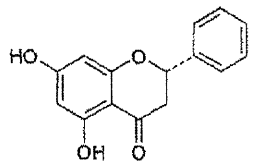
What is claimed is:

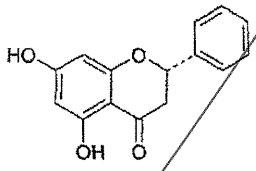
1.α crystalline form of pinocembrin of formula (I):



(I)

characterized in that, when analyzed by X-ray single crystal diffraction, it shows monoclinic crystal system symmetry, the space group is $P2_1/c$, and the crystal cell parameter values are as follows: a=5.189Å, b=24.149Å, c=10.472Å, α = 90°, β=102.31° and γ=90°.

2. α crystalline form of pinocembrin of formula (I):



(I)

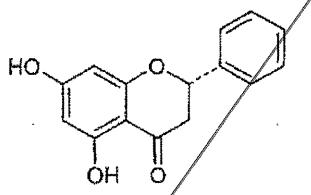
characterized in that, when analyzed by X-ray powder (polycrystal) diffraction (CuK_α radiation), the diffraction peak locations: 2-Theta value (°) or d value (Å), and the relative strength of diffraction peak: peak height value (Height%) or peak area value (Area%) show the following characteristics:

Peak	2-Theta	d(Å)	Height%	Area%	Peak	2-Theta	d(Å)	Height%	Area%
1	7.32	12.07	100.0	100.0	**17**	27.30	3.26	7.2	9.6
2	9.37	9.44	2.3	2.5	**18**	27.51	3.24	7.1	14.1
3	11.30	7.82	2.1	2.2	**19**	28.29	3.15	5.7	6.4
4	13.93	6.35	1.5	2.5	**20**	29.53	3.02	1.7	1.9
5	14.65	6.04	27.3	27.1	**21**	30.88	2.89	0.8	1.0
6	17.04	5.20	5.5	8.7	**22**	34.51	2.60	1.2	1.2
7	17.31	5.12	11.8	18.2	**23**	35.37	2.54	0.5	0.6
8	17.80	4.98	5.6	26.6	**24**	37.21	2.41	2.4	2.4
9	18.16	4.88	2.2	1.8	**25**	38.27	2.35	0.8	1.4
10	18.83	4.71	1.6	2.1	**26**	40.53	2.22	0.5	0.8
11	21.47	4.13	0.9	0.5	**27**	41.40	2.18	0.3	0.3
12	22.06	4.03	12.5	13.8	**28**	42.09	2.15	1.1	1.1
13	22.40	3.97	2.2	2.4	**29**	45.96	1.97	2.8	3.2
14	23.09	3.85	2.6	2.0	**30**	46.67	1.94	0.5	0.7
15	23.74	3.74	1.8	1.6	**31**	56.49	1.63	0.3	0.5
16	25.83	3.45	1.5	1.8					

3. The α crystalline form of pinocembrin according to any one of claims 1 and 2, characterized in that, the decalescence transition temperature in DSC trace is about 206℃.

4. The α crystalline form of pinocembrin according to any one of claims 1 and 2, characterized in that, the infrared absorption spectra thereof shows the following peaks: 3090.6, 3011.6, 2889.1, 2747.4, 2636.2, 1631.5, 1602.5, 1584.3, 1487.7, 1466.2, 1454.5, 1435.6, 1354.9, 1302.4, 1257.0, 1217.0, 1168.2, 1088.6, 1064.9, 1028.0, 1014.6, 1001.3, 975.8, 918.0, 887.7, 861.8, 825.9, 789.9, 766.4, 715.2, 698.1, 663.7, 646.7, 620.3, 587.3, 574.9, 560.5, 526.9 and 487.9cm^{-1}, wherein, the peaks 2891.1, 2747.4, 2636.2, 1631.5 and 1354.9 cm^{-1} are the main characteristic peaks of the α crystalline form of pinocembrin.

5. β crystalline form of pinocembrin of formula (I):



(I)

characterized in that, when analyzed by X-ray powder (polycrystal) diffraction (CuK_α radiation), the diffraction peak locations: 2-Theta value (°) or d value (Å), and the relative strength of diffraction peak: peak height value (Height%) or peak area value (Area%), show the following characteristics:

Peak	2-Theta	d(Å)	Height%	Area%	Peak	2-Theta	d(Å)	Height%	Area%
1	7.33	12.06	100.0	66.5	**14**	29.51	3.02	1.6	0.3
2	9.41	9.40	6.2	4.9	**15**	31.03	2.88	0.7	0.4
3	11.33	7.81	6.1	4.5	**16**	34.47	2.60	1.0	1.5
4	14.07	6.29	2.9	2.2	**17**	35.45	2.53	0.4	0.2
5	14.69	6.03	27.2	17.6	**18**	37.24	2.41	1.5	0.7
6	17.49	5.07	63.9	100.0	**19**	38.15	2.36	1.2	0.9
7	19.01	4.67	2.8	1.5	**20**	40.61	2.22	3.1	2.8
8	21.49	4.13	0.1	0	**21**	42.83	2.11	1.5	1.4
9	22.11	4.02	12.9	11.2	**22**	44.89	2.02	1.6	1.3
10	23.17	3.84	19.4	9.5	**23**	46.01	1.97	2.4	1.8
11	25.91	3.44	3.3	2.5	**24**	50.36	1.81	0.7	0.8
12	27.41	3.25	31.7	27.4	**25**	56.63	1.62	1.0	0.9
13	28.31	3.15	19.0	15.1					

6. The β crystalline form of pinocembrin according to claim 5, characterized in that, the decalescence transition temperature of DSC trace is about 204℃.

7. The β crystalline form of pinocembrin according to claim 5, characterized in that, the infrared absorption spectra thereof shows the following peaks: 3090.8, 2890.0, 2748.9, 2638.3, 1633.5, 1602.9, 1585.0, 1487.9, 1466.1, 1454.3, 1344.4, 1302.7, 1216.7, 1168.2, 1088.4, 1065.5, 1028.8, 1014.3, 1001.5, 975.8, 917.8, 888.2, 861.8, 826.6, 789.1, 766.6, 741.1, 715.4, 698.0, 663.7, 646.0, 620.5, 587.9, 574.8, 560.9, 527.2 and 488.4cm^{-1}, wherein the peaks 2890.0、2748.9、2638.3, 1633.5 and 1344.4 cm^{-1} are the main characteristic peaks of the β crystalline form of pinocembrin.

8. A mixed crystalline form of pinocembrin consisting of α crystalline form and β crystalline form of pinocembrin in any proportion.

9. The crystalline form of pinocembrin according to any one of preceding claims, characterized in that, said crystalline form contains no crystal water or other crystalline solvent.

10. An active pharmaceutical ingredient, comprising the crystalline form of pinocembrin according to claim 1, 2, 5 or 8 as active ingredient, said active pharmaceutical ingredient is used for the manufacture of a medicament for treating diseases related to cerebral ischemia or a medicament for preventing diseases related to cerebral ischemia by protecting neurovascular unit function.

11. The active pharmaceutical ingredient according to claim 10, daily dosage thereof ranges from 5 to 250mg, based on the crystalline form solid of pinocembrin.

12. A pharmaceutical composition, comprising therapeutically effective amount of crystalline form of pinocembrin according to any one of claims 1, 2, 5 and 8, in combination with one or more pharmaceutically acceptable carriers.

13. A dosage form, comprising the active pharmaceutical ingredient according to claim 10 or 11, or the composition according to claim 12, characterized in that the dosage form is tablet, capsule, pill, injection, sustained-release preparation or controlled-release preparation.

14. Use of the crystalline form of pinocembrin according to claim 1, 2, 5 or 8, or the active pharmaceutical ingredient according to claim 10, or the pharmaceutical composition according to claim 12, in the manufacture of a medicament for treating diseases related to cerebral ischemia or a medicament for preventing diseases related to cerebral ischemia by protecting neurovascular unit function.

15. Use of the crystalline form of pinocembrin according to claim 1, 2, 5 or 8, or the active pharmaceutical ingredient according to claim 10, or the pharmaceutical composition according to claim 12, in the manufacture of a medicament, the blood

concentration thereof in an organism being improved due to the crystal form effect.

16. A method for preparing α crystalline form of pinocembrin, comprising the steps of:

(1) dissolving a sample completely in a solvent selected from the group consisting of methanol, ethanol, chloroform, acetone, ethyl acetate, n-butanol, isopropanol, acetonitrile, THF, dioxane, 95% ethanol, glacial acetic acid, formic acid, ether, dichloromethane, toluene, benzene, n-hexane, cyclohexane, dioxane, DMF, petroleum ether, ammonia, n-propanol, or a mixture thereof, then,

(a) placing the mixture in a condition of temperature 4-50 ℃, relative humidity 10%-75% to allow recrystallization for 1 to 60 days, or

(b) adding water to allow precipitate, then obtaining α crystalline form of pinocembrin through filtration under reduced pressure, freeze-drying or cold spray.

17. A method for preparing β crystalline form of pinocembrin, comprising the steps of:

using α crystal form of pinocembrin as material, then

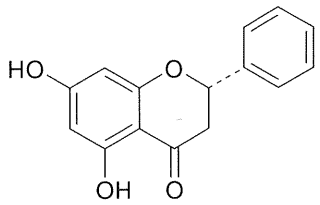
obtaining β crystalline form of pinocembrin through

(a) crystal transition by grinding, or

(b) dissolving the material completely in a solvent of pyridine or DMSO, adding water to allow precipitate, and performing filtration under reduced pressure, freeze-drying or cold spray.

What is claimed is:

1. β crystalline form of pinocembrin of formula (I):



(I)

characterized in that, when analyzed by X-ray powder (polycrystal) diffraction (CuK_α radiation), the diffraction peak locations: 2-Theta value (°) or d value (Å), and the relative strength of diffraction peak: peak height value (Height%) or peak area value (Area%), show the following characteristics:

Peak	2-Theta	d(Å)	Height%	Area%	Peak	2-Theta	d(Å)	Height%	Area%
1	7.33	12.06	100.0	66.5	**14**	29.51	3.02	1.6	0.3
2	9.41	9.40	6.2	4.9	**15**	31.03	2.88	0.7	0.4
3	11.33	7.81	6.1	4.5	**16**	34.47	2.60	1.0	1.5
4	14.07	6.29	2.9	2.2	**17**	35.45	2.53	0.4	0.2
5	14.69	6.03	27.2	17.6	**18**	37.24	2.41	1.5	0.7
6	17.49	5.07	63.9	100.0	**19**	38.15	2.36	1.2	0.9
7	19.01	4.67	2.8	1.5	**20**	40.61	2.22	3.1	2.8
8	21.49	4.13	0.1	0	**21**	42.83	2.11	1.5	1.4
9	22.11	4.02	12.9	11.2	**22**	44.89	2.02	1.6	1.3
10	23.17	3.84	19.4	9.5	**23**	46.01	1.97	2.4	1.8
11	25.91	3.44	3.3	2.5	**24**	50.36	1.81	0.7	0.8
12	27.41	3.25	31.7	27.4	**25**	56.63	1.62	1.0	0.9
13	28.31	3.15	19.0	15.1					

2. The β crystalline form of pinocembrin according to claim 1, characterized in that, the decalescence transition temperature of DSC trace is 204°C.

3. The β crystalline form of pinocembrin according to claim 1, characterized in that, the infrared absorption spectra thereof shows the following peaks: 3090.8, 2890.0, 2748.9, 2638.3, 1633.5, 1602.9, 1585.0, 1487.9, 1466.1, 1454.3, 1344.4, 1302.7, 1216.7, 1168.2, 1088.4, 1065.5, 1028.8, 1014.3, 1001.5, 975.8, 917.8, 888.2, 861.8, 826.6, 789.1, 766.6, 741.1, 715.4, 698.0, 663.7, 646.0, 620.5, 587.9, 574.8, 560.9, 527.2 and 488.4cm^{-1}, wherein the peaks 2890.0、2748.9、2638.3, 1633.5 and 1344.4 cm^{-1} are the main characteristic peaks of the β crystalline form of pinocembrin.

4. A mixed crystalline form of pinocembrin consisting of the β crystalline form of pinocembrin in any proportion according to claim 1 and α crystalline form of pinocembrin, when analyzed by X-ray single crystal diffraction, the α crystalline form shows monoclinic crystal system symmetry, the space group is $P2_1/c$, and the crystal

cell parameter values are as follows: a=5.189Å, b=24.149Å, c=10.472Å, α=90°, β=102.31° and γ=90°.

5. The crystalline form of pinocembrin according to any one of claims 1 to 4, characterized in that, said crystalline form contains no crystal water or other crystalline solvent.

6. An active pharmaceutical ingredient, comprising the crystalline form of pinocembrin according to claim 1or 4 as active ingredient, for use in the manufacture of a medicament for treating cerebral ischemia or for preventing cerebral ischemia by protecting neurovascular unit function.

7. The active pharmaceutical ingredient for use according to claim 6, daily dosage thereof ranges from 5 to 250mg, based on the crystalline solid form of pinocembrin.

8. A pharmaceutical composition, comprising therapeutically effective amount of crystalline form of pinocembrin according to any one of claims 1 and 4, in combination with one or more pharmaceutically acceptable carriers.

9. A dosage form, comprising the active pharmaceutical ingredient according to claim 6 or 7, or the composition according to claim 8, characterized in that the dosage form is tablet, capsule, pill, injection, sustained-release preparation or controlled-release preparation.

10. A method for preparing β crystalline form of pinocembrin, according to claim 1, comprising the steps of:

using α crystal form of pinocembrin as material, then

obtaining β crystalline form of pinocembrin through

(a) crystal transition by grinding, or

(b) dissolving the material completely in a solvent of pyridine or DMSO, adding water to allow precipitate, and performing filtration under reduced pressure, freeze-drying or cold spray,

wherein when analyzed by X-ray single crystal diffraction, the α crystal form shows monoclinic crystal system symmetry, the space group is $P2_1/c$, and the crystal cell parameter values are as follows: a=5.189Å, b=24.149Å, c=10.472Å, α=90°, β=102.31° and γ=90°.