

FIG. 1

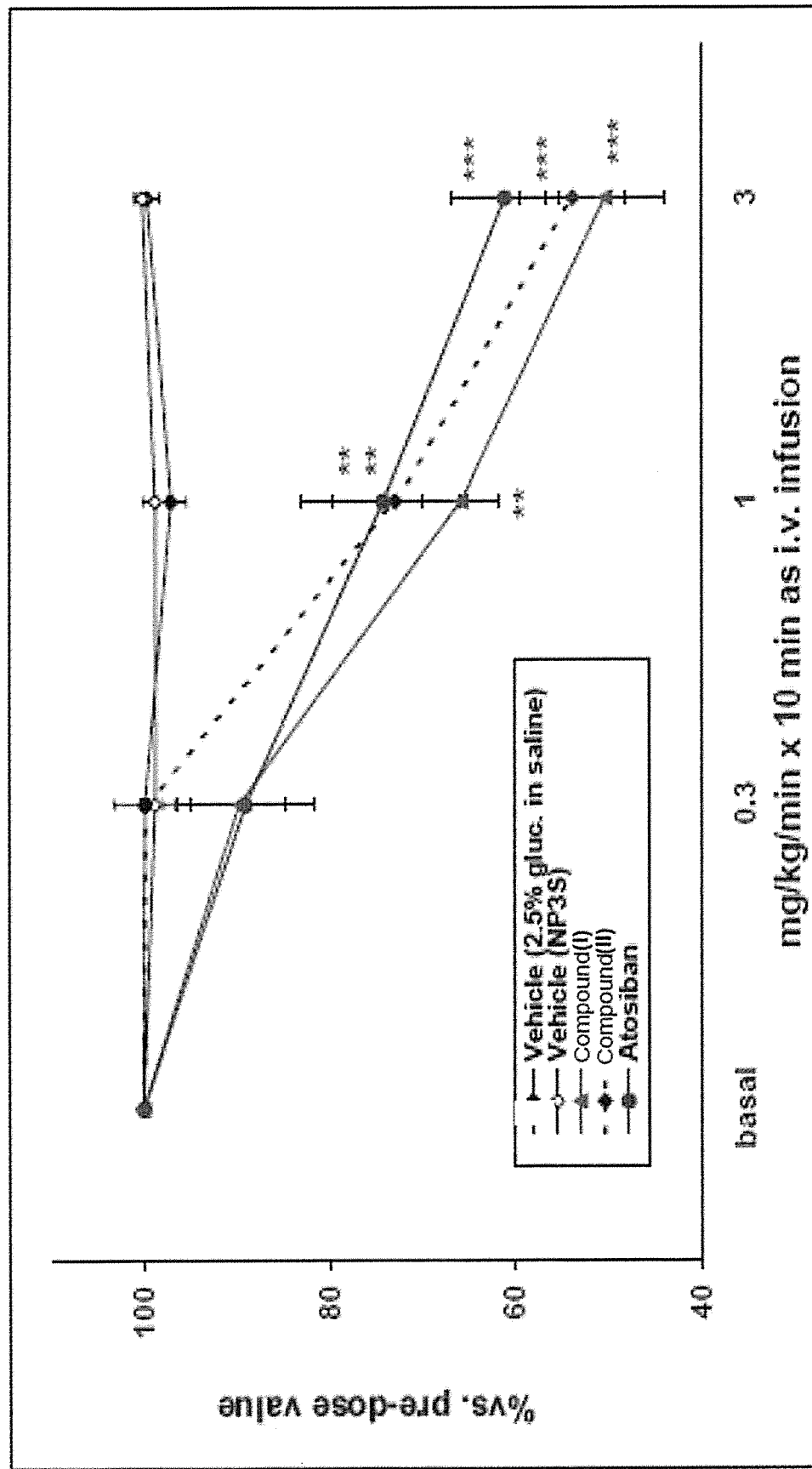


FIG. 2

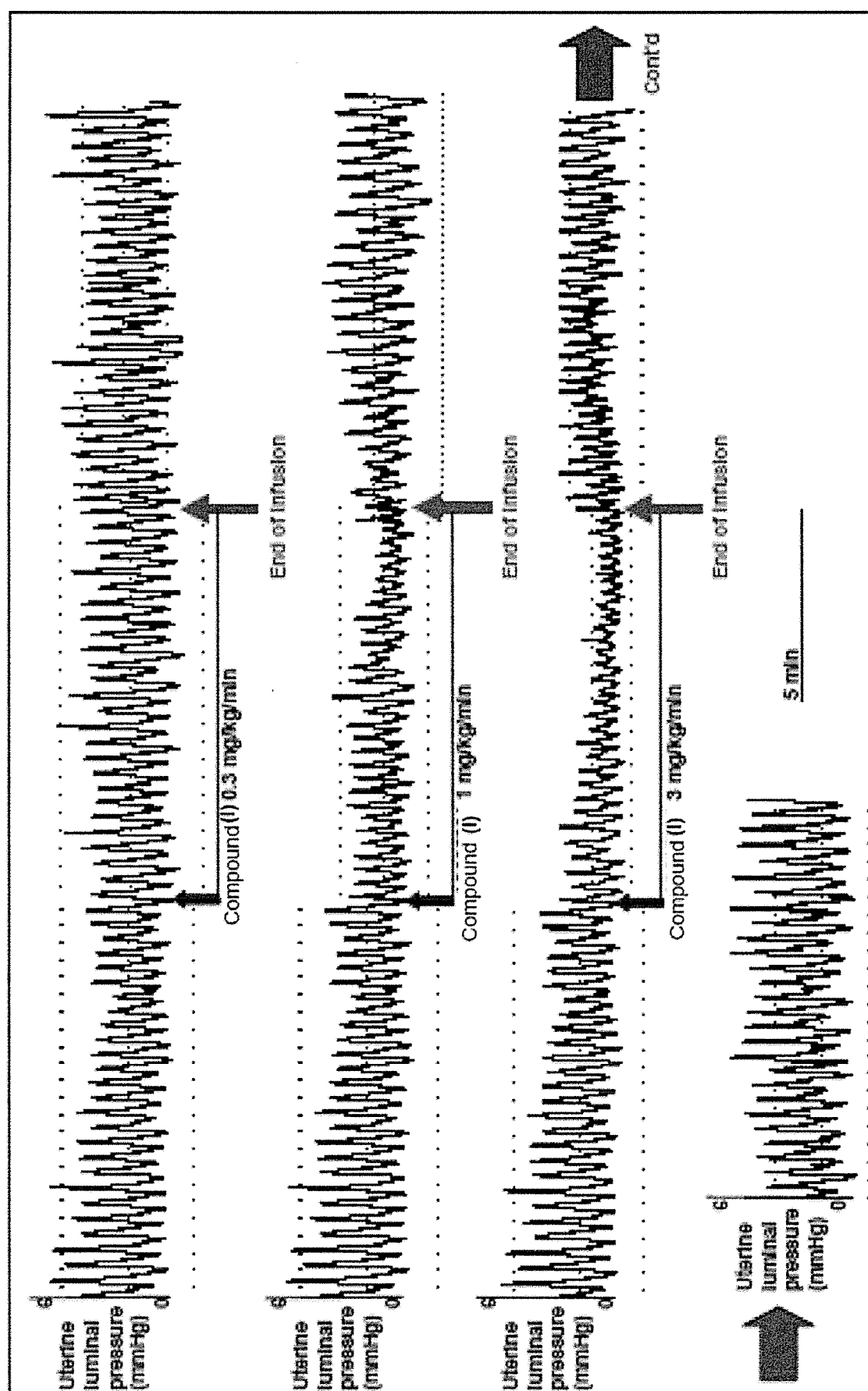
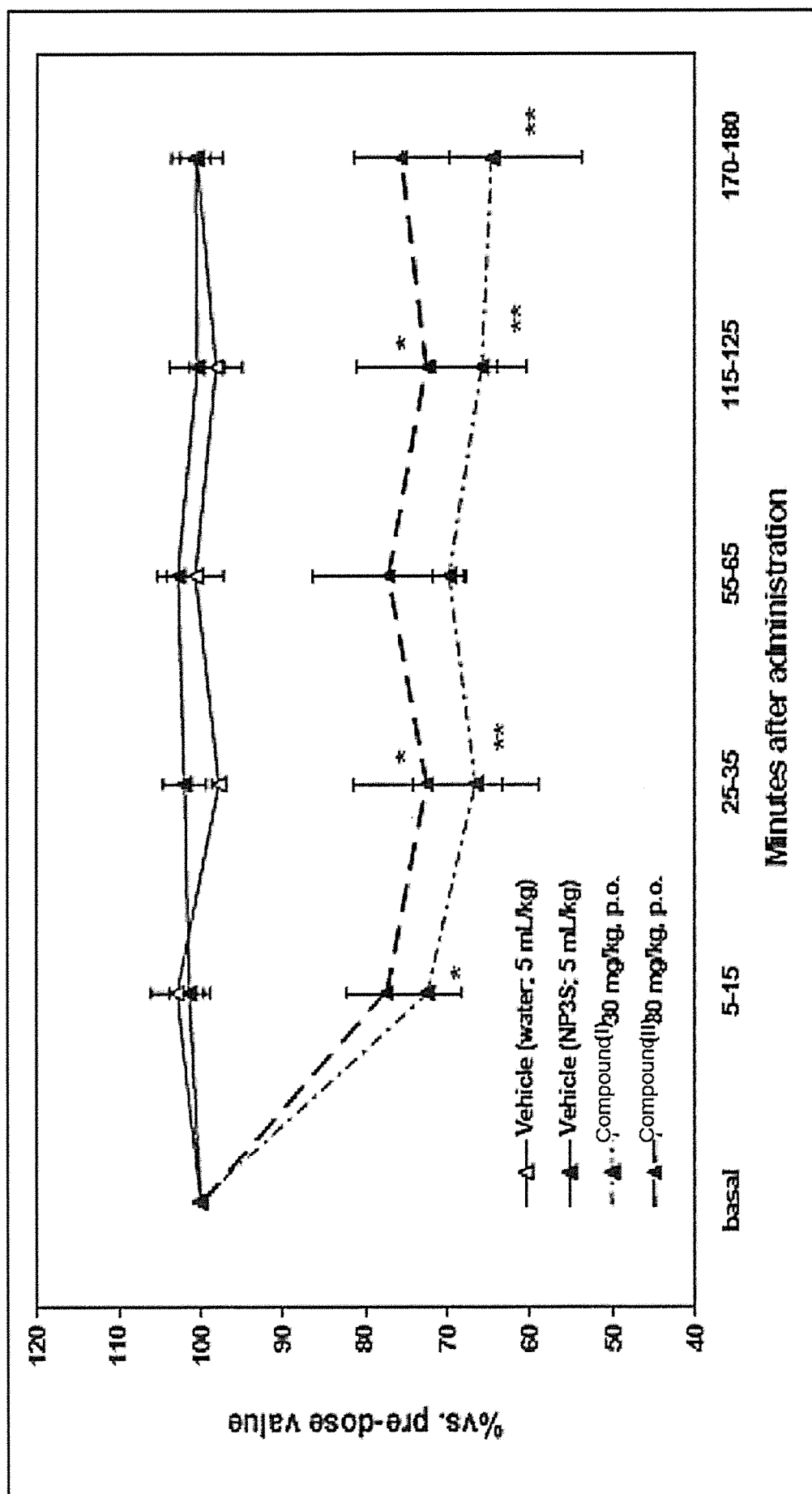


FIG. 3



*: p < 0.05

** : p < 0.01 vs vehicle-treated group

FIG. 4

Method	Observations	NMR Results
Addition of NaOH solution (H ₂ O) to salt solution (CH ₂ Cl ₂)	Rotary evaporated to dryness, dried in vacuum oven	methanesulfonic acid peak present
Addition of NaOH solution (H ₂ O) to salt solution (CH ₂ Cl ₂)	Yellow paste, dried in vacuum oven	methanesulfonic acid peak present
Water added to CH ₂ Cl ₂ solution Agitated by hand. Removed the water CH ₂ Cl ₂ layer, evaporated.	Solids precipitate in the water layer	-
Added NaOH (in water) to the water layer. Added CH ₂ Cl ₂ , agitated by hand.	Sticky solid, dried in vacuum oven	-
Removed CH ₂ Cl ₂ layer, evaporated	Paste, dried in vacuum oven.	methanesulfonic acid peak present
Addition of NaOH solution (EtOH) to salt solution (EtOH)	Slight precipitation, white, placed in refrigerator. Rotary evaporated, dried in vacuum oven.	methanesulfonic acid peak present
Addition of NaOH solution (EtOH) to salt solution (EtOH) 2:1. Evaporated	Paste, dried in vacuum oven.	free base
Addition of NaOH solution (EtOH) to salt solution (EtOH) 2:1. Evaporated	Dried in vacuum oven.	free base
Addition of NaOH solution (EtOH) to salt solution (EtOH) 2:1. Evaporated.	Paste, dried in vacuum oven.	free base
Addition of aqueous NaOH solution to salt solution in CH ₂ Cl ₂ (2:1). Evaporated.	Paste, dried in vacuum oven.	free base

FIG. 5

Salt	Method	Observations	NMR Result
Besylate	Acid solution added to filtered base solution, EtOH	Clear solution, evaporated. Clear glass like solid, slurried in ether. White, glass like solids.	Benzenesulfonate salt
	Free base solution added to acid slurry (CH_2Cl_2)	Clear solution-refrigerated. Placed in freezer.	-
	Acid solution added to base solution (Acetone)	Slightly hazy, yellow tinted solution. Very small amount of solid, refrigerated.	-
Citrate	Free base solution added to acid slurry (EtOAc)	White precipitate. Slurried, solid appears paste-like. Evaporated.	-
	Free base solution added to acid slurry (EtOAc)	White precipitate, paste-like. Placed on the orbit shaker, at 50 °C. Clear solution, refrigerated.	-
	Free base solution added to acid slurry (EtOAc)	Paste-like precipitate. The solution is slightly hazy, stirred. Clear solution, white paste. Placed in vacuum oven. White solid, unknown morphology/clear glassy film in areas. No birefringence	Citrate salt
Edisylate	Free base solution added to acid slurry (Dioxane)	Clear solution. Refrigerated. Solution solidifies, brought to RT, clear solution, evaporated.	-
	Acid solution (hazy-Dioxane) added to base solution (EtOAc)	No precipitate. Clear yellow tinted solution, refrigerated. Slowly evaporated – colorless oil. Vacuum dried at ambient	-
HCl	HCl in Et_2O was added to base solution in Et_2O	White precipitate, suspension stirred for ~ 30 mins, vacuum filtered. Solid of unknown morphology, no birefringence	HCl salt
	HCl in Et_2O was added to base solution in $\text{CH}_2\text{Cl}_2/\text{Et}_2\text{O}$	White precipitate, suspension stirred for ~ 15 mins, vacuum filtered. Viscous solid. Added acetone, slurried for 2 days	HCl salt

FIG. 5 (Continued)

Salt	Method	Observations	NMR Result
Esylate	Acid added to filtered base solution, CH_2Cl_2	Clear solution, evaporated. Clear glass-like solid, slurried in ether. White film like solid, does not have a distinct habit, no birefringence.	Ethanesulfonate salt
	Acid added to base solution, EtOAc	No immediate precipitate. Very small amount of solids w/stirring. Refrigerated.	-
Fumarate	Free base solution added to acid slurry (acetone)	Very little precipitate w/stirring. Partially evaporated. Refrigerated.	-
Glutamate	Acid solution (H_2O) added to base solution ($\text{H}_2\text{O}/\text{EtOH}$)	Droplets of oily material, solvent decanted, oil dried in ambient vacuum oven.	-
	Acid solution (H_2O) added to base solution (acetone)	Yellowish oil precipitate, cloudy white solution. Sonicated, refrigerated.	-
Maleate	Free base solution added to acid slurry (acetone)	Clear solution. Refrigerated.	-
	Acid added to base solution, EtOAc	Immediate precipitate, goes into solution w/stirring. Very slight precipitate, refrigerated.	-
Mesylate	Acid added to base solution in Et_2O	Immediate white precipitate, stirred for approx. 30 mins. Vacuum filtered – viscous solid, washed with ether, vacuum dried at ambient. Glassy, no birefringence	Mesylate salt
Phosphate	Acid (H_2O) added to base solution (hazy) EtOH	Slightly hazy solution. Evaporated. Fine white solids-freezer. Broken glass, aggregates of unknown morphology, white. Does not appear birefringent - storage.	-
	Acid added to base solution (acetone)	No precipitate. Refrigerated. Light yellow oil, vacuum dried at ambient.	-
Sulfate	Acid (H_2O) added to base solution in a mixture of Et_2O and CH_2Cl_2	Heterogeneous reaction. Light precipitate, vigorous stirring for approx. 30 mins. - white suspension, left for evaporation	Sulfate salt

FIG. 5 (Continued)

Salt	Method	Observations	NMR Result
Hydrogensulfate (~ 25 molar excess of H_2SO_4 used)	Acid (H_2O) added to base solution (hazy) EtOH	White precipitate, slurried on the rotator. Clear solution. Refrigerated. White, milky solution - freezer. White solids, decanted, placed in the hood to evaporate - solids go into residual solution, clear. Vacuum dried. The solids remain paste-like, no birefringence - storage.	-
	Acid (H_2O) added to filtered base solution (acetone)	Hazy solution, refrigerated. Placed in freezer. Solids - most likely due to the water in the acid solution, partial evaporation. Poured off the remaining solvent, white solid. Tiny needles, spherulites, birefringence. Vacuum dried. Brown paste - storage.	-
	Acid (H_2O) added to filtered base solution (acetone)	White precipitate, sticky. Sonicated, approx. 30 mins. White fluffy solid, paste on the bottom of the vial. Refrigerated. Fluffy solids, tiny needles.	Hydrogensulfate salt
	Acid solution added to base solution (hazy), EtOH	Small amount of solids. Refrigerated. Fine white solids - freezer.	-
Tosylate	Acid solution added to base solution, EtOAc	No precipitate. Refrigerated. Slowly evaporated - colorless oil. Vacuum dried at ambient	-

FIG. 6

Salt	Observations	XRPD Result
Besylate	light yellow solid, glassy, no birefringence	-
Citrate	glassy, no birefringence	amorphous
	glassy, no birefringence	-
	unknown morphology, clear glassy film, no birefringence	-
Edisylate	glassy, no birefringence	amorphous
	pink glassy solid, no birefringence	-
Esylate	white glassy solid, no birefringence	-
Fumarate	orange glassy solid, no birefringence	-
Glutamate	glassy, no birefringence	-
Maleate	white glassy solid, no birefringence	-
Phosphate	white solid, unknown morphology, no birefringence	
Hydrosulfate	fluffy solid, needles	crystalline X
	light yellow oil	-
	light yellow oil	-
Sulfate	white solid, unknown morphology, no birefringence	-
Tosylate	glassy, no birefringence	-
	glassy, no birefringence	-
HCl	white solid of unknown morphology, no birefringence	-

FIG. 7

Salt/ Sample ID	Solvent	Method ^a	Observations	XRPD Result
Citrate	methanol: toluene 1:2	SE	glassy, partially birefringent	amorphous
	acetone: iso-propanol 1:2	SE	glassy, no birefringence	-
	methanol: ethyl acetate 1:2	SE	glassy, no birefringence	-
	acetone: ethyl acetate: heptane 2:3:1	SE	glassy, no birefringence	-
	acetone: toluene	VD	glassy, no birefringence	-
Hydrogensulfate	ethyl acetate: heptane 6:1	SE	partially glassy, partially birefringent	amorphous
	ethyl acetate	SE	-	amorphous
	MEK: n-butyl acetate 1:1	SE	very viscous oil	-
		vacuum-dried	off white solid, glassy, no birefringence	-
Sulfate	acetone: toluene 2:1	SE	glassy, no birefringence	-
	MEK: n-butyl acetate 1:1		glassy white solid, no birefringence	-
	methanol: toluene 2:1		glassy, no birefringence	-
Dihydro-phosphate	methanol: ethyl acetate 1:2	SE	glassy, no birefringence	-
	methanol: acetonitrile 1:2	SE	mostly glassy, slightly birefringent	amorphous
	methanol: toluene 1:2	SE	unknown morphology, no birefringence	-
	methyl ethyl ketone: n-butyl acetate 1:1	SE	white solid of unknown morphology, birefringent	crystalline X
		SE	white solid, agglomerated plates, birefringent	low crystalline X
		SE	viscous solid	-
		vacuum-dried	viscous light yellow solid	-
Glutamate	ethyl acetate: heptane 1:1	SE	glassy, no birefringence	-
	methanol: toluene 1:1	SE	glassy, no birefringence	-
Tosylate	methanol: toluene 1:2	SE	glassy, no birefringence	-
	acetone: iso-propanol 1:2	SE	glassy, no birefringence	-
	CH ₃ CN: toluene 1:2	SE	glassy, no birefringence	-
	ethyl acetate: n-butyl acetate: heptane	VD	glassy, no birefringence	-
	methyl ethyl ketone: heptane 3:2	SE	glassy, no birefringence	-
	acetone: toluene 1:1	SE	glassy, no birefringence	-
HCl	ethyl acetate: heptane 5:1	SE	partially glassy, no birefringence	-
	acetone: toluene 1:1	SE	white solid of unknown morphology, birefringent	crystalline A
			white solid of unknown morphology, birefringent	crystalline A
	Et ₂ O: CH ₂ Cl ₂	FE	agglomerates of needles, birefringent	crystalline A
	acetone	slurry, 2d	white fluffy solid, thin needles, birefringent	crystalline A
	dried in vacuum at ambient		-	crystalline A

a. SE=slow evaporation, FE=fast evaporation, SC=slow cooling, CC=crash cooling

b. original sample

FIG. 7 (continued)

Salt/ Sample ID	Solvent	Method ^a	Observations	XRPD Result
Mesylate	methanol: toluene 1:2	SE	glassy, no birefringence	-
	acetone: <i>iso</i> -propanol 1:2	SE	glassy, no birefringence	-
	MEK: <i>n</i> -butyl acetate 1:1	SE	viscous solid	-
	CH ₃ CN: <i>n</i> -butyl acetate 1:1	SE	viscous solid	-
	CH ₂ Cl ₂ : EtOAc: Et ₂ O	SE	glassy, no birefringence	-
	<i>iso</i> -propyl acetate: methanol 30:1	SC	clear solution	-
		FE	glassy, no birefringence	-
		CC	clear solution	-
		SE	clear glassy solid	-
	heptane:MEK: ethanol 6:1:2	SC	clear solution	-
		FE	glassy, no birefringence	-
		CC	clear solution	-
		SE	clear, glassy solid	-
	acetone: MTBE 1:2	SE	glassy, no birefringence	-
	acetone: toluene 1:2	FE	glassy, no birefringence	-
	<i>iso</i> -propanol: toluene 3:1	FE	glassy, no birefringence	-
	<i>iso</i> -propanol: <i>iso</i> -propyl ether 1:1	FE	clear, glassy solid	-
	CH ₃ CN: water 1:1	CC	clear solution	-
		SE	morphology unknown, no birefringence	-
	<i>iso</i> -propyl ether: CH ₃ CN:MeOH 20:5:2	CC	clear solution	-
		SE	glassy, no birefringence	-
Fumarate	acetone: <i>n</i> -butyl acetate 1:1	SE	glassy, no birefringence	-
	CH ₂ Cl ₂ : <i>iso</i> -propanol 1:1	SE	glassy, no birefringence	-
	methanol: toluene 1:1	SE	partially glassy, some birefringence	crystalline B
	methanol: ethyl acetate 1:1	SE	partially glassy, partially birefringent	amorphous
	methanol: toluene 1:1	SE	partially oily, partially birefringent (fibers)	-
			light yellow oil	
		vacuum- dried	light yellow solid, unknown morphology, birefringent	amorphous + peak
	methanol: toluene 4:1	SE	glassy, no birefringence	-

a. SE =slow evaporation, FE =fast evaporation, SC =slow cooling, CC =crash cooling

b. original sample

FIG. 7 (continued)

Salt/ Sample ID	Solvent	Method ^a	Observations	XRPD Result
Esylate	MeOH: n-butyl acetate 1:1	SE	glassy, no birefringence	-
	acetone: toluene 1:1	SE	glassy, no birefringence	-
Besylate	ethyl acetate: heptane 4:1	SE	glassy, no birefringence	-
	acetone: toluene 1:1	SE	glassy, no birefringence	-
	CH ₂ Cl ₂ : <i>iso</i> -propanol 1:1	SE	glassy, no birefringence	-
	MEK: n-butyl acetate 1:1	SE	glassy, no birefringence	-
Edisylate	acetone: n-butyl acetate 1:1	SE	glassy, no birefringence	-
	MeOH: MEK: toluene 1:1:1	SE	partially glassy, partially birefringent	amorphous
Maleate	MeOH: n-butyl acetate 1:1	SE	glassy, no birefringence	-
	acetone: <i>iso</i> -propanol 1:2	SE	glassy, no birefringence	-

a. SE =slow evaporation, FE =fast evaporation, SC =slow cooling, CC =crash cooling

b. original sample

FIG. 8

Salt	Solubility (mg/mL) ^a
HCl	< 1
hydrosulfate	< 1
fumarate	< 0.5 (became viscous)
mesylate	< 46

a. Solubilities are calculated based on the total solvent used to give a solution; actual solubilities may be greater because of the volume of the solvent portions utilized or a slow rate of dissolution. Solubilities are reported to the nearest mg/mL.

FIG. 9

Salt	Notes	Relative humidity, %	Time	Observations	Weight change, %
HCl	-	95%	~ 2d	looks dry	0 ^a
	Vacuum dried		~ 2d	looks dry	~ 6 ^a
Hydrosulfate	-	43%	~ 20 h	looks dry	0 ^b
		53%	~ 3 h	looks dry	
		65%	~ 1d	looks dry	
			~ 3 d	looks dry	~ 2 ^c
Fumarate	-	43%	~ 20 h	looks dry	~ 2 ^b
		53%	~ 3 h	looks dry	
		65%	~ 1d	looks partially oily	
			~ 3 d	yellow oil with small amount of solid material	~ 4 ^c

FIG. 10

Sample Source	Technique	Analysis/Result
From acetone slurry	XRPD	crystalline I
	DSC ^a	endo 147. 228 (decomp.)
	TG ^b	0.55 @ 25-100 4.10 @ 25-160
	MB ^c	0.3 % wt loss at 5% RH 0.9 % wt gain from 5-95% RH 0.7 % wt loss from 95-5% RH
	¹ H NMR ^d	consistent w/structure
Vacuum dried	XRPD	crystalline I
	DSC ^a	endo 146
	TG ^b	0.21 @ 25-100 2.53 @ 100-160

a. endo= endotherm, temperatures (°C) reported are transition maxima. Temperatures are rounded to the nearest degree.

b. weight loss (%) at a certain temperature (°C); weight changes (%) are rounded to 2 decimal places; temperatures are rounded to the nearest degree.

FIG. 11

Technique	Analysis/Result
XRPD	crystalline I
DSC ^a	shouldered endo 188, 206, 272
TG ^b	0.0 @ 25-165 6.7 @ 165-220
¹ H NMR	0.12 molar % of EtOH

a. endo= endotherm, temperatures (°C) reported are transition maxima. Temperatures are rounded to the nearest degree.

b. weight loss (%) at a certain temperature (°C); weight changes (%) are rounded to 2 decimal places; temperatures are rounded to the nearest degree.

FIG. 12

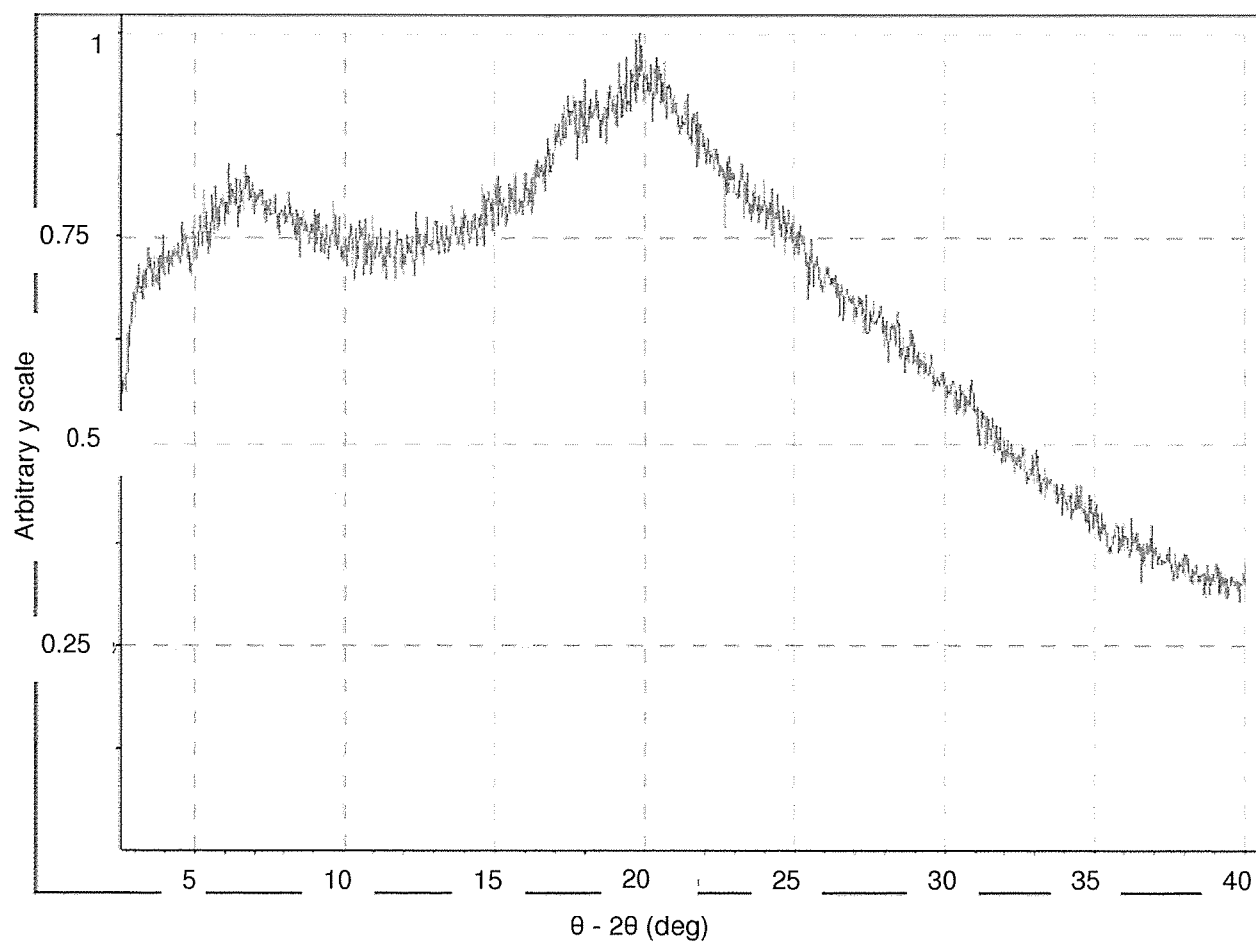


FIG. 13

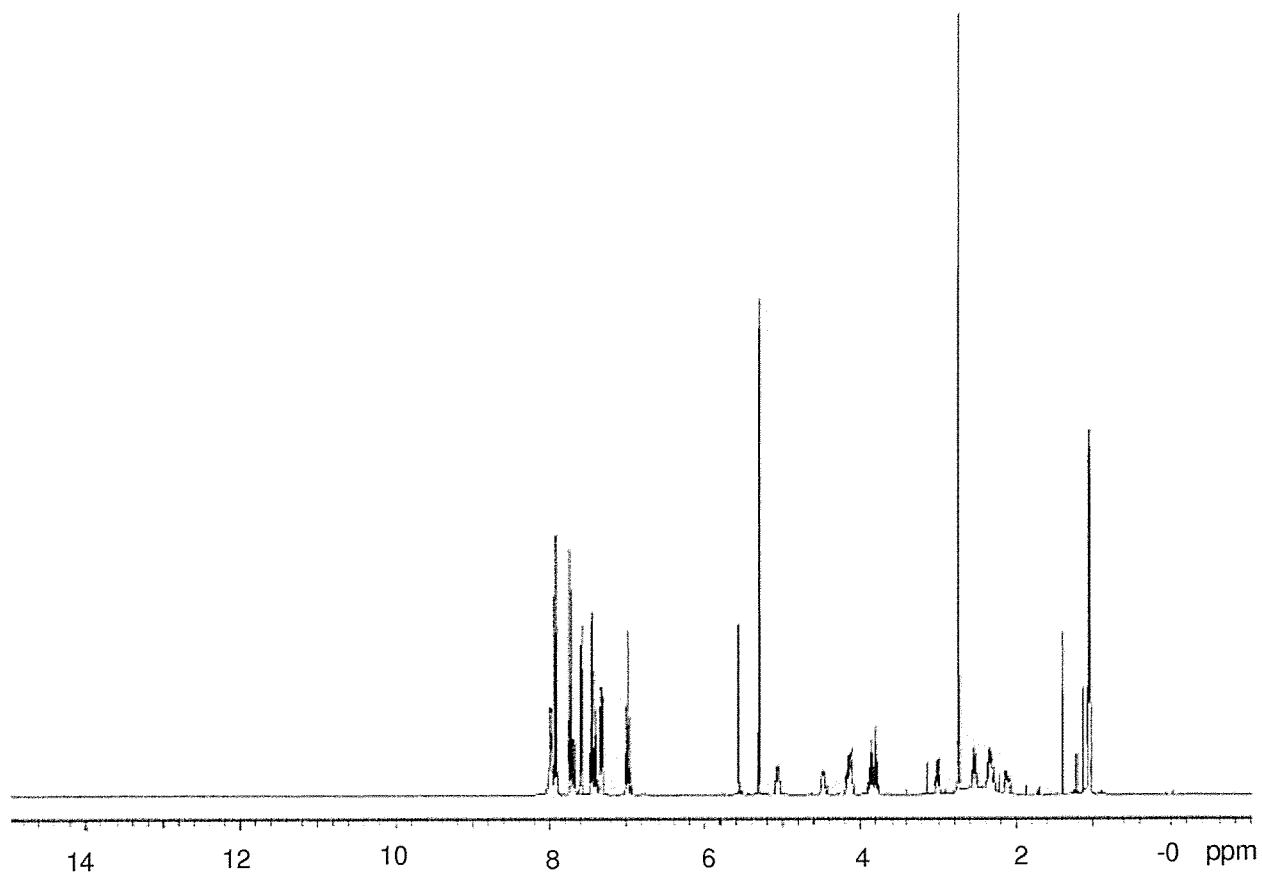


FIG. 14

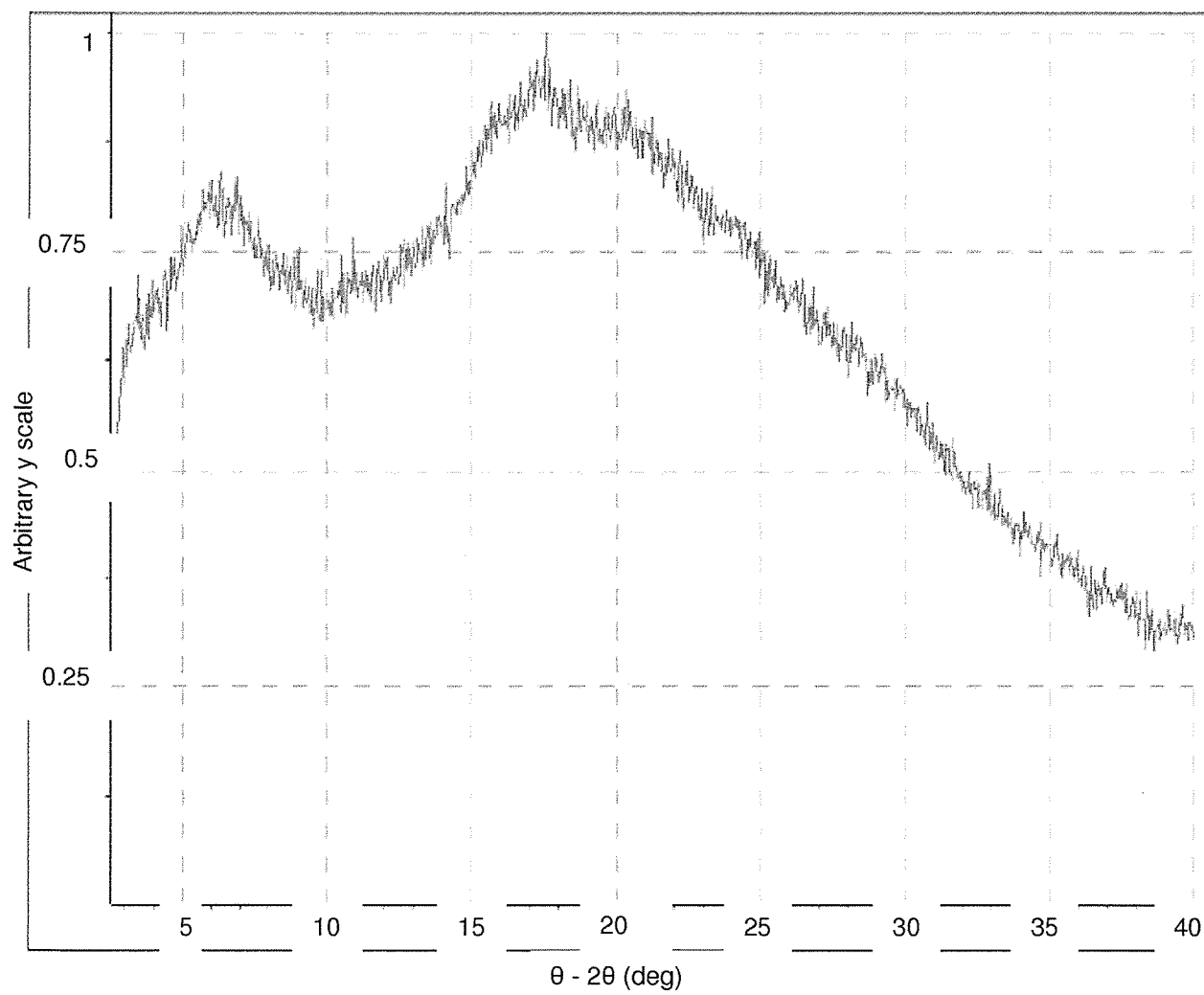


FIG. 15

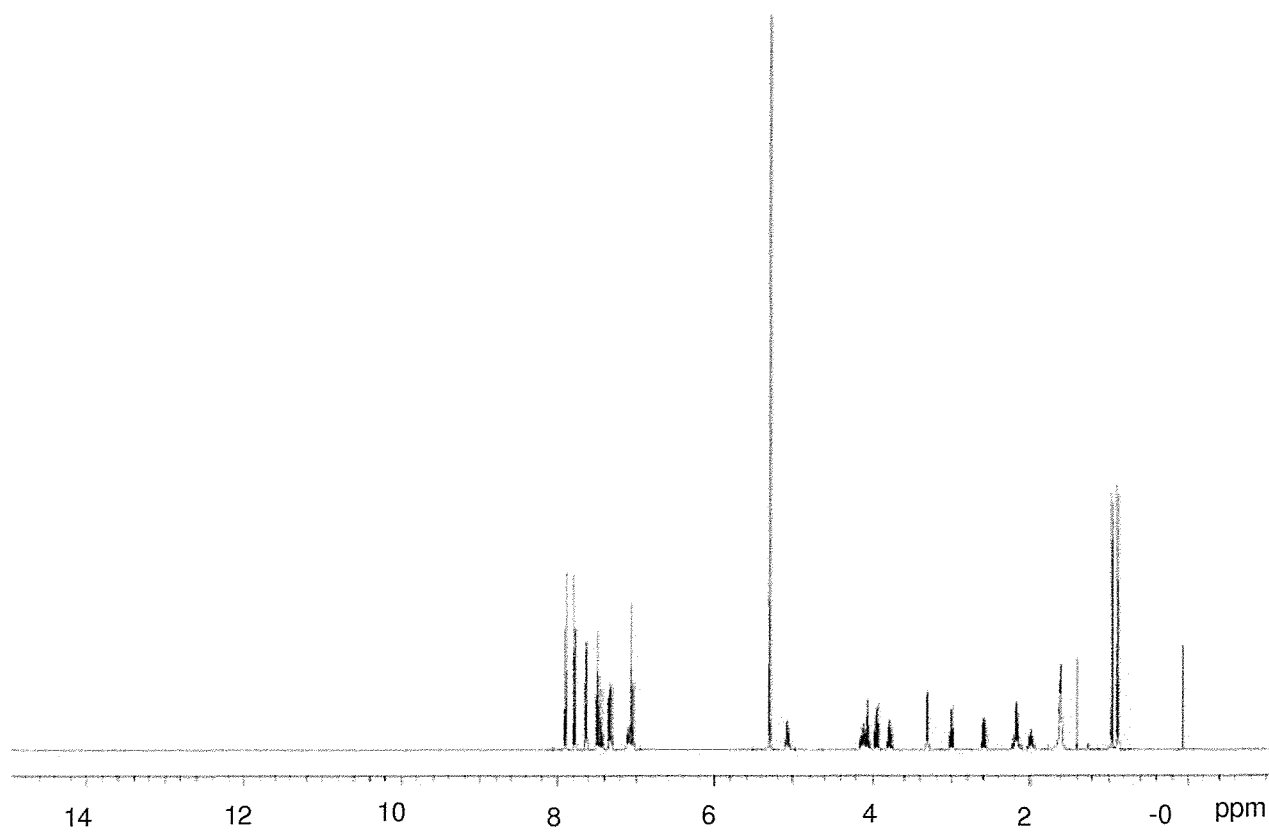


FIG. 16

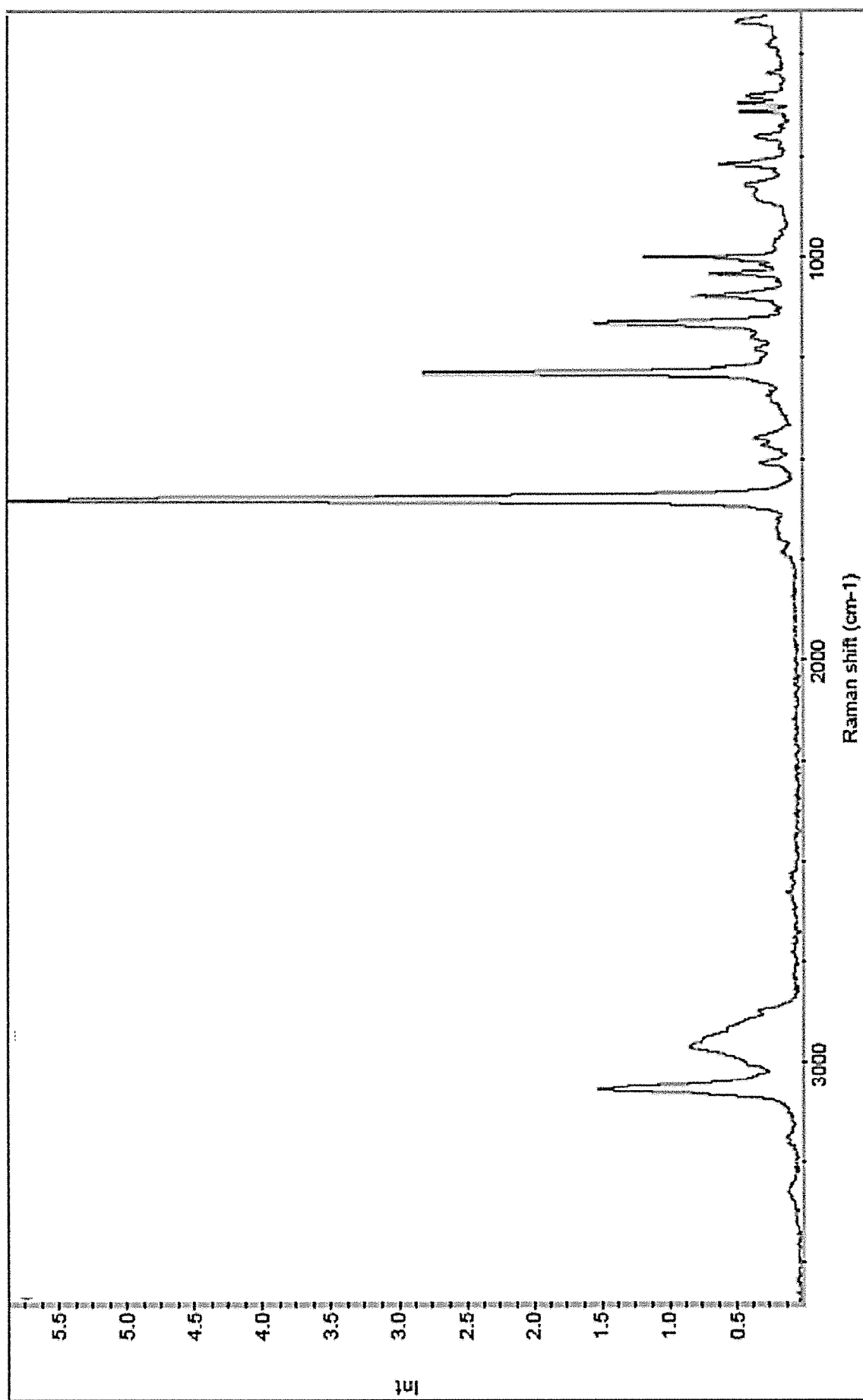


FIG. 17

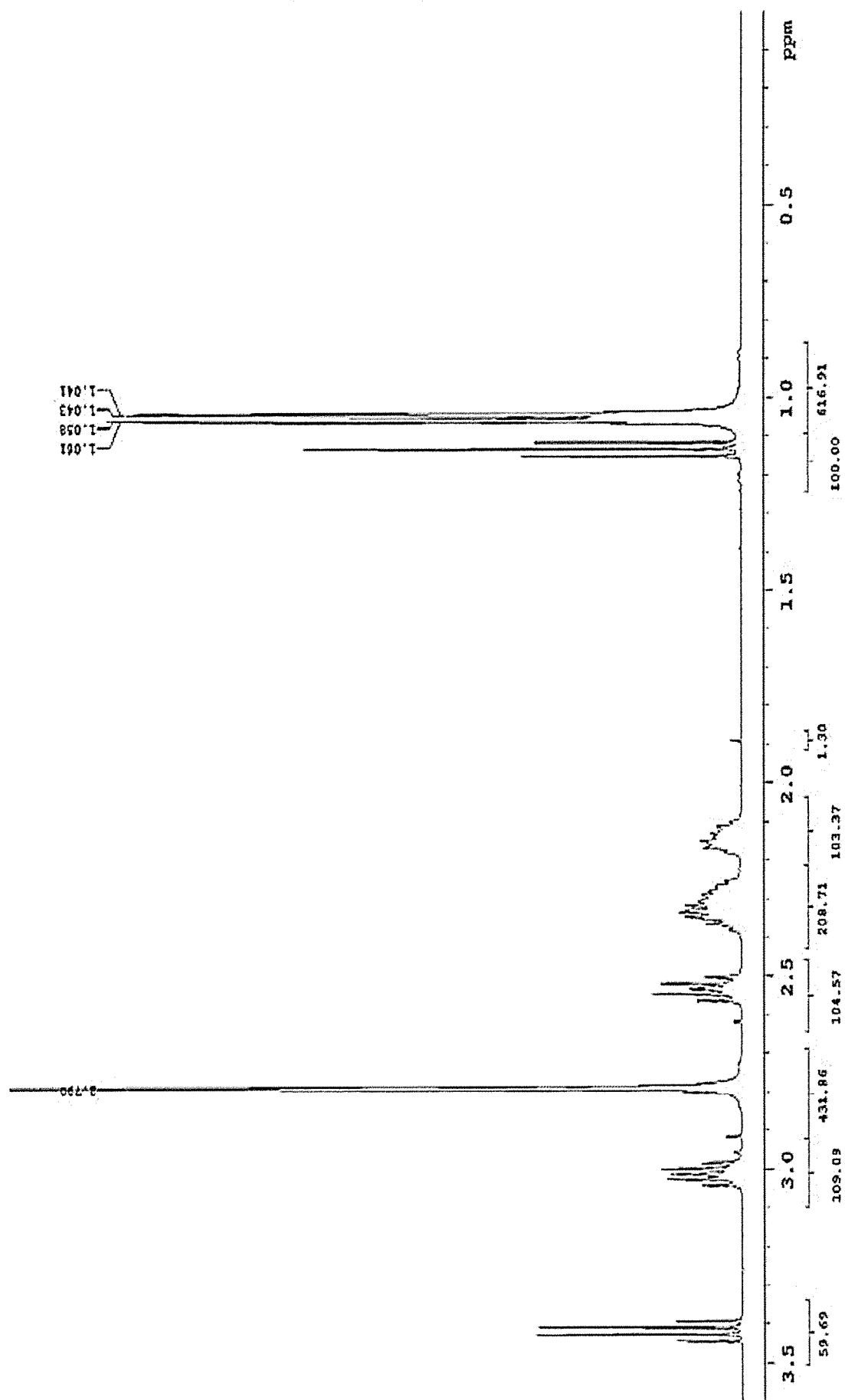


FIG. 18

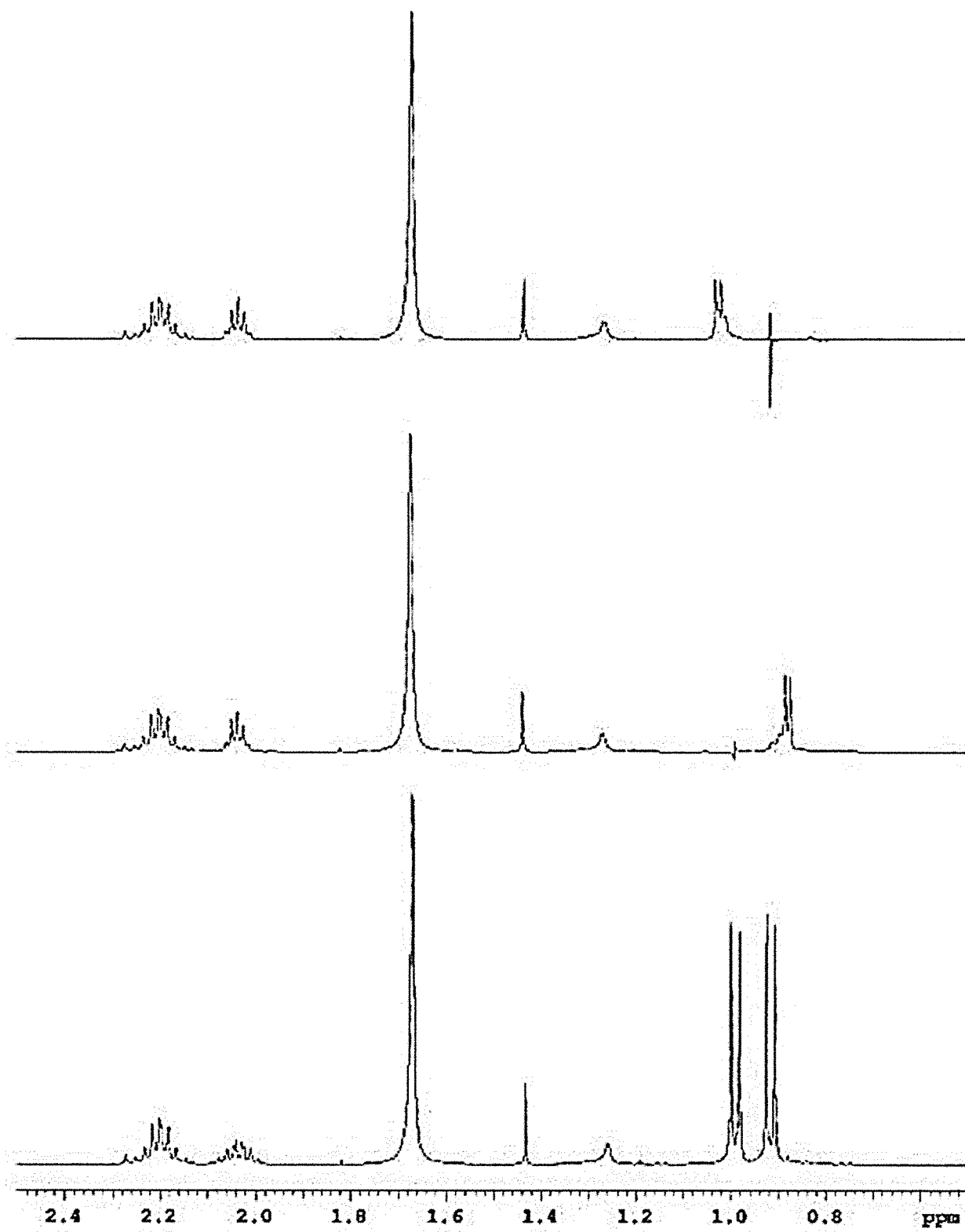


FIG. 19

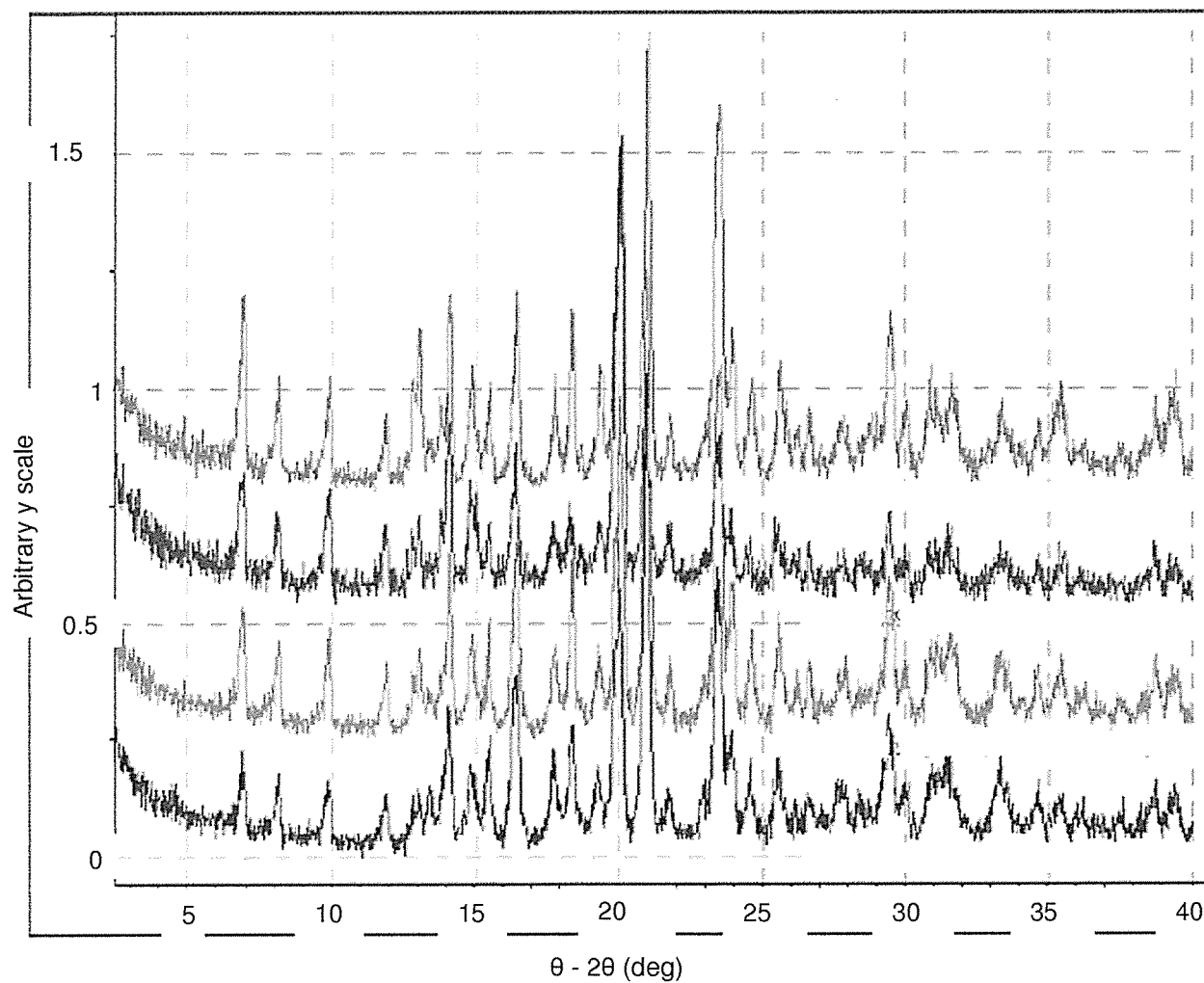


FIG. 20

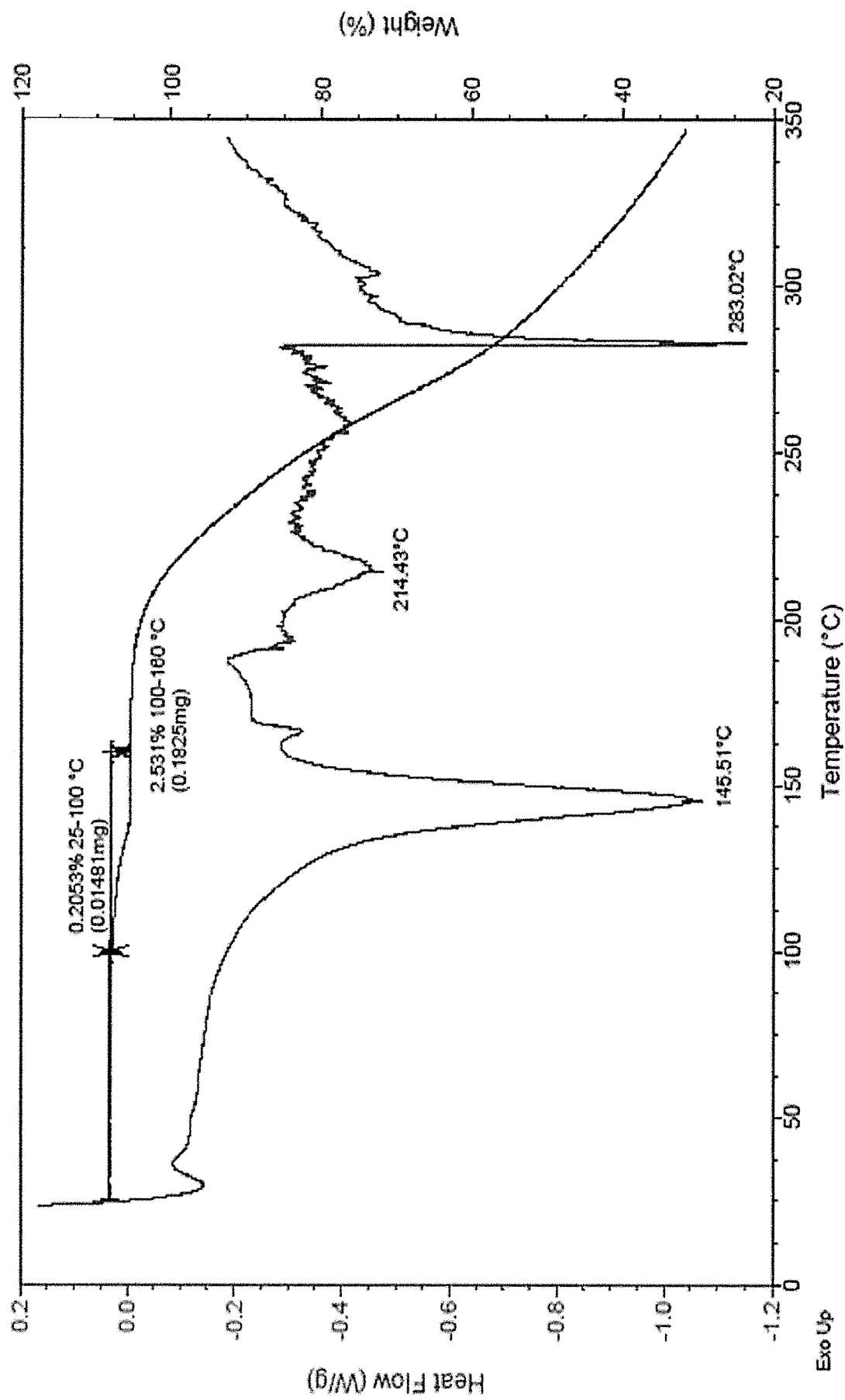


FIG. 21

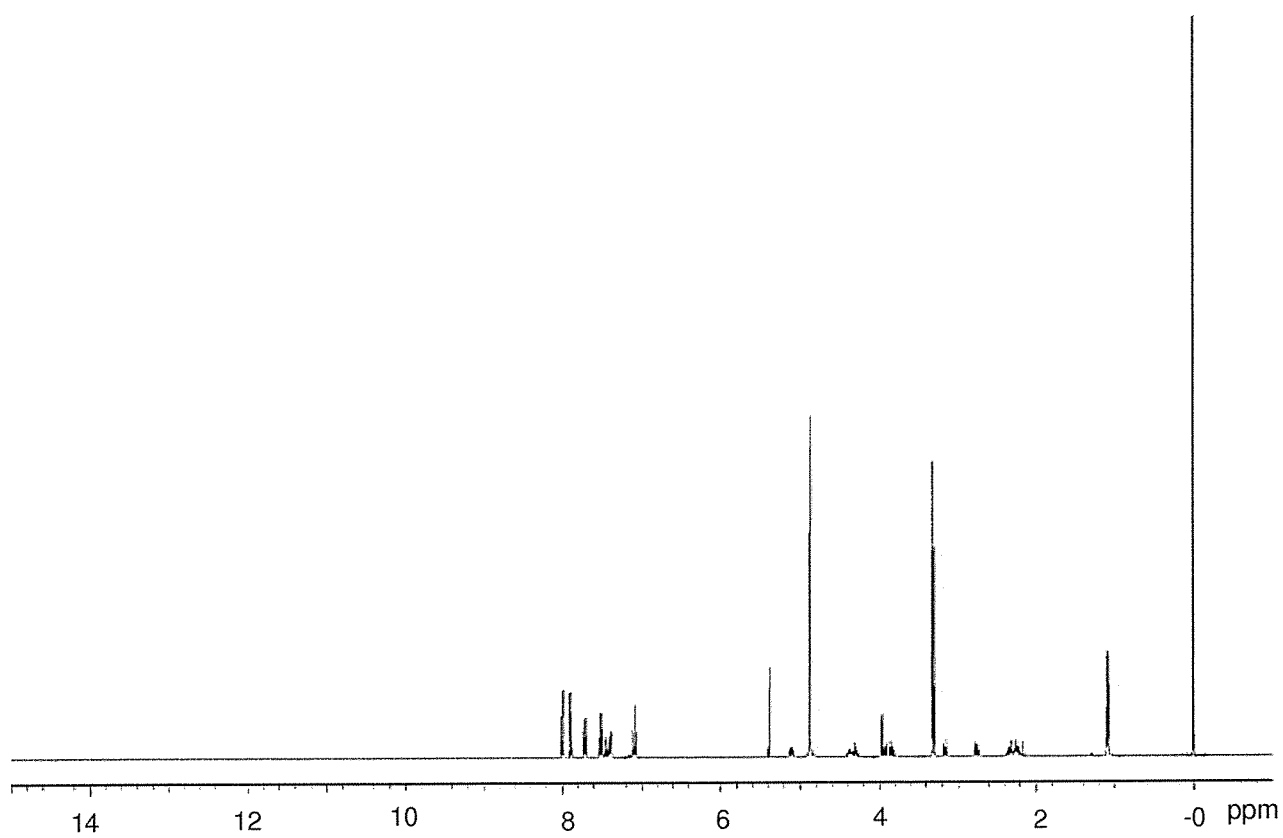


FIG. 21 (Continued)

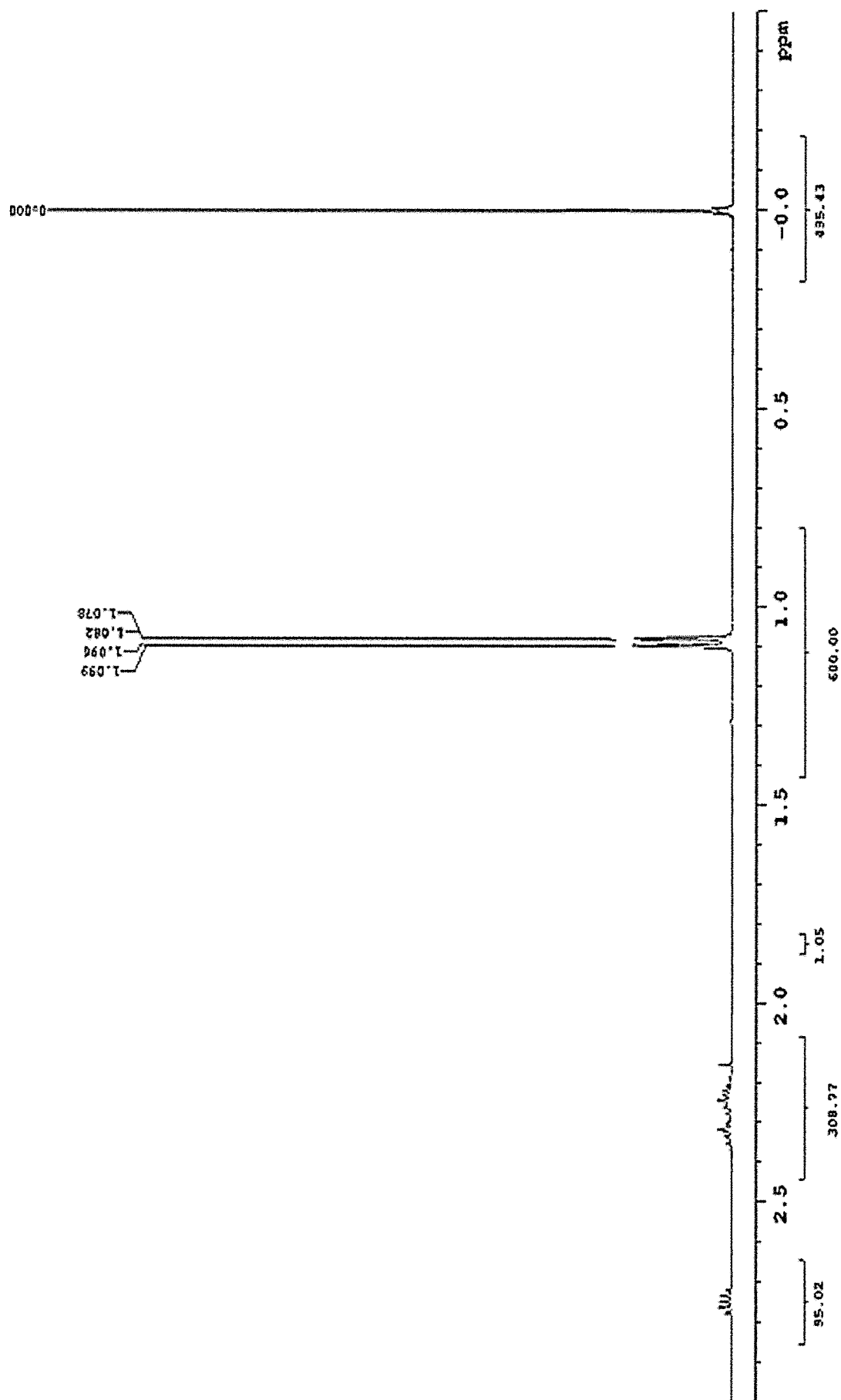


FIG. 21 (Continued)

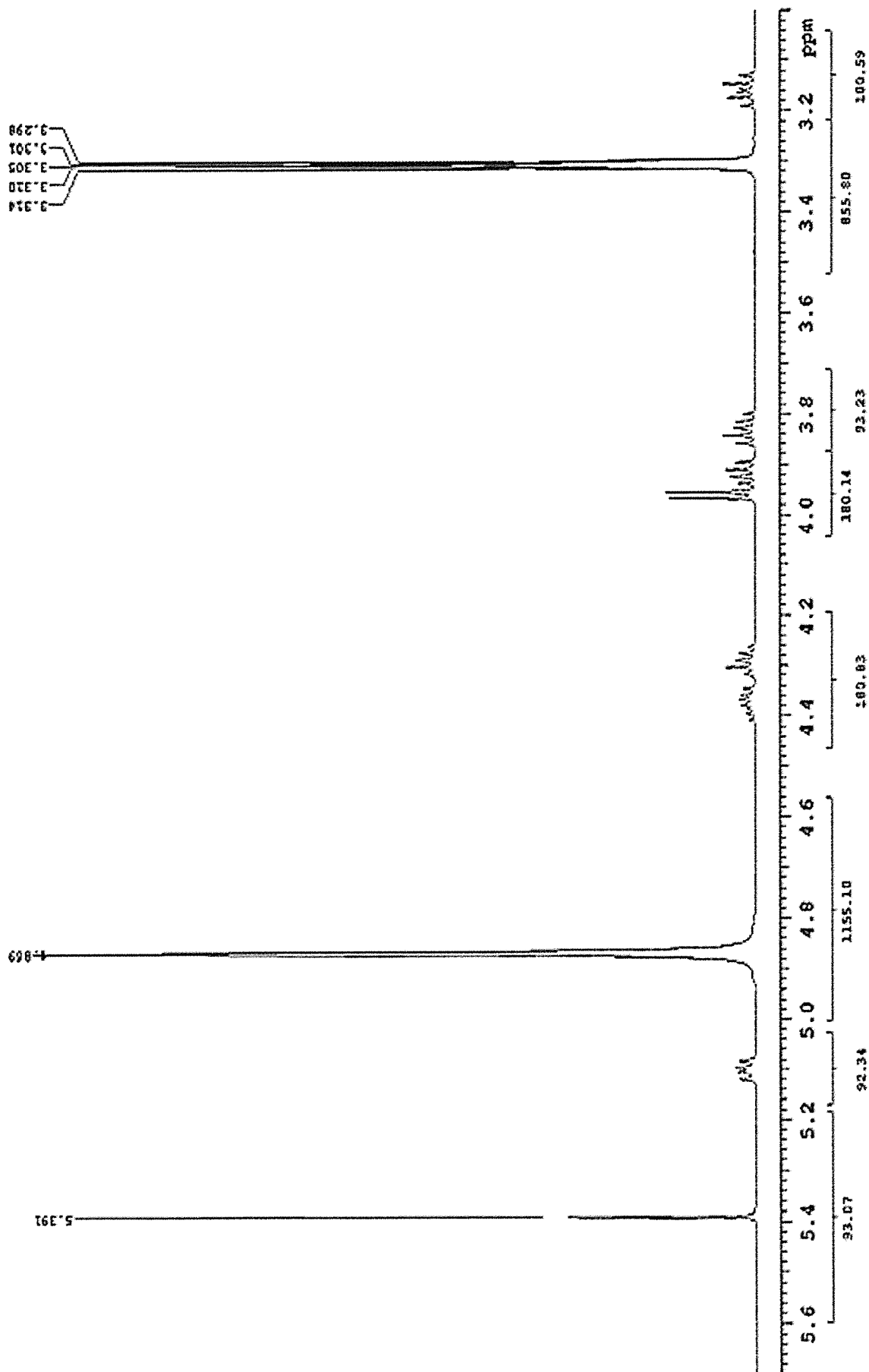


FIG. 21 (Continued)

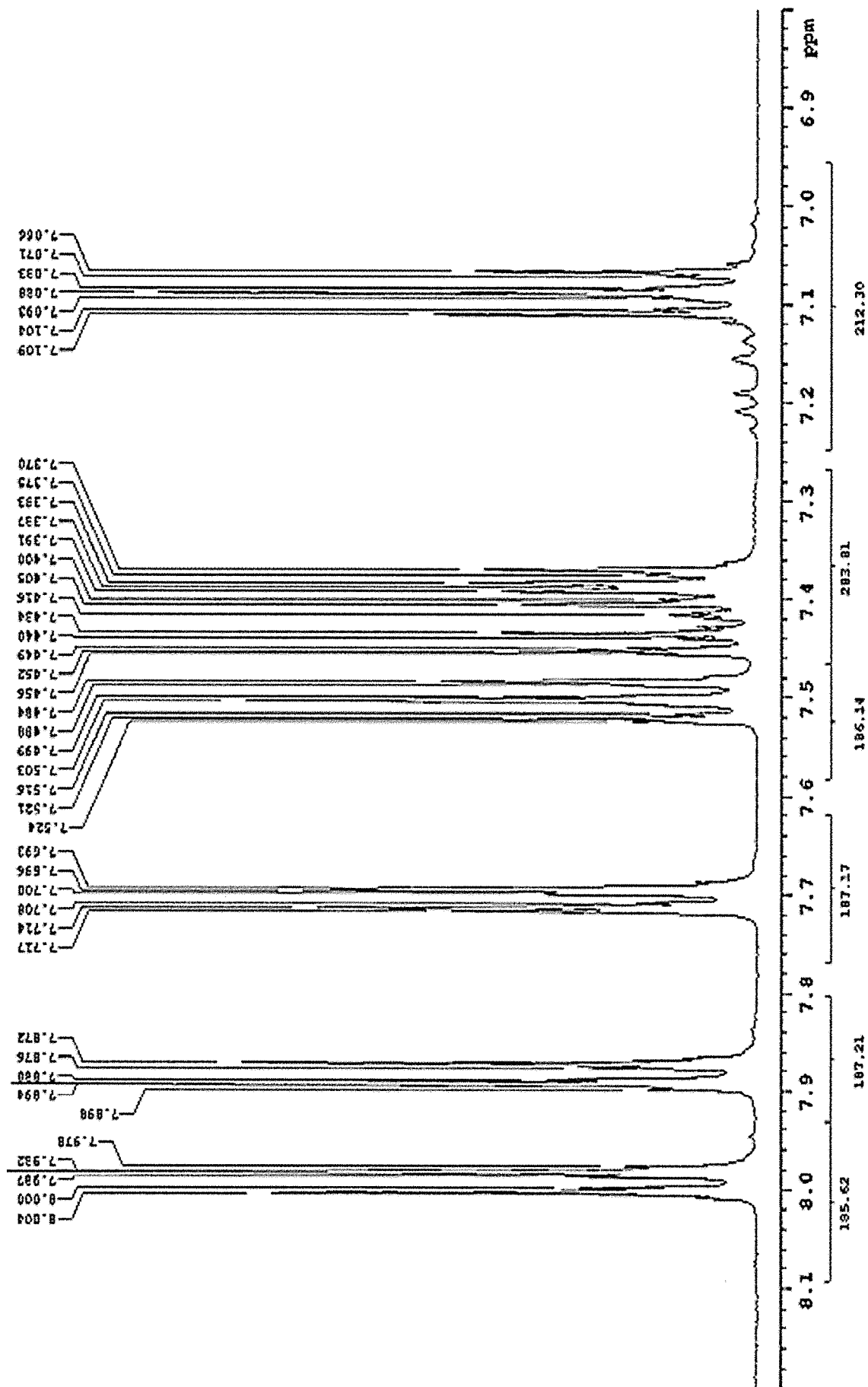


FIG. 22

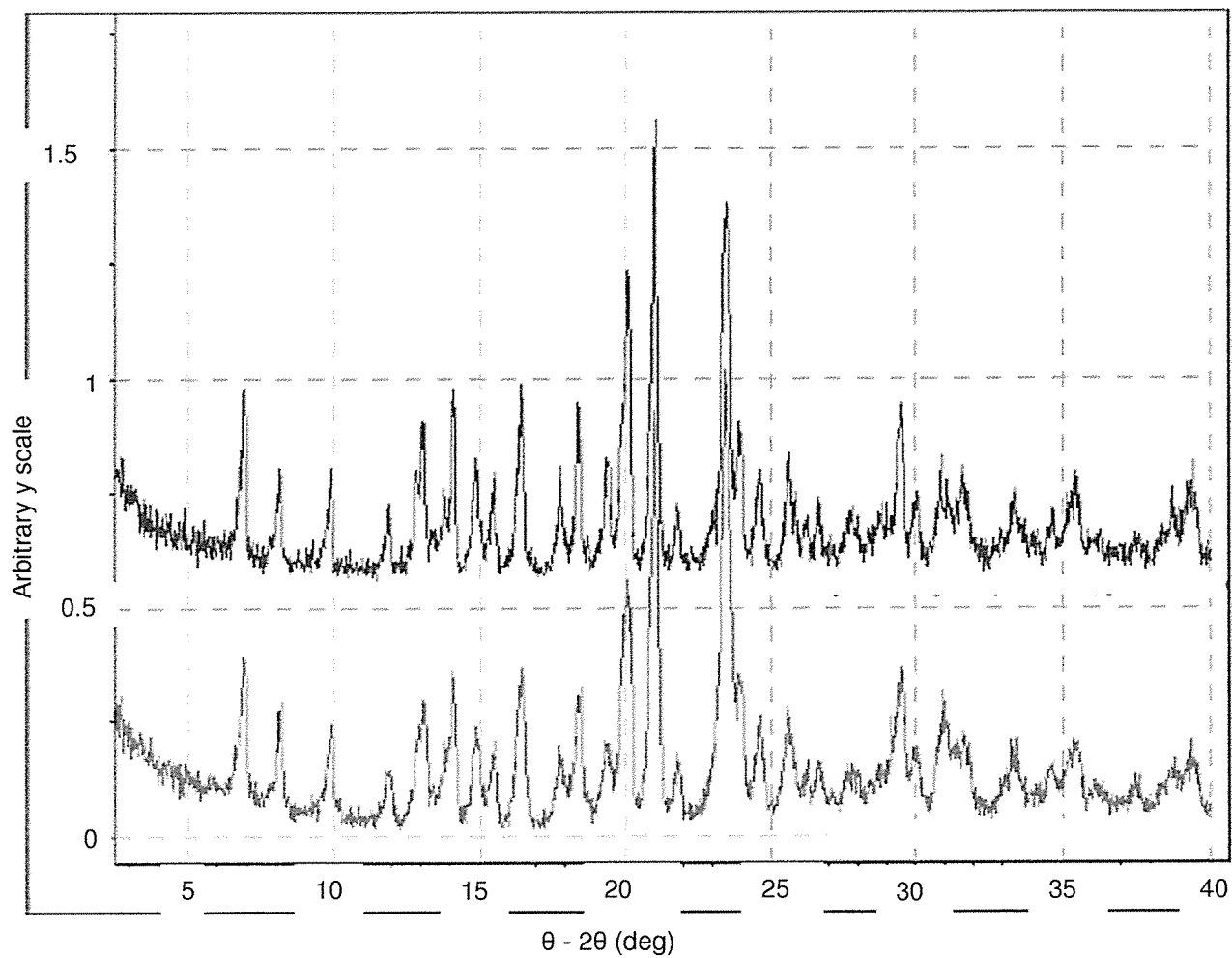


FIG. 23

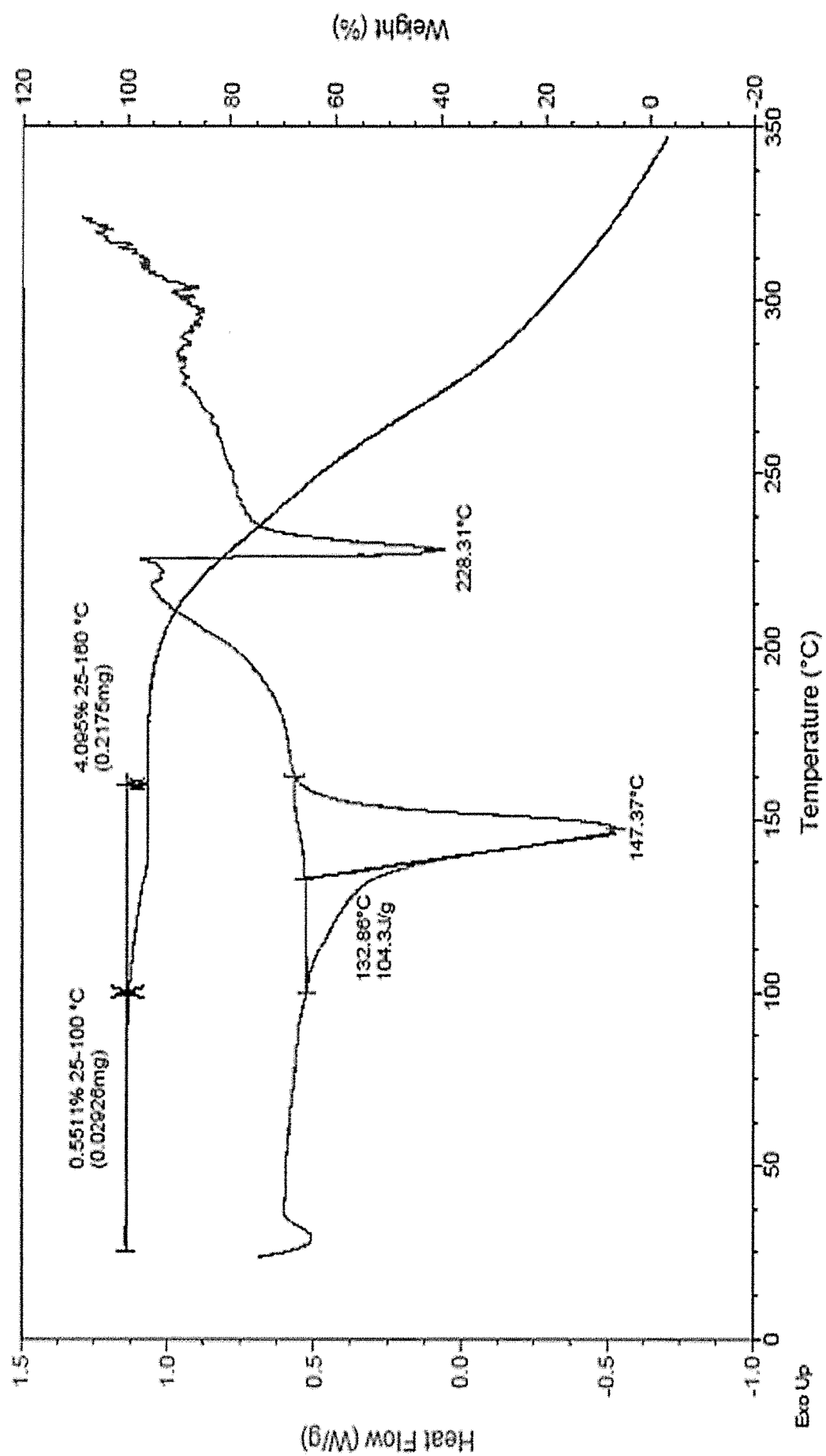


FIG. 24

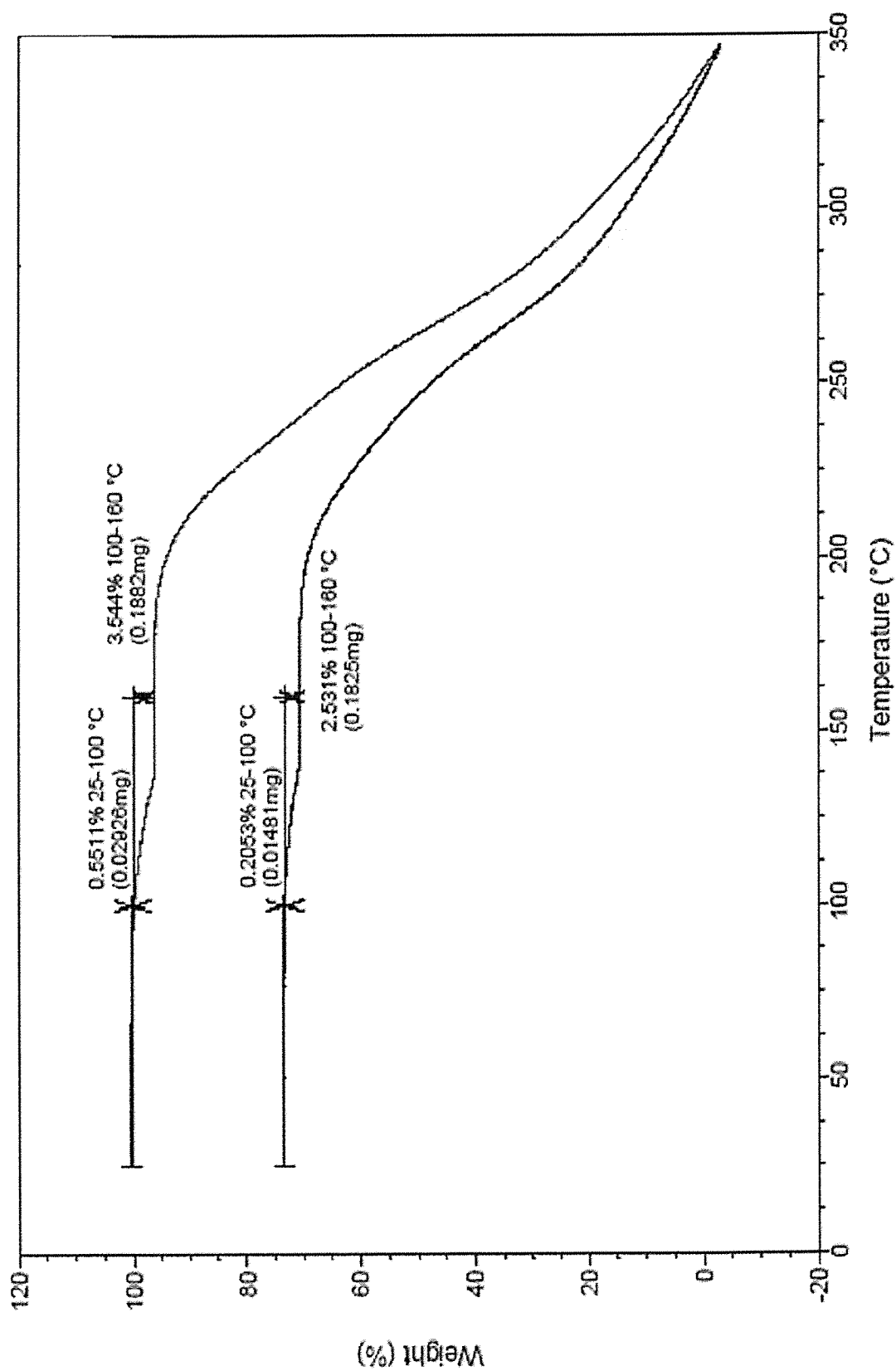


FIG. 25

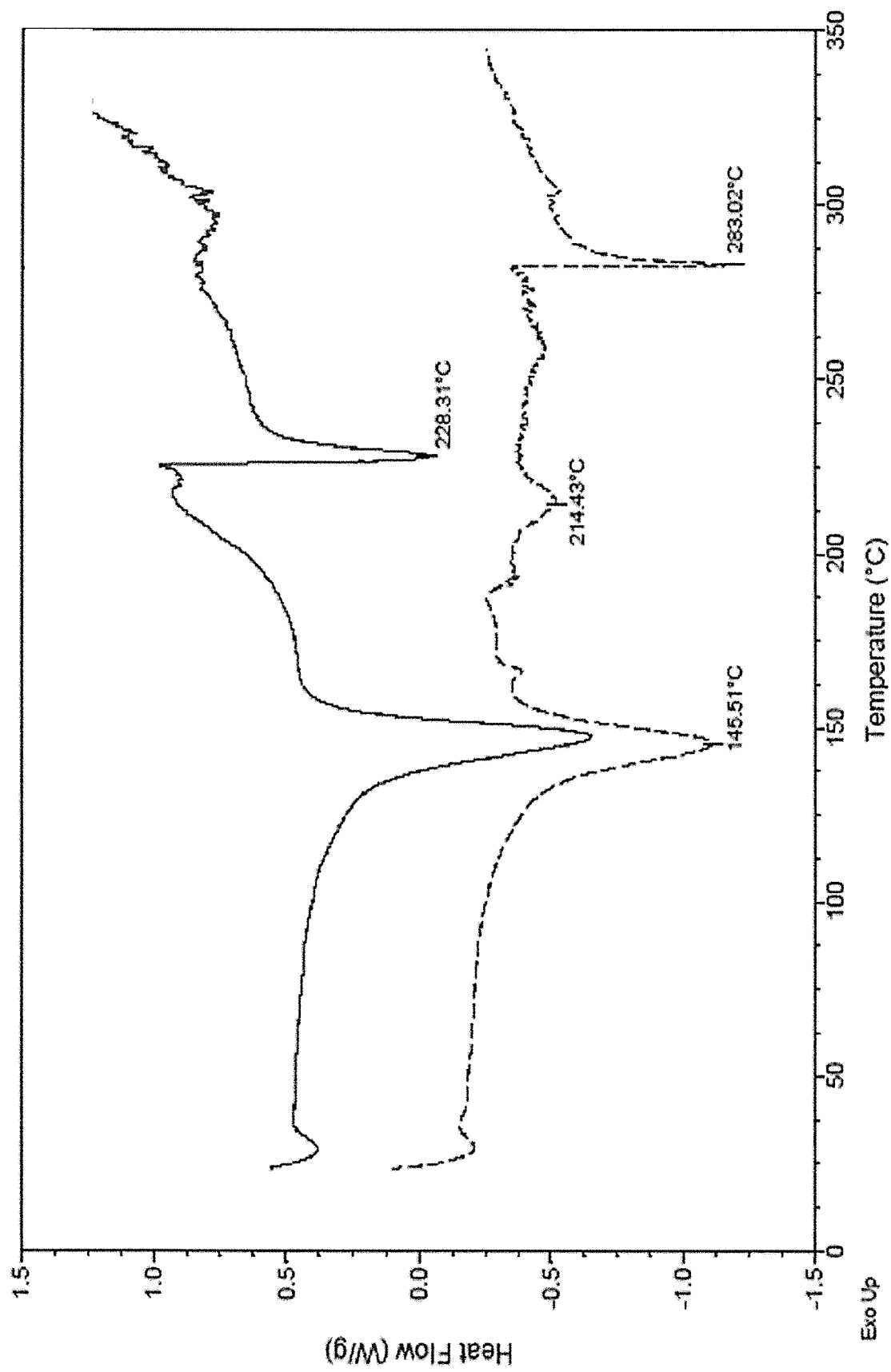


FIG. 26

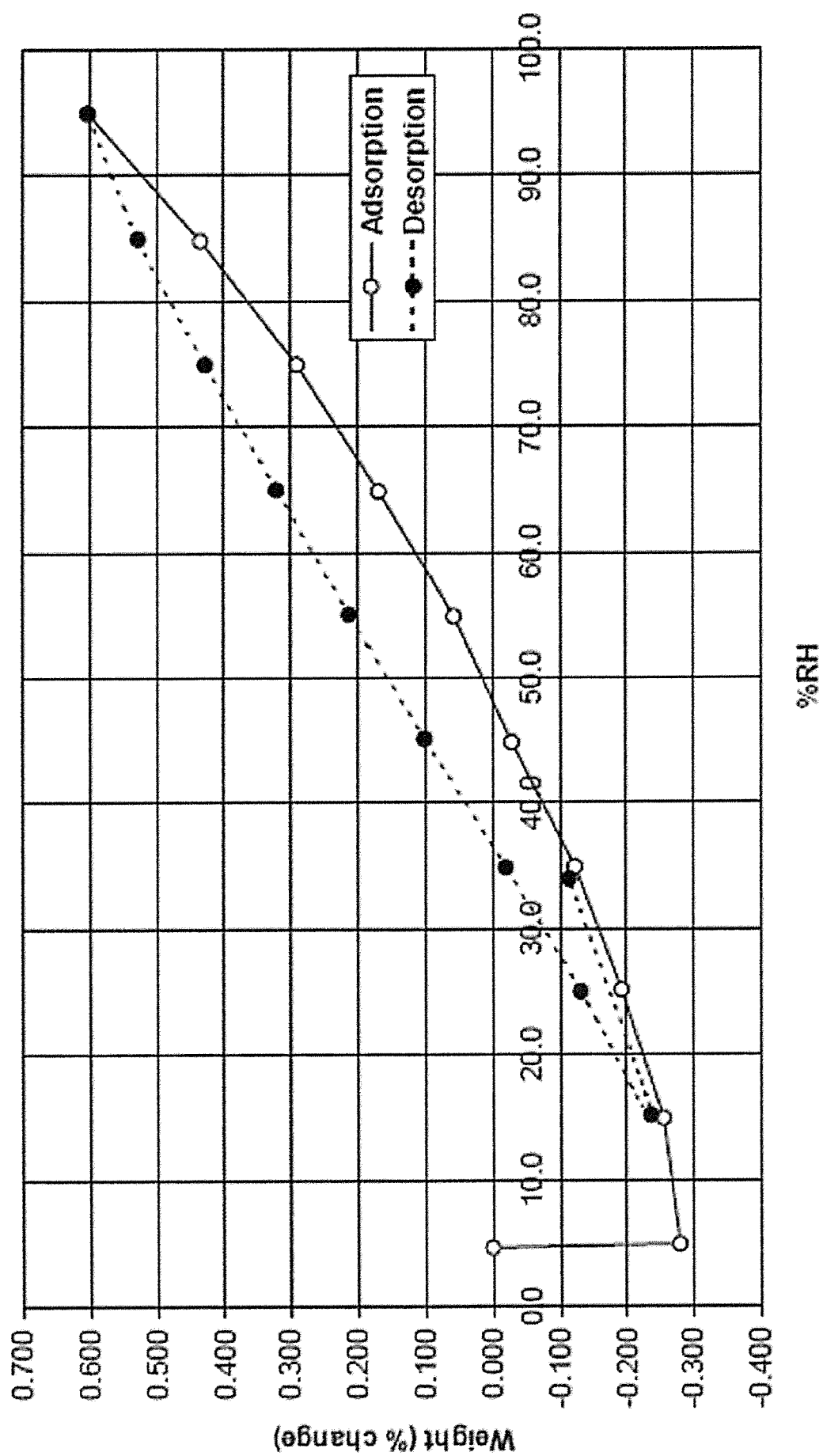


FIG. 27

Elap Time min	Weight mg	Weight % chg	Samp Temp deg C	Samp RH %
0.1	4.894	0.000	25.06	4.67
185.6	4.880	-0.279	25.07	4.95
369.1	4.881	-0.255	25.06	14.98
552.6	4.885	-0.192	25.06	25.17
738.2	4.888	-0.123	25.06	34.94
923.7	4.892	-0.029	25.05	44.85
1109.2	4.897	0.058	25.05	54.90
1294.8	4.902	0.170	25.06	64.87
1480.7	4.908	0.291	25.05	74.97
1666.2	4.915	0.435	25.04	84.82
1851.8	4.923	0.602	25.04	94.94
2037.8	4.920	0.528	25.03	84.97
2223.3	4.915	0.428	25.03	74.96
2410.8	4.910	0.321	25.03	65.01
2598.3	4.904	0.214	25.03	55.07
2783.9	4.899	0.101	25.04	45.13
2969.4	4.893	-0.020	25.03	34.89
3154.9	4.887	-0.131	25.06	25.04
3338.4	4.882	-0.236	25.02	15.23
3521.5	4.888	-0.114	25.04	33.97

FIG. 28

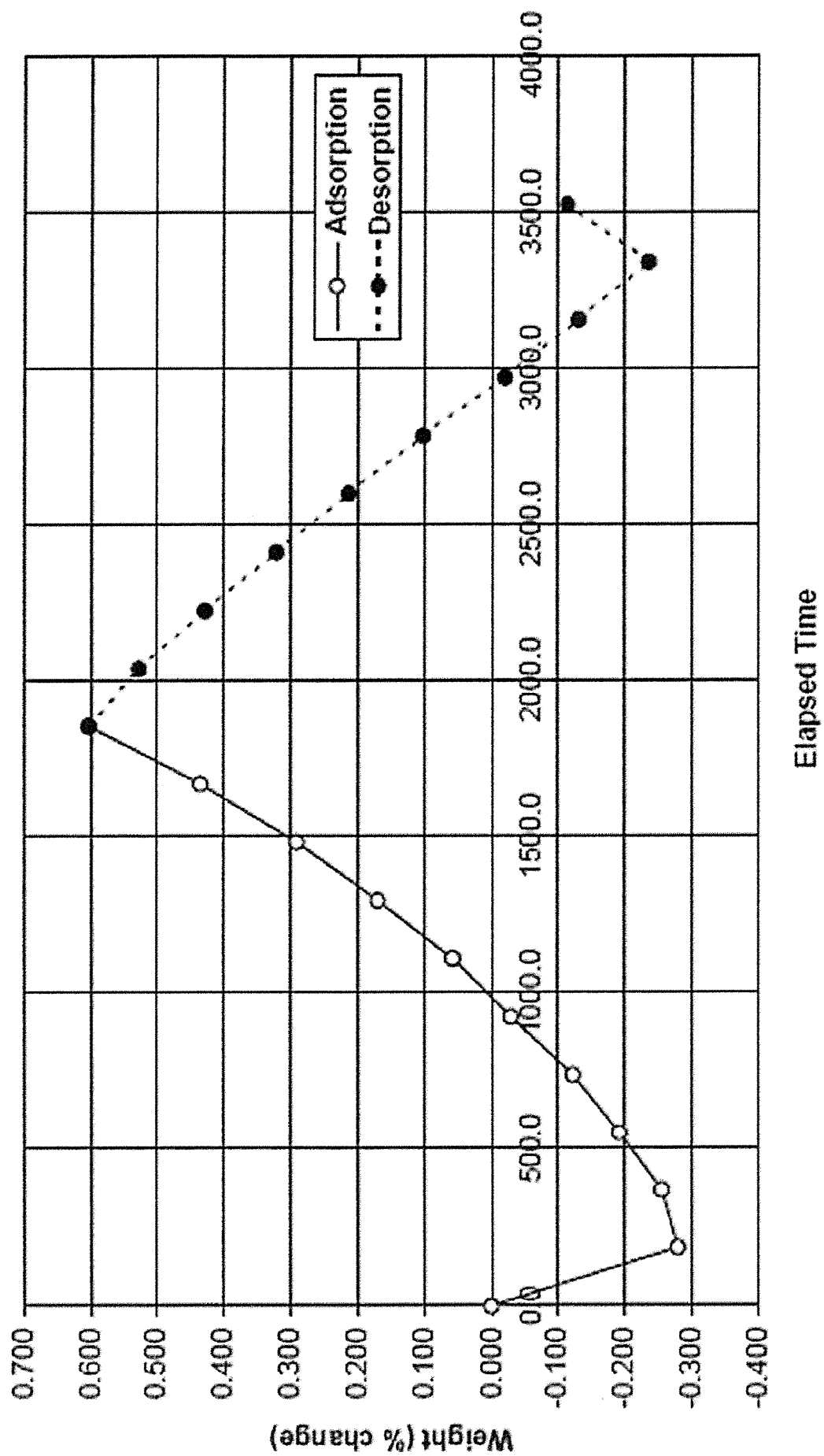


FIG. 29

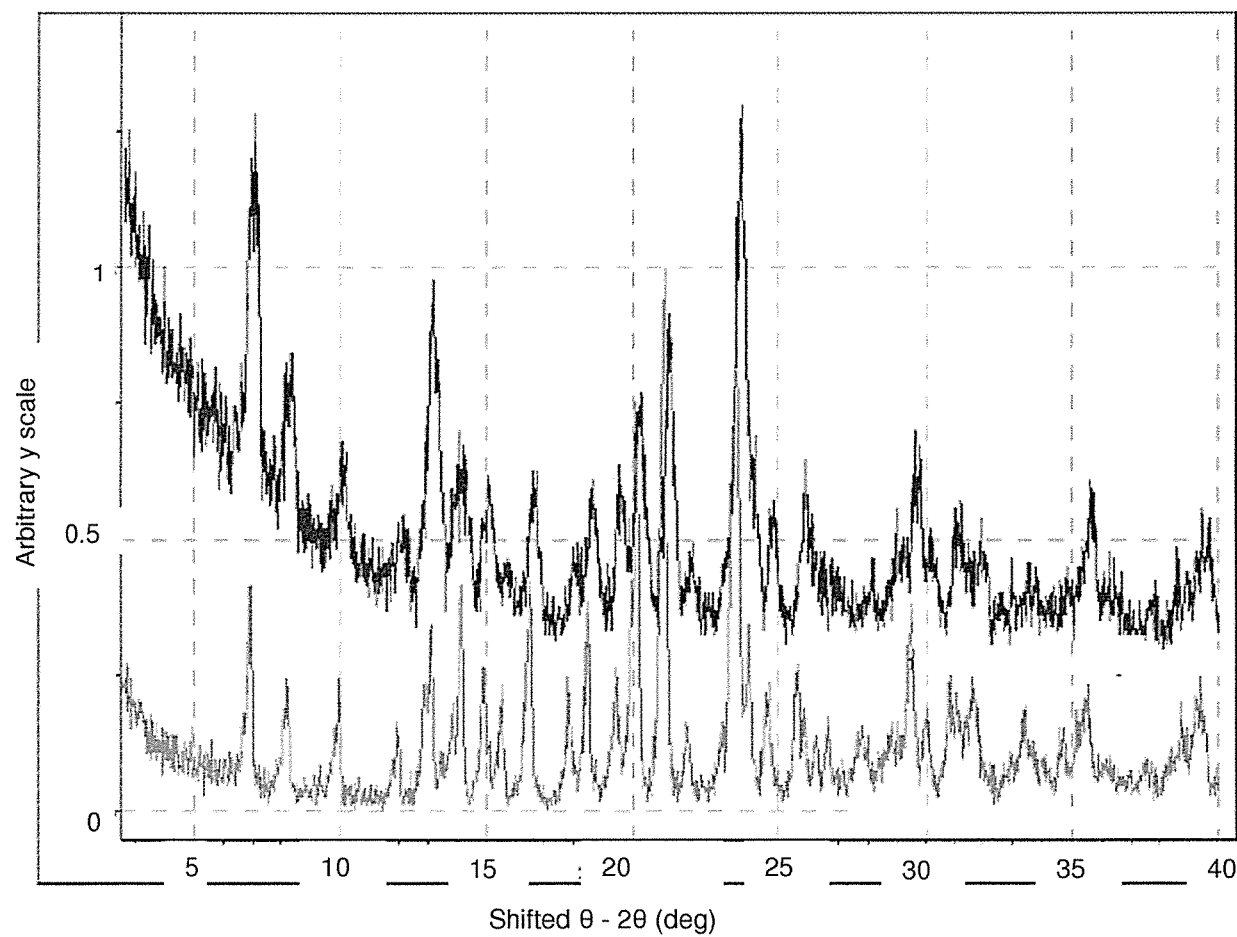


FIG. 30

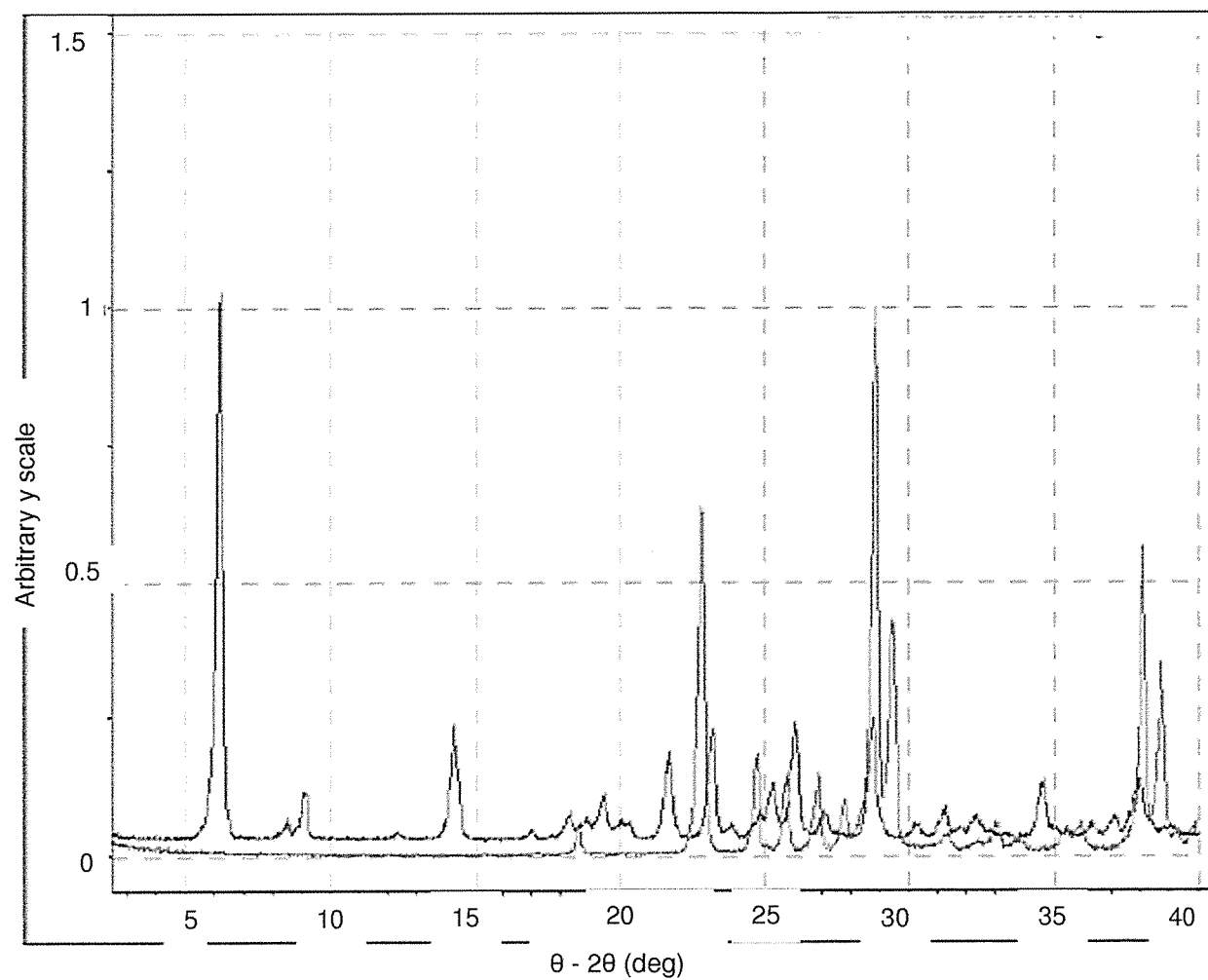


FIG. 31

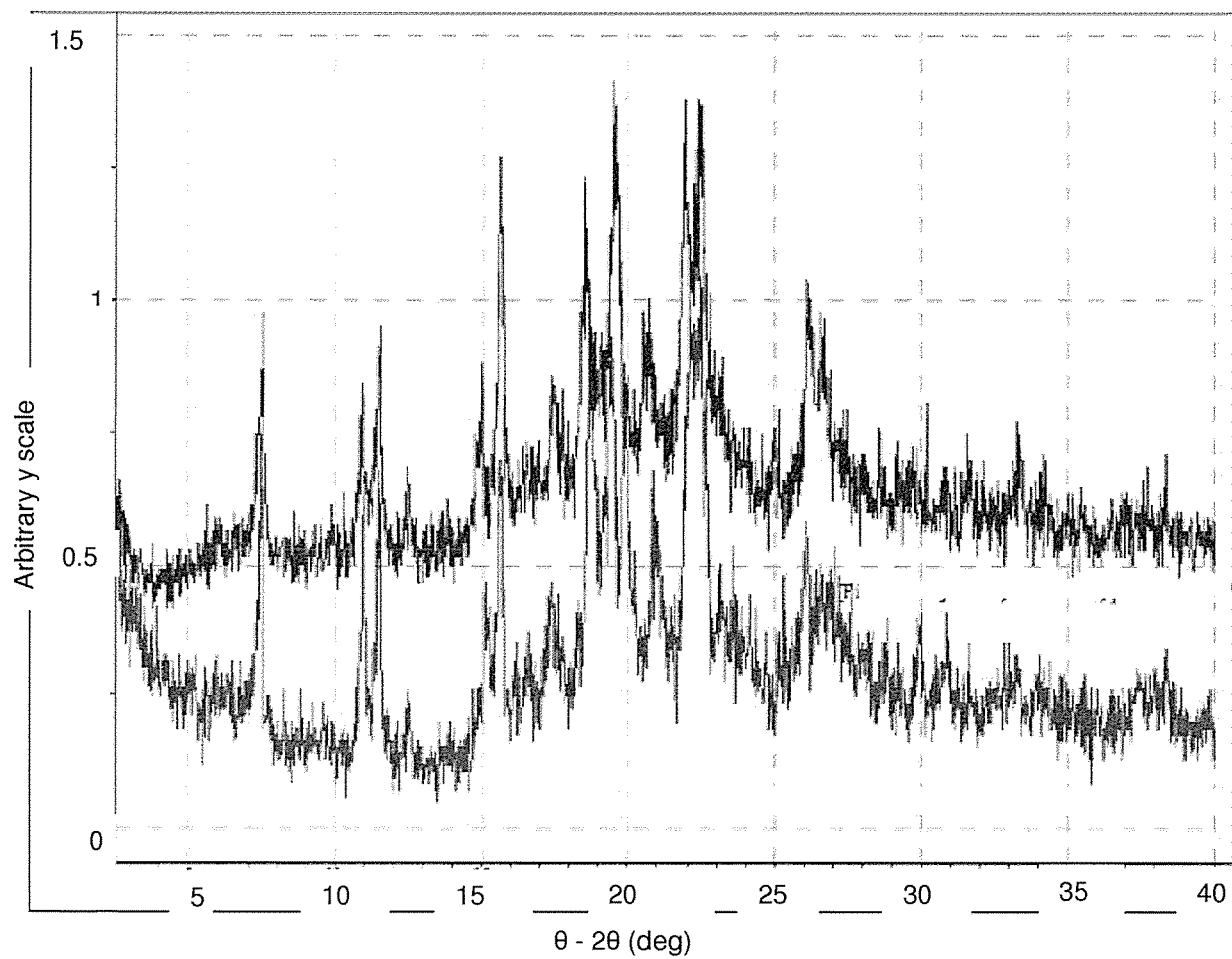


FIG. 32

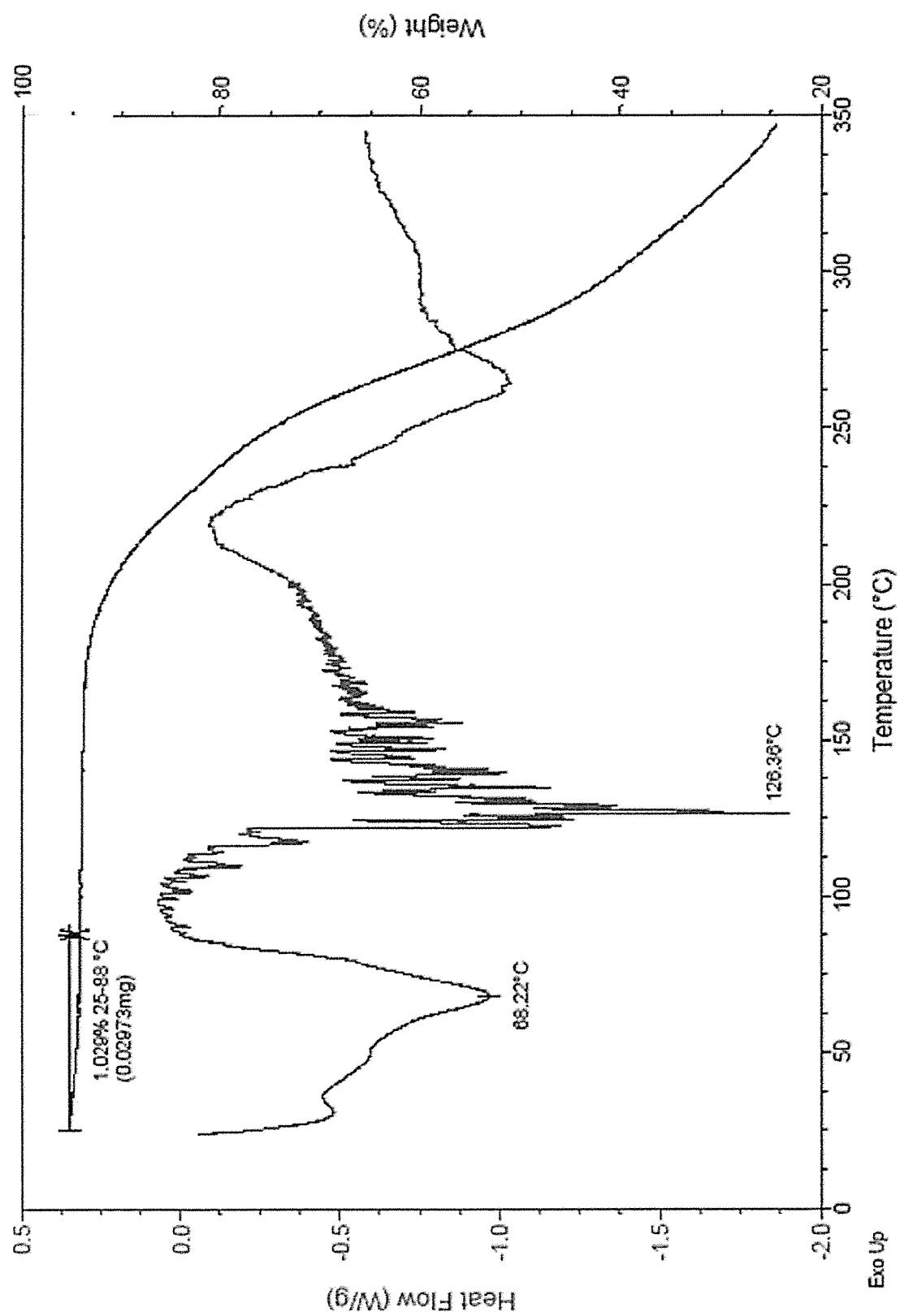


FIG. 33

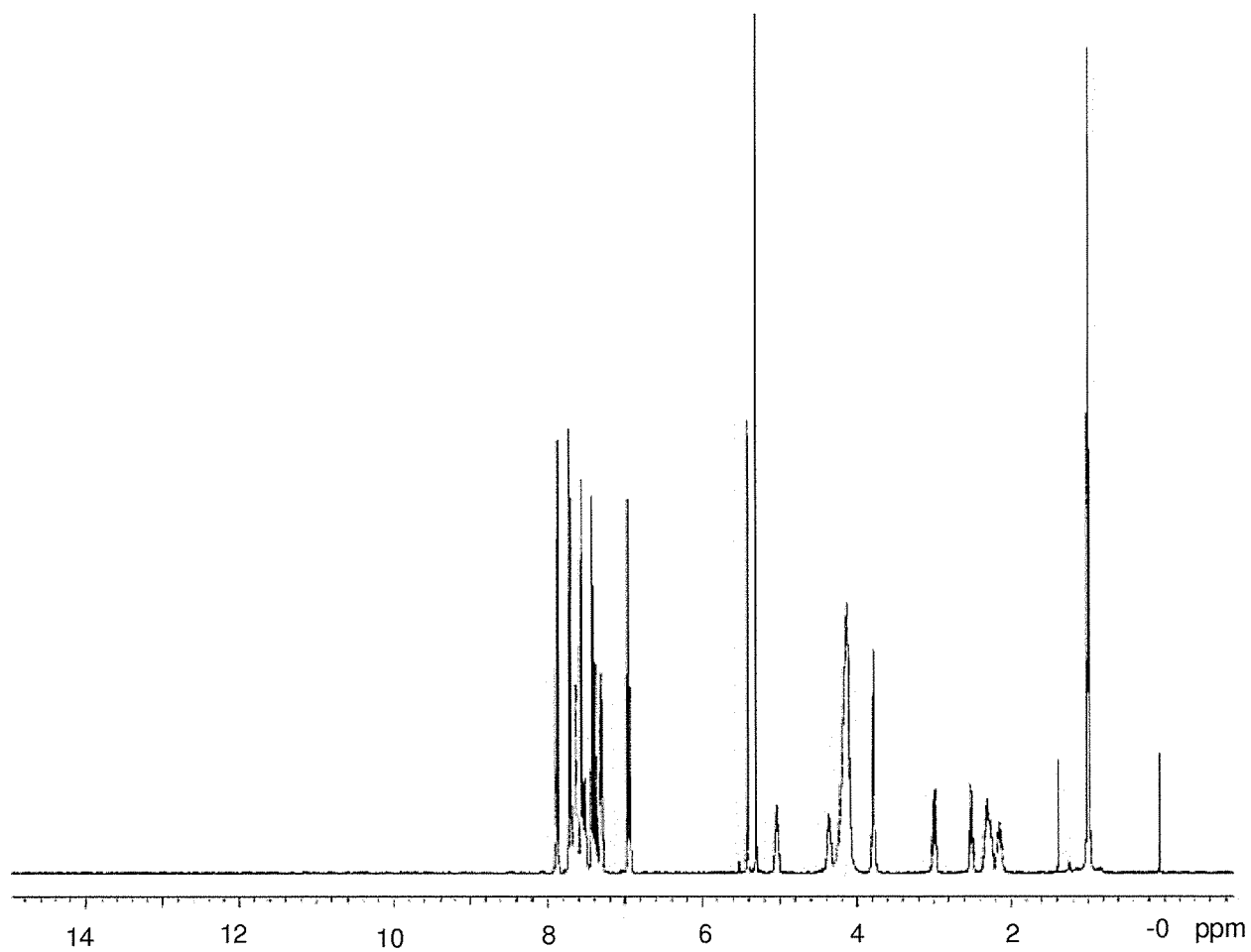


FIG. 34

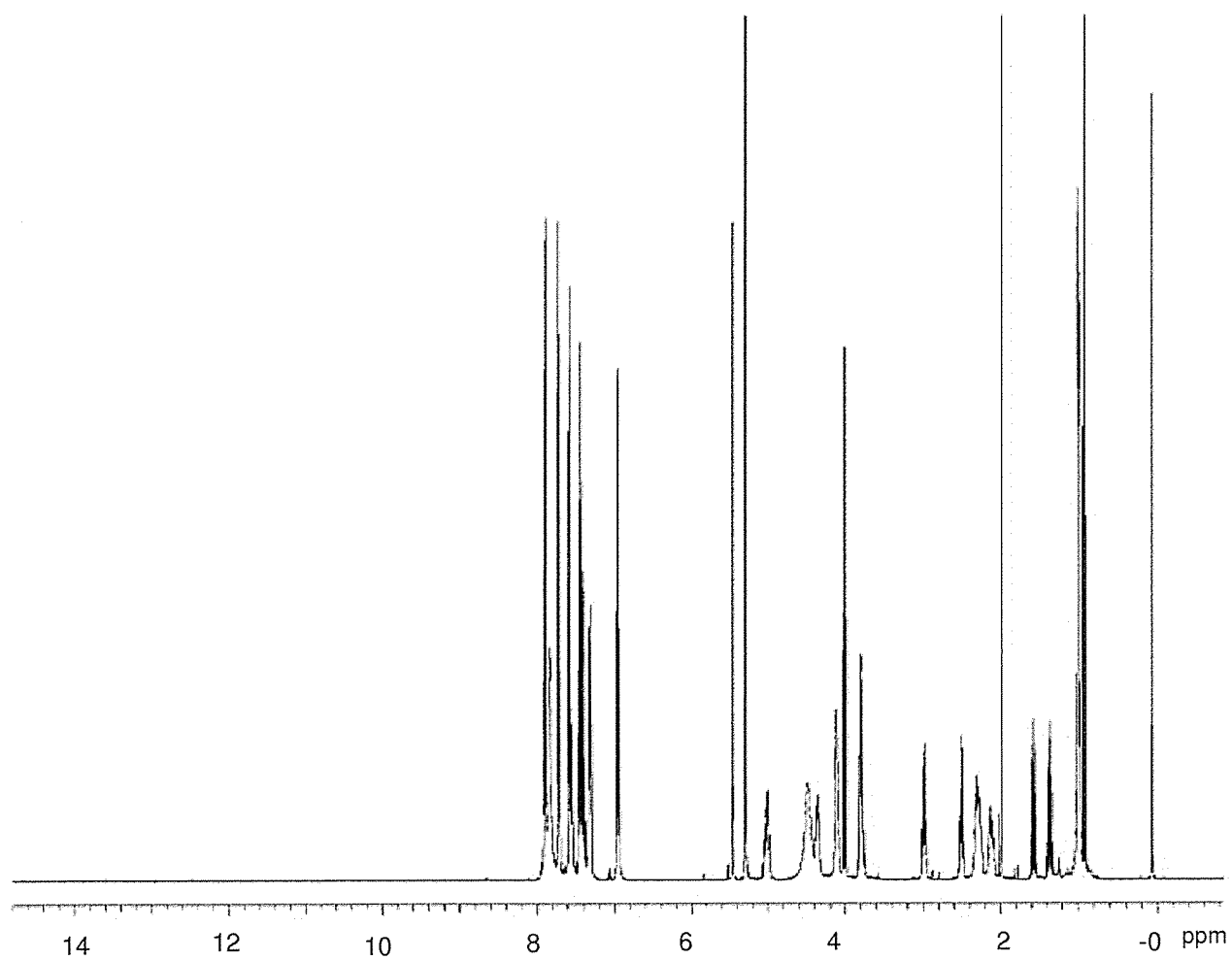


FIG. 35

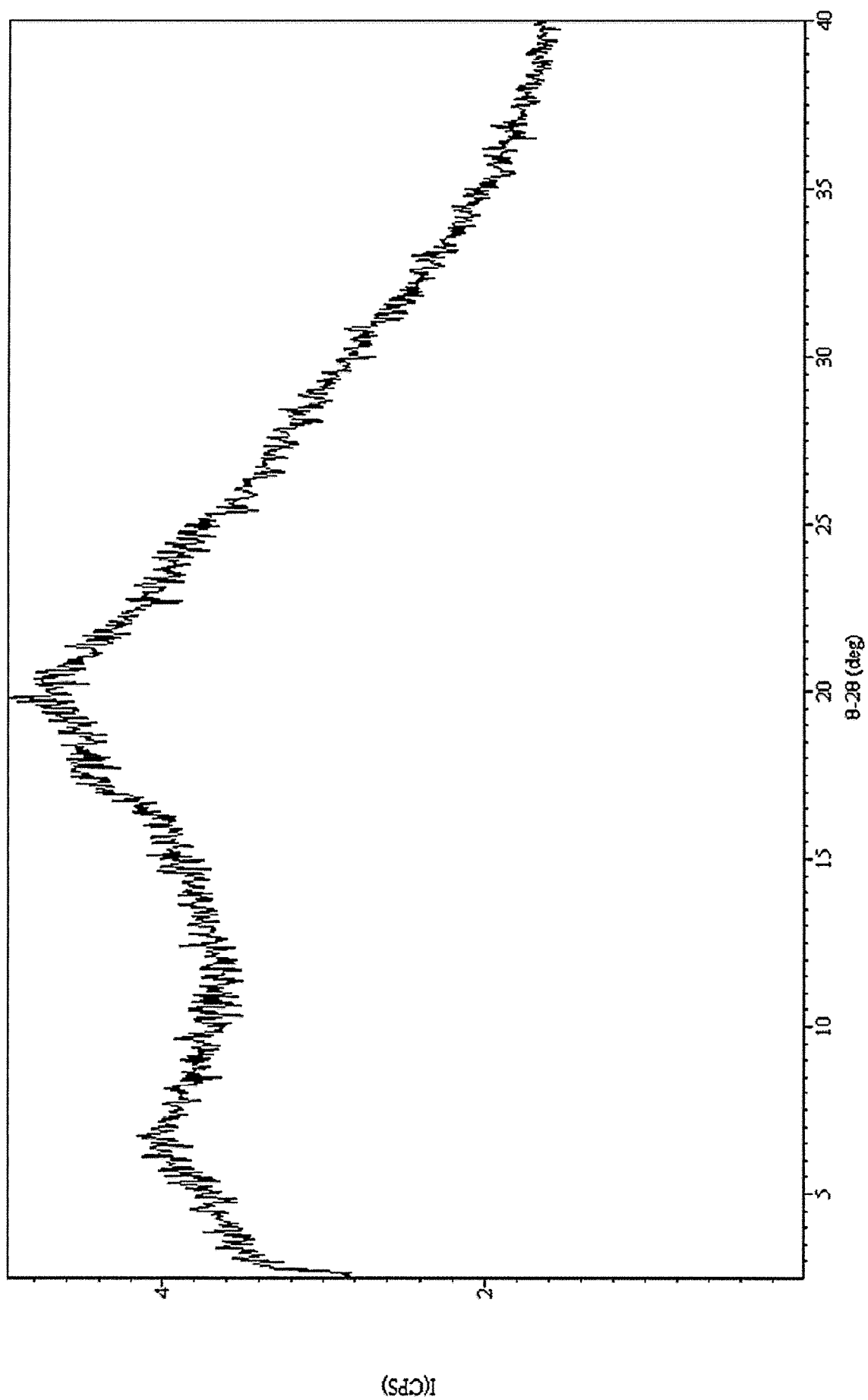


FIG. 36

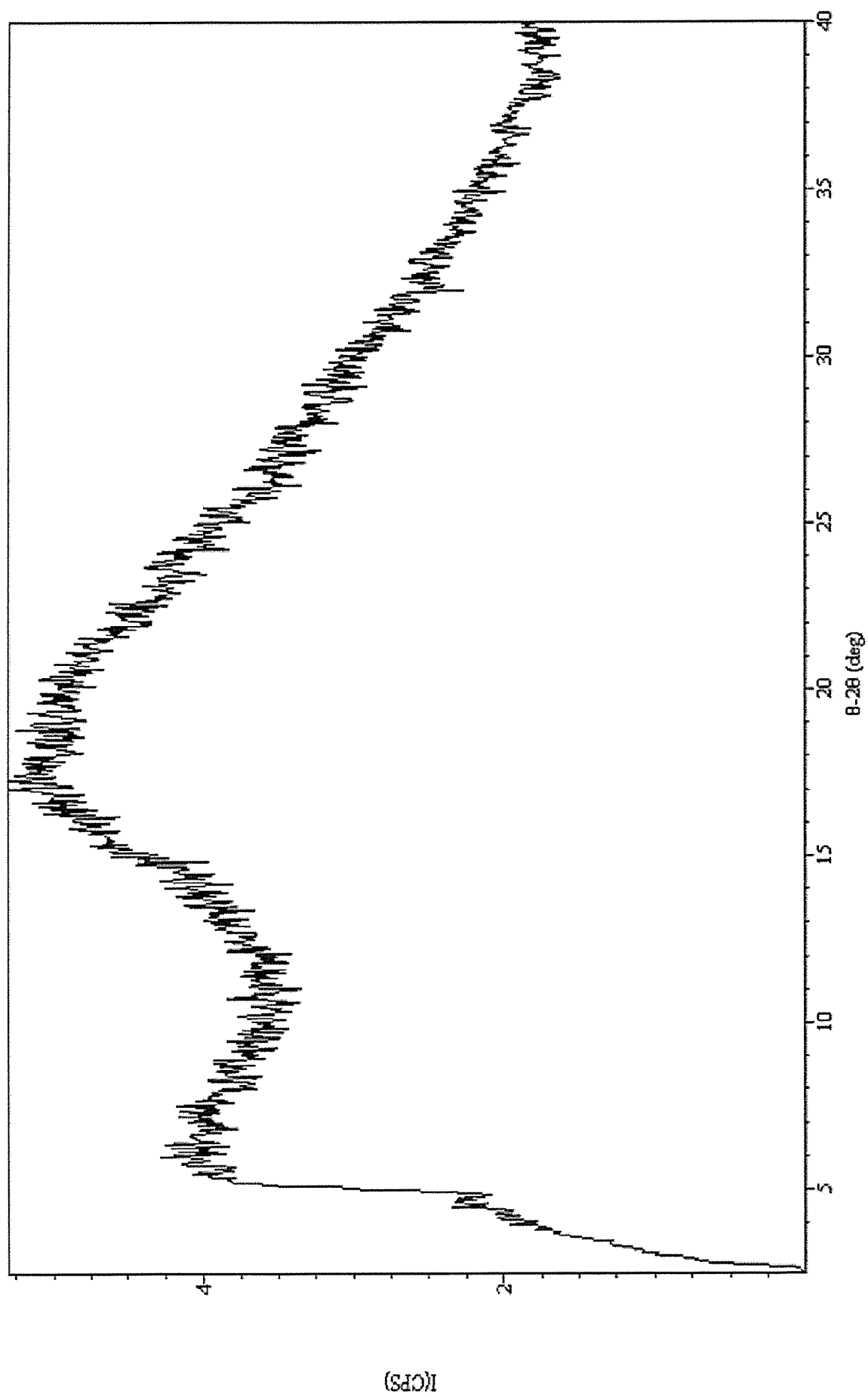


FIG. 37

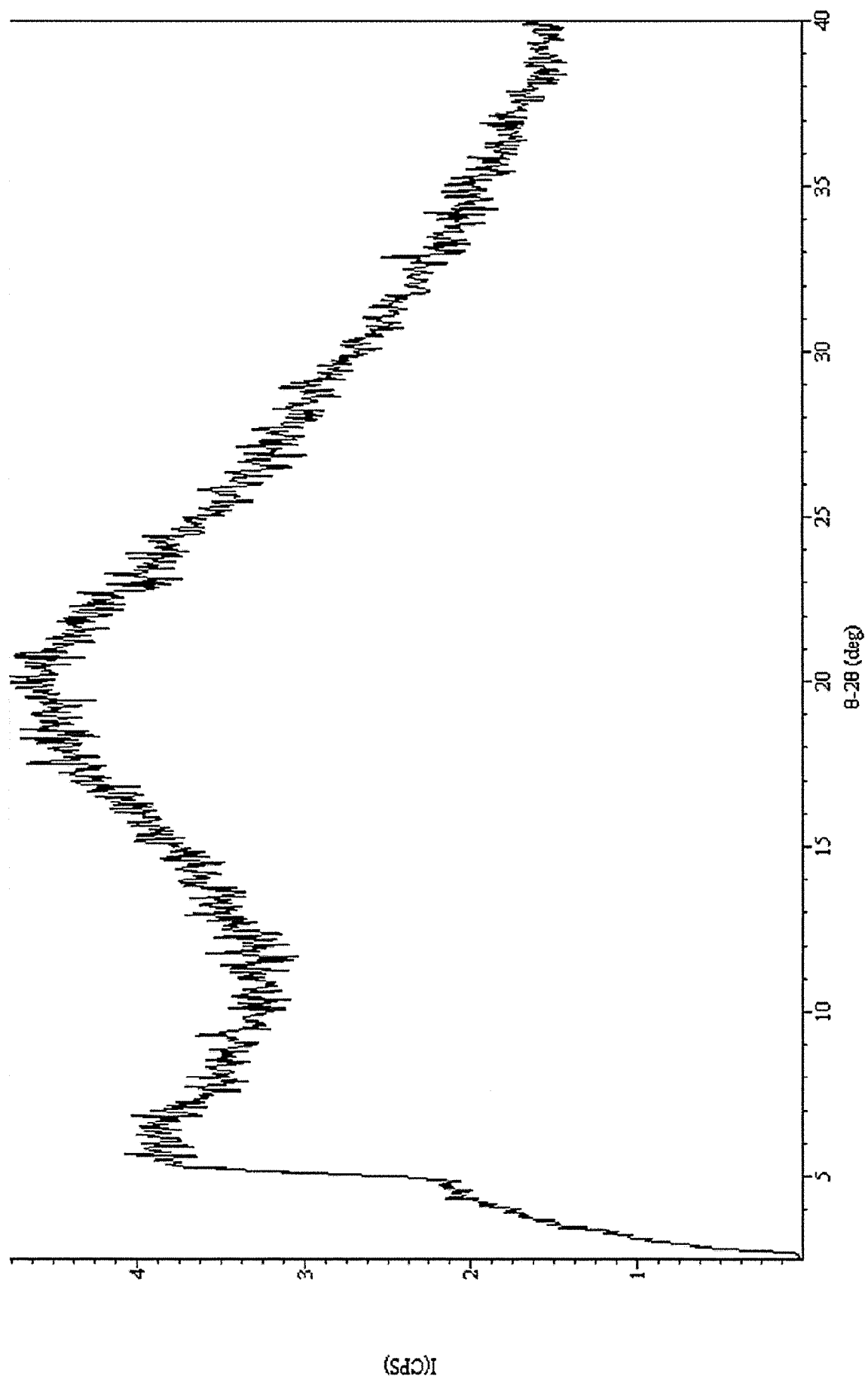


FIG. 38

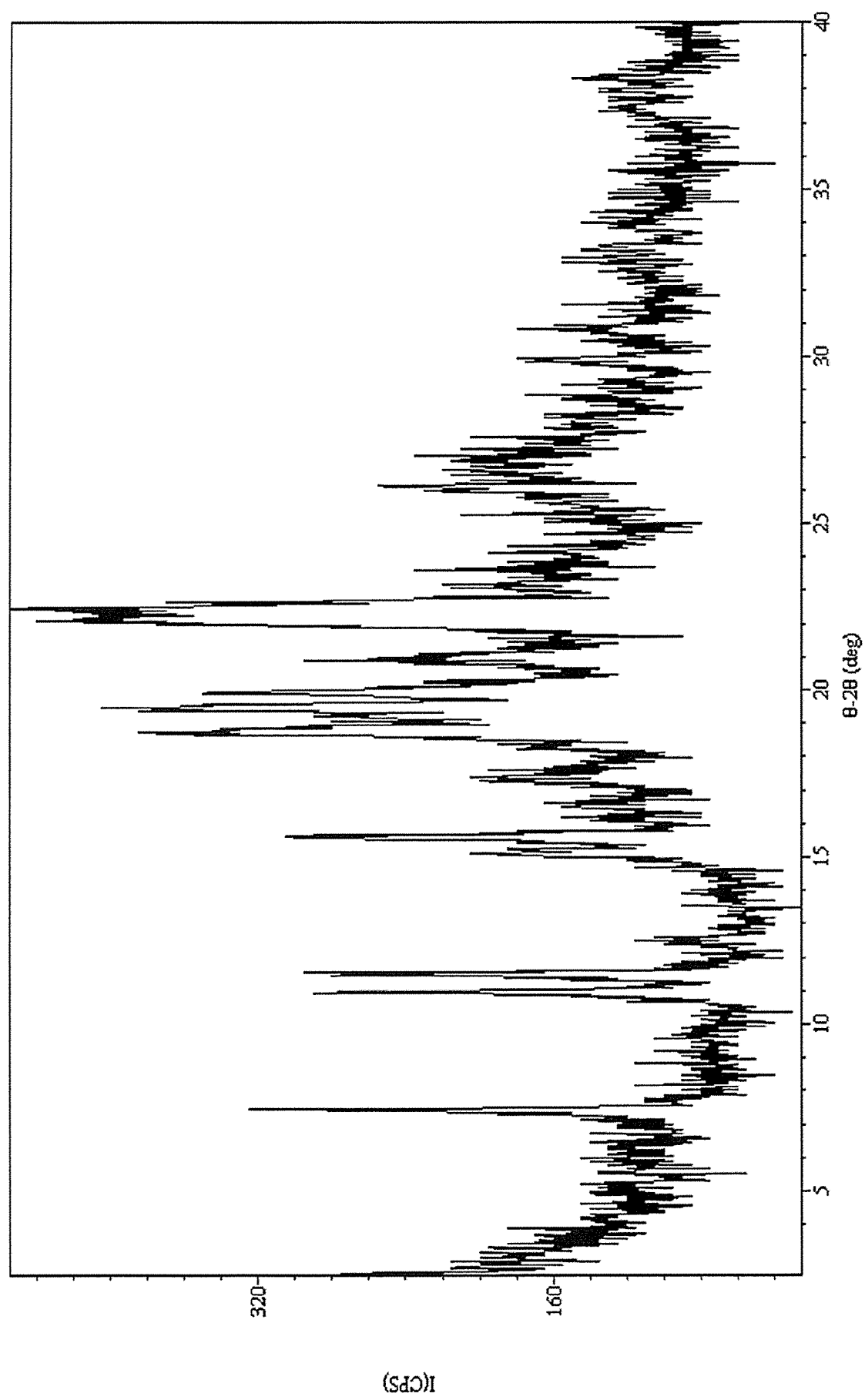


FIG. 39

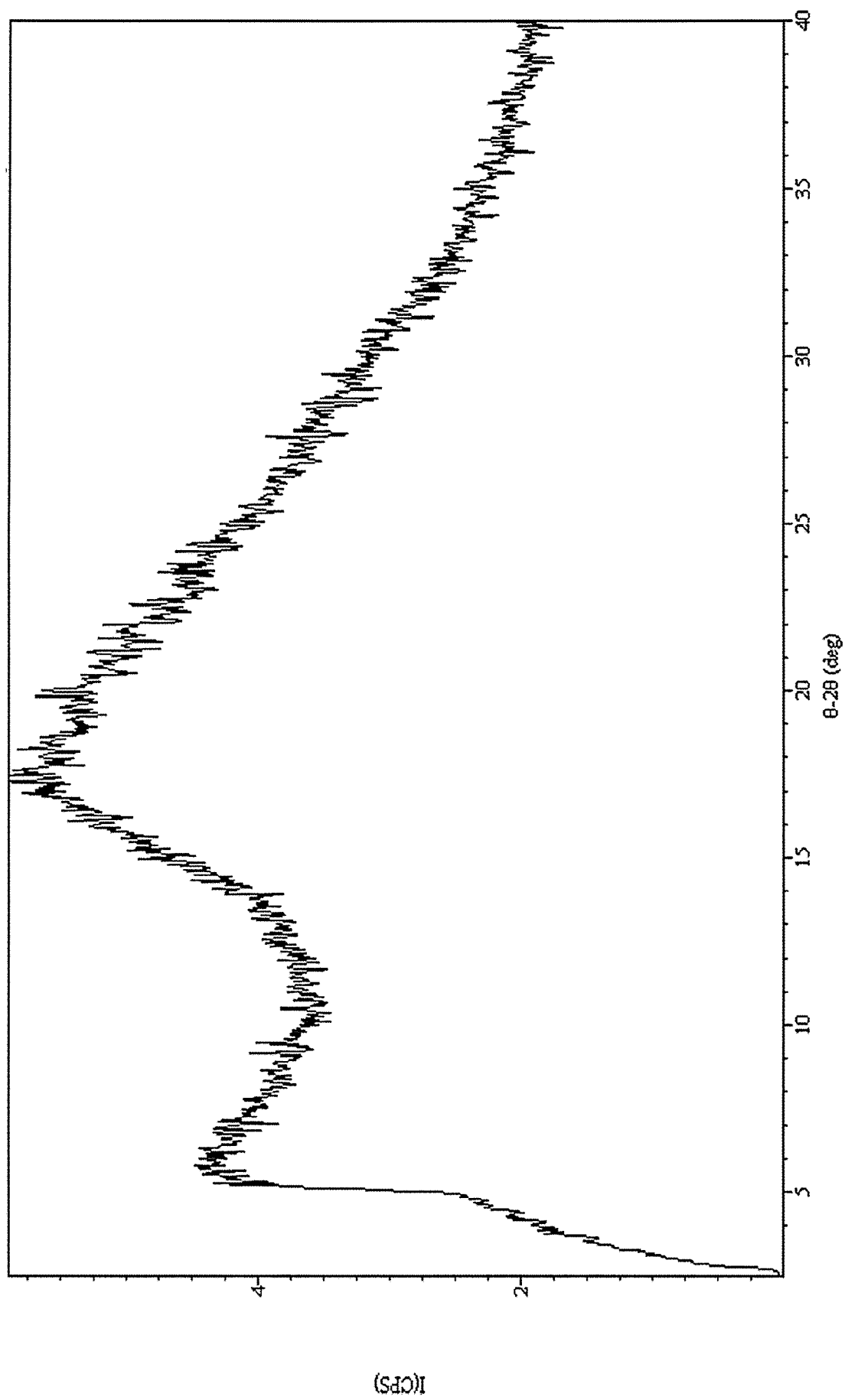


FIG. 40

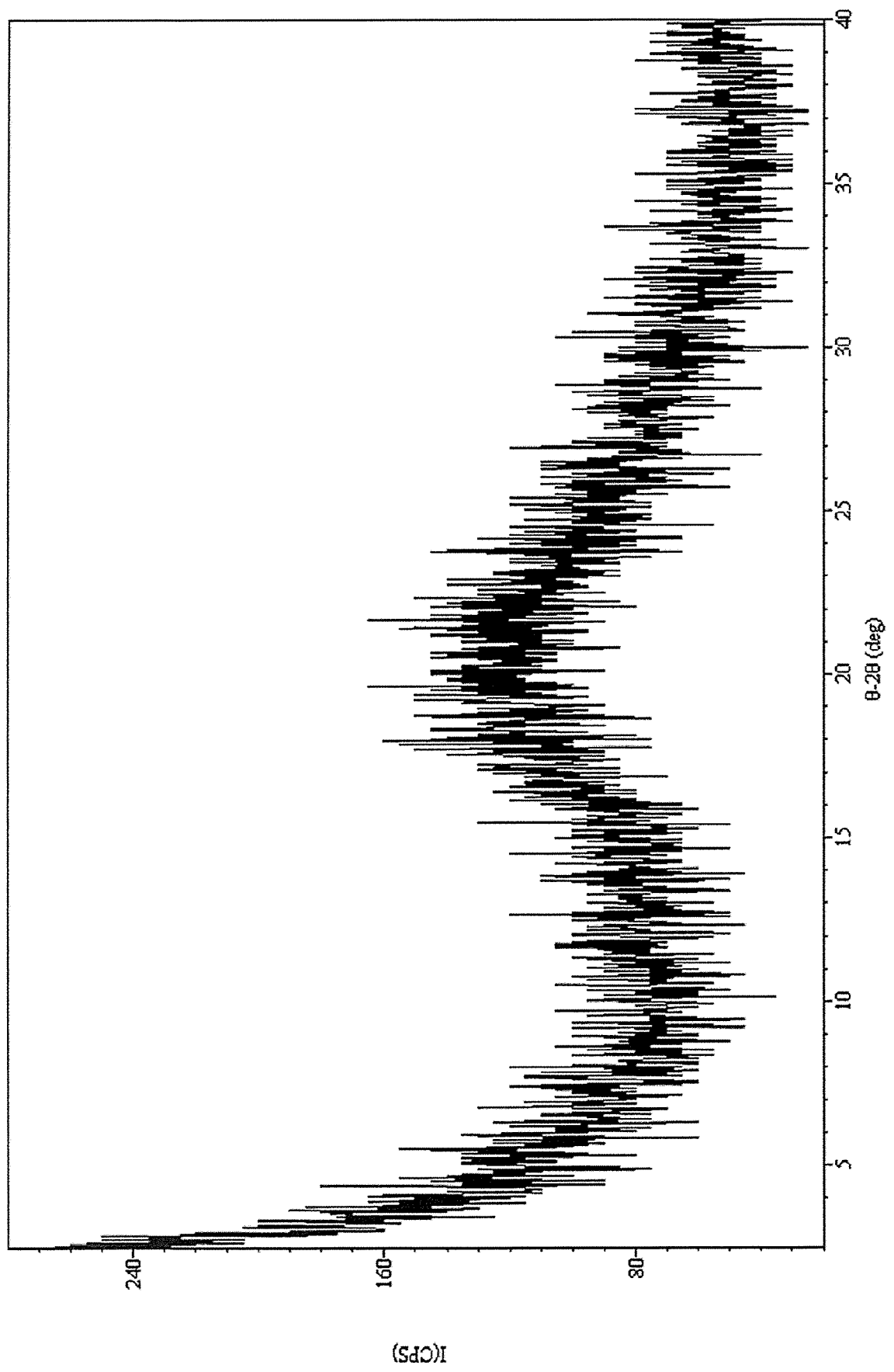


FIG. 41

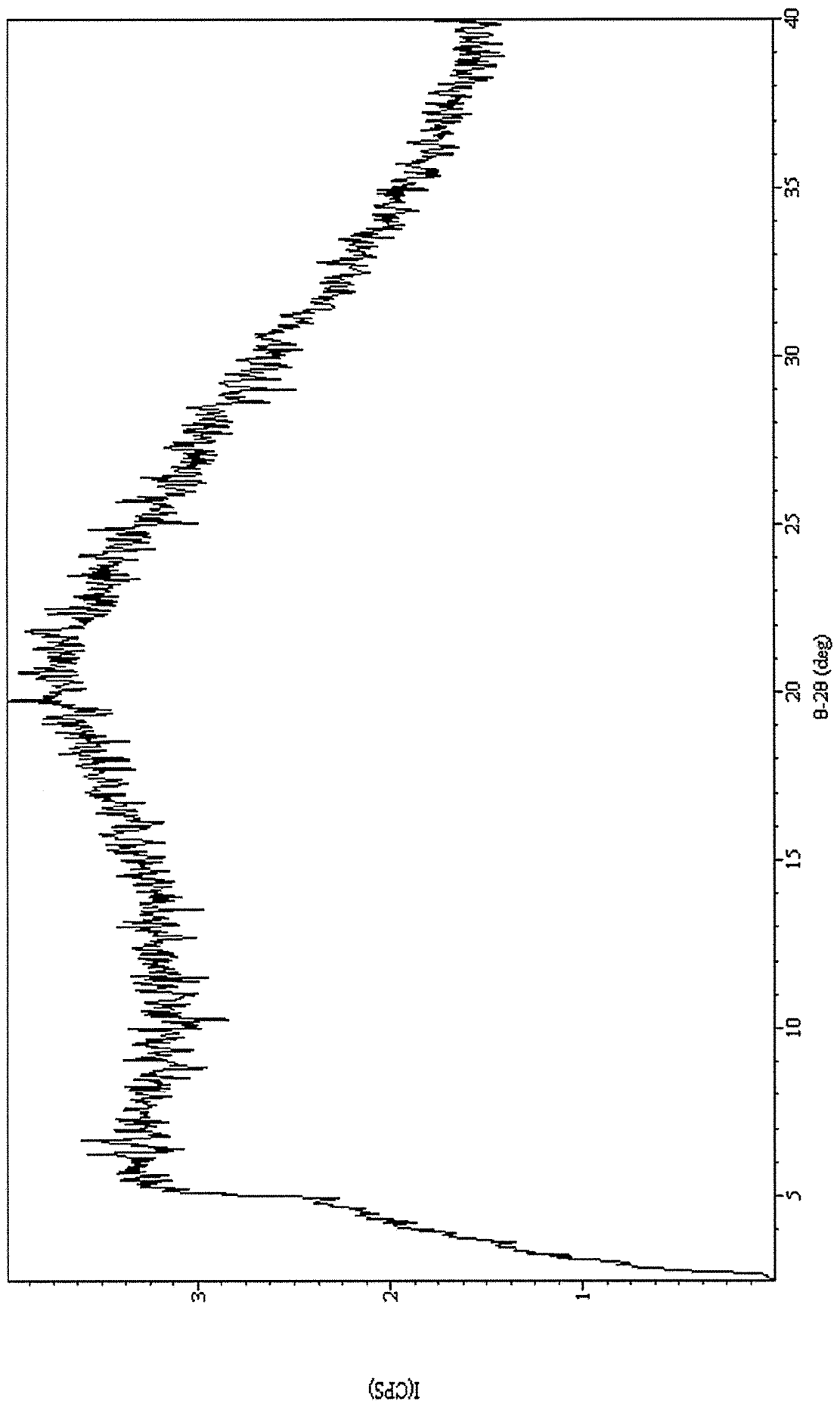


FIG. 42

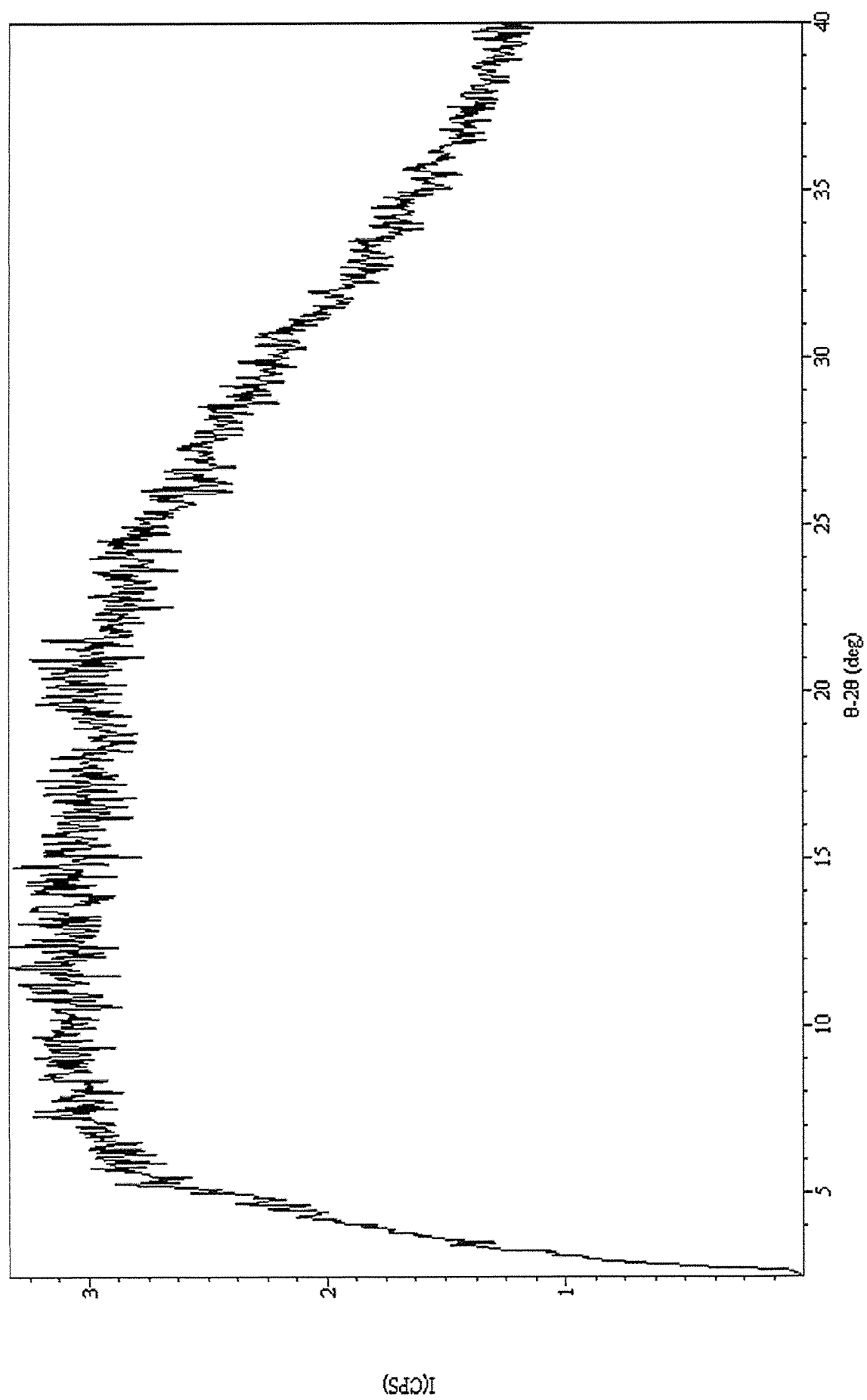


FIG. 43

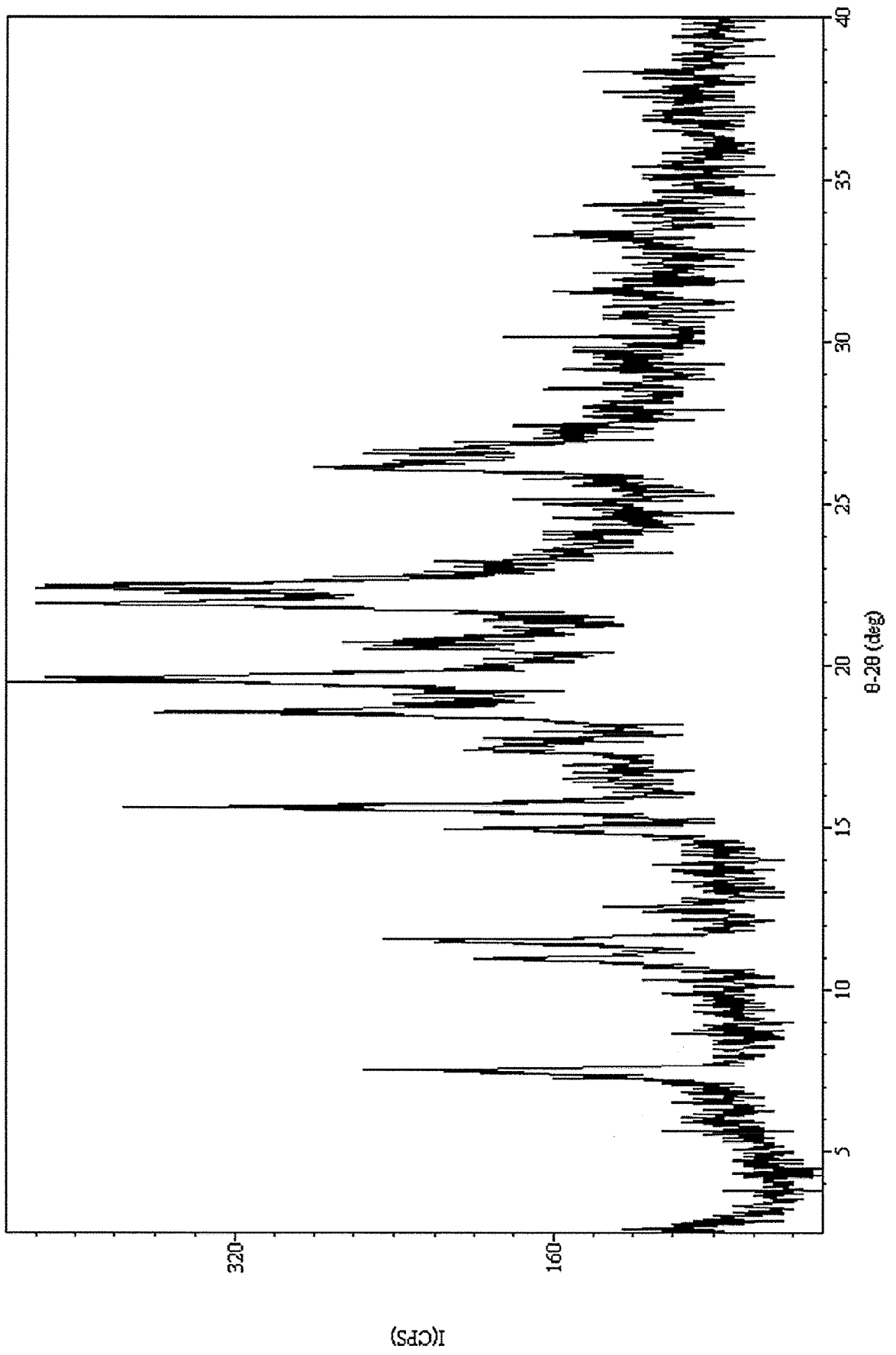


FIG. 44

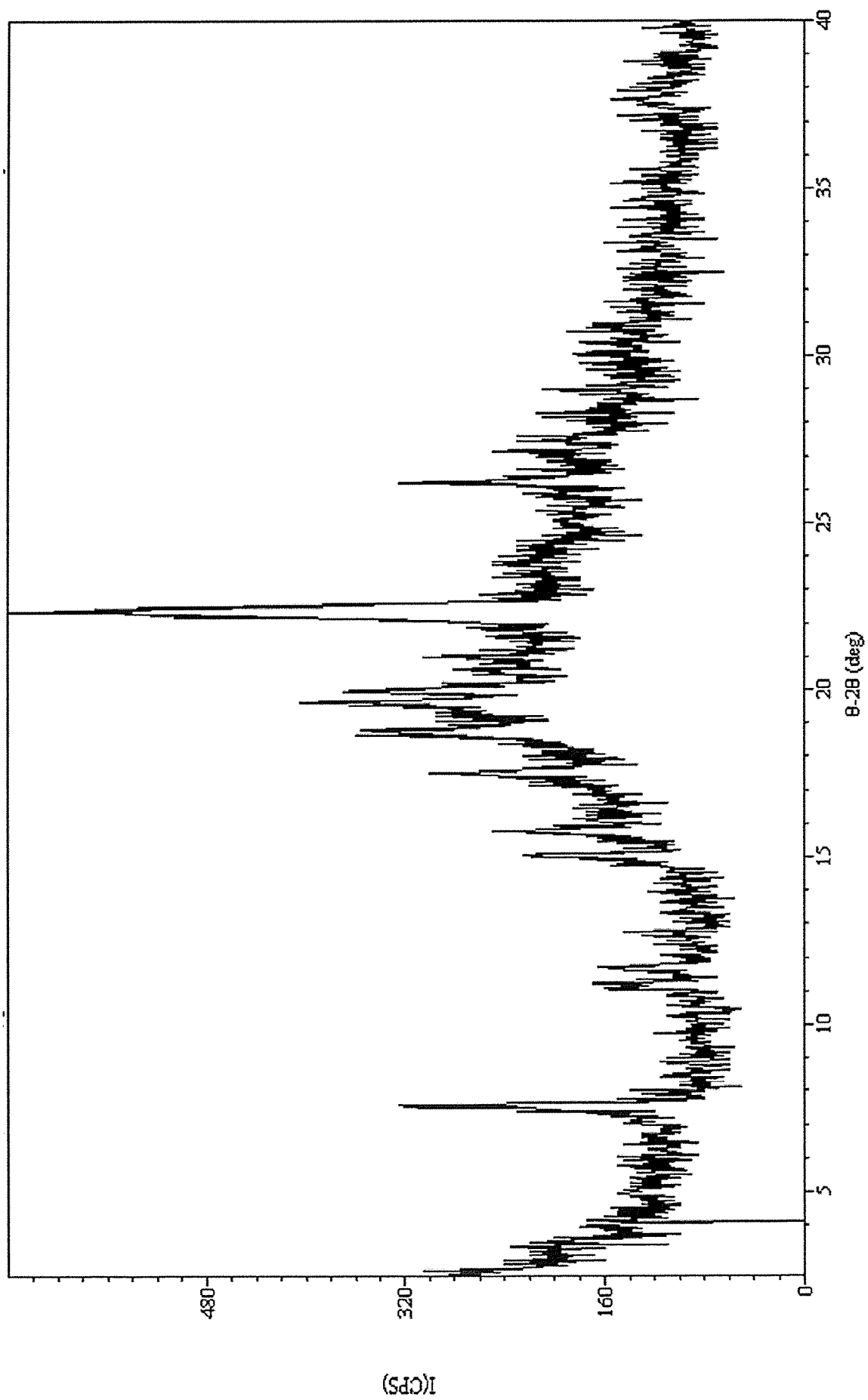


FIG. 45

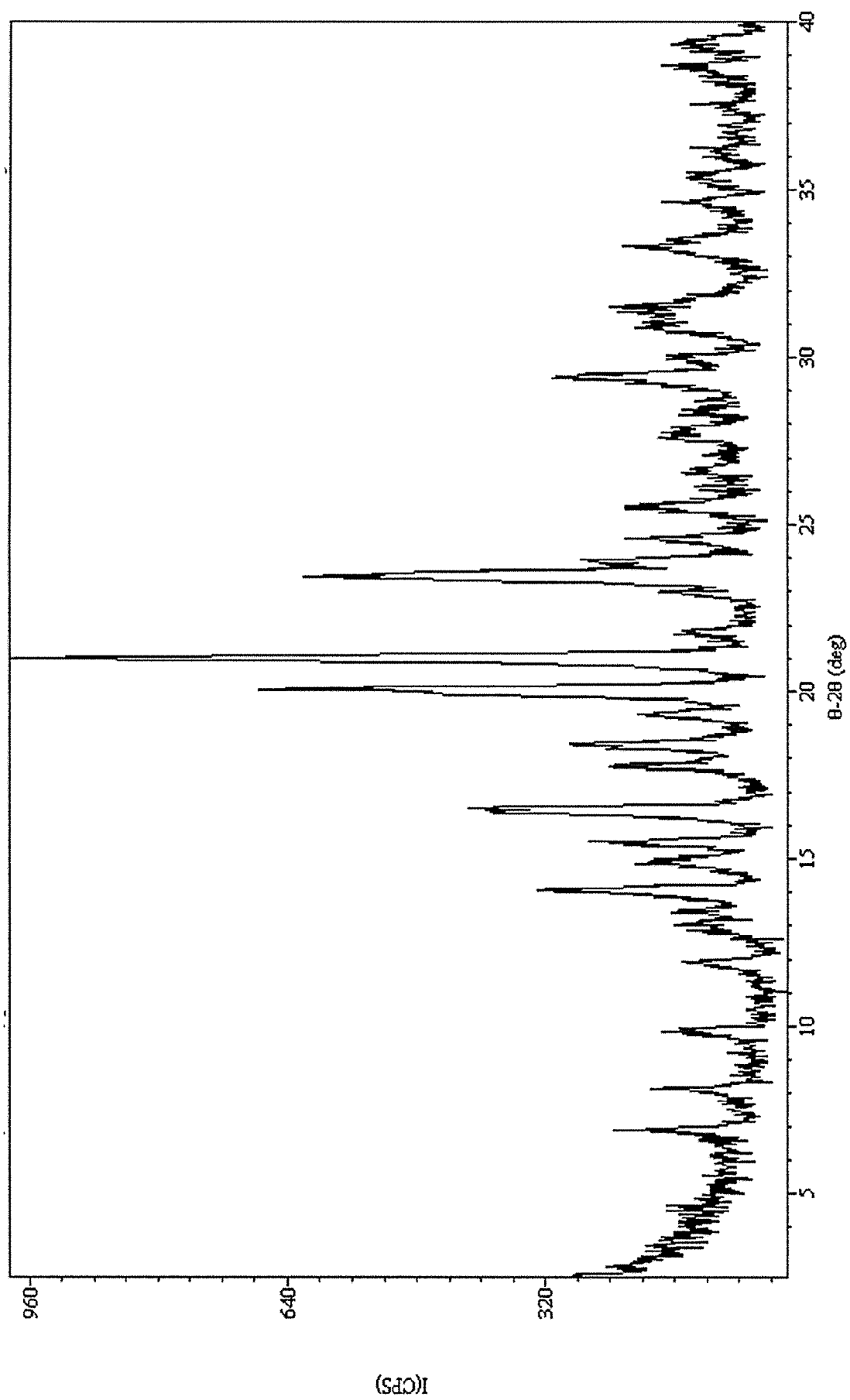


FIG. 46

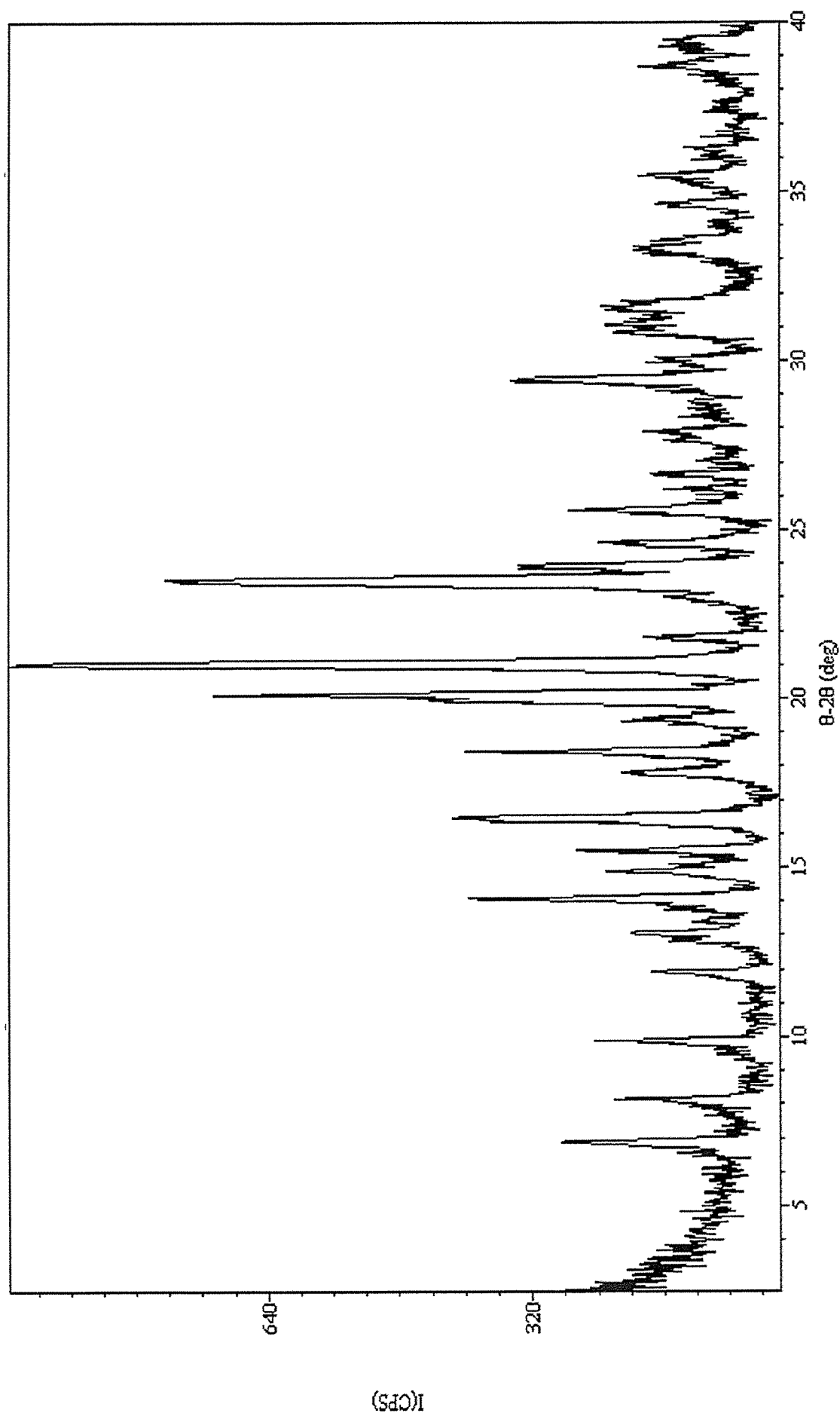


FIG. 47

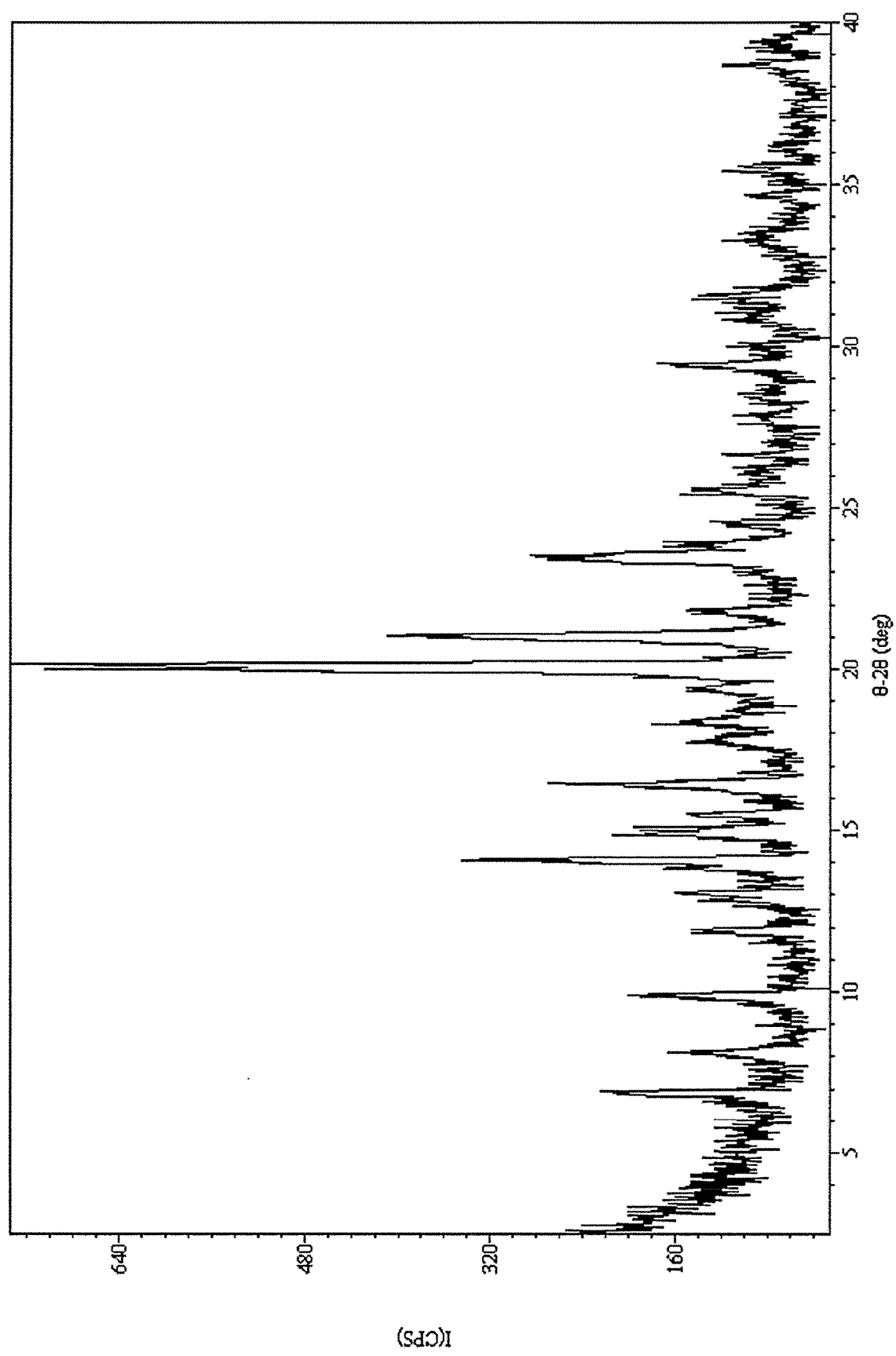


FIG. 48

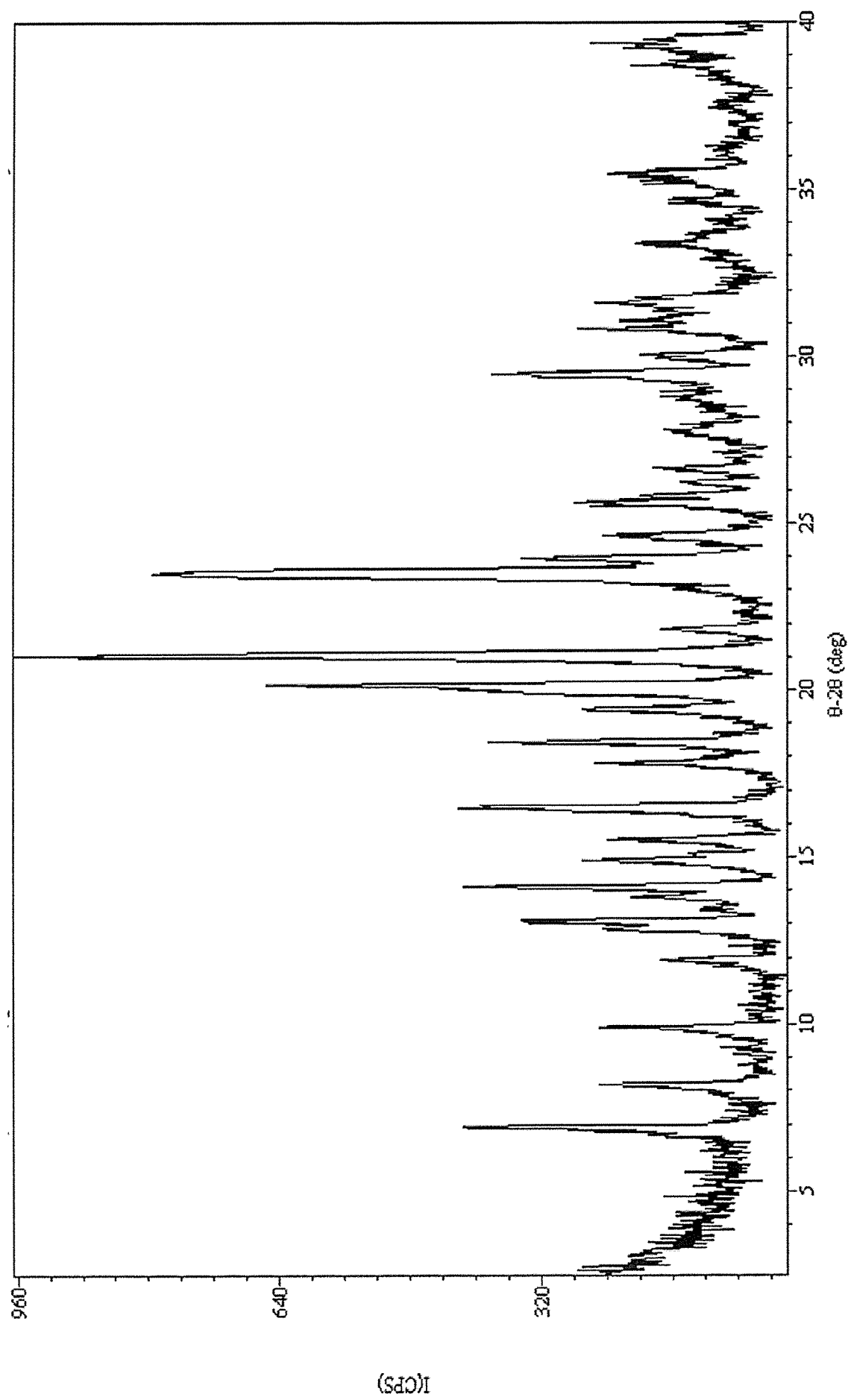


FIG. 49

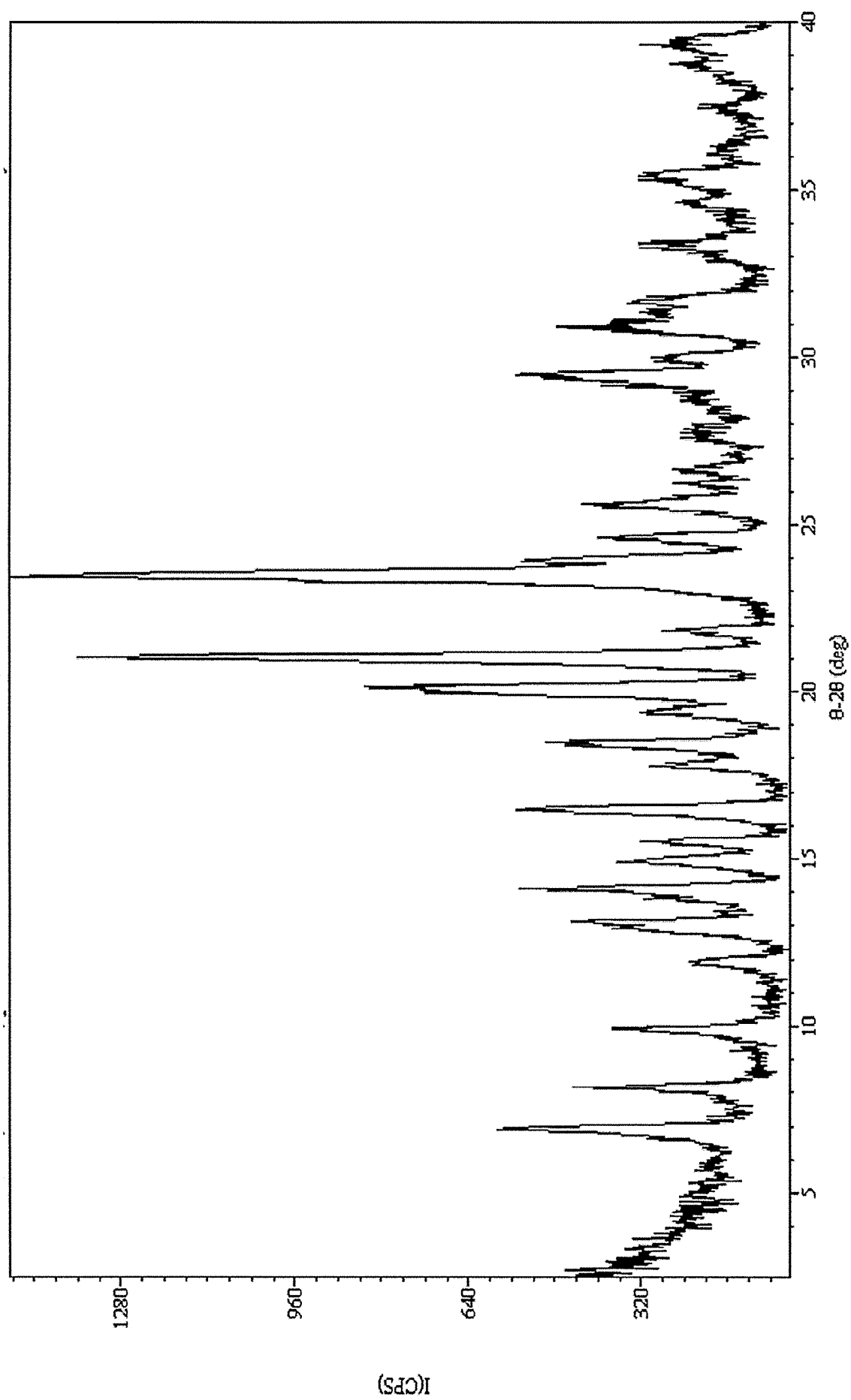


FIG. 50

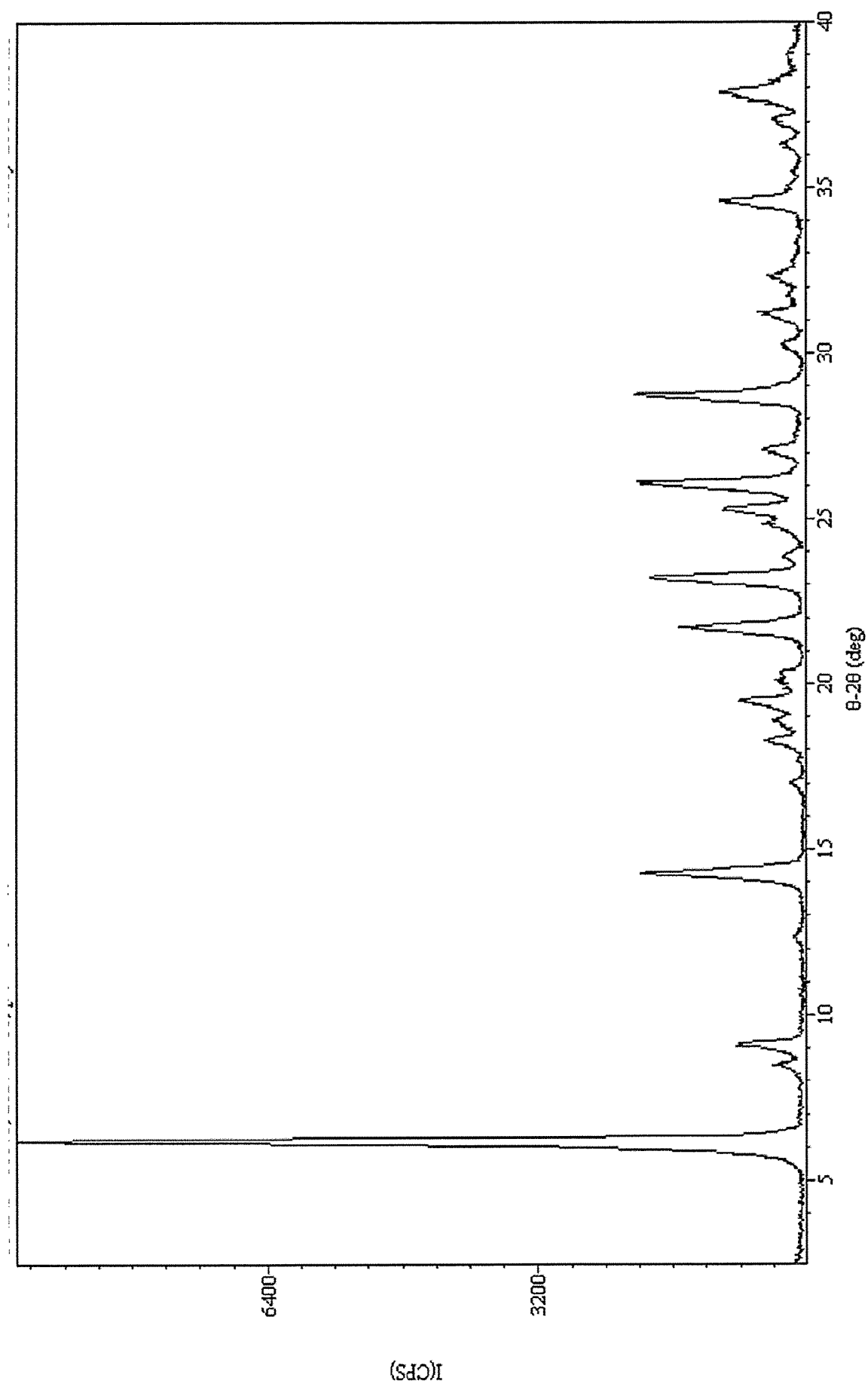


FIG. 51

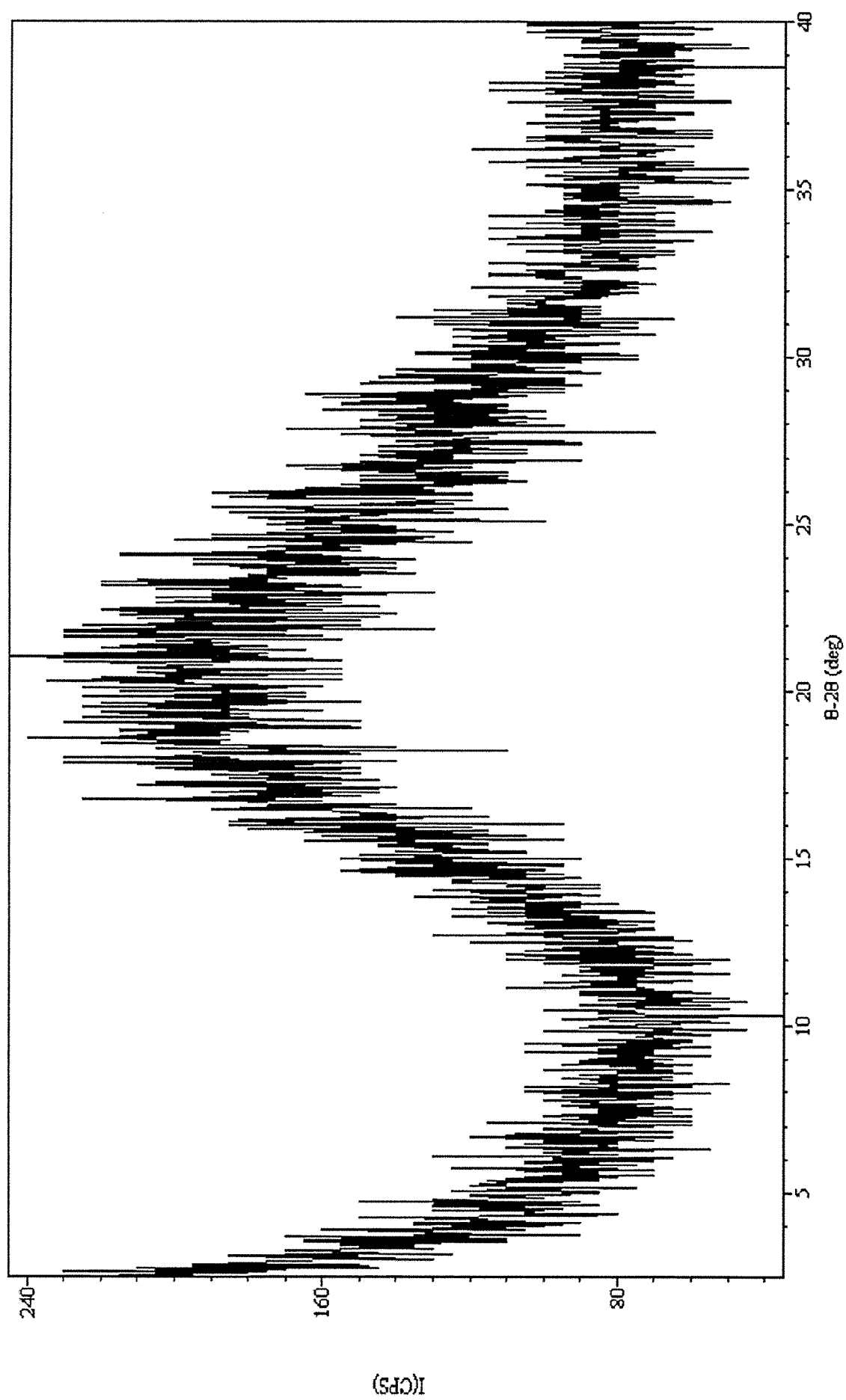


FIG. 52

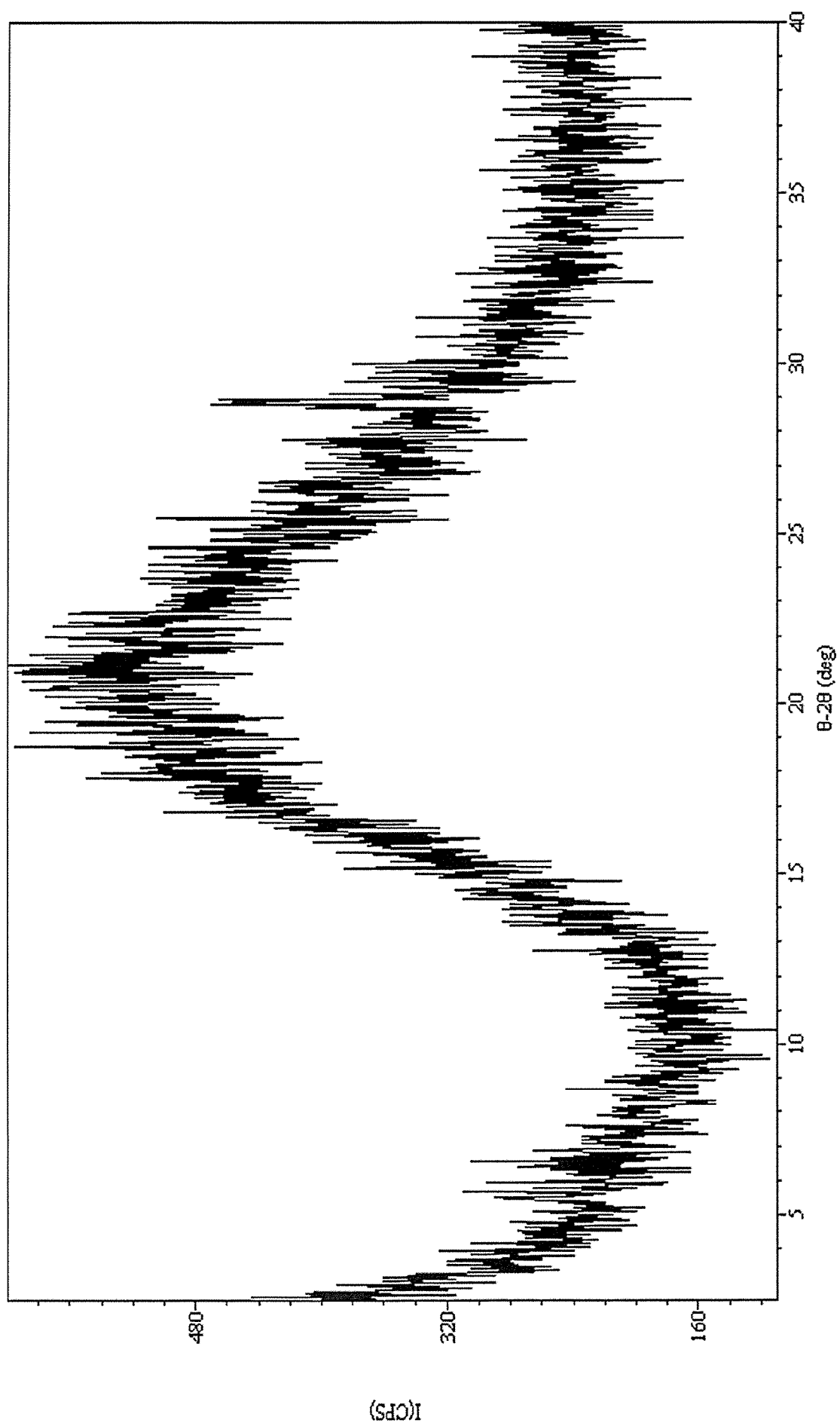


FIG. 53

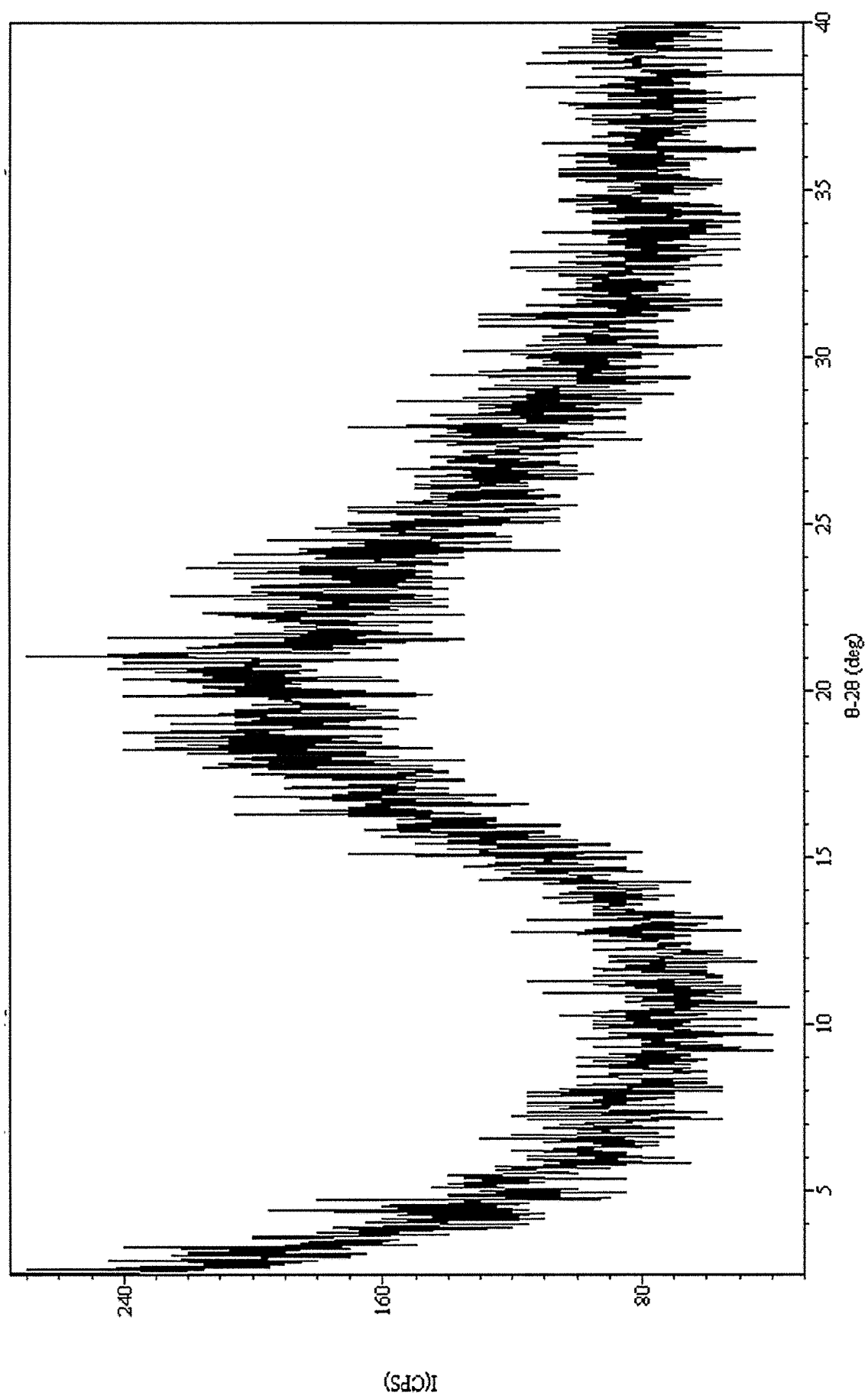


FIG. 54

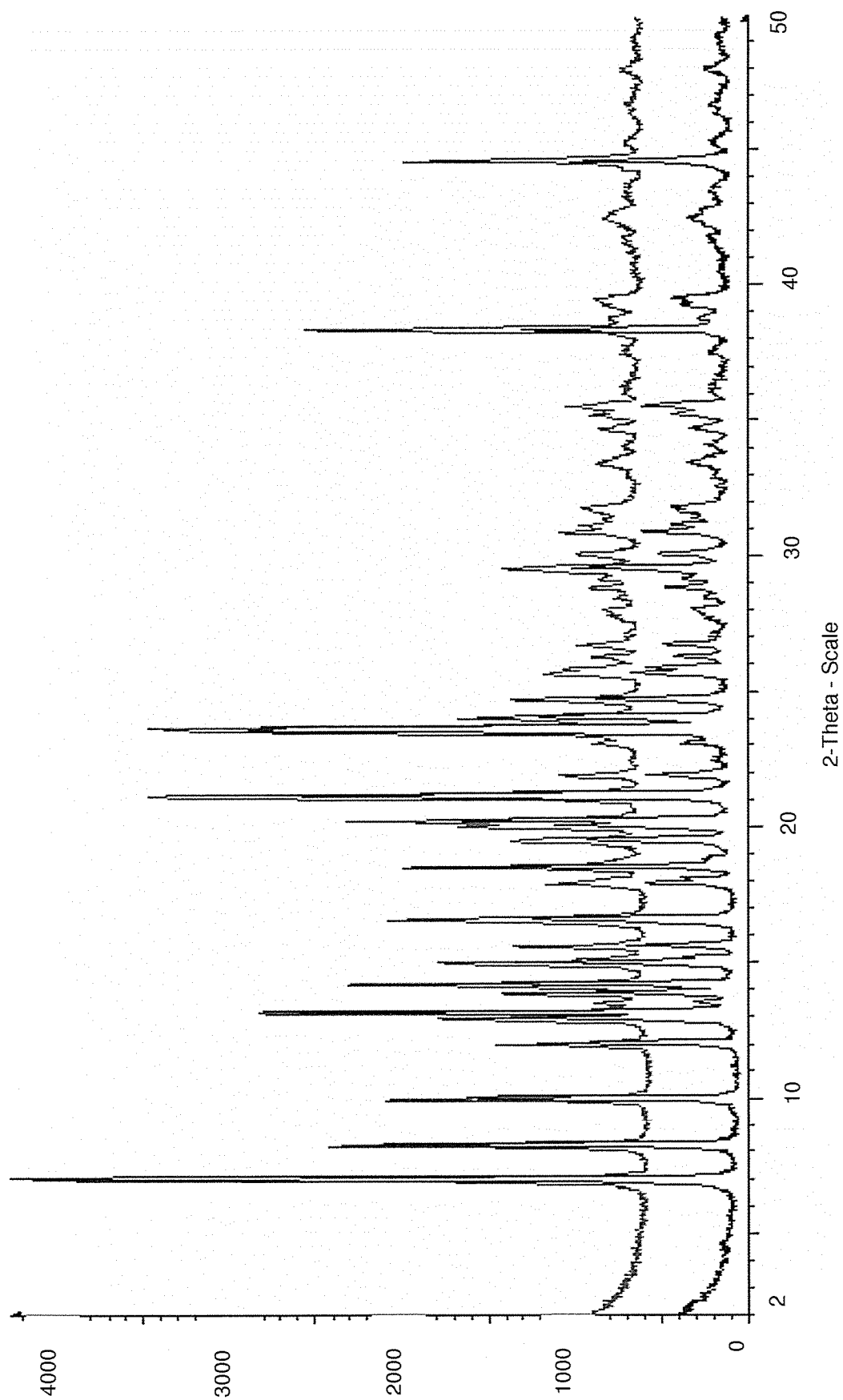


FIG. 55

Sampling time	Compound (I)			Compound (II)		
	Concentration μM			Concentration μM		
0 min	1.48	3.08	5.96	1.54	2.97	6.07
120 min	1.43	2.86	5.65	1.48	3.04	5.74
Recovery	97%	93%	95%	96%	102%	95%

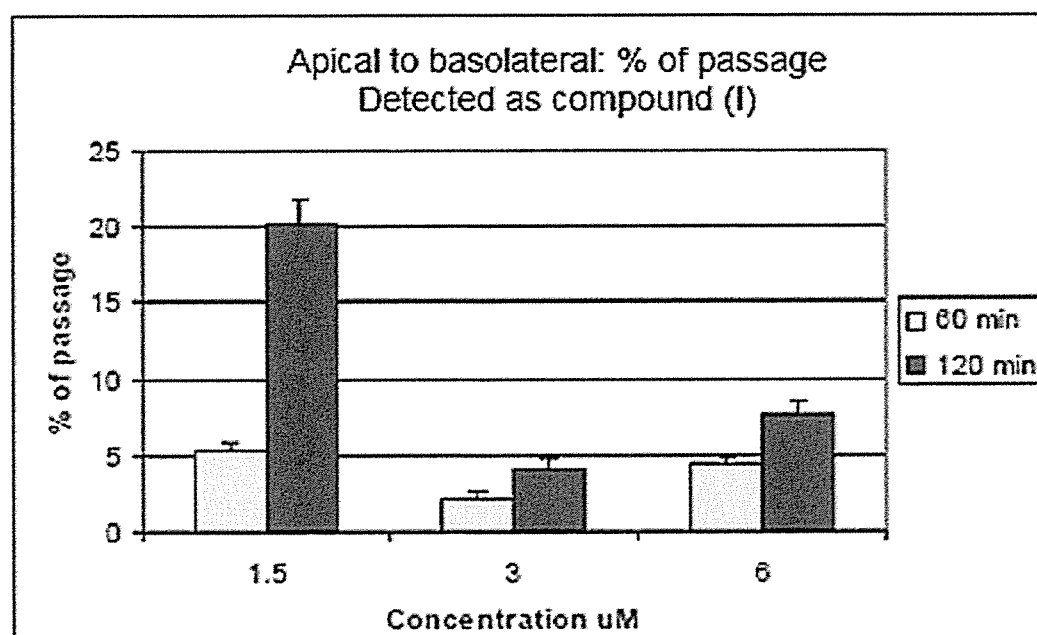
FIG. 56A

		Apical to basolateral: Compound (II) detected								
		1.5 μ M			3 μ M			6 μ M		
		% passage			% passage			% passage		
Sampling time		Mean	$\pm$	SD	Mean	$\pm$	SD	Mean	$\pm$	SD
60 min		5.39	$\pm$	0.46	2.27	$\pm$	0.38	4.41	$\pm$	0.38
120 min		20.22	$\pm$	1.47	4.11	$\pm$	0.73	7.54	$\pm$	0.99

FIG. 56B

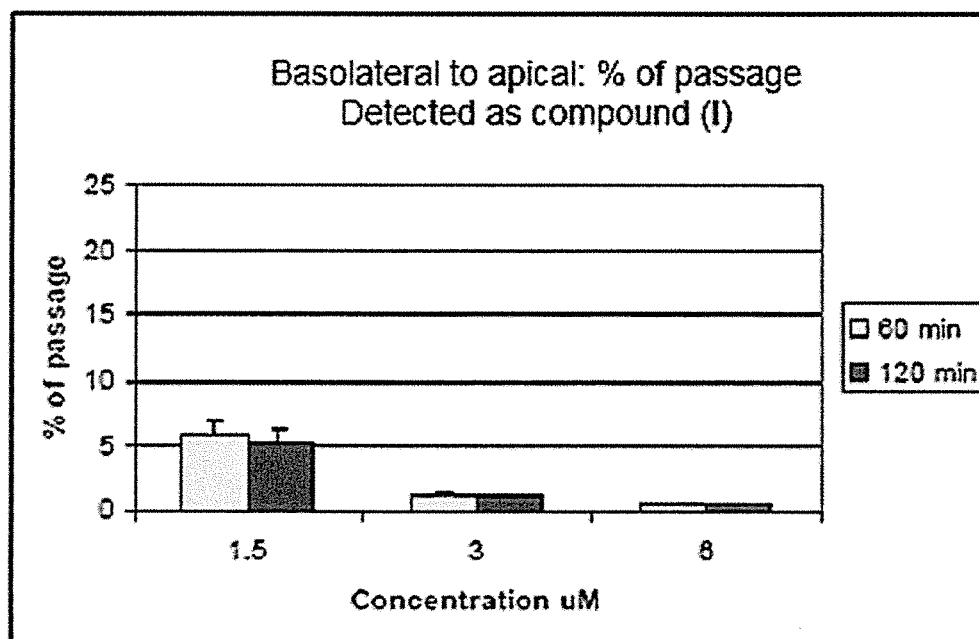
	Basolateral to apical: Compound (II) detected								
	1.5 μ M			3 μ M			6 μ M		
	% passage			% passage			% passage		
Sampling time	Mean	$\pm$	SD	Mean	$\pm$	SD	Mean	$\pm$	SD
60 min	5.81	$\pm$	0.95	1.04	$\pm$	0.34	0.42	$\pm$	0.16
120 min	5.25	$\pm$	0.92	1.06	$\pm$	0.25	0.60	$\pm$	0.01

FIG. 56C



Recovery in the apical compartment at the end of treatment (120 min)

FIG. 56D



Recovery in the apical compartment at the end of treatment (120 min)

FIG. 56E

	1.5 μ M	3 μ M	6 μ M
Compound (I)	2%	0.6%	3.1%
Compound (II)	349%	217%	302%

FIG. 57A

	Apical to Basolateral								
	1.5 μ M			3 μ M			6 μ M		
	% passage			% passage			% passage		
	Mean	$\pm$	SD	Mean	$\pm$	SD	Mean	$\pm$	SD
Sampling time									
60 min	n.d.	$\pm$	n.d.	17.83	$\pm$	1.19	18.48	$\pm$	4.76
120 min	n.d.	$\pm$	n.d.	33.08	$\pm$	1.12	23.37	$\pm$	4.60

FIG. 57B

	Basolateral to Apical								
	1.5 μ M			3 μ M			6 μ M		
	% passage			% passage			% passage		
	Mean	$\pm$	SD	Mean	$\pm$	SD	Mean	$\pm$	SD
Sampling time									
60 min	n.d.	$\pm$	n.d.	2.56	$\pm$	1.11	1.28	$\pm$	0.66
120 min	n.d.	$\pm$	n.d.	1.78	$\pm$	0.07	3.00	$\pm$	0.68

FIG. 57C

	60 min	120 min
Overall mean (mean% $\pm$ SD)	1.84% $\pm$ 1.18	4.36% $\pm$ 3.62
Papp ($\times 10^{-6}$) nm/sec	0.56	2.79

FIG. 57D

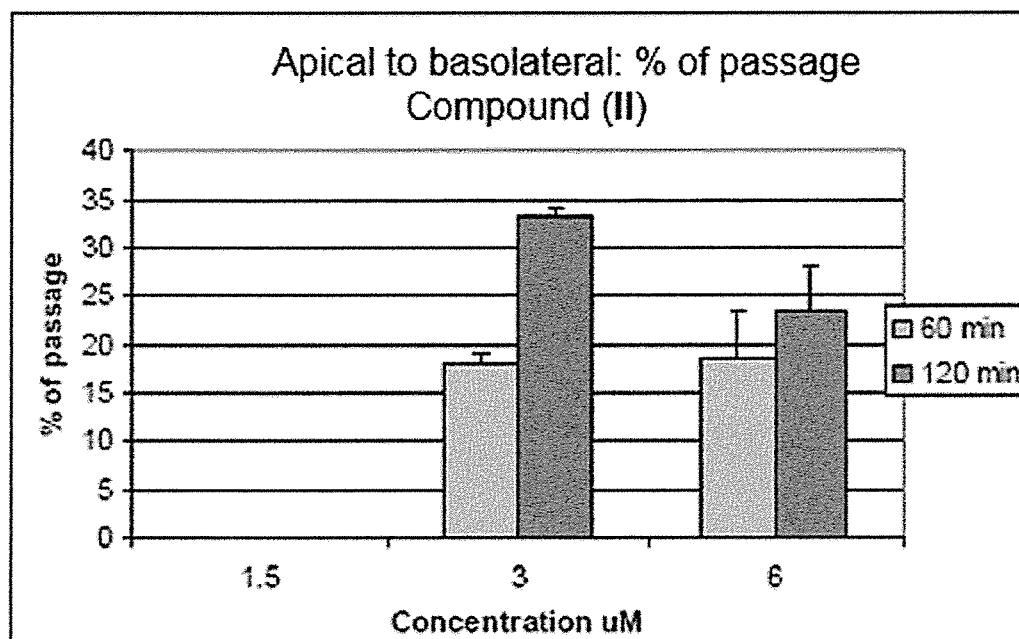


FIG. 57E

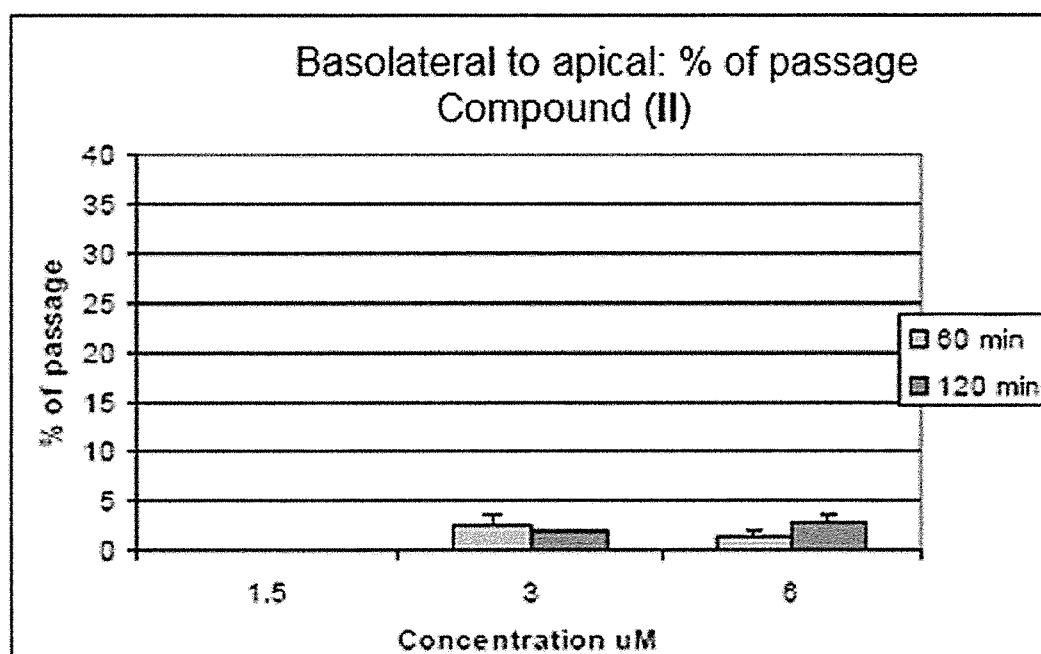
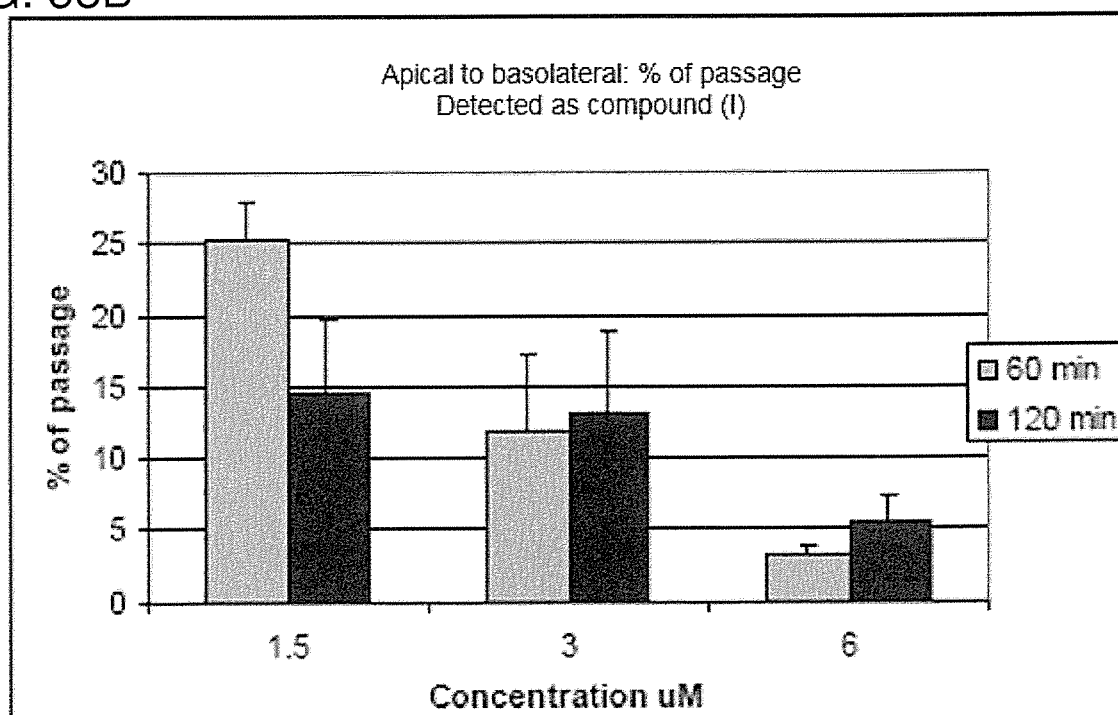


FIG. 58A

Apical to basolateral: Compound (II) detected									
1.5 μ M				3 μ M			6 μ M		
% passage				% passage			% passage		
Sampling time	Mean	$\pm$	SD	Mean	$\pm$	SD	Mean	$\pm$	SD
60 min	25.11	$\pm$	2.82	11.72	$\pm$	5.34	3.25	$\pm$	0.50
120 min	14.47	$\pm$	5.15	13.26	$\pm$	5.66	5.46	$\pm$	1.72

FIG. 58B



Recovery in the apical compartment at the end of treatment (120 min)

FIG. 58C

	1.5 μ M	3 μ M	6 μ M
Compound (I)	0.8%	1.8%	0.3%
Compound (II)	37.1%	39.1%	156.3%

FIG. 59

Analytical equipment			
HPLC		Surveyor Binar Pump	
Auto sampler		CTC, Pal	
Detector		Mass spectrometer Thermo Finnigan, DECA XP Plus	
Data System		Excalibur Software	
MS interface		ESI	
Scan type		MRM	
Polarity		Positive	
Ion monitored	Compound (I)	501.2 m/z (parent ion 484.1 – 501.9 – 349.9 m/z)	
Ion monitored	Compound (II)	502.1 m/z (parent ion 349.5 m/z)	
Chromatographic and Mass Spectrometric conditions			
Analytical column		Xterra 5uM C ₁₈ (2), 2.0 x 30 mm, Waters	
Column temperature		22 °C	
Mobile phase A		FOA 0.1% in water	
Mobile phase B		CH ₃ CN	
Flow rate		400 µL/min	
Injection volumes		10 µL	
Gradient		Time (min)	Mobile phase % A Mobile phase %B
		0	85 15
		2.0	5 95
		3.0	5 95
		3.1	85 15
		5.6	85 15

FIG. 60A

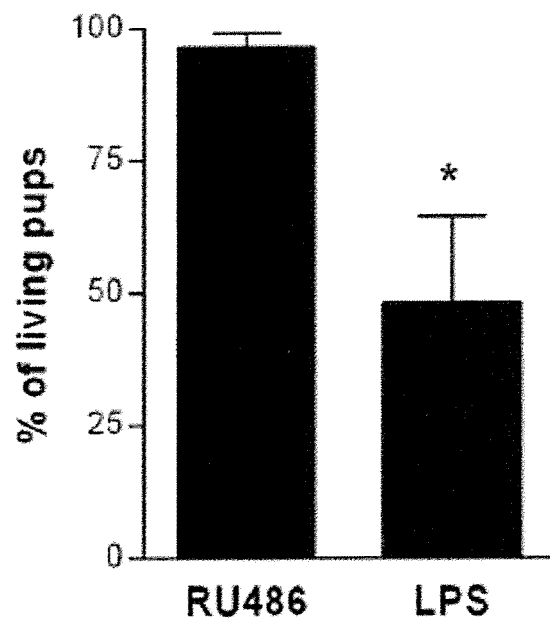


FIG. 60B

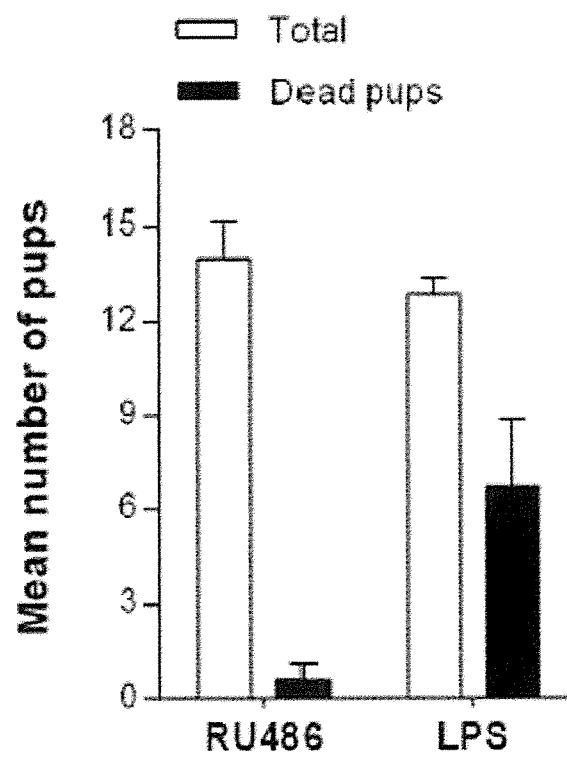


FIG. 61A

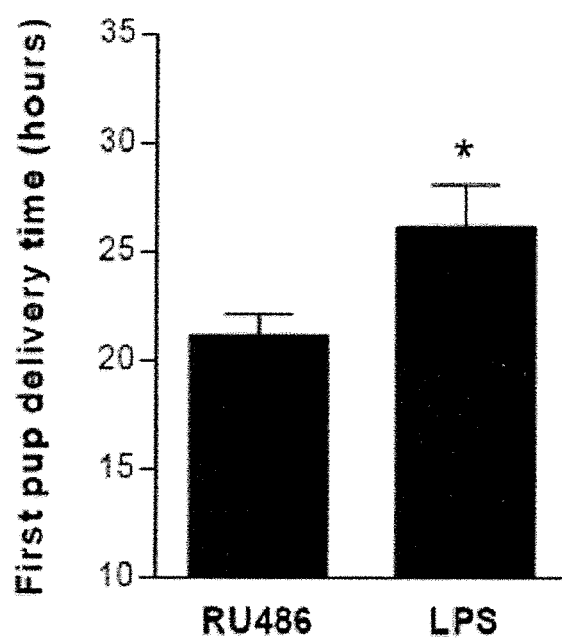


FIG. 61B

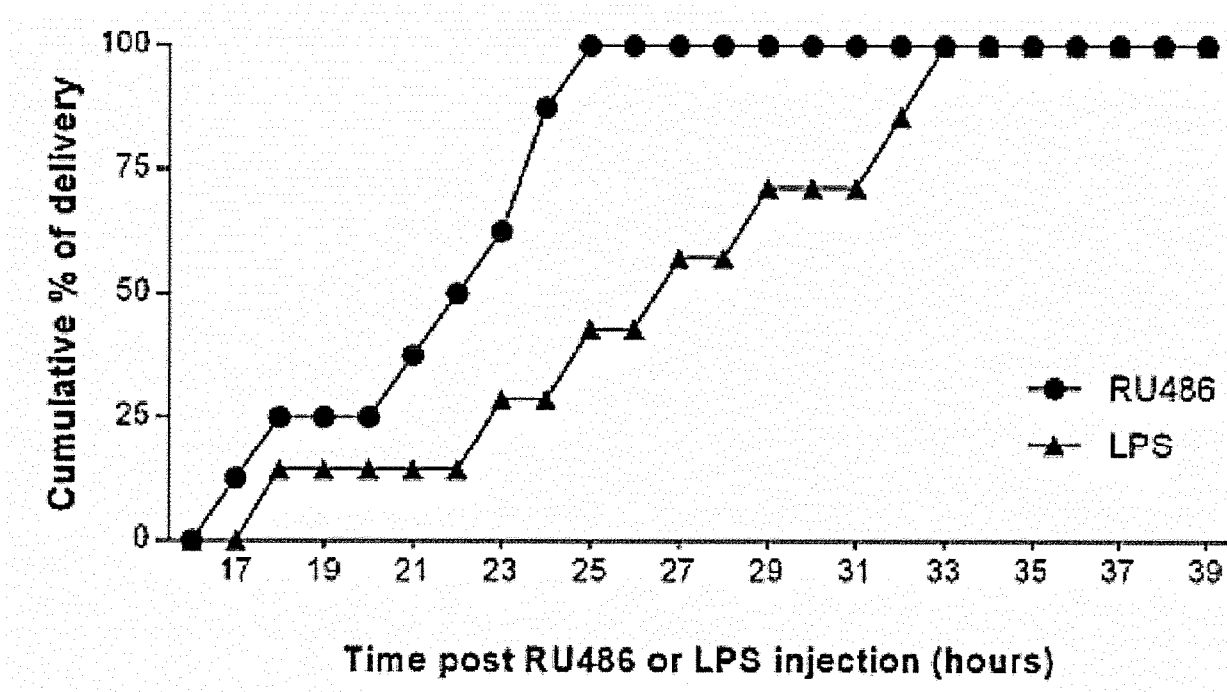


FIG. 61C

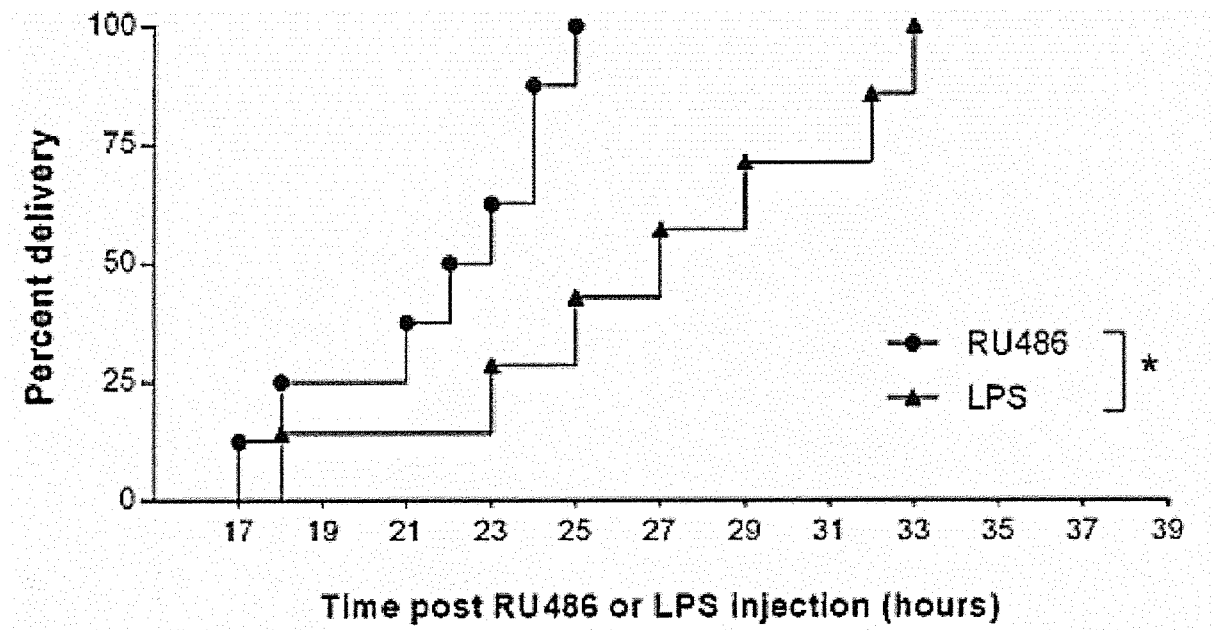


FIG. 62A

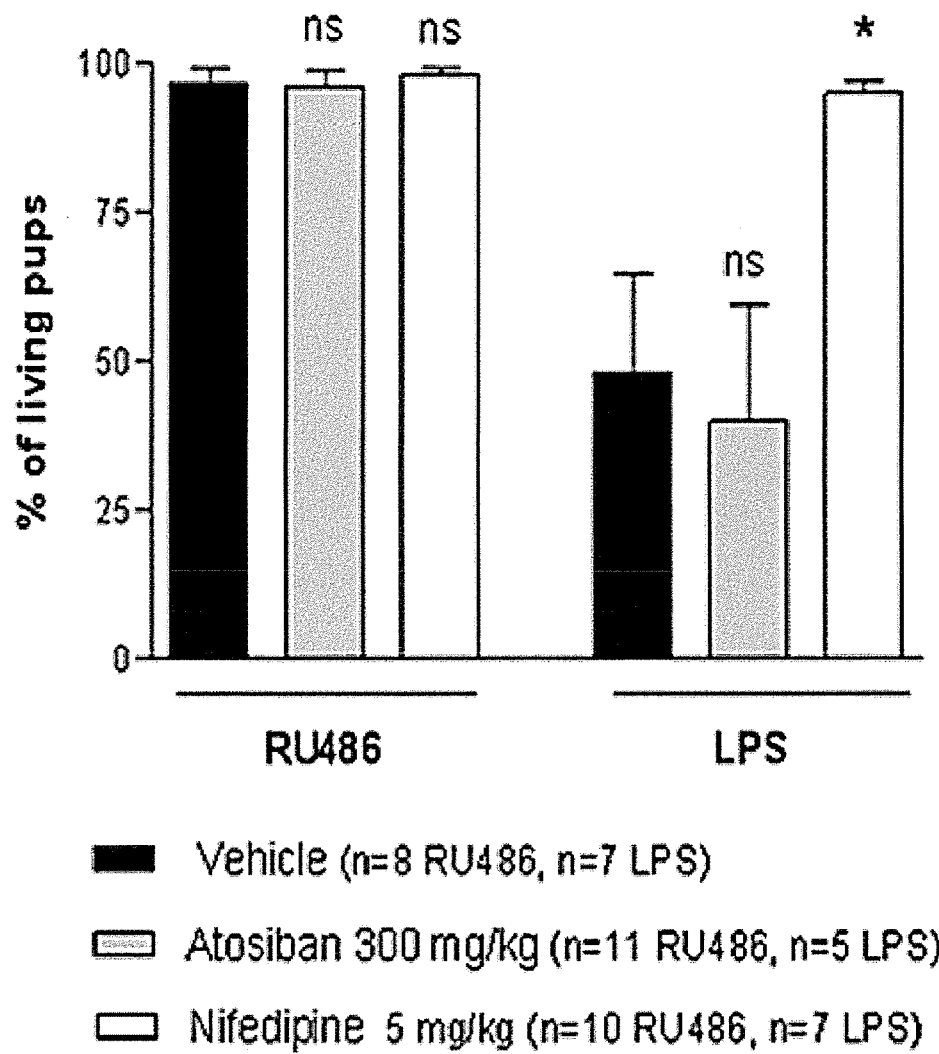


FIG. 62B

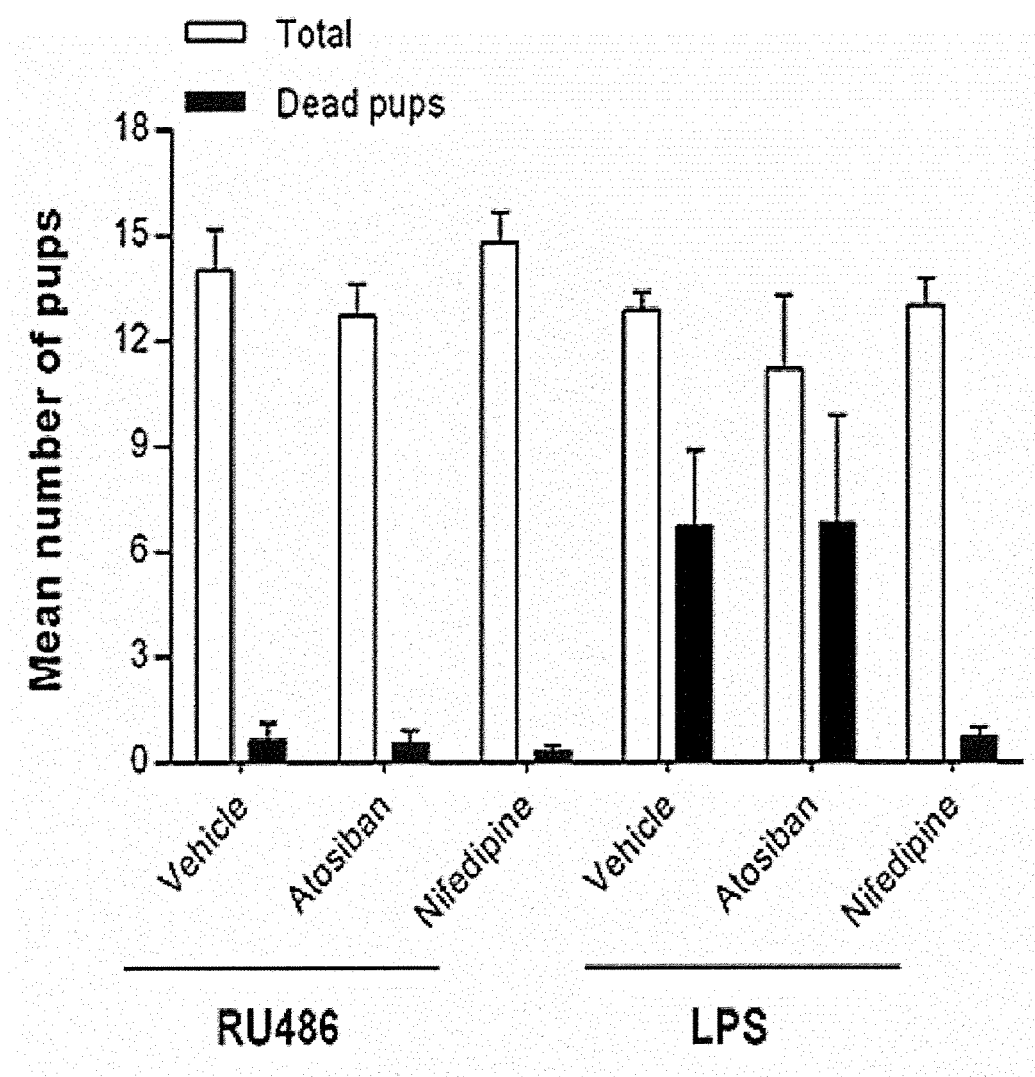


FIG. 63A

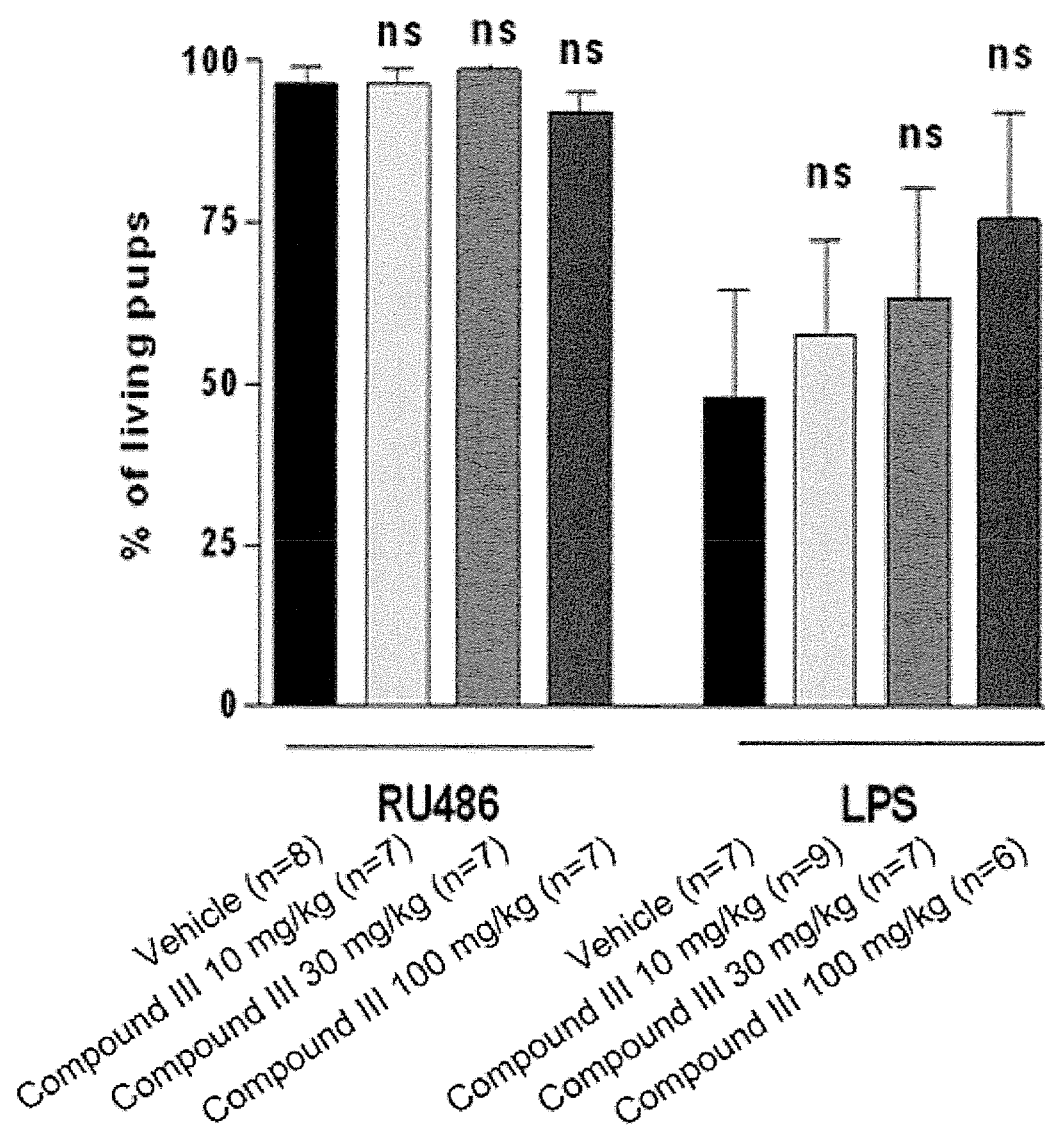


FIG. 63B

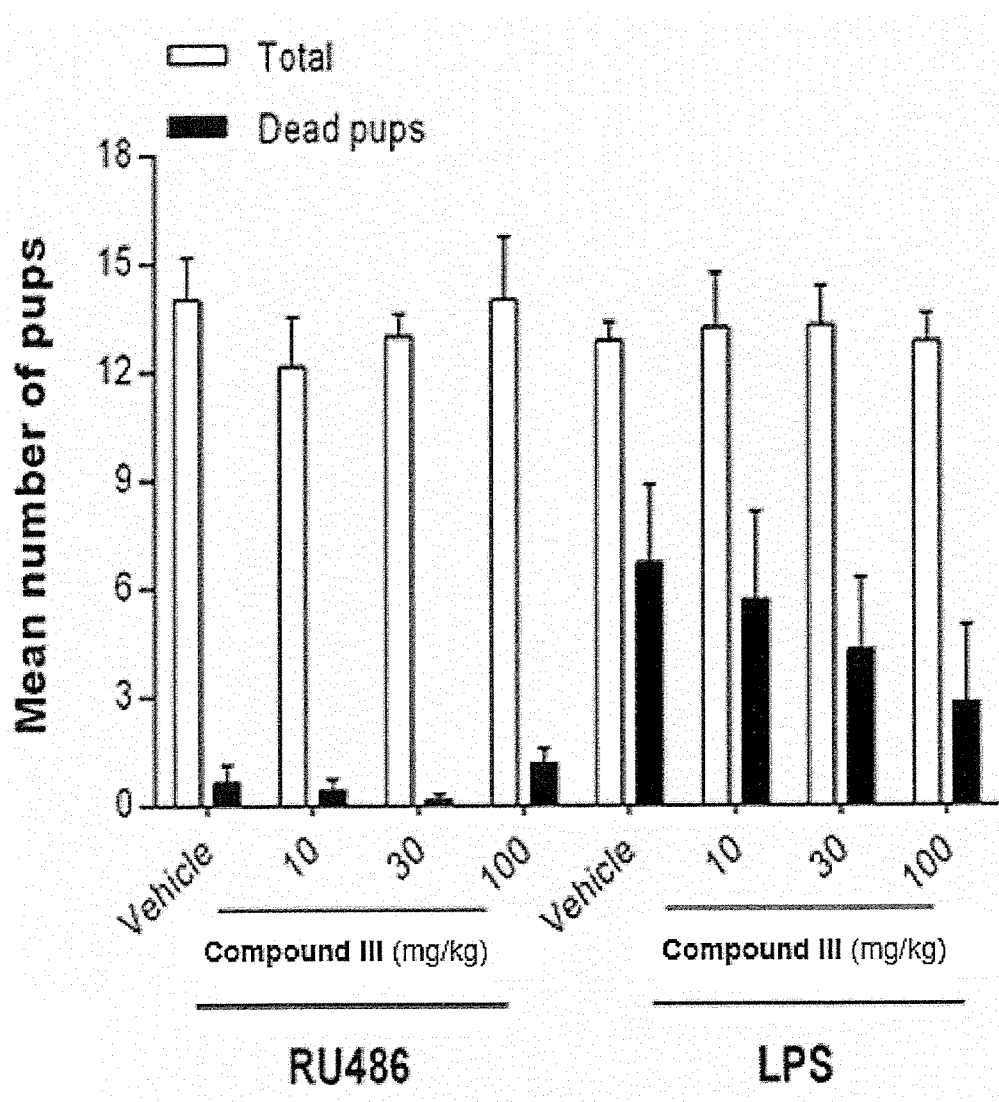


FIG. 64A

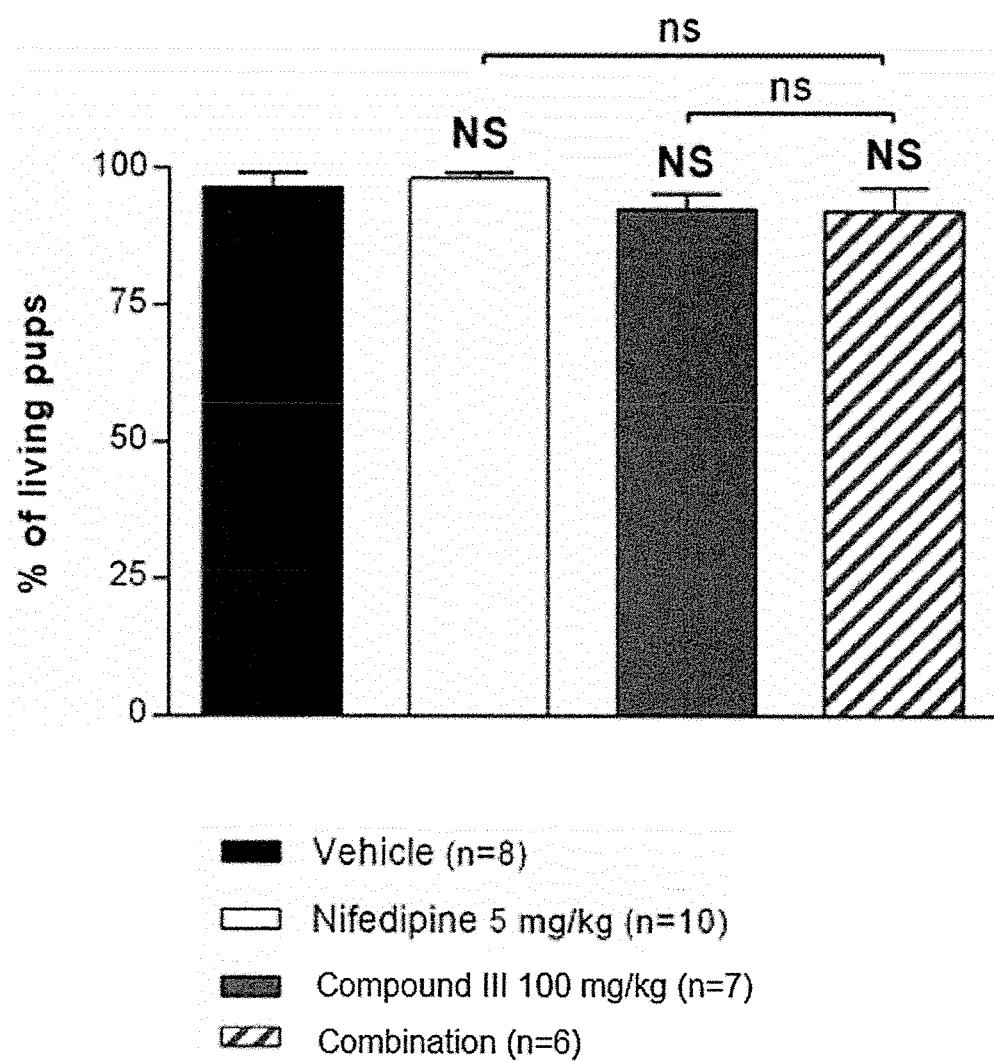


FIG. 64B

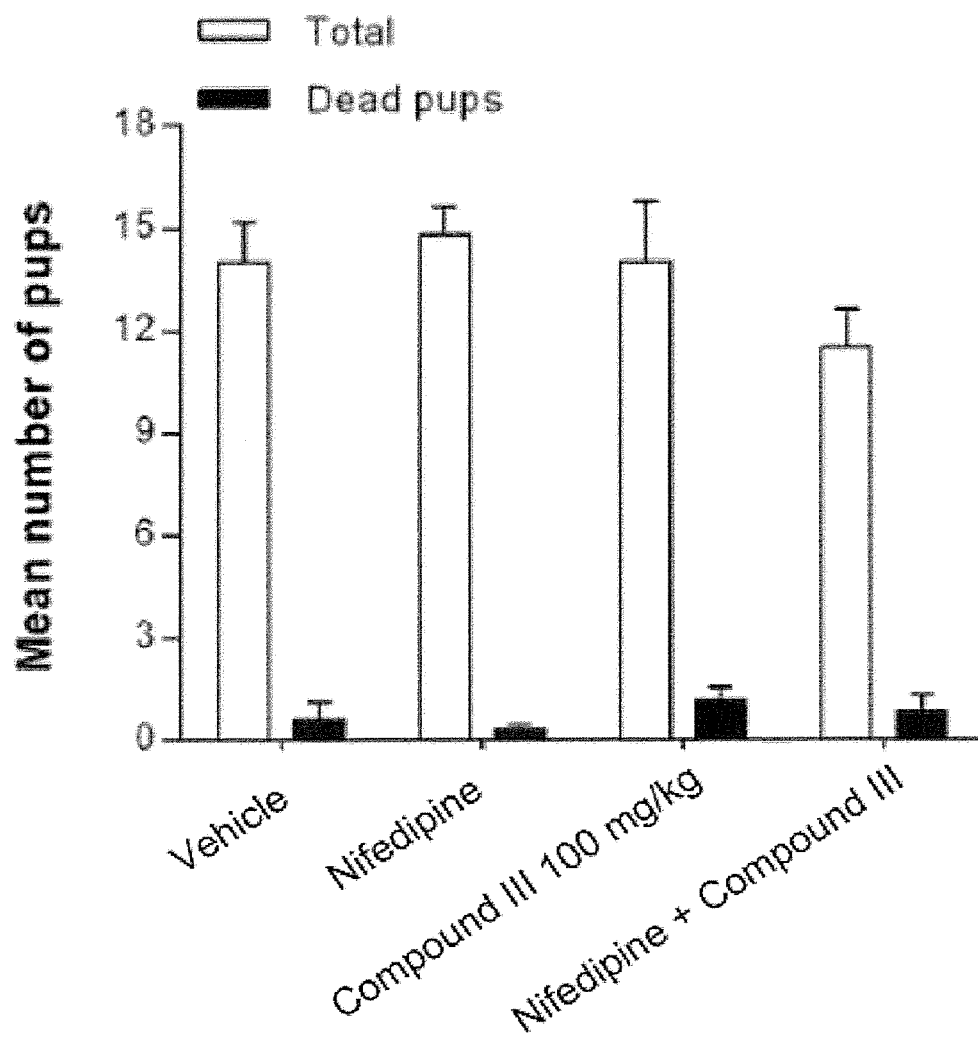


FIG. 65A

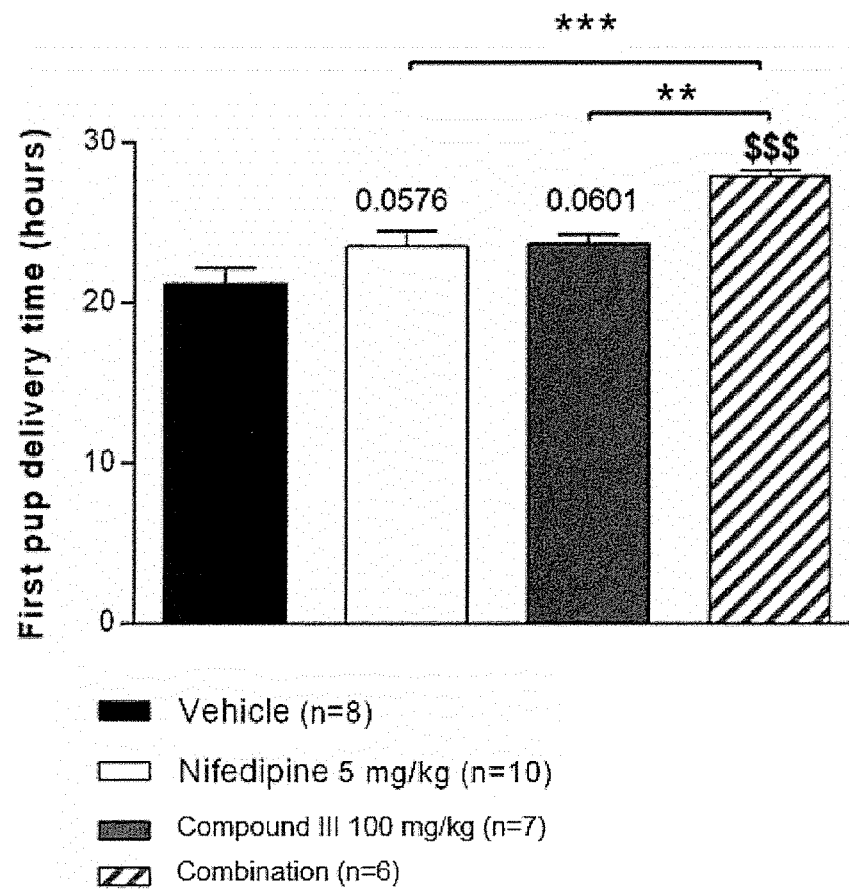


FIG. 65B

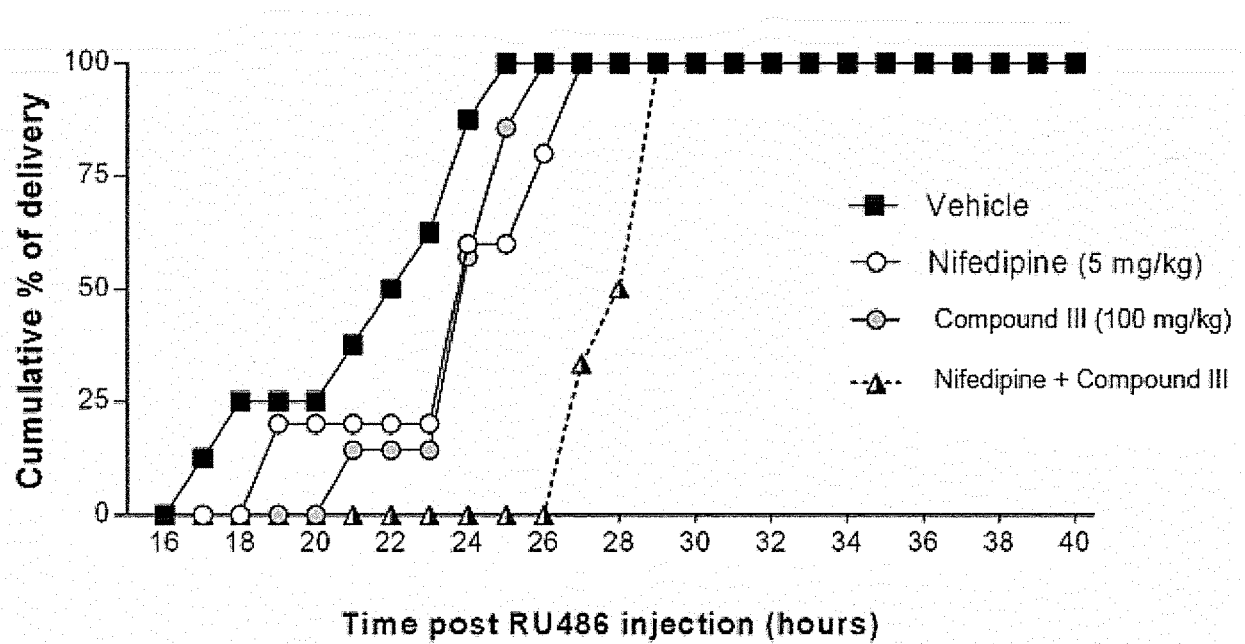


FIG. 65C

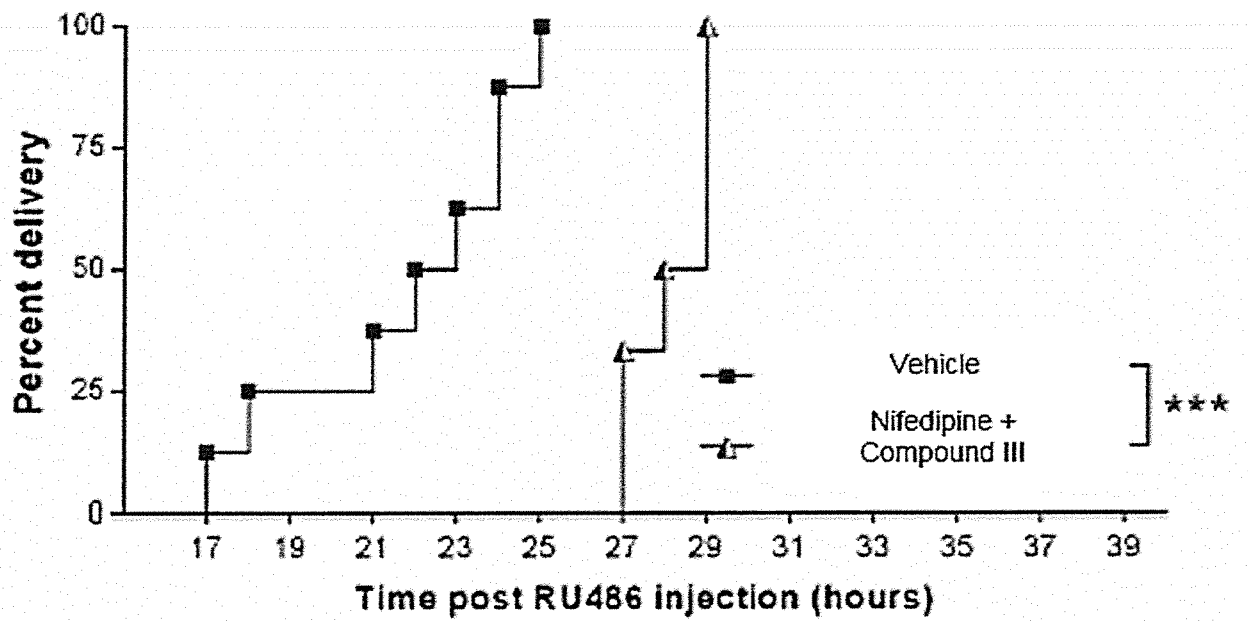


FIG. 65D

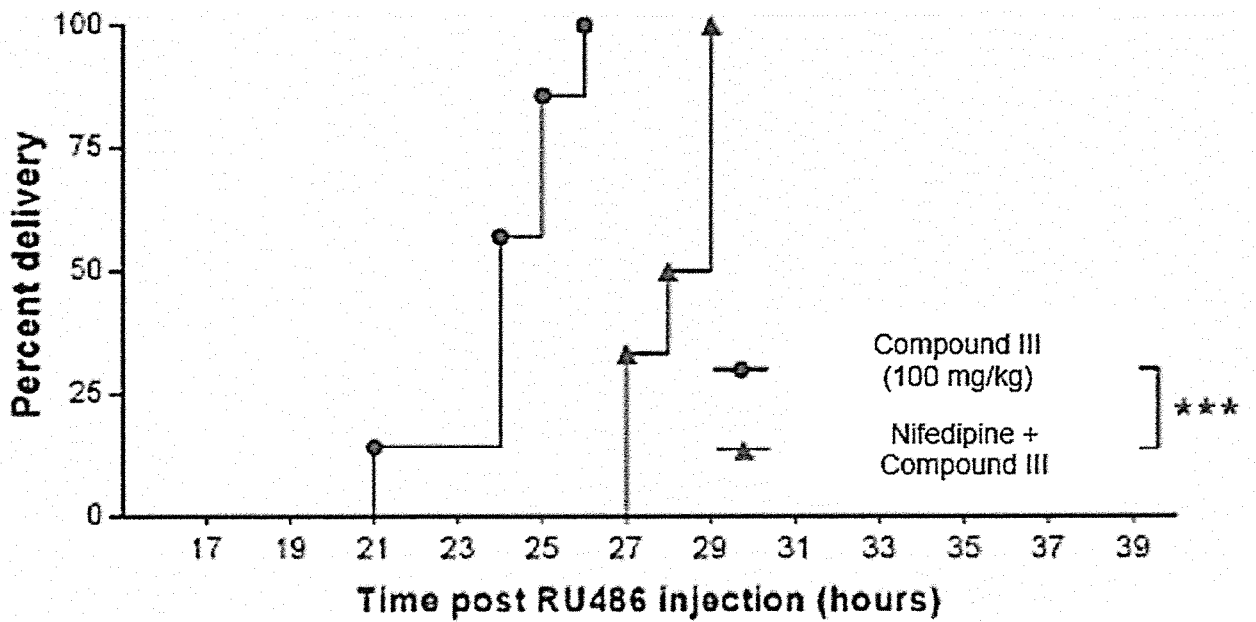


FIG. 65E

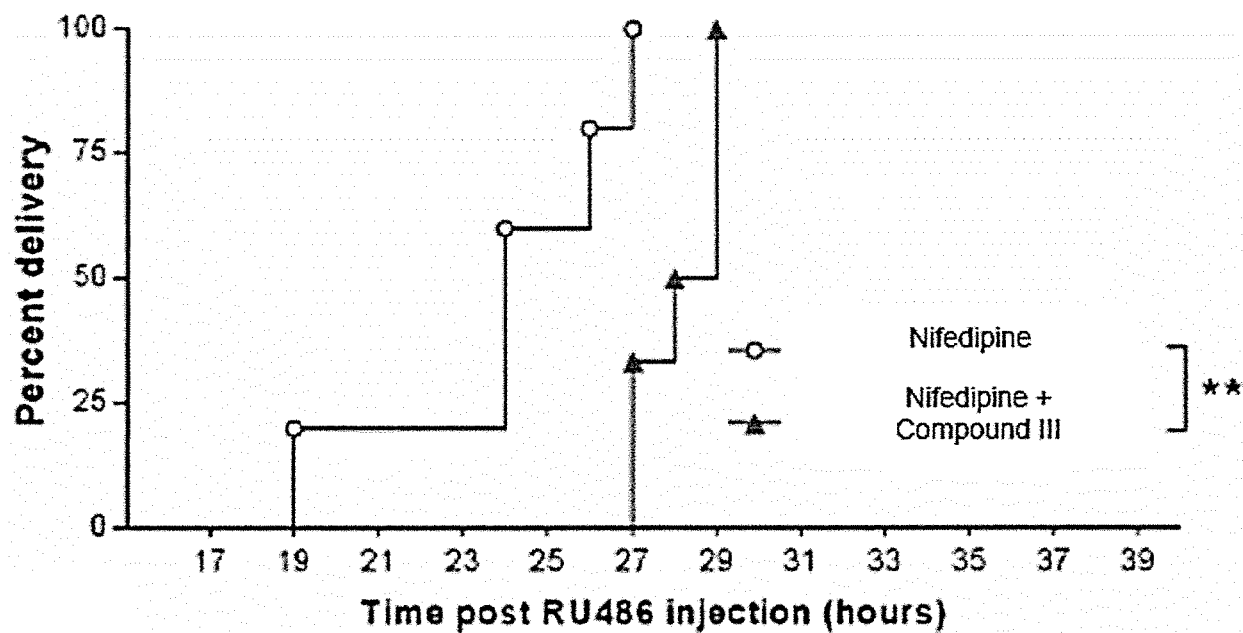


FIG. 66A

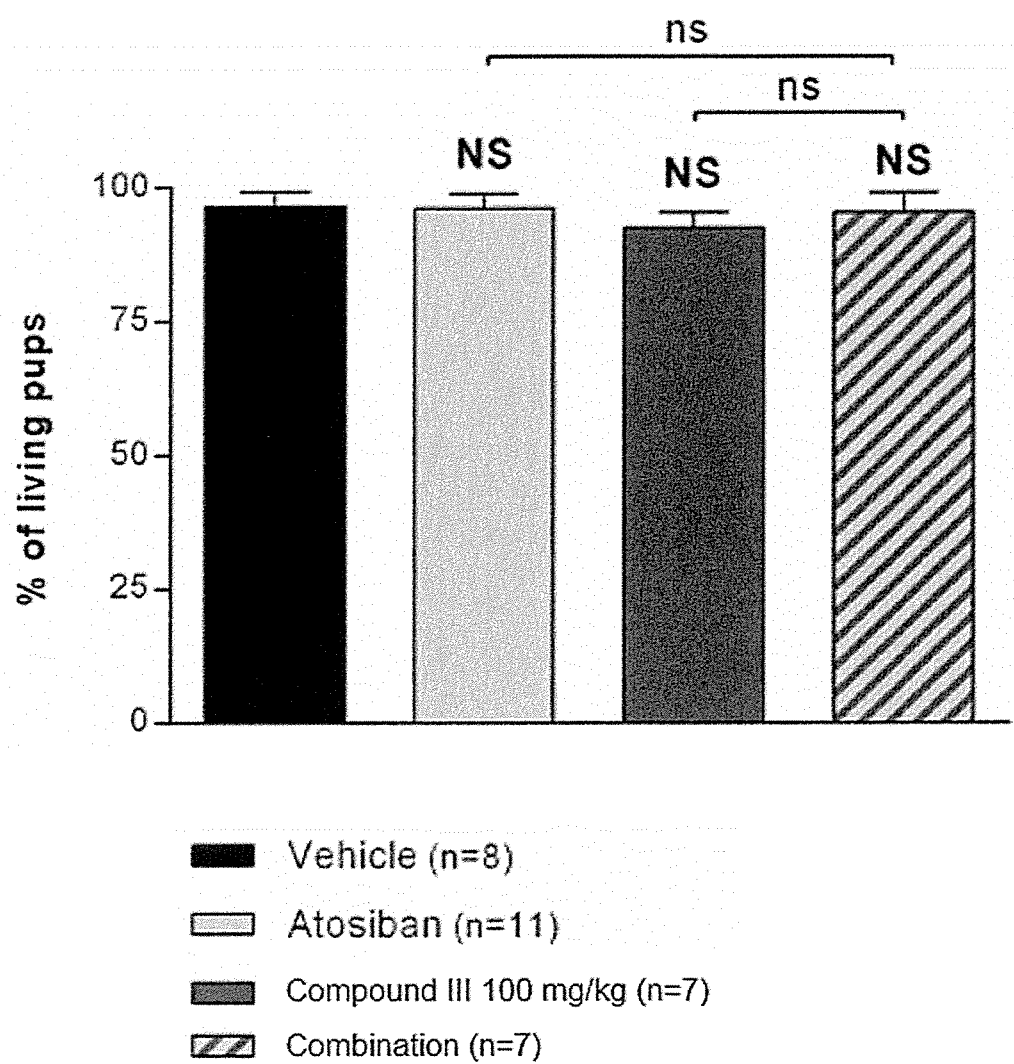


FIG. 66B

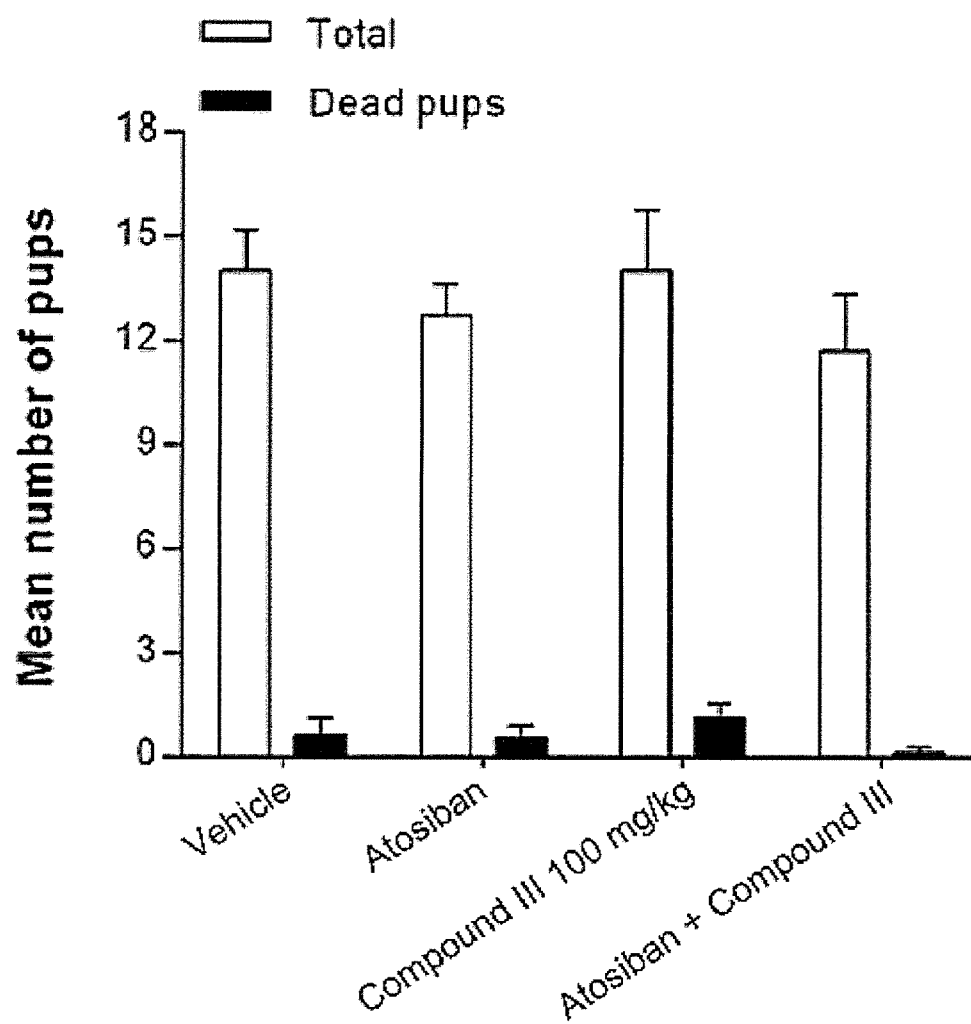


FIG. 67A

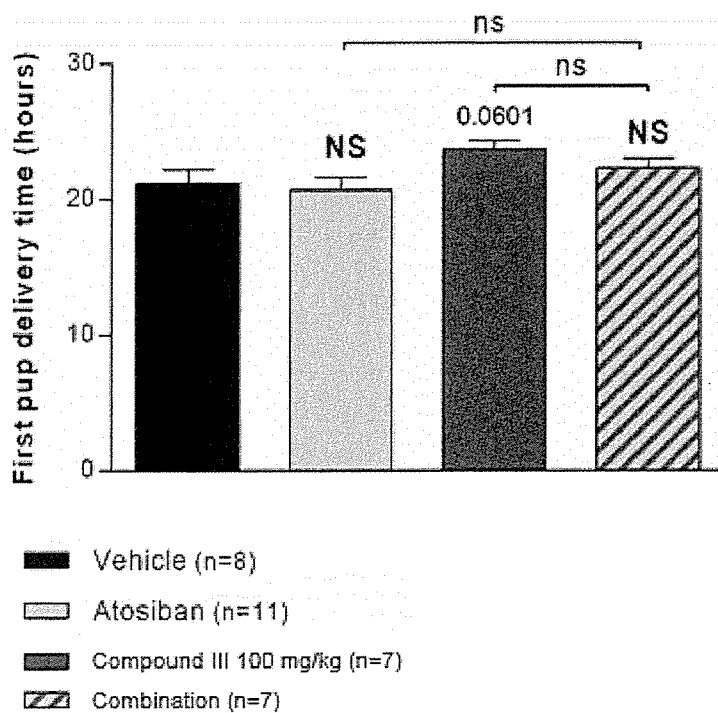


FIG. 67B

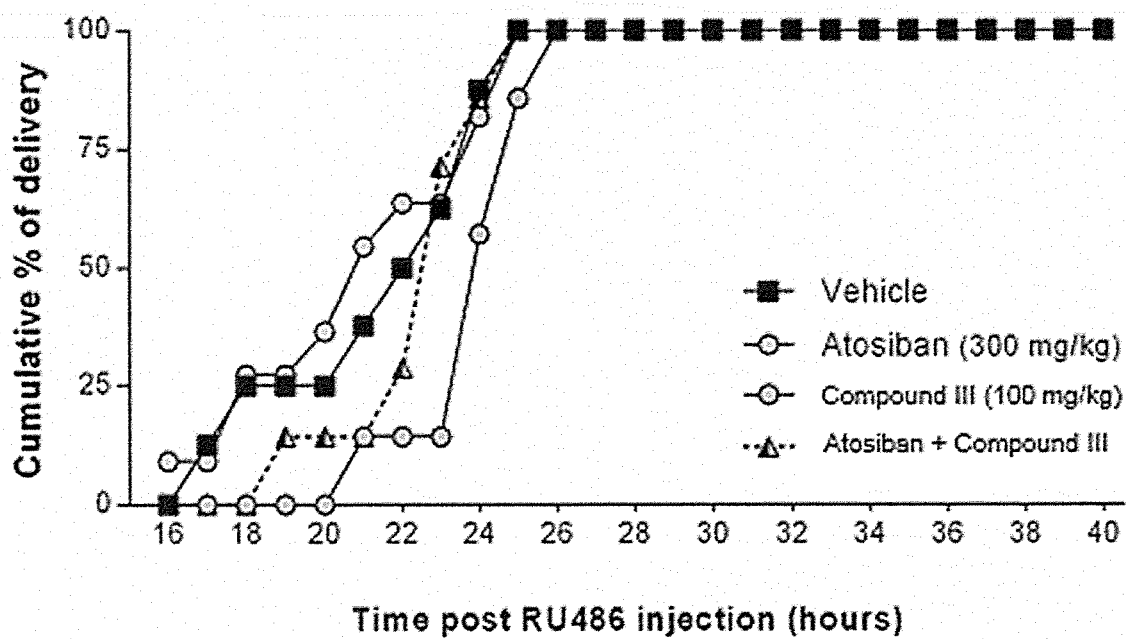


FIG. 67C

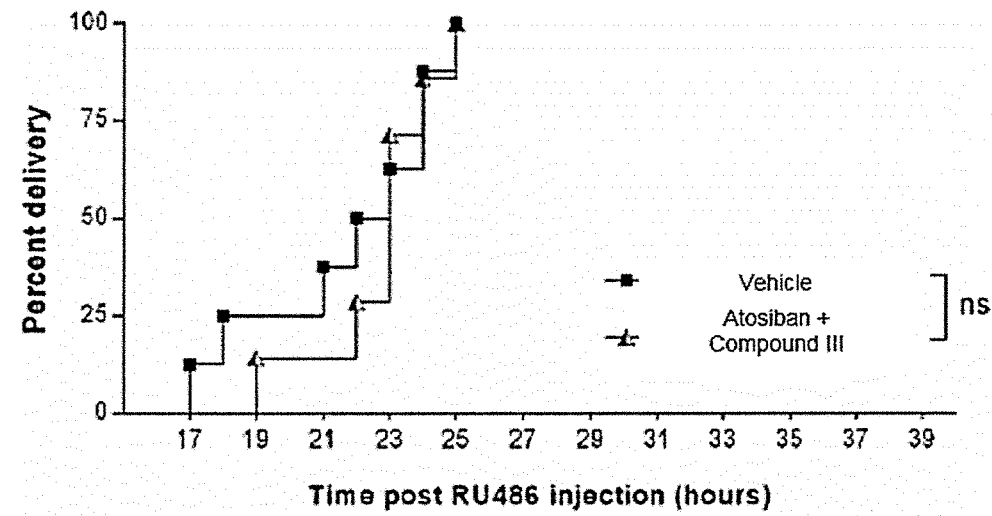


FIG. 67D

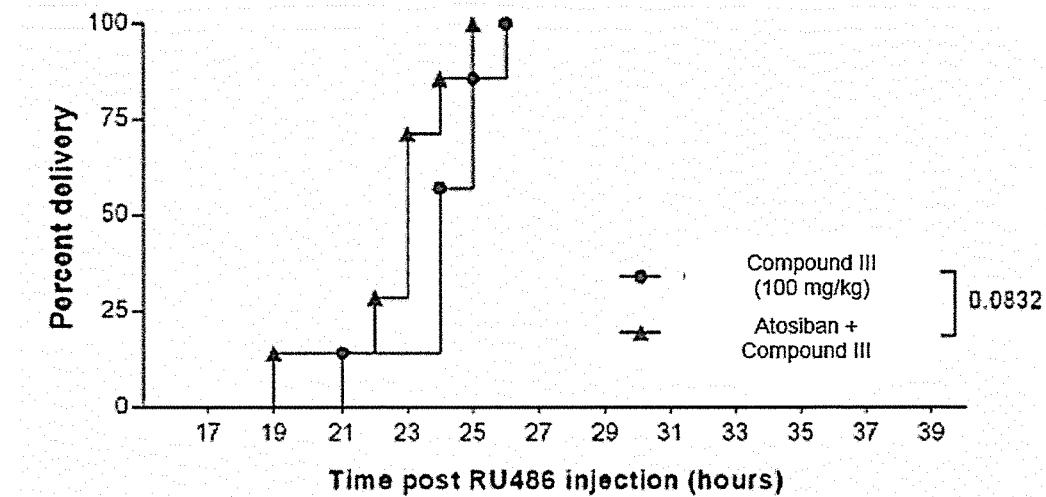


FIG. 67E

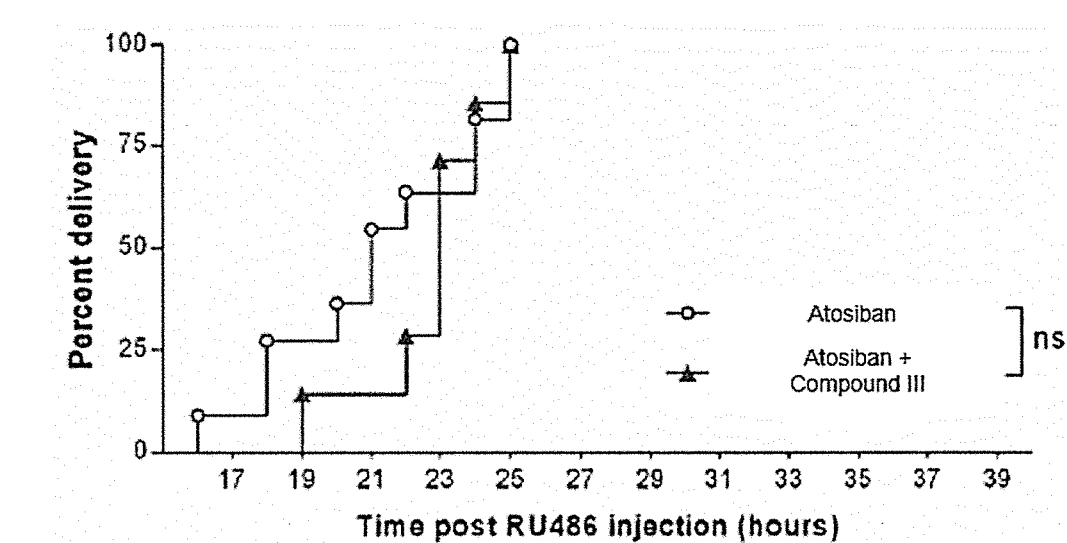


FIG. 68A

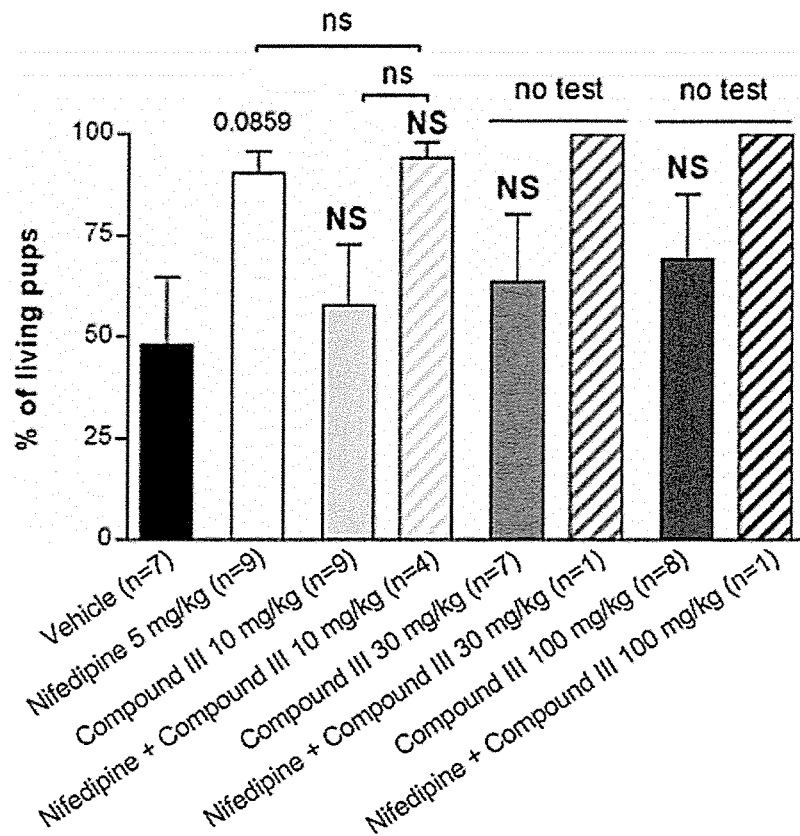


FIG. 68B

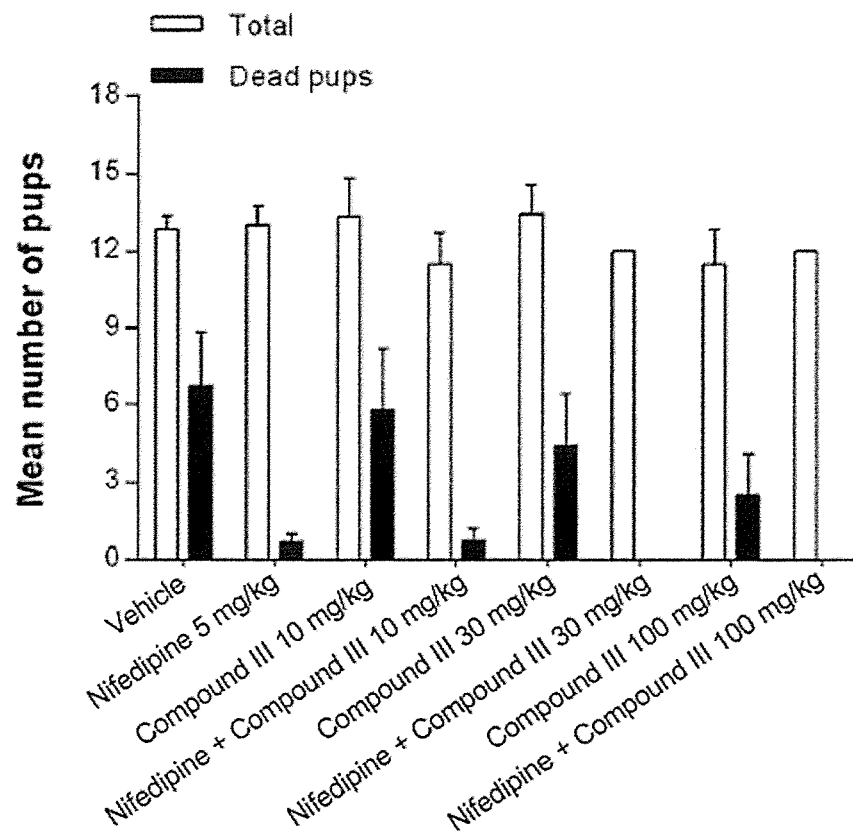


FIG. 69A

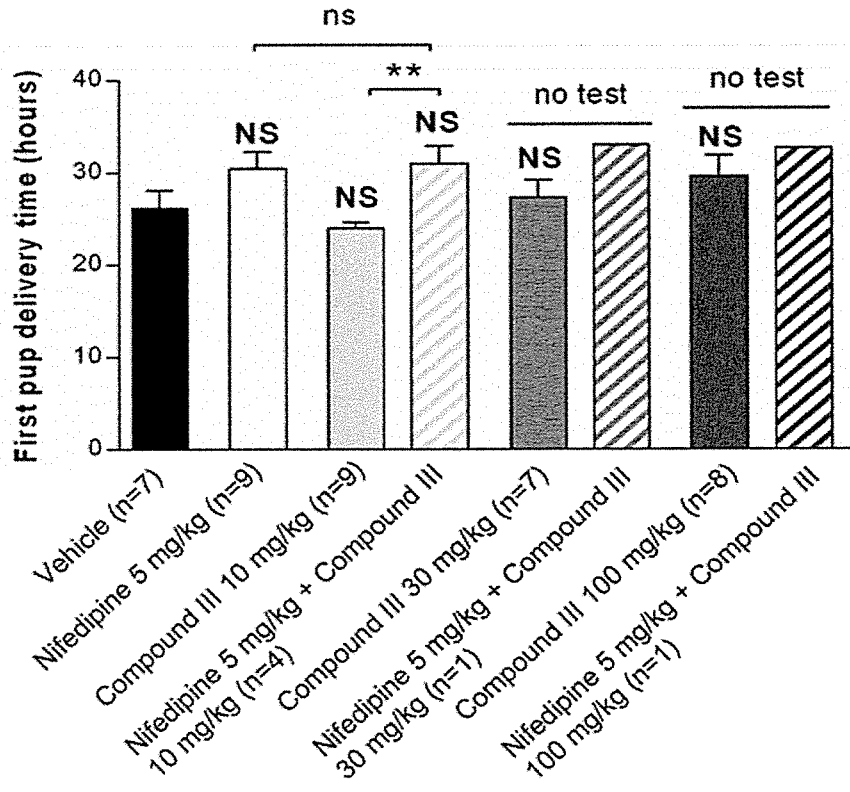


FIG. 69B

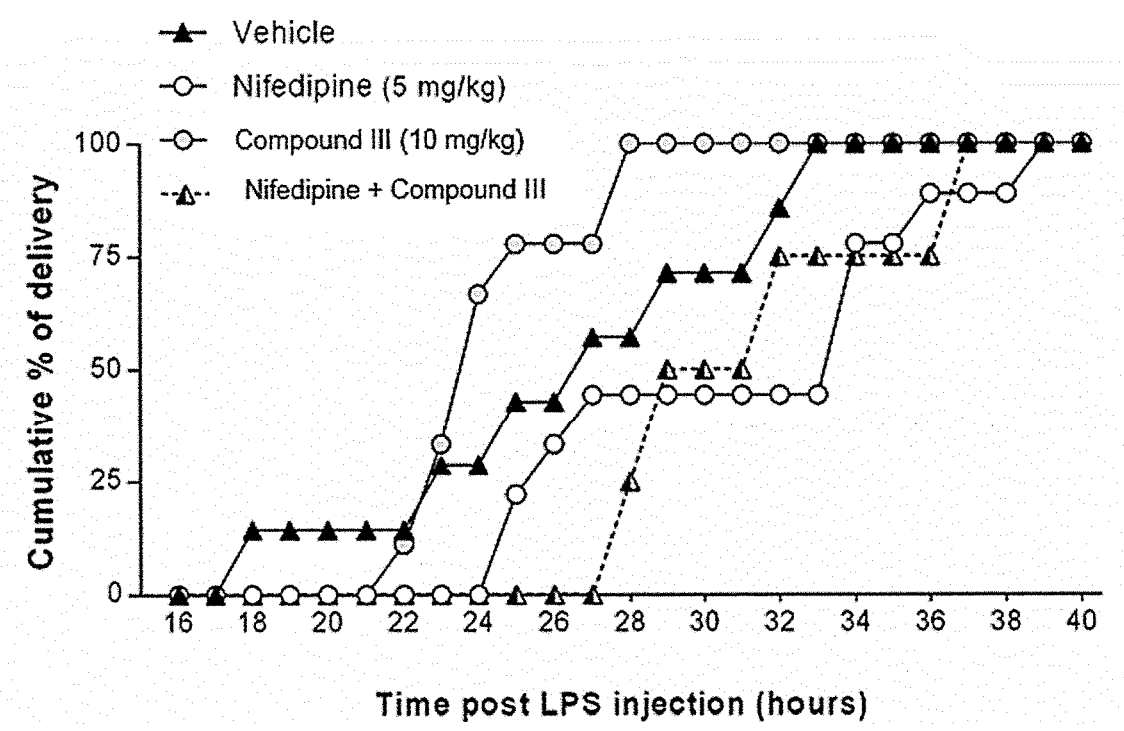


FIG. 69C

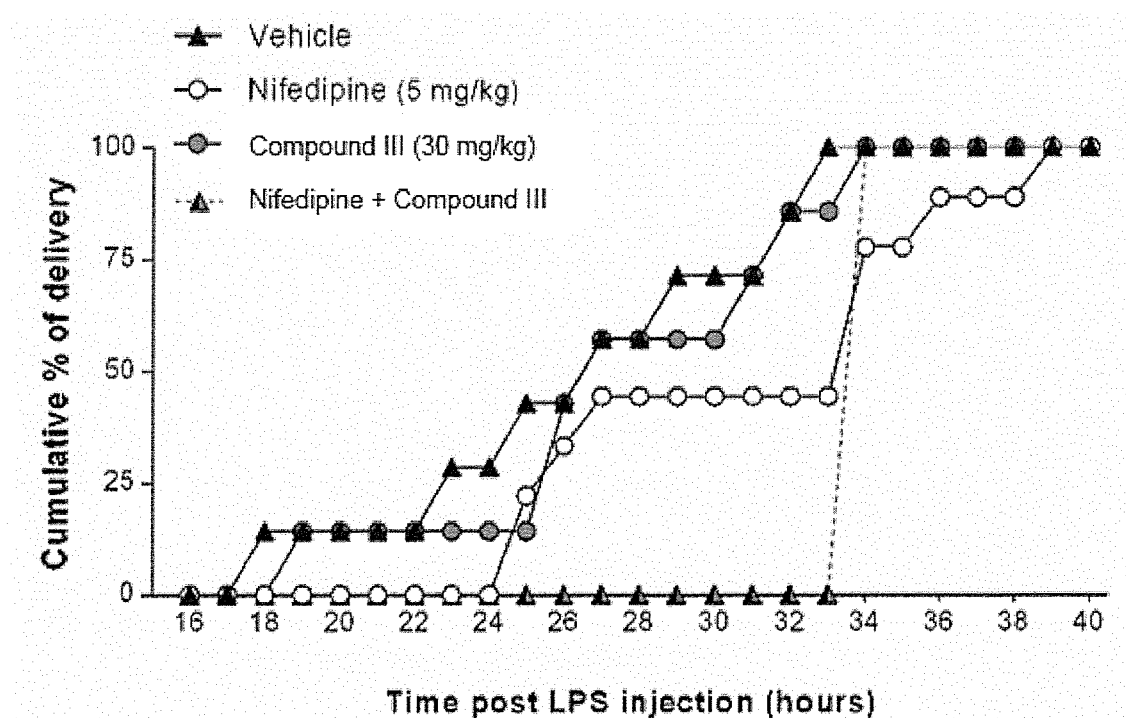


FIG. 69D

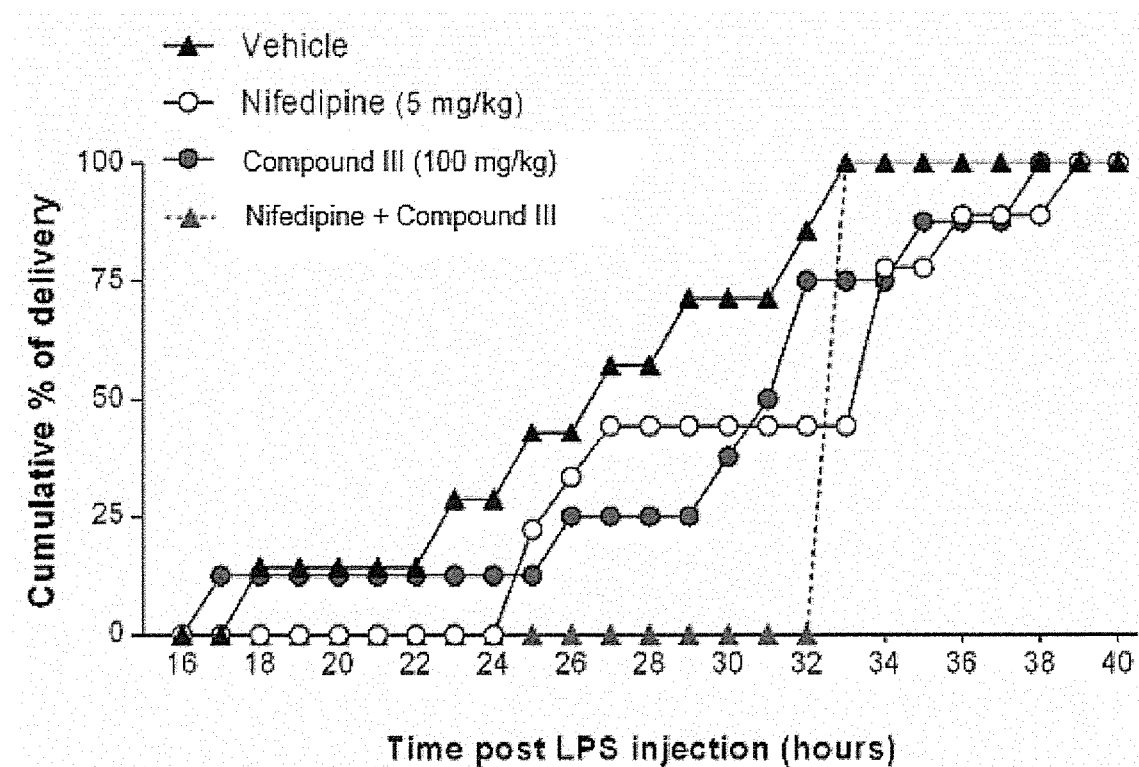


FIG. 69E

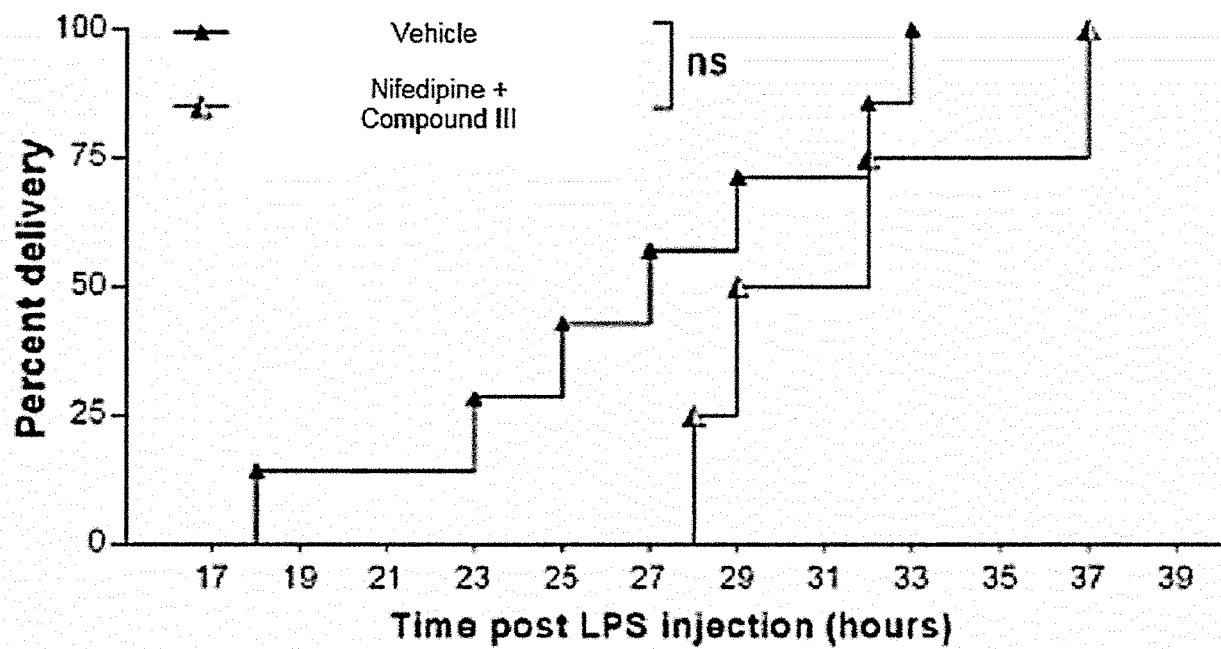


FIG. 69F

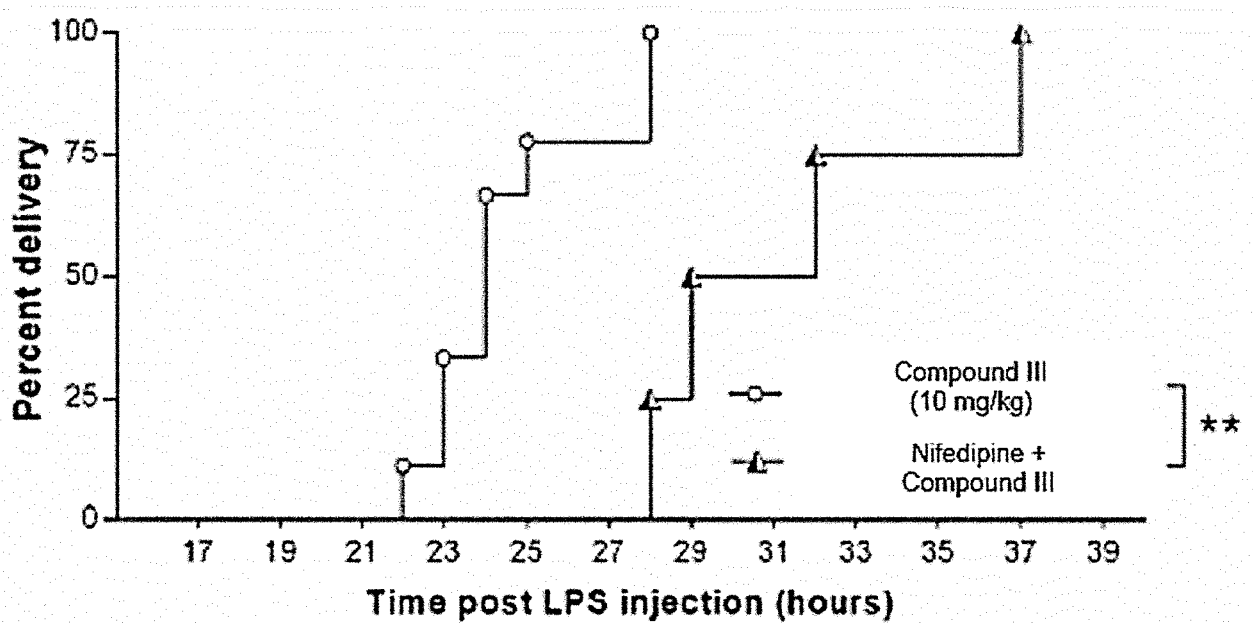


FIG. 69G

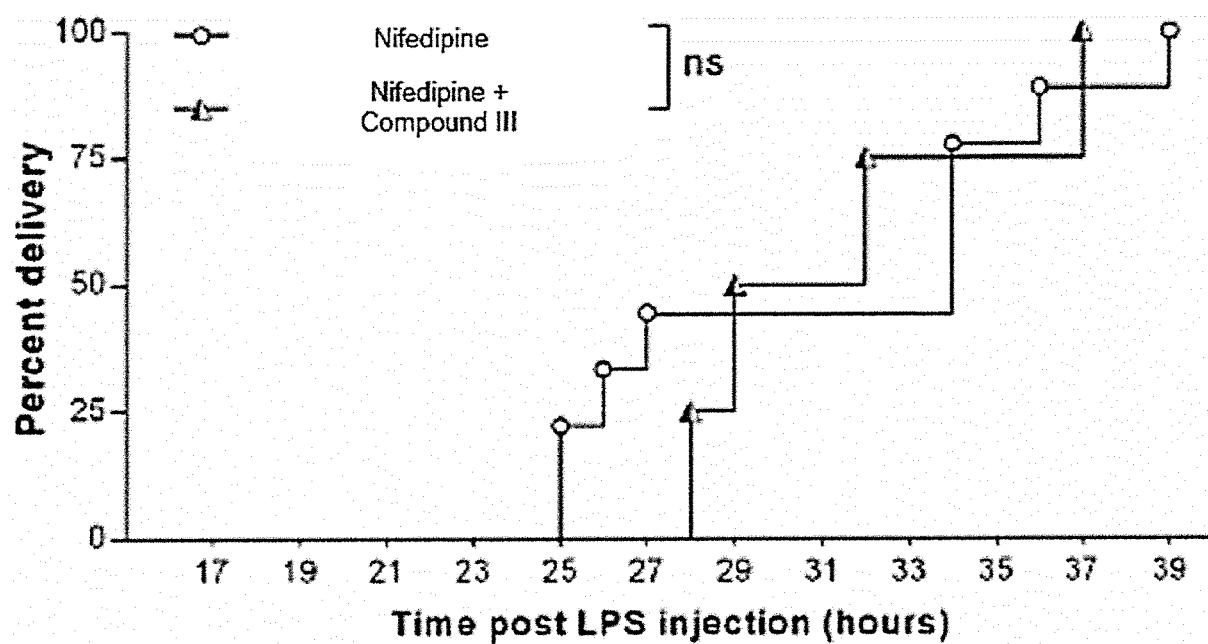


FIG. 69H

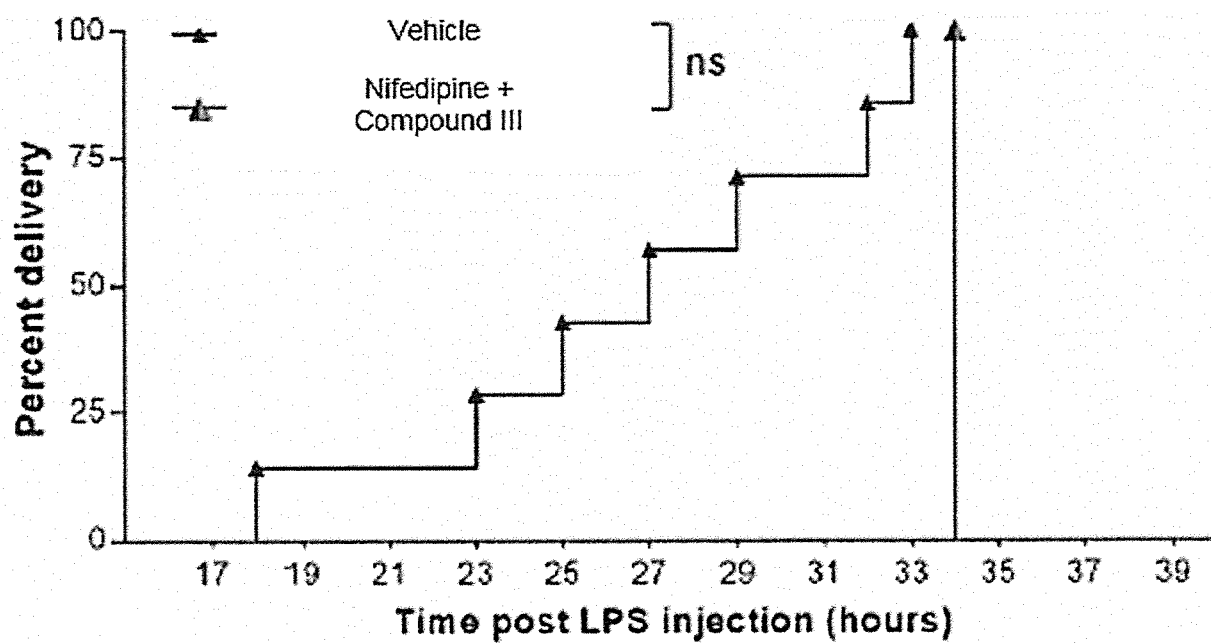


FIG. 69I

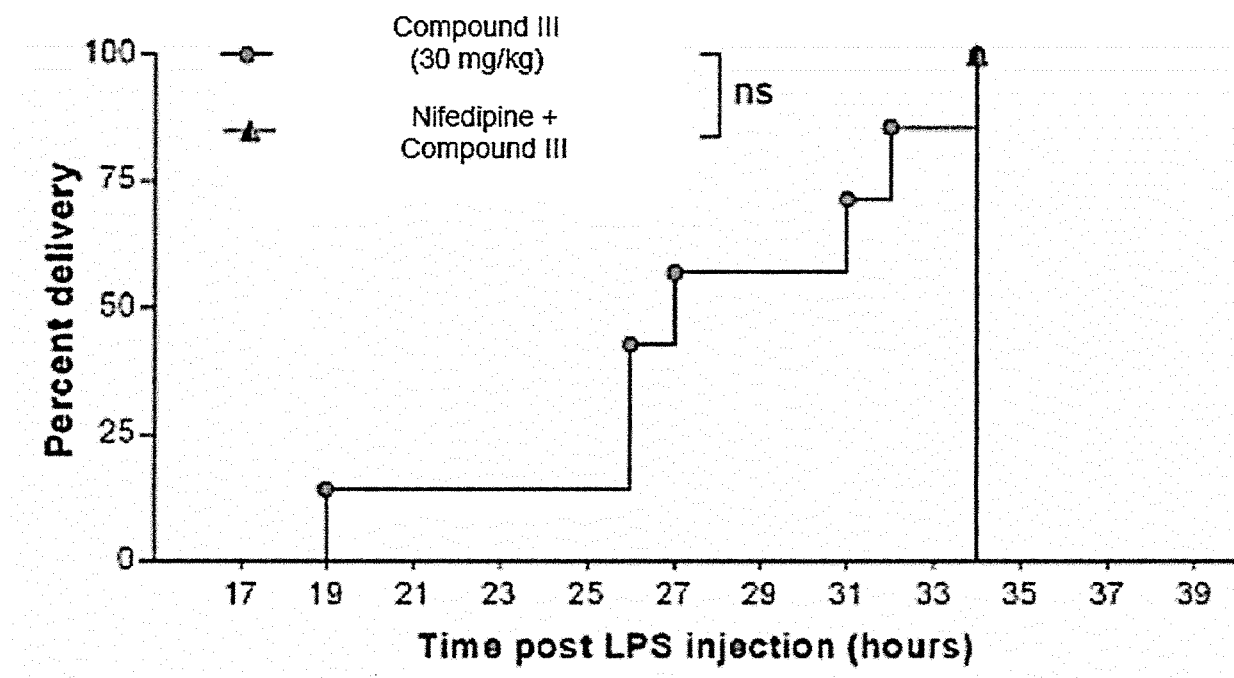


FIG. 69J

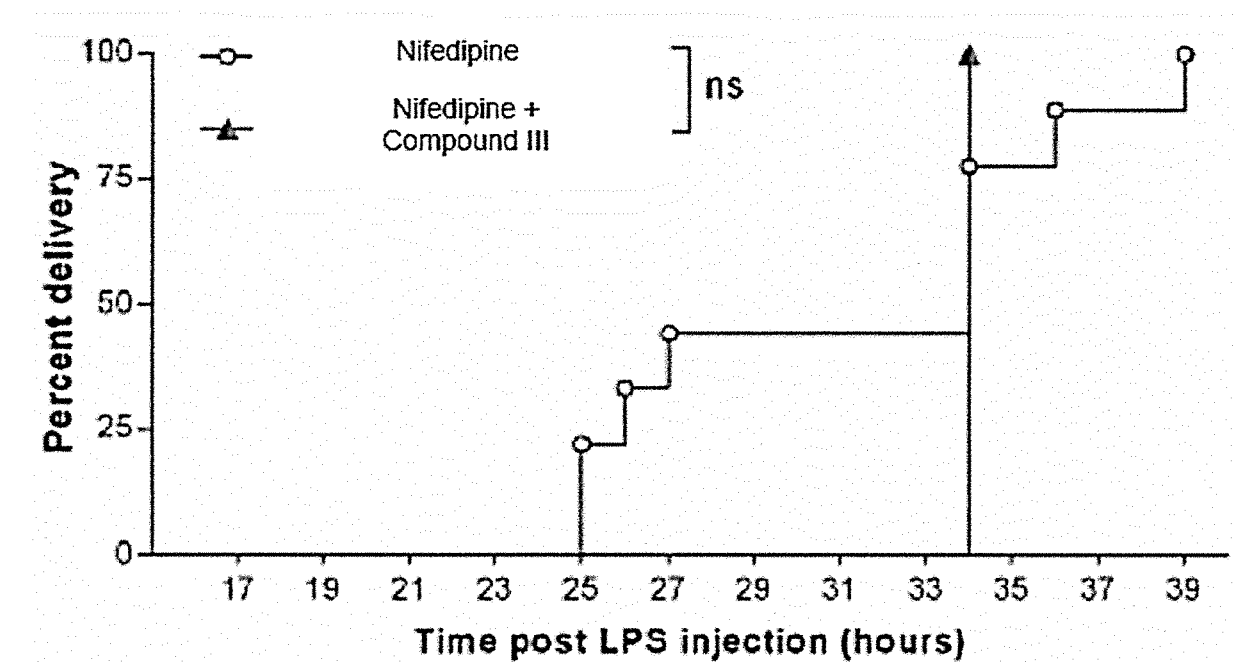


FIG. 69K

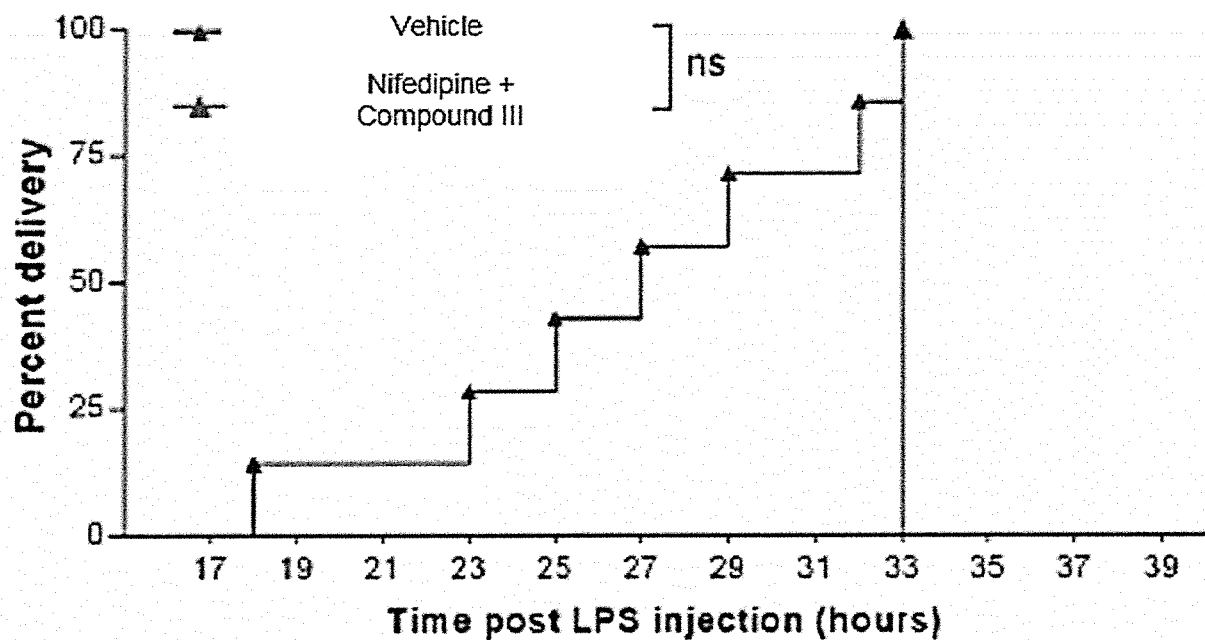


FIG. 69L

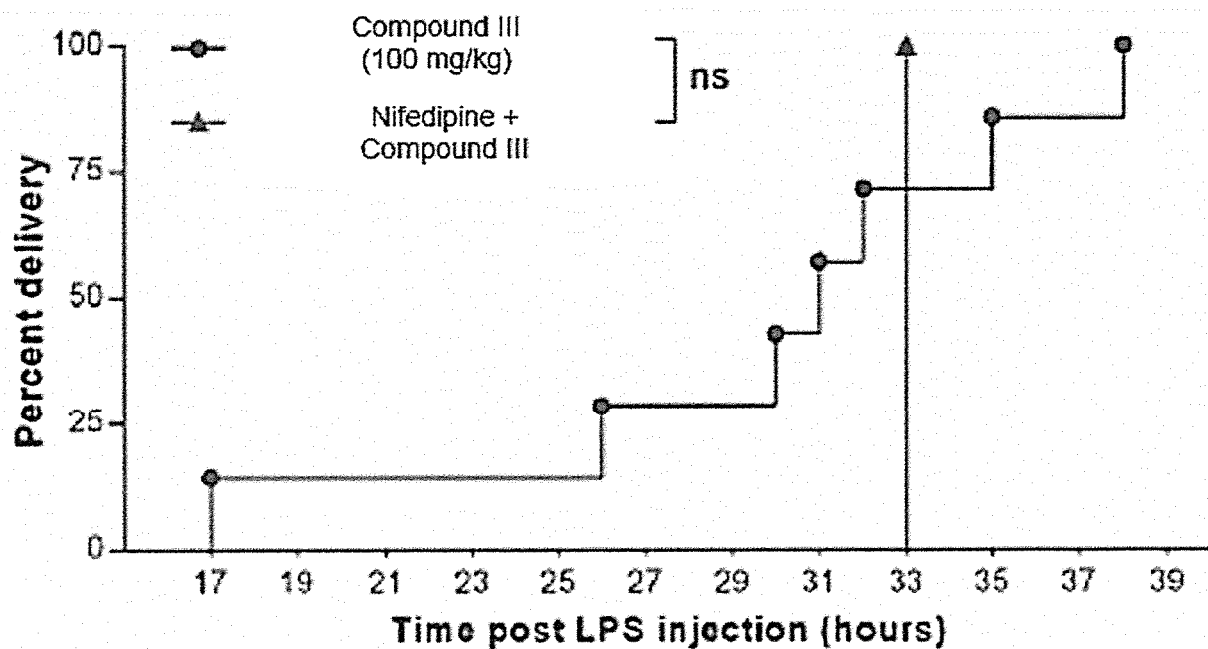


FIG. 69M

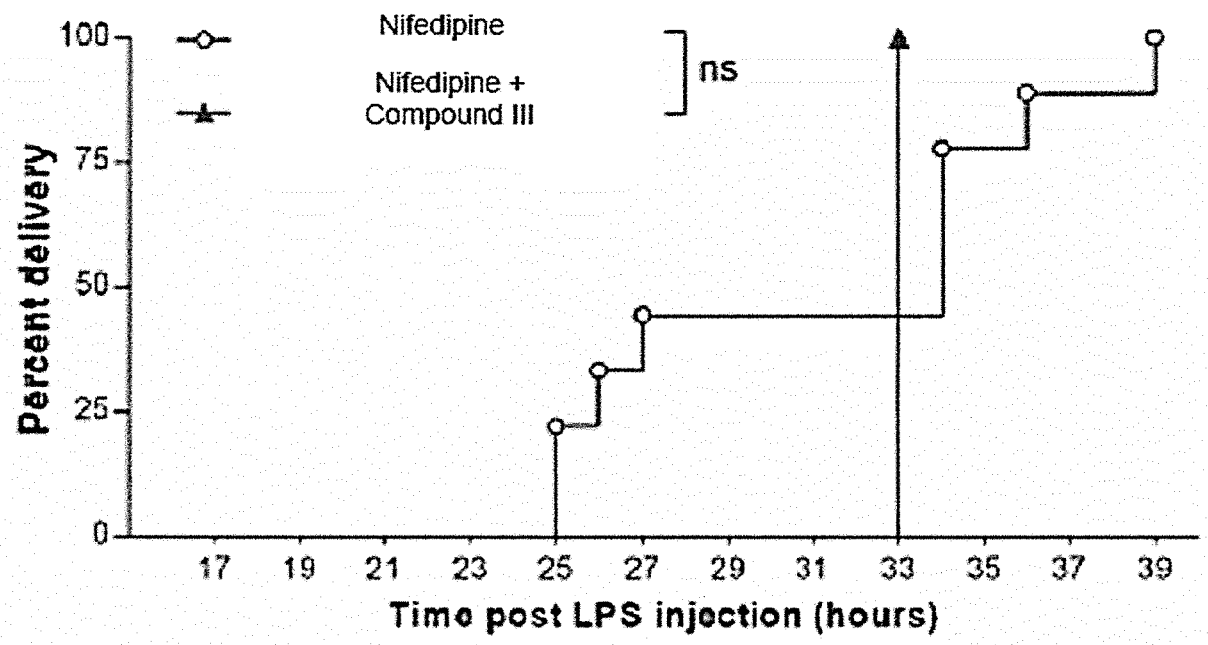


FIG. 70A

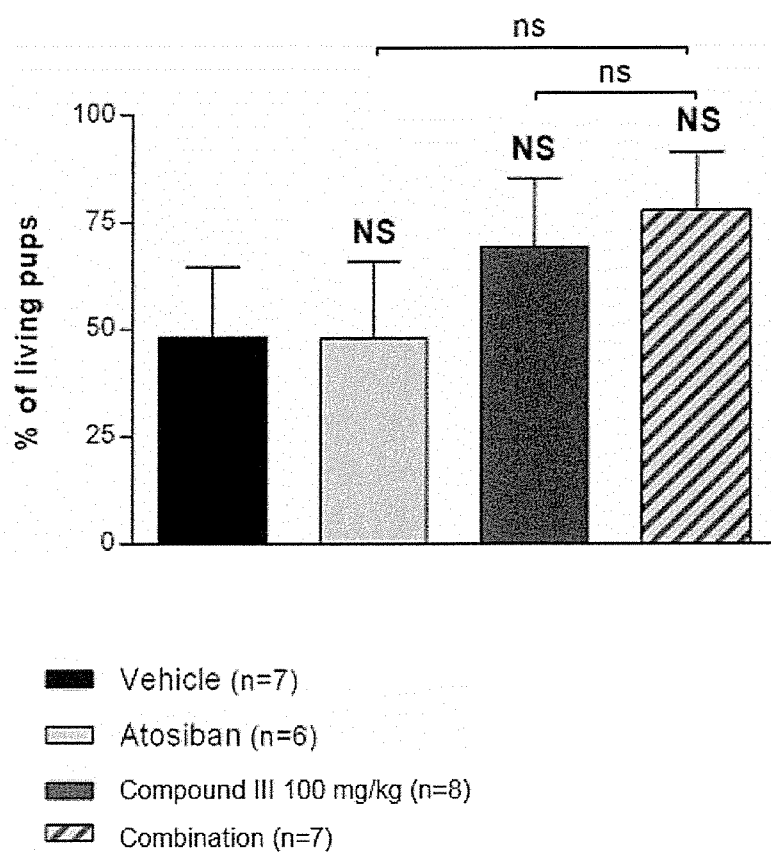


FIG. 70B

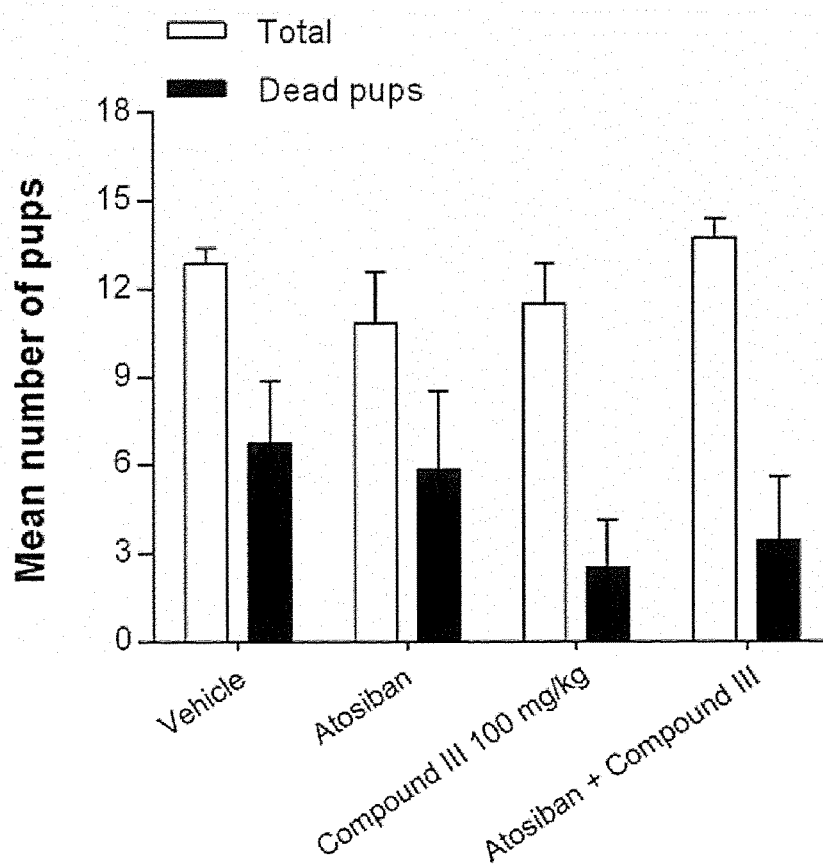


FIG. 71A

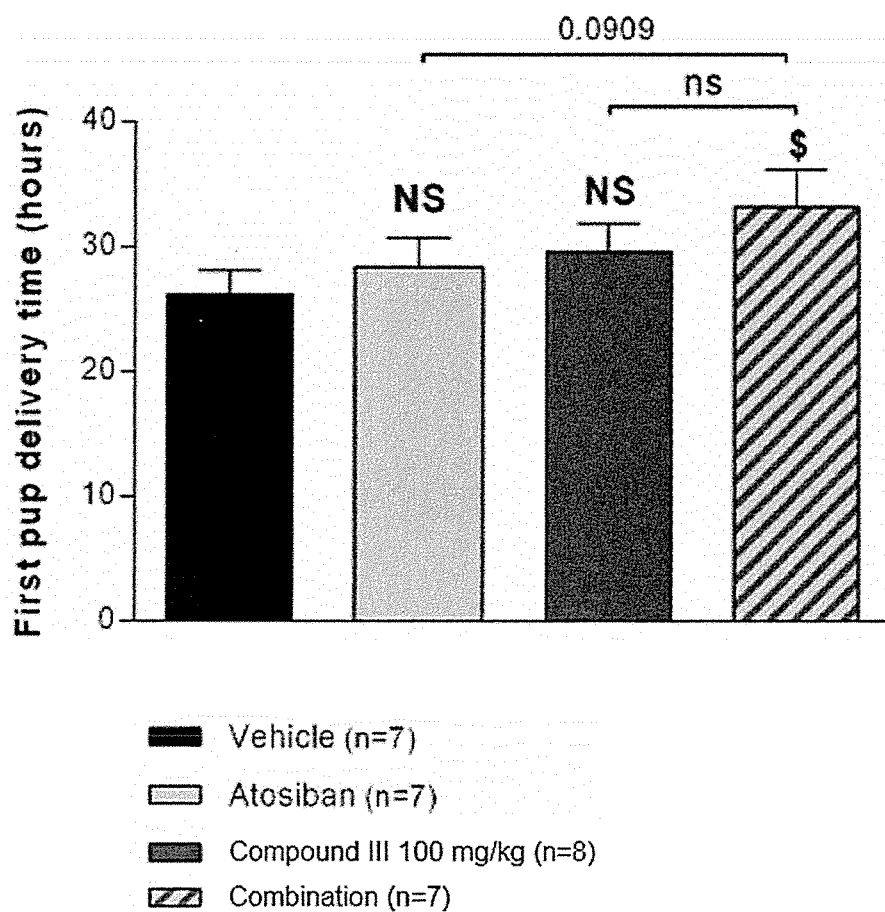


FIG. 71B

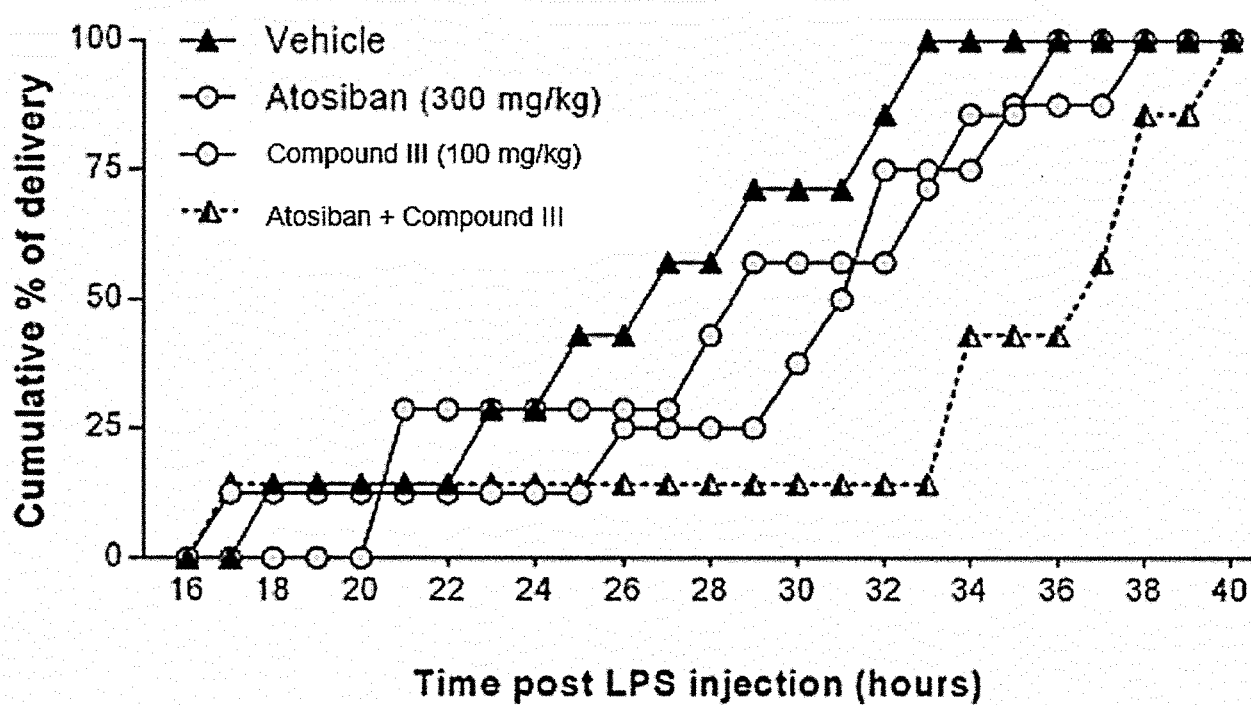


FIG. 71C

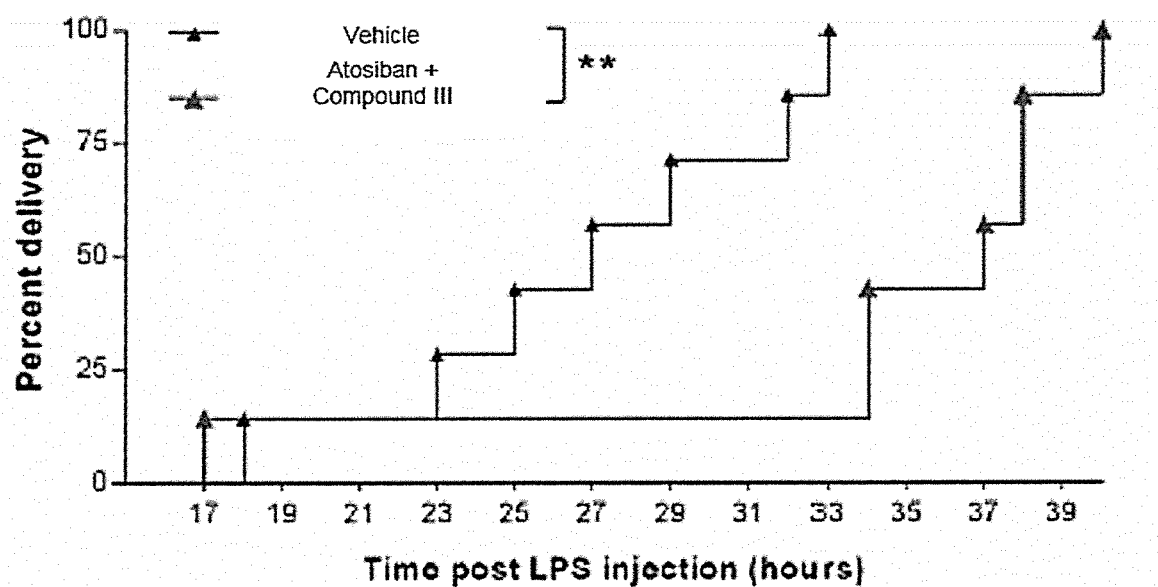


FIG. 71D

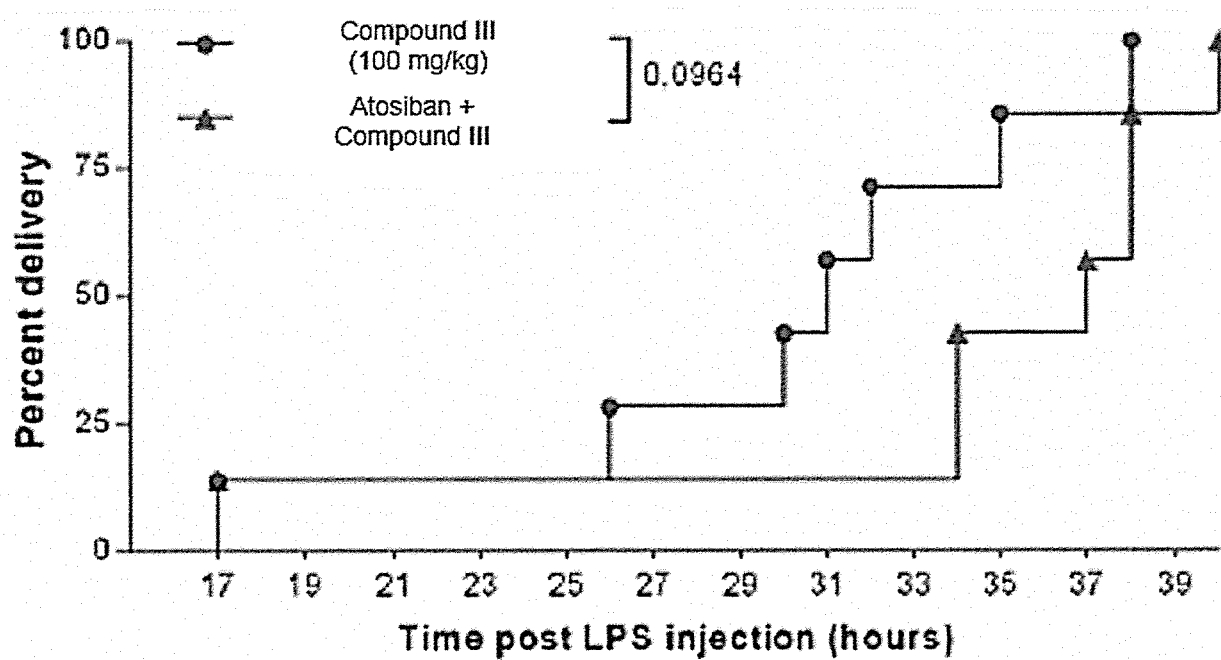


FIG. 71E

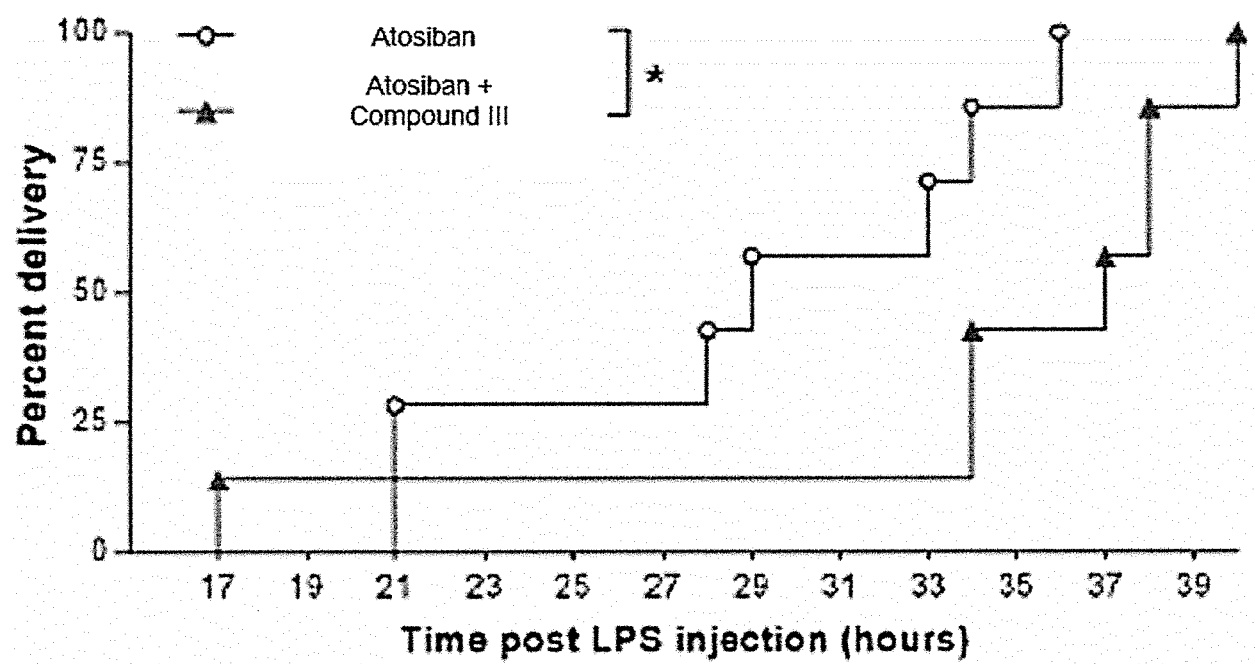


FIG. 72A

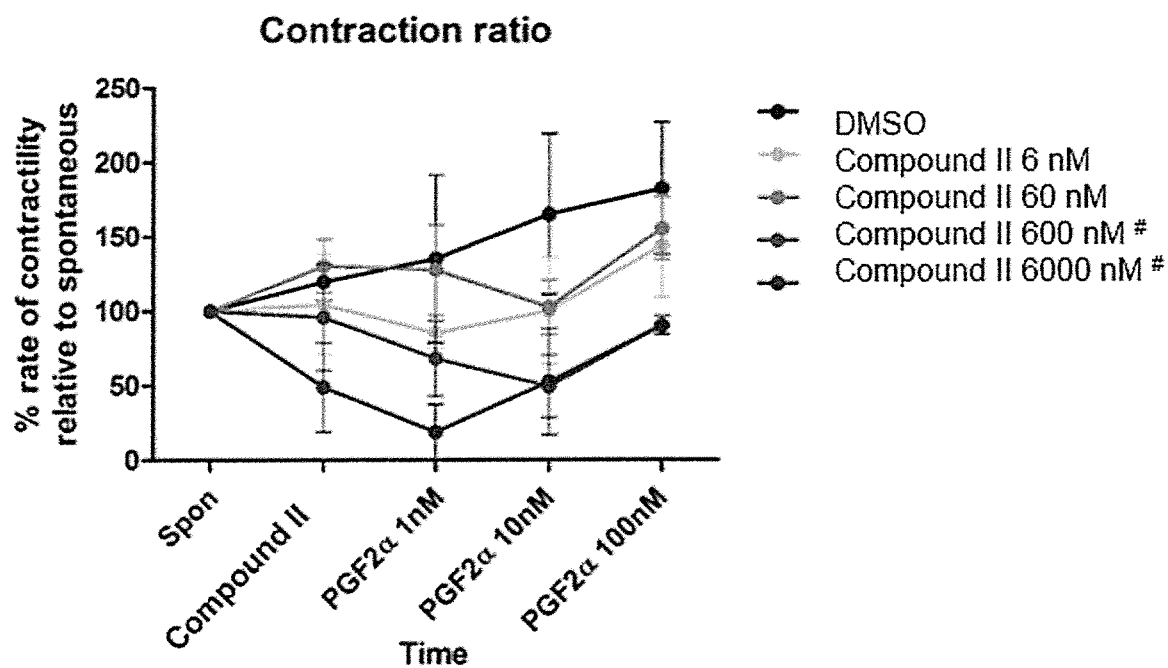


FIG. 72B

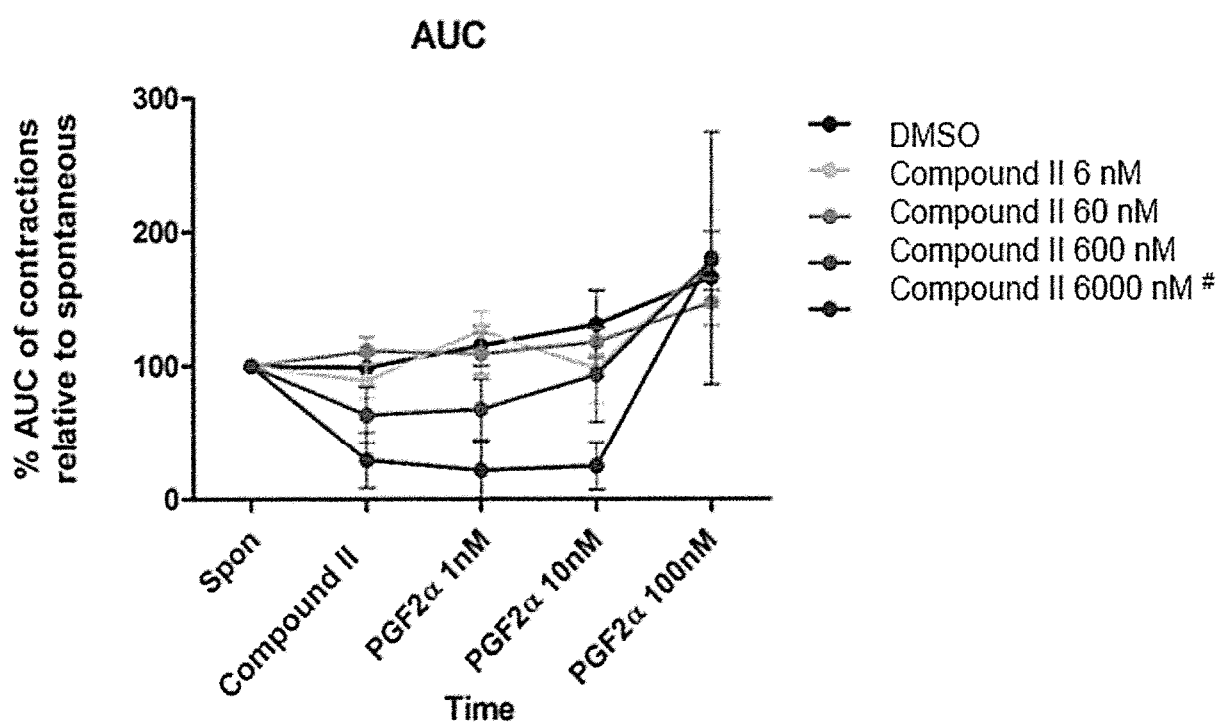


FIG. 72C

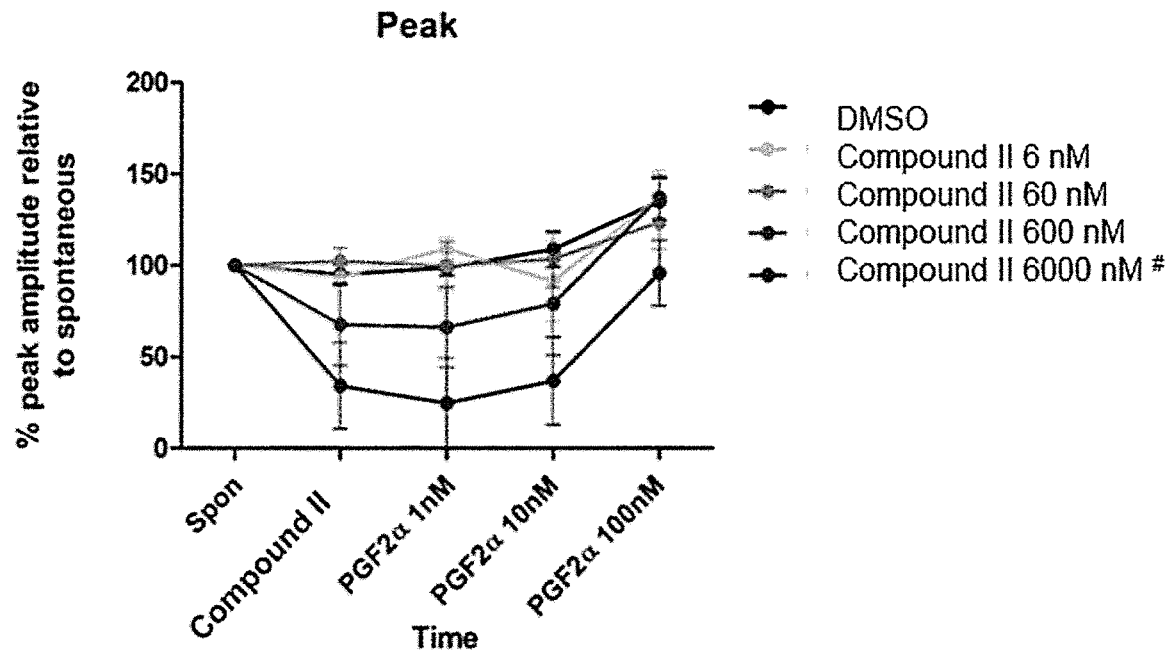


FIG. 72D

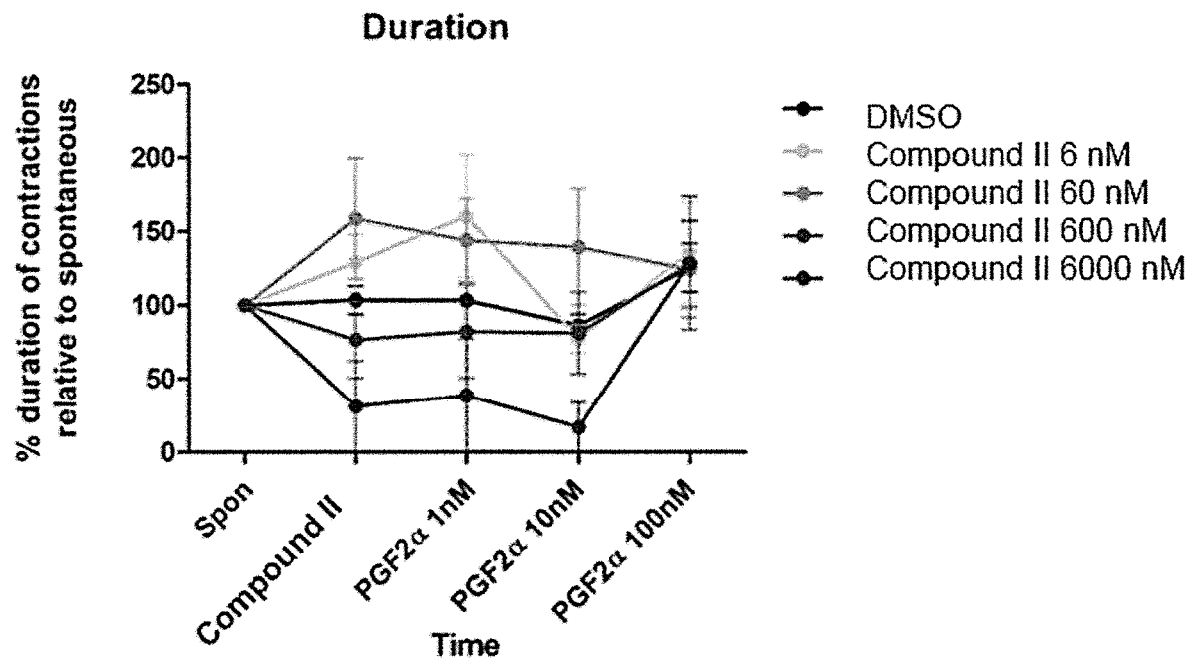


FIG. 72E

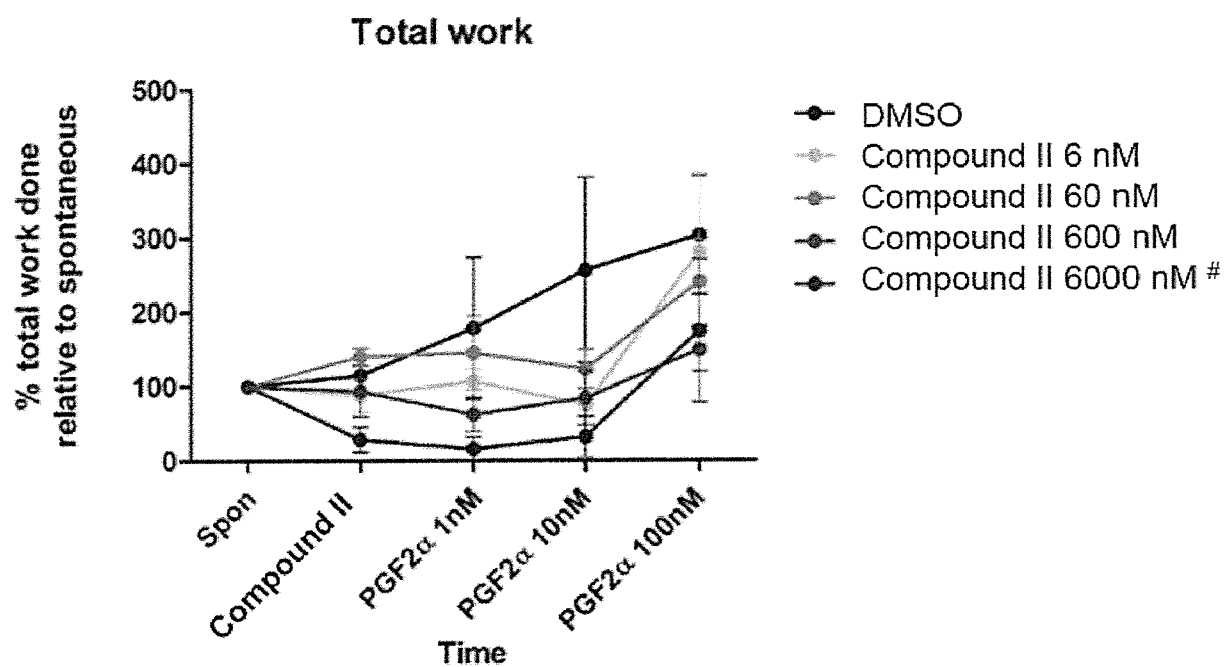


FIG. 73A

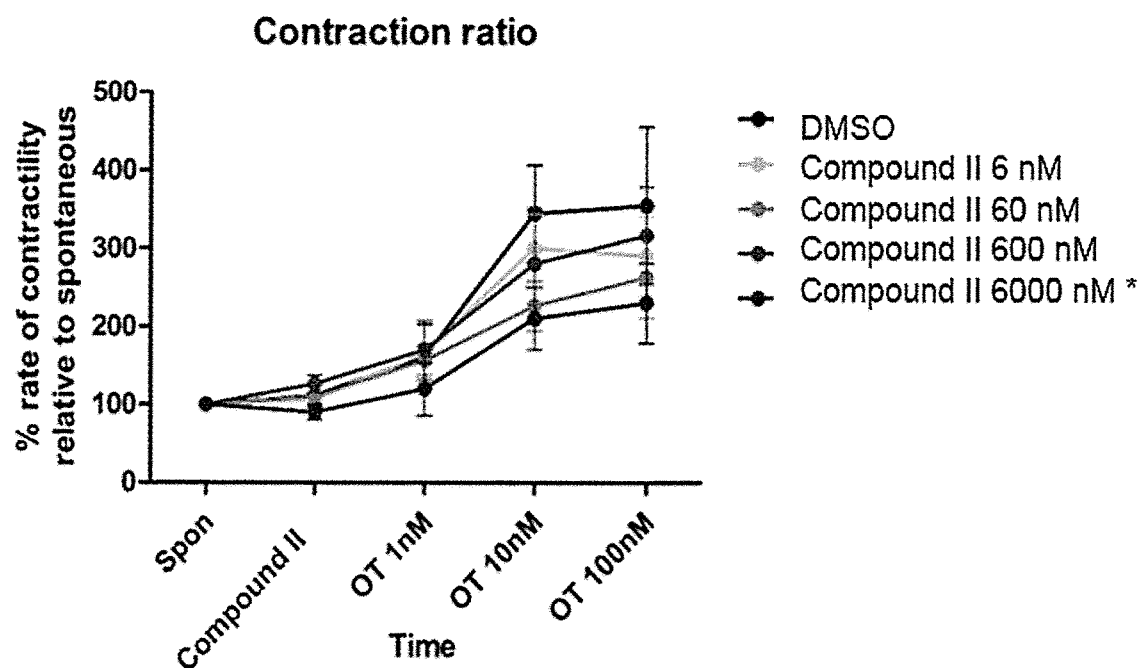


FIG. 73B

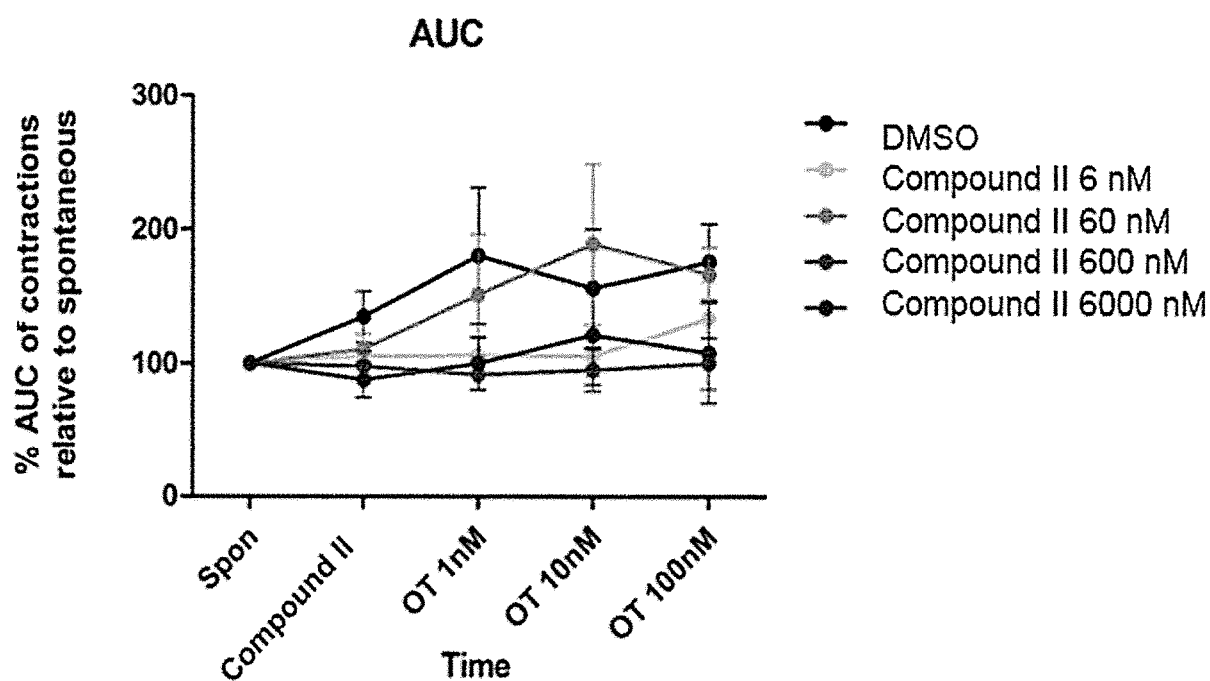


FIG. 73C

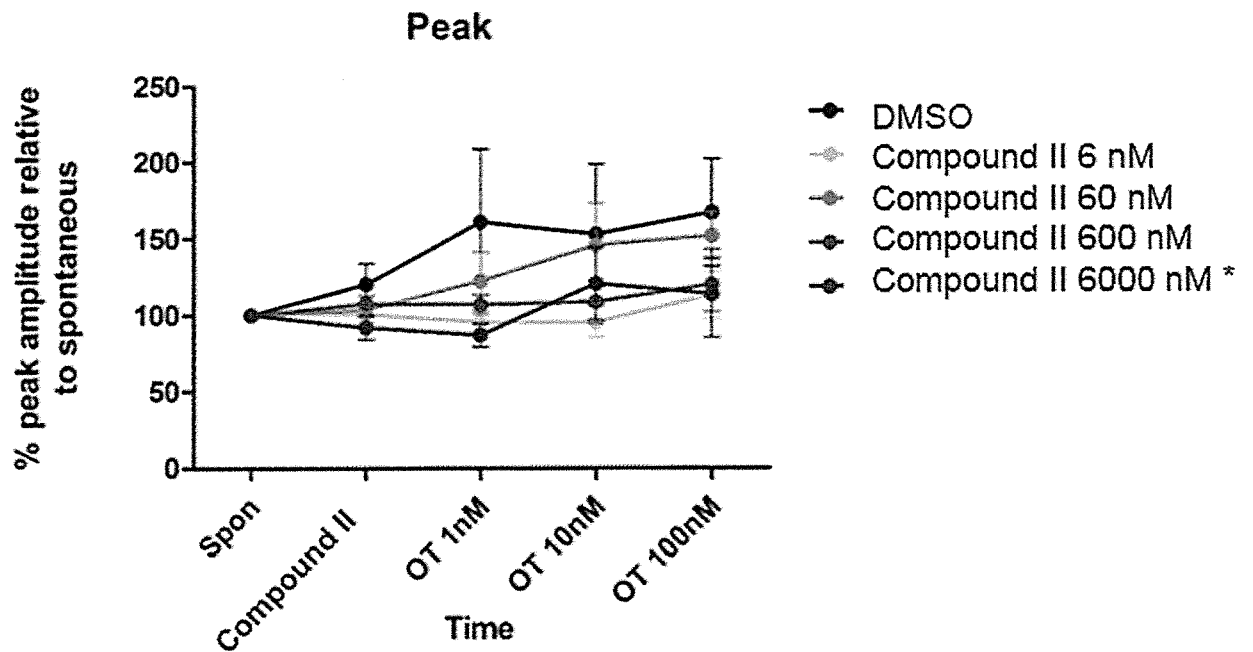


FIG. 73D

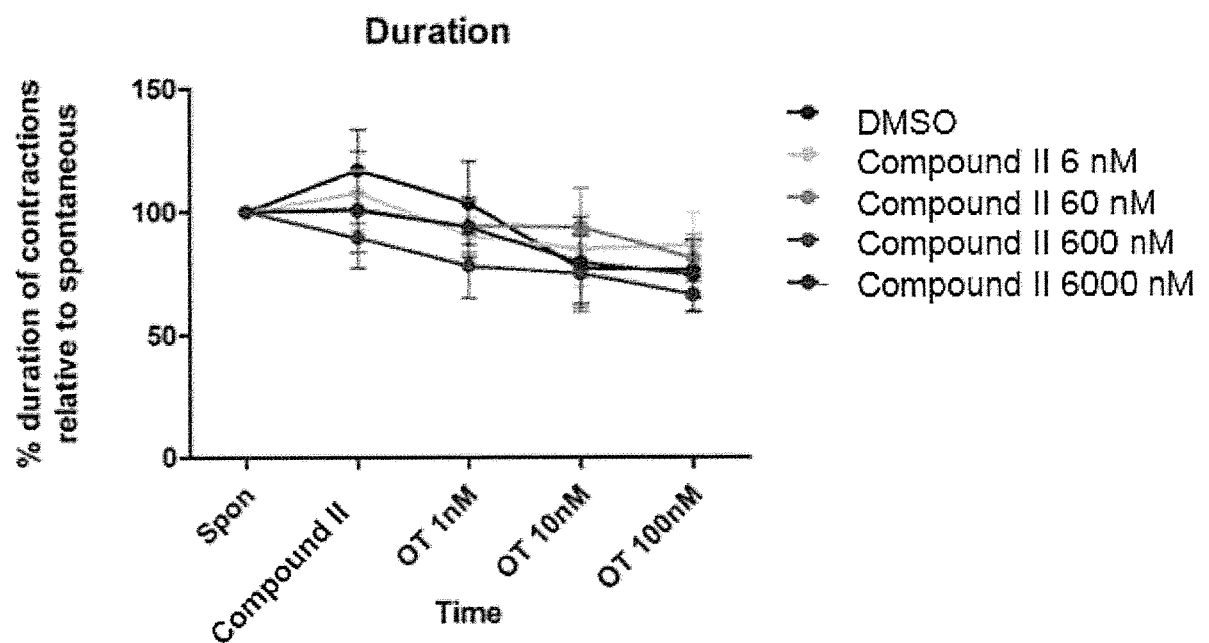


FIG. 73E

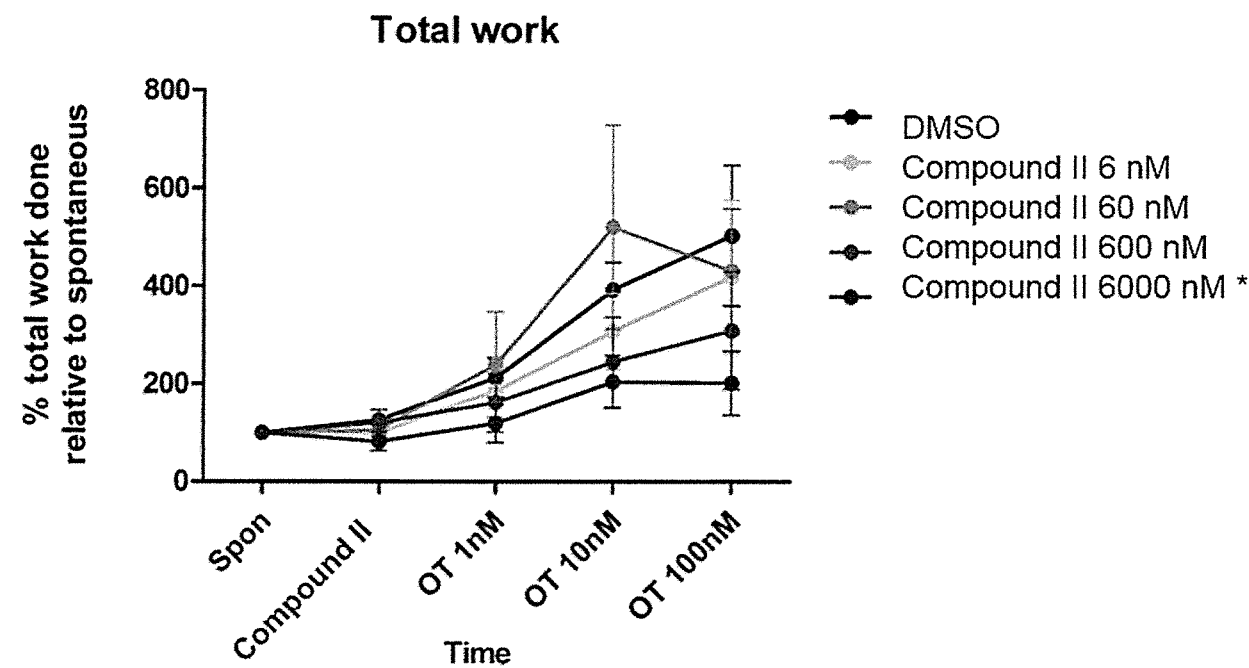


FIG. 74A

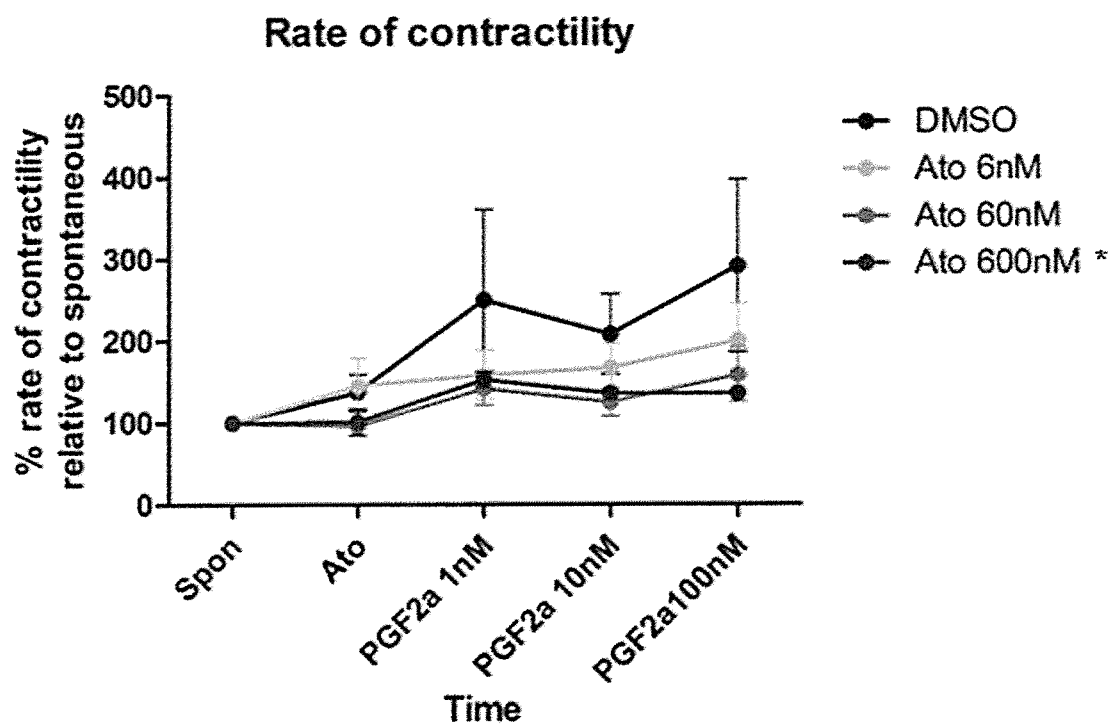


FIG. 74B

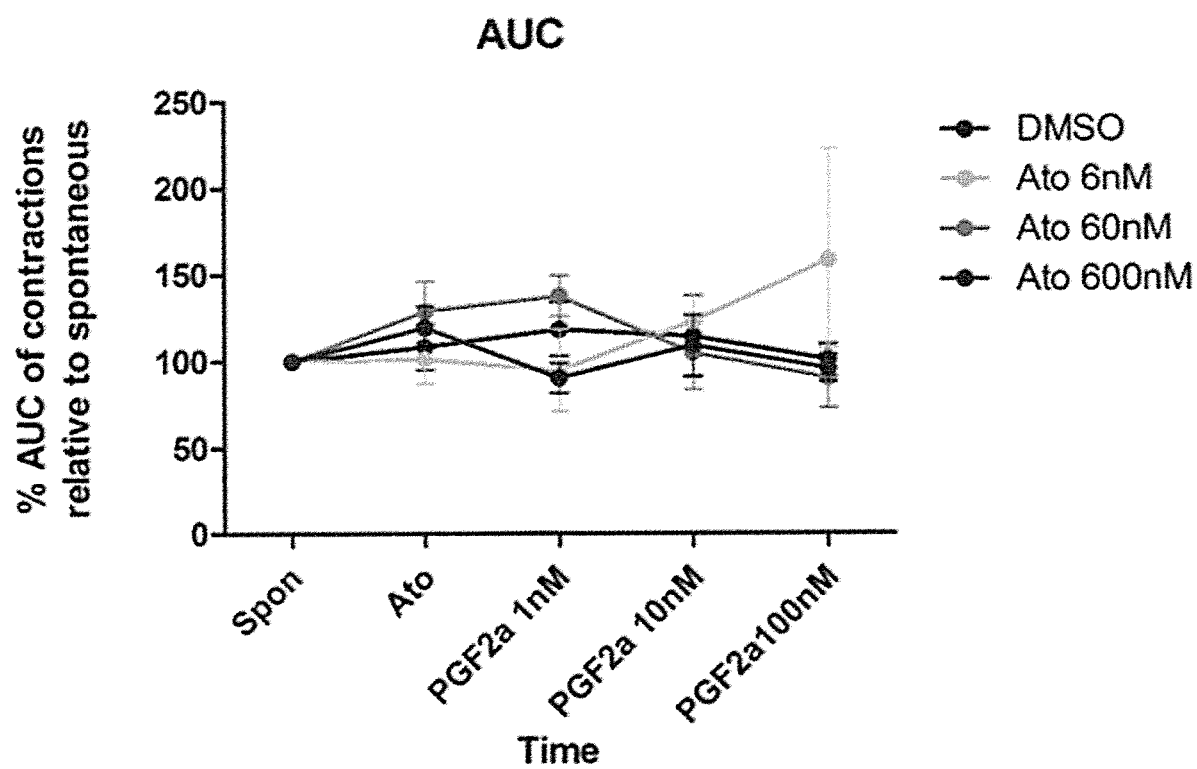


FIG. 74C

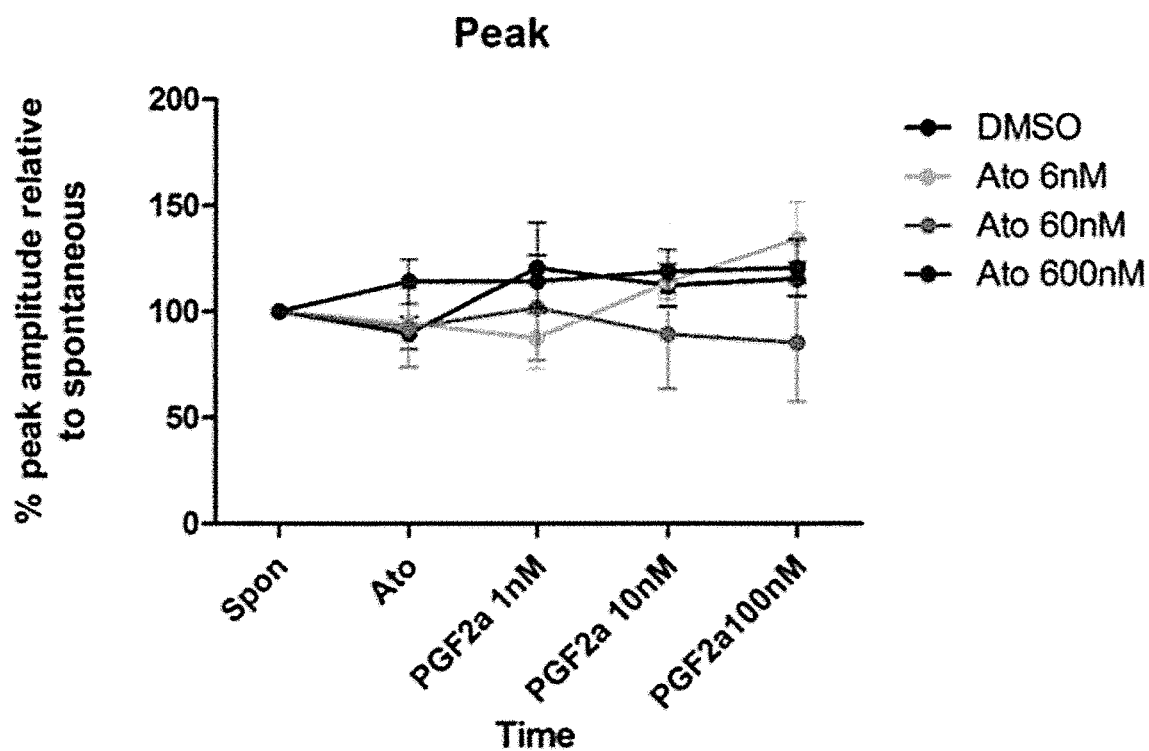


FIG. 74D

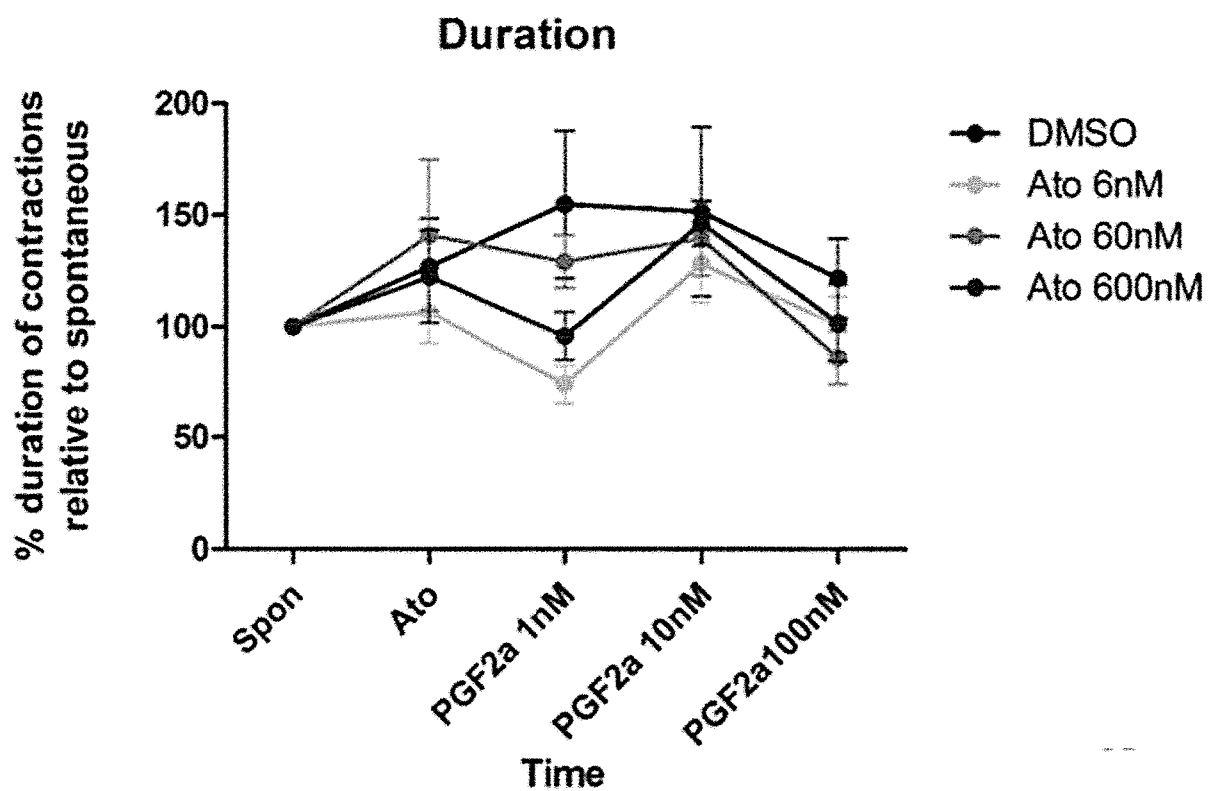


FIG. 74E

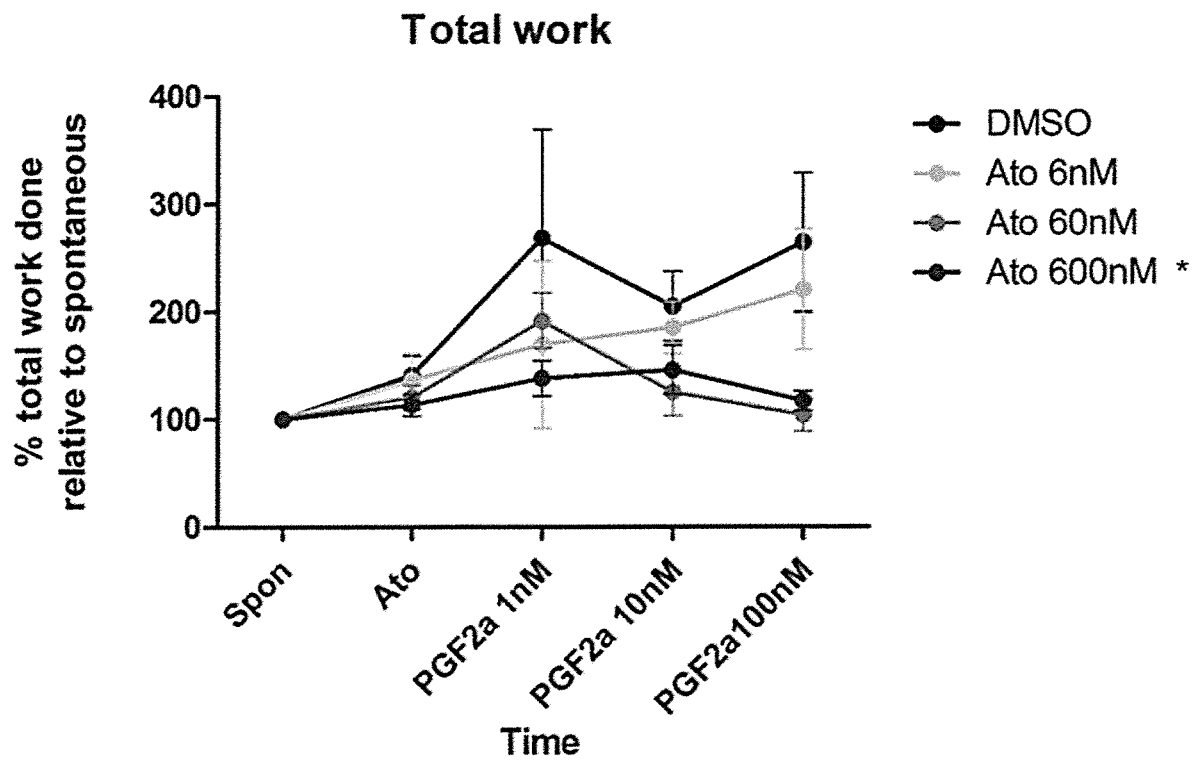


FIG. 75A

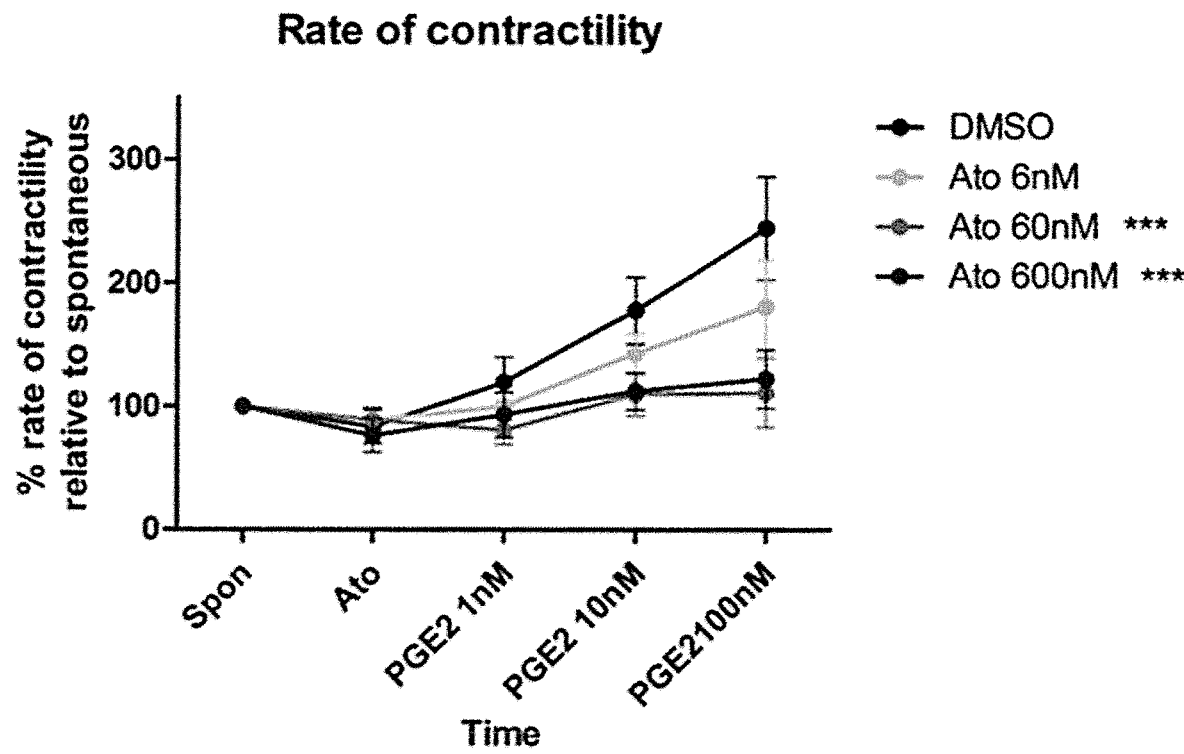


FIG. 75B

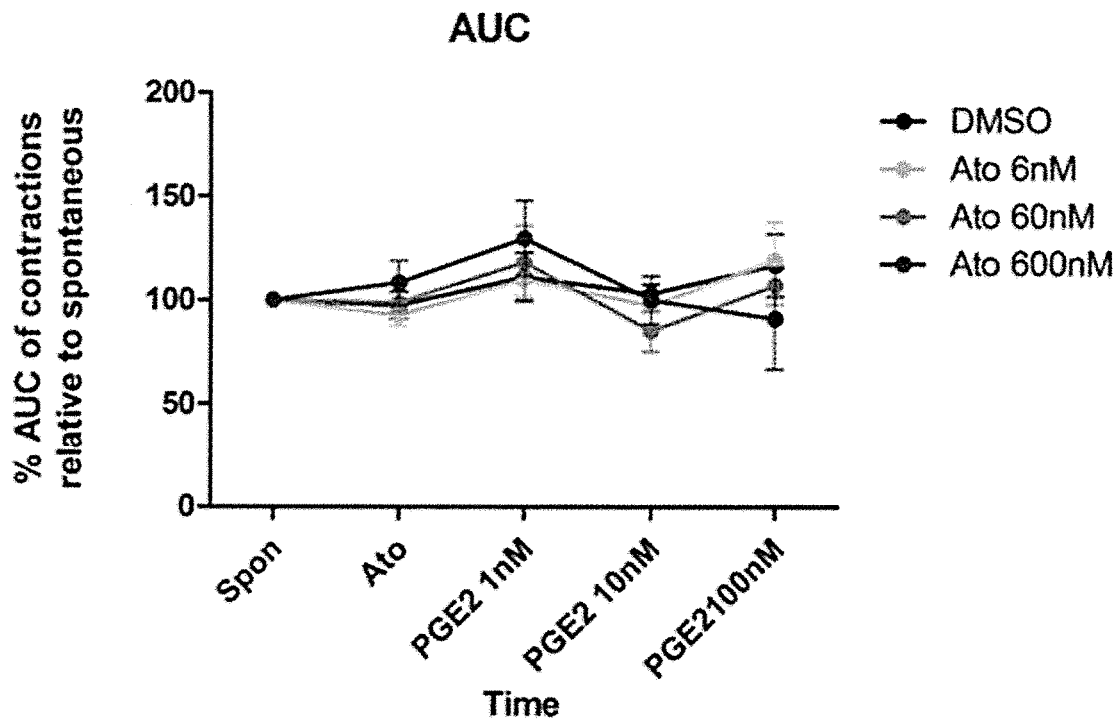


FIG. 75C

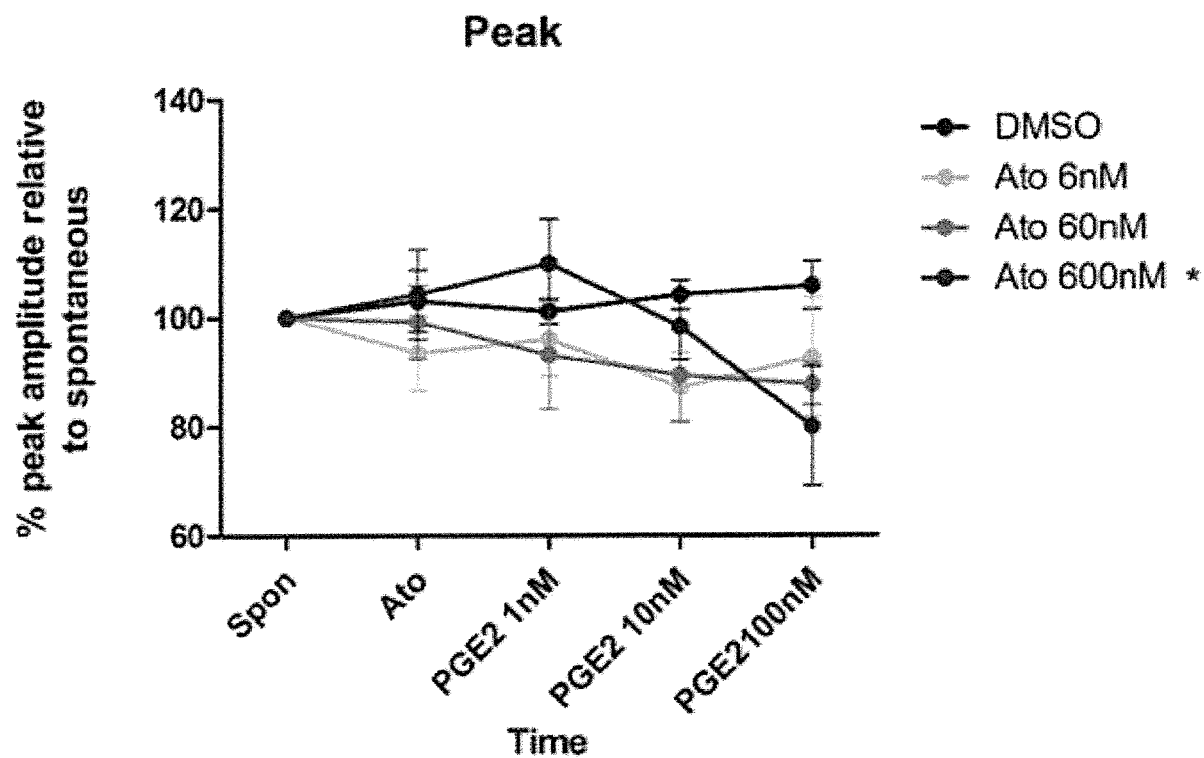


FIG. 75D

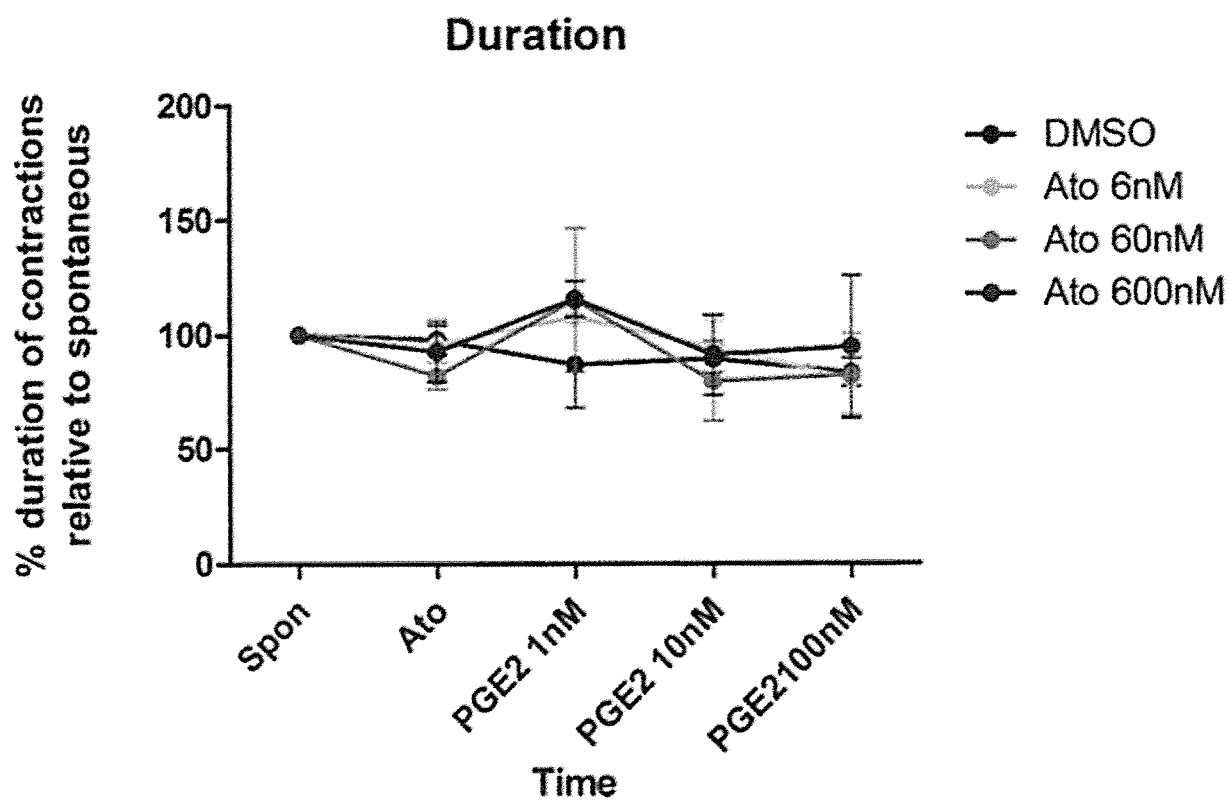


FIG. 75E

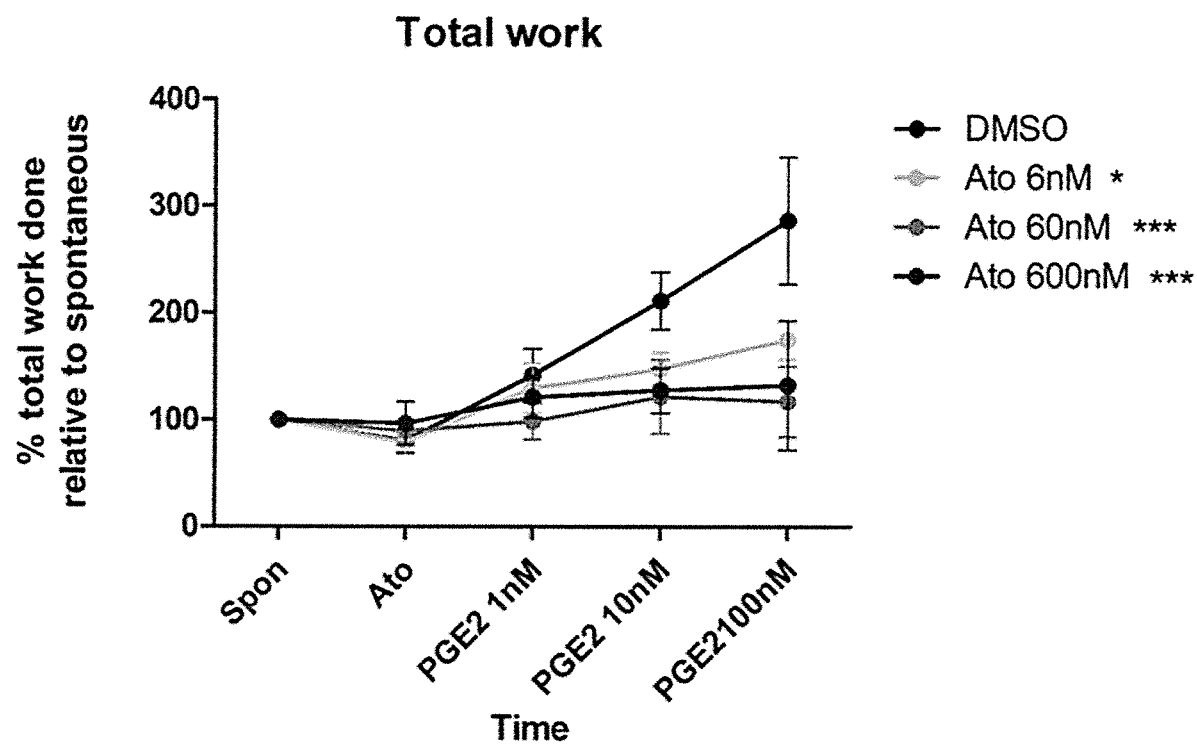


FIG. 76A

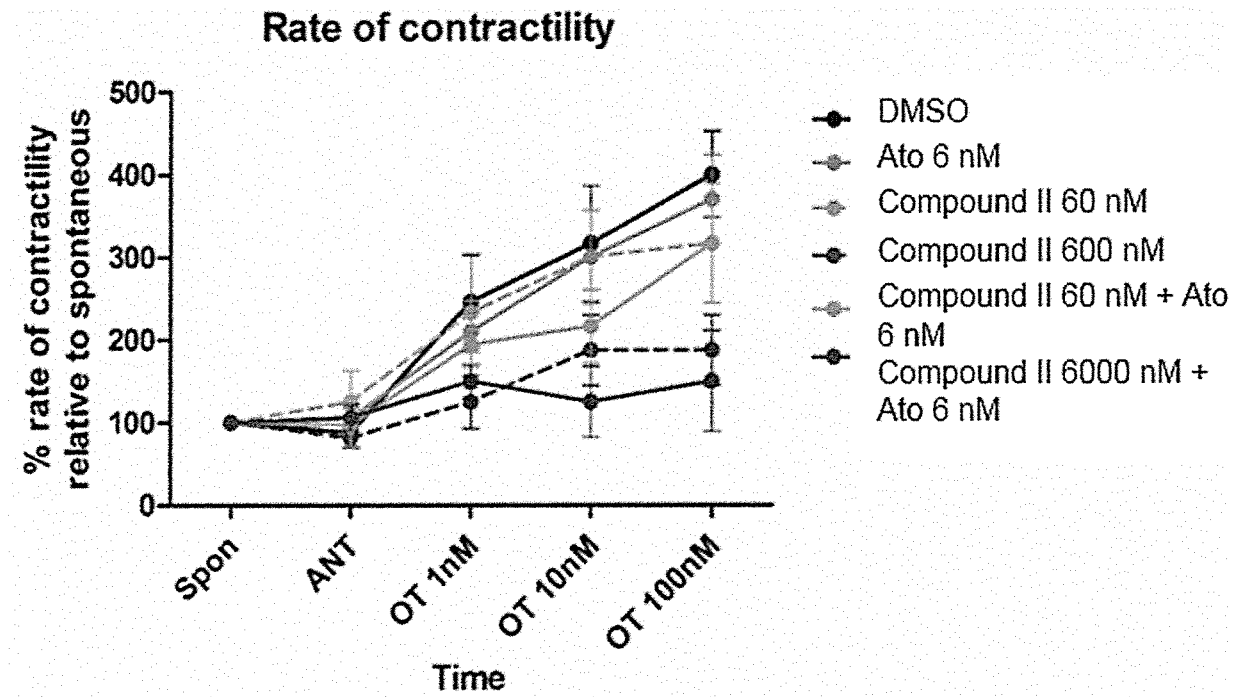


FIG. 76B

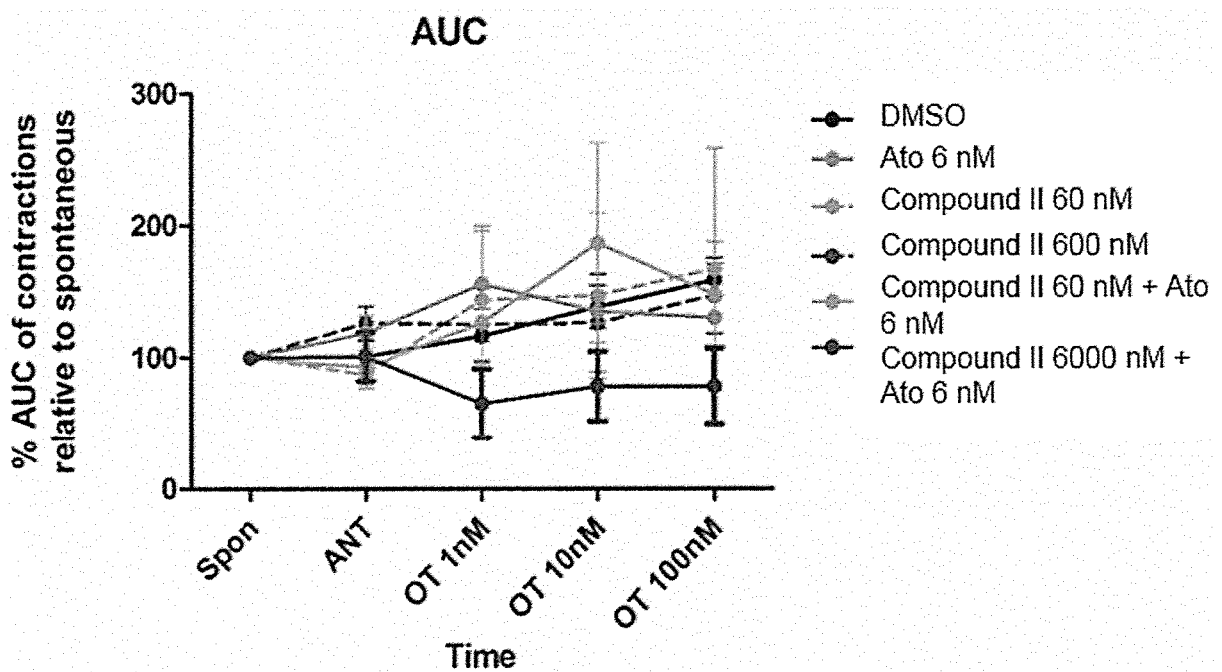


FIG. 76C

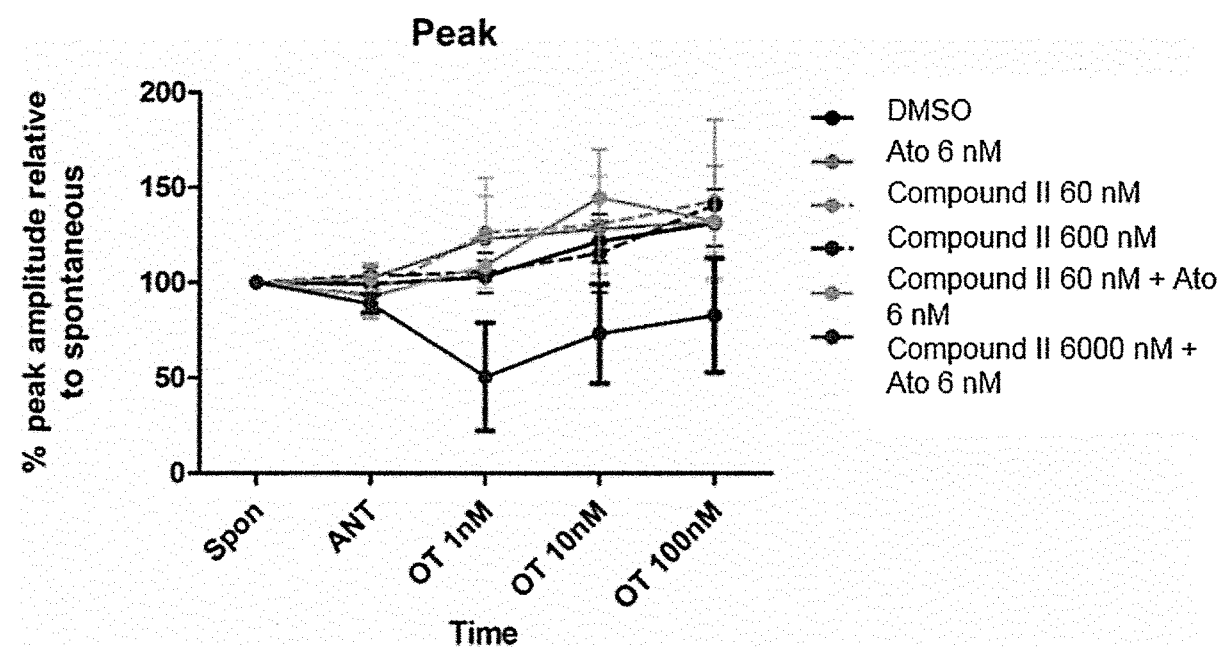


FIG. 76D

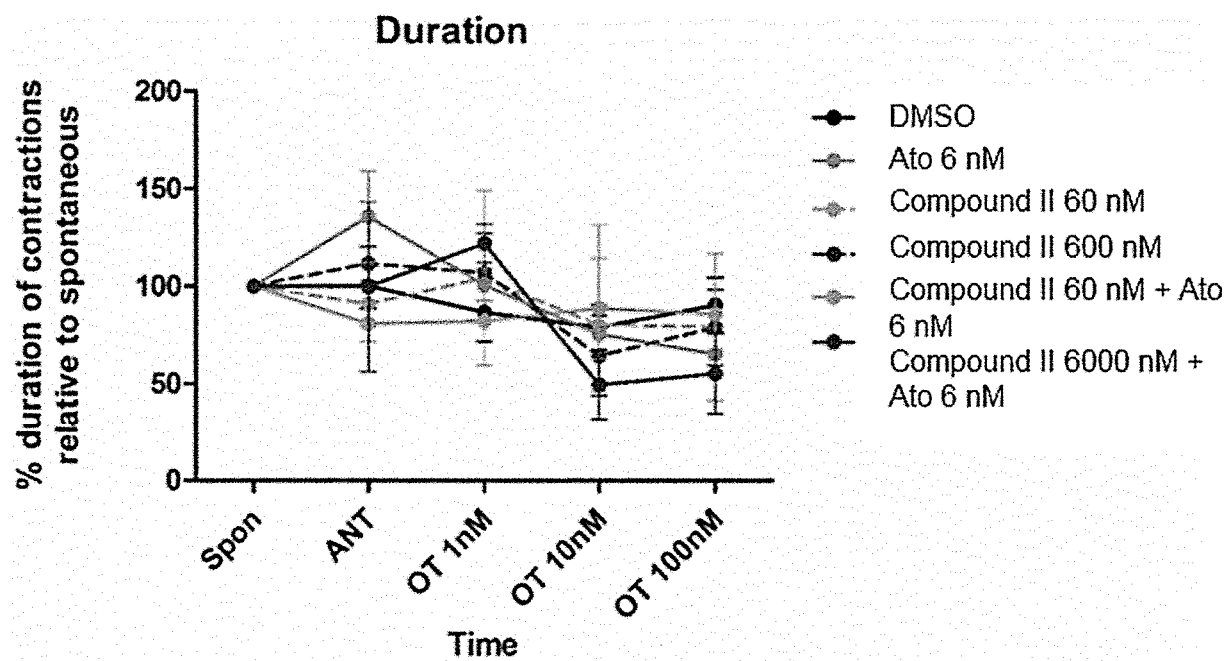


FIG. 76E

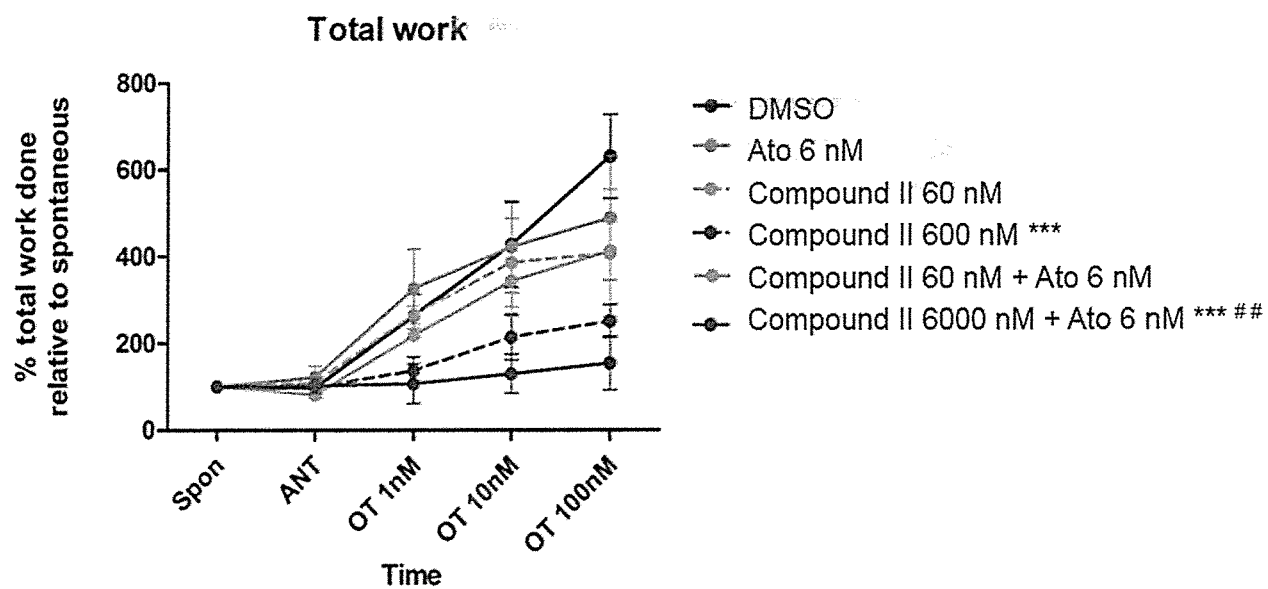


FIG. 77A

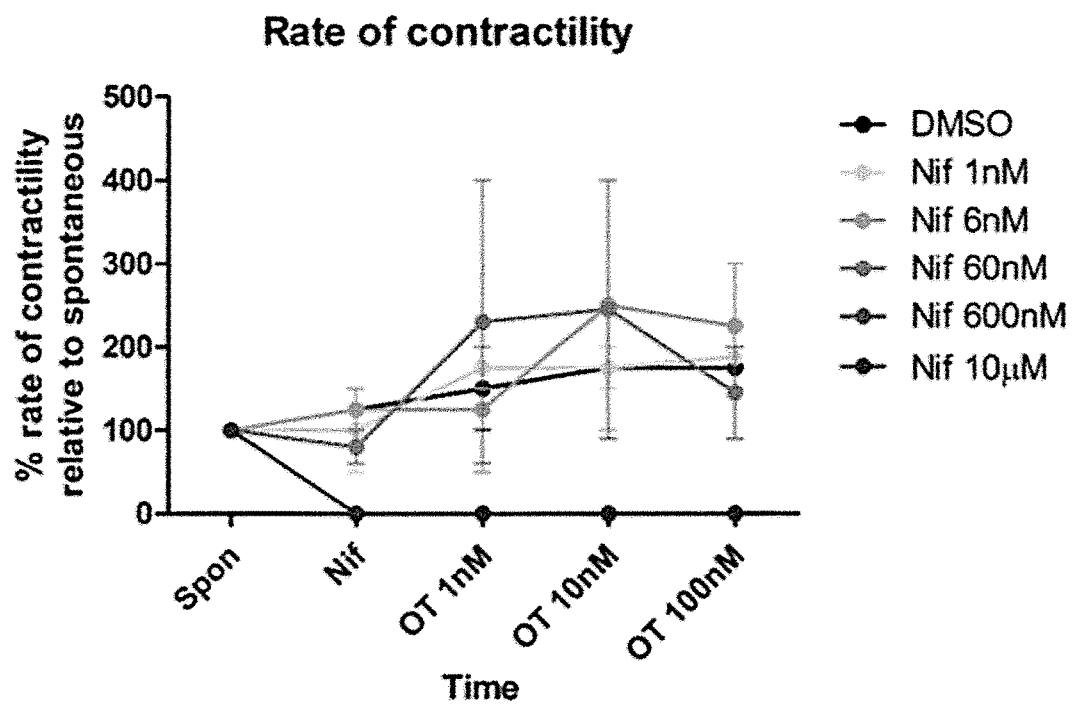


FIG. 77B

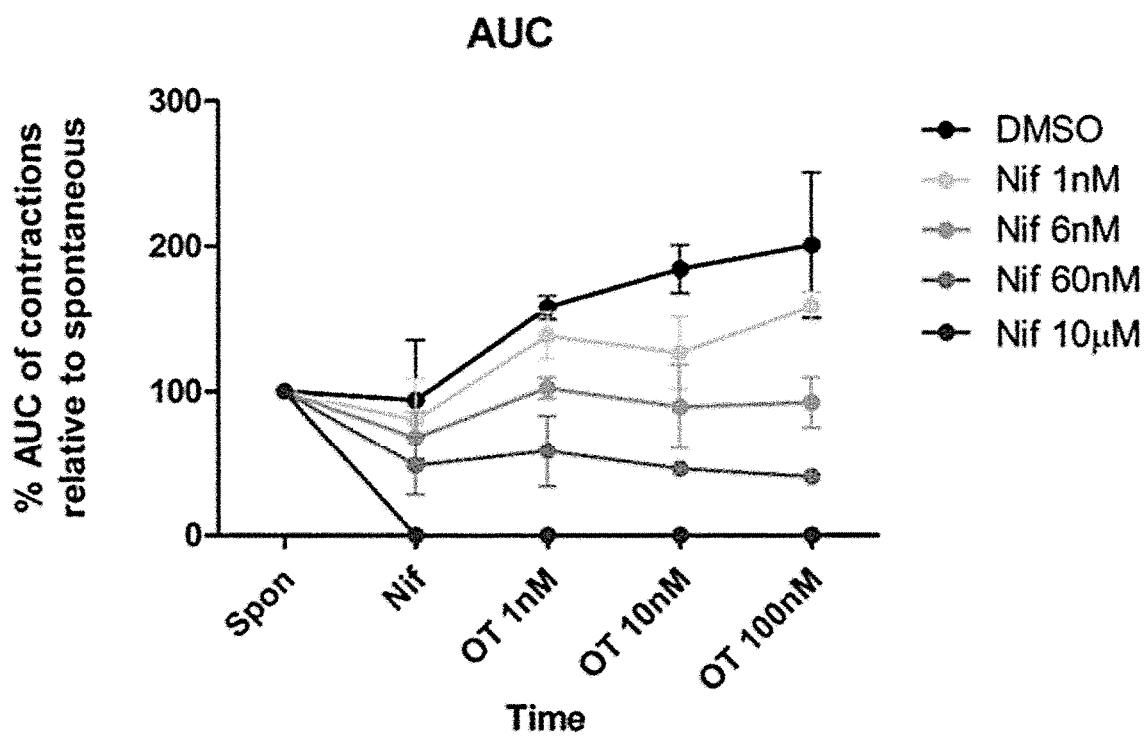


FIG. 77C

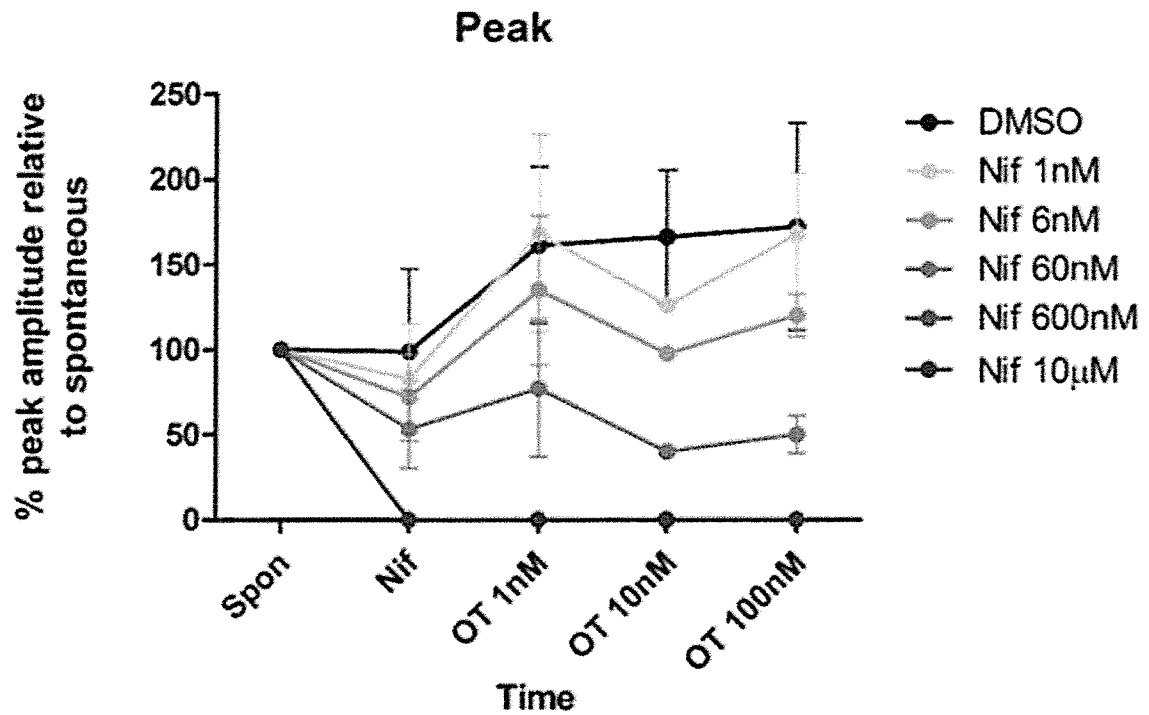


FIG. 77D

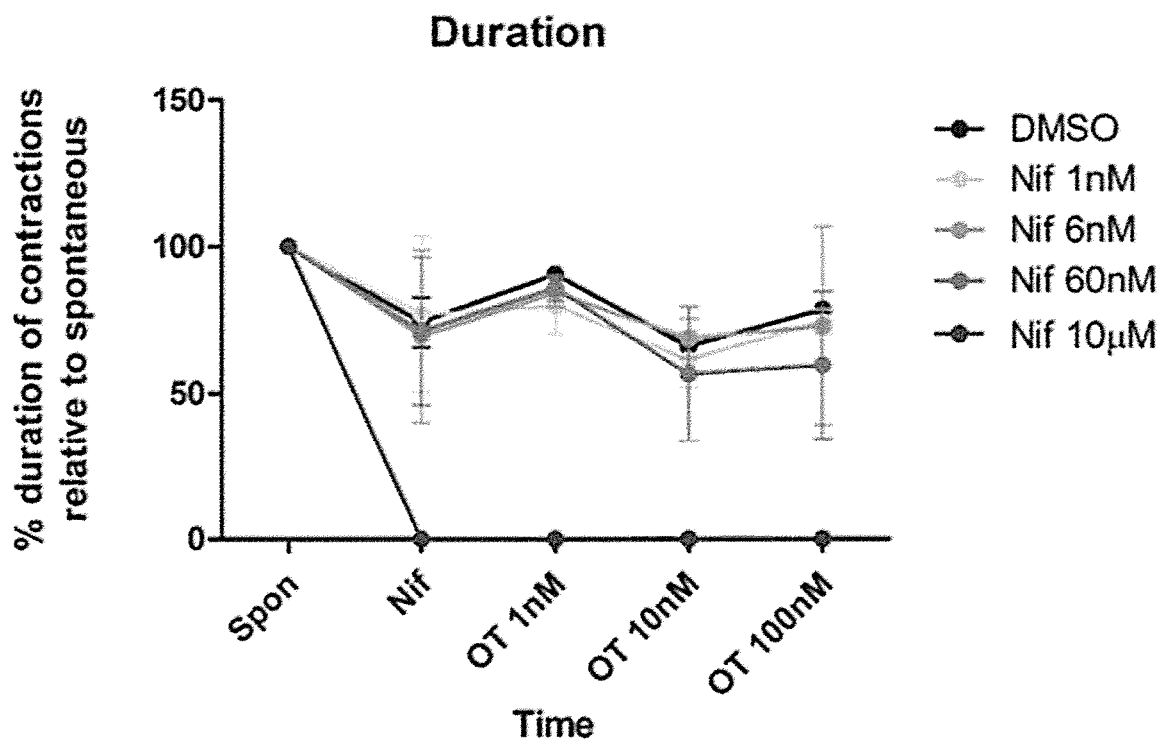


FIG. 77E

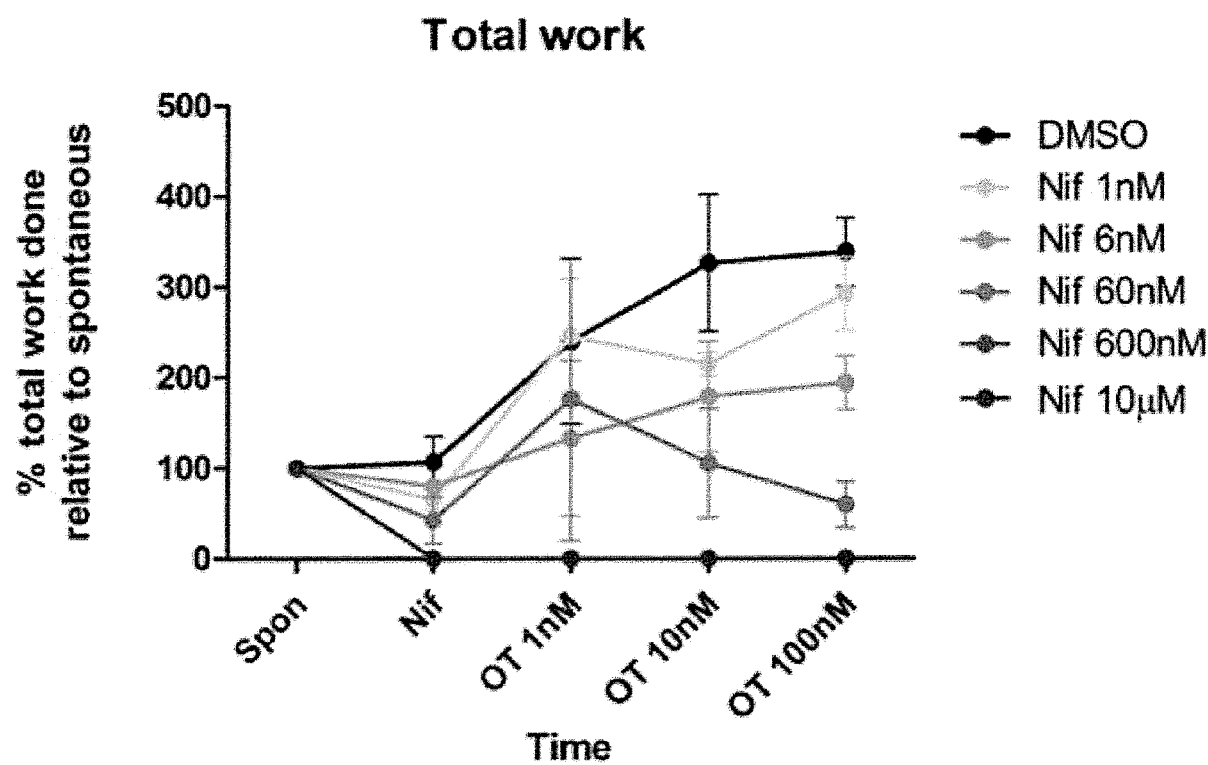


FIG. 78A

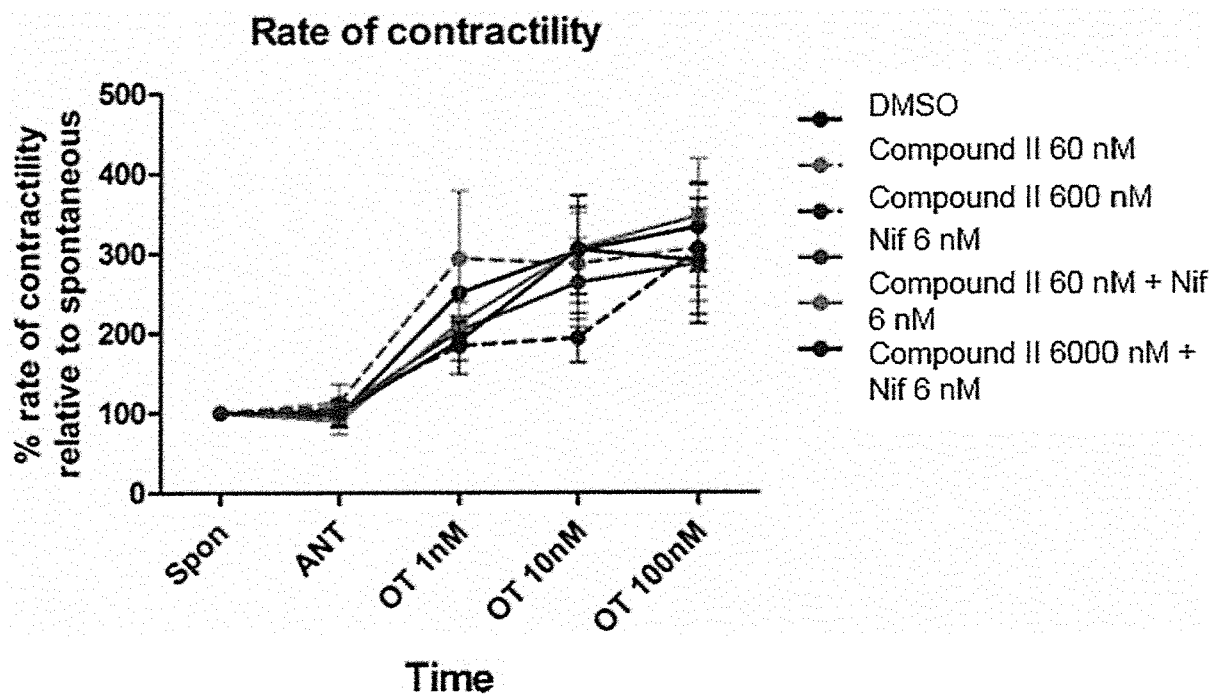


FIG. 78B

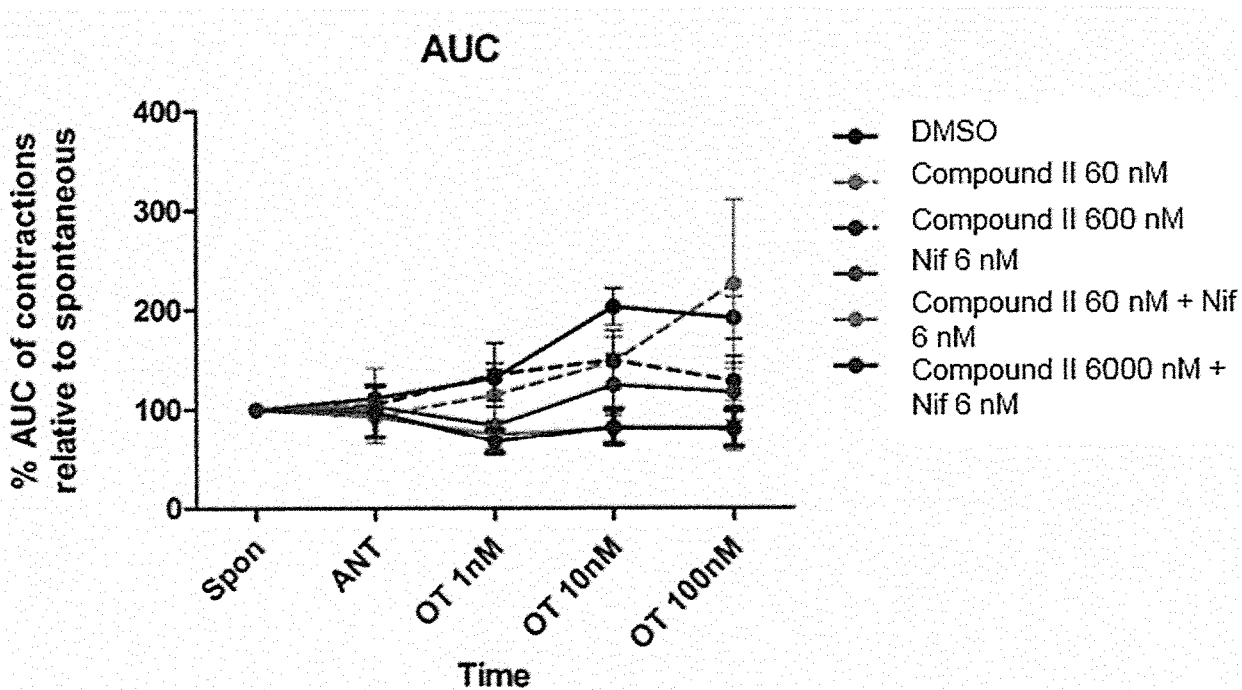


FIG. 78C

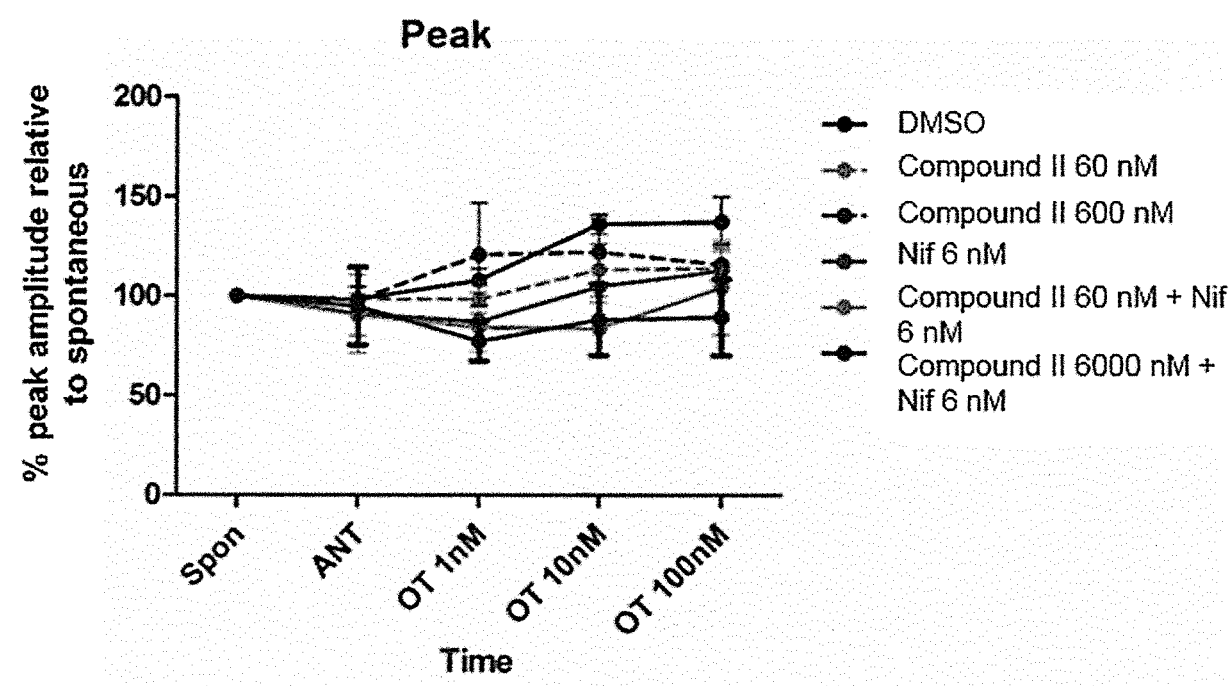


FIG. 78D

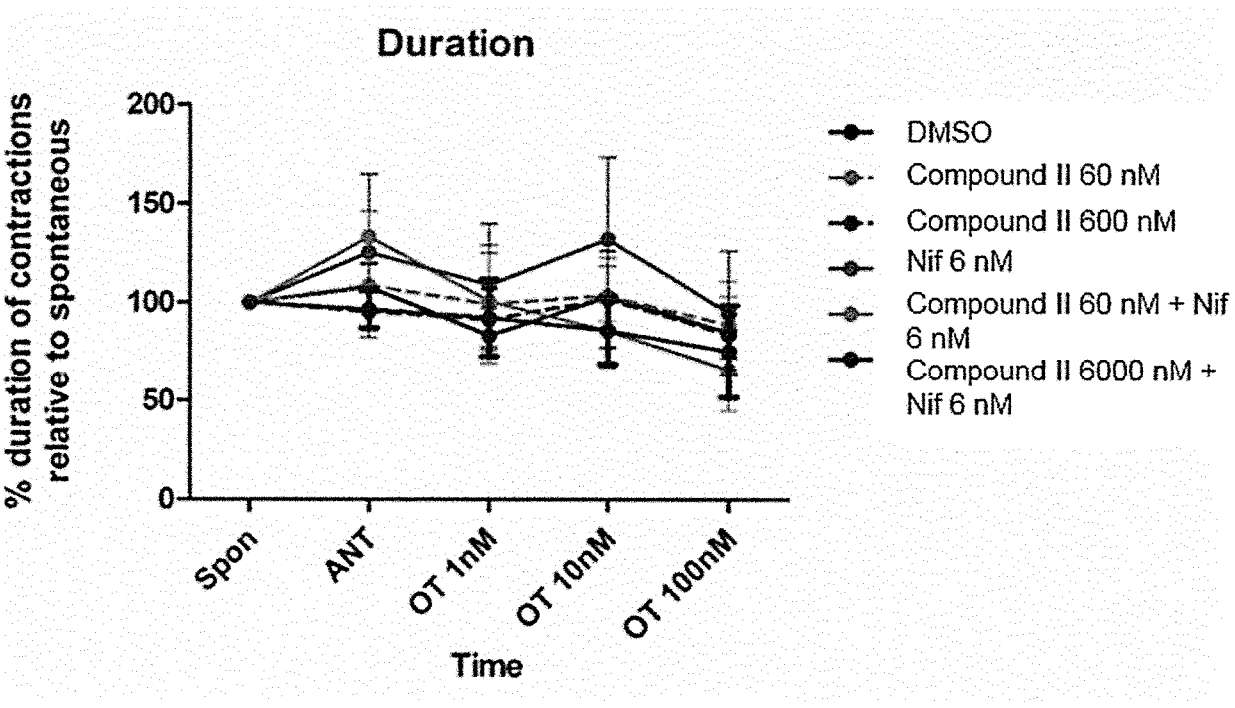


FIG. 78E

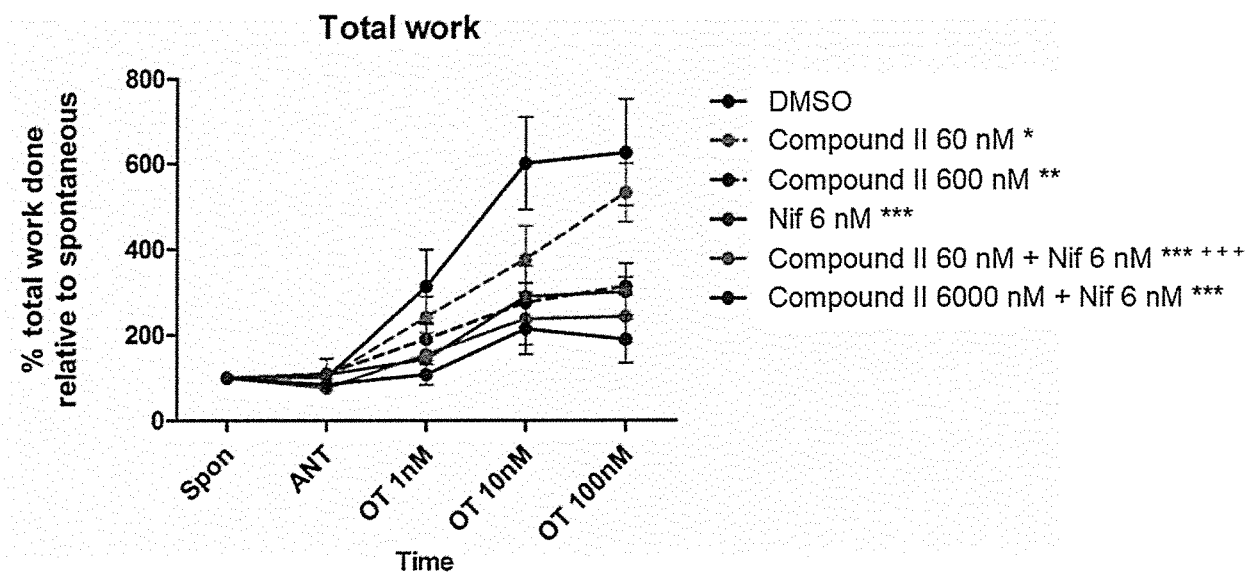


FIG. 79A

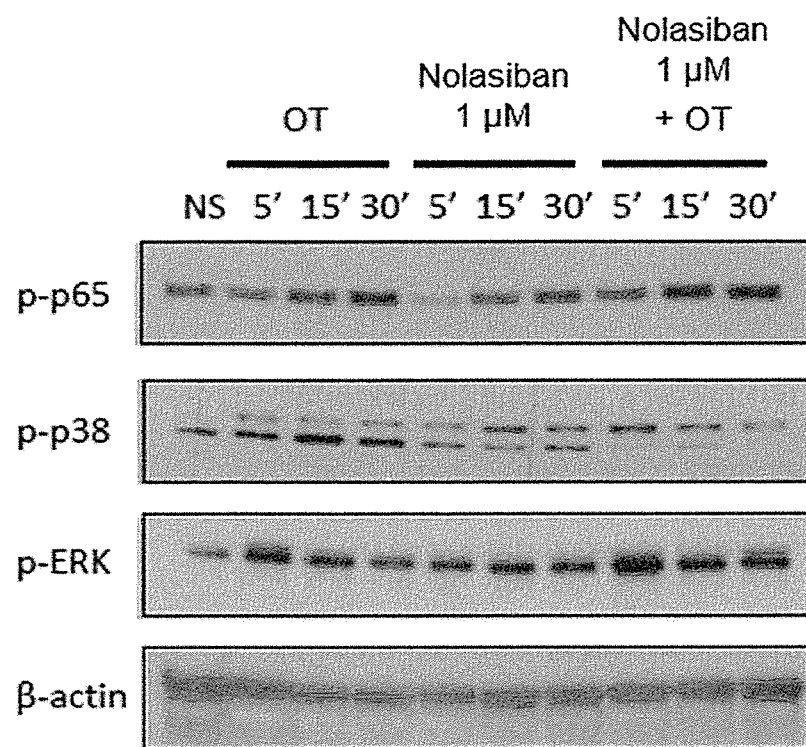


FIG. 79B

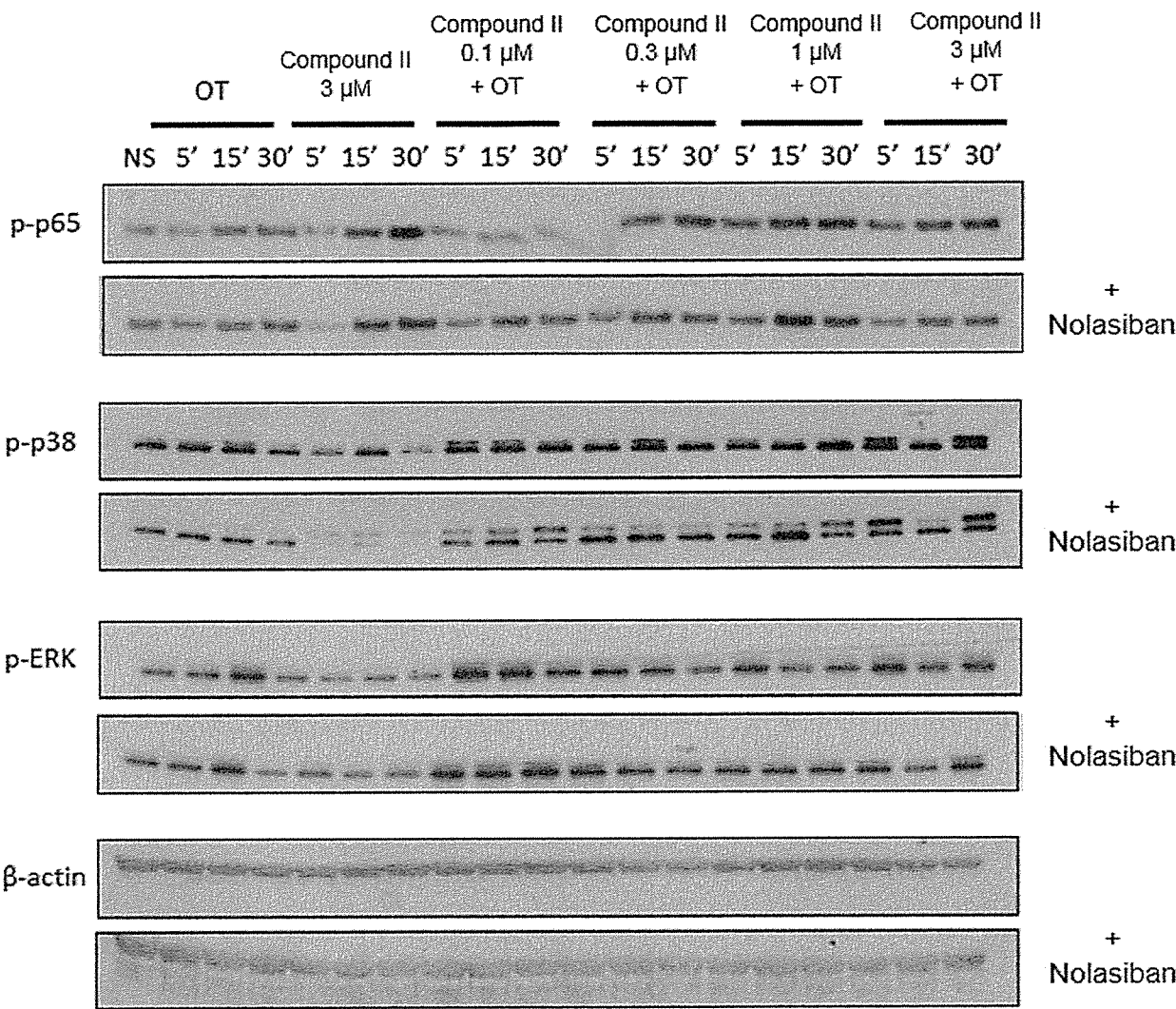


FIG. 79C

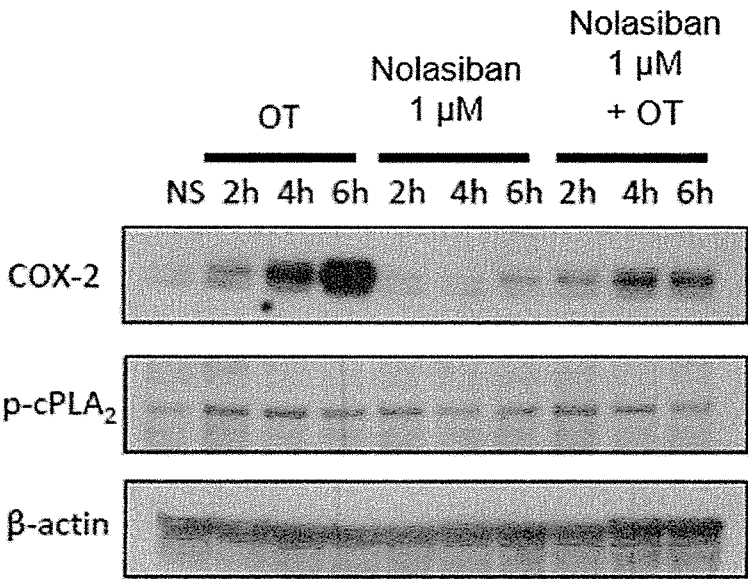


FIG. 79D

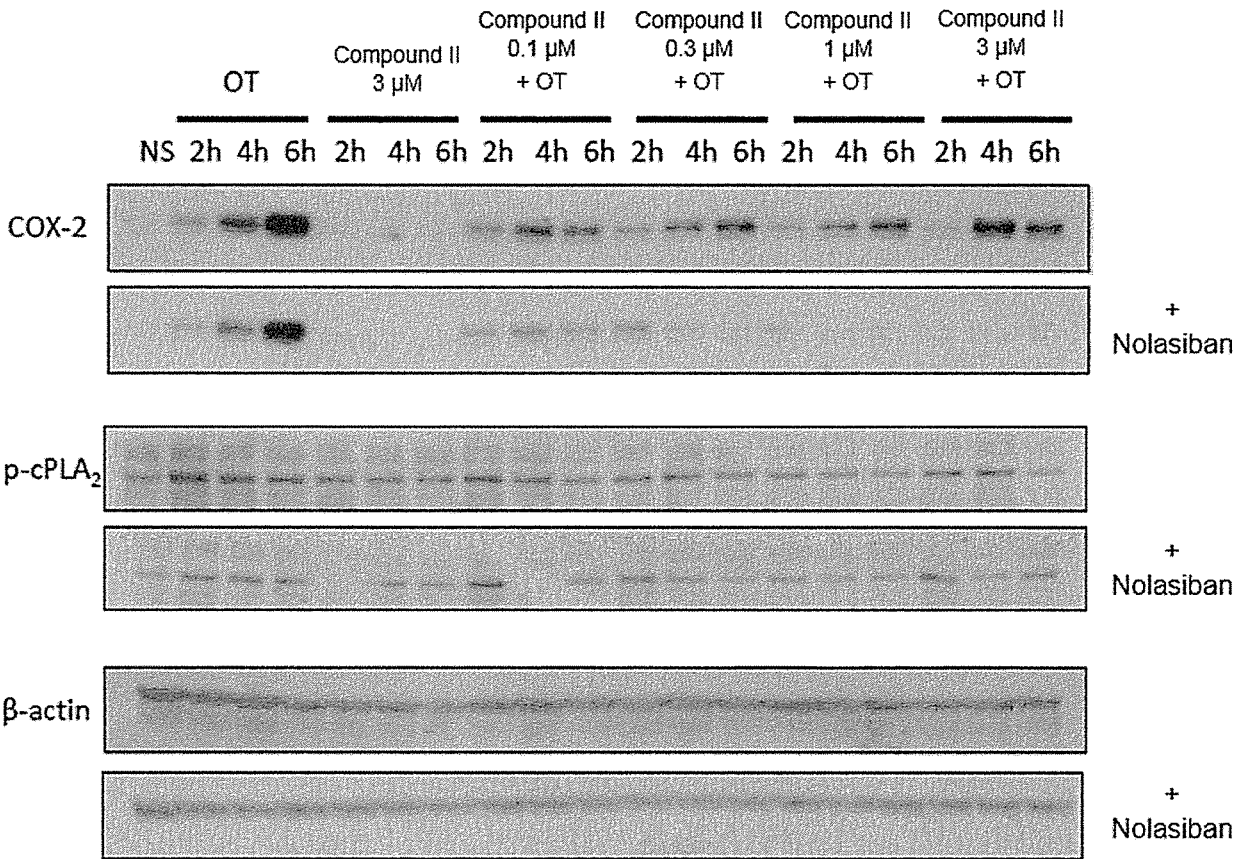


FIG. 79E

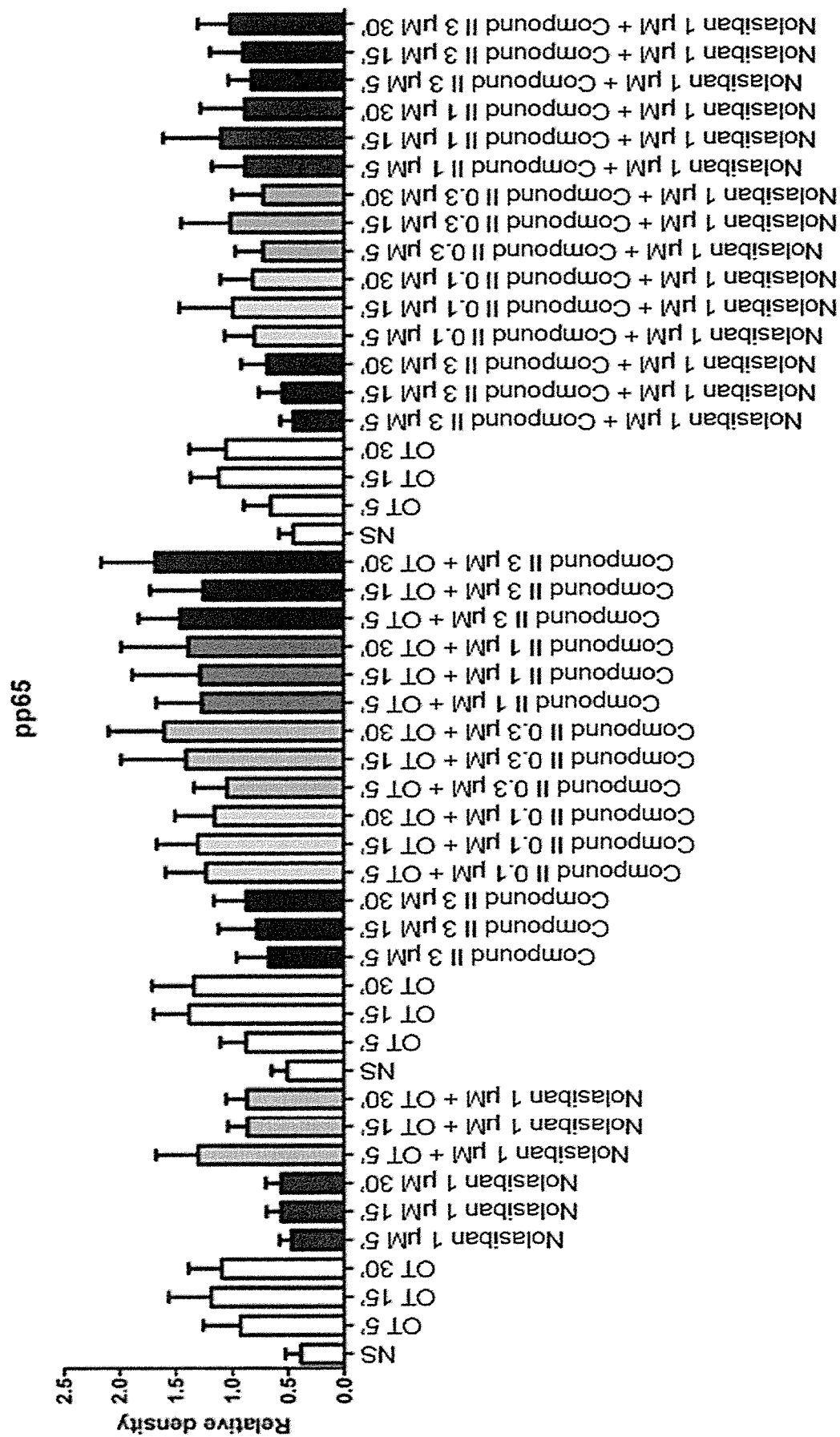


FIG. 79F

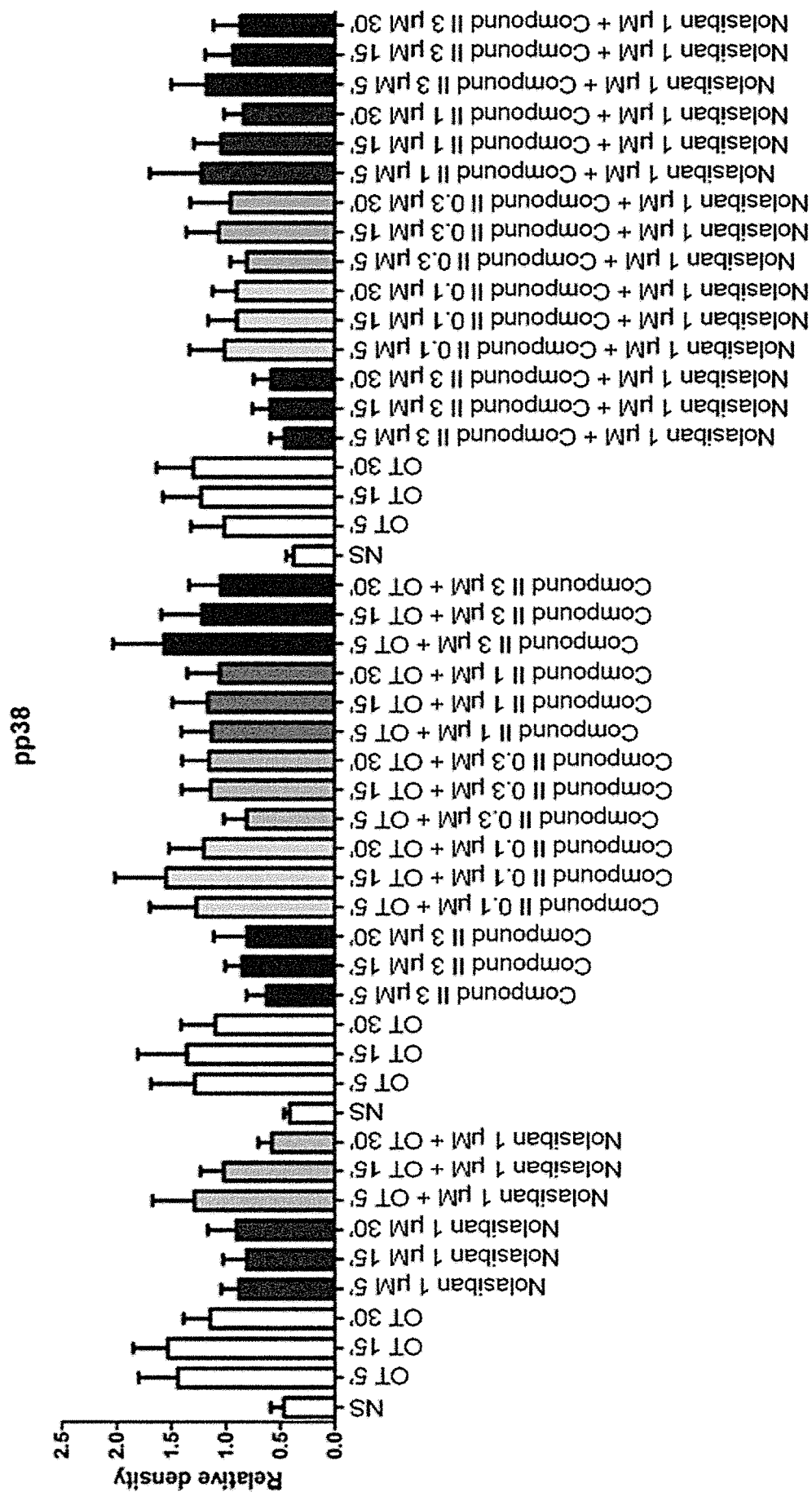


FIG. 79G

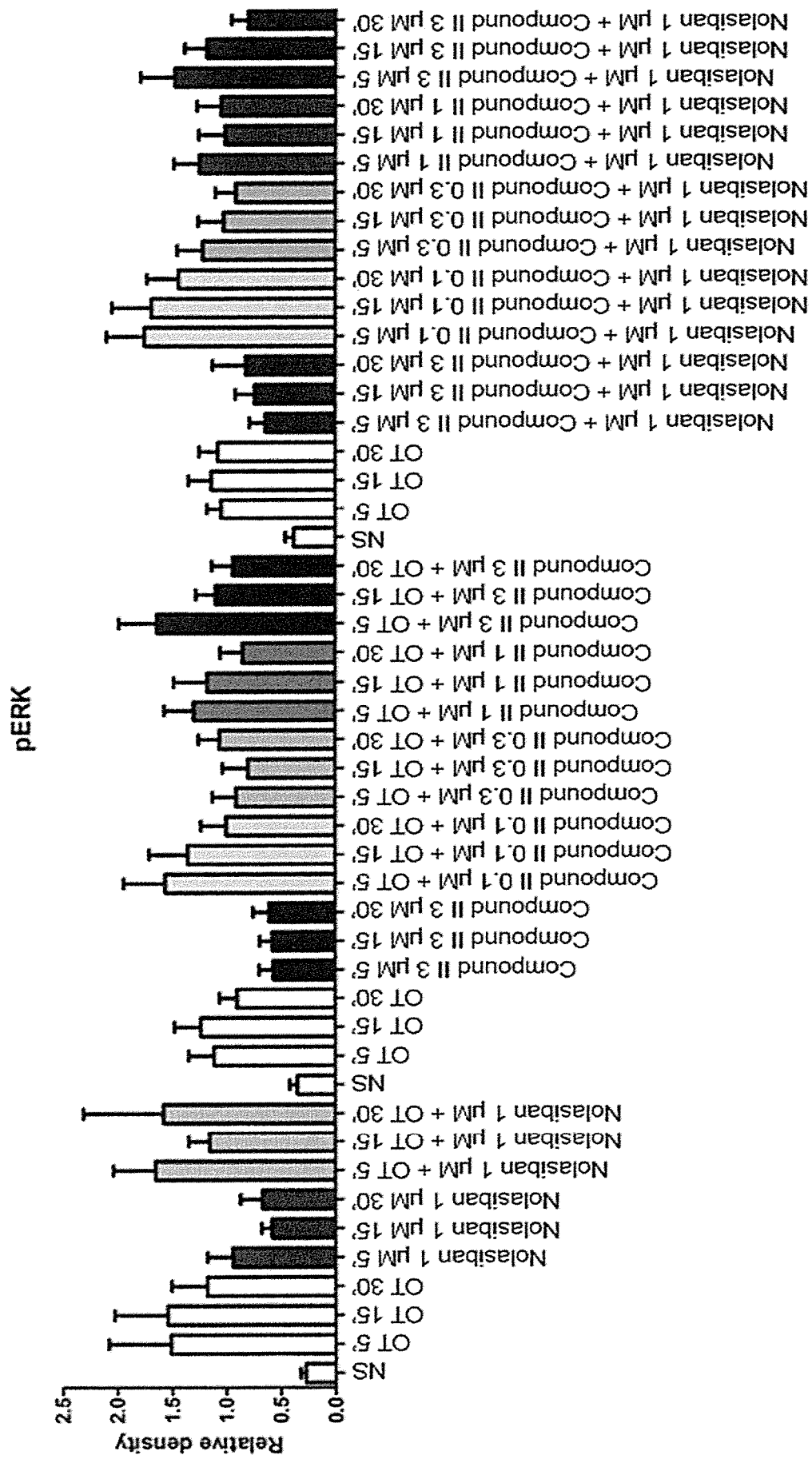


FIG. 79H

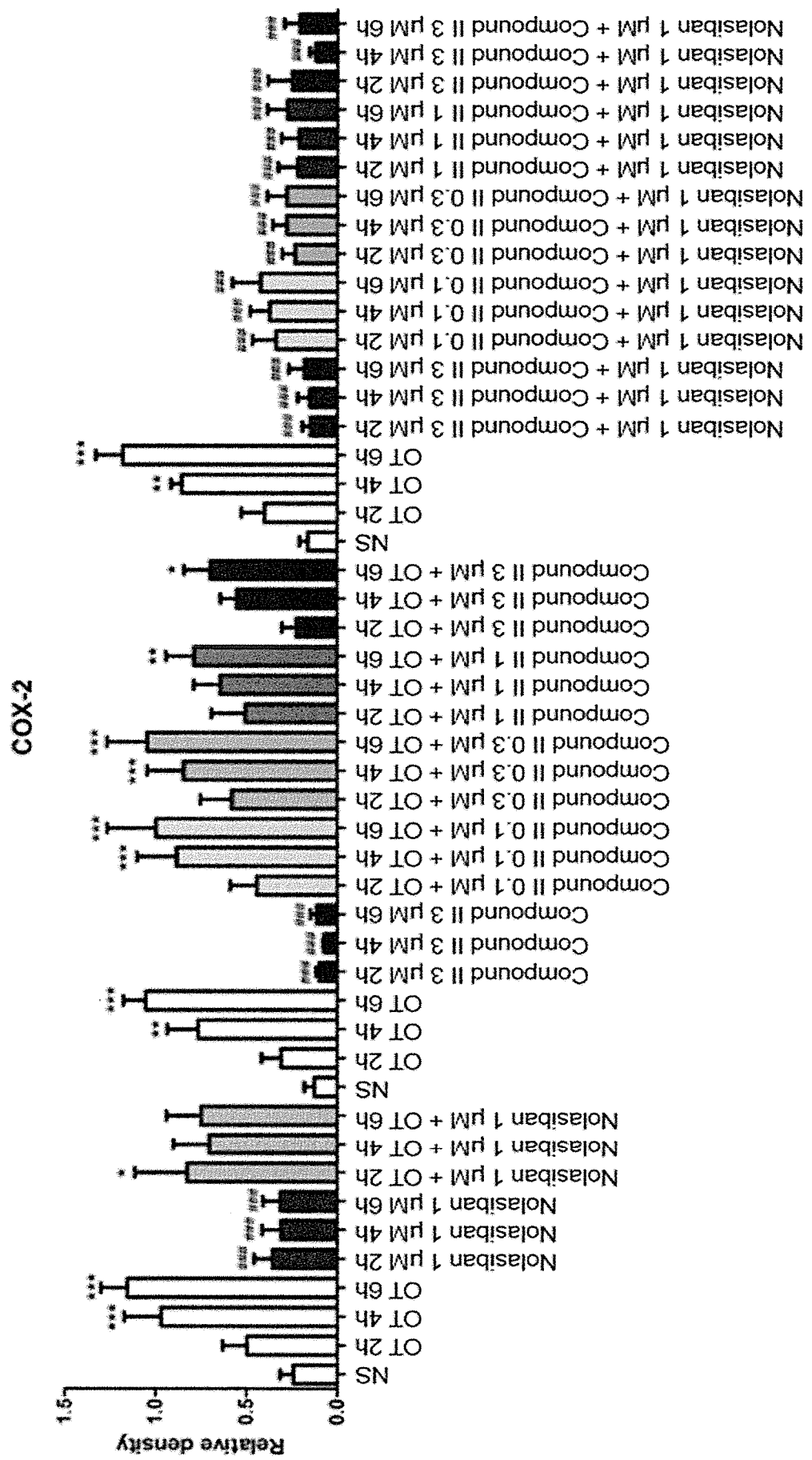


FIG. 79I

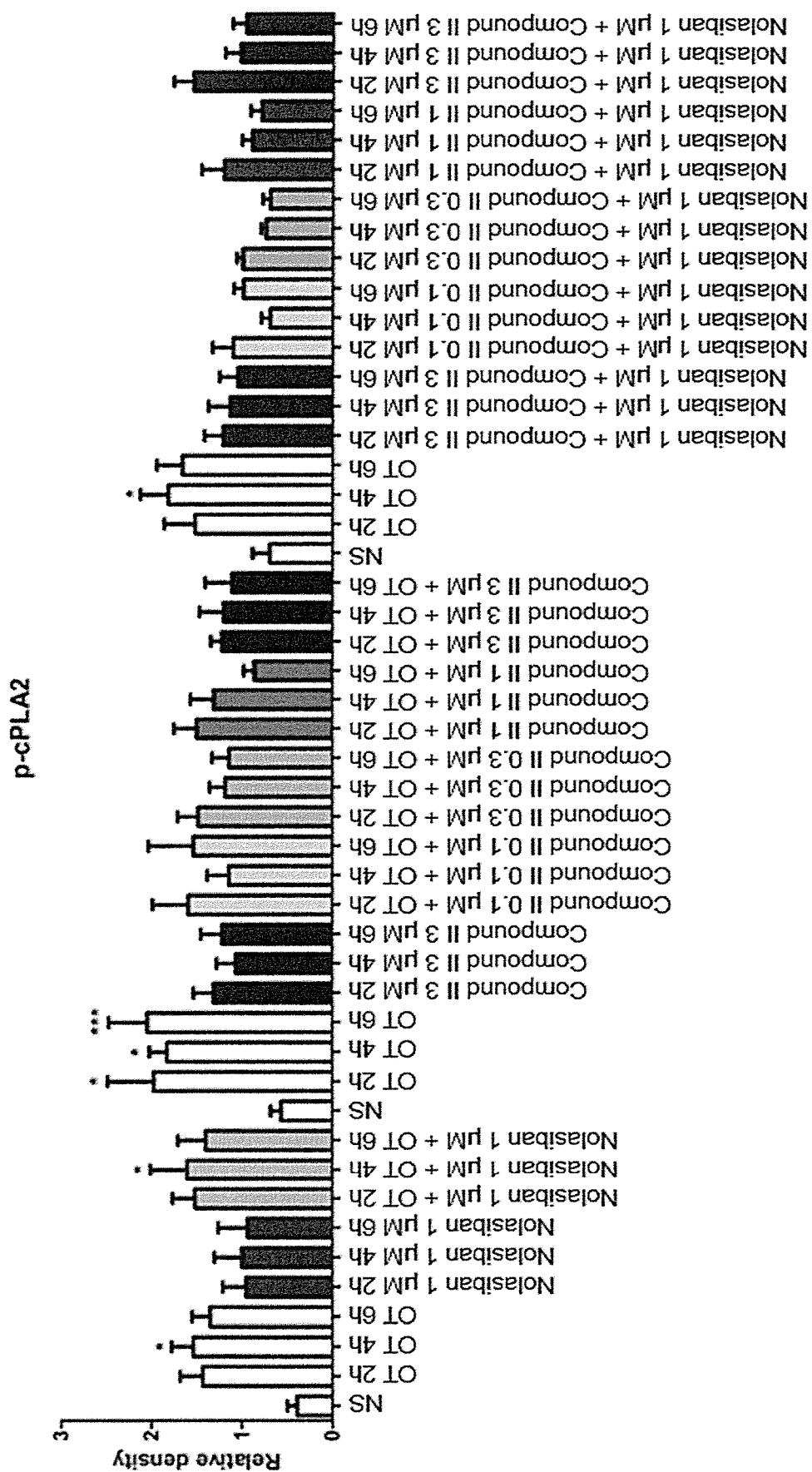


FIG. 80A

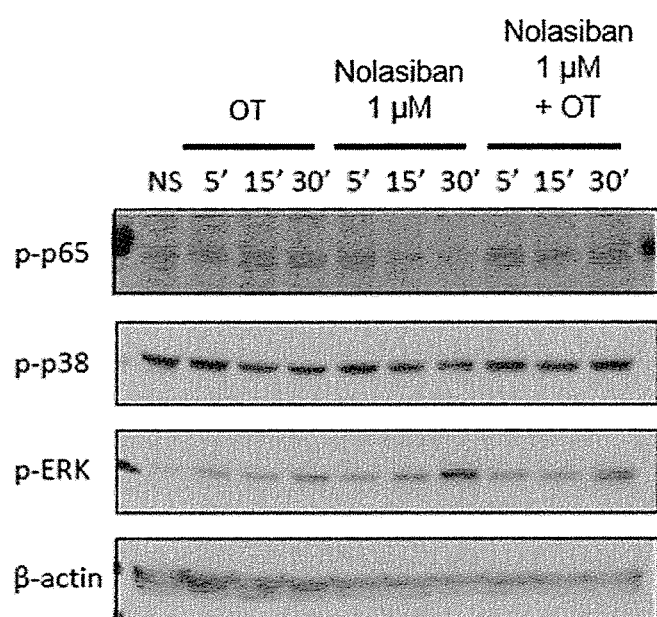


FIG. 80B

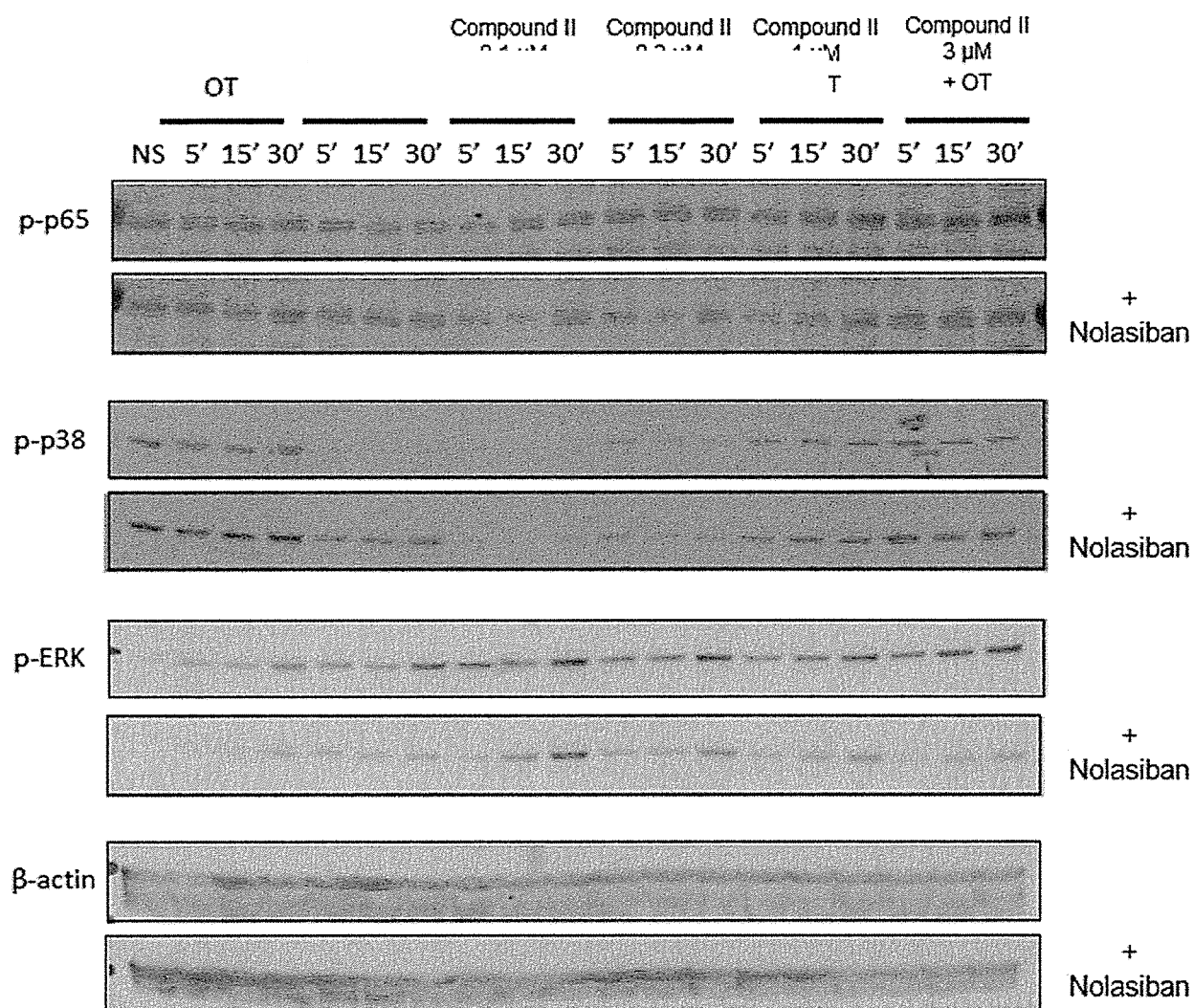


FIG. 80C

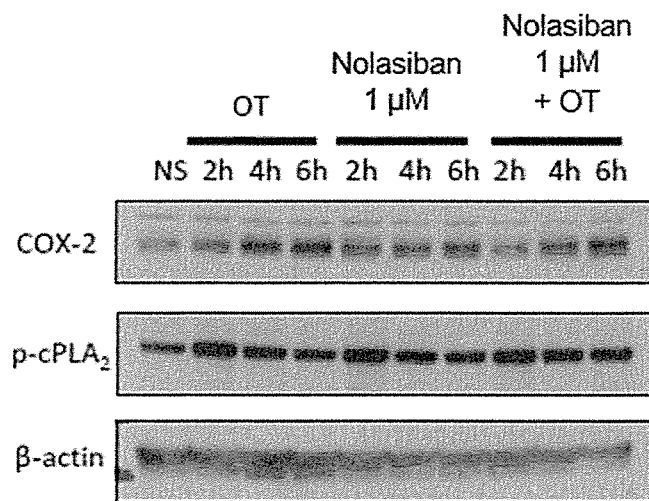


FIG. 80D

