

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 September 2007 (27.09.2007)

PCT

(10) International Publication Number
WO 2007/108632 A1

(51) International Patent Classification:
A61K 8/97 (2006.01) **A61Q 7/00** (2006.01)

(21) International Application Number:
PCT/KR2007/001349

(22) International Filing Date: 20 March 2007 (20.03.2007)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2006-0025863 21 March 2006 (21.03.2006) KR
10-2006-0101408 18 October 2006 (18.10.2006) KR

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(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES,
FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN,
IS, JP, KE, KG, KM, KN, KP, KZ, LA, LC, LK, LR, LS,
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SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL,
PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— with international search report

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: NATURAL ORIENTAL MEDICINAL COMPOSITION FOR THE PROMOTION OF HAIR GROWTH AND
METHOD FOR PREPARING THE SAME

(57) Abstract: Disclosed herein is a natural oriental medicinal composition for the promotion of hair growth. The oriental medicinal
composition comprises a black bean extract, a tangerine extract, a potato extract, a pine needle extract and a quartzite powder. Since
the oriental medicinal composition comprises crude drugs extracted from natural substances that can prevent hair loss, it is effective
for hair growth and has ensured biostability. Particularly, the oriental medicinal composition allows newborn hair to grow in the
form of stiff hair.



WO 2007/108632 A1

Description

NATURAL ORIENTAL MEDICINAL COMPOSITION FOR THE PROMOTION OF HAIR GROWTH AND METHOD FOR PREPARING THE SAME

Technical Field

- [1] The present invention relates to a natural oriental medicinal composition for the promotion of hair growth, and more specifically to a natural oriental medicinal composition for the promotion of hair growth which comprises extracts from particular kinds of crude materials.

Background Art

- [2] As causes of alopecia and hair loss, numerous hypotheses have generally been proposed, for example, the function of male hormones secreted from hair roots and organs (*e.g.*, sebaceous glands), reduction in the amount of blood flowing into hair follicles, excessive sebum secretion, formation of peroxides, an abnormal state of the scalp due to the proliferation of bacteria, hereditary factors, and aging. However, the precise mechanism of hair loss still remains unknown. The number of people who suffer from hair loss is gradually increasing. Further, the age of alopecia patients is dropping.
- [3] Until now, no effective treatment for alopecia has been known. Based on the previous traditional experiences, proper tools (*e.g.*, brushes) are used to apply physical stimuli to the head, or therapeutic compounds are used to remove or attenuate the above-mentioned causes of alopecia.
- [4] Normal humans have more than 1.3 million hairs in the body and more than 100 thousand hairs on the head. Each hair undergoes different stages during its growth cycle consisting of anagen, catagen and telogen phases. A state in which the number of hairs is zero or significantly rare due to certain causes when compared to the normal state is referred to 'hair loss'. Hair loss can be categorized into telogen effluvium and anagen effluvium. The former is a general phenomenon wherein hairs fall off in the telogen phase, whereas the latter is an abnormal hair loss phenomenon, which is generally referred to as alopecia.
- [5] Based on the hypothesis that hormones are associated with the treatment of alopecia, preparations comprising female hormones as active ingredients have been developed. However, these hormone preparations were reported to be ineffective for alopecia and to cause skin inflammation and other side effects due to the administration of hormones. The use of the hormone preparations is currently not allowed.
- [6] In recent years, minoxidil commercially available from Upjohn Company, U.S.A.

and preparations (Crinos, Co., Italy) comprising trichosaccharide as an active ingredient have been introduced into the market. However, these preparations showed no distinct effect on hair loss and caused side effects in terms of the stability in the human body.

[7] Most hair restorers developed hitherto use chemical substances and temporarily promote the circulation of blood to expand capillary vessels, thus stimulating hair roots. Accordingly, conventional hair restorers provide temporary relief for hair loss and are only effective for hair loss induced by excessively secreted sebum.

[8] Various methods have been developed to prevent or treat hair loss by revitalizing hair follicles or controlling the mechanism of antioxidants. The revitalization of hair follicles is achieved by activating hair follicles by immune enhancement to supply saccharides as nutrients to the hair follicles. According to these methods, however, newborn hair does not have an original form, but is temporarily formed by cell division and stimuli, resulting in shortened life of the hair.

[9] Much research has been conducted to solve the aforementioned problems. Although many hair restorers have been proposed to prevent and treat hair loss, no hair restorer has succeeded in overcoming the problems.

Disclosure of Invention

Technical Problem

[10] The present invention has been made in view of the problems of the prior art, and it is an object of the present invention to provide a natural oriental medicinal composition for the promotion of hair growth which comprises crude drugs extracted from natural substances that can prevent hair loss, are effective for hair growth and have ensured biostability, and a method for preparing the oriental medicinal composition.

[11] To solve the problems of the prior art, the present inventors have earnestly and intensively conducted research using an oriental medical approach to develop a natural oriental medicinal composition for the promotion of hair growth using natural substances that are biologically safe, can prevent hair loss and can promote hair growth. As a result, the present inventors have found that when a composition comprising quartzite was applied, newborn hair grows in the form of stiff hair. The present invention has been achieved based on this finding.

[12] Therefore, it is a main object of the present invention to provide a natural oriental medicinal composition for the promotion of hair growth which comprises quartzite, and a method for preparing the oriental medicinal composition.

[13] That is, it is one object of the present invention to provide a natural oriental medicinal composition for the promotion of hair growth which uses purified oriental

medicinal materials and grains to remove fats excessively secreted in response to invasion of pathogenic wind, thereby inhibiting the activity of harmful bacteria, and to sufficiently enhance the circulation of blood, thereby ensuring the supply of nutrients to hair roots and activating the formation of cells, and a method for preparing the oriental medicinal composition.

[14] It is another object of the present invention to provide a natural oriental medicinal composition for the promotion of hair growth that is suitable for the treatment of hair loss caused by the lack of nutrients, which is observed when the flow of vital energy is weakened, wherein vitamins, a high level of proteins (*i.e.* amino acids) and hematopoietic elements indispensable for the revitalization of hair are supplied to enhance the flow of vital energy, and a method for preparing the oriental medicinal composition.

[15] It is another object of the present invention to provide a natural oriental medicinal composition for the promotion of hair growth that allows newborn hair to grow in an original form through the control of hormone secretion, prevents hair loss, improves the elasticity of existing hair, and strengthens revitalized hair roots, and a method for preparing the oriental medicinal composition.

[16] It is yet another object of the present invention to provide a natural oriental medicinal composition for the promotion of hair growth that prevents hair loss induced due to specific physical constitution and hereditary factors, and effectively revitalizes the hair of patients suffering from alopecia areata due to scalp inflammation, stress and other various diseases based on an oriental medical principle of hair revitalization, that is, a hair revitalization mechanism due to improvement of blood circulation, enhancement of hair roots, control of hormones, activation of cells and high levels of nutrients, and a method for preparing the oriental medicinal composition.

Technical Solution

[17] In accordance with one aspect of the present invention for achieving the above objects, there is provided a natural oriental medicinal composition for the promotion of hair growth (hereinafter, referred to simply as an oriental medicinal composition) which comprises a black bean extract, a tangerine extract, a potato extract, a pine needle extract and a quartzite powder.

[18] Specifically, the oriental medicinal composition of the present invention comprises 100 parts by weight of the quartzite, 20 to 200 parts by weight of the black bean extract, 20 to 200 parts by weight of the tangerine extract, 20 to 200 parts by weight of the potato extract, and 20 to 200 parts by weight of the pine needle extract.

[19] The oriental medicinal composition of the present invention may further comprise an onion extract, a ginkgo nut extract, a *Fructus schizandrae* (the dried ripe fruit of

Schisandra chinensis) extract, a *Fructus lycii* (the dried ripe fruit of *Lycium barbarum*) extract, an oyster mushroom (*Pleurotus ostreatus*) extract, and a barley extract.

[20] Specifically, the oriental medicinal composition of the present invention may further comprise 50 to 250 parts by weight of the onion extract, 30 to 200 parts by weight of the ginkgo nut extract, 30 to 200 parts by weight of the *Fructus schizandrae* extract, 50 to 250 parts by weight of the *Fructus lycii* extract, 30 to 200 parts by weight of the oyster mushroom extract and 20 to 200 parts by weight of the barley extract, based on 100 parts by weight of the quartzite.

[21] The oriental medicinal composition of the present invention may further comprise a taro extract, a *Fructus rubi* (the dried fruit of *Rubus chingii*) extract, a jade powder, a wild ginseng extract, and a loess powder.

[22] Specifically, the oriental medicinal composition of the present invention may further comprise 10 to 150 parts by weight of the taro extract, 50 to 250 parts by weight of the *Fructus rubi* extract, 50 to 250 parts by weight of the jade powder, 50 to 250 parts by weight of the wild ginseng extract and 50 to 250 parts by weight of the loess powder, based on 100 parts by weight of the quartzite.

[23] The oriental medicinal composition of the present invention may further comprise 1 to 10 parts by weight of a gold powder, based on 100 parts by weight of the quartzite.

[24] In accordance with another aspect of the present invention, there is provided a method for preparing an oriental medicinal composition, the method comprising the steps of preparing crude drugs, mixing the crude drugs, and reconcentrating the mixture by heating.

[25] The step of preparing crude drugs comprises the sub-steps of: heating selected plants at 90 to 130°C for 8 to 15 hours and filtering the heated plants to obtain respective extracts from the plants; heating the extracts at 50 to 80°C for 12 to 48 hours to obtain respective concentrates; and drying the concentrates and pulverizing to obtain respective powders.

[26] The reconcentration step is carried out by mixing 50 to 250 parts by weight of the mixture of the crude drugs with 100 parts by weight of water and heating the resulting mixture at 80 to 140°C for 12 to 48 hours.

[27] The crude drugs are obtained from black beans, tangerines, potatoes, pine needles and quartzite.

[28] The crude drugs are obtained from black beans, tangerines, potatoes, pine needles, quartzite, onions, ginkgo nuts, *Fructus schizandrae*, *Fructus lycii*, oyster mushrooms and barley.

[29] The crude drugs are obtained from black beans, tangerines, potatoes, pine needles, quartzite, onions, ginkgo nuts, *Fructus schizandrae*, *Fructus lycii*, oyster mushrooms, barley, taro, *Fructus rubi*, jade, wild ginseng and loess.

- [30] Hair goes through a repeated growth cycle consisting of anagen, catagen and telogen phases. Alopecia refers to a state in which the telogen phase is relatively long and the anagen phase is relatively short. When the telogen phase is lengthened, the revitalization of hair is difficult. Based on the above facts, the present inventors have conducted research to develop a technique for strengthening hair at the initial stage of hair formation to extend the anagen phase so that the life of hair is prolonged, thus accomplishing the present invention. The term crude drug as used herein refers to an ingredient that is beneficial to humans. The crude drug is prepared from a naturally occurring material without any processing or through processing, such as drying, cutting, heating, extracting or pulverizing. Depending on the origin (*e.g.*, a plant, mineral or animal) of the naturally occurring material, the crude drug can be classified into a plant, mineral or animal crude drug.

Advantageous Effects

- [31] The oriental medicinal composition and the method for preparing the composition according to the present invention offer the following effects.
- [32] The oriental medicinal composition of the present invention prevents hair loss and exhibits superior hair restoration effects.
- [33] Since the oriental medicinal composition of the present invention comprises natural foods as major raw materials, it has no toxicity and side effect to humans.
- [34] That is, by the action of light energy released from quartzite, the oriental medicinal composition of the present invention promotes the absorption of polysaccharides as nutrients, which activate the division of cells, into hair follicles in the telogen phase for a long period of time, and enhances the bloodstream to allow newborn hair to grow in the form of stiff hair.
- [35] In addition, trisulfide extracted from onion, vitamin C, vitamin B group and vitamin E (tocopherol) extracted from black bean, oyster mushroom and ginkgo nut, polysaccharides (*e.g.*, glucose, maltose and tannin) contained as nutrients in taro, potato and barley, and terpene extracted from pine needles, ginkgo nut, *Fructus lycii*, *Fructus schizandrae* and *Fructus rubi* function to inhibit the formation of active oxygen to remove excessively secreted lipid peroxides due to their antibacterial activity, and inhibits the formation of lipid peroxides to allow hair to be effectively revitalized.
- [36] Furthermore, the method for the preparing the oriental medicinal composition according to the present invention comprises the steps of purifying crude materials, extracting the purified crude materials, concentrating the extracts, filtering the concentrates, drying the filtrates, pulverizing to obtain powders on a nanometer scale, mixing the powders, heating the mixture to dissolve the mixture, and reconcentrating

the solution. Accordingly, since the crude drugs are highly water-soluble without the addition of any additive, such as a dispersion auxiliary, the oriental medicinal composition can be uniformly dispersed in a relatively simple manner without the formation of any precipitate.

Mode for the Invention

- [37] The present invention will now be explained in more detail with reference to the following examples. However, these examples are given for the purpose of illustration and are not intended to limit the scope of the present invention.
- [38] The present invention provides a method for preparing an oriental medicinal composition, the method comprising the steps of preparing crude drugs, mixing the crude drugs, and reconcentrating the mixture by heating.
- [39] The oriental medicinal composition of the present invention is achieved based on an oriental medical principle of hair revitalization, that is, improvement of blood circulation, enhancement of hair roots, control of hormones, activation of cells and high levels of nutrients. Taking into consideration the circulation of blood by the action of light energy, the enzymatic metabolism of carbohydrates, the ability to form cells and the ability to inhibit the formation of active oxygen, it is preferred that the crude drugs contain ingredients capable of supplying vitamins, amino acids and hematopoietic elements essential for the revitalization of hair and improving the flow of blood by the action of light energy.
- [40] The crude drugs are preferably a black bean extract, a tangerine extract, a potato extract, a pine needle extract and quartzite.
- [41] The crude drugs are more preferably a black bean extract, a tangerine extract, a potato extract, a pine needle extract, quartzite, an onion extract, a ginkgo nut extract, a *Fructus schizandrae* extract, a *Fructus lycii* extract, an oyster mushroom extract and a barley extract. The crude drugs are even more preferably a black bean extract, a tangerine extract, a potato extract, a pine needle extract, quartzite, an onion extract, a ginkgo nut extract, a *Fructus schizandrae* extract, a *Fructus lycii* extract, an oyster mushroom extract, a barley extract, a taro extract, a *Fructus rubi* extract, a jade powder, a wild ginseng extract and loess.
- [42] The crude drugs effectively induce the promotion of hair growth. The step of preparing the crude drugs includes the sub-steps of: heating the selected plants at 90 to 130°C for 8 to 15 hours and filtering the heated plants to obtain extracts from the plants, heating the extracts at 50 to 80°C for 12 to 48 hours to obtain concentrates and; and drying the concentrates and pulverizing to obtain respective nanometer-sized powders. The nanometer-sized powders of the respective crude drugs are highly soluble without any precipitation in the subsequent mixing and reconcentration steps.

- [43] The oriental medicinal composition of the present invention comprises 100 parts by weight of the quartzite, 20 to 200 parts by weight of the black bean extract, 20 to 200 parts by weight of the tangerine extract, 20 to 200 parts by weight of the potato extract, and 20 to 200 parts by weight of the pine needle extract. Preferably, the oriental medicinal composition of the present invention further comprise 50 to 250 parts by weight of the onion extract, 30 to 200 parts by weight of the ginkgo nut extract, 30 to 200 parts by weight of the *Fructus schizandrae* extract, 50 to 250 parts by weight of the *Fructus lycii* extract, 30 to 200 parts by weight of the oyster mushroom extract and 20 to 200 parts by weight of the barley extract, based on 100 parts by weight of the quartzite. More preferably, the oriental medicinal composition of the present invention further comprises 10 to 150 parts by weight of the taro extract, 50 to 250 parts by weight of the *Fructus rubi* extract, 50 to 250 parts by weight of the jade powder, 50 to 250 parts by weight of the wild ginseng extract and 50 to 250 parts by weight of the loess, based on 100 parts by weight of the quartzite.
- [44] The contents of the respective crude drugs were determined through repeated experiments taking into consideration the optimum effects, for example, a hair tonic comprising the oriental medicinal composition of the present invention is used to allow newborn hair to have the same thickness as the original hair (stiff hair) of the user, and from the viewpoint of economic efficiency, *i.e.* minimized production costs. If the crude drugs are mixed in amounts of less than the respective contents defined above, the thickness of the revitalized hair is as small as that of fluff and the number of hairs lost decreases.
- [45] The reconcentration step is carried out by mixing 50 to 250 parts by weight of the mixture of the crude drugs with 100 parts by weight of water and heating the resulting mixture at 80 to 140°C for 12 to 48 hours.
- [46] The respective crude materials used to prepare the oriental medicinal composition of the present invention are well known in the art. Particularly, onions, black beans, oyster mushrooms, barley, ginkgo nuts, *Fructus schizandrae*, potatoes, *Fructus lycii*, wild ginseng, taro, pine needles, tangerines and *Fructus rubi* are commercially available as natural foods. These crude materials can be purchased as general products, and are preferably products cultivated in Korea without using any agricultural chemical. Then, the selected crude materials are washed. Hereinafter, the efficacy of the crude drugs will be explained below.
- [47] The onion extract used in the oriental medicinal composition of the present invention serves as a source of trisulfide. The vitamins and inorganic calcium phosphate contained in the onion extract remove harmful substances in the blood and promote the absorption of vitamin B1, a hormone for hair formation, to activate metabolism, thereby preventing the formation of blood clots. In addition, the onion

extract exerts synergistic effects with the black bean extract.

- [48] The black bean extract serves as a source of tocopherol, plant estrogen and saponin. The black bean extract contains substances essential for hair growth, such as high-quality proteins, lipids, vitamin B1 and vitamin B2. The black bean extract controls the metabolism of saccharides, which are energy sources for hair, and inhibits aging to prevent hair loss induced due to hereditary factors.
- [49] The oyster mushroom extract serves as a source of vitamin B2 and ergosterin. Vitamin B2 group contained in the oyster mushroom extract promotes the growth of hair and supplies substances necessary for the metabolism of saccharides, which are indispensable elements for the activation of hair follicle cells. In addition, the oyster mushroom extract prevents skin inflammation (dermatitis), exhibits antitumoral effects, and impedes the absorption of bad cholesterol so as to enhance the immune systems, thereby strengthening hair roots.
- [50] The barley extract exhibits antiphlogistic effects, is indispensable for the activation of hair follicle cells, and contains large amounts of vitamin B group, which is a main ingredient for the energy metabolism of carbohydrates.
- [51] The quartzite stimulates hair roots to improve the circulation of blood so that cells are sufficiently formed and revitalized. That is, the quartzite promotes the absorption of various crude drugs into the scalp by the action of light energy.
- [52] The ginkgo nut extract acts as a source of flavonoid, globulin and ergosterin, absorbs bad cholesterol to prevent the formation of extravasated blood, and exerts synergistic effects with grains to make the scalp clean.
- [53] The *Fructus schizandrae* extract acts to assist in the formation of amino acid transaminases (*e.g.*, GOT and GPT) to supply proteins necessary for the revitalization of hair, thereby controlling secretion of hormones through stimulation of brain waves.
- [54] The potato extract is a source of collagen and contains collagen ingredients that revitalize cells and enhance the elasticity of hair roots through balanced humors, *i.e.* controlled hormone secretion.
- [55] The *Fructus lycii* extract acts to produce immune enhancing substances, exhibits hematopoietic action and promotes the formation of growth hormones. Accordingly, the *Fructus lycii* extract has been used as a medicinal material effective for the prevention of hair loss.
- [56] The extract from wild ginseng known as a herb of eternal youth promotes the formation of cells and improves the bloodstream to sufficiently supply nutrients to hair roots.
- [57] The taro extract acts as a source of glucuronic acid, brings down fever, relieves inflammation, and activates the functions of the kidney and liver to prevent aging.
- [58] The pine needle extract acts as a source of terpene, -pinene and -pinene, and inhibits

the formation of lipid peroxides from linoleic acid, palmitic acid and 5-oleic acid by the action of active oxygen to prevent aging. In addition, the pine needle extract contains essential amino acids, which cannot be synthesized within the body, to revitalize elastic hairs.

- [59] The tangerine extract acts as a source of ascorbic acid, recovers fatigue, promotes metabolism, lowers the level of cholesterol, and is effective for the prevention of arteriosclerosis.
- [60] The *Fructus rubi* extract is a source of polyphenols, tannin, saponin and anthocyanine, and stimulates the functions of the adrenal cortex to activate growth functions, thus rendering hair black.
- [61] The jade acts to discharge of wastes from the body and improves the bloodstream.
- [62] The loess is mixed with grains to remove excessively secreted sebum, thereby making the scalp clean.
- [63] Ions (low current) of the gold (24K) bind to ions present in blood to stimulate the leucocytes, thereby promoting the circulation of blood (effects of negatively charged ions). In addition, a photocurrent generated from the gold induces resonance of moisture contained in the body to promote the activation of the moisture, so that the scalp is maintained in a fresh state.
- [64] That is, the action of the light energy released from the quartzite promotes the absorption of trisulfide extracted from onion, vitamin C, vitamin B group and vitamin E (tocopherol) extracted from black bean, oyster mushroom and ginkgo nut, and polysaccharides (*e.g.*, glucose, maltose and tannin) contained as nutrients in taro, potato and barley into the scalp. In addition, the quartzite promotes the bloodstream. Furthermore, terpene extracted from pine needles, ginkgo nut, *Fructus lycii*, *Fructus schizandrae* and *Fructus rubi* functions to inhibit the formation of active oxygen, removes excessively secreted lipid peroxides due to its antibacterial activity, and inhibits the formation of lipid peroxides to assist the revitalization of hair.

[65]

[66] **EXAMPLES**

[67] <Example 1-1>

[68] First, black beans, tangerines, pine needles and quartzite were thoroughly washed with water and potatoes were cut to a predetermined size.

[69] Next, 3g of the black beans were added to 50 ml of purified water heated at 120°C for 11 hours using an alcohol lamp, and filtered to obtain black beans extract. The filtrate, that is the extract, was heated at 55°C for 14 hours to obtain black beans concentrate. The concentrate was dried for 24 hours and pulverized to obtain a powder having a particle diameter not larger than 100 μ m, *i.e.* on a nanometer scale. The pine needles, the tangerines and the potatoes were processed in the same manner as in the

processing of the black beans to obtain respective powders.

[70] Also, the quartzite was pulverized to obtain a powder having a particle diameter not larger than 100 μ m, i.e. on a nanometer scale.

[71] Subsequently, 3g of the black bean powder, 3g of the pine needle powder, 3g of the tangerine powder and 3g of the potato powder were added to 40g of purified water, and mixed with 4g of the quartzite powder. The resulting mixture was heated at 110°C using an alcohol lamp for 24 hours to prepare an oriental medicinal composition.

[72]

[73] <Example 1-2>

[74] First, black beans, tangerines, pine needles, quartzite, ginkgo nuts, *Fructus schizandrae*, *Fructus lycii*, oyster mushrooms and barley were thoroughly washed. Onions and potatoes were cut to a predetermined size.

[75] Next, predetermined amounts of the black beans, the onions, the oyster mushrooms, the ginkgo nuts, the *Fructus schizandrae*, the pine needles, the tangerines, the potatoes, the *Fructus lycii* and the barley were processed in the same manner as in the processing of the black beans described in Example 1-1 to obtain respective powders.

[76] Subsequently, 4g of the onion powder, 3g of the black bean powder, 3g of the oyster mushroom powder, 3.5g of the ginkgo nut powder, 3.5g of the *Fructus schizandrae* powder, 3g of the pine needle powder, 3g of the tangerine powder, 3g of the potato powder, 4g of the *Fructus lycii* powder and 3g of the barley powder were added to 40g of purified water, and mixed with 4g of the quartzite powder having a particle diameter not larger than 100 μ m. The resulting mixture was heated at 110°C using an alcohol lamp for 24 hours to prepare an oriental medicinal composition.

[77]

[78] <Example 1-3>

[79] First, black beans, tangerines, pine needles, quartzite, ginkgo nuts, *Fructus schizandrae*, *Fructus lycii*, oyster mushrooms, barley, taro, *Fructus rubi*, jade, wild ginseng and loess were thoroughly washed. Onions and potatoes were cut to a predetermined size.

[80] Next, predetermined amounts of the black beans, the onions, the oyster mushrooms, the taro, the ginkgo nuts, the *Fructus schizandrae*, the pine needles, the tangerines, the potatoes, the *Fructus lycii*, the barley and *Fructus rubi* were processed in the same manner as in the processing of the black beans described in Example 1-1 to obtain respective powders. And the quartzite, the jade and the loess were processed in the same manner as in the processing of the quartzite described in Example 1-1 to obtain respective powders.

[81] Subsequently, 4g of the onion powder, 3g of the black bean powder, 3.5g of the oyster mushroom powder, 2.5g of the taro powder, 3.5g of the ginkgo nut powder, 3.5g

of the *Fructus schizandrae* powder, 3g of pine needle powder, 3g of the tangerine powder, 3g of the potato powder, 4g of the *Fructus lycii* powder, 4g of the wild ginseng powder, 3g of the barley powder and 4g of the *Fructus rubi* powder were added to 40g of purified water, and mixed with 4g of the loess powder, 4g of the quartzite powder and 4g of the jade powder, all of which had a particle diameter not larger than 100 μ . The resulting mixture was heated at 110°C using an alcohol lamp for 24 hours to prepare an oriental medicinal composition.

[82]

[83] <Example 1-4>

[84] First, black beans, tangerines, pine needles, quartzite, ginkgo nuts, *Fructus schizandrae*, *Fructus lycii*, oyster mushrooms, barley, taro, *Fructus rubi*, a jade, wild ginseng and loess were thoroughly washed with water, and onions and potatoes were cut to a predetermined size.

[85] Next, 3g of the black beans were added to 50 ml of purified water, heated at 120°C for 11 hours using an alcohol lamp, and filtered to obtain black beans extract. The filtrate, that is the extract, was heated at 55°C for 14 hours to obtain black beans concentrate. The concentrate was dried for 24 hours and pulverized to obtain a powder having a particle diameter not larger than 100 μ . The onions, the oyster mushrooms, the taro, the ginkgo nuts, the *Fructus schizandrae*, the pine needles, the tangerines, the potatoes, the *Fructus lycii*, the wild ginseng, the barley and *Fructus rubi* were processed in the same manner as in the processing of the black beans to obtain respective powders.

[86] Also, the quartzite was pulverized to obtain a powder having a particle diameter not larger than 100 μ , i.e. on a nanometer scale. The jade, the loess and gold (24K) were processed in the same manner as in the processing of the quartzite to obtain respective powders.

[87] Subsequently, 4g of the onion powder, 3g of the black bean powder, 3.5g of the oyster mushroom powder, 2.5g of the taro powder, 3.5g of the ginkgo nut powder, 3.5g of the *Fructus schizandrae* powder, 3g of the pine needle powder, 3g of the tangerine powder, 3g of the potato powder, 4g of the *Fructus lycii* powder, 4g of the wild ginseng powder, 3g of the barley powder and 4g of the *Fructus rubi* powder were added to 40g of purified water, and mixed with 4g of the loess, 4g of the quartzite, 4g of jade and 1.25 mg of gold (24K), all of which had a particle diameter not larger than 100 μ . The resulting mixture was heated at 110°C using an alcohol lamp for 24 hours to prepare an oriental medicinal composition.

[88] <Example 2-1>

[89] An oriental medicinal composition was prepared in the same manner as in Example 1-1, except that 4g of the black bean powder, 3g of the pine needle powder, 4g of the

tangerine powder and 3g of the potato powder were mixed with 5g of the quartzite powder.

[90] <Example 2-2>

[91] An oriental medicinal composition was prepared in the same manner as in Example 1-2, except that 5g of the onion powder, 4g of the black bean powder, 3.5g of the oyster mushroom powder, 3.5g of the ginkgo nut powder, 4g of the *Fructus schizandrae* powder, 3g of the pine needle powder, 4g of the tangerine powder, 3g of the potato powder, 5g of the *Fructus lycii* powder and 3g of the barley powder were mixed with 5g of the quartzite powder.

[92] <Example 2-3>

[93] An oriental medicinal composition was prepared in the same manner as in Example 1-3, except that 5g of the onion powder, 4g of the black bean powder, 3.5g of the oyster mushroom powder, 3g of the taro powder, 3.5g of the ginkgo nut powder, 4g of the *Fructus schizandrae* powder, 3g of the pine needle powder, 4g of the tangerine powder, 3g of the potato powder, 5g of the *Fructus lycii* powder, 3g of the wild ginseng powder, 3g of the barley powder and 4g of the *Fructus rubi* powder were mixed with 3g of the loess powder, 5g of the quartzite powder and 4g of the jade powder.

[94]

[95] <Example 2-4>

[96] An oriental medicinal composition was prepared in the same manner as in Example 1-4, except that 5g of the onion powder, 4g of the black bean powder, 3.5g of the oyster mushroom powder, 3g of the taro powder, 3.5g of the ginkgo nut powder, 4g of the *Fructus schizandrae* powder, 3g of the pine needle powder, 4g of the tangerine powder, 3g of the potato powder, 5g of the *Fructus lycii* powder, 3g of the wild ginseng powder, 3g of the barley powder and 4g of the *Fructus rubi* powder were mixed with 3g of the loess powder, 5g of the quartzite powder, 4g of the jade powder and 1.25 mg of the gold (24K) powder.

[97] <Example 3-1>

[98] An oriental medicinal composition was prepared in the same manner as in Example 1-1, except that 2g of the black bean powder, 2g of the pine needle powder, 5g of the tangerine powder and 3g of the potato powder were mixed with 5g of the quartzite powder.

[99] <Example 3-2>

[100] An oriental medicinal composition was prepared in the same manner as in Example 1-2, except that 3g of the onion powder, 2g of the black bean powder, 3.5g of the oyster mushroom powder, 3.5g of the ginkgo nut powder, 4g of the *Fructus schizandrae* powder, 2g of the pine needle powder, 5g of the tangerine powder, 3g of

the potato powder, 5g of the *Fructus lycii* powder and 3g of the barley powder were mixed with 5g of the quartzite powder.

[101] <Example 3-3>

[102] An oriental medicinal composition was prepared in the same manner as in Example 1-3, except that 3g of the onion powder, 2g of the black bean powder, 3.5g of the oyster mushroom powder, 3g of the taro powder, 3.5g of the ginkgo nut powder, 4g of the *Fructus schizandrae* powder, 2g of the pine needle powder, 5g of the tangerine powder, 3g of the potato powder, 5g of the *Fructus lycii* powder, 4g of the wild ginseng powder, 3g of the barley powder and 5g of the *Fructus rubi* powder were mixed with 4g of the loess, 5g of the quartzite and 4g of the jade.

[103] <Example 3-4>

[104] An oriental medicinal composition was prepared in the same manner as in Example 1-4, except that 3g of the onion powder, 2g of the black bean powder, 3.5g of the oyster mushroom powder, 3g of the taro powder, 3.5g of the ginkgo nut powder, 4g of the *Fructus schizandrae* powder, 2g of the pine needle powder, 5g of the tangerine powder, 3g of the potato powder, 5g of the *Fructus lycii* powder, 4g of the wild ginseng powder, 3g of the barley powder and 5g of the *Fructus rubi* powder were mixed with 4g of the loess, 5g of the quartzite, 4g of the jade and 1.25 mg of gold (24K).

[105] Clinical tests of each of the oriental medicinal compositions were conducted on 100 men and women suffering from alopecia, and the test results are shown in Table 1. After the oriental medicinal composition had been applied around hair roots of the scalp where hair loss occurred twice (each 5 ml) daily for six months, the state of the scalp was observed.

[106] Table 1

	Example 1-1	Example 1-2	Example 1-3	Example 1-4
Excellent	25	28	32	35
Good	14	16	18	20
Decrease of hair loss	11	12	14	15
Ineffective	25	19	11	5
Not available	25	25	25	25
	Example 2-1	Example 2-2	Example 2-3	Example 2-4
Excellent	13	14	16	18
Good	7	8	9	10

Decrease of hair loss	6	7	7	8
Ineffective	15	12	9	5
Not available	59	59	59	59
	Example 3-1	Example 3-2	Example 3-3	Example 3-4
Excellent	7	8	9	10
Good	4	4	5	5
Decrease of hair loss	5	6	7	8
Ineffective	15	13	10	8
Not available	69	69	69	69

[107] When hair having the same thickness as the original hair of the users was grown (*i.e.* , when newborn hair was stiff), the oriental medicinal composition was judged to be 'excellent' When thin hair in the form of fluff was grown, the oriental medicinal composition was judged to be 'good'. When no newborn hair was grown and the number of hairs lost was decreased, the oriental medicinal composition was judged to be 'decrease of hair loss'. When there is no difference in the density before and after the test, the oriental medicinal composition was judged to be 'ineffective'. When no clinical test result was obtained from the users, the oriental medicinal composition was judged to be 'not available'.

[108] As can be seen from the data shown in Table 1, assuming that the oriental medicinal compositions prepared in Example 1-4 and Example 3-4 have an efficiency of 100%, the oriental medicinal compositions prepared in Example 1-1 and Example 3-1 have an efficiency of about 70%, the oriental medicinal compositions prepared in Example 1-2 and Example 3-2 have an efficiency of about 80%, and the oriental medicinal compositions prepared in Example 1-3 and Example 3-3 have an efficiency of about 90%.

[109] In addition, depending on the type of hair loss, the oriental medicinal composition prepared in Example 1-4 was applied to 90 males and females suffering from hair loss due to hereditary factors, 70 males and females suffering from hair loss due to alopecia areata and a variety of diseases, and 40 males and females at the initial stage of hair loss. The clinical test results are shown in Table 2.

[110] Table 2

Type of hair loss	Hair growth cycle (day)	Number of patients
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Hair loss due to hereditary factors (90 patients)	180	60
	140	20
	120	6
	Not available	4
Hair loss due to alopecia areata and a variety of diseases (70 patients)	120	30
	100	20
	80	10
	Not available	10
Initial stage of hair loss(40 patients)	60	15
	50	10
	40	5
	Not available	10

[111]

[112]

As can be seen from the data shown in Table 2, about 85% of the patients using the oriental medicinal compositions experienced excellent hair growth effects. Although there was a difference in the time when hair began to grow between the individuals, the oriental medicinal composition was effective in all patients suffering from various types of alopecia. Particularly, excellent hair growth effects were observed in the patients suffering from hair loss due to hereditary factors.

Industrial Applicability

[113]

Based on these observations, it seems that the oriental medicinal compositions of the present invention promoted hair growth through the supply of optimal nutrients, the circulation of blood due to the action of light energy, the enzymatic metabolism of carbohydrates, the ability to form cells and the ability to inhibit the formation of active oxygen, resulting in prevention of hair loss and revitalization of hair.

[114]

[115]

Claims

- [1] A natural oriental medicinal composition for the promotion of hair growth, the composition comprising a black bean extract, a tangerine extract, a potato extract, a pine needle extract and a quartzite powder.
- [2] The composition according to claim 1, wherein the composition comprises 100 parts by weight of the quartzite, 20 to 200 parts by weight of the black bean extract, 20 to 200 parts by weight of the tangerine extract, 20 to 200 parts by weight of the potato extract, and 20 to 200 parts by weight of the pine needle extract.
- [3] The composition according to claim 1, further comprising an onion extract, a ginkgo nut extract, a *Fructus schizandrae* extract, a *Fructus lycii* extract, an oyster mushroom extract, and a barley extract.
- [4] The composition according to claim 3, wherein the composition comprises 50 to 250 parts by weight of the onion extract, 30 to 200 parts by weight of the ginkgo nut extract, 30 to 200 parts by weight of the *Fructus schizandrae* extract, 50 to 250 parts by weight of the *Fructus lycii* extract, 30 to 200 parts by weight of the oyster mushroom extract and 20 to 200 parts by weight of the barley extract, based on 100 parts by weight of the quartzite.
- [5] The composition according to claim 1, further comprising a taro extract, a *Fructus rubi* extract, a jade powder, a wild ginseng extract, and a loess powder.
- [6] The composition according to claim 5, wherein the composition comprises 10 to 150 parts by weight of the taro extract, 50 to 250 parts by weight of the *Fructus rubi* extract, 50 to 250 parts by weight of the jade powder, 50 to 250 parts by weight of the wild ginseng extract and 50 to 250 parts by weight of the loess powder, based on 100 parts by weight of the quartzite.
- [7] The composition according to claim 1, further comprising 1 to 10 parts by weight of a gold powder, based on 100 parts by weight of the quartzite.
- [8] A method for preparing an oriental medicinal composition, the method comprising the steps of:
preparing plant crude drugs from black beans, tangerines, potatoes and pine needles;
preparing a mineral crude drug from quartzite;
mixing the plant crude drugs with the mineral crude drug; and
reconcentrating the mixture by heating.
- [9] The method according to claim 8, wherein the step of preparing the plant crude drugs comprises the sub-steps of:
heating the selected plants at 90 to 130°C for 8 to 15 hours and filtering the

heated plants to obtain respective extracts from the plants;
heating the extracts at 50 to 80°C for 12 to 48 hours to obtain respective concentrates; and
drying the concentrates and pulverizing to obtain respective powders.

- [10] The method according to claim 8, wherein the reconcentration step is carried out by mixing 50 to 250 parts by weight of the mixture of the crude drugs with 100 parts by weight of water and heating the resulting mixture at 80 to 140°C for 12 to 48 hours.
- [11] The method according to any one of claims 8 to 10, wherein the plant crude drugs further include crude drugs obtained from onions, ginkgo nuts, *Fructus schizandrae*, *Fructus lycii*, oyster mushrooms and barley.
- [12] The method according to claim 11, wherein the plant crude drugs further include crude drugs obtained from taro, *Fructus rubi* and wild ginseng; and the mineral crude drug further includes crude drugs obtained from jade and loess.
- [13] The method according to claim 12, wherein the mineral crude drug further includes a crude drug obtained from gold.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2007/001349**A. CLASSIFICATION OF SUBJECT MATTER*****A61K 8/97(2006.01)i, A61Q 7/00(2006.01)i***

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC8 as above

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKIPASS, PAJ, FPD, USPAT

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 2002-0084718 A (PARK UI SEOK) 11 November 2002 see page 2, lines 48-50; claim 1	1 - 13
A	KR 2006-0014307 A (PARK HYUN SUK) 15 February 2006 see abstract, claims 1, 2	1 - 13
A	KR 2001-0109383 A (LEE JAE KOOK) 10 December 2001 see abstract, claim 1	1 - 13
A	US 5 494 667 A (YUTAKA MIYAUCHI. et al.) 25 February 1996 see abstract, claim 1	1 - 13
A	US 6 093 402 A (KABUSHIKI KAISHA HAYAHIBARA. et al.) 27 July 2000 see abstract, claim 1	1 - 13

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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Date of the actual completion of the international search

21 JUNE 2007 (21.06.2007)

Date of mailing of the international search report

21 JUNE 2007 (21.06.2007)

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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