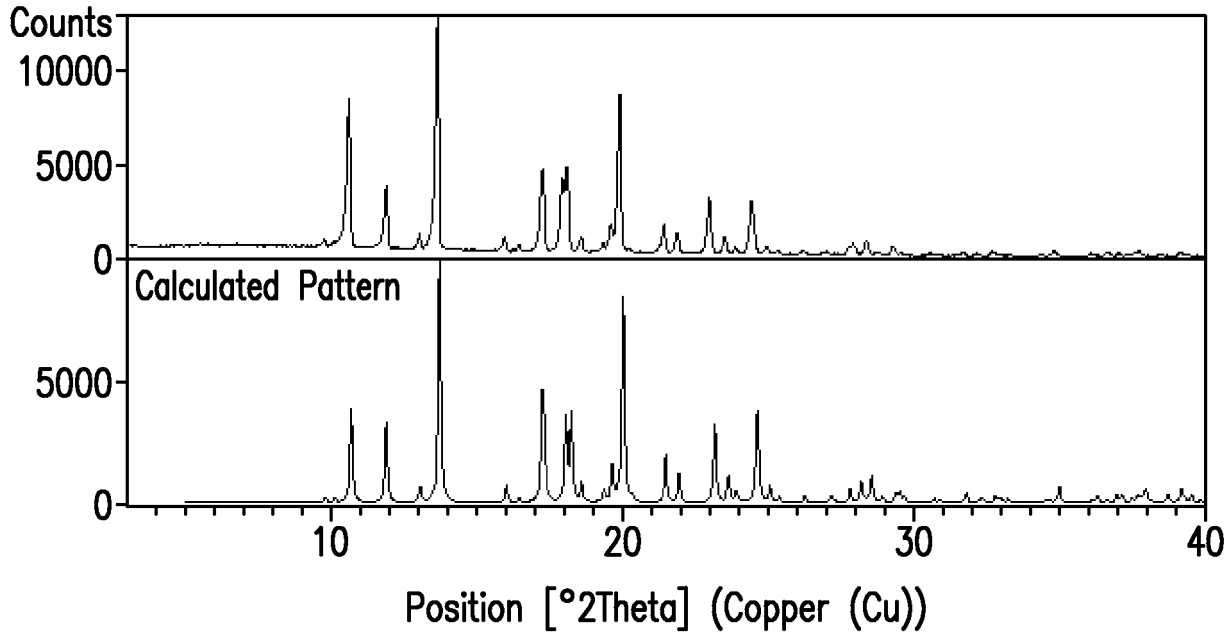

Counts
10000
5000
0
Calculated Pattern
5000
0
10
20
30
40
Position [°2Theta] (Copper (Cu))

FIG. 1

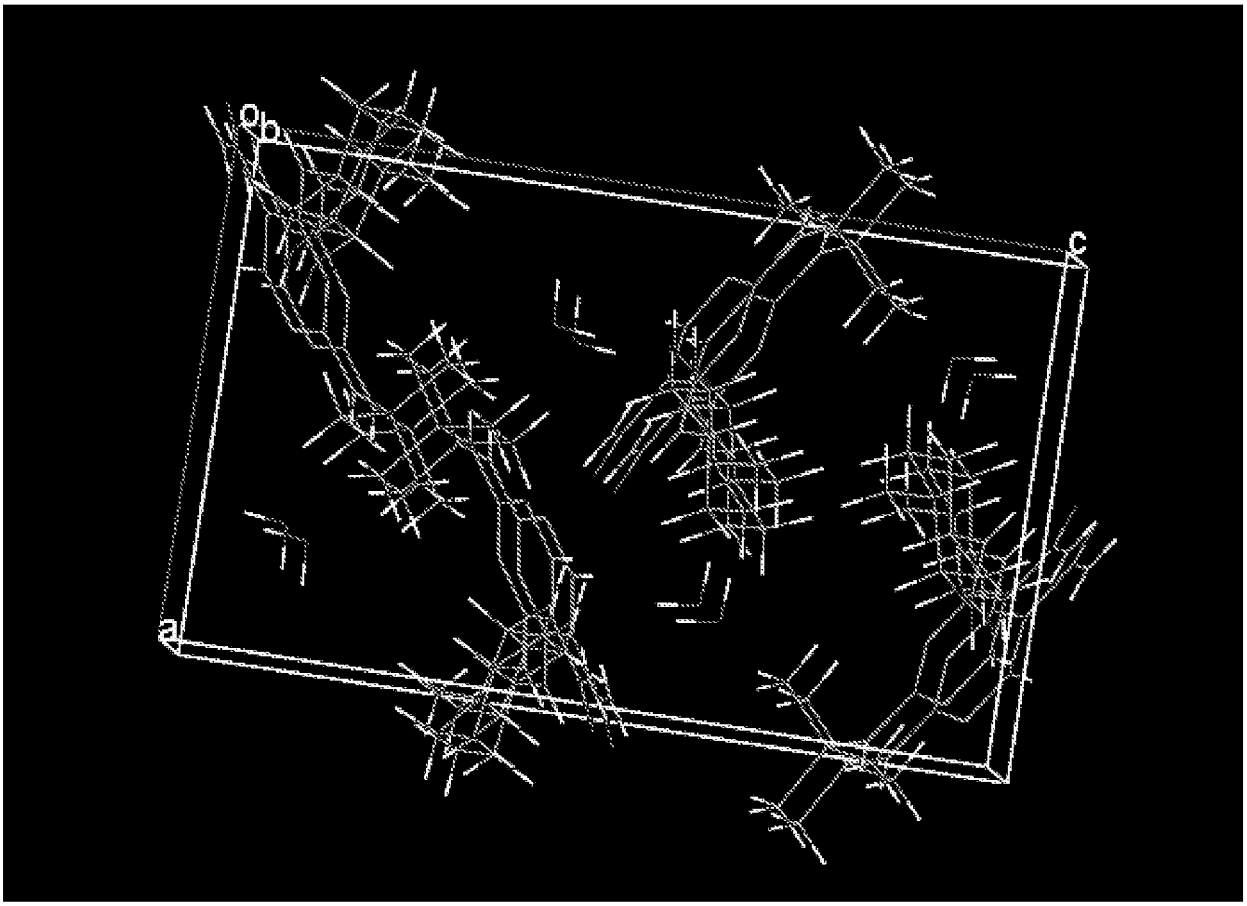


FIG. 2

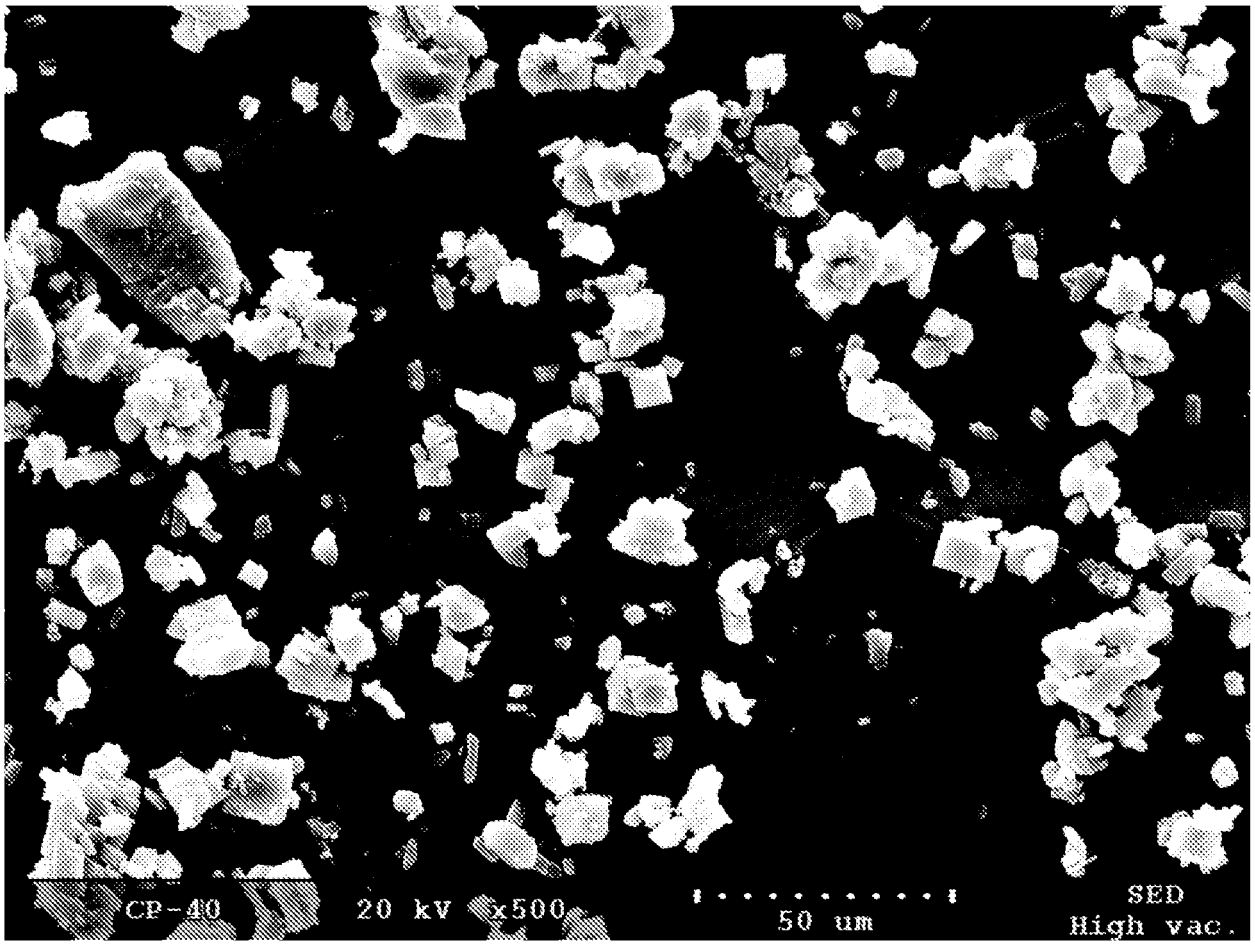


FIG. 3

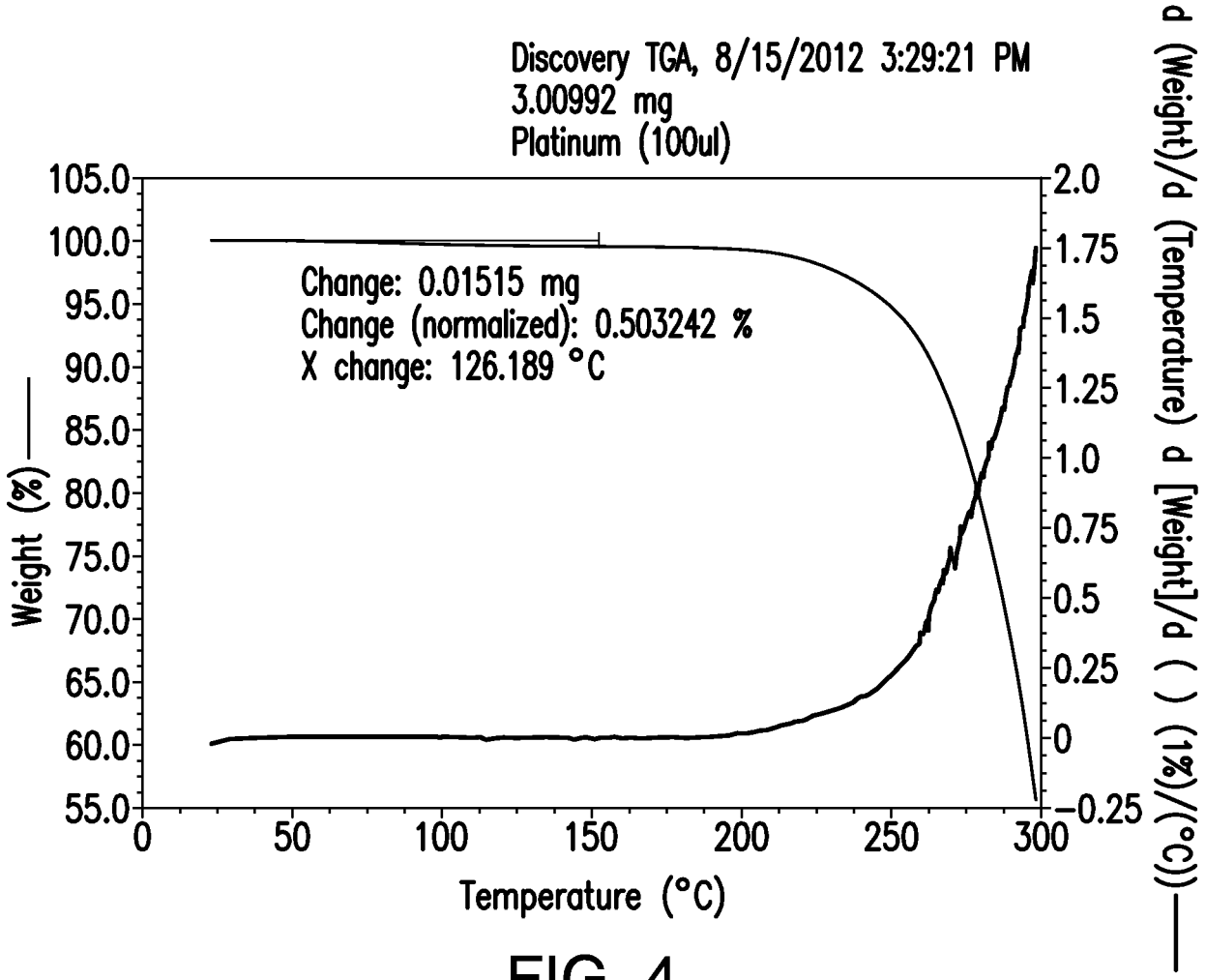

Discovery TGA, 8/15/2012 3:29:21 PM
3.00992 mg
Platinum (100ul)
Change: 0.01515 mg
Change (normalized): 0.503242 %
X change: 126.189 °C
Weight (%)
d (Weight)/d (Temperature) d [Weight]/d ( ) (1%)/(°C))
Temperature (°C)
105.0
100.0
95.0
90.0
85.0
80.0
75.0
70.0
65.0
60.0
55.0
2.0
1.75
1.5
1.25
1.0
0.75
0.5
0.25
0
-0.25
0
50
100
150
200
250
300

FIG. 4

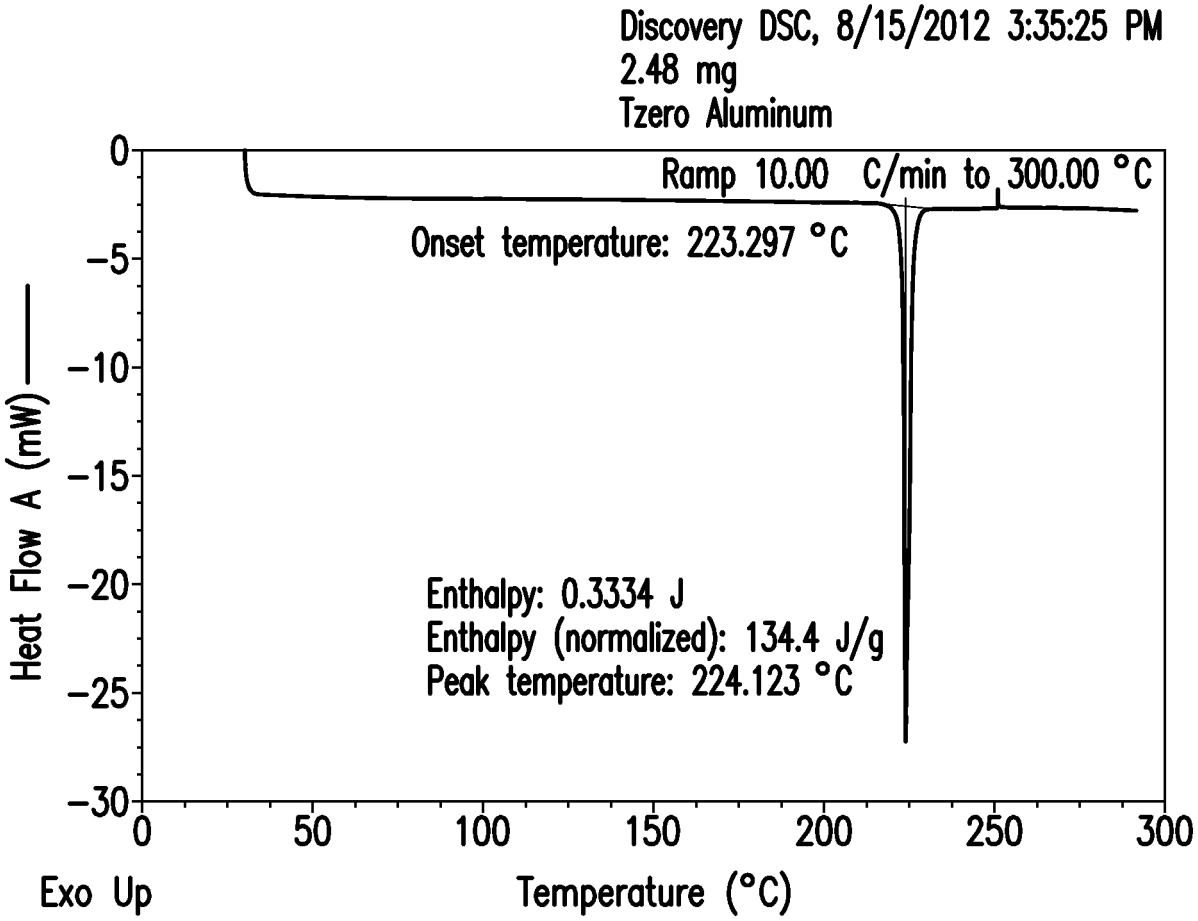

Discovery DSC, 8/15/2012 3:35:25 PM
2.48 mg
Tzero Aluminum
Ramp 10.00 C/min to 300.00 °C
Onset temperature: 223.297 °C
Enthalpy: 0.3334 J
Enthalpy (normalized): 134.4 J/g
Peak temperature: 224.123 °C
Heat Flow A (mW)
Exo Up
Temperature (°C)
0
-5
-10
-15
-20
-25
-30
0
50
100
150
200
250
300

FIG. 5

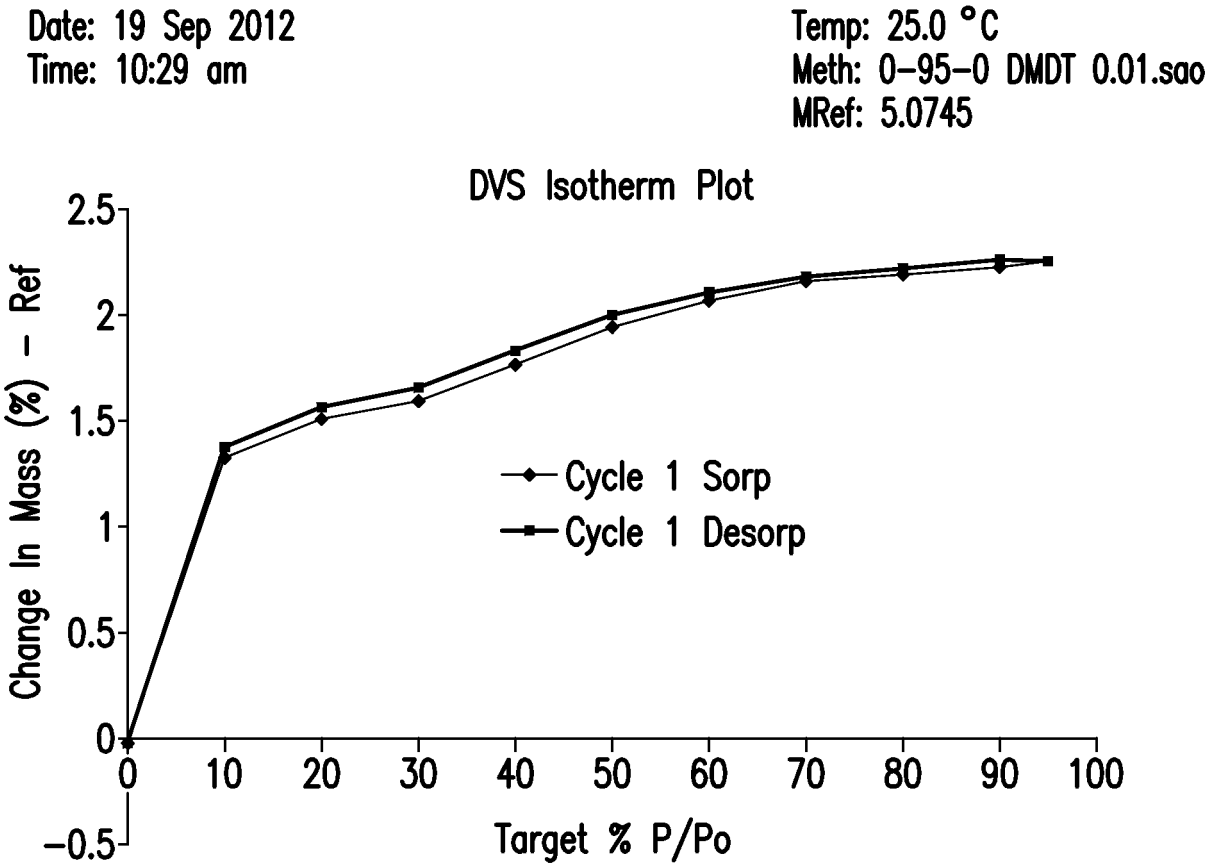

Date: 19 Sep 2012
Time: 10:29 am
Temp: 25.0 °C
Meth: 0-95-0 DMDT 0.01.sao
MRef: 5.0745
DVS Isotherm Plot
Change In Mass (%) - Ref
2.5
2
1.5
1
0.5
0
-0.5
0
10
20
30
40
50
60
70
80
90
100
Target % P/Po
Cycle 1 Sorp
Cycle 1 Desorp

FIG. 6

Celgene

Current Data Parameters

EXPNO	10	SWH	6186.119	He	
PROCNO	1	FIDRES	0.094423	He	
F5 - Acquisition Parameters		AQ	5.2953587	sec	
Date	20120904	RG	25.4		
Time	9.30	DW	80.800	usec	
INSTRUM	spect	DE	6.50	usec	
PROBHD	5 mm PABBO BB-	TE	297.5	K	
PULPROG	ug30	D1	1.00000000	sec	
TD	65536	TD0	1		
SOLVENT	DMSO				
NS	32				
DS	2				

CHANNEL f1

NUC1	1H	
P1	9.25	usec
PL1	-3.00	dB
PL1W	30.32182693	W
SFO1	300.1418535	MHe
F5 - Processing Parameters		
SI	32768	
SF	300.1400003	MHe
WDW	EM	
SSB	0	
LB	0.30	He
GB	0	
PC	1.00	

PROTON DMSO D:\\ ARD 22

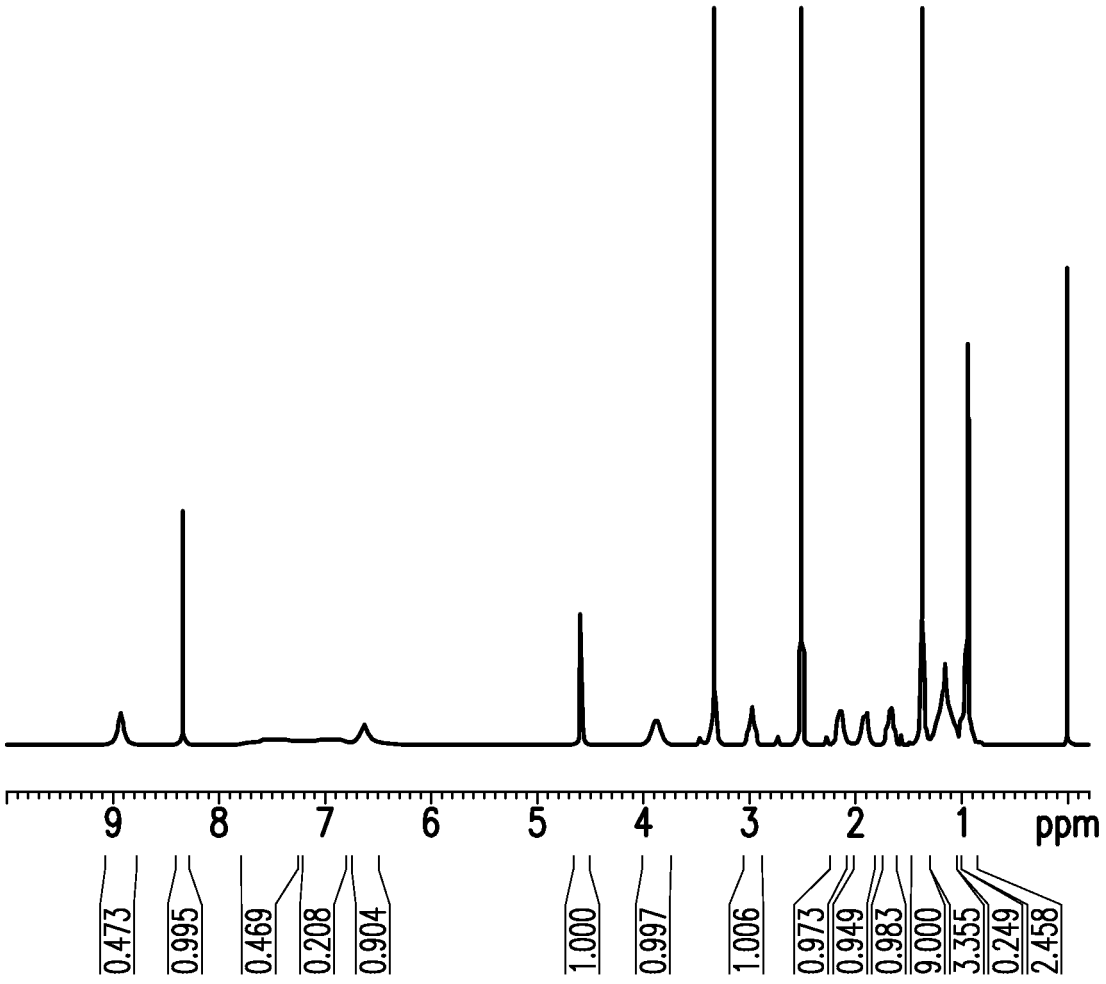


FIG. 7

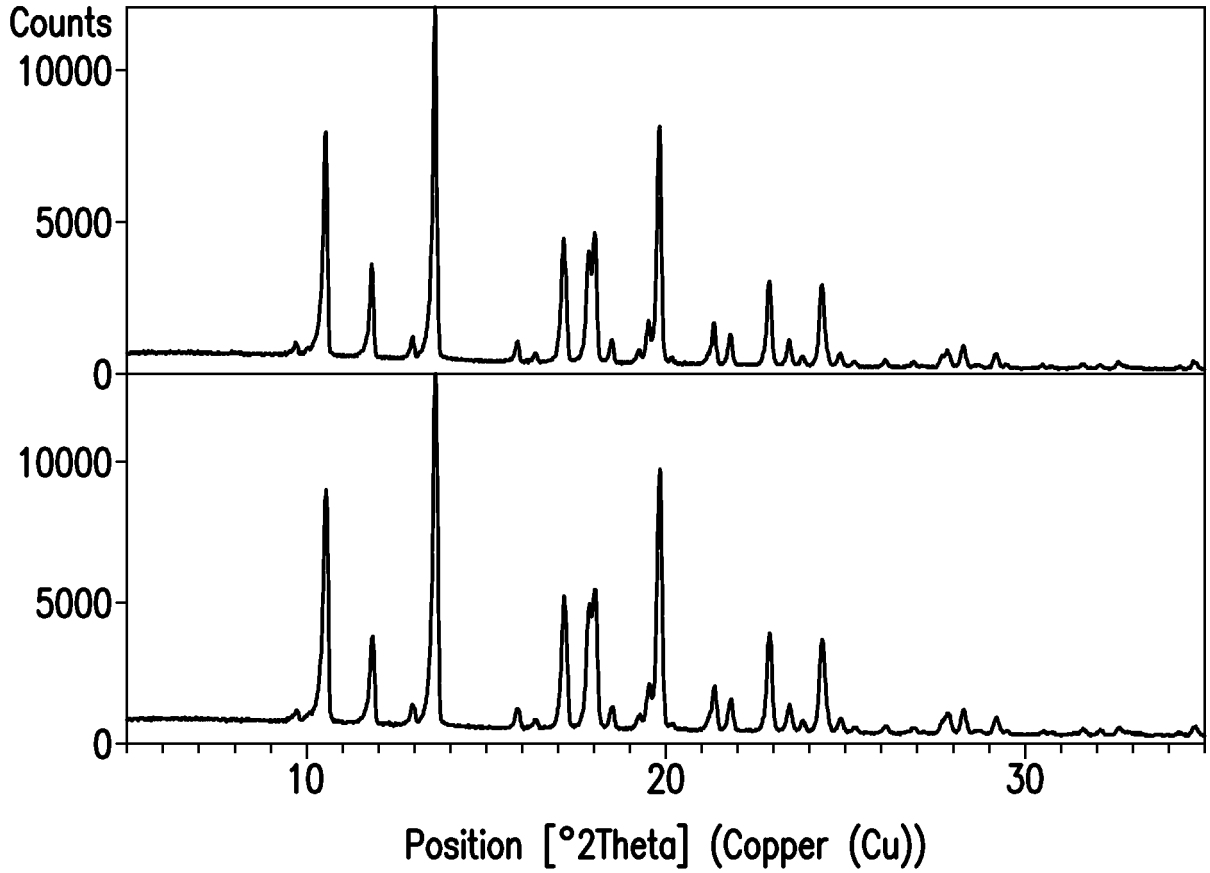

Counts
10000
5000
0
10000
5000
0
10
20
30
Position [°2Theta] (Copper (Cu))

FIG. 8

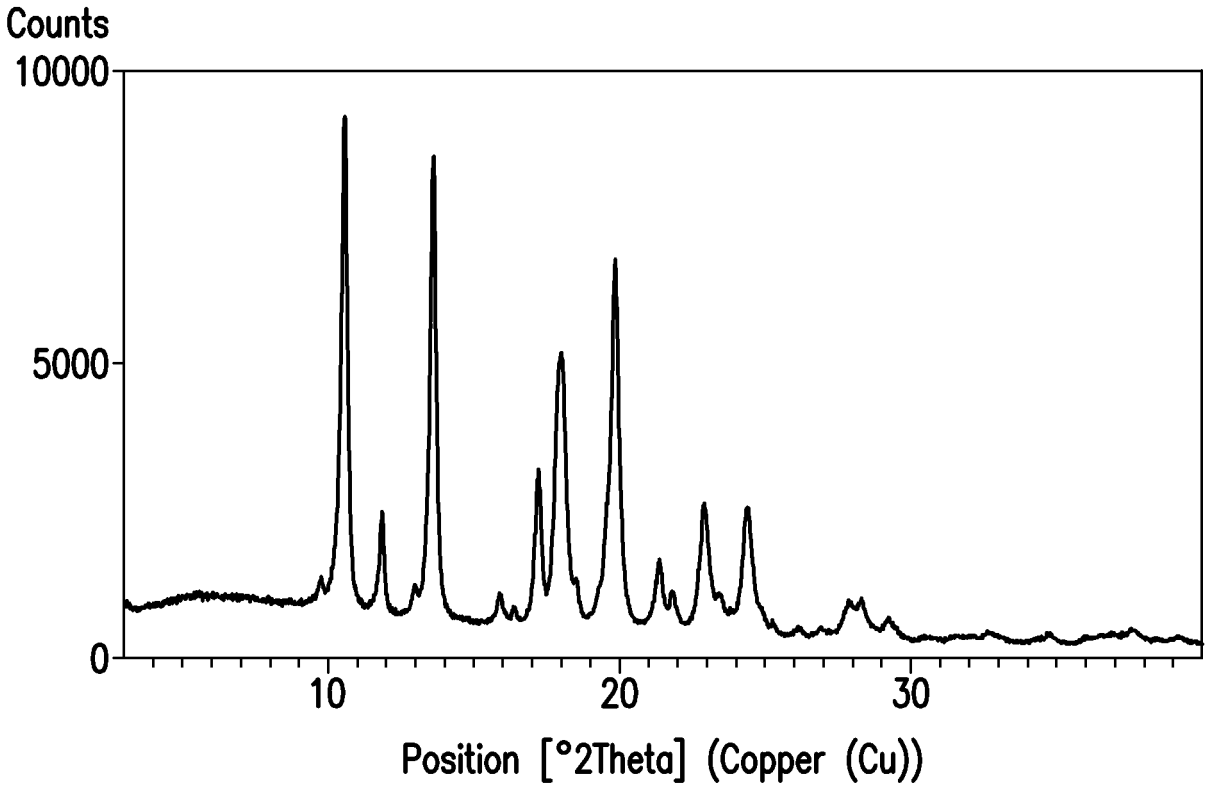


FIG. 9

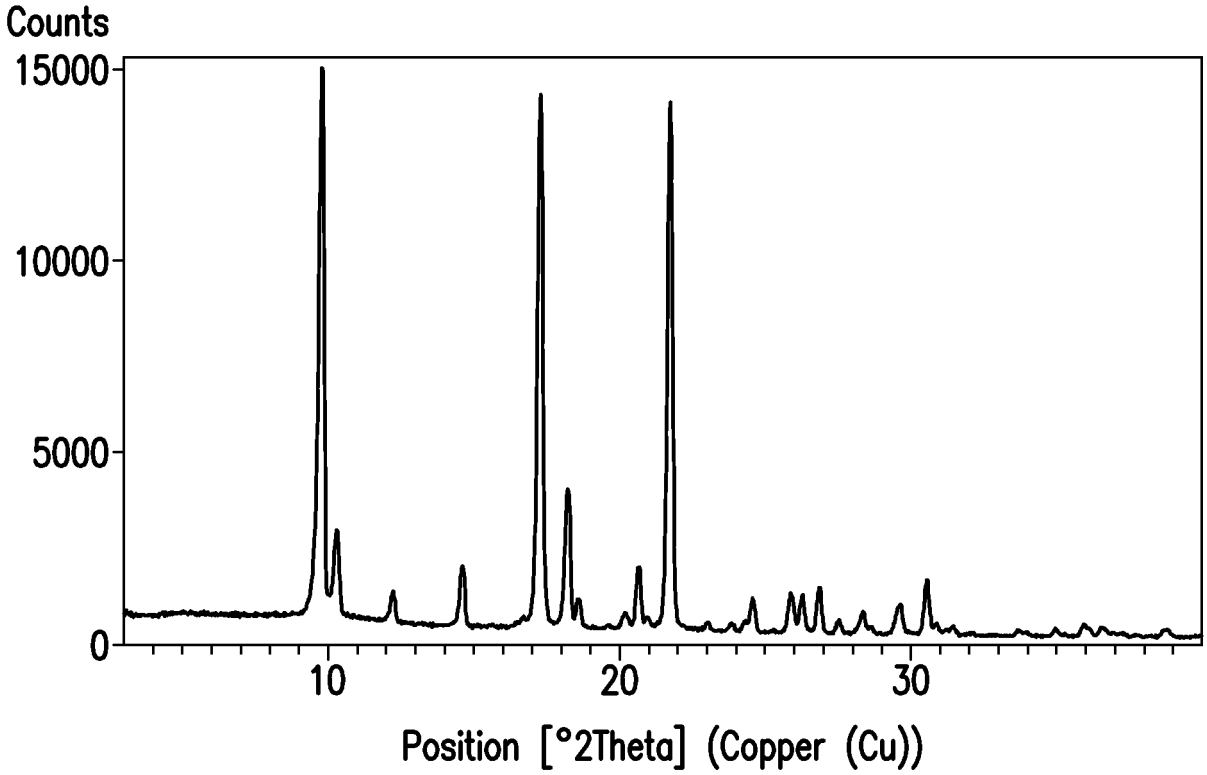


FIG. 10

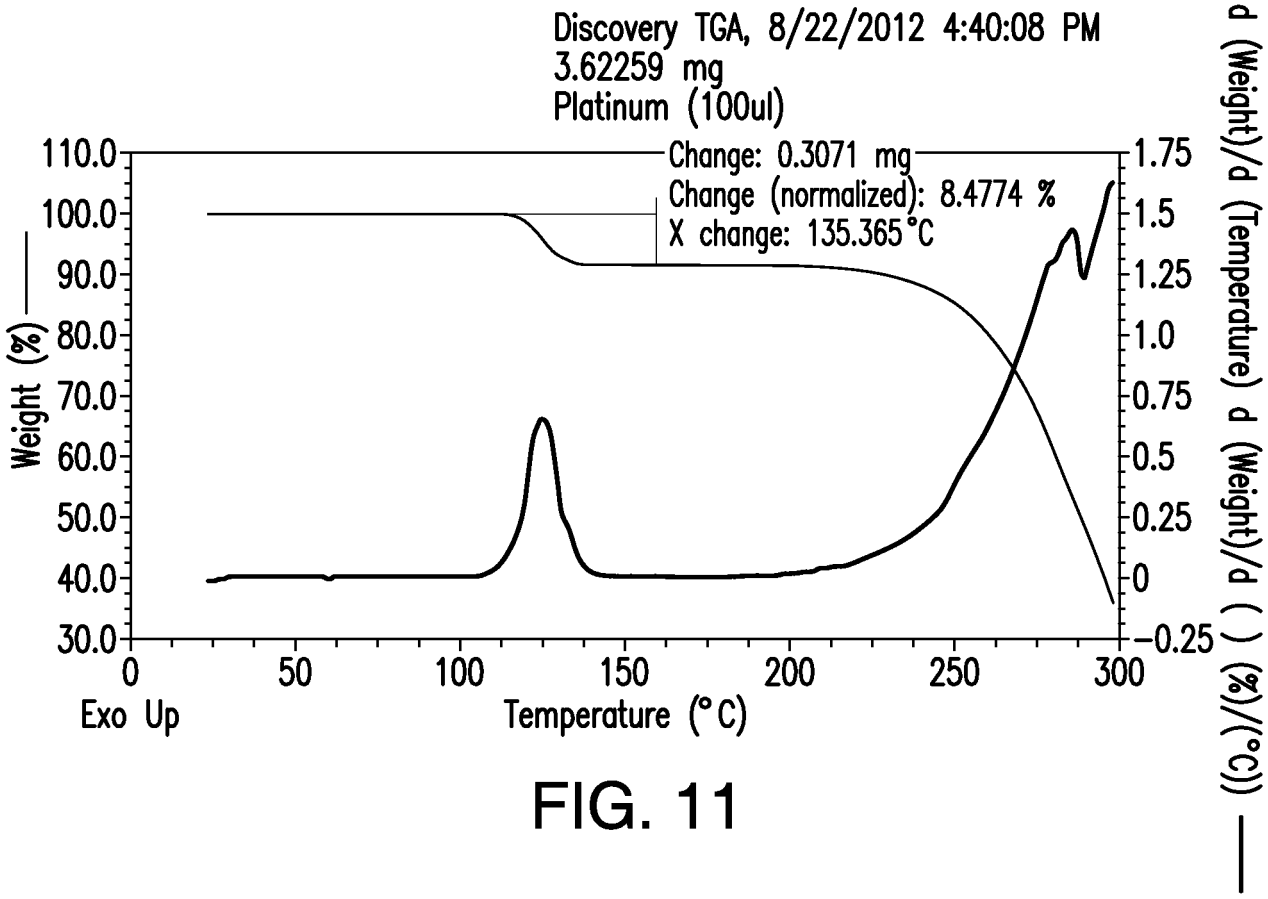

Discovery TGA, 8/22/2012 4:40:08 PM
3.62259 mg
Platinum (100ul)
Change: 0.3071 mg
Change (normalized): 8.4774 %
X change: 135.365°C
Weight (%)
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
0
50
100
150
200
250
300
Exo Up
Temperature (°C)
d (Weight)/d (Temperature) d (Weight)/d ( ) (%)/(°C))
1.75
1.5
1.25
1.0
0.75
0.5
0.25
0
-0.25

FIG. 11

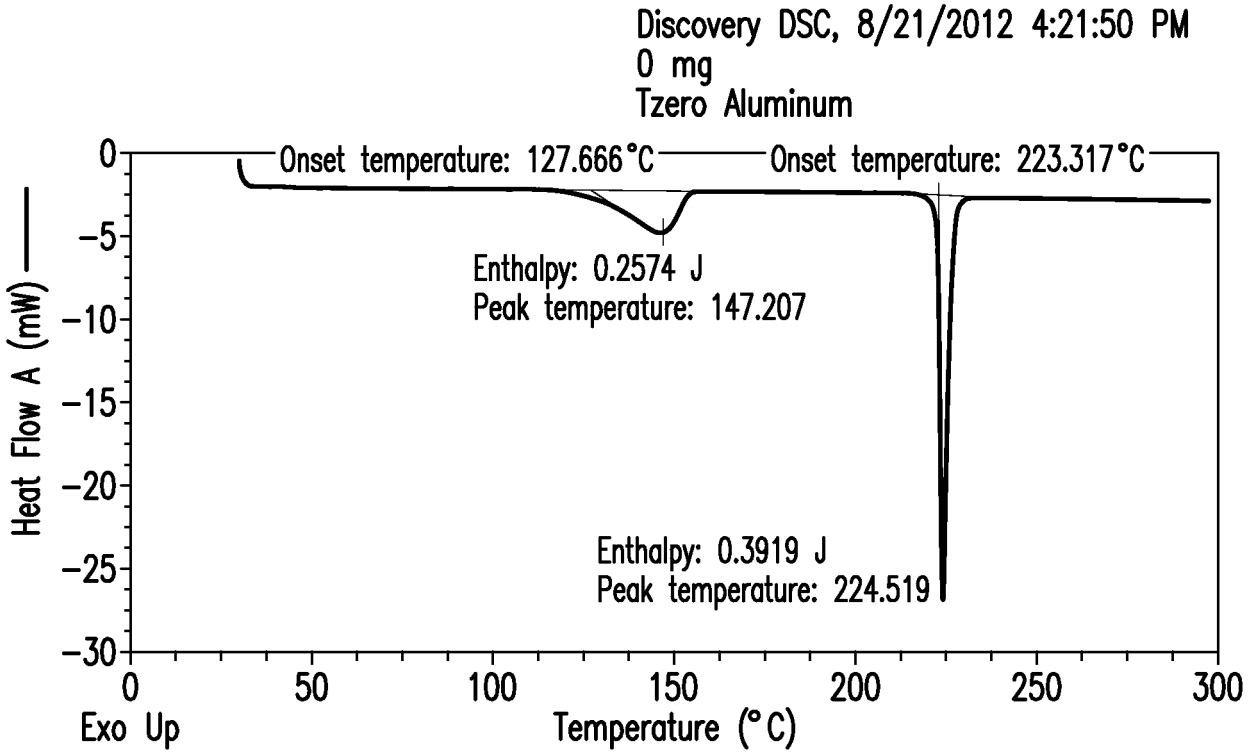

Discovery DSC, 8/21/2012 4:21:50 PM
0 mg
Tzero Aluminum
Onset temperature: 127.666 °C
Onset temperature: 223.317 °C
Enthalpy: 0.2574 J
Peak temperature: 147.207
Enthalpy: 0.3919 J
Peak temperature: 224.519
Heat Flow A (mW)
Exo Up
Temperature (°C)
0
-5
-10
-15
-20
-25
-30
0
50
100
150
200
250
300

FIG. 12

Celgene

Current Data Parameters

NAME	EQ RT in Acetone
EXPNO	10
PROCNO	1
F5 - Acquisition Parameters	
Date	20120904
Time	9.30
INSTRUM	spect
PROBHD	5 mm PABBO BB-
PULPROG	ug30
TD	65536
SOLVENT	DMSO
NS	32
DS	2

SWH	6186.119	He
FIDRES	0.094423	He
AQ	5.2953587	sec
RG	25.4	
DW	80.800	usec
DE	6.50	usec
TE	297.5	K
D1	1.00000000	sec
TD0	1	

CHANNEL f1

NUC1	1H	
P1	9.25	usec
PL1	-3.00	dB
PL1W	30.32182693	W
SFO1	300.1418535	MHe
F5 - Processing Parameters		
SI	32768	
SF	300.1400003	MHe
WDW	EM	
SSB	0	
LB	0.30	He
GB	0	
PC	1.00	

EQ RT in Acetone
PROTON DMSO D:\\ ARD 23

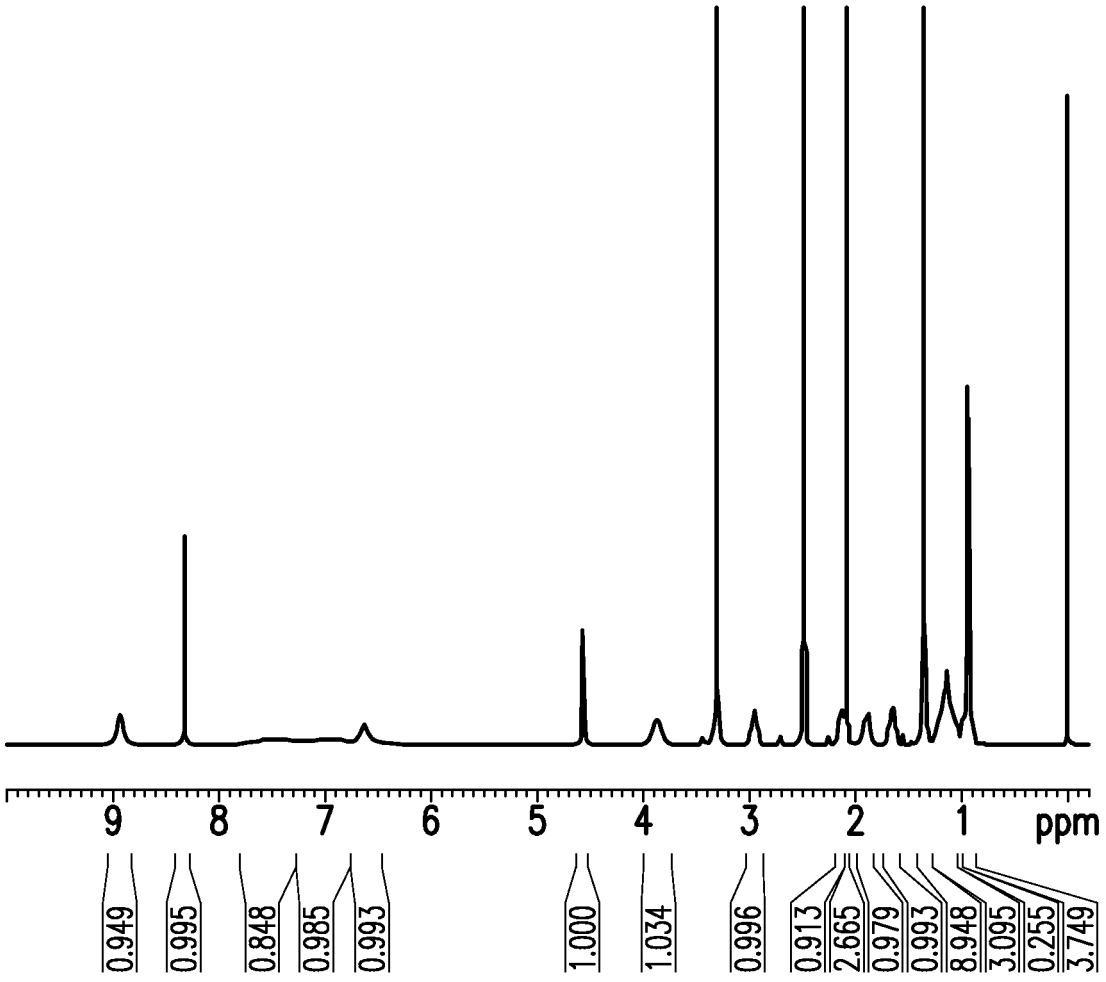


FIG. 13

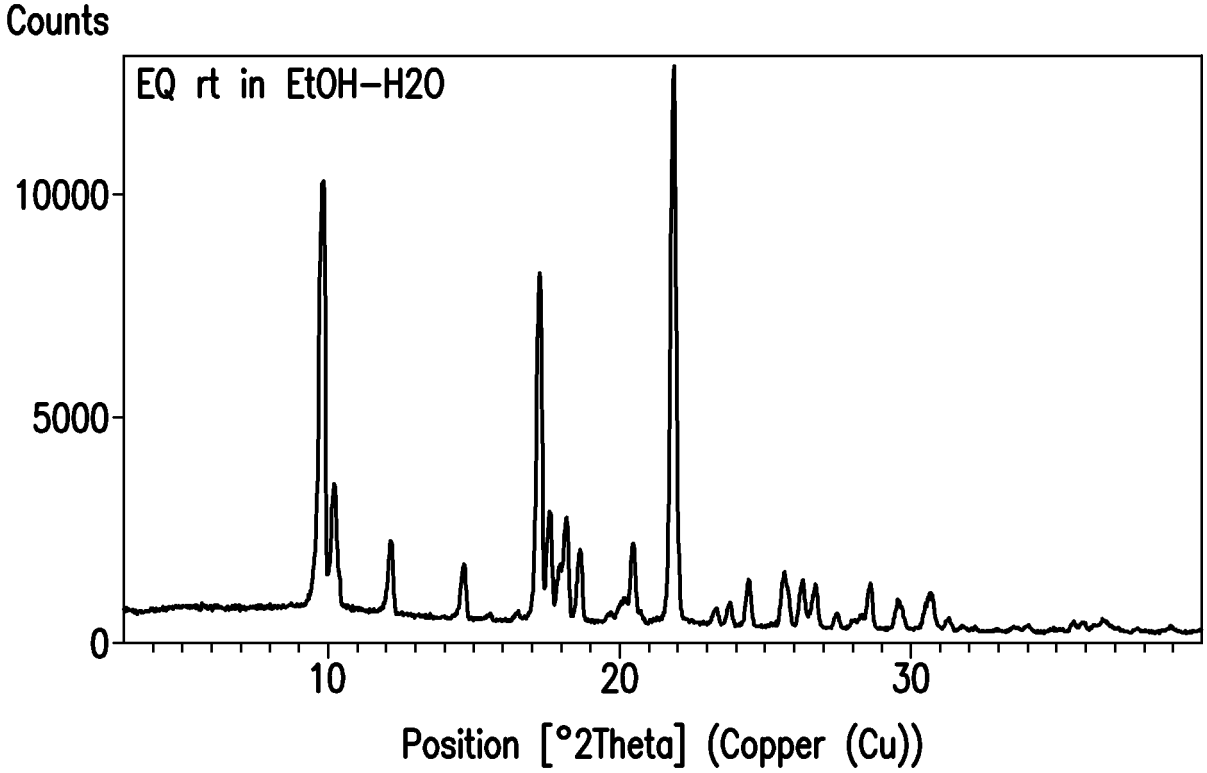

Counts
EQ rt in EtOH–H2O
10000
5000
0
10
20
30
Position [°2Theta] (Copper (Cu))

FIG. 14

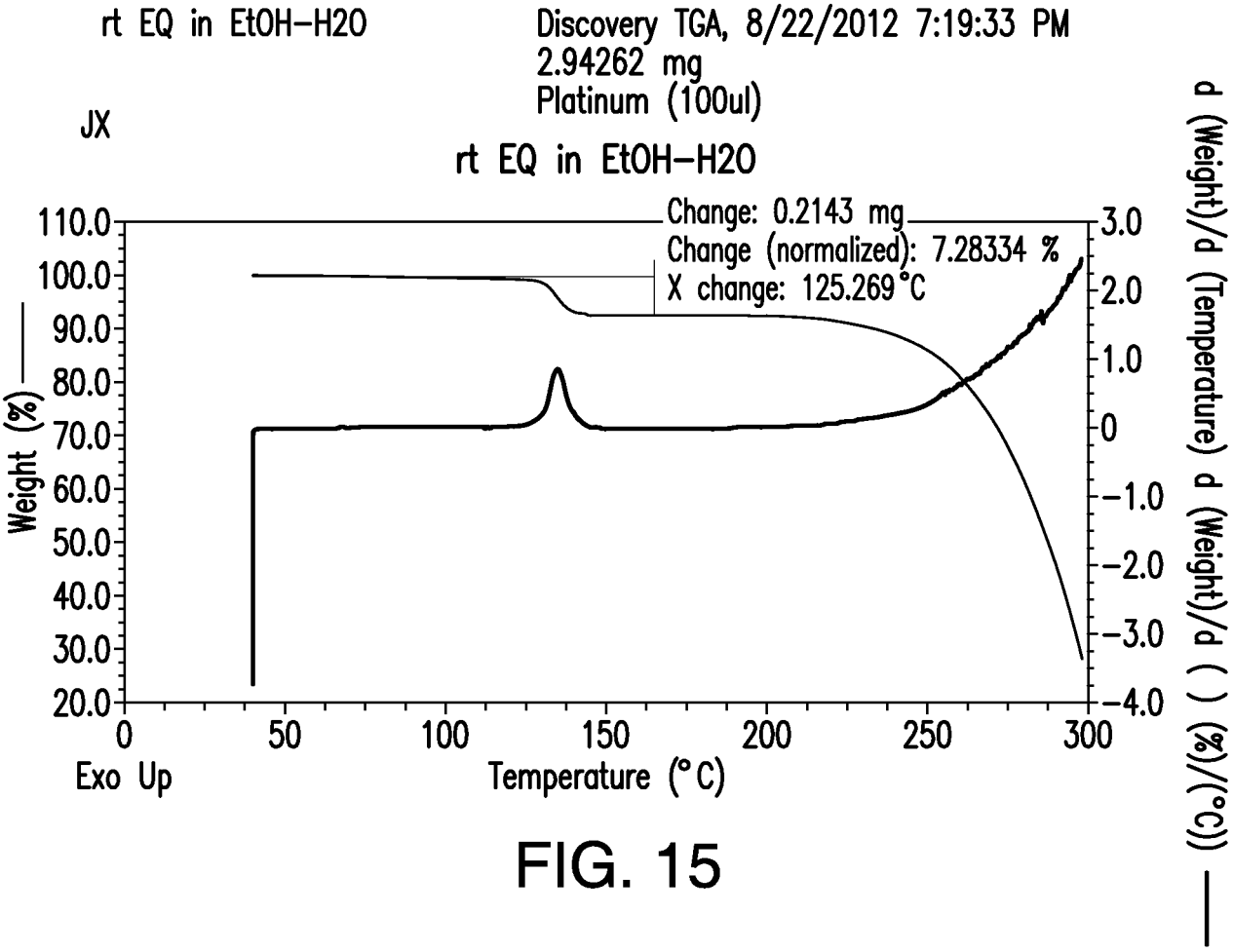

rt EQ in EtOH–H2O
Discovery TGA, 8/22/2012 7:19:33 PM
2.94262 mg
Platinum (100ul)
JX
rt EQ in EtOH–H2O
Change: 0.2143 mg
Change (normalized): 7.28334 %
X change: 125.269 °C
Weight (%)
d (Weight)/d (Temperature) d (Weight)/d ( ) (%)/(°C))
Exo Up
Temperature (°C)
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
3.0
2.0
1.0
0
-1.0
-2.0
-3.0
-4.0
0
50
100
150
200
250
300

FIG. 15

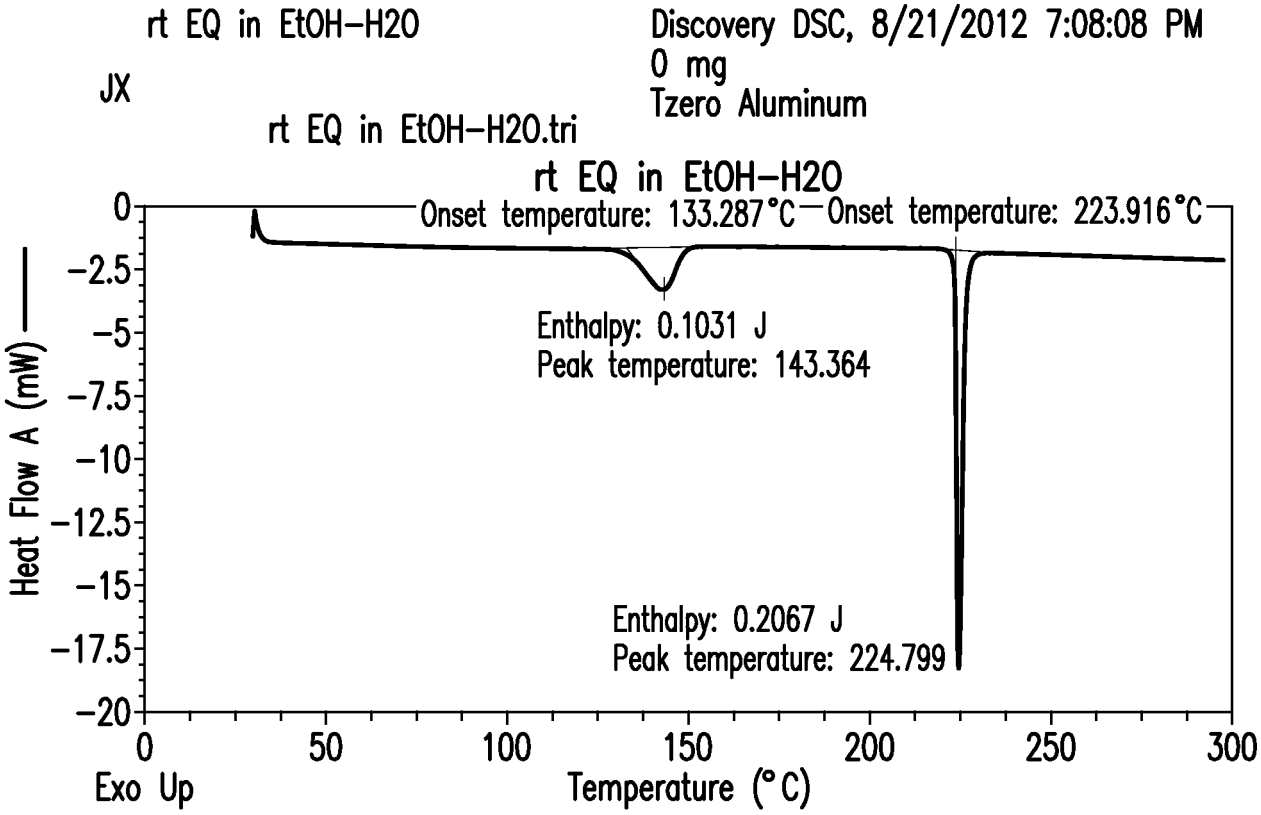

rt EQ in EtOH–H2O
Discovery DSC, 8/21/2012 7:08:08 PM
0 mg
Tzero Aluminum
JX
rt EQ in EtOH–H2O.tri
rt EQ in EtOH–H2O
Onset temperature: 133.287°C
Onset temperature: 223.916°C
Enthalpy: 0.1031 J
Peak temperature: 143.364
Enthalpy: 0.2067 J
Peak temperature: 224.799
Heat Flow A (mW)
0
−2.5
−5
−7.5
−10
−12.5
−15
−17.5
−20
0
50
100
150
200
250
300
Exo Up
Temperature (°C)

FIG. 16

Celgene

Current Data Parameters

NAME	EQ RT in EtOH-H2O				
EXPNO	10		SWH	6186.119	He
PROCNO	1		FIDRES	0.094423	He
F5 - Acquisition Parameters			AQ	5.2953587	sec
Date	20120904		RG	25.4	
Time	9.30		DW	80.800	usec
INSTRUM	spect		DE	6.50	usec
PROBHD	5 mm PABBO BB-		TE	297.5	K
PULPROG	ug30		D1	1.00000000	sec
TD	65536		TD0	1	
SOLVENT	DMSO				
NS	32				
DS	2				

CHANNEL f1

NUC1	1H	
P1	9.25	usec
PL1	-3.00	dB
PL1W	30.32182693	W
SFO1	300.1418535	MHe
F5 - Processing Parameters		
SI	32768	
SF	300.1400003	MHe
WDW	EM	
SSB	0	
LB	0.30	He
GB	0	
PC	1.00	

EQ RT in EtOH-H2O
PROTON DMSO D:\\ ARD 14

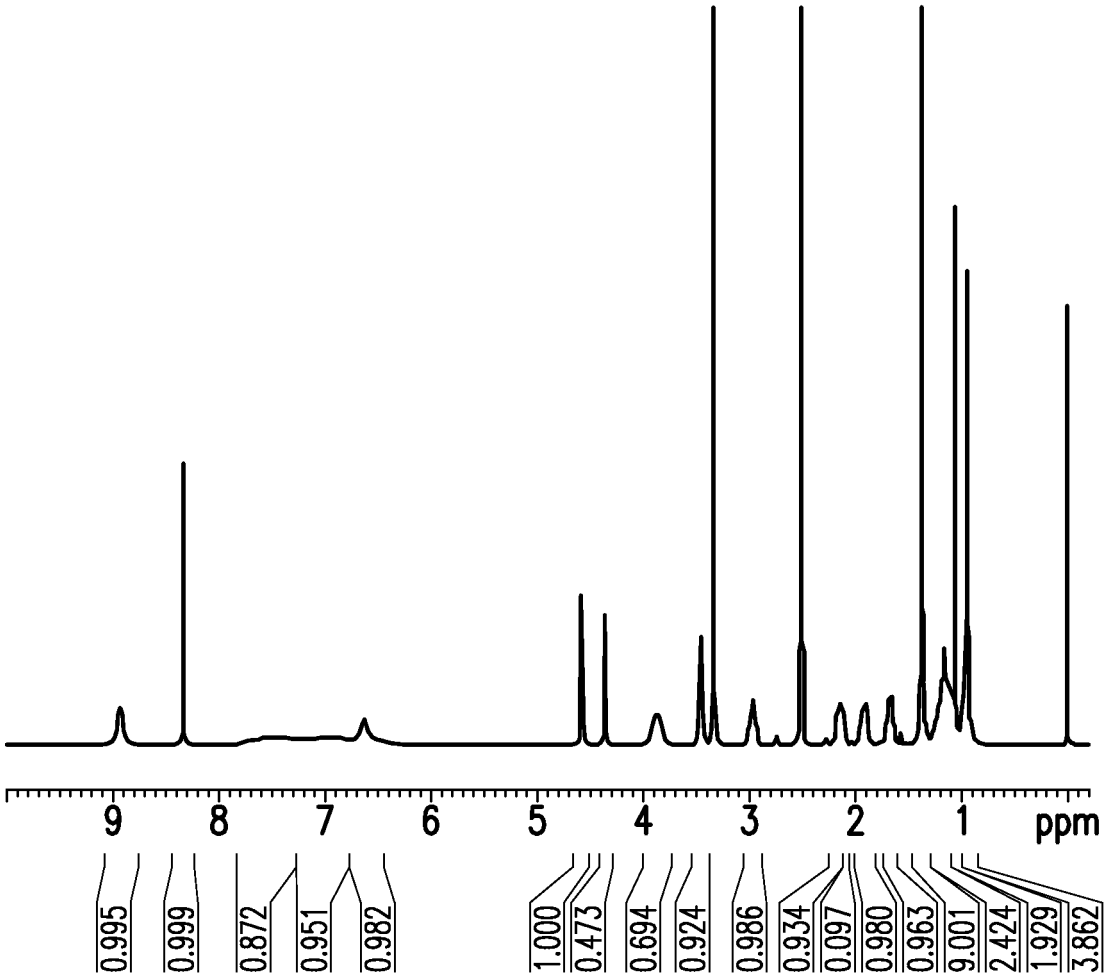


FIG. 17

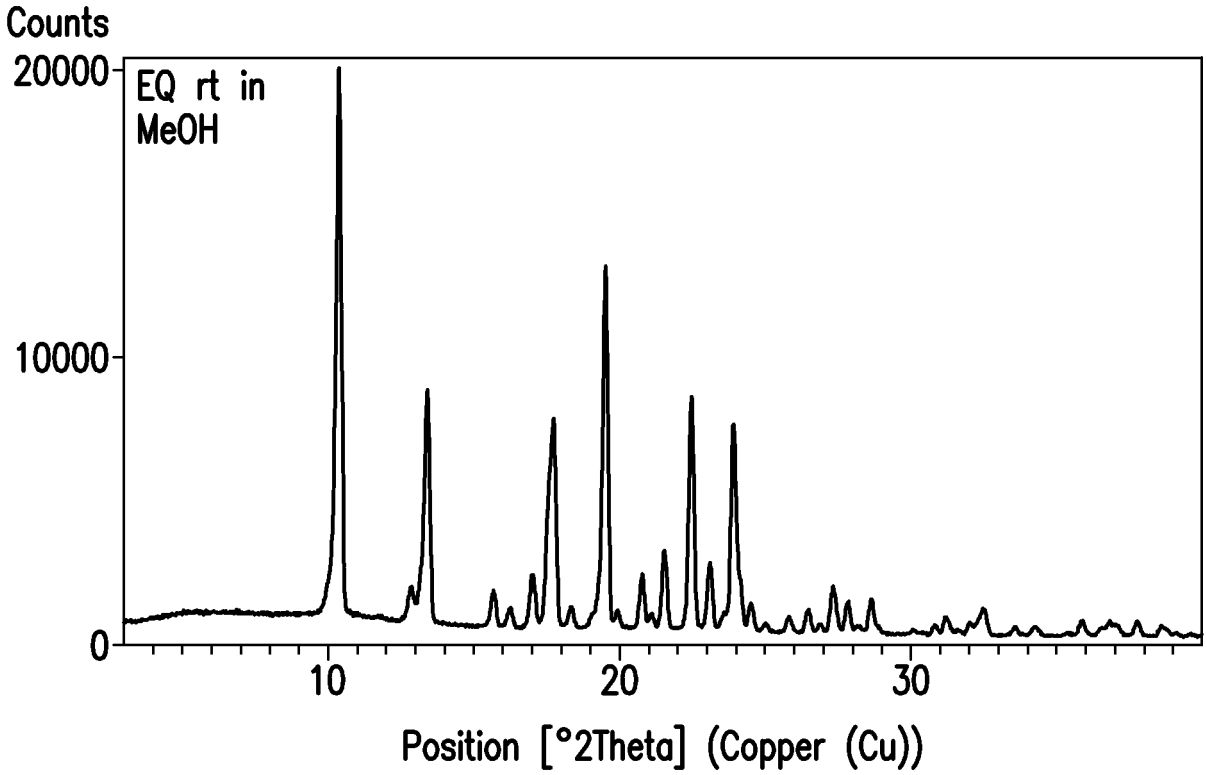

Counts
20000
10000
0
EQ rt in
MeOH
10
20
30
Position [°2Theta] (Copper (Cu))

FIG. 18

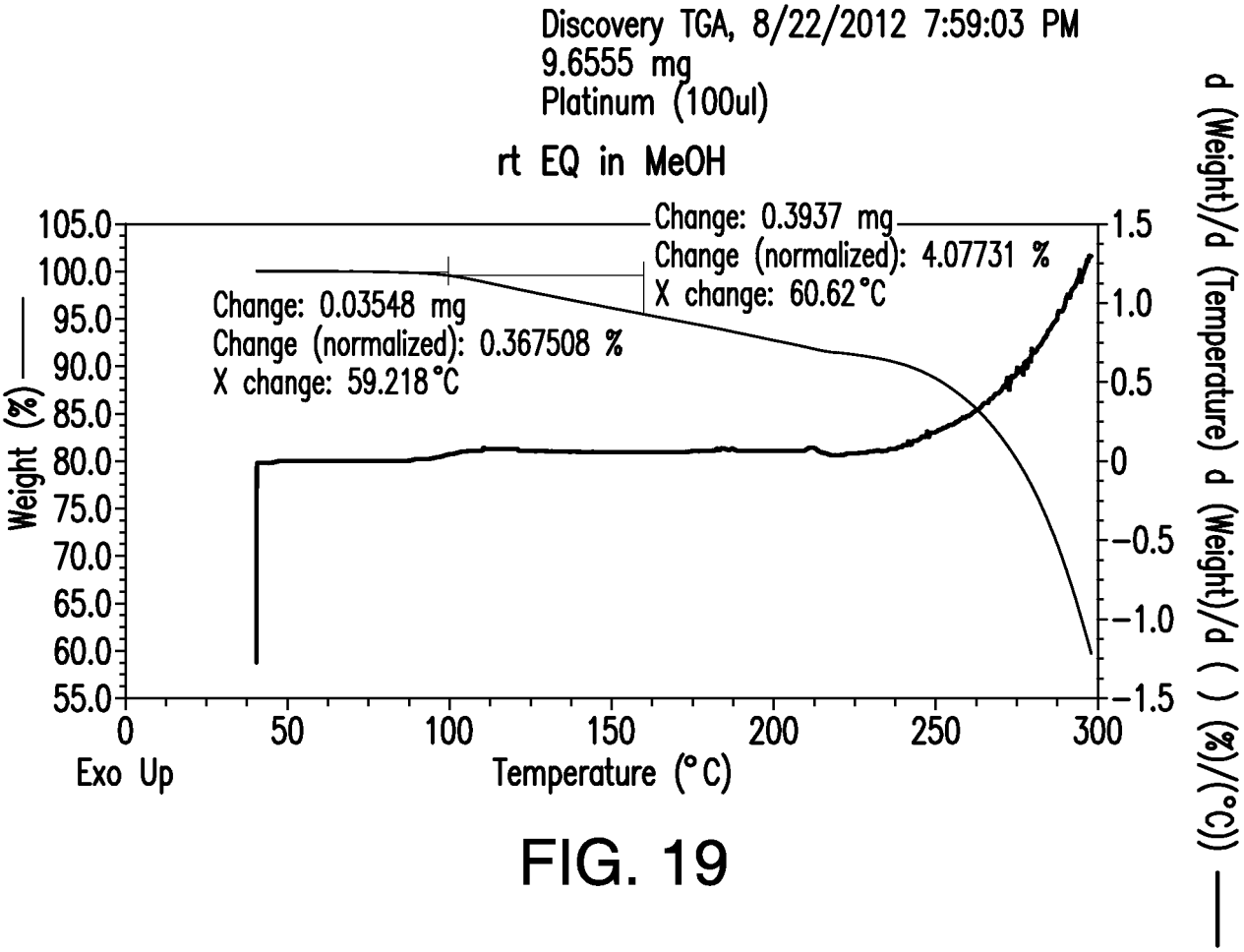

Discovery TGA, 8/22/2012 7:59:03 PM
9.6555 mg
Platinum (100ul)
rt EQ in MeOH
Change: 0.3937 mg
Change (normalized): 4.07731 %
X change: 60.62°C
Change: 0.03548 mg
Change (normalized): 0.367508 %
X change: 59.218°C
Weight (%)
105.0
100.0
95.0
90.0
85.0
80.0
75.0
70.0
65.0
60.0
55.0
0
50
100
150
200
250
300
Exo Up
Temperature (°C)
d (Weight)/d (Temperature) d (Weight)/d ( ) (%)/(°C))
1.5
1.0
0.5
0
-0.5
-1.0
-1.5

FIG. 19

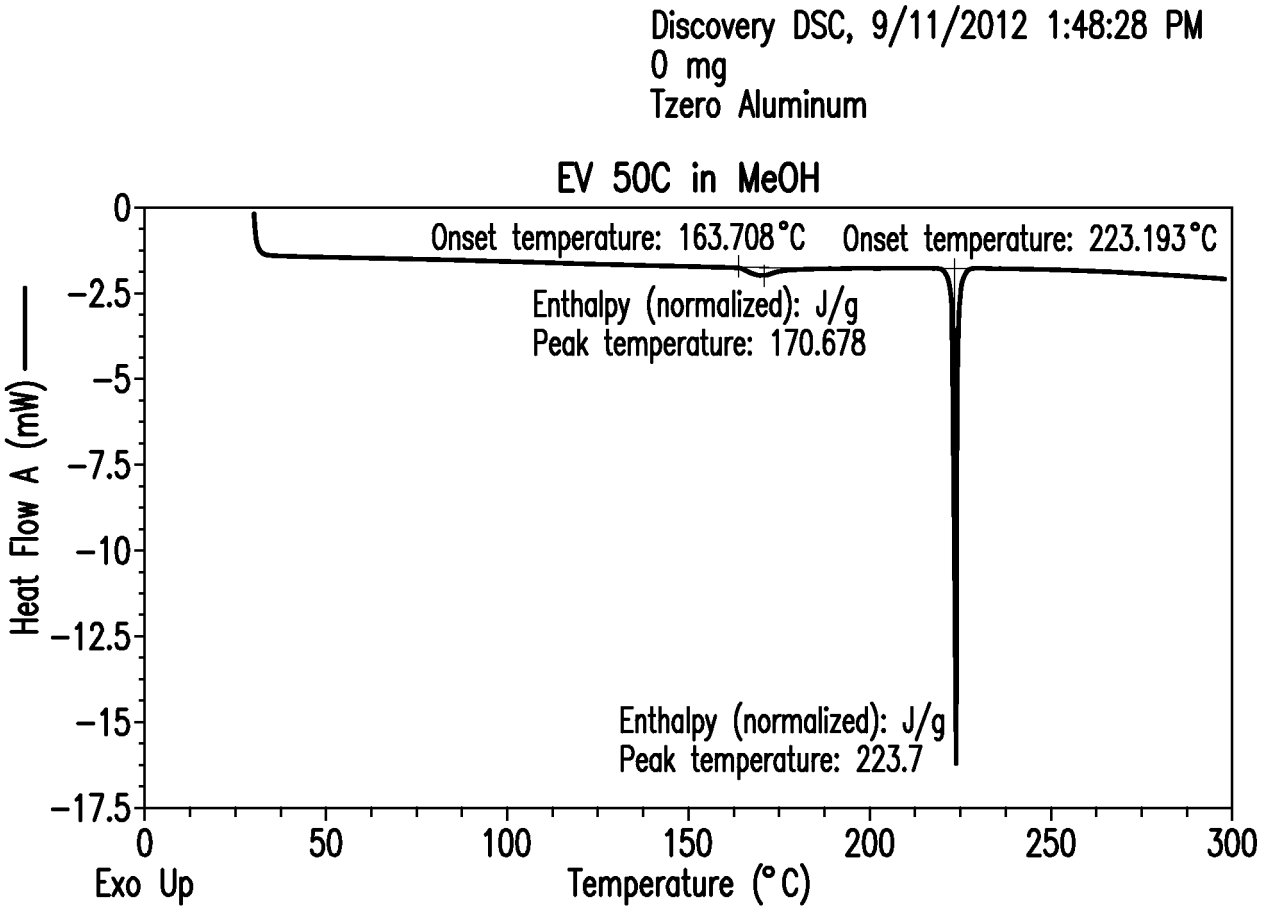

Discovery DSC, 9/11/2012 1:48:28 PM
0 mg
Tzero Aluminum
EV 50C in MeOH
Onset temperature: 163.708°C
Onset temperature: 223.193°C
Enthalpy (normalized): J/g
Peak temperature: 170.678
Enthalpy (normalized): J/g
Peak temperature: 223.7
Heat Flow A (mW)
Exo Up
Temperature (°C)
0
-2.5
-5
-7.5
-10
-12.5
-15
-17.5
0
50
100
150
200
250
300

FIG. 20

Celgene

Current Data Parameters

NAME	EQ RT in MeOH				
EXPNO	10		SWH	6186.119	He
PROCNO	1		FIDRES	0.094423	He
F5 - Acquisition Parameters			AQ	5.2953587	sec
Date	20120904		RG	25.4	
Time	9.30		DW	80.800	usec
INSTRUM	spect		DE	6.50	usec
PROBHD	5 mm PABBO BB-		TE	297.5	K
PULPROG	ug30		D1	1.00000000	sec
TD	65536		TD0	1	
SOLVENT	DMSO				
NS	32				
DS	2				

CHANNEL f1

NUC1	1H	
P1	9.25	usec
PL1	-3.00	dB
PL1W	30.32182693	W
SFO1	300.1418535	MHe
F5 - Processing Parameters		
SI	32768	
SF	300.1400003	MHe
WDW	EM	
SSB	0	
LB	0.30	He
GB	0	
PC	1.00	

EQ RT in MeOH
PROTON DMSO D:\\ ARD 25

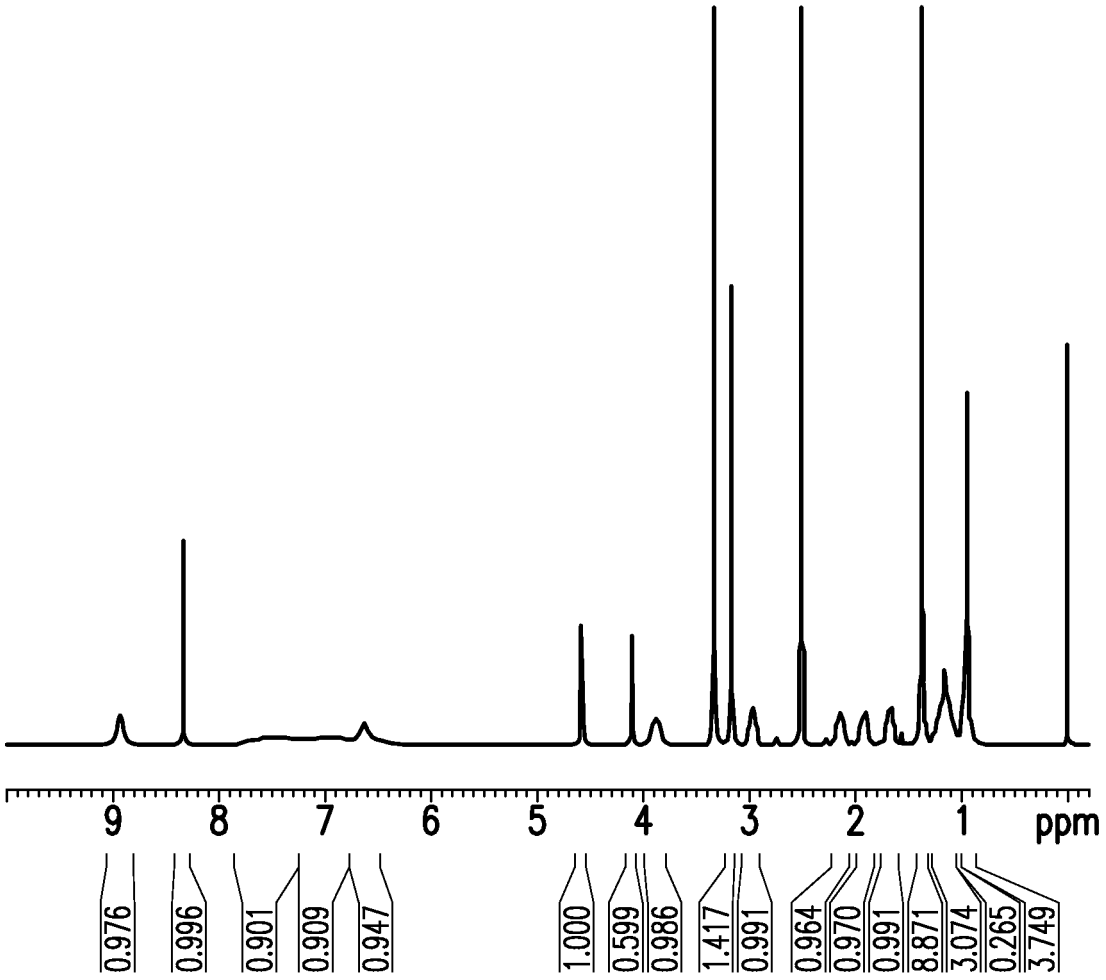


FIG. 21

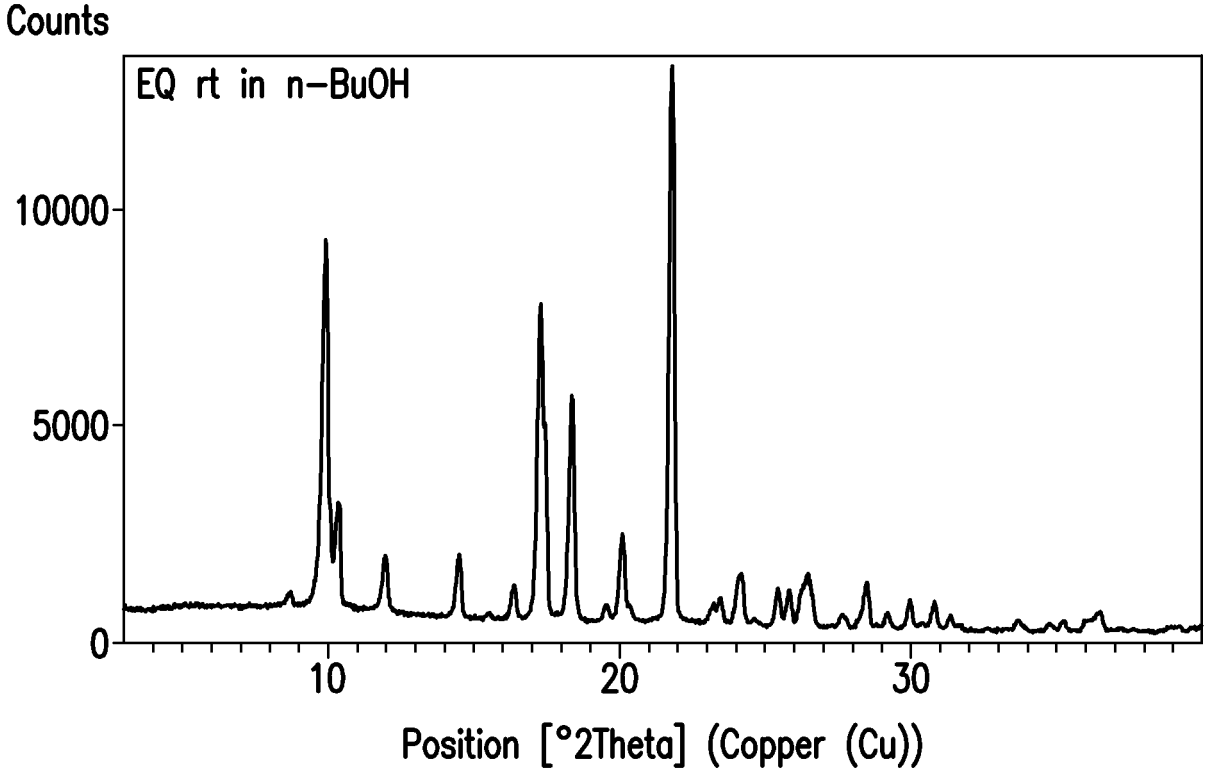

Counts
EQ rt in n-BuOH
10000
5000
0
10
20
30
Position [°2Theta] (Copper (Cu))

FIG. 22

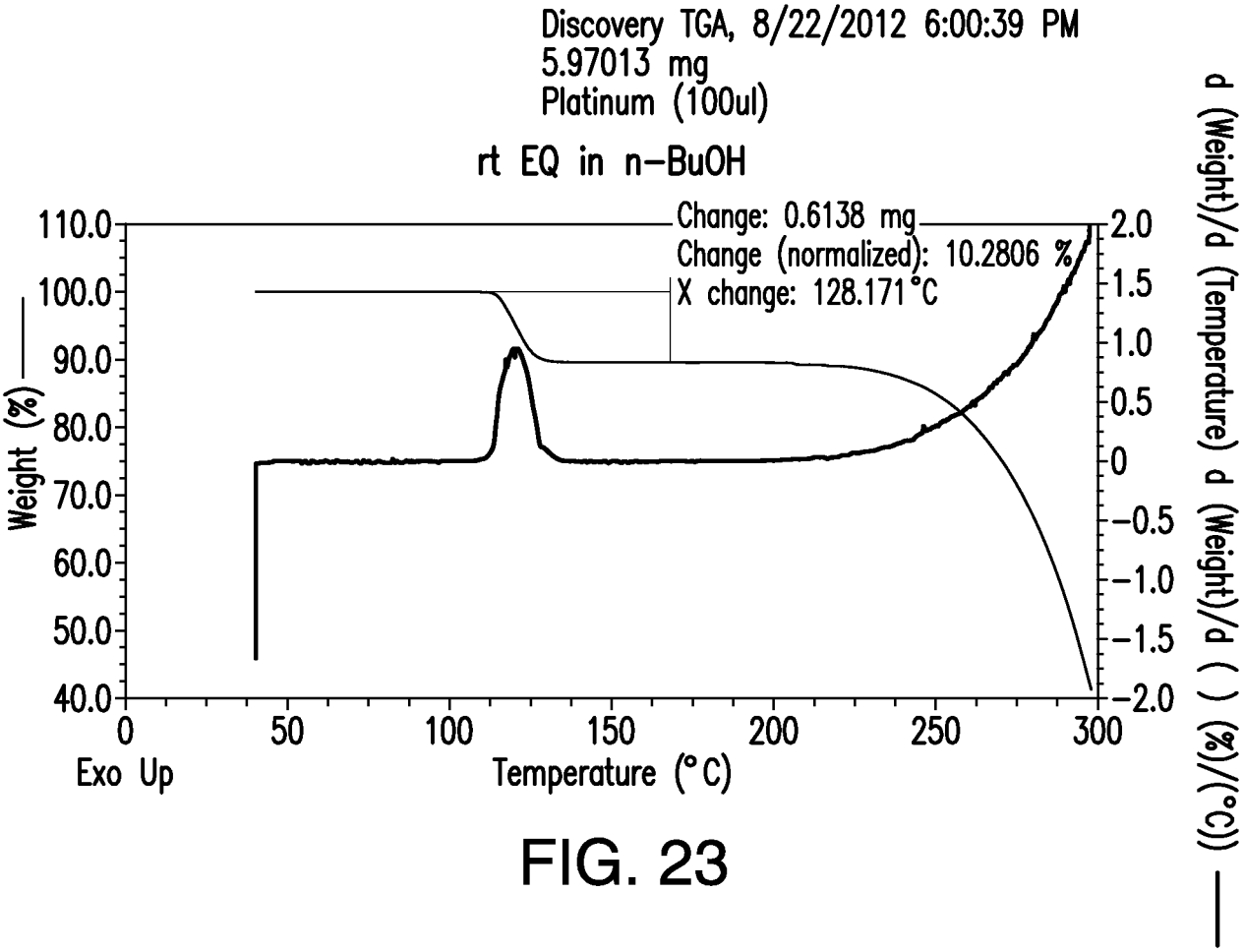

Discovery TGA, 8/22/2012 6:00:39 PM
5.97013 mg
Platinum (100ul)
rt EQ in n-BuOH
Change: 0.6138 mg
Change (normalized): 10.2806 %
X change: 128.171°C
Weight (%)
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
0
50
100
150
200
250
300
Exo Up
Temperature (°C)
d (Weight)/d (Temperature) d (Weight)/d ( ) (%)/(°C))
2.0
1.5
1.0
0.5
0
-0.5
-1.0
-1.5
-2.0

FIG. 23

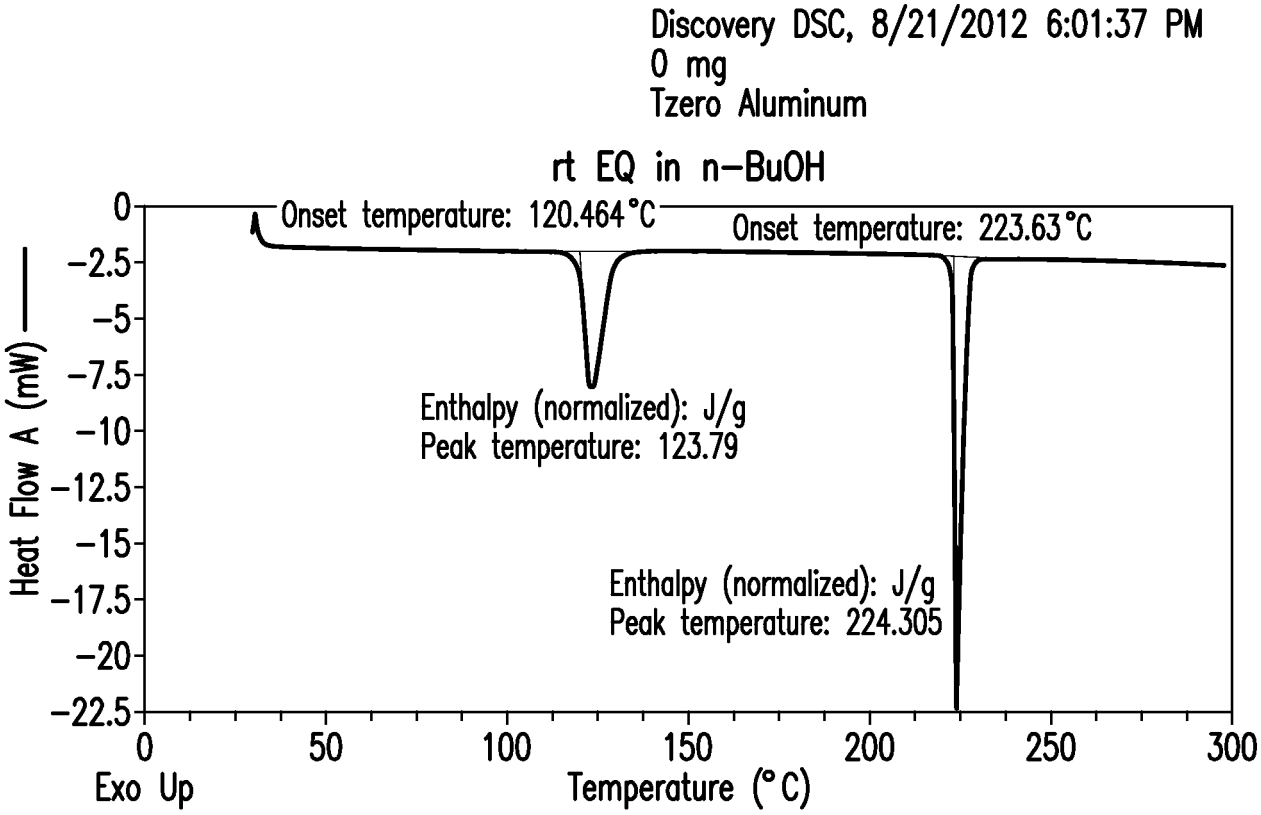

Discovery DSC, 8/21/2012 6:01:37 PM
0 mg
Tzero Aluminum
rt EQ in n-BuOH
Onset temperature: 120.464°C
Onset temperature: 223.63°C
Enthalpy (normalized): J/g
Peak temperature: 123.79
Enthalpy (normalized): J/g
Peak temperature: 224.305
Heat Flow A (mW)
0
-2.5
-5
-7.5
-10
-12.5
-15
-17.5
-20
-22.5
Exo Up
0
50
100
150
200
250
300
Temperature (°C)

FIG. 24

Celgene

Current Data Parameters

NAME	EQ RT in n-BuOH	
EXPNO	10	
PROCNO	1	
F5 - Acquisition Parameters		
Date	20120904	
Time	9.30	
INSTRUM	spect	
PROBHD	5 mm PABBO BB-	
PULPROG	ug30	
TD	65536	
SOLVENT	DMSO	
NS	32	
DS	2	
SWH	6186.119	He
FIDRES	0.094423	He
AQ	5.2953587	sec
RG	25.4	
DW	80.800	usec
DE	6.50	usec
TE	297.5	K
D1	1.00000000	sec
TD0	1	

CHANNEL f1

NUC1	1H	
P1	9.25	usec
PL1	-3.00	dB
PL1W	30.32182693	W
SFO1	300.1418535	MHe
F5 - Processing Parameters		
SI	32768	
SF	300.1400003	MHe
WDW	EM	
SSB	0	
LB	0.30	He
GB	0	
PC	1.00	

EQ RT in n-BuOH
PROTON DMSO D:\\ ARD 26

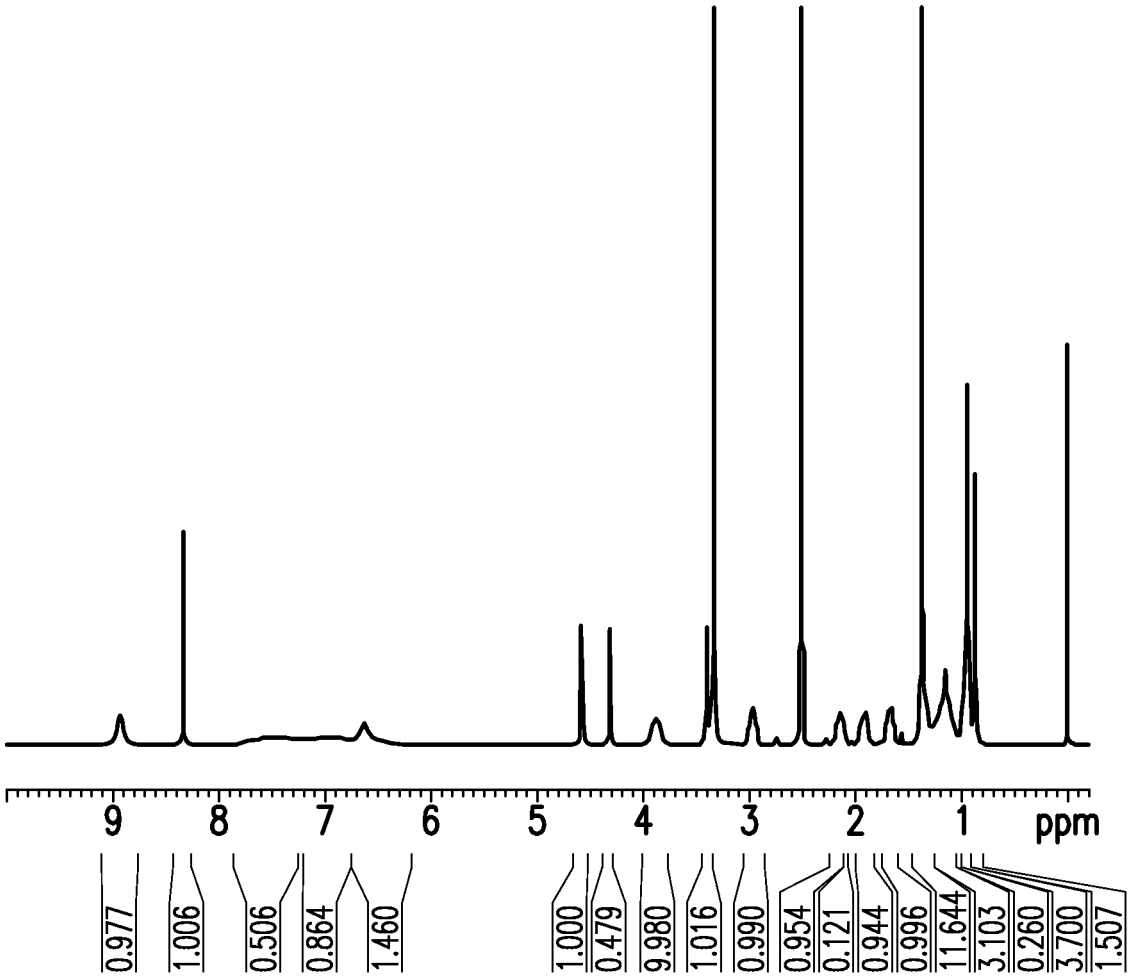


FIG. 25

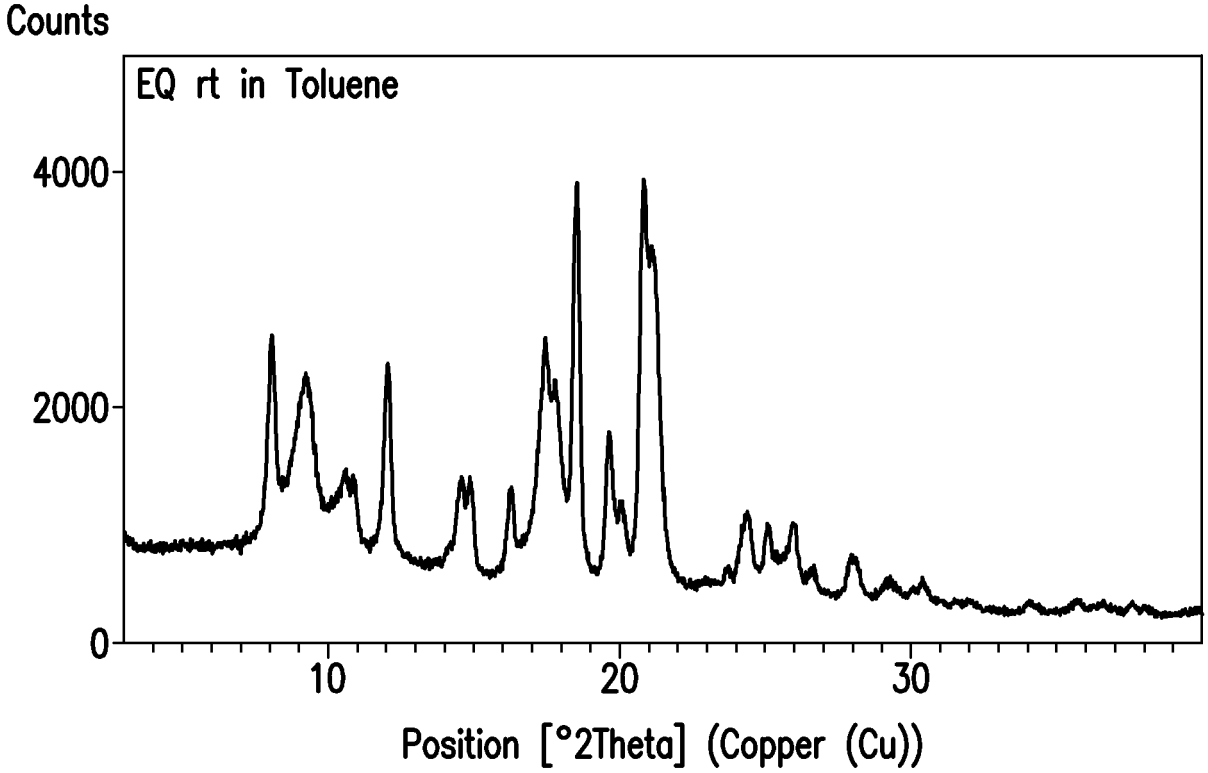

Counts
EQ rt in Toluene
4000
2000
0
10
20
30
Position [°2Theta] (Copper (Cu))

FIG. 26

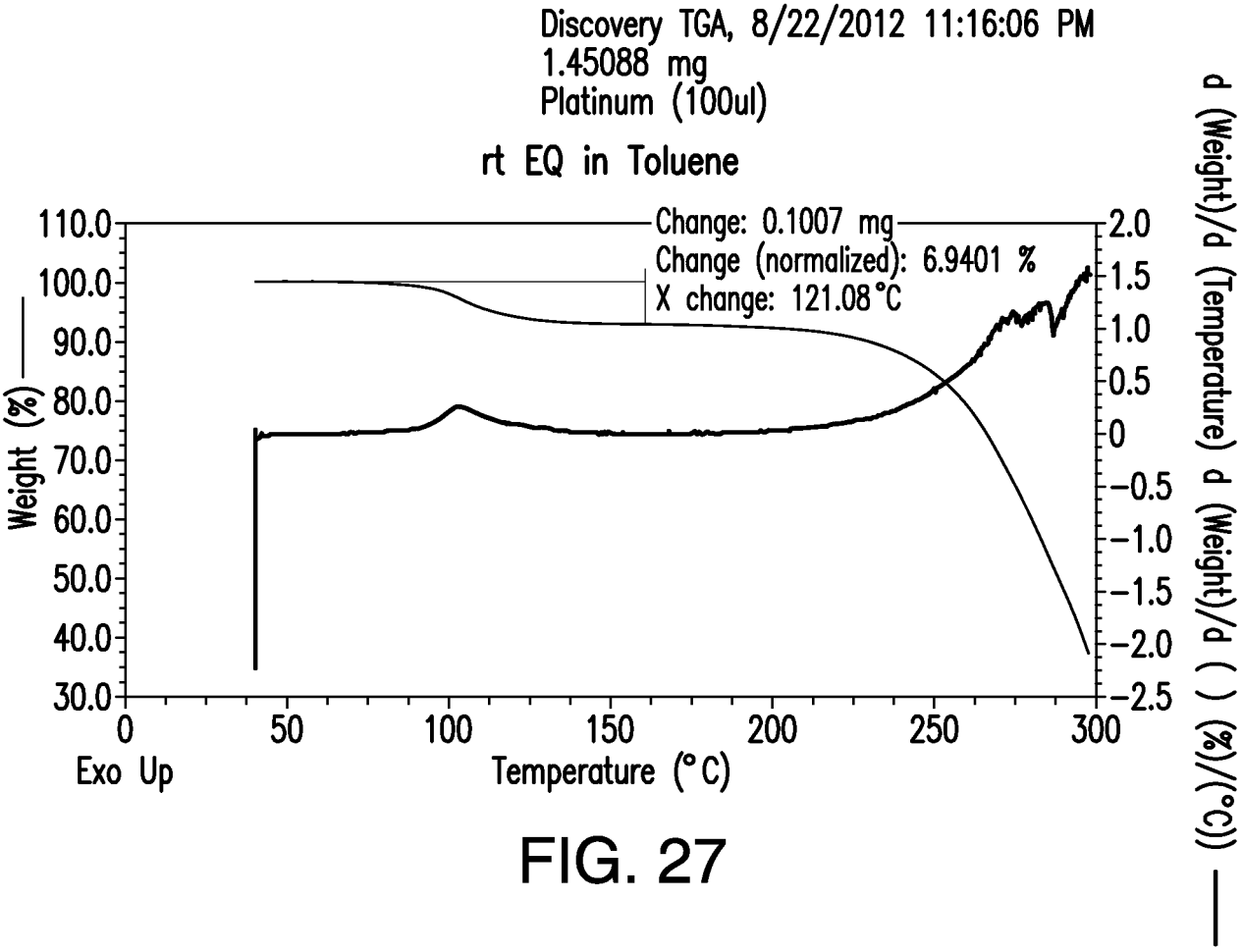

Discovery TGA, 8/22/2012 11:16:06 PM
1.45088 mg
Platinum (100ul)
rt EQ in Toluene
Change: 0.1007 mg
Change (normalized): 6.9401 %
X change: 121.08°C
Weight (%)
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
0
50
100
150
200
250
300
Exo Up
Temperature (°C)
d (Weight)/d (Temperature) d (Weight)/d ( ) (%)/(°C))
2.0
1.5
1.0
0.5
0
-0.5
-1.0
-1.5
-2.0
-2.5

FIG. 27

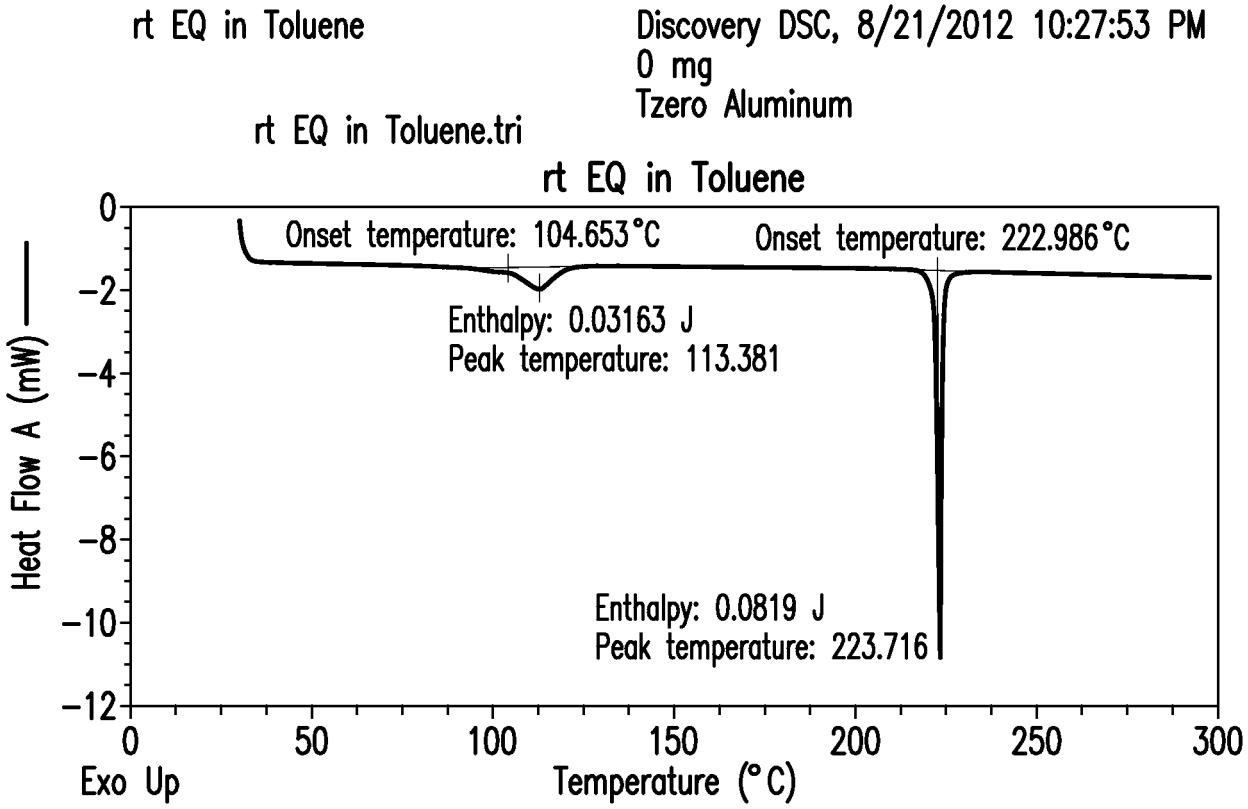

rt EQ in Toluene
Discovery DSC, 8/21/2012 10:27:53 PM
0 mg
Tzero Aluminum
rt EQ in Toluene.tri
rt EQ in Toluene
Onset temperature: 104.653°C
Onset temperature: 222.986°C
Enthalpy: 0.03163 J
Peak temperature: 113.381
Enthalpy: 0.0819 J
Peak temperature: 223.716
Heat Flow A (mW)
Exo Up
Temperature (°C)
0
-2
-4
-6
-8
-10
-12
0
50
100
150
200
250
300

FIG. 28

Celgene

Current Data Parameters

NAME	EQ RT in Toluene
EXPNO	10
PROCNO	1
F5 - Acquisition Parameters	
Date	20120904
Time	9.30
INSTRUM	spect
PROBHD	5 mm PABBO BB-
PULPROG	ug30
TD	65536
SOLVENT	DMSO
NS	32
DS	2

SWH	6186.119	He
FIDRES	0.094423	He
AQ	5.2953587	sec
RG	25.4	
DW	80.800	usec
DE	6.50	usec
TE	297.5	K
D1	1.00000000	sec
TD0	1	

CHANNEL f1

NUC1	1H	
P1	9.25	usec
PL1	-3.00	dB
PL1W	30.32182693	W
SFO1	300.1418535	MHe
F5 - Processing Parameters		
SI	32768	
SF	300.1400003	MHe
WDW	EM	
SSB	0	
LB	0.30	He
GB	0	
PC	1.00	

EQ RT in Toluene
PROTON DMSO D:\\ ARD 27

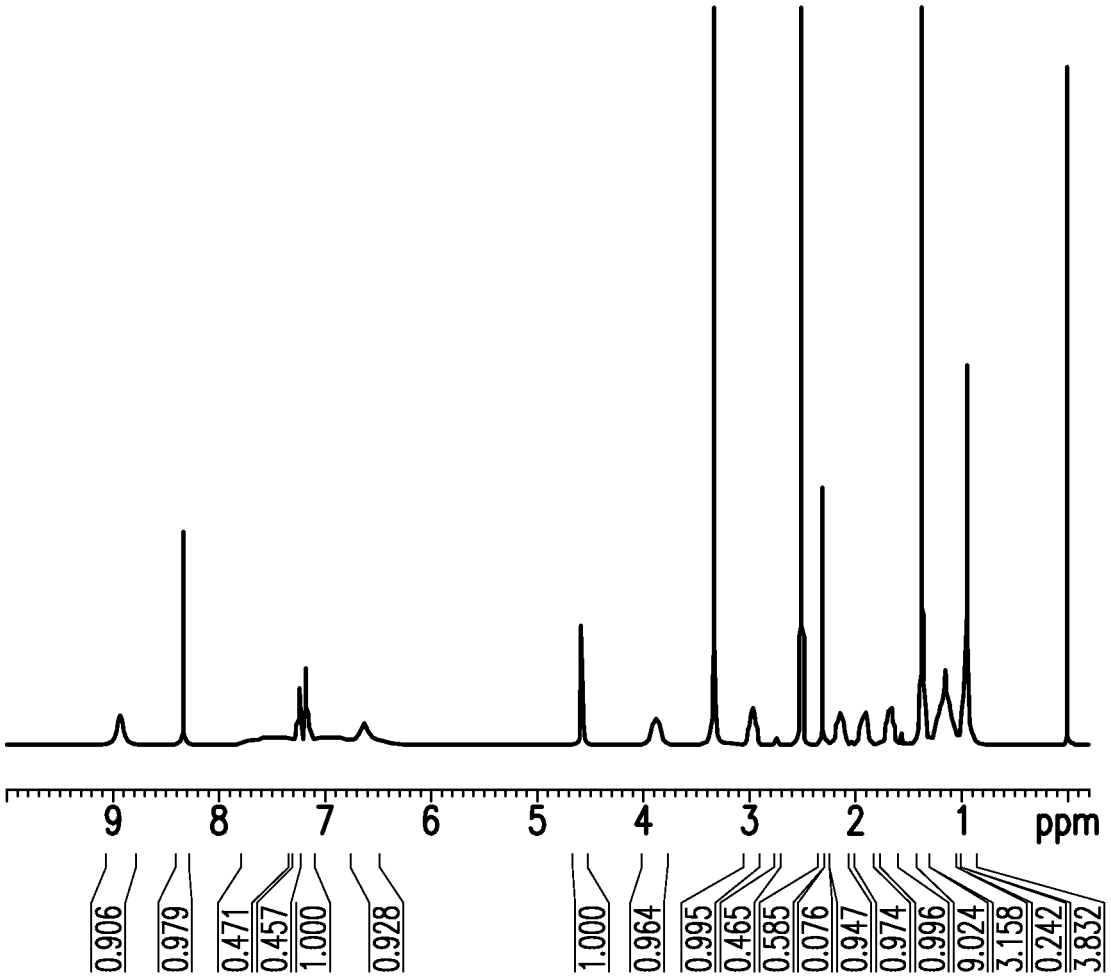


FIG. 29

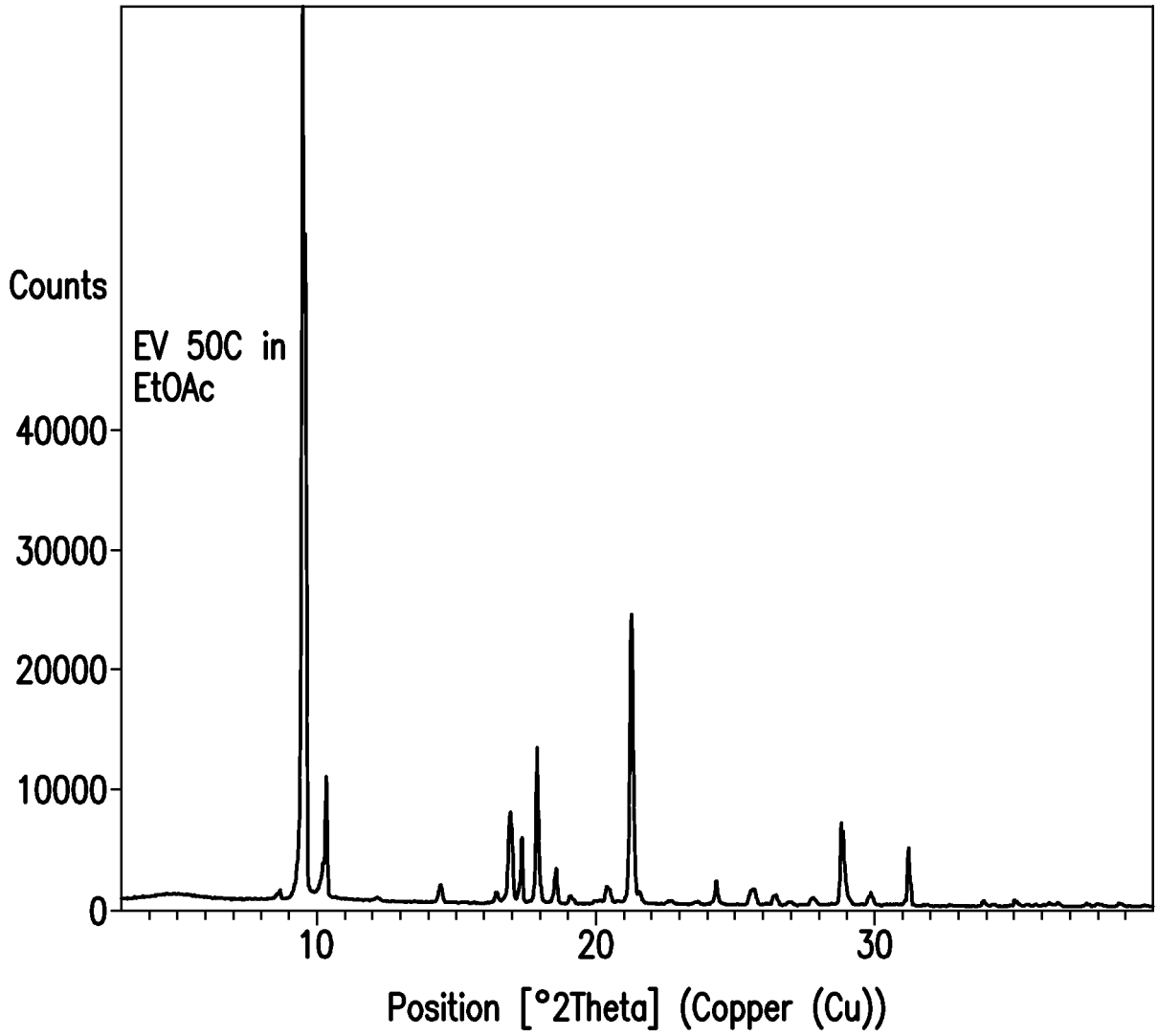

Counts
EV 50C in
EtOAc
40000
30000
20000
10000
0
10
20
30
Position [°2Theta] (Copper (Cu))

FIG. 30

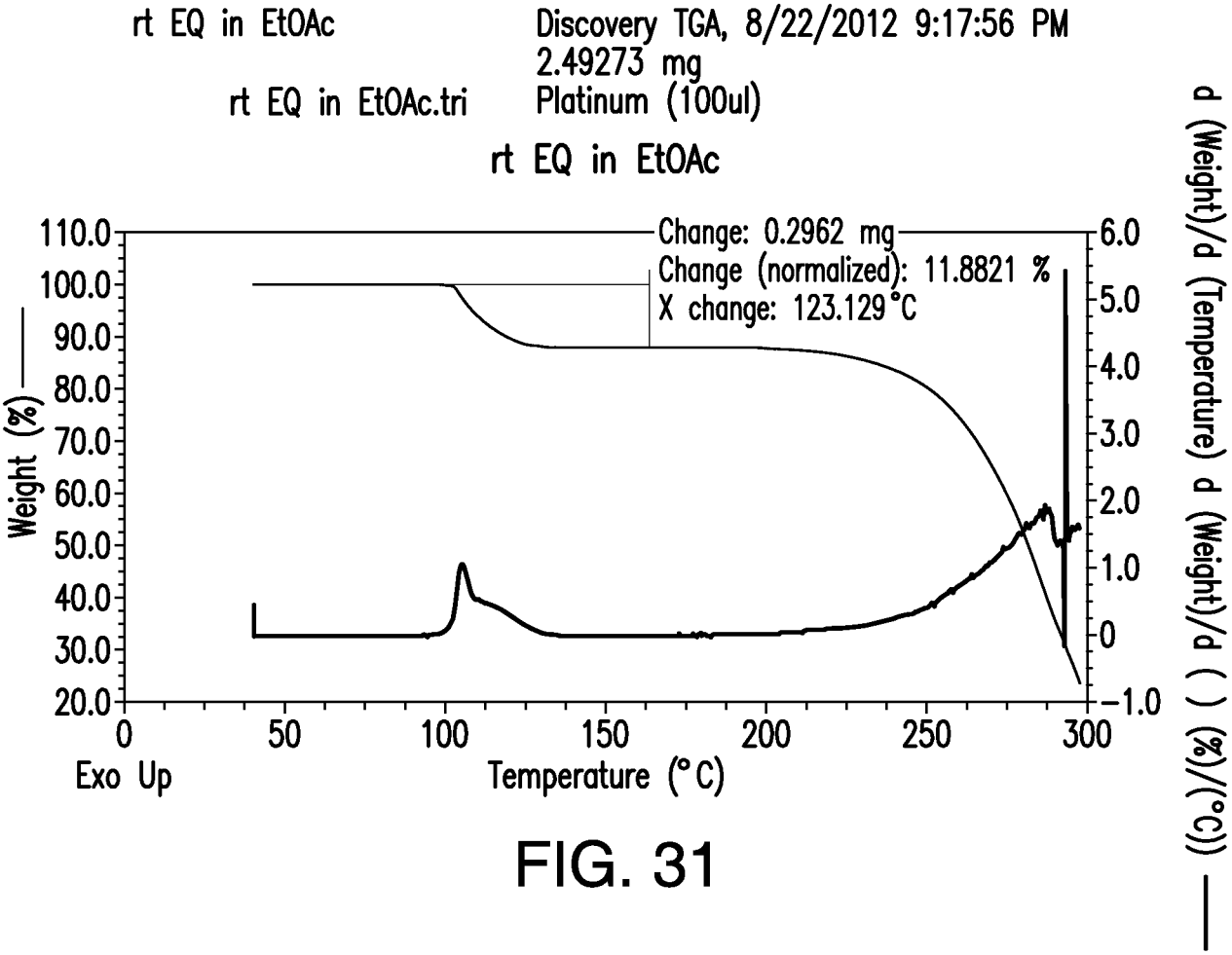

rt EQ in EtOAc
Discovery TGA, 8/22/2012 9:17:56 PM
2.49273 mg
rt EQ in EtOAc.tri
Platinum (100ul)
rt EQ in EtOAc
Change: 0.2962 mg
Change (normalized): 11.8821 %
X change: 123.129°C
Weight (%)
d (Weight)/d (Temperature) d (Weight)/d ( ) (%)/(°C))
Exo Up
Temperature (°C)
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
6.0
5.0
4.0
3.0
2.0
1.0
0
-1.0
0
50
100
150
200
250
300

FIG. 31

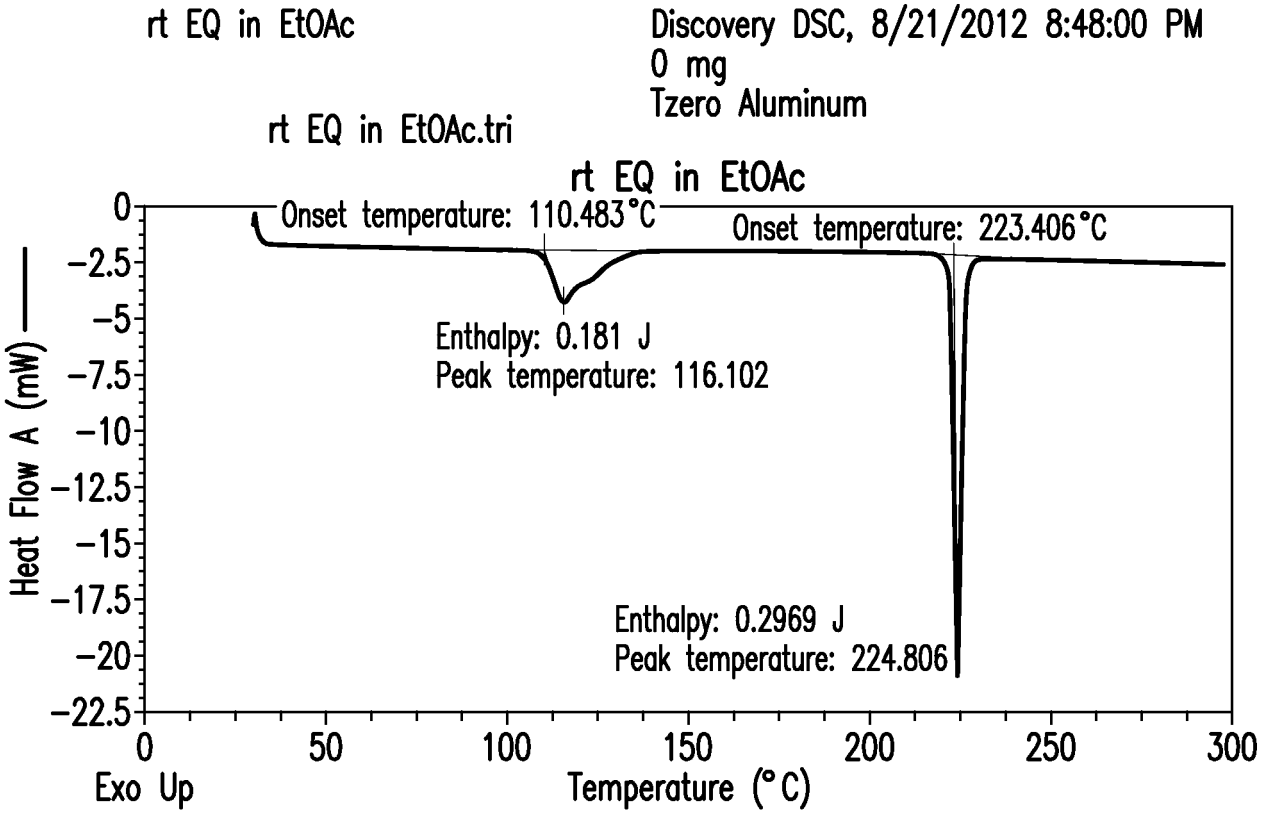

rt EQ in EtOAc
Discovery DSC, 8/21/2012 8:48:00 PM
0 mg
Tzero Aluminum
rt EQ in EtOAc.tri
rt EQ in EtOAc
Onset temperature: 110.483°C
Onset temperature: 223.406°C
Enthalpy: 0.181 J
Peak temperature: 116.102
Enthalpy: 0.2969 J
Peak temperature: 224.806
Heat Flow A (mW)
0
-2.5
-5
-7.5
-10
-12.5
-15
-17.5
-20
-22.5
0
50
100
150
200
250
300
Exo Up
Temperature (°C)

FIG. 32

Celgene

Current Data Parameters

NAME	EV 50C in EtOAc
EXPNO	10
PROCNO	1
F5 - Acquisition Parameters	
Date	20120904
Time	9.30
INSTRUM	spect
PROBHD	5 mm PABBO BB-
PULPROG	ug30
TD	65536
SOLVENT	DMSO
NS	32
DS	2

SWH	6186.119	He
FIDRES	0.094423	He
AQ	5.2953587	sec
RG	25.4	
DW	80.800	usec
DE	6.50	usec
TE	297.5	K
D1	1.00000000	sec
TD0	1	

CHANNEL f1

NUC1	1H	
P1	9.25	usec
PL1	-3.00	dB
PL1W	30.32182693	W
SF01	300.1418535	MHe
F5 - Processing Parameters		
SI	32768	
SF	300.1400003	MHe
WDW	EM	
SSB	0	
LB	0.30	He
GB	0	
PC	1.00	

EV 50C in EtOAc
PROTON DMSO D:\\ ARD 28

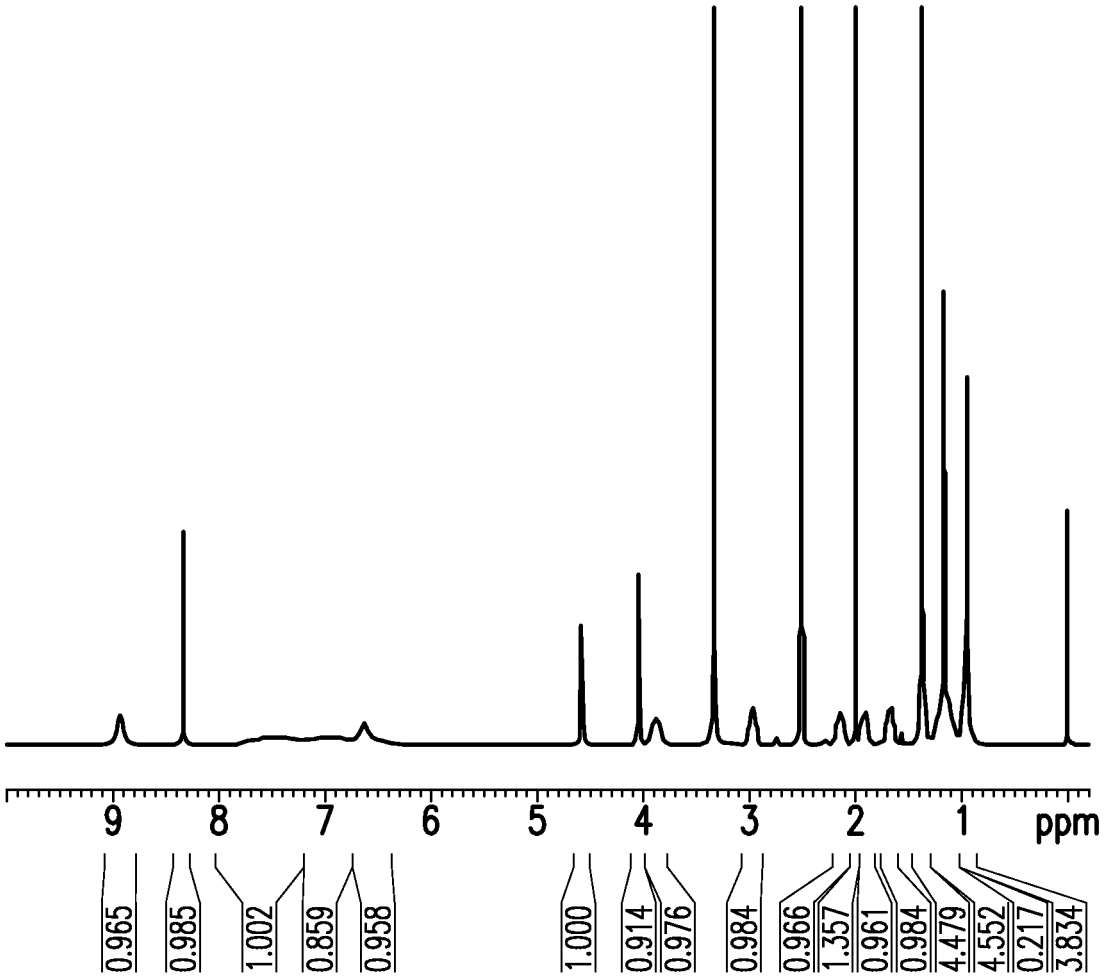


FIG. 33

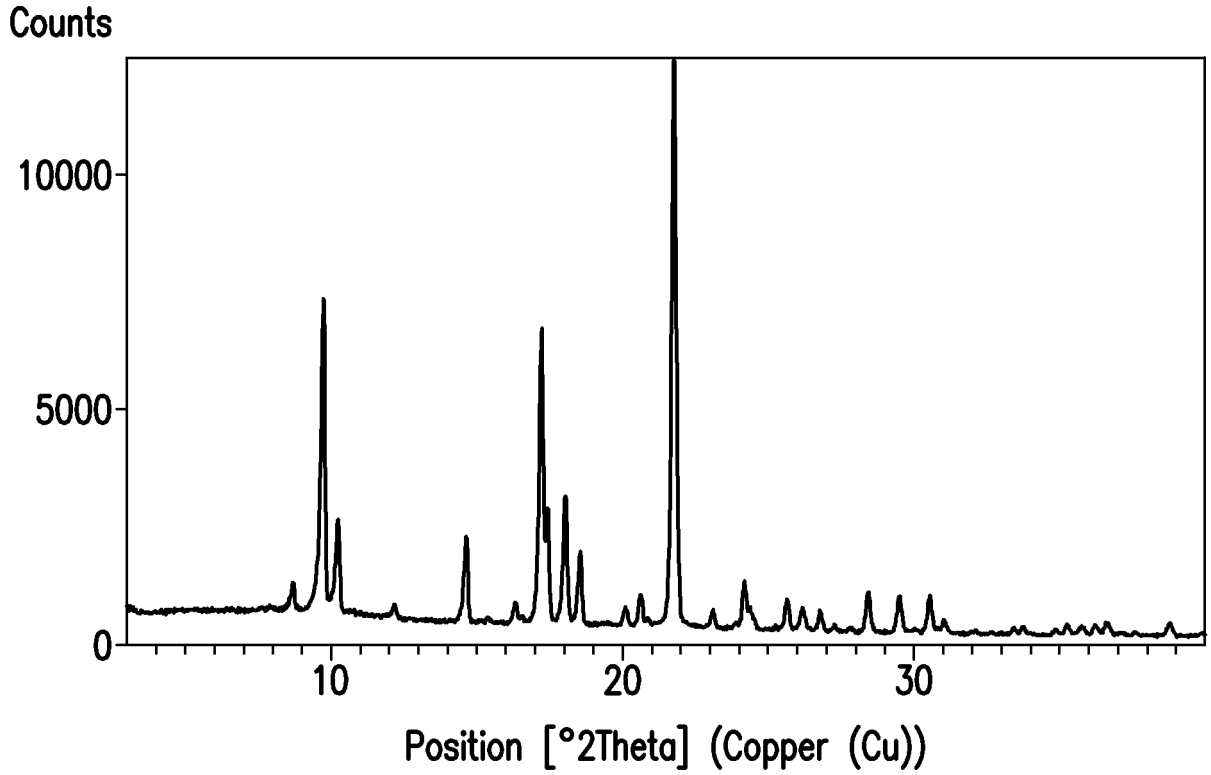


FIG. 34

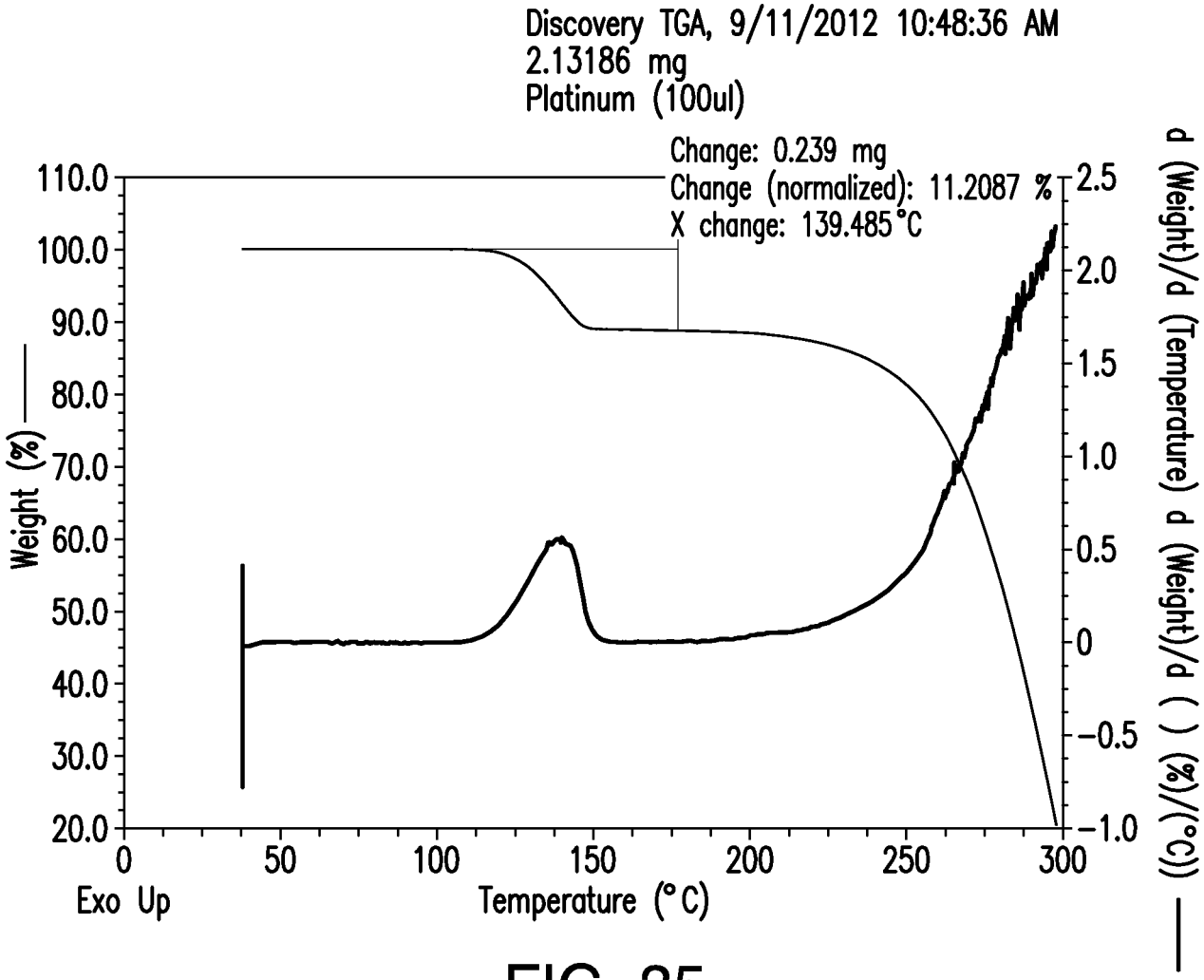

Discovery TGA, 9/11/2012 10:48:36 AM
2.13186 mg
Platinum (100ul)
Change: 0.239 mg
Change (normalized): 11.2087 %
X change: 139.485°C
Weight (%)
d (Weight)/d (Temperature) d (Weight)/d ( ) (%)/(°C))
Exo Up
Temperature (°C)
110.0
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
2.5
2.0
1.5
1.0
0.5
0
-0.5
-1.0
0
50
100
150
200
250
300

FIG. 35

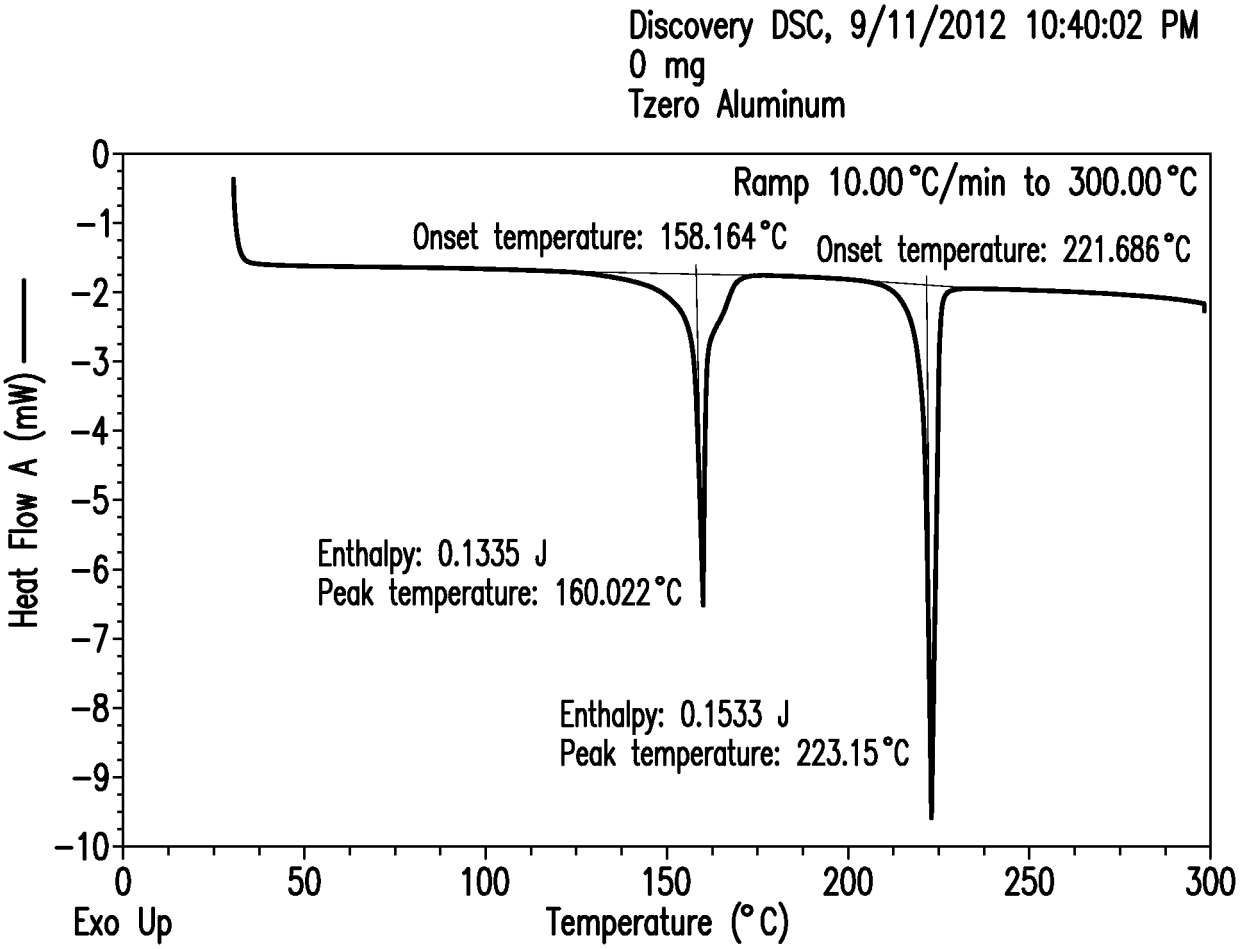

Discovery DSC, 9/11/2012 10:40:02 PM
0 mg
Tzero Aluminum
Ramp 10.00°C/min to 300.00°C
Onset temperature: 158.164°C
Onset temperature: 221.686°C
Enthalpy: 0.1335 J
Peak temperature: 160.022°C
Enthalpy: 0.1533 J
Peak temperature: 223.15°C
Heat Flow A (mW)
Exo Up
Temperature (°C)
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
0
50
100
150
200
250
300

FIG. 36

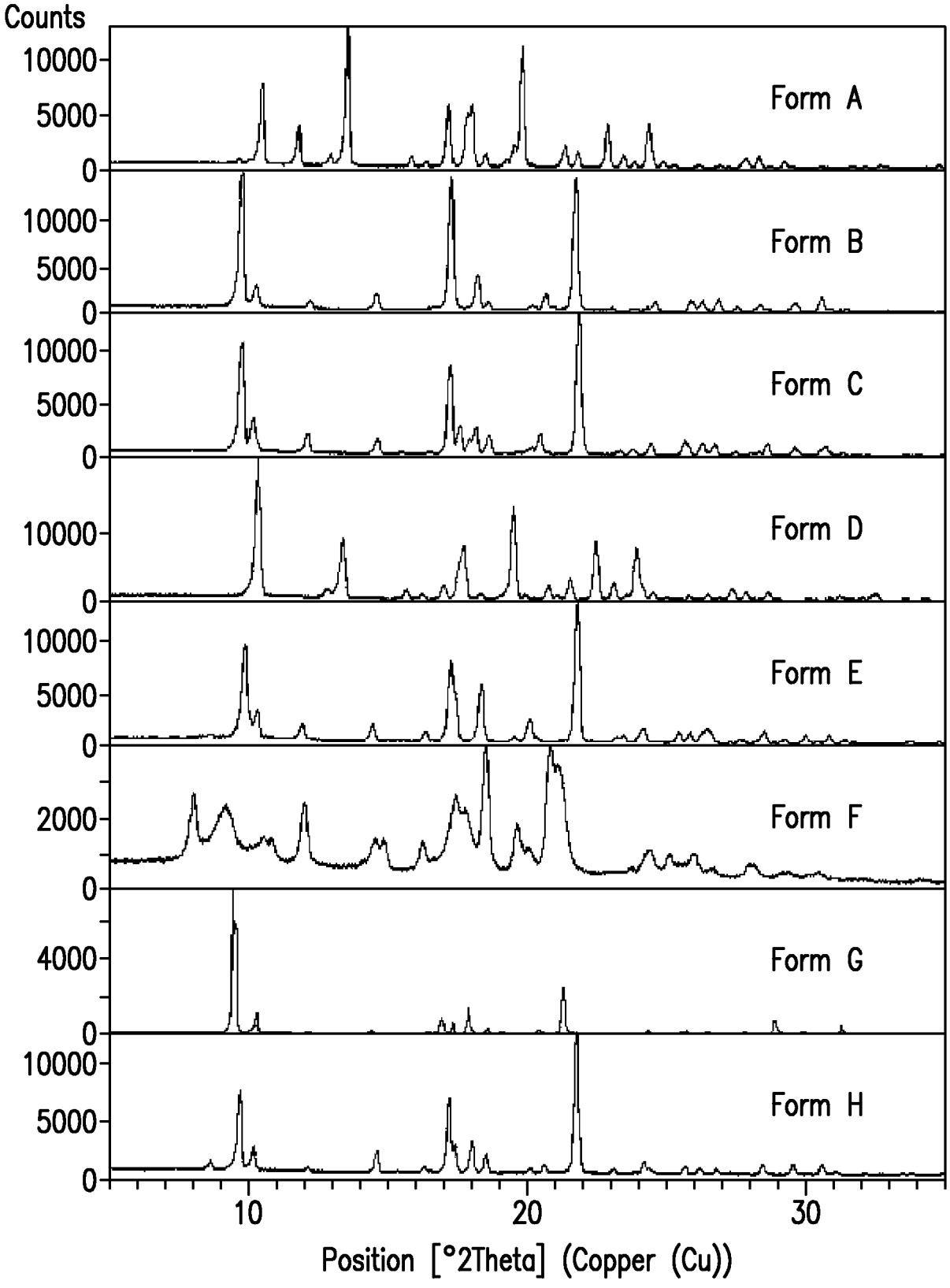

Counts
10000
5000
0
Form A
Form B
Form C
Form D
Form E
2000
Form F
4000
Form G
Form H
10
20
30
Position [°2Theta] (Copper (Cu))

FIG. 37

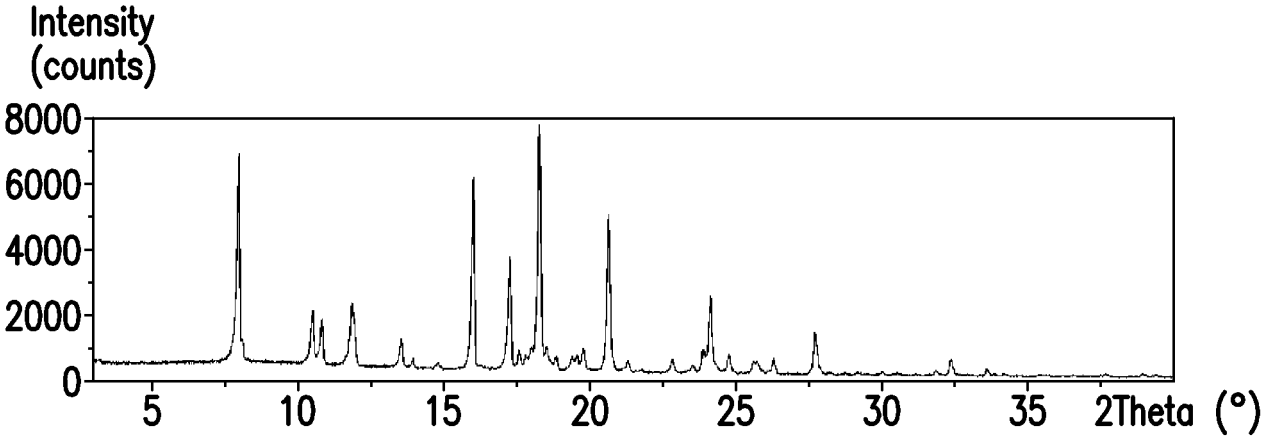

Intensity
(counts)
8000
6000
4000
2000
0
5
10
15
20
25
30
35
2Theta (°)

FIG. 38

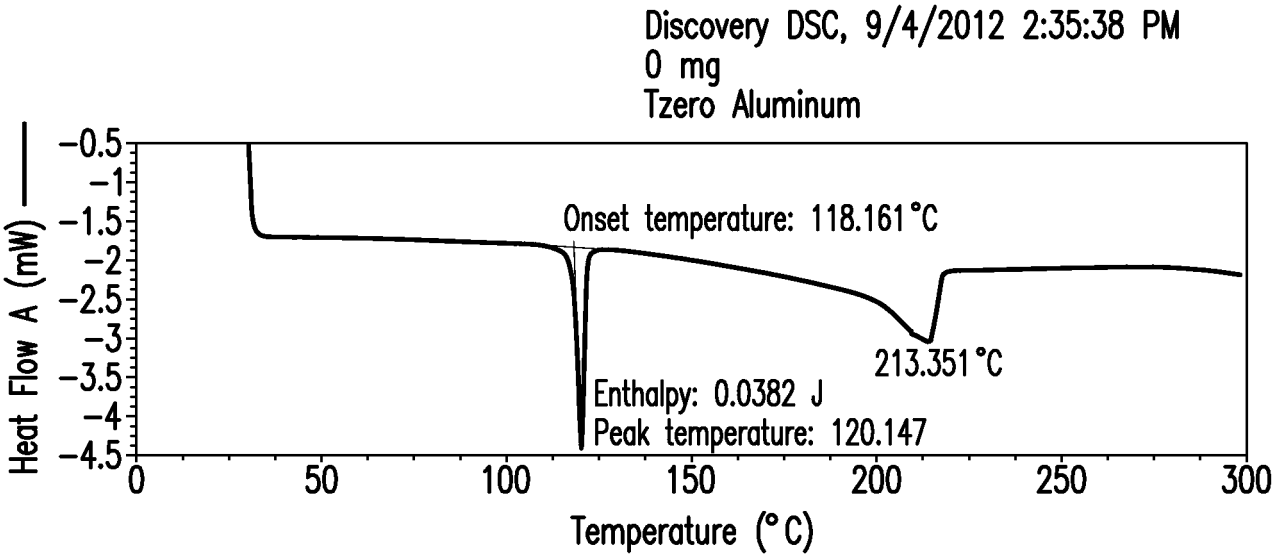

Discovery DSC, 9/4/2012 2:35:38 PM
0 mg
Tzero Aluminum
Heat Flow A (mW)
−0.5
−1
−1.5
−2
−2.5
−3
−3.5
−4
−4.5
Onset temperature: 118.161 °C
213.351 °C
Enthalpy: 0.0382 J
Peak temperature: 120.147
0
50
100
150
200
250
300
Temperature (°C)

FIG. 39

Celgene

NAME	7690-014-J (after MTBE)
EXPNO	10
PROCNO	1
Date	20120904
Time	9.30
INSTRUM	spect
PROBHD	5 mm PABBO BB-
PULPROG	ug30
TD	65536
SOLVENT	DMSO
NS	32
DS	2

SWH	6186.119	Hz
FIDRES	0.094423	Hz
AQ	5.2953587	sec
RG	25.4	
DW	80.800	usec
DE	6.50	usec
TE	297.5	K
D1	1.00000000	sec
TD0	1	

CHANNEL f1

NUC1	1H	
P1	9.25	usec
PL1	-3.00	dB
PL1W	30.32182693	W
SFO1	300.1418535	MHz
SI	32768	
SF	300.1400003	MHz
WDW	EM	
SSB	0	
LB	0.30	Hz
GB	0	
PC	1.00	

8.920 8.342 6.644 4.576 4.558 3.881 3.868 3.856 3.318 3.076 3.018 3.008 3.002 2.993 2.984 2.977 2.968 2.946 2.930 2.914 2.513 2.507 2.501 2.495 2.490 2.156 2.124 2.115 2.094 2.083 2.080 2.069 2.058 2.055 2.044 2.028 2.024 1.928 1.887 1.693 1.682 1.650 1.639 1.572 1.364 1.299 1.257 1.235 1.219 1.194 1.188 1.166 1.151 1.106 1.074 1.061 1.054 1.024 1.016 0.982 0.973 0.947 0.925 0.900 0.011 -0.000 -0.011

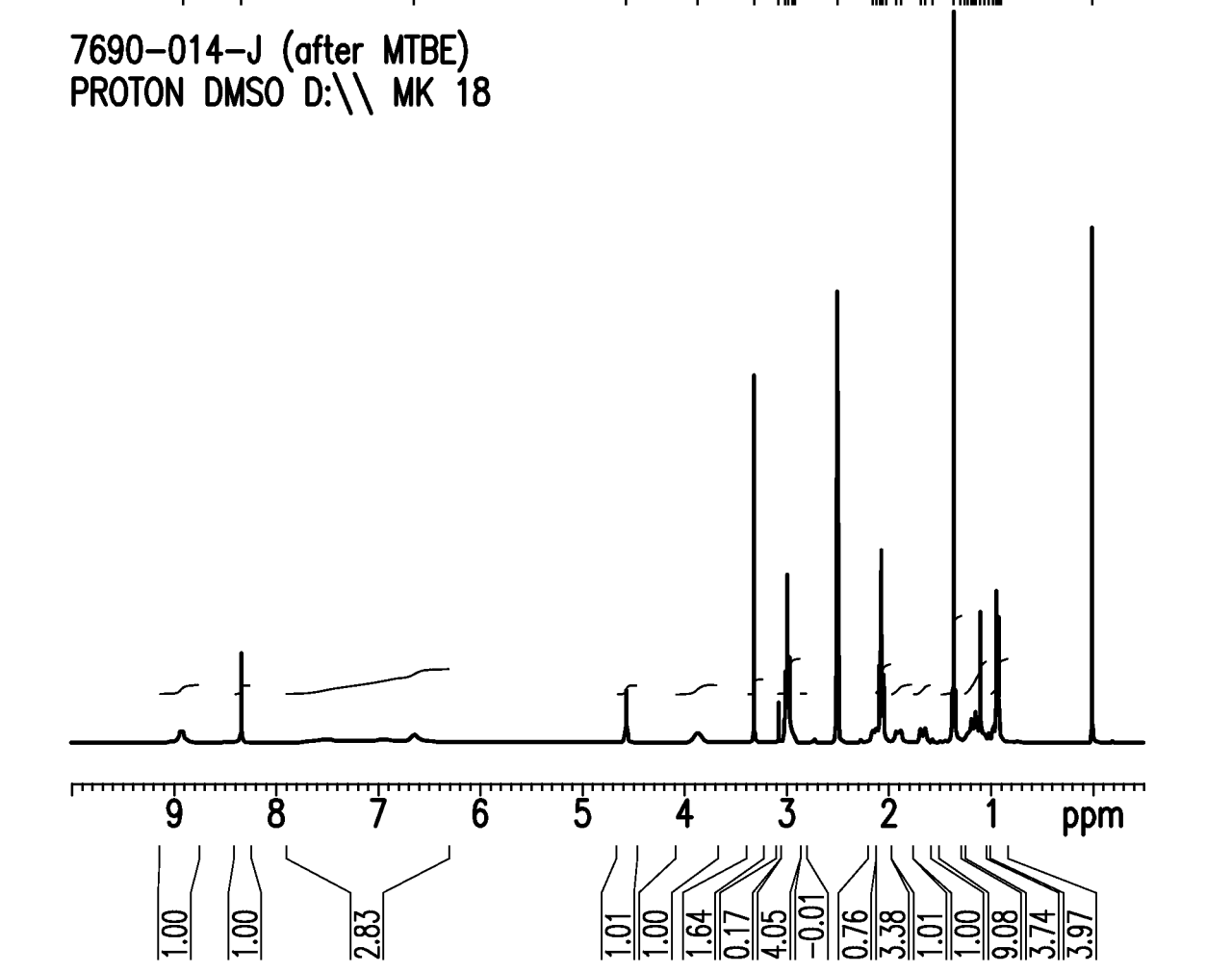


FIG. 40

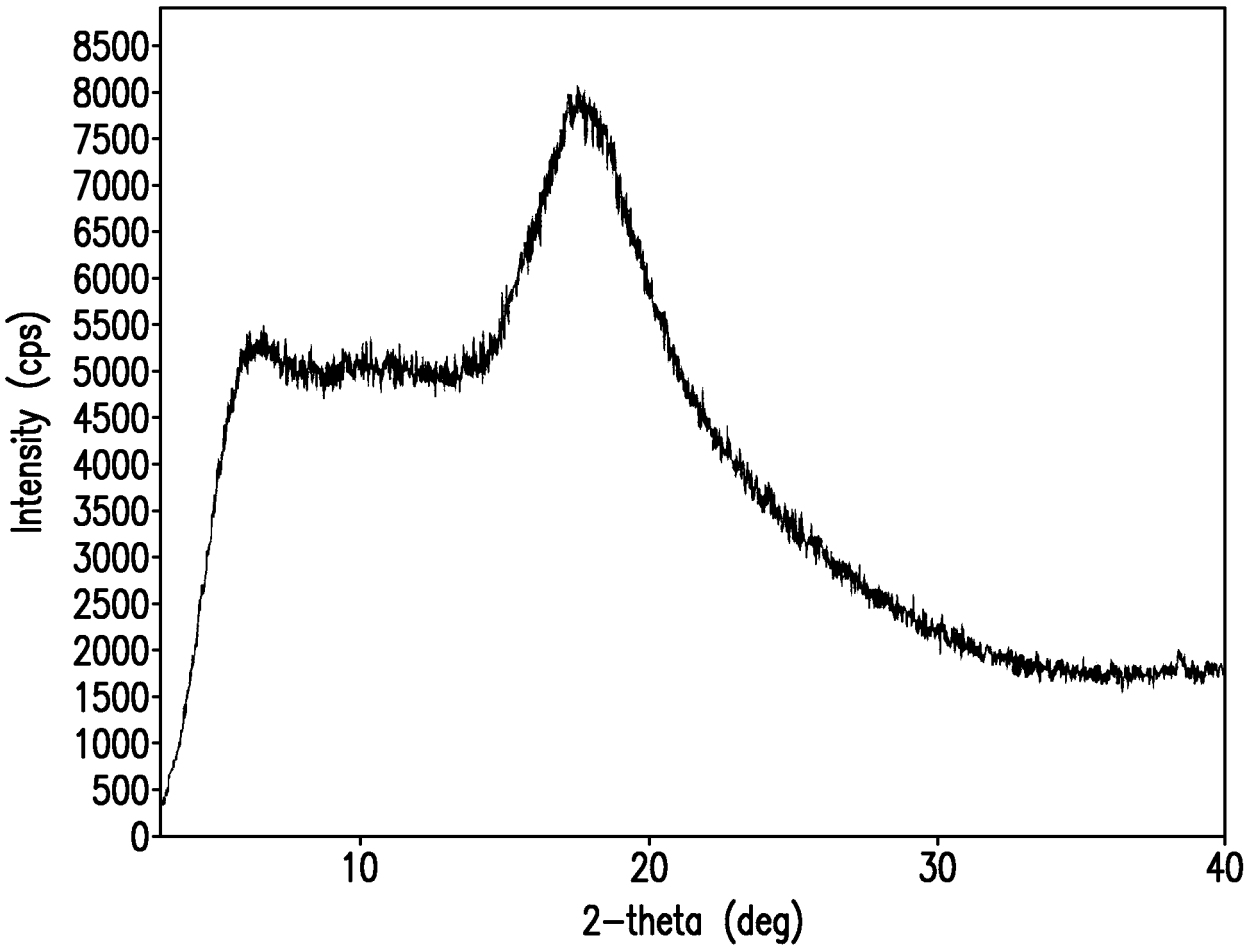

Intensity (cps)
8500
8000
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
10
20
30
40
2-theta (deg)

FIG. 41

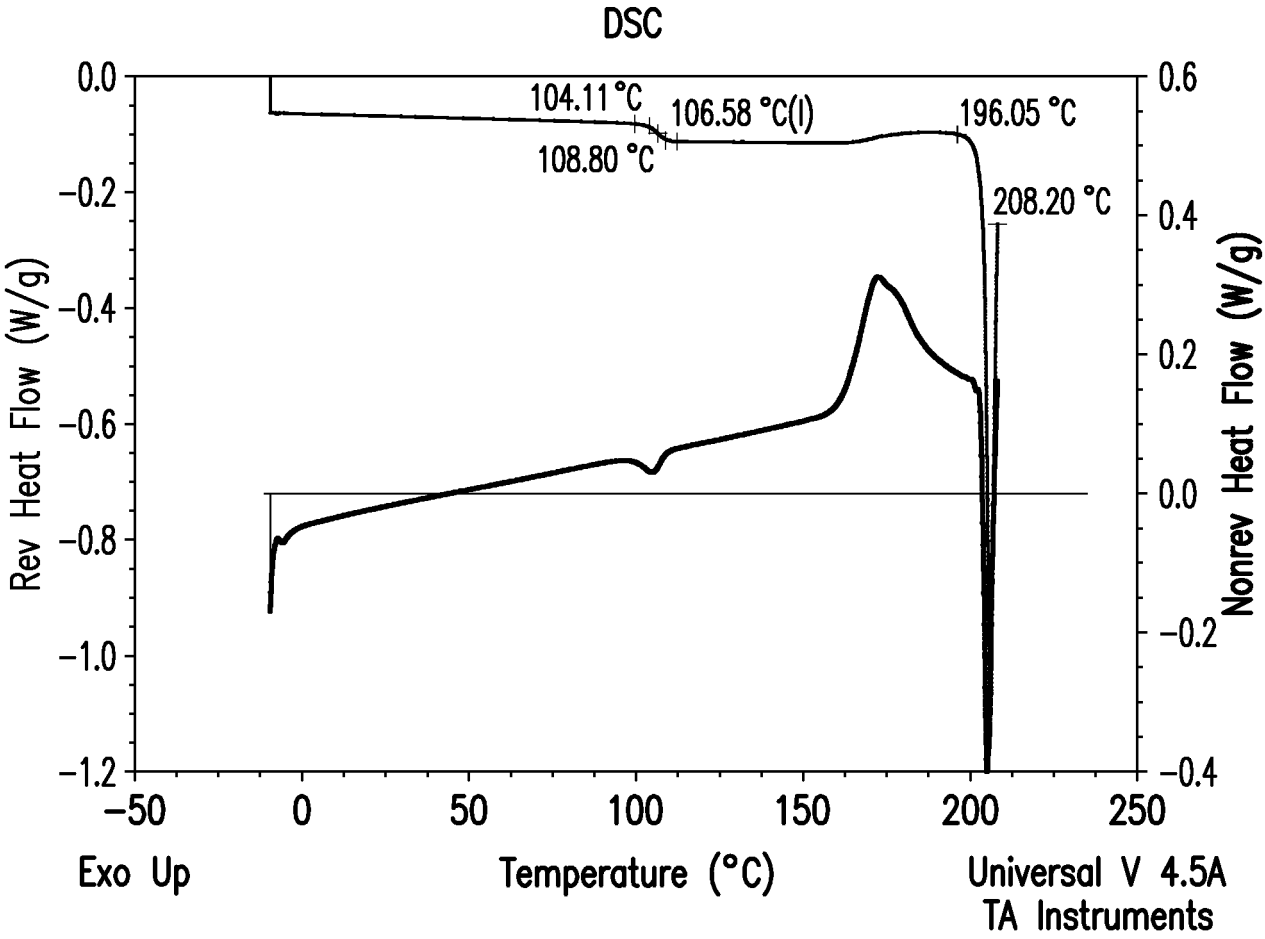

DSC
104.11 °C
106.58 °C(I)
108.80 °C
196.05 °C
208.20 °C
Rev Heat Flow (W/g)
Nonrev Heat Flow (W/g)
0.0
−0.2
−0.4
−0.6
−0.8
−1.0
−1.2
0.6
0.4
0.2
0.0
−0.2
−0.4
−50
0
50
100
150
200
250
Exo Up
Temperature (°C)
Universal V 4.5A
TA Instruments

FIG. 42

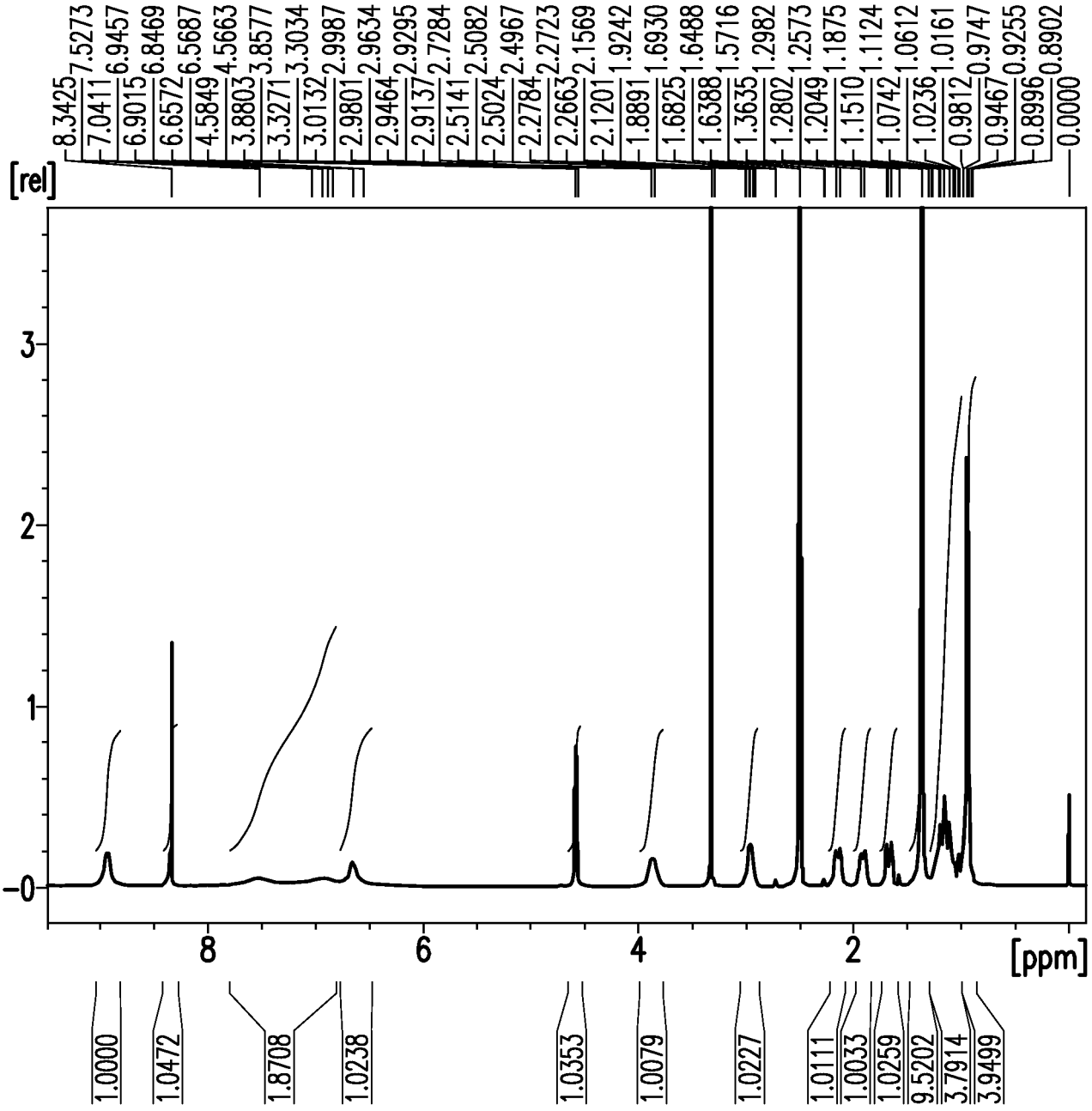
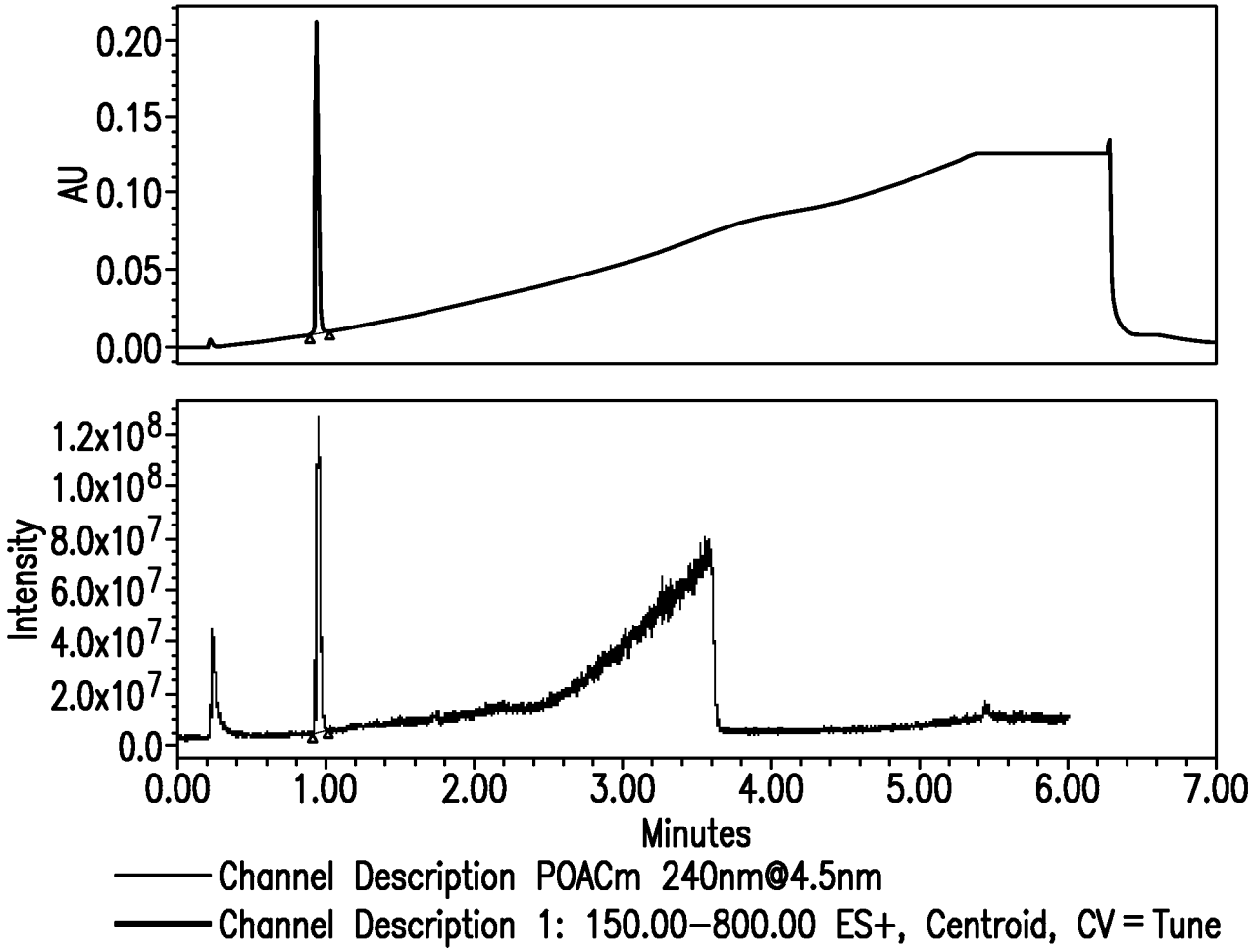
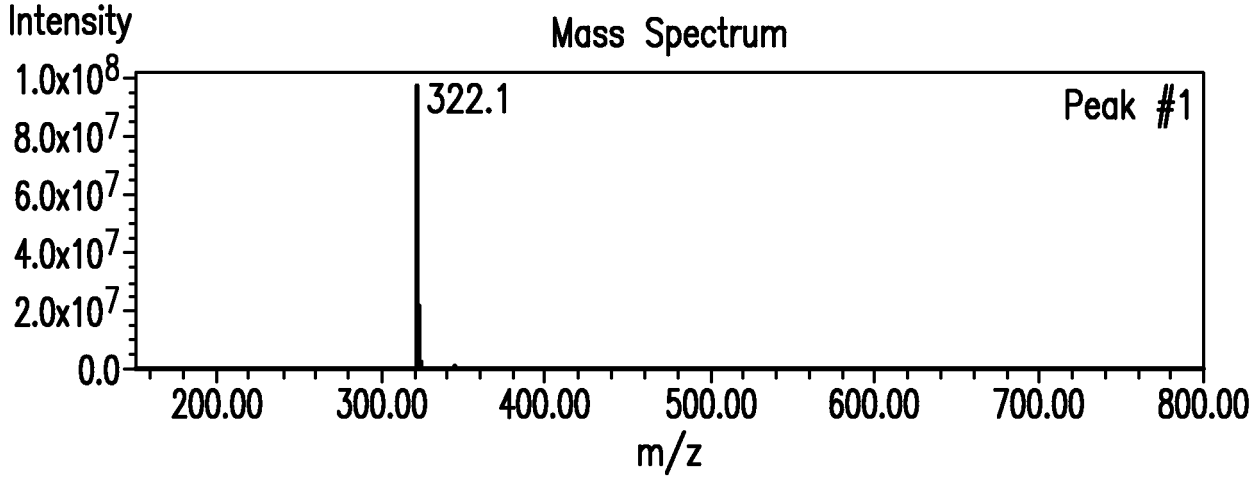

8.3425
7.5273
7.0411
6.9457
6.9015
6.8469
6.6572
6.5687
4.5849
4.5663
3.8803
3.8577
3.3271
3.3034
3.0132
2.9987
2.9801
2.9634
2.9464
2.9295
2.9137
2.7284
2.5141
2.5082
2.5024
2.4967
2.2784
2.2723
2.2663
2.1569
2.1201
1.9242
1.8891
1.6930
1.6825
1.6488
1.6388
1.5716
1.3635
1.2982
1.2802
1.2573
1.2049
1.1875
1.1510
1.1124
1.0742
1.0612
1.0236
1.0161
0.9812
0.9747
0.9467
0.9255
0.8996
0.8902
0.0000
[rel]
3
2
1
0
8
6
4
2
[ppm]
1.0000
1.0472
1.8708
1.0238
1.0353
1.0079
1.0227
1.0111
1.0033
1.0259
9.5202
3.7914
3.9499

FIG. 43



240 nm results

	RT	Area	% Area	Height
1	0.94	297844	100.00	203788



Retention Time 0.953 Channel Description 1: 150.00–800.00 ES+, Centroid, CV = Tune

FIG. 44

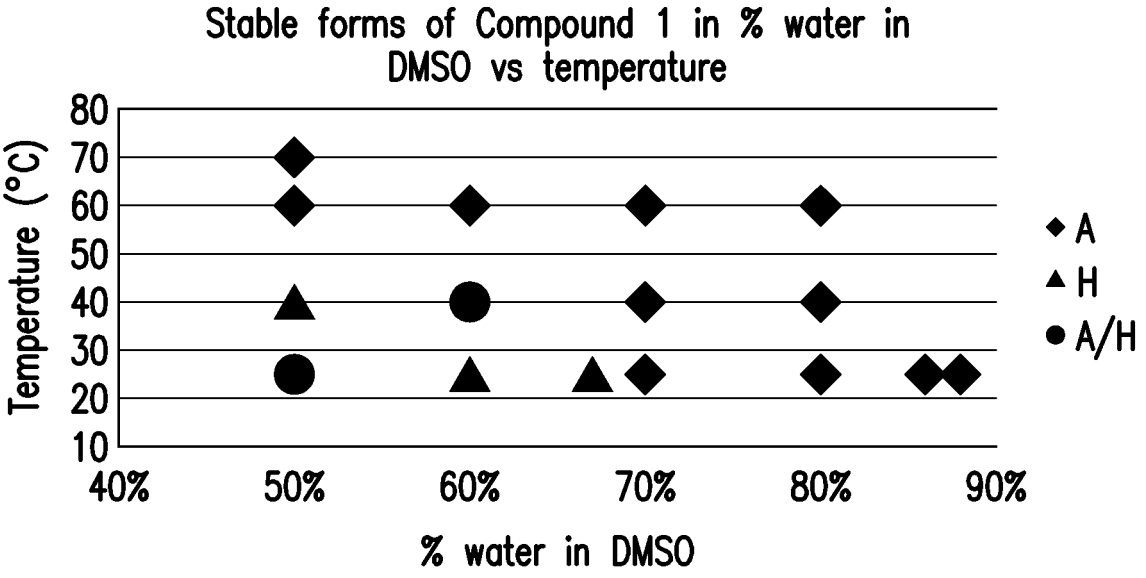

Stable forms of Compound 1 in % water in DMSO vs temperature
Temperature (°C)
80
70
60
50
40
30
20
10
40%
50%
60%
70%
80%
90%
% water in DMSO
A
H
A/H

FIG. 45