Pan Weight (g)	Gross Wet Weight (g)
1	H2I010401	MWEWK	N	1.11	9.53
2	↓	↓ WK(DUP)	↓	1.09	9.58
3	H2I040438	MWFE9	N	1.09	6.53
4	↓	↓ FD	↓	1.11	9.52
5		FE		1.12	7.95
6		FF		1.10	7.26
7		FG		1.12	7.90
8	↓	↓ FJ	↓	1.09	8.56
9	H2H140413	MU4WQ	N	1.09	8.14
10	H2H140411	MU4WF	N	1.11	8.36
11	↓	↓ WG	↓	1.10	8.53
12	H2H140412	MU4WH	N	1.07	6.83
13	↓	↓ WJ	↓	1.13	7.00
14		WK		1.10	8.57
15		WL		1.08	7.51
16	↓	↓ WM	↓	1.08	8.77
17					
18					
19		DKW 9/5/12			
20					
21					

2012 1989/23

MWE WK 1AA

WC097R4, 081909

TestAmerica Knoxville
Sample Moisture Worksheet

Batch Number: 2249034 ✓ Balance ID
Initiated By: BKD S1
Final Weight By: TSN W2
Entered By: TSN
QuantIMS Code: 430353

Date Into Oven: 09/04/2012 (mmddyyyy)
Time Into Oven: 15:45 (hhmm)
Date Out of Oven: 09/05/2012 (mmddyyyy)
Time Out of Oven: 09:00 (hhmm)

Reviewer Initials: DTW
Reviewer Date: 9/5/12
Oven #: 023

	LOT #	WORK ORDER #	SUF	PAN WT (g)	GROSS WET WT (g)	GROSS DRY WT (g)	SAMPLE WET WT (g)	SAMPLE DRY WT (g)	DRYNESS FACTOR	PERCENT MOISTURE	PERCENT SOLIDS	ANALYSIS DATE (mmddyy)	ANALYSIS TIME (hhmm)	DECANT? ✓	RPD	DIFFERENCE
1	H2H140411	MV4WF1AD		1.110	8.36	7.57	7.25	6.46	0.8910	10.90	89.10	090512	0950	N		
2	H2H140411	MV4WG1AD		1.100	8.53	6.96	7.43	5.86	0.7887	21.13	78.87	090512	0950	N		
3	H2H140412	MV4WH1AD		1.070	6.83	6.30	5.76	5.23	0.9080	9.20	90.80	090512	0950	N		
4	H2H140412	MV4WJ1AD		1.130	7.00	5.97	5.87	4.84	0.8245	17.55	82.45	090512	0951	N		
5	H2H140412	MV4WK1AD		1.100	8.57	7.57	7.47	6.47	0.8661	13.39	86.61	090512	0951	N		
6	H2H140412	MV4WL1AD		1.080	7.51	6.57	6.43	5.49	0.8538	14.62	85.38	090512	0951	N		
7	H2H140412	MV4WM1AD		1.080	8.77	7.38	7.69	6.30	0.8192	18.08	81.92	090512	0951	N		
8	H2H140413	MV4WQ1AD		1.090	8.14	6.91	7.05	5.82	0.8255	17.45	82.55	090512	0952	N		
9	H2I010401	MWEWK1AA		1.110	9.53	9.24	8.42	8.13	0.9656	3.44	96.56	090512	0954	N		
10	H2I010401	MWEWK1AV	X	1.090	9.58	9.27	8.49	8.18	0.9635	3.65	96.35	090512	0954	N	5.84	✓
11	H2I010401	MWEWL1AA		1.110	9.53	9.24	8.42	8.13	0.9656	3.44	96.56	090512	0954	N		
12	H2I040438	MWFE91AA		1.090	6.53	5.03	5.44	3.94	0.7243	27.57	72.43	090512	0955	N		
13	H2I040438	MWFFD1AA		1.110	9.52	8.55	8.41	7.44	0.8847	11.53	88.47	090512	0955	N		
14	H2I040438	MWFFE1AA		1.120	7.95	5.77	6.83	4.65	0.6808	31.92	68.08	090512	0956	N		
15	H2I040438	MWFFF1AA		1.100	7.26	4.87	6.16	3.77	0.6120	38.80	61.20	090512	0956	N		
16	H2I040438	MWFFG1AA		1.120	7.90	5.23	6.78	4.11	0.6062	39.38	60.62	090512	0957	N		
17	H2I040438	MWFFJ1AA		1.090	8.56	7.68	7.47	6.59	0.8822	11.78	88.22	090512	0957	N		
18																
19																
20																
21																
22																
23																
24																
25																

NOTES:
Sample Wet Weight, g = Gross Wet Weight (g) - Pan Weight (g)
Sample Dry Weight, g = Gross Dry Weight (g) - Pan Weight (g)
Dryness Factor = Dry Weight (g) / Wet Weight (g)
Percent Moisture = ((Wet Weight (g) - Dry Weight (g)) / Wet Weight (g)) x 100
Percent Solids = (Dry Weight (g) / Wet Weight (g)) x 100

Sample Receipt Documentation

TestAmerica Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

H2H1404113

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Colussy, Jill L	Carrier Tracking No(s):	COC No: 180-64924.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jill.colussy@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 180-13267-1
Address: 5815 Middlebrook Pike, ,	Due Date Requested: 8/28/2012			
City: Knoxville	TAT Requested (days):			
State, Zip: TN, 37921				
Phone: 865-291-3000(Tel) 865-584-4315(Fax)	PO #:			
Email:	WO #:			
Project Name: QDI Institute, WV	Project #: 18010348			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT/ 8290A, Dioxins/Furans 17 isomers only	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
TSS-4 (4-6) (180-13267-17)	8/8/12	14:45 Eastern		Solid			X	1	
TSS-1 (4-6) (180-13267-19)	8/8/12	15:30 Eastern		Solid			X	1	
TSS-2 (5-7) (180-13267-21)	8/8/12	11:20 Eastern		Solid			X	1	
									1 cooler Rec'd @ 1.1°
									with custody Seal intact
									JPH 8/14/12
									1 cooler Fed X#
									4342 6973 3447

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	8/13/12 1800	TA Pittsb	[signature]	8/14/12 1015	TA Knox
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

915

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Lot Number: H2H14D413

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **1a** Do not match COC ☐ **1b** Incomplete information ☐ **1c** Marking smeared ☐ **1d** Label torn ☐ **1e** No label ☐ **1f** COC not received ☐ **1g** Other:	
2. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C)	✓			☐ **2a** Temp Blank = _____ ☐ **2b** Cooler Temp = _____ ☐ **2c** Cooling initiated for recently collected samples, ice present.	
3. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **3a** Sample preservative =	
4. Were custody seals present/intact on cooler and/or containers?	✓			☐ **4a** Not present ☐ **4b** Not intact ☐ **4c** Other:	
5. Were all of the samples listed on the COC received?	✓			☐ **5a** Samples received-not on COC ☐ **5b** Samples not received-on COC	
6. Were all of the sample containers received intact?	✓			☐ **6a** Leaking ☐ **6b** Broken	
7. Were VOA samples received without headspace?			✓	☐ **7a** Headspace (VOA only)	
8. Were samples received in appropriate containers?	✓			☐ **8a** Improper container	
9. Did you check for residual chlorine, if necessary?			✓	☐ **9a** Could not be determined due to matrix interference	
10. Were samples received within holding time?	✓			☐ **10a** Holding time expired	
11. For rad samples, was sample activity info. provided?			✓	☐ Incomplete information	
12. For 1613B water samples is pH<9?			✓	If no, was pH adjusted to pH 7 - 9 with sulfuric acid? _____	
13. Are the shipping containers intact?	✓			☐ **13a** Leaking ☐ **13b** Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **14a** Not relinquished	
15. Are tests/parameters listed for each sample?	✓			☐ **15a** Incomplete information	
16. Is the matrix of the samples noted?	✓			☐ **15a** Incomplete information	
17. Is the date/time of sample collection noted?	✓			☐ **15a** Incomplete information	
18. Is the client and project name/# identified?	✓			☐ **15a** Incomplete information	
19. Was the sampler identified on the COC?		✓		☐ **19a** Other	

Quote #: 90778 PM Instructions: NA

Sample Receiving Associate: [signature] Date: 8/14/12

QA026R23.doc, 022812

Shipping and Receiving Documents

FedEx Express **US Airbill**

FedEx Tracking Number 8692 8094 9334

Form ID No. 0200

1 From *Please print and press hard.*

Date 8/8/12 Sender's FedEx Account Number 3210698835 ACCOUNT NUMBER ONLY

Sender's Name Bart Sattler Phone (610) 608 5907

Company SAIC

Address 300 Wharton Cir. Ste. 174

Dept/Floor/Suite/Room

City Triadelphia State PA ZIP 26059

2 Your Internal Billing Reference First 24 characters will appear on invoice. 4501020069 OPTIONAL

3 To Recipient's Name Sample Custodian Phone (412) 963 7058

Company Test America Pittsburgh

Recipient's Address 301 Alpha Dr. RIDC Park

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept/Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Pittsburgh State PA ZIP 15238

Schedule a pickup at fedex.com

4a Express Package Service

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

4b Express Freight Service

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

* Call for Confirmation:

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box

6 Special Handling Include FedEx address in Se

- [ ] SATURDAY Delivery NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location NOT Available for FedEx First Overnight.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, U

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit

FedEx Acct. No. Credit Card No.

Total Packages	Total Weight	Total Declared Val
		$

Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill yo service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit

8 Residential Delivery Signature Options If you require a sig

No Signature Required — Direct Signature — Indirect Signature

fedex.com 1.800.GoFedEx 1.800.463.3339

FedEx Express US Airbill

8692 8094 9746

0200

Form ID No.

fedex.com 1.800.GoFedEx 1.800.463.3339

1 From

Date

Sender's FedEx Account Number 321069825

Sender's Name

Phone

Company

Address

City

Dept./Floor/Suite/Room

State ZIP

2 Your Internal Billing Reference 4130107 0069 / 2...

3 To

Recipient's Name

Phone

Company

Recipient's Address

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

Dept./Floor/Suite/Room

City

State ZIP

4a Express Package Service

1 ☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

5 ☐ FedEx Standard — Next business afternoon. Saturday Delivery NOT

3 ☐ FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

20 ☐ FedEx Express S — Third business day.* Saturday Delivery NOT a

FedEx Envelope rate not available. Minimum charge: One-pound rate.

4b Express Freight Service

7 ☐ FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

8 ☐ FedEx 2Day Freigt — Second business day.** Th shipments will be delivered unless SATURDAY Delivery

* Call for Confirmation:

5 Packaging

6 ☐ FedEx Envelope*

2 ☐ FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.

3 ☐ Fe Bo

6 Special Handling

3 ☐ SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.

Include FedE

1 ☐ HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.

Does this shipment contain dangerous goods? One box must be checked.

☐ No

4 ☐ Yes — As per attached Shipper's Declaration.

☐ Yes — Shipper's Declaration not required.

6 ☐

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

7 Payment *Bill to:*

1 ☐ Sender — Acct. No. in Section 1 will be billed.

2 ☐ Recipient

Enter FedEx Acct. No. or Credit Card No. b

3 ☐ Third Party

4 ☐

Total Packages

Total Weight

*Our liability is limited to $100 unless you declare a

TestAmerica Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

180- 123267

Chain of Custody Record

15, 13 43

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information				
Client Contact: Bart Sattler	Sampler: B. Sattler	Lab PM: Colussy, Jill L	Carrier Tracking No(s):	COC No: 180-6342-1901.21
	Phone: 610 608 5907	E-Mail: jill.colussy@testamericainc.com		Page: Page 21 of 24
Company: Science Applications International Corp				Job #:
Address: 300 Wharton Circle, Suite 176	Due Date Requested:			
City: Triadelphia	TAT Requested (days):			
State, Zip: WV, 26059				
Phone:	PO #: Purchase Order not required			
Email: bart.sattler@saic.com	WO #:			
Project Name: QDI Institute, WV	Project #: 18010348			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - (MOD) TCL 4.2 GC/MS Volatiles	6010C, 7471B, 8270C	8081A, 8082, 8151A	8260B_LL - (MOD) TCL 4.2 GC/MS Volatiles List LL	Dioxins / Furan / Pest / Herb	SVOC, PAH	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	N	N	A			X	
Trip Blank			G	W ~~Solid~~						X				
TSS-9 (6.5-8.5)	8/8/12	0915	G, C	Solid			X	X	X					
TSS-9 (4-6)		0900	G, C	Solid			X	X	X					
TSS-9 (17-19)		0930		Solid										
TSS-6 (3.8-5.8)		0945		Solid										
TSS-6 (10-12)		1000		Solid										
TSS-3 (6-8)		1030		Solid										
TSS-3 (4.5-5.5)		1045		Solid										
TSS-2 (7.2-8.9)		1135		Solid										
TSS-5 (5-7)		1230		Solid										
TSS-5 (7-9)		1245		Solid										

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	8/8/12	SAIC	Fedex	8/8/12	
Relinquished by:	Date/Time:	Company	Received by: [signature]	8-9-12 @ 900	TAPIT
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

TestAmerica Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: B. Sattler	Lab PM: Colussy, Jill L	Carrier Tracking No(s):	COC No: 180-6342-1901.22
Client Contact: Bart Sattler	Phone: 610 608 5907	E-Mail: jill.colussy@testamericainc.com		Page: Page 22 of 24
Company: Science Applications International Corp				Job #:
Address: 300 Wharton Circle, Suite 176	Due Date Requested:			
City: Triadelphia	TAT Requested (days):			
State, Zip: WV, 26059				
Phone:	PO #: Purchase Order not required			
Email: bart.sattler@saic.com	WO #:			
Project Name: QDI Institute, WV	Project #: 18010348			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - (MOD) TCL 4.2 GC/MS Volatiles	6010C, 7471B, 8270C	8081A, 8082, 8151A	8260B_LL - (MOD) TCL 4.2 GC/MS Volatiles List LL	Pest/Herb/Diox/Furan	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	A			
TSS-8 (4-6)	8/8/12	1315	G,C	Solid			X	X	X				
TSS-8 (10-12)		1335		Solid									
TSS-8 (13-15)		1400		Solid									
TSS-7 (4-6)		1420		Solid									
TSS-7 (10-12)		1430		Solid									
TSS-4 (4-6)		1445		Solid									
TSS-4 (6-8)		1505		Solid									
TSS-1 (4-6)		1530		Solid									
TSS-1 (6-8)		1550		Solid									
TSS-2 (5-7)		1120		Solid									
				Solid									

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	8/8/12	SAIC	Fedex	8/8/12	—
			[signature]	8-9-12 (9:00	TA Pitt

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Science Applications International Corp

Job Number: 180-13267-2

Login Number: 13267

List Source: TestAmerica Pittsburgh

List Number: 1

Creator: O'Donnell, Brandon R

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Science Applications International Corp

Job Number: 180-13267-2

Login Number: 13267
List Number: 1
Creator: Buckingham, Paul

List Source: TestAmerica Nashville
List Creation: 08/15/12 10:25 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	