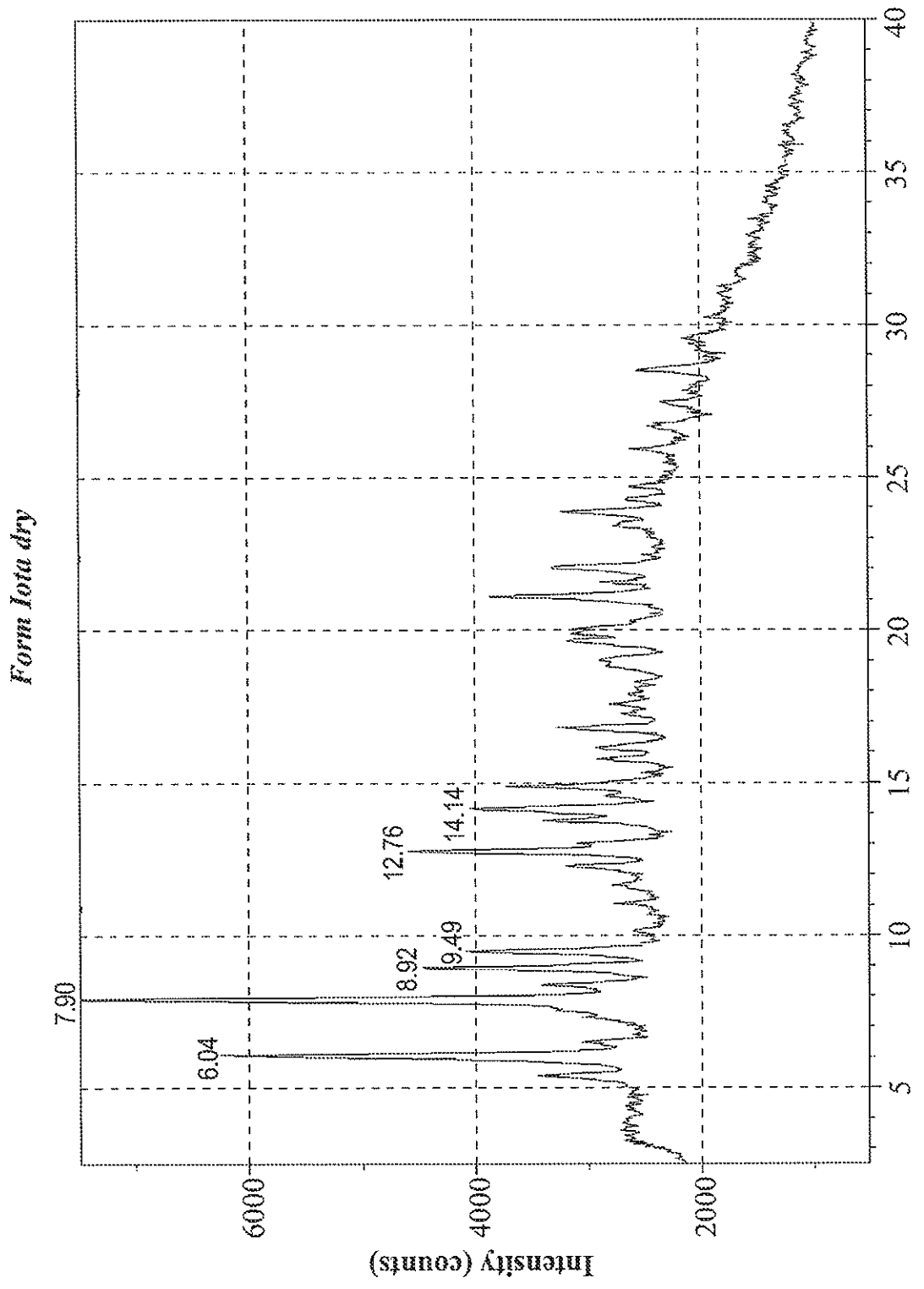

Form Iotu dry
7.90
6.04
8.92
9.49
12.76
14.14
6000
4000
2000
Intensity (counts)
5
10
15
20
25
30
35
40
θ-2θ (deg)

FIG. 1

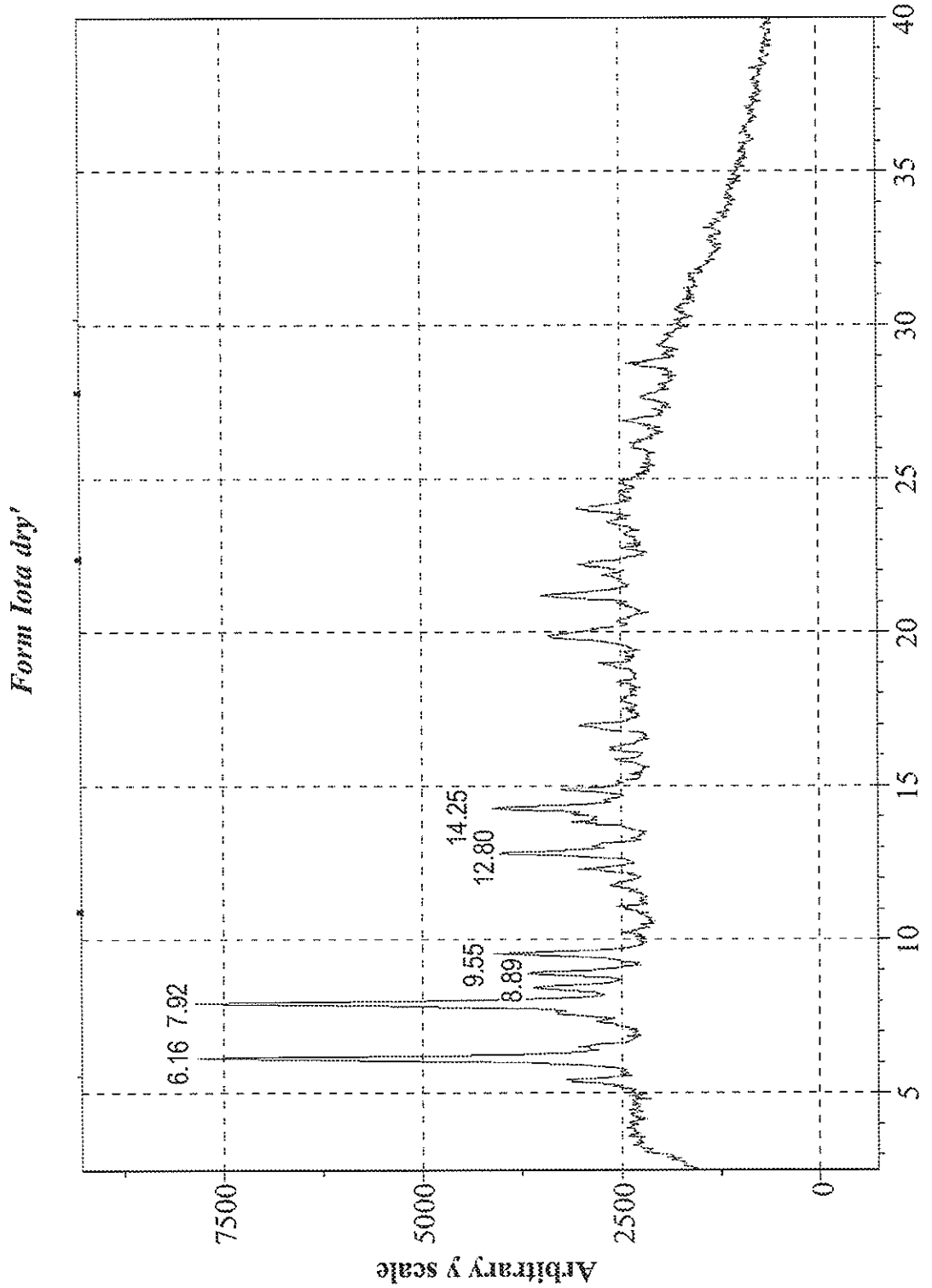

Form Iota dry'
Arbitrary y scale
θ-2θ (deg)
7500
5000
2500
0
5
10
15
20
25
30
35
40
6.16
7.92
8.89
9.55
12.80
14.25

FIG. 2

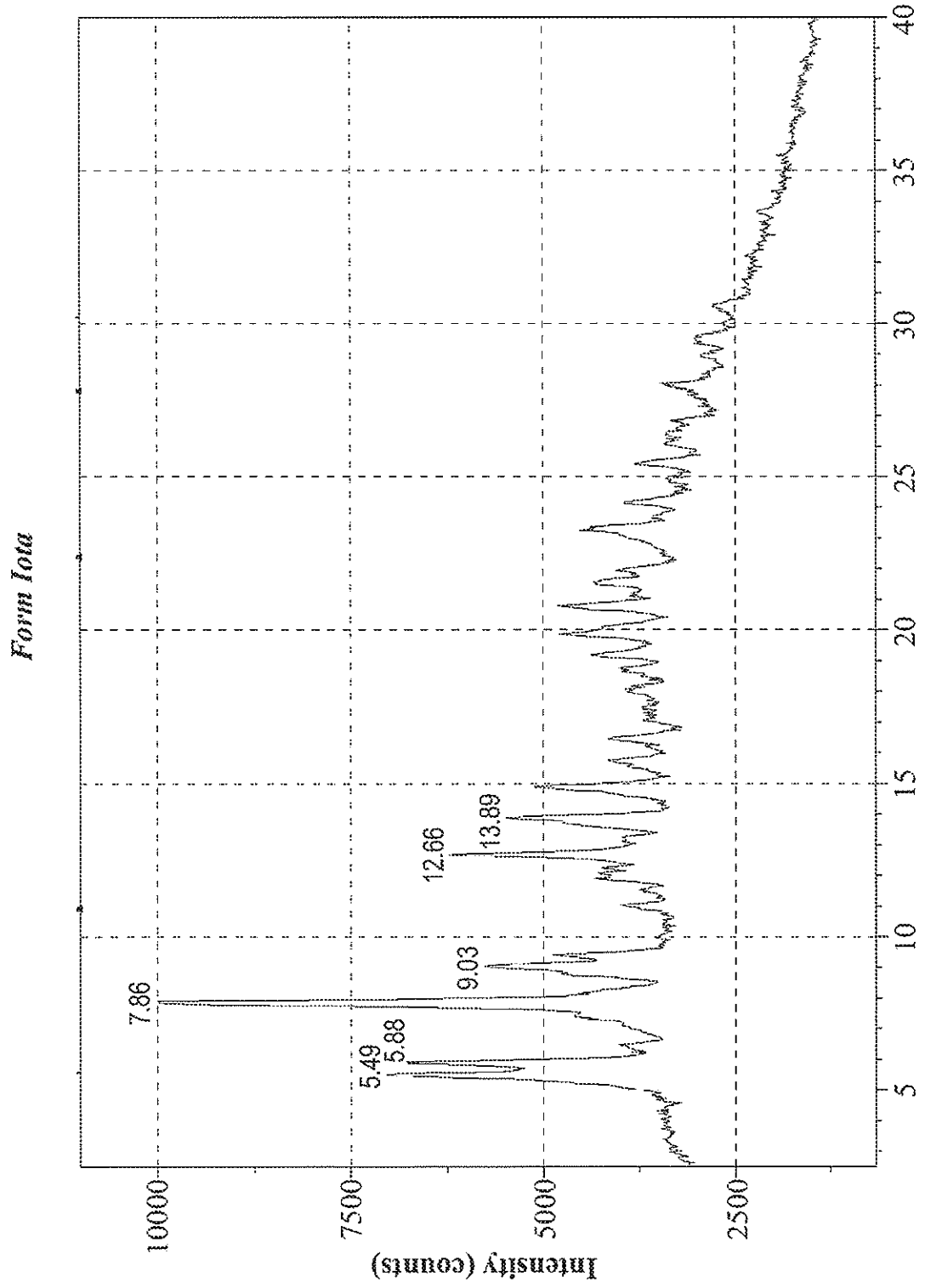
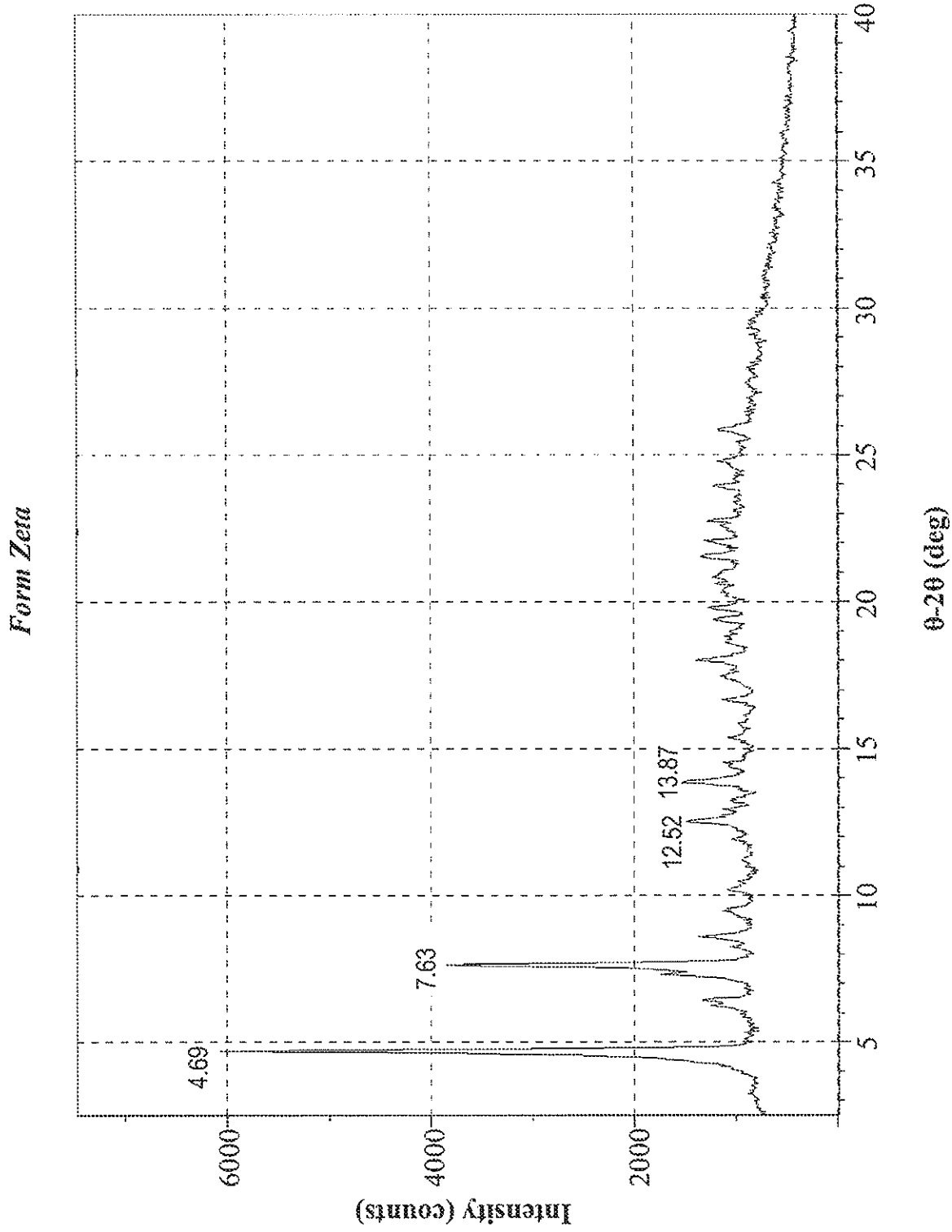

Form Iota
Intensity (counts)
10000
7500
5000
2500
θ-2θ (deg)
5
10
15
20
25
30
35
40
7.86
9.03
5.88
5.49
12.66
13.89

FIG. 3

FIG. 4


Form Zeta
Intensity (counts)
6000
4000
2000
θ-2θ (deg)
5
10
15
20
25
30
35
40
4.69
7.63
12.52
13.87

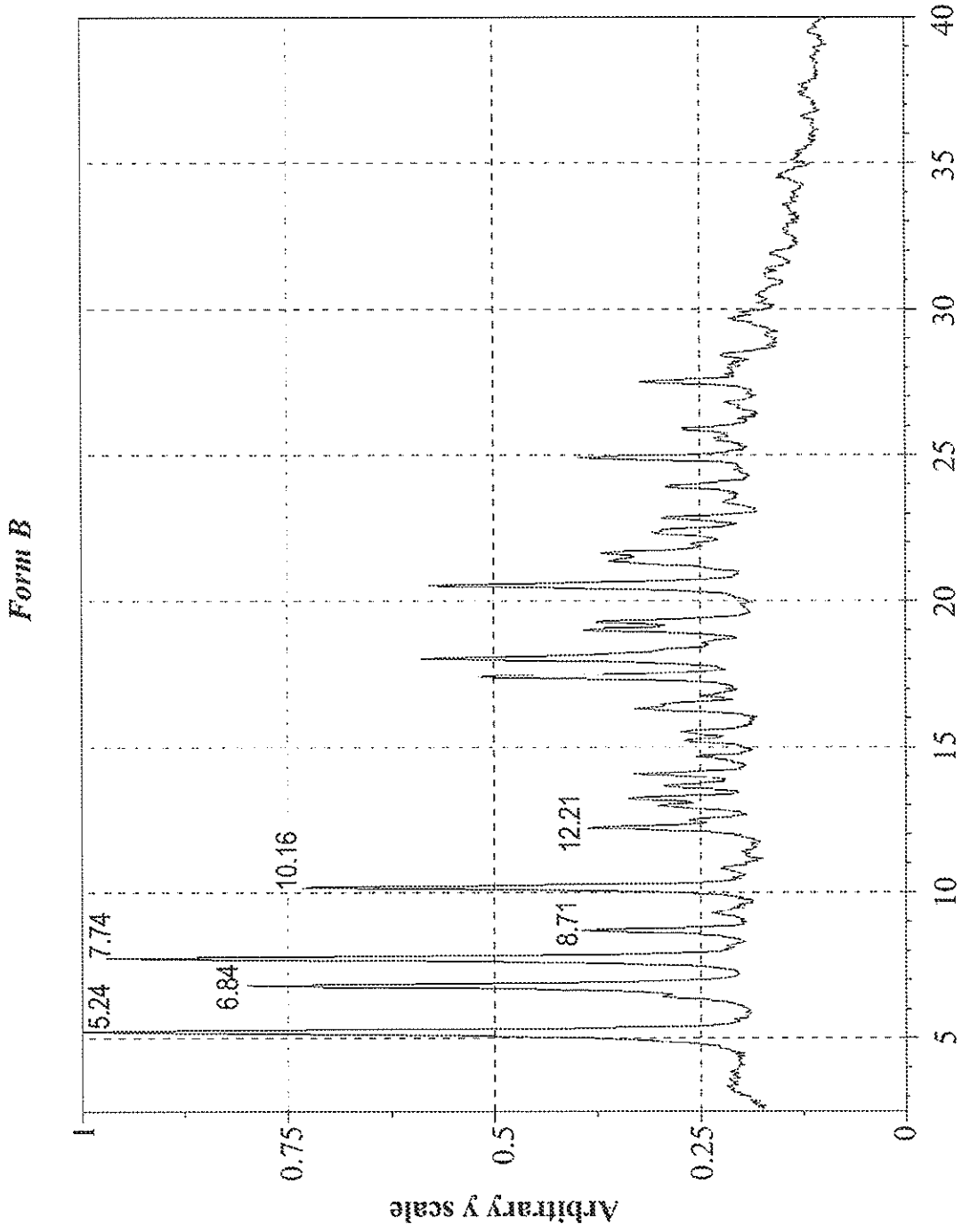

Form B
Arbitrary y scale
θ-2θ (deg)
0
0.25
0.5
0.75
1
5
10
15
20
25
30
35
40
5.24
6.84
7.74
8.71
10.16
12.21

FIG. 5

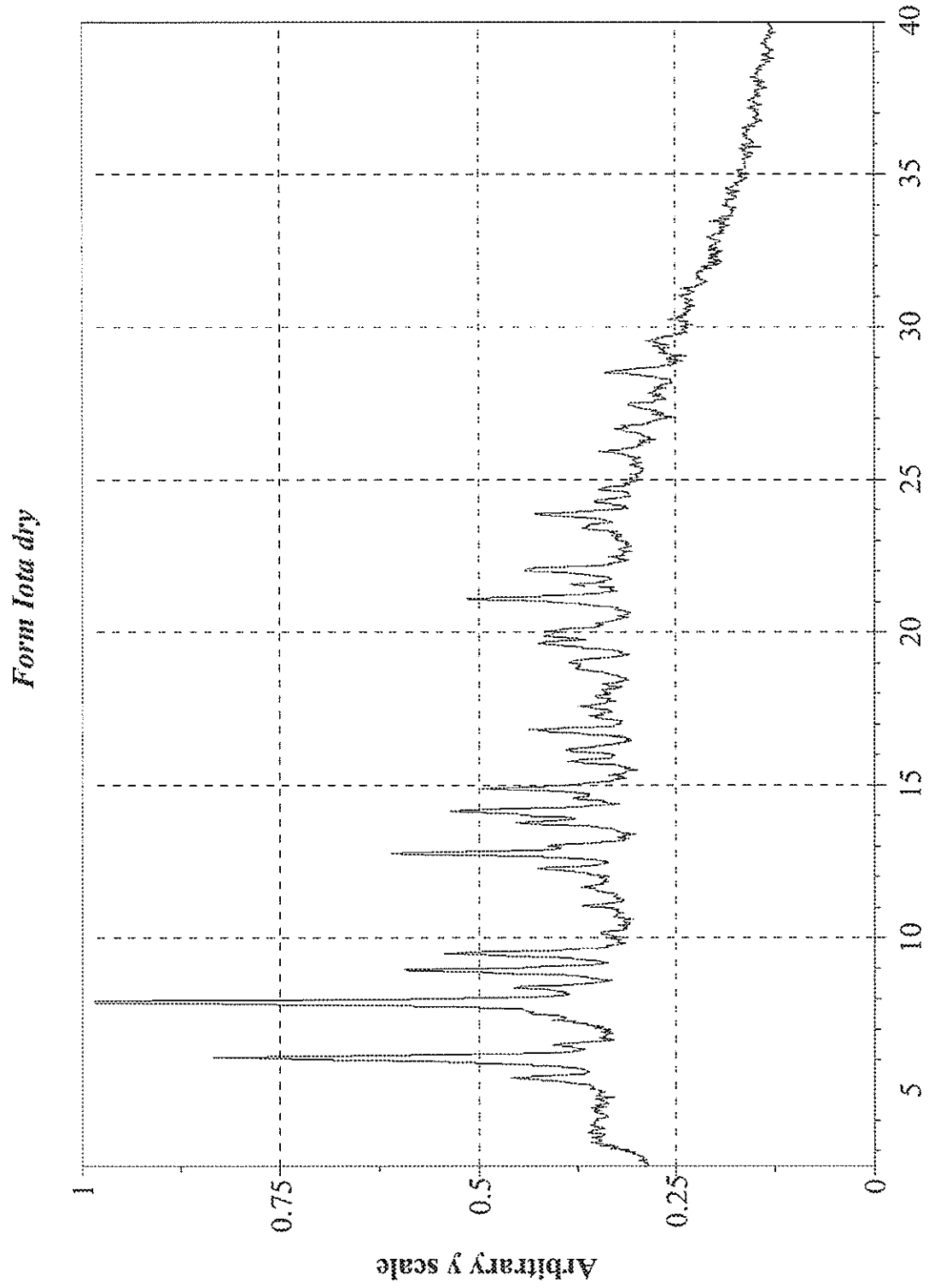

Form Iota dry
Arbitrary y scale
0
0.25
0.5
0.75
1
5
10
15
20
25
30
35
40
θ-2θ (deg)

FIG. 6

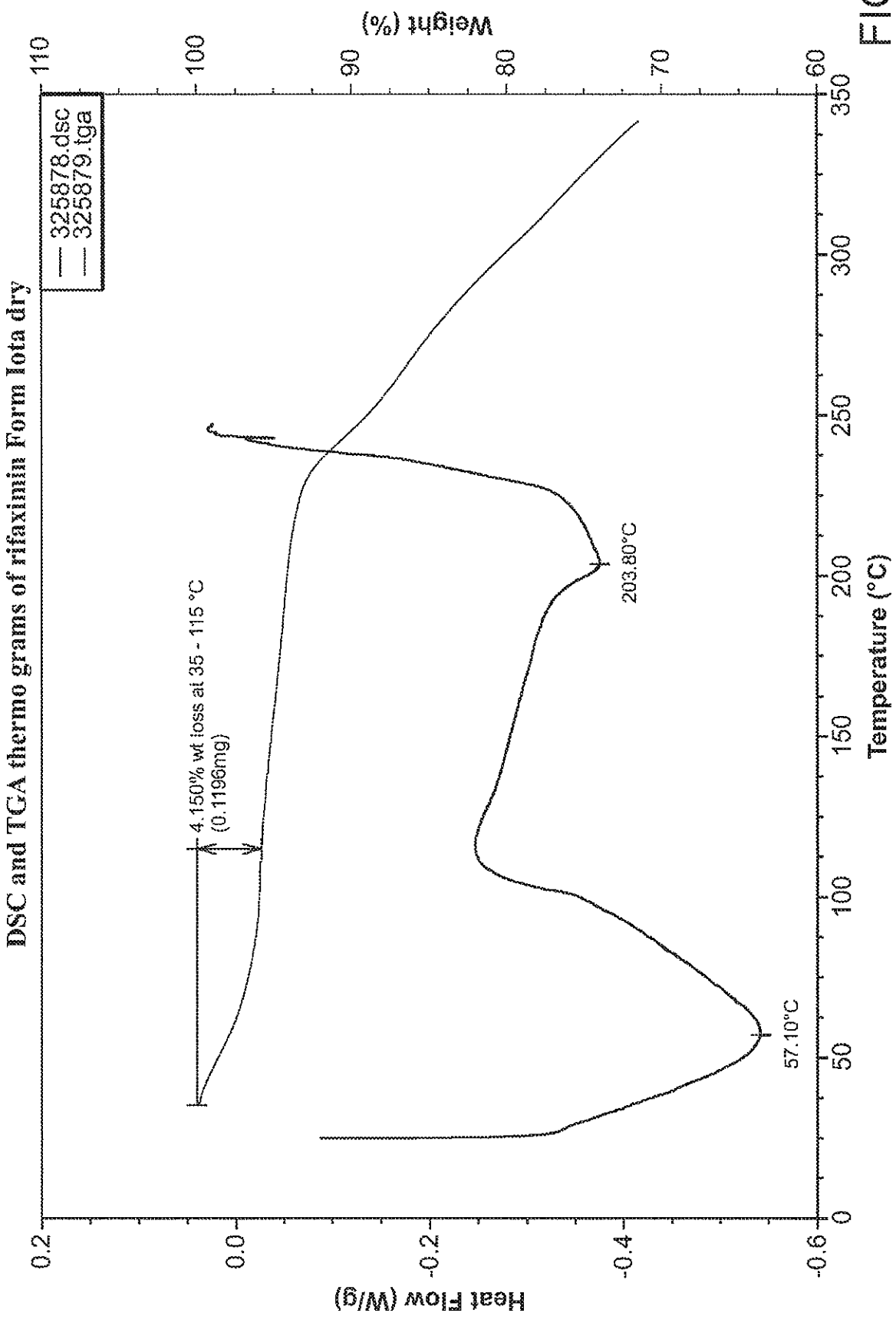

DSC and TGA thermo grams of rifaximin Form Iota dry
325878.dsc
325879.tga
4.150% wt ioss at 35 - 115 °C
(0.1196mg)
57.10°C
203.80°C
Heat Flow (W/g)
Weight (%)
Temperature (°C)
0.2
0.0
-0.2
-0.4
-0.6
110
100
90
80
70
60
0
50
100
150
200
250
300
350

FIG. 7

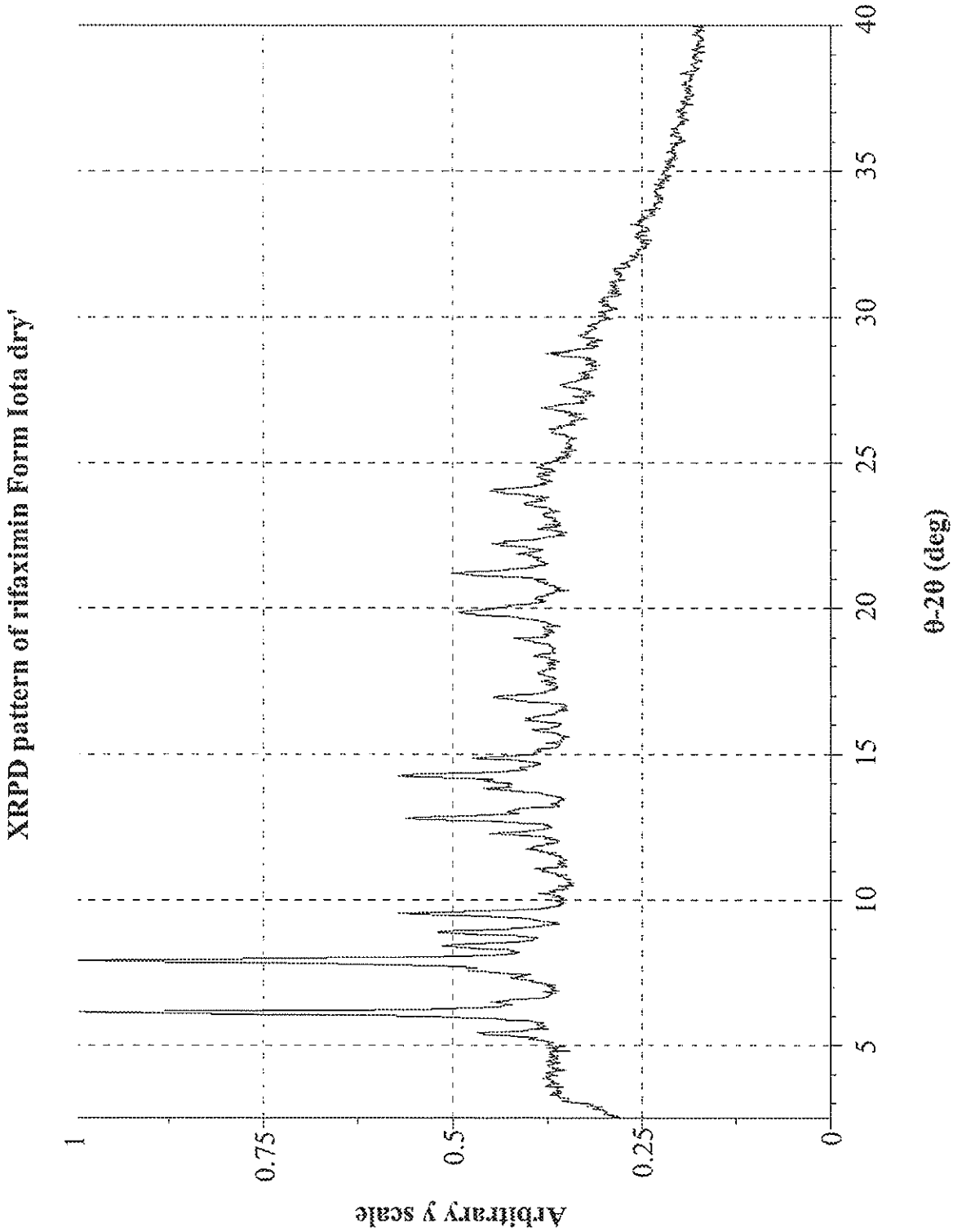

XRPD pattern of rifaximin Form Iota dry'
Arbitrary y scale
0
0.25
0.5
0.75
1
5
10
15
20
25
30
35
40
θ-2θ (deg)

FIG. 8

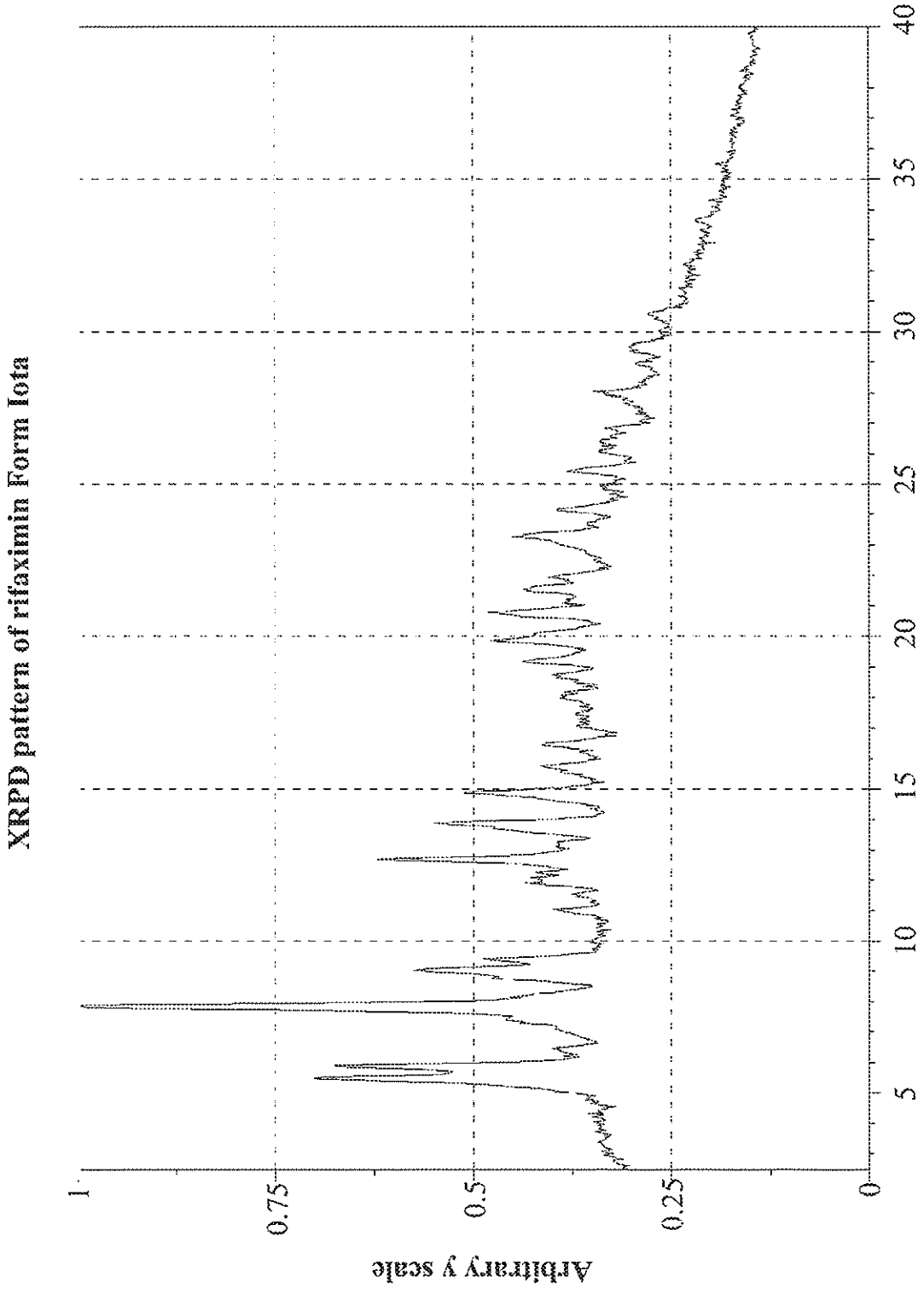

XRPD pattern of rifaximin Form Iota
Arbitrary y scale
1
0.75
0.5
0.25
0
5
10
15
20
25
30
35
40
θ-2θ (deg)

FIG. 9

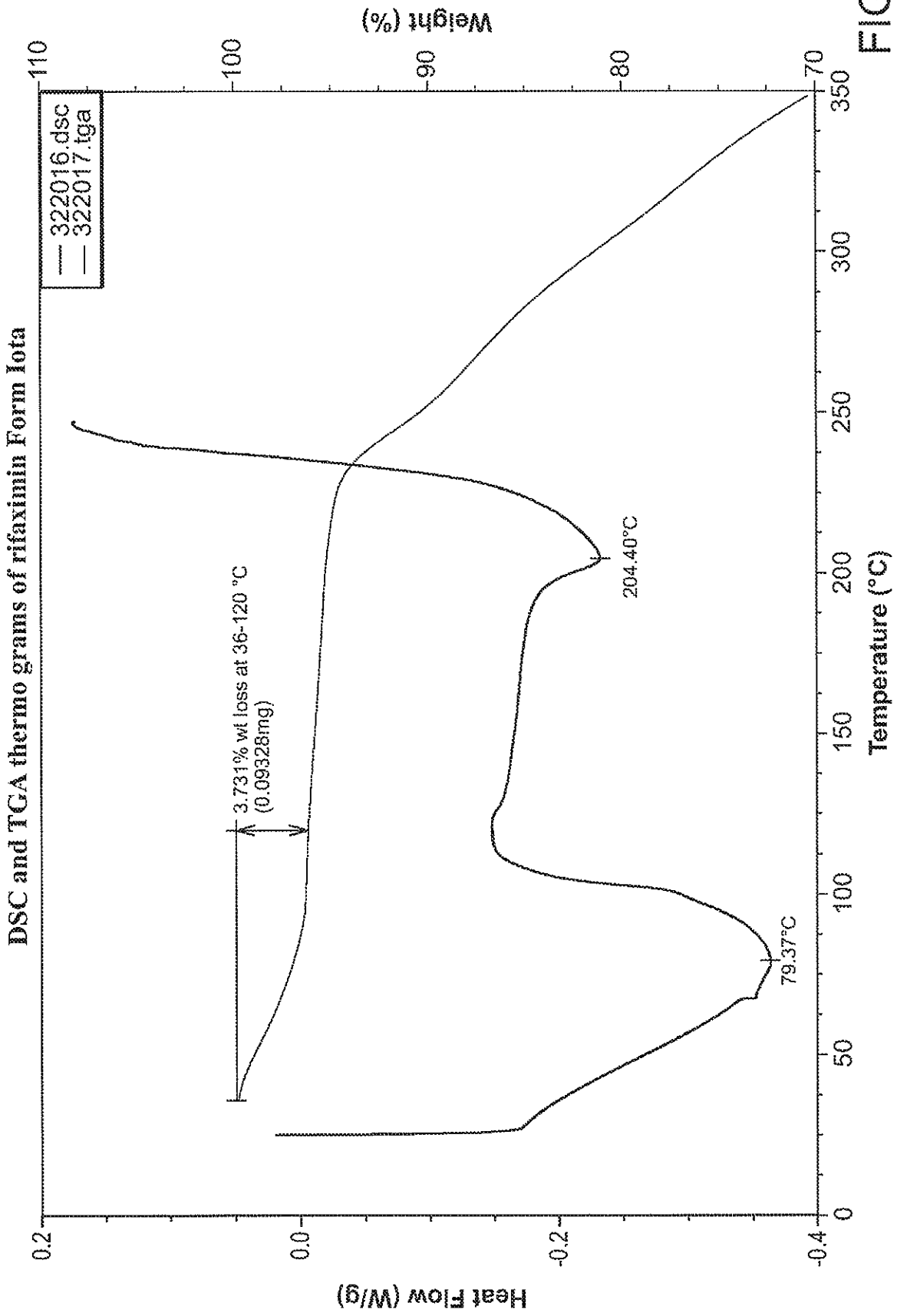

DSC and TGA thermo grams of rifaximin Form Iota
322016.dsc
322017.tga
3.731% wt loss at 36-120 °C
(0.09328mg)
204.40°C
79.37°C
Heat Flow (W/g)
Weight (%)
Temperature (°C)
0.2
0.0
-0.2
-0.4
110
100
90
80
70
0
50
100
150
200
250
300
350

FIG. 10

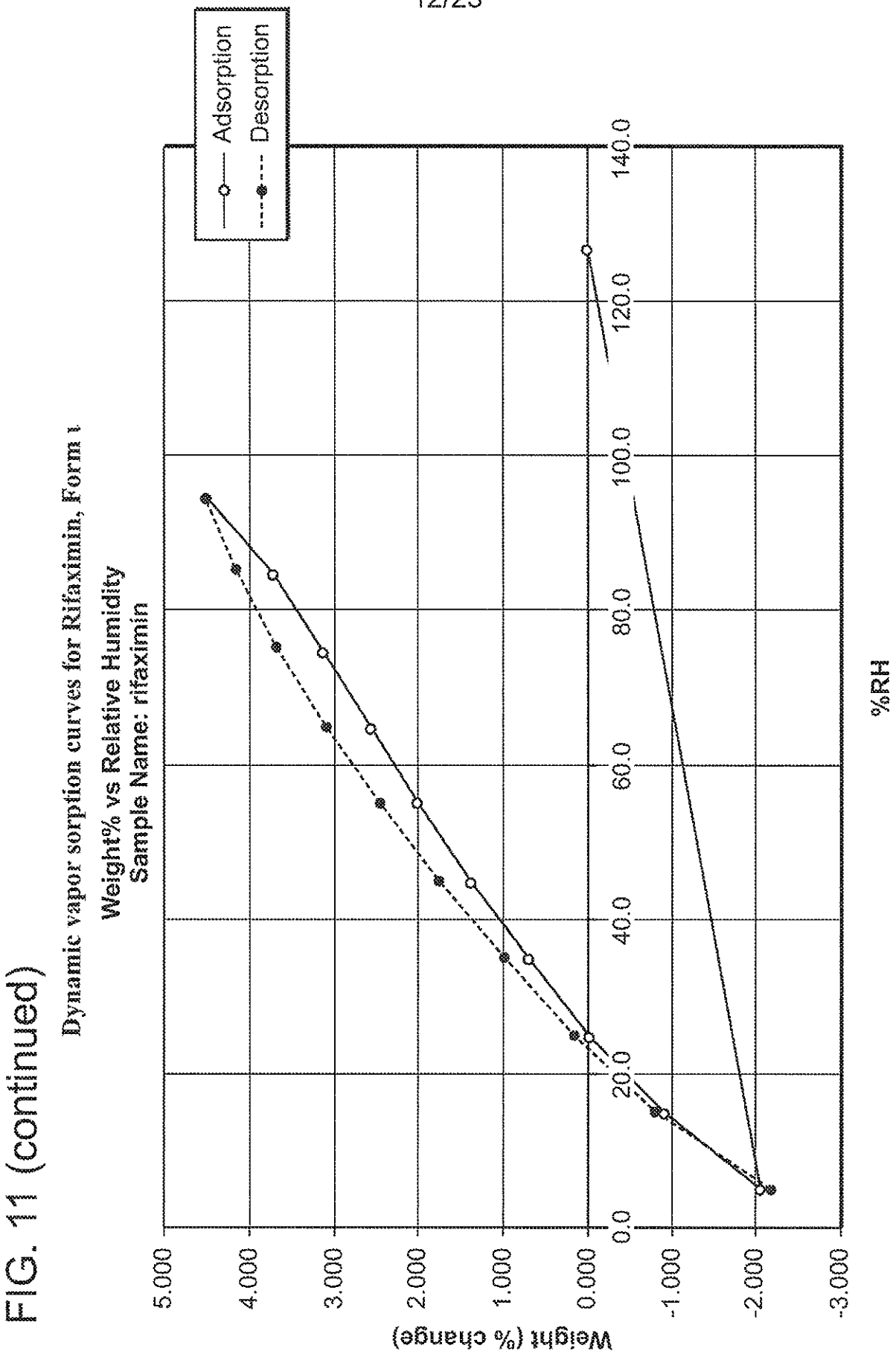
Dynamic vapor sorption/desorption of rifaximin Form Iota

Max Equil Time	180 min	
Equil Crit	0.0100 wt % in	5.00 min
T-RH Steps	25, 5; 25, 15; 25, 25; 25, 35; 25, 45; 25, 55; 25, 65; 25, 75; 25, 85; 25, 95; 25, 85; 25, 75; 25, 65; 25, 55; 25, 45; 25, 35; 25, 25; 25, 15; 25, 5	
Data Logging Interval	2.00 min or	0.0100 wt %
Expt Started	1/23/2009	
Run Started	6:13:26	

Elap Time min	Weight mg	Weight % chg	Samp Temp deg C	Samp RH %
0.1	7.748	0.000	24.75	126.87
152.6	7.588	-2.064	25.35	5.02
177.2	7.676	-0.921	25.36	14.92
207.9	7.745	-0.038	25.37	24.88
234.1	7.802	0.697	25.37	34.85
267.4	7.854	1.366	25.36	44.84
301.1	7.903	1.998	25.37	55.08
334.8	7.946	2.558	25.37	64.80
375.0	7.990	3.124	25.34	74.57
424.3	8.035	3.708	25.31	84.57
524.3	8.097	4.503	25.31	94.57
554.4	8.068	4.137	25.30	85.42
586.5	8.032	3.667	25.30	75.37
643.8	7.986	3.079	25.29	65.01
709.6	7.937	2.443	25.29	55.05
764.7	7.883	1.745	25.28	45.05
813.6	7.824	0.984	25.28	35.07
854.2	7.759	0.140	25.27	25.10
889.8	7.685	-0.814	25.27	15.21
950.5	7.578	-2.190	25.27	4.98

FIG. 11

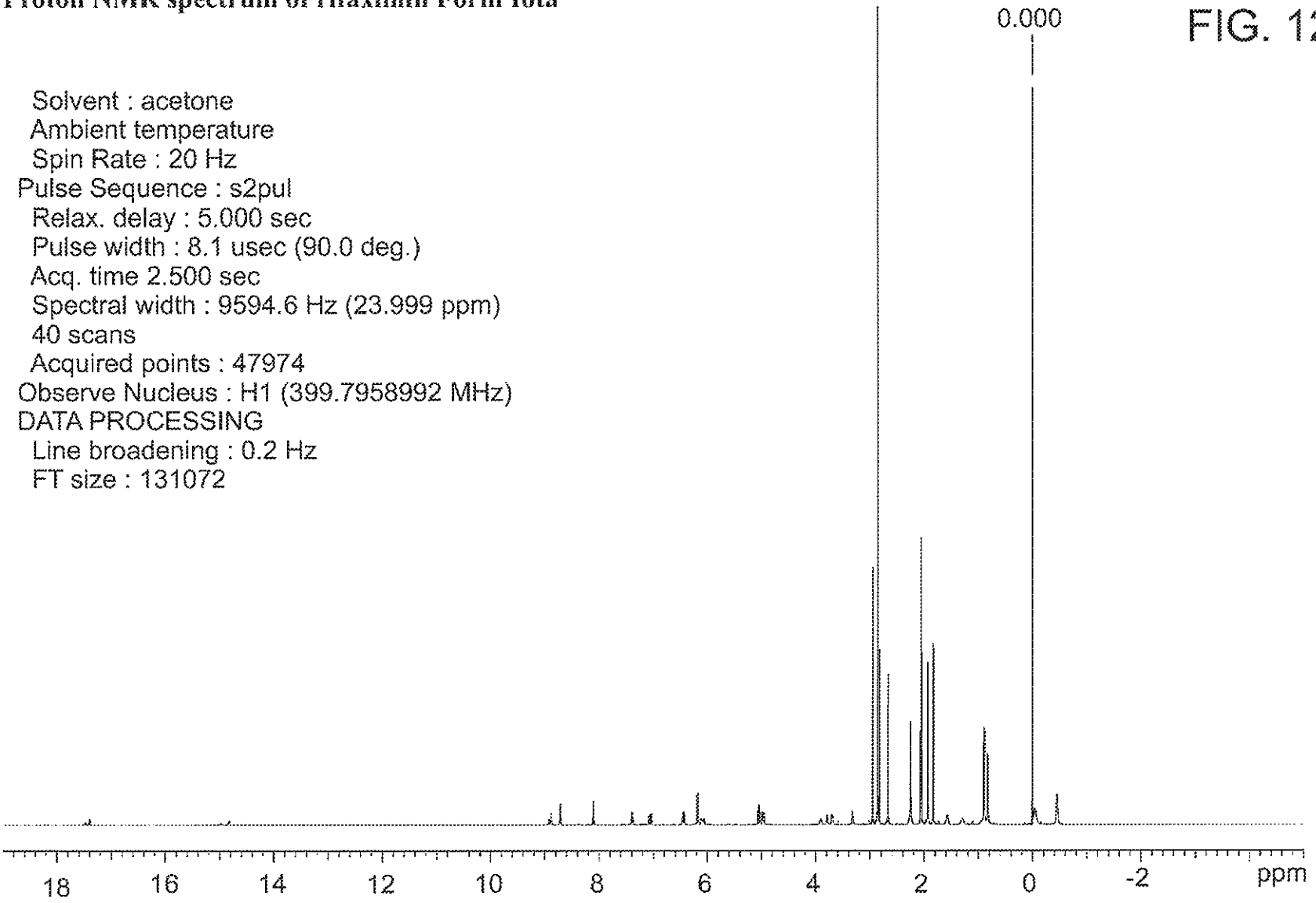
FIG. 11 (continued)



Proton NMR spectrum of rifaximin Form Iota

FIG. 12

Solvent : acetone
Ambient temperature
Spin Rate : 20 Hz
Pulse Sequence : s2pul
Relax. delay : 5.000 sec
Pulse width : 8.1 usec (90.0 deg.)
Acq. time 2.500 sec
Spectral width : 9594.6 Hz (23.999 ppm)
40 scans
Acquired points : 47974
Observe Nucleus : H1 (399.7958992 MHz)
DATA PROCESSING
Line broadening : 0.2 Hz
FT size : 131072



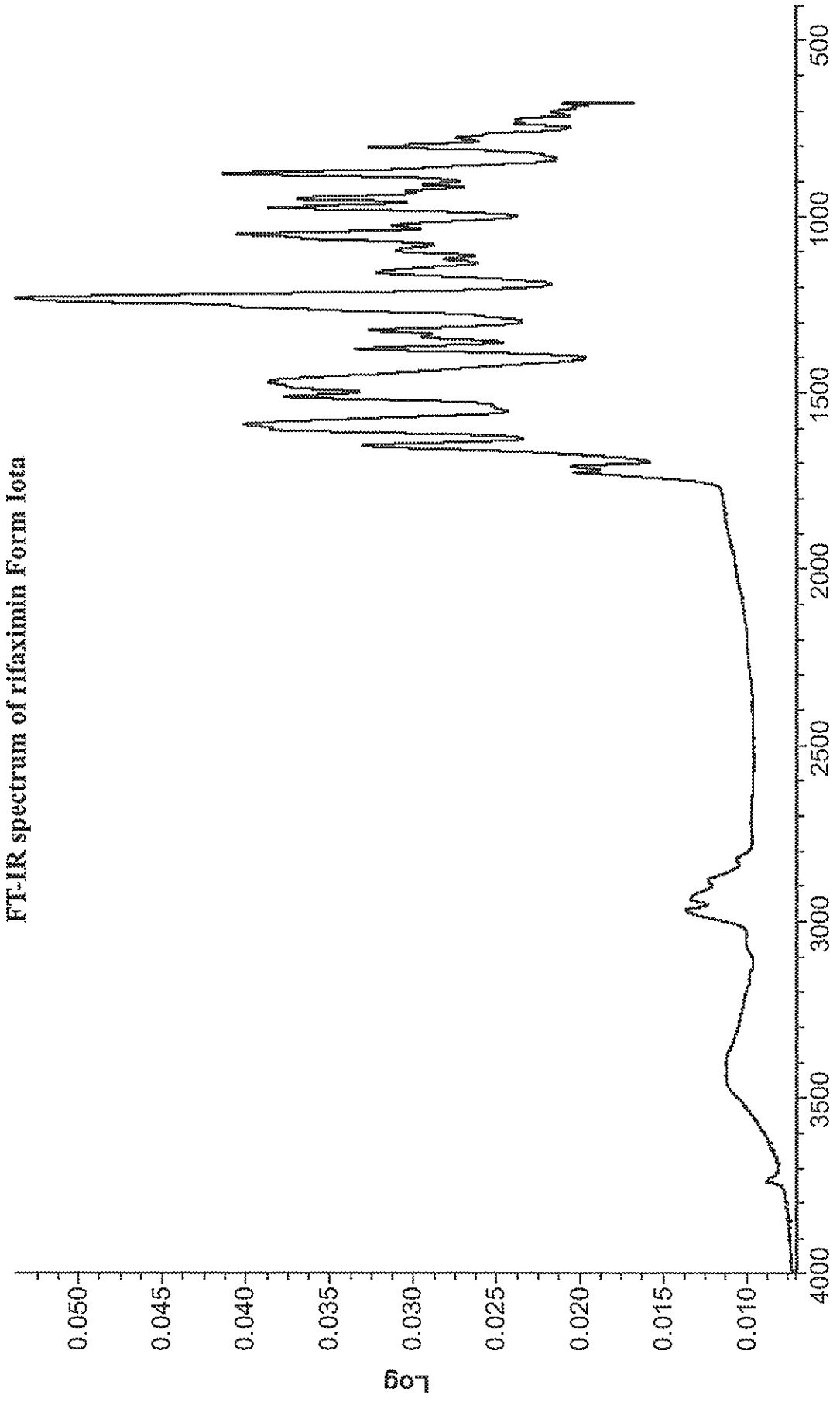
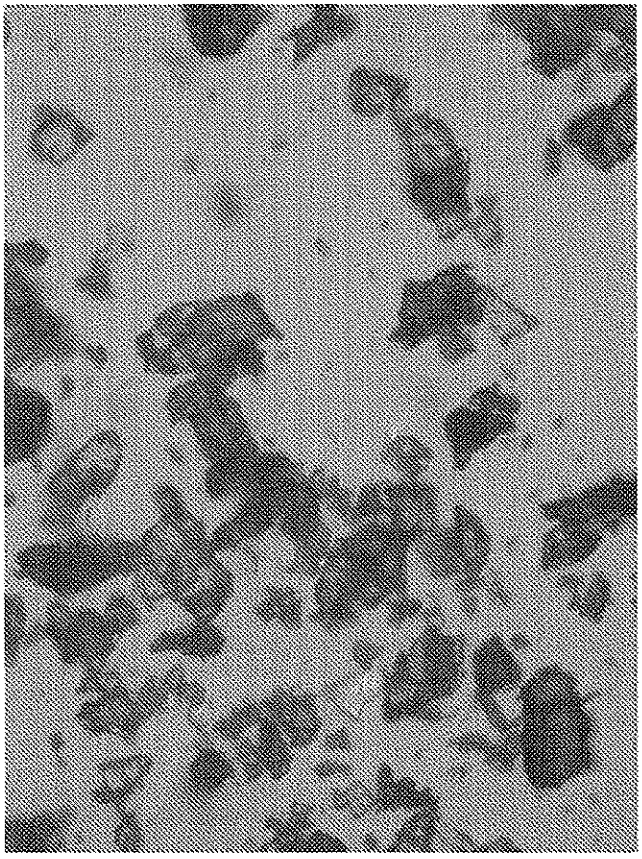

FT-IR spectrum of rifaximin Form Iota
Log
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
4000
3500
3000
2500
2000
1500
1000
500
cm-1

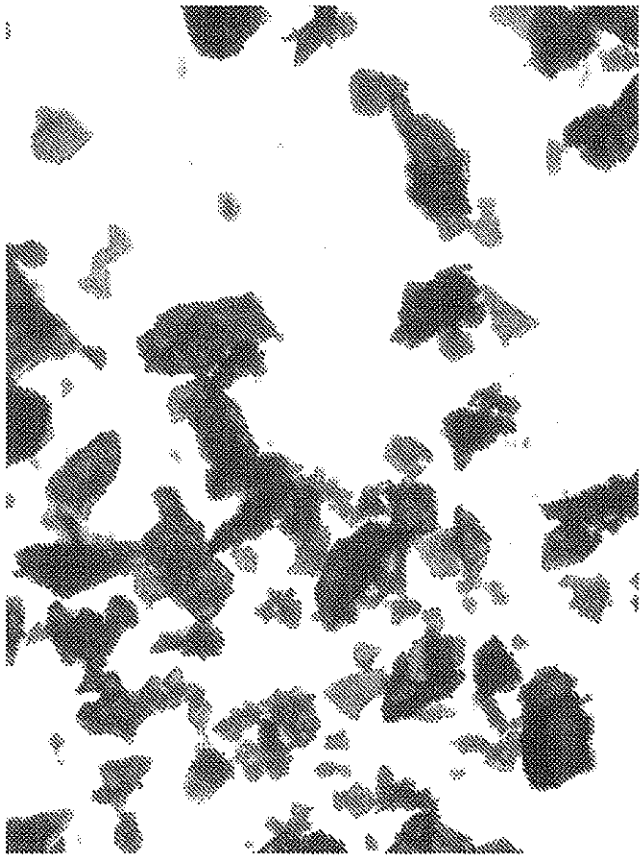
FIG. 13

FIG. 14

Hot stage images for rifaximin, Form α



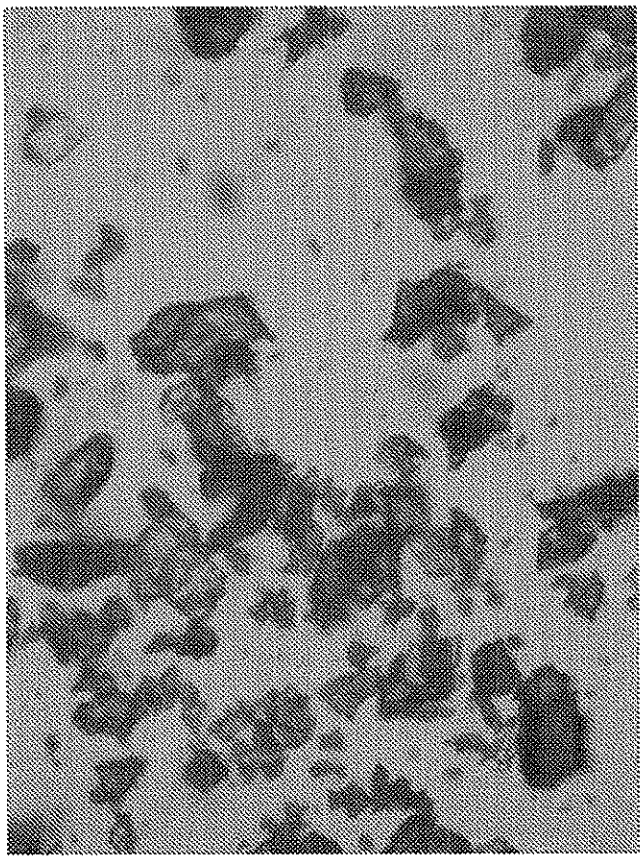
T = 30 °C, with no top polarizer



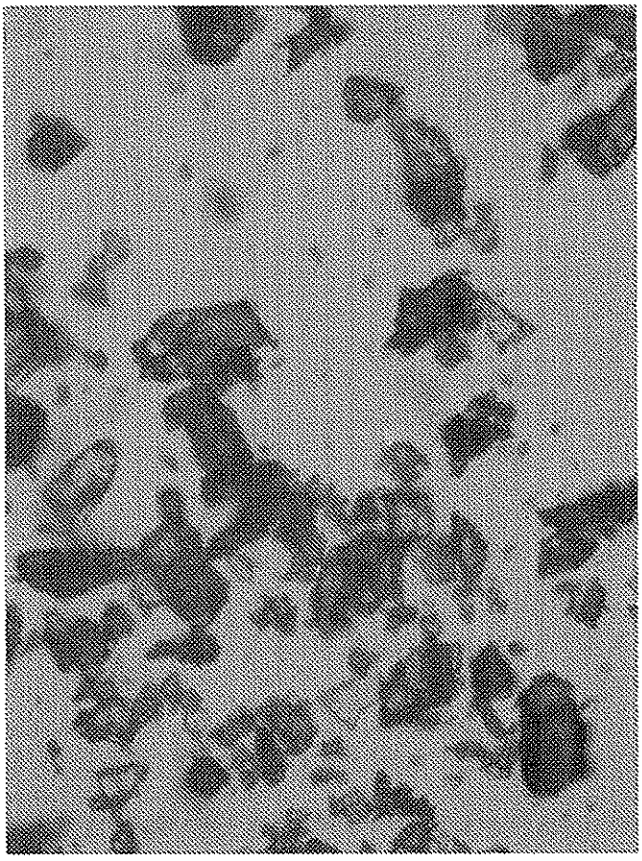
T = 30 °C, no top polarizer

FIG. 14 (continued)

Hot stage images for rifaximin, Form I



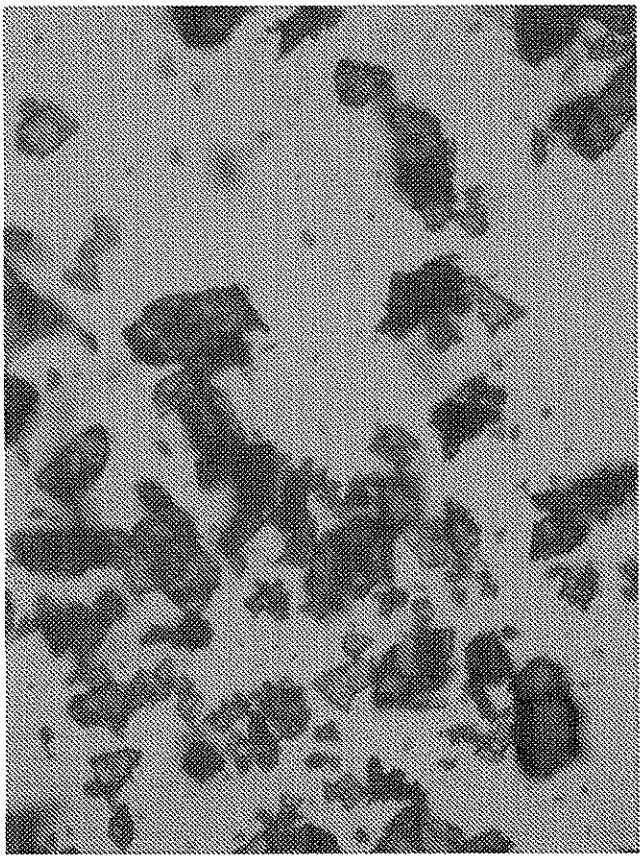
T = 120 °C



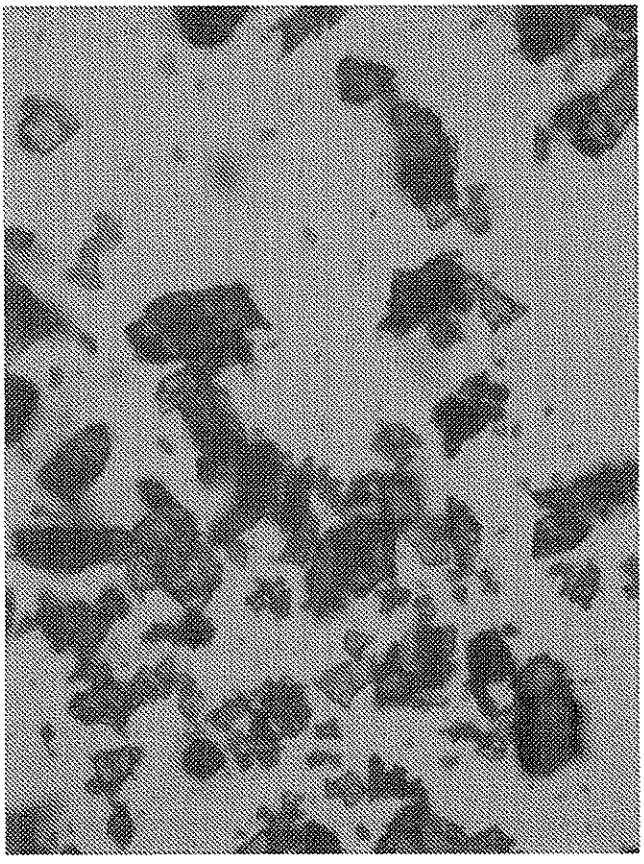
T = 80 °C

FIG. 14 (continued)

Hot stage images for rifaximin, Form I



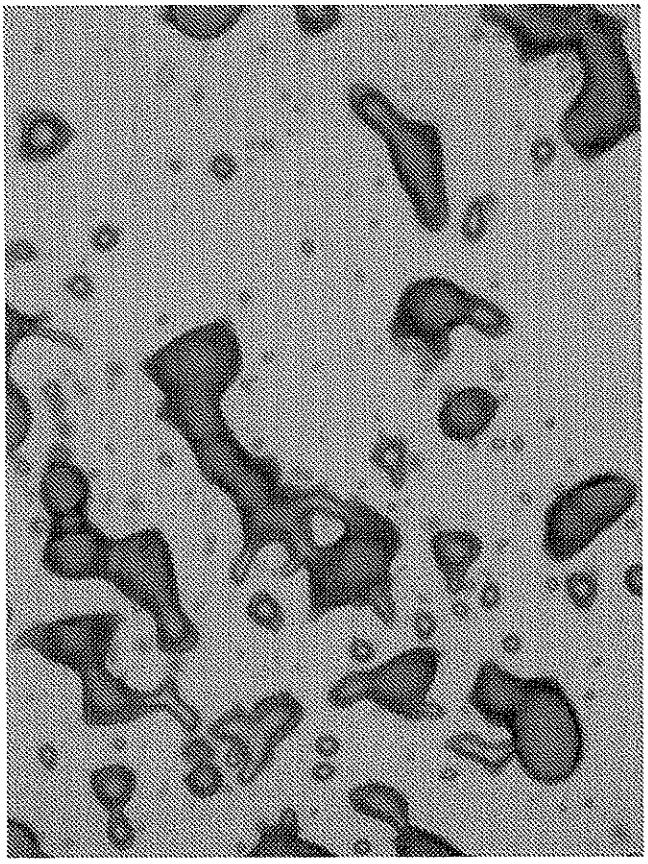
T = 204 °C



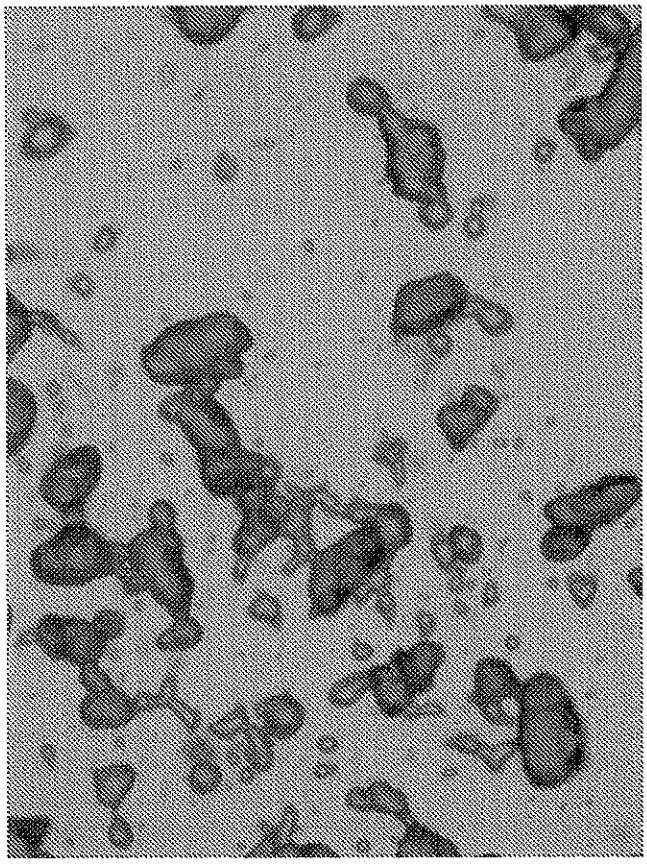
T = 190 °C

FIG. 14 (continued)

Hot stage images for rifaximin, Form I



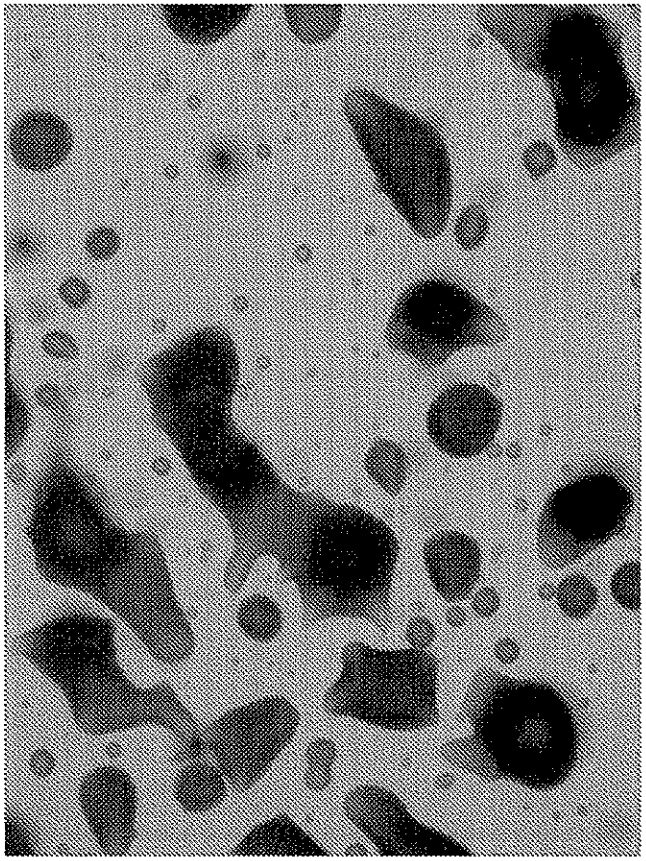
T = 222 °C



T = 218 °C

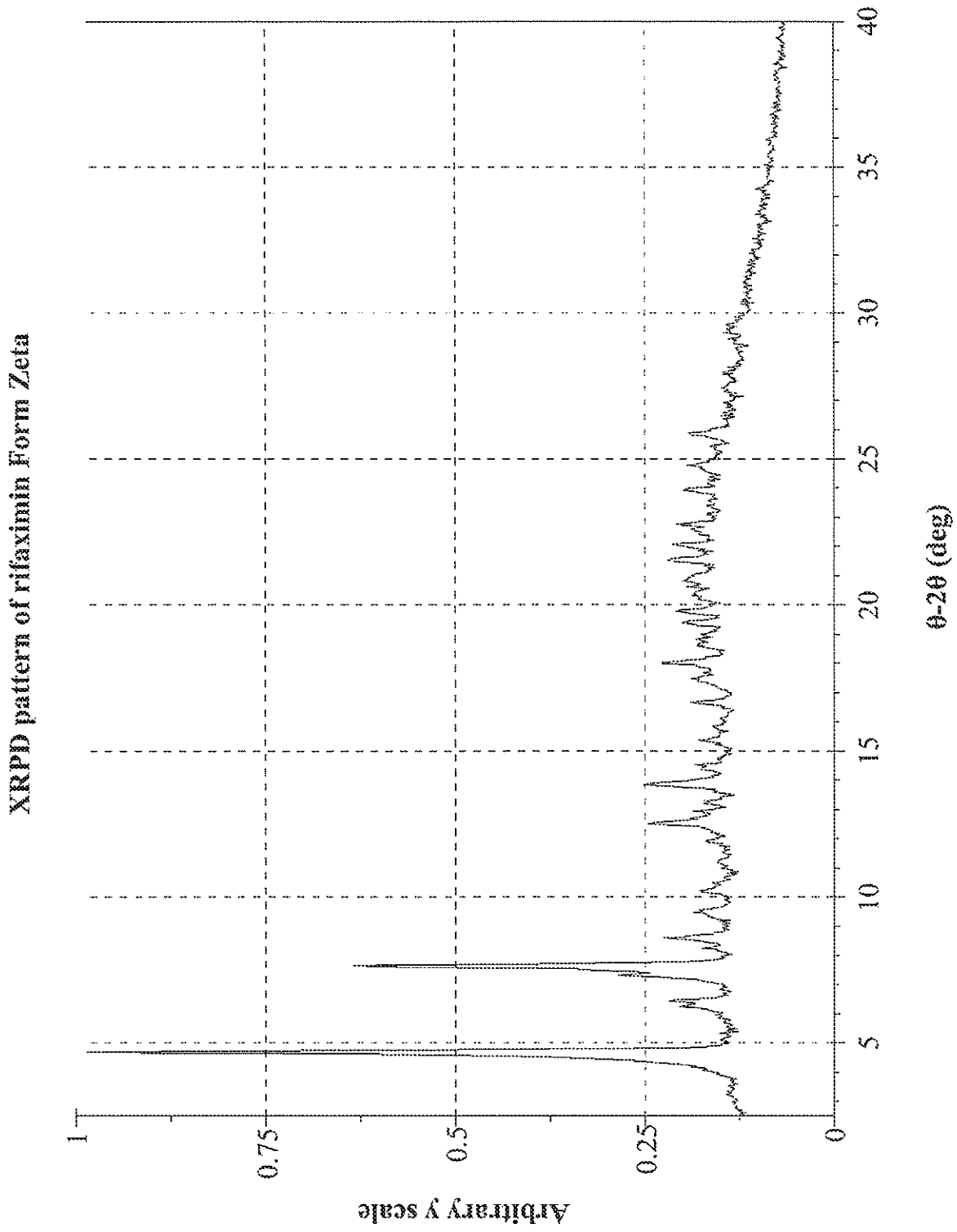
FIG. 14 (continued)

Hot stage images for rifaximin, Form 1



T = 250 °C

FIG. 15


XRPD pattern of rifaximin Form Zeta
Arbitrary y scale
θ-2θ (deg)
0
0.25
0.5
0.75
1
5
10
15
20
25
30
35
40

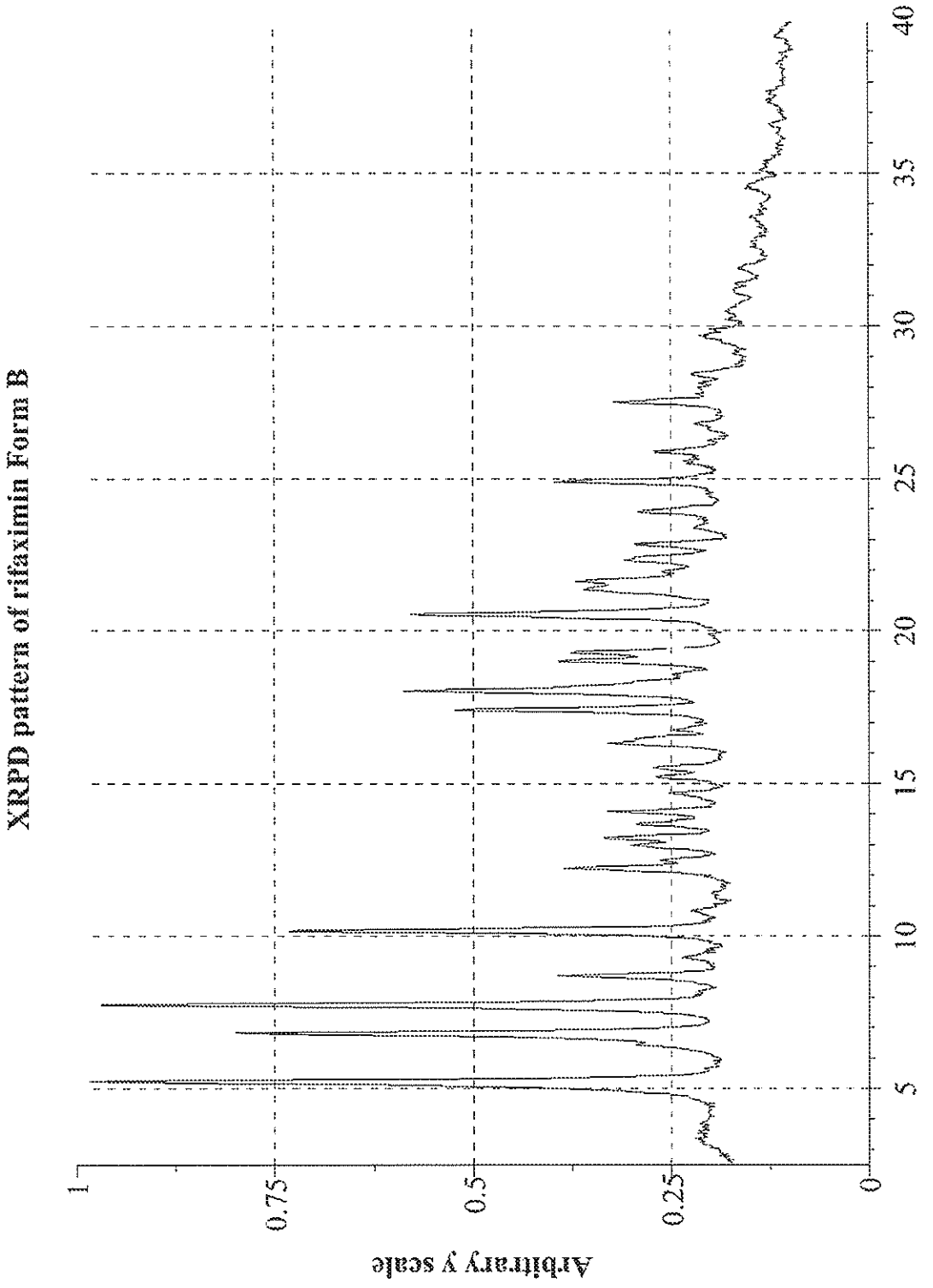

XRPD pattern of rifaximin Form B
Arbitrary y scale
0
0.25
0.5
0.75
1
5
10
15
20
25
30
35
40
θ-2θ (deg)

FIG. 16

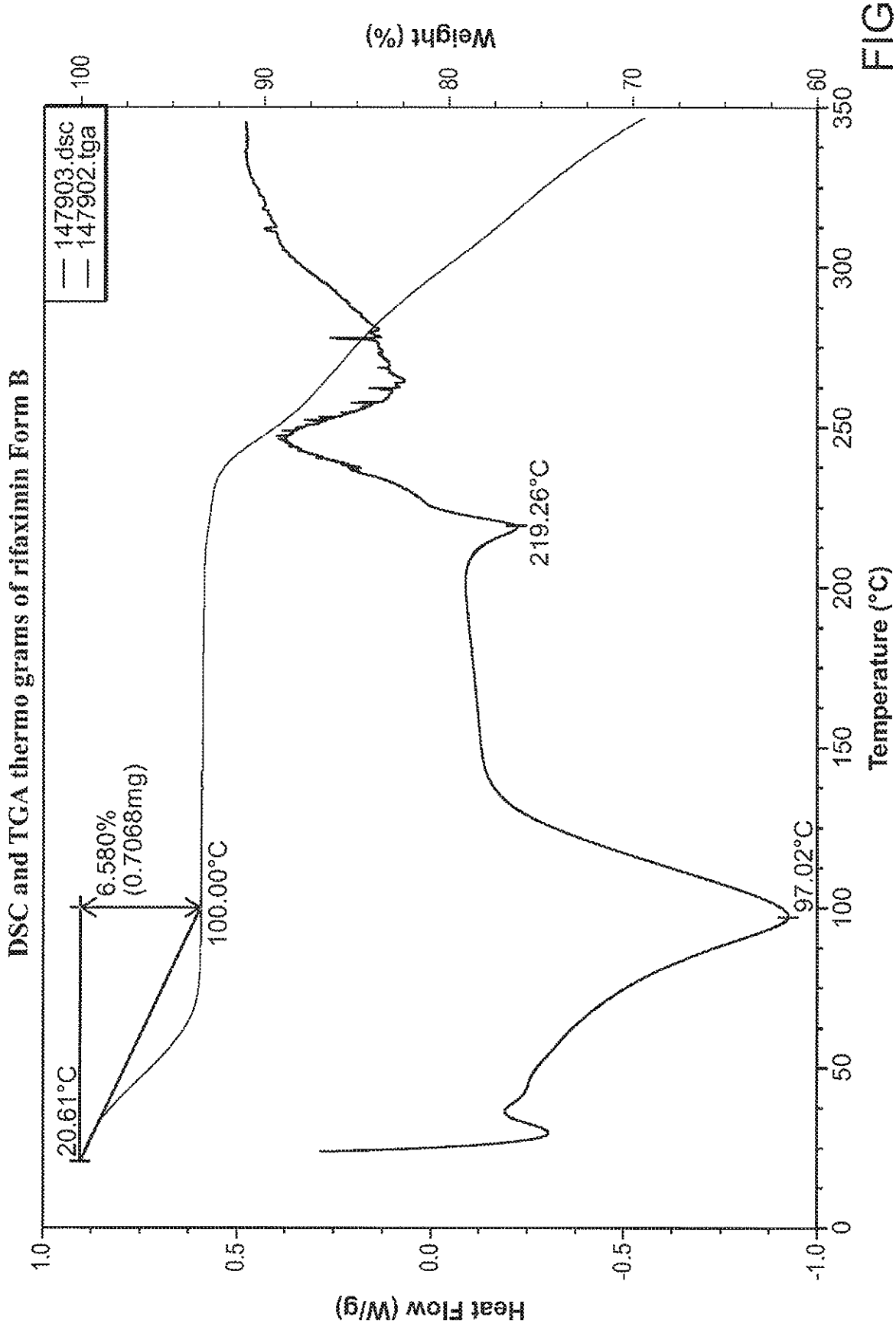

DSC and TGA thermo grams of rifaximin Form B
147903.dsc
147902.tga
Weight (%)
Heat Flow (W/g)
Temperature (°C)
20.61°C
6.580%
(0.7068mg)
100.00°C
219.26°C
97.02°C

FIG. 17

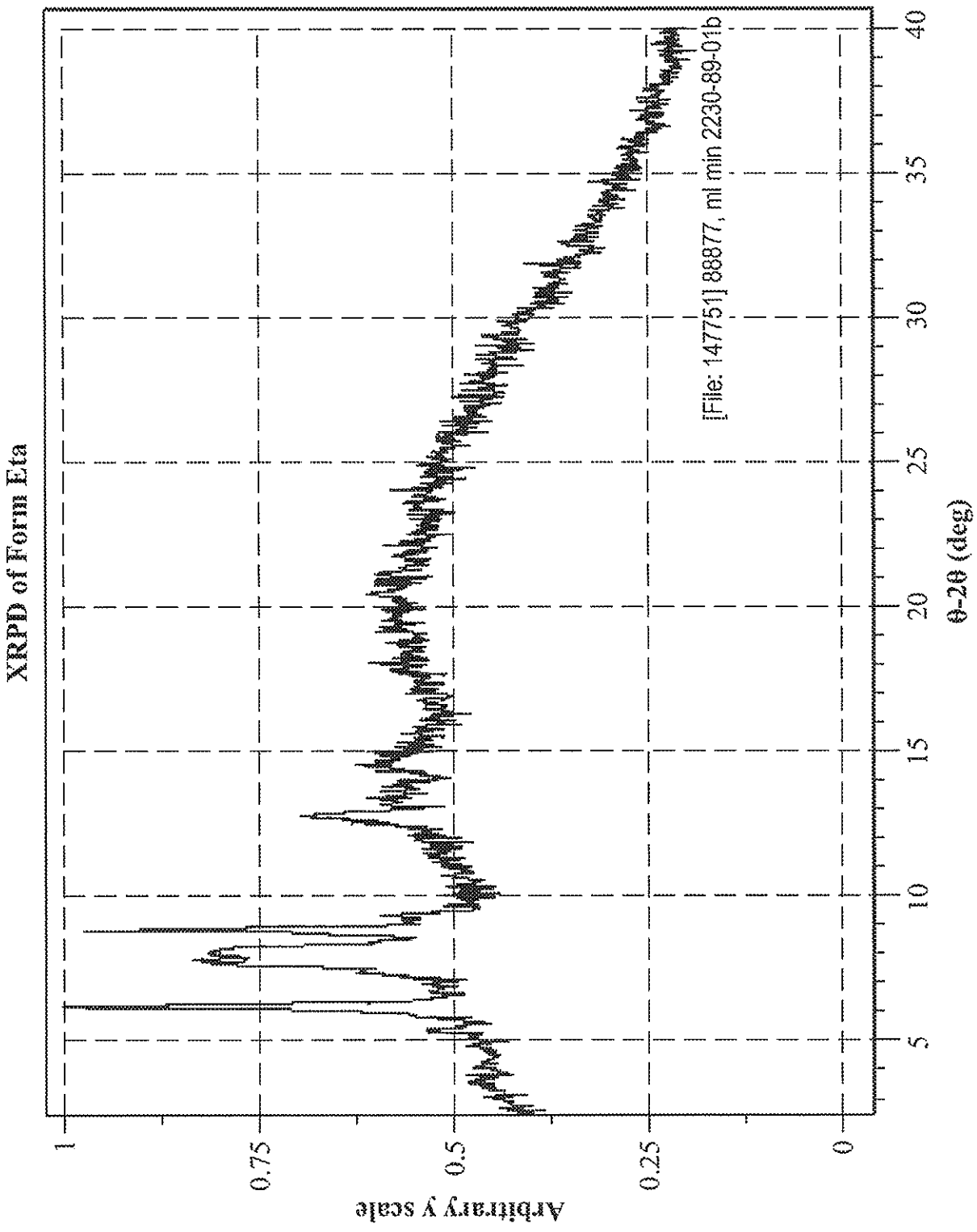

XRPD of Form Eta
[File: 147751] 88877, ml min 2230-89-01b
Arbitrary y scale
θ-2θ (deg)
0
0.25
0.5
0.75
1
5
10
15
20
25
30
35
40

FIG. 18