

## Hair grower

### Abstract

<P>PROBLEM TO BE SOLVED: To provide a hair grower tender to human bodies and excellent in use feeling and moisture retaining effects. <P>SOLUTION: This hair grower is characterized by containing humus soil extracts. The humus soil extracts are obtained by adding water to the humus soil to extract, filtrating the obtained extract liquid by using a filter of 0.1-0.2 μm and purifying the obtained filtrate. The hair grower has ≤15 wt.% alcohol content and contains no preservative. <P>COPYRIGHT: (C)2007,JPO&INPIT

JP2006327978A

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**Inventor:** [Takashi Noda](#), [隆司 野田](#), [Shinji Sugiyama](#), [眞次 杉山](#), [Sakiko Chino](#), [佐希子 千野](#)

**Current Assignee :** MYUBIO CO Ltd , Nippon Zettoc Co Ltd

### Worldwide applications

2005 [JP](#)

### Application JP2005152767A events

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**Info:** [Patent citations \(5\)](#), [Cited by \(4\)](#), [Legal events](#), [Similar documents](#), [Priority and Related Applications](#)

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### Claims (6)

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translated from Japanese

A hair restorer comprising a humus soil extract. The said humus soil extract was refine | purified using the filtrate obtained by adding water to humus soil and filtering the obtained extract using a 0.1-0.2 micrometer filter. The hair restorer according to claim 1, wherein The hair restorer according to claim 1 or 2, wherein the alcohol content is 15 wt% or less. The hair restorer according to any one of claims 1 to 3, which does not contain a preservative. The hair restorer according to any one of claims 1 to 4, comprising vitamin E and / or a derivative thereof. The hair restorer according to any one of claims 1 to 5, which is used in a spray container.

### Description

translated from Japanese

The present invention relates to a hair restorer.

Conventionally, there is a high demand for hair restorers that improve light hair and hair loss, and a variety of hair restorers are on the market.

Conventional hair restorers contain many alcohol components for the purpose of dissolving oil-soluble components, sterilizing scalp and the like, and preserving the hair restorer itself (see, for example, Patent Document 1).

However, there has been concern about the adverse effects on the human body due to such a large amount of alcohol components. Moreover, there existed a problem of reducing the moisturizing effect of a hair restorer. In addition, there is a problem that the stimulation to the scalp and the like is too strong and the usability is impaired.

In addition, conventional hair restorers contain antiseptics such as parabens and sodium benzoate for the purpose of preventing product deterioration, and such antiseptics are highly irritating to the scalp etc. It was difficult to obtain a feeling of use. There was also a problem in terms of safety.

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An object of the present invention is to provide a hair restorer that is gentle to the human body and excellent in feeling of use and moisturizing effect.

Such an object is achieved by the present inventions (1) to (6) below.

(1) A hair restorer comprising a humus soil extract.

(2) The humus soil extract is extracted by adding water to the humus soil, and using the filtrate obtained by filtering the obtained extract using a 0.1-0.2  $\mu\text{m}$  filter. The hair restorer according to the above (1), which is purified.

(3) The hair restorer according to the above (1) or (2), wherein the alcohol content is 15 wt% or less.

(4) The hair restorer according to any one of (1) to (3), which does not contain a preservative.

(5) The hair restorer according to any one of the above (1) to (4), comprising vitamin E and / or a derivative thereof.

(6) The hair restorer according to any one of (1) to (5), which is used in a spray container.

ADVANTAGE OF THE INVENTION According to this invention, it is gentle to a human body and can provide a hair restorer for a feeling of use and a moisturizing effect.

Hereinafter, preferred embodiments of the hair restorer of the present invention will be described in detail.

In addition, the dosage form of the hair restorer in this specification includes hair tonic, hair lotion, hair cream, hair gel, hair mist, hair foam, hair shampoo, hair rinse, and the like.

The hair restorer of the present invention is characterized by containing a humus soil extract.

Humus is usually decomposed, synthesized, and organically decomposed by anaerobic microorganisms such as seaweed, plants, algae, seafood, and other minerals deposited on the bottom of the seabed, lakes and swamps over 5 million years ago. For example, it exists as a layer of about 10 m in about 20 m underground.

Humus is composed of many components such as amino acids, vitamins, proteins, enzymes, and minerals.

The humus soil extract used in the present invention is a substance extracted from such humus soil and purified using water, as will be described in detail later.

Humic acid extracts include humic acid, fulvic acid, humic substances such as humic substances, lipolytic enzymes such as lipase, alcohol degrading enzymes such as alcohol dehydrogenase, proteins, amino acids, fatty acids, organic acids, vitamins, minerals and reducing substances.

Humic acid, also called humic acid, is a component that forms most of the organic and coalaceous matter in the soil. Although the chemical structure of humic acid is unknown, it is a condensate of a polyphenolic aromatic compound and a nitrogen-containing compound and has a phenolic hydroxyl group and a carboxyl group.

However, humic acid cannot be judged decisively because its molecular weight and components change greatly depending on the degree of progress of humus, but 50-55% contains amino acids, hexosamine, polycyclic aromatics, oxygen-containing functional groups. It is considered that the remainder is a compound with unknown chemical structure and many double bonds.

Such a humus soil extract has an antibacterial / bactericidal action, a moisturizing action, an antioxidant action, an antiseptic action, a surface active action, an active oxygen inactivating action, a deodorizing action and the like.

These actions can be obtained by enzymes synthesized by microorganisms, enzymes obtained by degradation of dead microorganisms, and amino acids, proteins, vitamins synthesized by microorganisms from the plant bodies of the grass family that first form humus. It is obtained by the interaction between enzymes and minerals such as magnesium, calcium, sodium, potassium, and aluminum deposited by igneous rocks. In particular, the mineral contains a large amount of ions such as aluminum, magnesium, sodium, calcium, etc., and the pH value rises after ion exchange, so the sterilization mechanism of the humus soil extract is humus. I think that the place which influences the low pH and mineral which an acid shows is large.

By the way, the conventional hair restorer contains many alcohol components for the purpose of dissolving oil-soluble components, sterilizing scalp and the like, and preserving the hair restorer itself. However, there has been concern about the adverse effects on the human body due to such a large amount of alcohol components. Moreover, there existed a problem of reducing the moisturizing effect of a hair restorer. In addition, there is a problem that the stimulation to the scalp and the like is too strong and the usability is impaired. In addition, conventional hair restorers contain antiseptics such as parabens and sodium benzoate for the purpose of preventing product deterioration, and such antiseptics are highly irritating to the scalp etc. It was difficult to obtain a feeling of use. There was also a problem in terms of safety.

On the other hand, in the hair restorer of the present invention, by including a humus soil extract, an alcohol component that has been conventionally required for dissolving oil-soluble components, sterilizing the scalp, etc., preserving the hair restorer itself, etc. As a result, it is possible to provide a hair-restoring agent that is gentle to the human body and excellent in feeling of use and moisturizing effect.

Moreover, since the scalp surface can be sufficiently sterilized by using the humus soil extract, the scalp and the like can be cleaned while taking into consideration the influence on the human body.

Moreover, it can be made not to contain a preservative by using a humus soil extract. Even if such a preservative is not used, the hair restorer can be effectively prevented from decaying.

Moreover, since humus soil extract has the function as surfactant by including humus soil extract, content of surfactant can be decreased. As a result, the hair restorer of the present invention is more gentle to the human body. Moreover, the oil and fat secreted from the scalp can be dissolved by the function as a surfactant, and the environment of the scalp can be kept clean.

Moreover, the odor secreted from the scalp can be removed by the deodorizing effect of the humus soil extract.

Further, the humus soil extract has an effect of promoting absorption of vitamin E and / or a derivative thereof into the skin when the hair-restoring agent contains vitamin E and / or a derivative thereof, and the vitamin E and / or the derivative thereof has The effect (blood circulation promoting effect) can be made higher.

The content (blending amount) of the humus soil extract as described above is preferably 0.5 to 50 wt%, more preferably 1 to 30 wt%, and even more preferably 5 to 20 wt%. . Thereby, the above-mentioned effect becomes more remarkable.

The hair restorer of the present invention may contain an alcohol component in addition to the above components, but the content of the alcohol component contained in the hair restorer of the present invention is preferably 15 wt% or less, and 10 wt%. % Or less is more preferable, and 5 wt% or less is still more preferable. Thereby, while giving a moderate irritation | stimulation with respect to a scalp, it can be set as the hair restorer gentler to a human body. On the other hand, when the alcohol component exceeds the upper limit, the irritation to the scalp may become stronger than necessary depending on other components.

Examples of such an alcohol component include ethanol, benzyl alcohol, isopropyl alcohol, and the like.

Moreover, the hair restorer of this invention can mix | blend a medicinal component suitably as needed.

Medicinal components include, for example, assembly extract, ginseng extract, vitamin E and its derivatives, cephalanthin, benzyl nicotinate, nicotinamide, biotin, D-pantothenyl alcohol, isopropylmethylphenol, caronium chloride, hinokitiol, 1-menthol , Soluble cystine, octopirox, benzalkonium chloride, pyridoxine and derivatives thereof, ginger tincture, cucumber extract, and the like, and one or more of these can be used in combination.

Among the above-mentioned, when isopropylmethylphenol is used as a medicinal component, the hair restorer of the present invention prevents unintentional irritation to the scalp due to a synergistic effect with the bactericidal effect of the humus soil extract. In particular, it has a remarkable sterilizing effect.

Moreover, the hair restorer of this invention can mix | blend various additives as needed.

Examples of such additives include lactic acid and salts thereof, citric acid and salts thereof, pH adjusters such as sodium hydroxide, potassium hydroxide, and triethanolamine, amino acids such as glycine and arginine, olive oil, squalane, and fluidity. Oils such as paraffin, isopropyl myristate, higher alcohol, higher fatty acid, glycerin, 1,3-butylene glycol, sorbitol, maltitol, polyethylene glycol, dipropylene glycol, isoprene glycol, propylene glycol and other polyhydric alcohols, carboxyvinyl polymer , Carboxymethyl cellulose and salts thereof, thickeners such as hydroxyethyl cellulose, hydroxypropyl cellulose, carrageenan, alginic acid and salts thereof, ascorbic acid and derivatives thereof, vitamin E and Derivatives, dibutylhydroxytoluene and other antioxidants, benzophenone, hydroxymethoxybenzophenone sulfonic acid and its salts and other ultraviolet absorbers, trimethylglycine, sodium pyrrolidonecarboxylate, trehalose and other moisturizers, polyoxyethylene hydrogenated castor oil, poly Solubilizers and emulsifiers such as oxyethylene polyoxypropylene alkyl ether and polyglycerin fatty acid ester, lavender oil, peppermint oil, spearmint oil, bergamot oil, eucalyptus oil, clove oil, peppermint oil, orange oil and other aromatic essential oils, fragrances, A pigment | dye, various animal and plant extracts, and water can be mentioned, These can be used 1 type (s) or 2 or more types.

In addition, the hair restorer of this invention which combined the said component can be manufactured according to a conventional method, The manufacturing method is not specifically limited. Moreover, the obtained hair restorer can be filled and used for a plastic bottle, a spray container, etc.

In particular, when the hair restorer of the present invention is applied to a spray container, the following effects are obtained.

The spray container can supply hair growth agent evenly to the scalp, so it can be suitably used as a method of supplying the hair growth agent. However, since conventional hair growth agents contain a large amount of alcohol component, It is difficult to use a spray container because there is a possibility of igniting. However, since the hair restorer of the present invention can reduce the content of the alcohol component, there is no need to consider such a problem such as ignition, and a spray container can be suitably applied.

Next, the purification method of the humus soil extract used for the hair restorer of this invention is demonstrated.

The humus soil used for refining the humus soil extract can be any of those collected from any of them, but humus soil collected at Kariya Nishina, Moriyama-cho, Kitakagi-gun, Nagasaki Prefecture is particularly preferable.

The collected humus soil contains moisture and is sticky like soil taken from a paddy field, and is subjected to an extraction process after two drying steps of rough drying and precision drying.

The drying process dries and subdivides the humus soil, activates the action of aerobic microorganisms to suppress the action of anaerobic bacteria, performs solar thermal sterilization, and at the same time absorbs ultraviolet rays, etc. (photosynthesis) to absorb amino acids, It is thought to activate (ripen) vitamins and enzymes. Thereby, it is thought that beneficial effects, such as an antioxidant effect and a corrosion-proof effect, are produced. In addition, by performing the drying process in two stages, it is possible to obtain a uniform corrosive soil extract material with uniform constituent components, removal of mud other than humus soil, and little variation in pH during extraction.

In the rough drying described above, the collected humus soil having a diameter of about 5 to 50 cm is rained on a material that is not mixed with humus such as concrete, and is dried for 6 months to 1 year in a sunshine condition (sunlight). Is done. During this time, it is preferable to turn the humus soil upside down so that the sun is well exposed. This process turns the humus soil into a dry mass. Next, it is further dried in a greenhouse (precision drying).

This drying is performed for a minimum of one month, usually 1.5 to 2 months. As a result, the lump is further dried, and the lump is further pulverized by a cultivator or the like to make it further sandy. The term "humus soil" as used herein refers to dried and crushed humus soil obtained through the above-described steps. Such humus is commercially available, for example, as a bag of FCM powder from Karako Sangyo Co., Ltd.

The humus soil extract used in the present invention is purified by using the above-described humus soil extracted with water.

Any water may be used for extraction, and for example, ground water, well water, tap water, purified water, distilled water and the like can be used. In particular, in order to obtain an extract with a low pH, water containing a large amount of mineral components is preferable, and groundwater and well water containing minerals are preferable because they do not contain a chlorine-based disinfectant.

Extraction can be performed by stirring humus soil and water. The temperature during extraction is usually room temperature. The stirring time is usually 1 to 3 hours, preferably 2 to 3 hours.

The preferred ratio of humus soil to the water used is from 1: 1 to 1: 5, further from 1: 3 to 1: 5, in particular 1: 5 (weight / volume ratio). If the amount of water is less than the above range, the yield of the extract with respect to the used humus soil will be small, and even if it is reduced, the pH obtained will not be lower than a certain value, which is meaningless. On the other hand, if the amount of water is more than the above range, the pH of the resulting extract will be higher than 2.99, and depending on the type of bacteria, the sterilization and sterilization effects may not be sufficiently obtained.

After completion of stirring, the mixture is allowed to stand for 2 to 4 weeks, preferably about 3 weeks to settle the suspended fine particles, and then the supernatant is usually subjected to a filtration process such as decantation, suction, and pre-filtration with a 50 to 100  $\mu$ m bag filter. Separation is performed according to the separation method used. When the suction port is located 5-10 cm above the interface between the supernatant and the humus soil layer, and when suctioning, the supernatant can be sucked in at a high yield without sucking the humus soil layer. it can.

Next, the extract is filtered using a filter having a pore size of 0.1 to 0.2  $\mu$ m. By carrying out this filtration, it is possible to remove germs and to remove suspended matters, suspensions or insoluble substances that precipitate over time.

The filter medium of the filter is not limited as long as it does not affect the filtrate, and specific examples include nylon, polypropylene, and polyvinylidene fluoride. Of these, polyvinylidene fluoride is preferred.

Filtration can be performed under pressure or under reduced pressure, but is generally performed under pressure. The method is carried out, for example, by setting a membrane filter cartridge of the above material in a housing, connecting it to a pressurized tank and pumping it at a pressure of  $2\text{ kg/cm}^2$  or less. It is preferable to perform preliminary filtration before this filtration from the viewpoints of improving the efficiency of filtration and reducing the burden on the filtration device. In practice, it is sufficient to filter with a 50-100  $\mu\text{m}$  bag filter.

The filtrate obtained preferably has a pH of 2.50 to 2.99, more preferably a pH of 2.85 to 2.95, in particular a pH of 2.9.

The filtrate thus obtained may be added as it is as a humus soil extract, or may be further subjected to a treatment such as a heat treatment.

As mentioned above, although the hair restorer of this invention was demonstrated, this invention is not limited to this. For example, in addition to the components described above, a component having an arbitrary function can be blended in the hair restorer of the present invention.

Next, specific examples of the present invention will be described.

[Humus soil extract]

First, a humus soil extract was obtained as follows.

Humus was collected from a wetland in Karabe Nishina, Moriyama-machi, Kitatakgagi-gun, Nagasaki Prefecture. The collected humus soil was dried for about one year on concrete on the sun.

Next, it was further dried in a greenhouse for 1.5 months. The obtained humus soil was pulverized into particles having a particle size of about 0.01 to 0.5 mm.

About 140 kg of the obtained humus soil was put in a 1 t tank (made of polyethylene) (capacity when it was put in the 1 t tank was about  $0.6\text{ m}^3$ ), and 700 liters of water (mineral water collected at the foot of Mount Aso) was added. This was stirred at room temperature for about 2 hours using a bamboo spatula and allowed to stand for 3 weeks to settle the suspended fine particles, and then the supernatant liquid having a pH of 2.7 was sucked out with a pump. The amount of the supernatant taken out was about 600 kg.

The obtained extract was pre-filtered with a bag filter, and then filtered with a filter (pore size: 0.2  $\mu\text{m}$ , trade name: filter cartridge 0.2  $\mu\text{m}$ M CY4440NFP4, manufactured by Nippon Pole Co., Ltd.) to obtain a humus soil extract having a pH of 2.9. Got.

[Hair restorer]

Next, using the humus soil extract obtained as described above, a hair growth agent was produced by a conventional method according to the following formulation (unit: wt%).

Example 1

Humus soil extract: 15.0

Ethanol: 5.0

Tocopherol acetate: 0.1

Polyoxyethylene (60) hydrogenated castor oil: 0.5

Isopropylmethylphenol: 0.02

1,3-butylene glycol: 5.0

Polyoxyethylene (9) lauryl ether: 0.2

I-Menthol: 0.1

Sodium citrate (pH adjuster): 0.15

Water: balance

(Examples 2 to 5)

A hair restorer was produced in the same manner as in Example 1 except that the blending amount (content) of the humus soil extract and ethanol was as shown in Table 1.

(Comparative Example 1)

A hair restorer was produced in the same manner as in Example 1 except that the humus soil extract was not blended.

(Comparative Example 2)

A hair restorer was produced in the same manner as in Comparative Example 1 except that the blending amount of the alcohol component was as shown in Table 1. Table 1 shows the blending amounts of the humus soil extract and the alcohol component in each Example and each Comparative Example.

<Evaluation>

[Usage feeling]

The hair restorer obtained in each Example and Comparative Example was used on the scalp and evaluated according to the following four criteria.

(Double-circle): A moderate irritation | stimulation and favorable usability | use\_condition.

○: Slightly irritating but good feeling.

(Triangle | delta): There exists irritation | stimulation and a feeling of use is somewhat bad.

X: Strong irritation and poor usability.

[Moisturizing effect]

The hair restorer obtained in each Example and Comparative Example was applied to the skin and evaluated according to the following four criteria.

A: A moist feeling was maintained.

○: Moist feeling lasted a little.

Δ: Moist feeling lasted very slightly.

X: There was no moist feeling.

The above evaluation results are shown in Table 2.

As is apparent from Table 2, the hair-restoring agent obtained in each example was gentle to the human body and excellent in feeling of use and moisturizing effect. On the other hand, the hair restorer obtained in each comparative example did not give sufficient results.

Patent Citations (5)

Publication number	Priority date	Publication date	Assignee	Title
JPH02294382A *	1989-05-09	1990-12-05	Kao Corp	Aerosol product

JPH08151313A *	1994-11-25	1996-06-11	Kanebo Ltd	Cosmetic
JP2000136140A *	1998-10-29	2000-05-16	Ra Purata Koeki Kk	Aqueous solution containing substance extracted from humic soil
JP2003267821A *	2002-03-13	2003-09-25	Koike Kagaku Kk	Raw material for cosmetic
JP2004231553A *	2003-01-29	2004-08-19	Kao Corp	Aerosol hair growth product
Family To Family Citations				

\* Cited by examiner, † Cited by third party

Cited By (4)



Publication number	Priority date	Publication date	Assignee	Title
JP6233999B1 *	2017-01-05	2017-11-22	株式会社スタイルアンドバリュージャパン	Hair restorer
JP2018065799A *	2016-10-18	2018-04-26	花王株式会社	Cosmetic
JP2019019108A *	2017-07-20	2019-02-07	学校法人 中村産業学園	5α-REDUCTASE INHIBITOR, AND COMPOSITION FOR PREVENTIVE TREATMENT OF ALOPECIA OR HAIR GROWTH PROMOTION, AND METHOD FOR INHIBITING 5α-REDUCTASE IN SCALP AND HAIR GROWTH PROMOTION METHOD
CN112972313A *	2021-03-08	2021-06-18	德利宝(广州)香料有限公司	Preparation method of modified humus extract and shampoo composition containing modified humus extract
Family To Family Citations				

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

Similar Documents



Publication	Publication Date	Title
KR101448283B1	2014-10-13	A Composition of a Bubble Dentifrice and the Method of Making it
KR101653886B1	2016-09-02	Natural Preservative Composition
JP6034118B2	2016-11-30	Deodorant, antibacterial agent, and skin external preparation composition containing them
JP2004346045A	2004-12-09	Cosmetic additive, bathing agent and health food containing sake lees extract obtained in brewing of sake using deep seawater
CN108852951B	2021-04-30	Skin moistening and cleaning composition and plant shower gel
KR20130059780A	2013-06-07	A composite of toothpaste containing extract and powder using cactus
JP2005035957A	2005-02-10	External preparation composition for iontophoresis containing polyglutamic acid or its salt
JP2006327978A	2006-12-07	Hair grower
JP2009079018A	2009-04-16	Scalp cosmetic
JP2002068953A	2002-03-08	Cosmetic composition
KR101220903B1	2013-01-11	Composition of skin external for improving of skin wrinkle
KR102308571B1	2021-10-01	Functional cleaning agent containing sand pear extract
JP2005179219A	2005-07-07	Skin care preparation for external use
JP2002363057A	2002-12-18	Melanogenesis inhibitor or cosmetic composition
JP2002316937A	2002-10-31	Plant extract-containing anti-allergic agent
KR101418366B1	2014-07-15	Composition containing bee venom and propolis for preventing or treating acne
JP2002363027A	2002-12-18	Active oxygen scavenger or cosmetic composition
JP3715895B2	2005-11-16	Method for producing plant extract powder and composition for oral cavity containing plant extract powder produced by this method
JP2003267821A	2003-09-25	Raw material for cosmetic
JPH09323915A	1997-12-16	Melanin generation inhibitor consisting of n-acetyltyrosine derivative as active ingredient and application of the same to skin preparation for external use and bath agent
JP5389334B2	2014-01-15	Vascular endothelial growth factor production promoter and hair growth hair external preparation
JP2006335687A	2006-12-14	Oral composition

<a href="#">JP5072300B2</a>	2012-11-14	Cyclic AMP phosphodiesterase inhibitor
<a href="#">CN106074342A</a>	2016-11-09	A kind of geraniol nanoparticle disposable gel handwashing liquid and preparation method thereof
<a href="#">JPH09301883A</a>	1997-11-25	Cell activator containing blackberry lily extract and alpha-hydroxyl acid and its application

### Priority And Related Applications

#### Priority Applications (1) ▲

Application	Priority date	Filing date	Title
<a href="#">JP2005152767A</a>	2005-05-25	2005-05-25	Hair grower

#### Applications Claiming Priority (1) ▲

Application	Filing date	Title
<a href="#">JP2005152767A</a>	2005-05-25	Hair grower

#### Legal Events ▲

Date	Code	Title	Description
2008-05-20	A621	Written request for application examination	<b>Free format text:</b> JAPANESE INTERMEDIATE CODE: A621 <b>Effective date:</b> 20080519
2009-11-02	A977	Report on retrieval	<b>Free format text:</b> JAPANESE INTERMEDIATE CODE: A971007 <b>Effective date:</b> 20091102
2010-08-25	A131	Notification of reasons for refusal	<b>Free format text:</b> JAPANESE INTERMEDIATE CODE: A131 <b>Effective date:</b> 20100824
2010-09-14	A711	Notification of change in applicant	<b>Free format text:</b> JAPANESE INTERMEDIATE CODE: A711 <b>Effective date:</b> 20100913
2010-10-02	A521	Written amendment	<b>Free format text:</b> JAPANESE INTERMEDIATE CODE: A821 <b>Effective date:</b> 20100913
2010-10-23	A521	Written amendment	<b>Free format text:</b> JAPANESE INTERMEDIATE CODE: A523 <b>Effective date:</b> 20101022
2010-11-09	A521	Written amendment	<b>Free format text:</b> JAPANESE INTERMEDIATE CODE: A523 <b>Effective date:</b> 20101020
2011-01-19	A131	Notification of reasons for refusal	<b>Free format text:</b> JAPANESE INTERMEDIATE CODE: A131 <b>Effective date:</b> 20110118
2011-11-02	A02	Decision of refusal	<b>Free format text:</b> JAPANESE INTERMEDIATE CODE: A02 <b>Effective date:</b> 20111101

#### Concepts ▲

machine-extracted

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Name	Image	Sections	Count	Query match
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<div> <div></div> <div>humus</div> </div>		claims,abstract,description	62	0.000
<div> <div></div> <div>soil</div> </div>		claims,abstract,description	57	0.000
<div> <div></div> <div>extract</div> </div>		claims,abstract,description	43	0.000
<div> <div></div> <div>ethanol</div> </div>		claims,abstract,description	24	0.000

▀ water	claims,abstract,description	16	0.000
▀ filtrate	claims,abstract,description	6	0.000
▀ preservative	claims,abstract,description	5	0.000
▀ preservative agent	claims,abstract,description	5	0.000
▀ filtration	claims,description	9	0.000
▀ Vitamin E	claims,description	7	0.000
▀ Vitamin E	claims,description	7	0.000
▀ spray	claims,description	7	0.000
▀ vitamin E	claims,description	7	0.000
▀ vitamin E	claims,description	7	0.000
▀ vitamin E derivatives	claims,description	7	0.000
▀ all-trans-retinol derivatives	claims,description	4	0.000
▀ effects	abstract,description	8	0.000
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