Pilatory and application of pilatory

Abstract

The invention discloses pilatory. The pilatory uses humic acid sodium salts and/or kali salts as necessary ingredients, and has the effects of promoting blood circulation to remove blood stasis, nourishing the hair follicle, growing and moistening the hair and preventing alopecia. The humic acid sodium (kali) salts can promote the blood circulation, the promotion effect on the hair growth of unhaired mice is realized, and a certain inhibition effect is realized on the trichomadesis phenomenon of mice injected with cyclophosphamide. The humic acid sodium (kali) salts are used as major effective ingredients, so a hair growth method and the pilatory with the advantages that good effects of hair growth promotion and hair loss prevention are realized, in addition, the pilatory is natural, no pungent smell and no toxic or side effect exist, and safety and reliability are realized are provided.

CN102871885A

China

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Other languages: Chinese

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Current Assignee : Kunming University of Science and Technology

Worldwide applications

2012 CN

Application CN2012103958032A events

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Info: Patent citations (3), Non-patent citations (5), Cited by (3), Legal events, Similar documents, Priority and Related Applications

External links: Espacenet, Global Dossier, Discuss

Claims (5)

Hide Dependent

1. a hair growth promoter is characterized in that: contain humic acids sodium salt and/or humic acids potassium salt.

2. hair growth promoter according to claim 1, it is characterized in that: the humic acids sodium salt is fulvic acid sodium and/or hymatomalenic acid sodium.

3. hair growth promoter according to claim 1, it is characterized in that: humic acids potassium salt is fulvic acid potassium and/or hymatomalenic acid potassium.

4. each described hair growth promoter according to claim 1-3, it is characterized in that: the consumption of humic acids sodium salt and/or humic acids potassium salt is 1g/L-30g/L.

5. the application of hair growth promoter described in the claim 1 in preparation hair growth promoting, hair care, hair products.

Description

A kind of hair growth promoter and application thereof

Technical field

The present invention relates to a kind of hair growth promoter, this hair growth promoter has the effect that promotes hair growth, Anti-hair loss take sodium humate (potassium) salt as essential component, and this hair growth promoter is applied in hair growth promoting, hair care, hair products (comprising medicine, health product or cosmetics) aspect.

Background technology

Humic acids (humic acid, HA) be that the animal and plant remains are through the decomposition and inversion of microorganism, and the geochemical a series of process natural organic substance that forms and accumulate, can be divided into fulvic acid, ulmic acid and humic acid three major types according to molecular size range, contain the various active group, such as carboxyl, phenolic hydroxyl group, alcoholic extract hydroxyl group, quinonyl, carbonyl etc., has multiple biological activity.As far back as Ancient Times in China, just existing record about similar humic acids medicine in the Compendium of Material Medica of Li Shizhen (1518-1593 A.D.), lot of experiments and clinical efficacy show that it has blood circulation promoting and blood stasis dispelling, antiinflammatory, the remarkable efficacy such as antibiotic both at home and abroad at present.

Alopecia is clinical frequently-occurring disease, commonly encountered diseases, loses hair above being judged as the pathologic alopecia more than 100 when every day, mainly comprises androgenetic alopecia, alopecia areata, pseudopelade and growing period alopecia etc.For a long time alopecia is puzzlement people's major issue

always, affects daily life, its cause of disease more complicated, and especially along with the increase of people's life, operating pressure, sickness rate is very high, has a strong impact on attractive in appearance.Research and development and the sale of some product for improving hair-growing are also arranged in the market, but some problems of ubiquity, as: (1) Chinese medicine aspect: Chinese medicine has more report to hair growth, but can't unify therapy; Some Chinese medicine self has zest or bad smell; Active ingredient of Chinese herbs mostly is organic solvent extraction, exists easily poisonous hazardous solvent residual; Portioned product adopts the dosage form of organic solvent dissolution, also have penetrating odor even solvent is ethanol, even some the skin allergy phenomenon can occur; Too much, the production technology more complicated of raw material in some Chinese medicine product for improving hair-growing prescriptions, product quality is difficult to control, and cost is higher; (2) Western medicine aspect: mostly be hormones or be with medicine excitatory, have side effect, even behind inactive or life-time service, rebound phenomenon occurs.

Summary of the invention

According to reason and the characteristics of alopecia morbidity, not enough for the shortcoming of existing product and technology, the purpose of this invention is to provide the hair growth promoter that a kind of hair growth promoting and anticreep are satisfactory for result, have no side effect, have no irritating odor.This hair growth promoter contains humic acids sodium salt and/or humic acids potassium salt.

The humic acids sodium salt is fulvic acid sodium and/or hymatomalenic acid sodium among the present invention, and humic acids potassium salt is fulvic acid potassium and/or hymatomalenic acid potassium, and two or more humates are mixed by any ratio when mixing.

The consumption of humic acids sodium salt and/or humic acids potassium salt is 1g/L-30g/L among the present invention.

Humic acids is to adopt H from peat, brown coal among the present invention $_2$0 $_2$The catalyzing oxidizing degrading legal system is standby, purification obtains, humic acids ash≤1% behind the purification; And yellow humic acid and hymatomalenic acid are separation and purifications from purifying humic acid, remove black plant rotten acid and obtain; Humic acids sodium salt or potassium salt are to add alkali reaction namely to obtain humic acids sodium salt or potassium salt in the humic acids that makes by said method; For example with reference to the method among the application number 200810233669.X " oxidation and degradation of brown coal is produced the method for humic acids and salt thereof ".

The yellow humic acid physical and chemical index: acidic groups 13.82mmol/g, carboxyl 10.18mmol/g, phenolic hydroxyl group 3.64mmol/g, molecular weight is 75%, C less than or equal to 1000 composition, H, N, O constituent content (%) is respectively 38.77,4.166,1.993,55.07.

Hair growth promoter of the present invention is that percutaneous contains one or more mixture in humic acids sodium salt and/or the humic acids potassium salt (arbitrarily than) and is the hair growth promoter of effective ingredient from the head.

Another purpose of the present invention be with aforementioned contain one or more mixture in humic acids sodium salt and/or the humic acids potassium salt as the hair growth promoter of effective ingredient for the preparation of hair growth promoting, hair care, hair products (comprising medicine, health product or cosmetics), its dosage form be lotion, emulsion, Emulsion (ointment), gel and spray etc. all can, use the conventional method manufacturing according to the purpose dosage form.

At hair growth promoter during for the preparation of hair growth promoting, hair care, hair products, can add as required the auxiliary blending constituent of the routine of using in conventional cosmetics, health product, the medicine preparation process, as be generally used for excipient, vasodilation, wetting agent, various animals and plants activity extract, vitamins, antioxidant, water, cosolvent, metabolism revivifier, surfactant, spice and the dyestuff etc. of hair growth promoter, but matched combined is used in the scope that does not affect effect of the present invention.

Hair growth promoter of the present invention directly acts on the setation position when using, and promotes to induce natural on-off cycles of hair growth to grow through skin, makes the hair chap that thickens.

With respect to prior art, advantage of the present invention and technique effect are as follows:

But 1, provided by the invention take humic acids sodium salt and/or potassium salt as main component the hair growth promoter blood circulation promoting and blood stasis dispelling, take a tonic or nourishing food to build up one's health hair follicle, hair growth is had good facilitation and Anti-hair loss effect.

2, the humic acids as the main effective ingredient of the present invention is to adopt H from peat, brown coal $_2$O $_2$The catalyzing oxidizing degrading legal system is standby, purification obtains, and yellow humic acid and hymatomalenic acid are separation and purifications from purifying humic acid, removes black plant rotten acid and obtain.The yellow humic acid physical and chemical index: acidic groups 13.82mmol/g, carboxyl 10.18mmol/g, phenolic hydroxyl group 3.64mmol/g, molecular weight is 75%, C less than or equal to 1000 composition, H, N, O constituent content (%) is respectively 38.77,4.166,1.993,55.07.

3, humic acids source is polarized be peat, brown coal, can avoid the generation of some toxic and side effects of later stage.Adopt H $_2$O $_2$The standby humic acids of catalyzing oxidizing degrading legal system, technique is succinct, environmental protection, product biological activity are high, gained humic acids sodium salt or potassium salt are natural, self nonirritant or bad smell, do not exist poisonous hazardous solvent residual, active high, have no side effect, safe and reliable.

4, the present invention is widely applicable, for alopecia in seborrheic alopecia, alopecia areata, mixed type alopecia, the cancer treatment procedure etc. good curative effect is arranged all.

Description of drawings

Fig. 1 is the newborn hair growth condition grading of mice of the present invention curve synoptic diagram.

Fig. 2 is mice depilation of the present invention district skin heart distribution contrast sketch map, and A is blank group; B is the administration group.

Fig. 3 is the blank group of mouse back skin HE stained of the present invention sketch map;

Fig. 4 is dosage group sketch map in the mouse back skin HE stained of the present invention;

Fig. 5 is that the present invention contains 0 day mice picture of fulvic acid sodium hair growth promoter administration;

Fig. 6 is that the present invention contains 8 days mice pictures of fulvic acid sodium hair growth promoter administration;

Fig. 7 is that the present invention contains 16 days mice pictures of fulvic acid sodium hair growth promoter administration.

The specific embodiment

Below in conjunction with drawings and Examples the present invention is described in further detail, but protection domain of the present invention is not limited to described content.

Embodiment 1: fulvic acid sodium is to the action effect experiment of depilation mouse hair growth

Present embodiment is to adopt normal mouse to check fulvic acid sodium of the present invention to the action effect of depilation mouse hair growth, 15 days pharmacodynamic action of fulvic acid sodium water preparation is smeared in depilation mice depilation zone continuously observed.

The experiment material of using in the present embodiment is as follows:

(1) fulvic acid sodium: adopt brown coal H_2O_2The catalyzing oxidizing degrading legal system is standby to make fulvic acid sodium with purification, and method is with reference to the method among the application number 200810233669.X " oxidation and degradation of brown coal is produced the method for humic acids and salt thereof ".

(2) laboratory animal is clean type Kunming kind white mice, and is male, and body weight 18 ~ 22g available from unming Medical College's Experimental Animal Center, observed two days before the experiment, selected active, healthy mice to be used for experiment.

Concrete operations are as follows: get Kunming mouse, under slight anesthesia, be applied to mouse back after the Colophonium that mass ratio 1:1 is mixed and the mineral wax mixture heating and melting, throw off gently after it solidifies hardening, the depilation region area of every mice is about 2 * 2cm ^{2}, by the body weight random packet, 10 every group, totally 4 groups, specific as follows after the depilation:

(1) blank group: water is smeared in the depilation district;

(2) fulvic acid sodium low dosage administration group: the fulvic acid sodium water liquid of smearing 1g/L;

(3) dosed administration group in the fulvic acid sodium: the fulvic acid sodium water liquid of smearing 5g/L;

(4) fulvic acid sodium high dose administration group: the fulvic acid sodium water liquid of smearing 25g/L;

Administration every day 1 time, continuous 15 days, put to death in the 16th day, survey territory, newborn hair-fields Mus staple length and Mus gross weight, get skin of back and observe its vascularity.Observe each treated animal hair growth situation every day, every day, standards of grading were: 1. be grown to 0 minute without hair to the virgin wool upgrowth situation scoring of mice depilation district; 2. shallow hair, the full depilation of growth district are 1 minute; 3. newborn staple length and density for depilation district not half be 2 minutes; 4. the virgin wool growth is 3 minutes with the district's indifference of not losing hair or feathers; Scoring is carried out curve fitting, the results are shown in Table 1, Fig. 1 and Fig. 2.

The result shows: fulvic acid sodium has the effect that promotes the growth of depilation mouse hair, and the administration group relatively has significant difference with blank group, and administration mice medication zone skin heart obviously becomes abundanter and blood vessel is thicker.

Table 1: fulvic acid sodium to depilation mouse hair affects on the growth (± s)

In the table: compare with the blank group, * represents P < 0.05, has statistical significance, and * * represents P < 0.01, has significant difference.

Embodiment 2: hymatomalenic acid potassium is to the histological observation experiment of depilation mouse hair growth

This experimental example is to adopt normal mouse to check hymatomalenic acid potassium of the present invention to the action effect of depilation mouse hair growth, 15 days pharmacodynamic action of hymatomalenic acid potassium water preparation is smeared in depilation mice depilation zone continuously to be observed, and territory, newborn hair-fields skin made paraffin section, histological observation is carried out in HE dyeing.

The experiment material of using in the present embodiment is as follows:

(1) hymatomalenic acid potassium: adopt conventional H_2O_2Oxidative degradation brown coal legal system is standby to make hymatomalenic acid potassium with purification, and method is with reference to the method among the application number 200810233669.X " oxidation and degradation of brown coal is produced the method for humic acids and salt thereof ".

(2) laboratory animal is clean type Kunming kind white mice, and is male, and body weight (18 ~ 22g), available from unming Medical College's Experimental Animal Center, observed two days before the experiment, select active, healthy mice to be used for experiment.

The experiment concrete operations are as follows: get Kunming mouse, under slight anesthesia, be applied to mouse back after the Colophonium that mass ratio 1:1 is mixed/mineral wax mixture heating and melting, throw off gently after it solidifies hardening, the depilation region area of every mice is about 2 * 2cm ^{2}, by the body weight random packet, 10 every group, totally 4 groups, specific as follows after the depilation:

(1) blank group: water is smeared in the depilation district;

(2) hymatomalenic acid potassium low dosage administration group: the hymatomalenic acid potassium water liquid of smearing 1g/L;

(3) dosed administration group in the hymatomalenic acid potassium: the hymatomalenic acid potassium water liquid of smearing 5g/L;

(4) hymatomalenic acid potassium high dose administration group: the hymatomalenic acid potassium water liquid of smearing 30g/L;

Administration every day 1 time, continuous 15 days, put to death, territory, newborn hair-fields skin is made paraffin section in the 16th day, HE dyeing, carry out histological observation, hair follicle counting, the hair follicle number of several 3 high power fields of every example (* 400), get its average, calculate again every group every mouse hair follicles and count meansigma methods, analyze the significance respectively organize difference, the results are shown in Table 2, Fig. 3 and Fig. 4.

Experimental result shows: through general histological observation, find skin complete, without reactions such as hyperemia, edema, cell infiltration, show that animal skin tissue is without breakage, stimulation and inflammatory reaction; Hymatomalenic acid potassium has the effect that promotes the mouse hair growth, and the hair follicle number increases and skin corium thickness obviously thickens, and with the blank group utmost point significant difference is arranged relatively.

Table 2: hymatomalenic acid potassium to depilation mouse hair growing tissue learn observation experiment (± s)

In the table: compare with the blank group, * represents P < 0.05, has statistical significance, and * * represents P < 0.01, has significant difference.

Embodiment 3: fulvic acid sodium and hymatomalenic acid sodium mixture (1:5) suppress the mouse hair experiment that comes off

This experimental example adopts the mice of intraperitoneal injection of cyclophosphamide modeling to check sodium humate of the present invention to suppress the effect that mouse hair comes off, to lumbar injection the mouse back zone of cyclophosphamide smear continuously fulvic acid sodium and 28 days pharmacodynamic action of hymatomalenic acid sodium mixture (1:5) water preparation is observed, found that this medicine comes off to the mouse hair of intraperitoneal injection of cyclophosphamide inhibitory action is arranged, medication mice medication zone skin heart obviously becomes abundant, and gross weight increases.

The experiment material that present embodiment uses is as follows:

(1) fulvic acid sodium, hymatomalenic acid sodium: adopt conventional H_2O_2Oxidative degradation brown coal legal system is standby to be made with purification, and method is with reference to the method among the application number 200810233669.X " oxidation and degradation of brown coal is produced the method for humic

acids and salt thereof ".

(2) cyclophosphamide: Hengrui Medicine Co., Ltd., Jiangsu Prov., compound concentration is 10mg/mL, consumption is the 100mg/kg Mouse Weight.

(3) laboratory animal is clean type Kunming kind white mice, and is male, and body weight 18 ~ 22g available from unming Medical College's Experimental Animal Center, observed two days before the experiment, selected active, healthy mice to be used for experiment.

Concrete operations are as follows: get Kunming mouse, by the body weight random packet, 8 every group, totally 4 groups, specific as follows behind the intraperitoneal injection of cyclophosphamide:

(1) blank group: smear water;

(2) fulvic acid sodium and hymatomalenic acid sodium mixture (1:5) low dosage administration group: the medicinal liquid of smearing 1g/L;

(3) dosed administration group in fulvic acid sodium and the hymatomalenic acid sodium mixture (1:5): the medicinal liquid of smearing 5g/L;

(4) fulvic acid sodium and hymatomalenic acid sodium mixture (1:5) high dose administration group: the medicinal liquid of smearing 25g/L;

Administration every day 1 time, continuous 28 days, put to death in the 29th day, survey coating zone Mus gross weight, and get skin of back and observe its vascularity situation, see Table 3.

The result shows: fulvic acid sodium and hymatomalenic acid sodium mixture (1:5) have the effect that promotes the mouse hair growth, the mouse hair of intraperitoneal injection of cyclophosphamide come off inhibitory action, medication mice medication zone skin heart obviously becomes abundant, and gross weight increases.

Table 3: the impact that fulvic acid sodium and hymatomalenic acid sodium mixture come off on injection cyclophosphamide mouse hair (± s)

Embodiment 4: contain the hair growth promoter of fulvic acid sodium to the effect experiment of depilation mouse hair growth

Present embodiment contains composition and the weight distribution ratio following (solvent is water) of fulvic acid sodium hair growth promoter:

Fulvic acid sodium 5g/L Radix Angelicae Sinensis 20 g Radix Polygoni Multiflori 15g

Cacumen Platycladi 15g Flos Chrysanthemi Indici 10g

Preparation method: pulverize after said medicine mixed, boil cold filtration after soaking 24h by liquid medicine than 1:4.Fulvic acid sodium is added into the liquid.

This water preparation dosage form hair growth promoter is natural, self nonirritant or bad smell, do not exist poisonous hazardous solvent residual, have no side effect, safe and reliable.The verification method that adopts with the positive contrast of ZHANGGUANG 101, not add the negative contrast of fulvic acid sodium hair growth promoter, the results are shown in Table 4, Fig. 5-7 with embodiment 1.

The result shows: the hair growth promoter medication mouse skin that contains fulvic acid sodium absorbs better, hair is smooth, and medication zone skin heart obviously becomes abundant, has the effect that promotes the growth of depilation mouse hair, the administration group has significant difference with blank group staple length, gross weight, and effect slightly is better than positive control.

Table 4: the hair growth promoter that contains fulvic acid sodium to depilation mouse hair affects on the growth (± s)

Grouping	Staple length (cm)	Gross weight g/ (cm ^{2})	Blank	0.61±0.08660	0.015±0.0040
Positive control (ZHANGGUANG 101)	0.662±0.05178	0.0192±0.0033			
Negative control	0.667±0.05111	0.0178±0.0042	Contain the fulvic acid sodium hair growth promoter	0.764±0.05029*	0.02098±0.0023*

In the table: compare with the blank group, * represents P < 0.05, has statistical significance, and * * represents P < 0.01, has significant difference.

Embodiment 5: the hair growth promoter that contains fulvic acid sodium and fulvic acid potassium mixture (1:3)

Composition and the weight distribution ratio of hair growth promoter following (solvent is water):

Fulvic acid sodium and fulvic acid potassium mixture (1:3) 5g/L Rhizoma Zingiberis Recens 20 g

Rhizoma Pinelliae 15g Cacumen Platycladi 15g Cortex Mori 10g

Preparation method: with Rhizoma Zingiberis Recens, the Rhizoma Pinelliae, Cacumen Platycladi, Cortex Mori decocting twice, cold filtration; Fulvic acid sodium and fulvic acid potassium mixture (1:3) are added into the liquid, product is water formulation.

Patent Citations (3)

Publication number	Priority date	Publication date	Assignee	Title
CN1568929A *	2003-07-16	2005-01-26	刘南凯	Cosmetics containing humic acid and application of humic acid in cosmetics
CN101423536A *	2008-12-02	2009-05-06	昆明理工大学	Method for preparing humic acid and salt thereof by oxidation and degradation of brown coal
CN101684132A *	2008-09-25	2010-03-31	唐毅	Production method and application of humic acid and fulvic acid extracted from humus and organic salts of mineral compounds thereof
Family To Family Citations				

* Cited by examiner, † Cited by third party

Non-Patent Citations (5)

Title

《腐植酸》 20041231 黄良才 《"乌金散"助动护肤品回归大自然》 30-31 1-5 , *
《腐植酸》 20111231 周霞萍 等 腐植酸医用研究新进展 5-9 1-5 , 第3期 *
周霞萍 等: "腐植酸医用研究新进展", 《腐植酸》, no. 3, 31 December 2011 (2011-12-31), pages 5 - 9 *
张常书 等: "药用黄腐酸的开发应用探讨", 《第八届全国绿色环保肥料（农药）新技术、新产品交流会》, 24 December 2009 (2009-12-24), pages 65 - 69 *
黄良才: "《"乌金散"助动护肤品回归大自然》", 《腐植酸》, 31 December 2004 (2004-12-31), pages 30 - 31 *

* Cited by examiner, † Cited by third party

Cited By (3)

Publication number	Priority date	Publication date	Assignee	Title
CN104398869A *	2014-10-30	2015-03-11	昆明理工大学	Traditional Chinese medicinal compound ointment for treating burns and scalds
CN106265225A *	2016-08-10	2017-01-04	云南尚呈生物科技有限公司	A kind of eyebrow pencil compositions and preparation method thereof
CN108078827A *	2018-01-08	2018-05-29	河北源本生物科技有限责任公司	A kind of hair growth accelerating shampoo and preparation method thereof
Family To Family Citations				

* Cited by examiner, † Cited by third party, ‡ Family to family citation

Similar Documents

Publication	Publication Date	Title
KR101481371B1	2015-01-14	Toothpaste composition containing Curcuma longa L and production method thereof
CN104435379B	2016-11-30	A kind of plant extract complex with antibacterial anti-inflammatory, hemostasis and pain relieving and application thereof
CN104382786A	2015-03-04	Hair loss prevention hair-blacking agent and preparation method thereof
CN108452275A	2018-08-28	It is a kind of to have effects that the composition, medicament and preparation method of relaxing tendons and activating collaterals
CN102961282B	2014-12-17	Composition with penetration enhancing effect as well as preparation method and application thereof
CN108743729A	2018-11-06	A kind of herb composition that treating alopecia seborrheica and nanometer hair nourishing liquid
KR101196523B1	2012-11-01	Composition for promoting hair growth comprising fermented oriental medicine extract
CN106727011A	2017-05-31	A kind of anti-acne lotion
CN103505385B	2016-01-13	Herba Ecliptae hair color nutrition shampoo, hair color Ying Yang treatment wax and hair color nutritional solution dew
CN102871885B	2015-11-18	A kind of hair growth promoter and application thereof
CN109310724A	2019-02-05	It is a kind of for skin and/or the composition of hair nursing and/or treatment
CN106491455B	2019-12-31	Composition containing buddleia davidii extract and application thereof
CN106039022B	2020-05-08	Skin-brightening and whitening traditional Chinese medicine composition, skin-brightening and whitening traditional Chinese medicine preparation, skin-brightening and whitening mask and preparation method
CN103191328B	2014-08-27	Acne removing cream
CN111012725A	2020-04-17	Asparagus skin care composition and preparation method thereof
CN105012174A	2015-11-04	Chinese herbal toothpaste containing vitamin C and preparation method of Chinese herbal toothpaste
CN107823114A	2018-03-23	A kind of anti-acne skin care item containing sealwort stem cell extract
CN105213581A	2016-01-06	A kind of Chinese medicine formula for the treatment of liver and gall syndrome of fish and preparation method thereof
CN105853338A	2016-08-17	Dandruff removal traditional Chinese medicine composition containing tropaeolum majus and used for cosmetics
CN105853314A	2016-08-17	Anti-dandruff traditional Chinese medicine composition containing waltheria indica leaves and used for cosmetics
CN102349994A	2012-02-15	Alligator oil hair restoring cream and preparation method thereof
KR20120009192A	2012-02-01	Oriental herbal bathing material and manufacturing method thereof
CN110051608A	2019-07-26	Anticreep hair care containing crocus sativus is sprayed essence and preparation method
CN102670735A	2012-09-19	Anti-dandruff Chinese medicinal composition and application thereof to anti-dandruff external application agent
CN100333760C	2007-08-29	Chinese medicine for treating trichomadesis and preparation thereof

Priority And Related Applications

Priority Applications (1)

Application	Priority date	Filing date	Title
CN201210395803.2A	2012-10-18	2012-10-18	A kind of hair growth promoter and application thereof

Applications Claiming Priority (1)

Application	Filing date	Title
CN201210395803.2A	2012-10-18	A kind of hair growth promoter and application thereof

Legal Events

Date	Code	Title	Description
2013-01-16	C06	Publication	
2013-01-16	PB01	Publication	
2013-02-27	C10	Entry into substantive examination	
2013-02-27	SE01	Entry into force of request for substantive examination	
2015-11-18	C14	Grant of patent or utility model	
2015-11-18	GR01	Patent grant	

Concepts

machine-extracted

Download Filter table

Name	Image	Sections	Count	Query match
anagen phase		claims,abstract,description	51	0.000
hair growth		claims,abstract,description	51	0.000
sodium		claims,abstract,description	51	0.000
sodium		claims,abstract,description	51	0.000
sodium		claims,abstract,description	51	0.000
humic acid		claims,abstract,description	43	0.000
Hair		claims,abstract,description	25	0.000
sodium salts		claims,abstract,description	13	0.000
promoting		claims,abstract,description	8	0.000
3,7,8-trihydroxy-3-methyl-10-oxo-1,4-dihydropyrano[4,3-b]chromene-9-carboxylic acid		claims,description	43	0.000
fulvic acid		claims,description	43	0.000
fulvic acid		claims,description	43	0.000
acid		claims,description	30	0.000
growth promoter		claims,description	30	0.000
potassium		claims,description	20	0.000
potassium		claims,description	20	0.000
potassium		claims,description	20	0.000
potassium salts		claims,description	12	0.000
preparation method		claims,description	10	0.000
effects		abstract,description	22	0.000
alopecia		abstract,description	9	0.000
alopecia		abstract,description	9	0.000

Cyclophosphamide	abstract,description	8	0.000
Cyclophosphamide	abstract,description	8	0.000
salts	abstract,description	7	0.000
sodium chloride	abstract,description	7	0.000
Hair Follicle	abstract,description	6	0.000
ingredient	abstract,description	5	0.000
blood circulation	abstract,description	4	0.000
smell	abstract,description	4	0.000
Blood	abstract,description	3	0.000
blood	abstract,description	3	0.000
inhibitory effect	abstract,description	3	0.000
side effect	abstract,description	3	0.000
Kali <angiosperm>	abstract	3	0.000
nontoxic	abstract	1	0.000
preventing hair loss	abstract	1	0.000

Show all concepts from the description section