(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
21 August 2014 (21.08.2014)

WIPO | PCT

(10) International Publication Number
WO 2014/125340 A1

(51) International Patent Classification:
A61K 9/72 (2006.01) *A61K 36/00* (2006.01)
A61K 47/10 (2006.01) *A61K 36/488* (2006.01)
A61K 47/26 (2006.01) *A61P 11/00* (2006.01)
A24F 47/00 (2006.01) *A61P 25/34* (2006.01)
A61M 15/06 (2006.01) *A61M 11/04* (2006.01)
A61K 31/465 (2006.01)

(21) International Application Number:
PCT/IB2013/053378

(22) International Filing Date:
29 April 2013 (29.04.2013)

(25) Filing Language: Italian

(26) Publication Language: English

(30) Priority Data:
MI2013A000214 15 February 2013 (15.02.2013) IT
MI2013A000314 1 March 2013 (01.03.2013) IT

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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, 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, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

WO 2014/125340 A1

(54) Title: SMOKE LIQUID FOR ATOMIZERS AND/OR VAPORIZERS

(57) Abstract: The present invention concerns a liquid smoke composition comprising: propylene glycol and/or sorbitol, glycerine, water and at least one compound useful as a medicament by inhalation. Said composition may be advantageously utilized to supply atomizer or vaporizer devices, such as electronic cigarettes and similar devices for example, as it is capable of being vapourized, creating a smoke very similar to that of a cigarette. In this manner, it is possible to give the user visual, olfactory and tasting sensations substantially identical to those offered by a real cigarette, in addition to having an advantageous curative and lenitive effect for example on the respiratory air passages or the oral cavity, or also to be utilized in smoking dependence treatments.

SMOKE LIQUID FOR ATOMIZERS AND/OR VAPORIZERS

The present invention concerns a liquid smoke composition and the relative use thereof for supplying atomizer and/or vaporizer devices, such as electronic cigarettes or the like.

An electronic cigarette is a device that makes it possible to vaporize a liquid composition, which is contained in a specific cartridge. This device is designed so that by drawing in, the liquid composition is converted into vapour, which can be inhaled, thereby in fact simulating cigarette smoke. Moreover, the liquid composition gives the taste, the sense of fullness in the lungs and the "hit", that is, the hit in the throat, which is essential for the habitual smoker.

Generally, the liquid present in said cartridges for use as refills for common electronic cigarettes, comprises vegetable glycerine e, propylene glycol, water, nicotine and flavourings, in varying amounts and proportions.

Vegetable glycerine e (or glycerol) is a colourless liquid that can be obtained as a by-product of the processing of plants and it is used in many commonly used products including syrups and pharmaceutical and cosmetic creams. It is also used as a food additive, and is miscible in water in virtually any proportion. In blends for electronic cigarettes, vegetable glycerine e is the substance that lends smokiness.

Propylene glycol is a liquid that is known for its bacteriostatic properties and it is also often utilized as a pharmaceutical excipient, as a carrier for flavourings, as well as in herbal preparations in general.

Lastly, water and flavourings constitute the remaining components of the smoke blends commonly available on the

market. The flavourings in particular may be present in varying amounts, typically in the range of 3-10% and they are generally ordinary food flavourings.

In some cases, the liquid compositions may also contain predetermined quantities of nicotine, which may be utilized in smoking cessation therapies or to reduce nicotine dependence common to most traditional smokers.

The Applicants have now confronted the problem of obtaining a liquid smoke composition that can be vapourised and inhaled and that can simulate the smoke of a traditional cigarette, but at the same time is not hazardous to health and may on the contrary be beneficial to the smoker.

Therefore, the present invention refers to a liquid smoke composition comprising: propylene glycol and/or sorbitol, glycerine e, water and at least one compound useful as a medicament by inhalation.

In particular, the Applicants have found that it is possible to utilize sorbitol in addition to or even in place of propylene glycol.

The present composition may also contain ethanol, flavourings and/or nicotine or other compounds generally utilized in similar smoke compositions, as described in detail herein below.

In a further aspect, the invention refers to the use of the composition for supplying an atomizer or vaporizer device, such as an electronic cigarette or similar devices.

Furthermore, the invention also concerns the use of the composition in a method for reducing or eliminating the state of dependence of smokers.

In one aspect, the invention also relates to an atomizer or vaporizer device, preferably in the form of an electronic cigarette, which is supplied with the present liquid composition, as well as to the use of said device for the administration of substances useful as a medicament by inhalation.
In an additional aspect, the invention concerns a container (or cartridge) comprising the present composition and that can be utilized to supply the atomizer or vaporizer devices as described herein below.

In particular, in a first aspect, the present invention refers to a liquid smoke composition (that is, capable of being vapourized and converted into smoke or vapour), comprising vegetable glycerine, propylene glycol and/or sorbitol and water, and characterized in that it contains at least one compound that is capable of having a curative or lenitive effect, when vapourized and drawn in.
Sorbitol (or glucitol) is a polyhydroxy derivative of glucose that is widely used for example in the food industry, and easily available at low cost on the market. Advantageously, sorbitol is capable of increasing the shelf life of the present composition, owing above all to its capacity to retain moisture. Furthermore, as a result of the presence of sorbitol, the present composition can take on an optimal consistency for use as a smoke agent, as described herein below.
Sorbitol may be present in the composition as a substitute for and in addition to propylene glycol.
In a preferred form, the sorbitol, still more preferably of natural origin, is present in place of propylene

glycol and this can be particularly convenient as, differently from propylene glycol, there are no indications regarding intake limits thereof, and it can also be of plant origin, for example obtained from fruit. Propylene glycol is instead of synthetic origin, and the purity of the raw material utilized during the step of synthesis must be carefully assessed.

In this regard, in a preferred embodiment, the liquid smoke composition of the invention comprises at least:

sorbitol, preferably of natural origin,

glycerine,

water, and

one compound useful as a medicament by inhalation.

In an additional embodiment, the present liquid composition comprises: propylene glycol, sorbitol, glycerine, water and at least one compound useful for the treatment or health of the mucous membranes, the respiratory air passages, the oral cavity, or still more preferably, the throat.

When utilized in combination with glycol, sorbitol can be utilized in percentages by weight that vary from 10 to 50%, preferably from 10 to 20%.

When used in place of glycol, sorbitol is present in an amount ranging between 10 and 70%, preferably between 10 and 50%.

As regards propylene glycol and vegetable glycerine, these substances have very low toxicity and are widely used in the food sector and also in the pharmaceutical field, for example as a vehicle for oral intake of pharmacologically active substances.

In the present composition, propylene glycol may be present in an amount varying from 40 to 80% by weight, preferably from 40 to 70%, or 60 to 70% by weight.
Vegetable glycerine is instead utilized in amounts ranging between 10 and 60% or 10 and 50% by weight, preferably between 10% and 40% by weight, more preferably between 20 and 45% by weight, or 20 and 30% by weight.
Water is utilized in amounts such as to arrive to 100% of the composition, preferably up to 60% by weight, preferably from 5 to 60% or 3 to 20% by weight, preferably 5 to 19% by weight or still more preferably from 5% to 15% water by weight. Preferably, the composition comprises ultra-pure water, known to persons skilled in the art and widely utilized in the pharmaceutical field. Typically, said pure water contains very low concentrations of salts, organic derivatives, oxygen and bacteria and may be purchased or even produced by means of techniques such as membrane filtration, ion-exchange filtration, treatment with ozone and the like.
The compound useful as a medicament by inhalation may be present in the composition up to an amount consisting of approximately 20% by weight. In a preferred form said compound is present in amounts ranging from: 0.01 to 20%, preferably between 0.01% and 15%, still more preferably ranging between 0.01% and 2% by weight, or between 0.01 and 0.5%.

Owing to the presence of at least one compound that is useful as a medicament by inhalation, the present composition can be conveniently utilized to offer beneficial effects for example for the respiratory air

passages or the oral cavity in general, or it may also be utilized in therapies or methods for reducing the state of dependence of a smoker, as indicated herein below.

In this regard, in one embodiment of the invention, said compound may be selected from among common natural extracts known in the prior art for their beneficial properties affecting the respiratory air passages or capable of acting for example on the defences of the immune system of the human body, and preferably selected from among extracts of: rosemary, echinacea, currant, propolis, eucalyptus, thyme, sage, hornbeam and mixtures thereof, or, extracts of: burdock, sunflower seeds, wood sorrel, red elm, service tree, rhubarb, Japanese mushrooms of the Maitake type, turmeric, mangosteen, hyaluronic acid, sodium hyaluronate, mouse-ear hawkweed extract, xanthan gum, plantain and/or plant extracts having mucosal protective effects, hydrolyzed glucosaminoglucan, cellulose, hydroxymethyl cellulose, hydroxyethyl cellulose, carrageenan cellulose and mixtures thereof, extracts of pueraria lobata (kudzu), of lobelia, of plantain and mixtures thereof.

The liquid smoke composition of the invention may also contain a mixture of compounds that are useful as medicaments by inhalation, for treatment of the respiratory air passages. In this regard, a preferred mixture comprises: water, fructose, hornbeam bud extract, aqueous extract of propolis and extract of sage.

Preferably said compound that is useful as a medicament by inhalation is selected from: sodium hyaluronate, extract of lobelia, of plantain and mixtures thereof, the extract of pueraria lobata (also known as kudzu)

being particularly preferred. In one embodiment, the extract utilized is obtained from the roots of pueraria lobata. This is a plant native to Japan and utilized for example as a food ingredient or as a natural remedy.
The Applicants have unexpectedly found that when the compound that is useful as a medicament by inhalation is a pueraria lobata extract, the resulting composition can be utilized also in treatments that enable smoking addiction to be reduced. In fact, pueraria extract is capable of inhibiting the state of dependence on smoking, so that, by regulating for example the concentration of the extract in such a manner that it decreases over the time, it is possible to bring the smoker to a gradual withdrawal from dependence. Preferably, said extract is present in the composition of the invention in amounts ranging between 0.01 and 15%, still more preferably ranging between 0.01 and 2%. In one embodiment, the pueraria extract can also be utilized in combination with certain amounts of nicotine, in addiction treatments, as described in detail herein below.
Kudzu extract can be found on the market (and utilized in the preparation of the present composition) in a pure solid form, or in general as a component of mixtures extracted from the root of the plant. Preferably, the extract is utilized in the present invention as pure root extract, understood as dry extract containing 100% kudzu.

Therefore, in an additional aspect, the invention refers to the use of the present composition, preferably comprising pueraria lobata (kudzu) extract, in a method

for reducing or eliminating the state of dependence of a smoker.

As can be seen from the description, the present composition is characterized in that it contains compounds and/or derivatives of natural plant origin.

Advantageously, said extracts may also derive from organic farming, or organic crops, thus making it possible to utilize high-quality, certified natural components.

In addition to the ingredients herein defined in detail, the present composition may also contain other flavour-enhancing agents or food flavourings, including for example sweet apple, liquorice, cinnamon extracts and the like. Preferably, said flavour-enhancing agent is a tobacco derivative or extract. Owing to the presence of the tobacco flavour, the present composition can be utilized as a substitute for traditional cigarettes, without, however, causing the damage, especially to the lungs, and the dependence that are associated with the use of said traditional cigarettes.

When present, said flavourings are used in amounts within the range of 0.1 to 20%, preferably of 0.5 to 15%, and still more preferably within the range of 0.5 to 2%.

As mentioned above, the present composition may possibly also contain some additional compounds utilized in similar compositions, for example selected from: zeolites, preferably in amounts ranging between 0.01 and 0.2%, or even derivatives of a saccharide nature, including for example mannitol, fructose and polydextrose. When present, said derivatives of a

saccharide nature are used in an amount ranging between 10 and 40%, preferably ranging between 20 and 30%.

Owing to its versatility, the present composition is classifiable as a food supplement and/or as a medical device, and it can also be classified as a class A - C OTC (over-the-counter) or SOP (non-prescription) medicinal product, typically depending on the compound useful as a medicament that is utilized. Moreover, the composition proves to be particularly suited for supplying an electronic cigarette, in that it is capable of being vapourized and simulating the smoke of a conventional cigarette, giving the smoker the same sensation with the same gestures. In addition, during its use, the present composition is capable of creating a taste and aroma very similar to that provided by a conventional cigarette, while proving, however, to be less hazardous to the health of the smoker and to persons near the smoker.

As mentioned above, in addition to possible use as a refill for electronic cigarettes, the liquid composition of the invention can be converted into smoke (and then drawn in) also by means of any other device capable of converting it into the required physical form, including for example a vaporizer, an atomizer, a sprayer or similar devices such as a narghile water pipe for example.

Owing to the presence of at least one compound that is useful as a medicament by inhalation, the composition of the invention can also be conveniently utilized to relieve slight inflammation or irritations of the oral cavity or of the respiratory air passages, for example of the throat, or to give a sense of well-being when inhaling, in the event that it contains plant extracts

or extracts of officinal herbs having refreshing or lenitive effects.

In addition to the components as described in detail hereinabove, the present composition may also comprise nicotine, preferably L-nicotine. The presence of nicotine can be dosed and calibrated in such a manner as to reduce the amount thereof gradually, and thus, if utilized for example as a refill for electronic cigarettes, bring the smoker to a gradual withdrawal from nicotine dependence, thus helping the smoker to give up smoking. Nicotine can be present generally in an amount of up to 2% by weight, preferably between 0.05 and 2% by weight, more preferably between 0.09 and 2%, still more preferably between 0.05% and 1%. As mentioned above, nicotine may be used in combination with pueraria lobata (kudzu) extract in smoking give up treatments, that is, in treatments useful for reducing or eliminating a smoker's state of dependence.

In an additional embodiment, the present composition may also contain ethanol in amounts within the range of 0 to 0.5%, preferably within the range of 0.3-0.5%.

In this regard, ethanol is used as a solvent, aiding the composition to maintain the consistency and viscosity required for use as a smoke liquid, and it also helps to create the desired end smoke effect.

In a preferred embodiment, the composition comprises: propylene glycol and/or sorbitol, vegetable glycerine , water, pueraria (kudzu) extract, and, eventually, nicotine.

Thus, a preferred liquid composition may have the following formula:

propylene glycol 45-70%

glycerine 20-45%
ultra-pure water 5-19%
flavouring 0.5-15%
ethanol 0-0.5%, preferably 0.3-0.5%
at least one compound useful as a medicament 0.01%-2
and
nicotine 0-2%, preferably 0.09-2%.

Equally preferred are compositions free of ethanol and/or nicotine, in particular having the following formulas:
propylene glycol 45-70%
glycerine 20-45%
ultra-pure water 5-19%
flavouring 0.5-15%
at least one compound useful as a medicament 0.01%-2%, and possibly
nicotine 0.09-2%,

or:

propylene glycol 45-70%
glycerine 20-45%
ultra-pure water 5-19%
flavouring 0.5-15%
ethanol 0-0.5%, preferably 0.3-0.5%
at least one compound useful as a medicament 0.01%-2%.

The Applicants have found that a particularly preferred and advantageous composition has the following formula:
propylene glycol 45%
glycerine 44%

flavouring 10%
ethanol 0%
at least one compound useful as a medicament 0.5%
nicotine 0.5%
ultra-pure water 100% UPW.
Preferably, said compound useful as a medicament is a pueraria lobata (kudzu) extract.

The following are additionally preferred compositions:
sorbitol 10-50%
glycerine 10-60%
ultra-pure water 100% UPW
tobacco extracts 0-20%, preferably 0.1-15%
nicotine: 0-2%, preferably 0.09-2%
compound useful as a medicament 0.01-2%,

or

propylene glycol 40-70%
sorbitol 10-20%
glycerine 10-60%
ultra-pure water 100% UPW
tobacco extracts 0-20%, preferably 0.5-15%
nicotine 0-2%, preferably 0.09-2%
compound useful as a medicament 0.01-2%.

In accordance with an embodiment of the invention, in the preferred compositions specified hereinabove, the compound useful as a medicament is selected from among: sodium hyaluronate, pueraria lobata extract (also known as kudzu extract), lobelia extract, plantain extract and mixtures thereof, pueraria lobata extract being particularly preferred.

The present composition may be prepared by means of methods of formulation known in the art, for example by weighing and adding the individual components in dry form, and mixing in the amount of ultra-pure water needed.

The composition of the invention can be advantageously utilized to supply virtually any type of electronic cigarette, vaporizer, atomizer or similar devices, for example a spray atomizer, substituting or even partially supplementing the liquid compositions commonly utilized for that purpose.

In an additional aspect, the invention also concerns a container (or cartridge) comprising the present composition, and that can be utilized to supply atomizer or vaporizer devices, preferably electronic cigarettes.

In this regard, the present composition proves to be particularly stable over time and can be stored in specific cartridges or containers, of volumes generally varying on the order of millilitres, and ready, for example, for insertion in the device selected or ready for use. In a preferred embodiment, said cartridge is utilized as a reservoir tank for electronic cigarettes, and it can be in the form of a disposable, or even refillable, cartridge. The cartridge is preferably disposable, utilizable until depletion of the contents thereof (that is, depletion of the composition of the invention), without eventually being refilled. It can then be conveniently replaced by another pre-filled cartridge, containing for example the present composition having a lower content of nicotine and/or

kudzu, which is particularly useful in smoking addiction treatments, as described in detail hereinabove.

Therefore, in an additional aspect, the invention concerns a device, preferably in the form of an electronic cigarette, comprising: an extractable container (reservoir tank) containing the liquid smoke composition of the invention as described above, a vaporizer for converting the liquid composition contained in the reservoir tank into an aerosol, an electronic chip for controlling the operation of the vaporizer and a battery for supplying power to the vaporizer and the electronic chip.

In a further aspect, the invention refers to the use of an electronic cigarette supplied with the composition of the invention, as a device for the administration of a compound useful as a medicament by inhalation, preferably for the treatment or health of the respiratory air passages or of the oral cavity, still more preferably for the treatment or health of the throat.

In an additional aspect of the invention, when supplied with the composition of the invention comprising pueraria lobata (kudzu) extract and/or nicotine, said electronic cigarette can be utilized in treatments for reducing or eliminating the state of dependence of a traditional smoker.

Experimental part

Example 1: use of the composition of the invention comprising pueraria (kudzu) extract in a smoking cessation treatment.

The SVAPOSANO system makes it possible to atomize aqueous solutions containing flavouring and hydrating substances that foster the hydration of the oral mucosa, by means of a small portable instrument.

In the case at hand, the SVAPOSANO system was utilized on persons affected by tobacco addiction (defined as cigarette smoking dependence) for the purpose of testing the effectiveness of the present composition for possible smoking cessation treatment.

To this end, a composition comprising the following was vapourized:

sorbitol 20%

glycerine 55%

ultra-pure water 100% UPW

a compound useful as a medicament (kudzu) at concentrations of 1.9%, 0.9%, 0.4% and 0%.

Four volunteers who were smokers were recruited (3 men and one woman) for a 30-day study.

Treatment provided for a progressive reduction of the concentration of kudzu over time (with reference to the percentages indicated above) so as to achieve the gradual withdrawal of the smoker from smoking dependence.

The volunteers expressed their opinions by rating tolerability (a), overall well-being (b), and changes in cigarette smoking dependence (c). The results are reported in Tables A - C.

TOLERABILITY	SUFF	FAIR	GOOD	EXCELLENT
MAN 1st TEST		X		
MAN 2nd TEST			X	
MAN 3rd TEST			X	
WOMAN 4th TEST				X

Table A: tolerability

OVERALL WELL-BEING	SUFF	FAIR	GOOD	EXCELLENT
MAN 1ST TEST			X	
MAN 2nd TEST		X		
MAN 3rd TEST			X	
WOMAN 4th TEST			X	

Table B: overall well-being

SMOKING DEPENDENCE REDUCTION	SUFF	FAIR	GOOD	EXCELLENT
MAN 1st TEST		X		
MAN 2nd TEST	X			
MAN 3rd TEST			X	
WOMAN 4th TEST			X	

Table C: reduction of the desire to smoke

Example 1 A (comparative).

The same trials were carried out utilizing a composition corresponding to that utilized in the experiment specified above, but comprising nicotine in place of kudzu extract.

The results concerning smoking dependence were similar, but the composition comprising nicotine obtained unfavourable opinions in terms of overall well-being, as the volunteers felt discomfort and pain in the respiratory air passages and the throat, which was not perceived with the use of the kudzu extract.

In conclusion, the results can be summarized according to the following points:

1) none of the volunteers showed signs of problems or adverse reactions during or after utilization of the

present composition containing the pueraria (kudzu) extract of Example 1,

2) all the volunteers indicated good tolerability,

3) all the volunteers indicated greater well-being concerning the respiratory air passages with a reduction in irritation, utilizing the composition of Example 1, with respect to the same composition comprising nicotine (Example 1A),

4) the volunteer smoker noted a greater ability to abstain from smoking, and a lesser need for a cigarette.

For comparative purposes, the volunteers tested the same solutions atomized by using a mechanical sprayer and the results obtained are comparable.

CLAIMS

1. A liquid smoke composition comprising: propylene glycol and/or sorbitol, glycerine, water and at least one compound useful as a medicament by inhalation.

2. The composition according to claim 1, comprising sorbitol, glycerine, water and at least one compound useful as a medicament by inhalation.

3. The composition according to claim 2, wherein sorbitol is present in an amount ranging between 10 and 50%.

4. The composition according to claim 1, wherein sorbitol is present in an amount ranging between 10 and 20%.

5. The composition according to claim 1, comprising 40 to 80 % propylene glycol by weight.

6. The composition according to the preceding claims, comprising 10 to 60% glycerine by weight.

7. The composition according to the preceding claims, wherein said compound is useful as a medicament for the treatment or health of mucous membranes, the respiratory air passages, the oral cavity, or preferably, the throat.

8. The composition according to the preceding claims, wherein said compound useful as a medicament by

inhalation is present in an amount within the range of 0.01 to 20% by weight.

9. The composition according to the preceding claims, wherein said compound useful as a medicament is selected from among extracts of: rosemary, echinacea, currant, eucalyptus, thyme, sage, hornbeam and mixtures thereof, propolis, extracts of: burdock, sunflower seeds, wood sorrel, red elm, service tree, rhubarb, Japanese mushrooms of the Maitake type, turmeric, mangosteen, hyaluronic acid, sodium hyaluronate, mouse-ear hawkweed extract, xanthan gum, plantain, hydrolyzed glucosaminoglucan, cellulose, hydroxymethyl cellulose, hydroxyethyl cellulose, carrageenan cellulose and mixtures thereof, extracts of pueraria lobata (kudzu), of lobelia, of plantain and mixtures thereof.

10. The composition according to claim 9, wherein said compound useful as a medicament is selected from among: sodium hyaluronate, extract of lobelia, of plantain, and, preferably, pueraria lobata (kudzu) extract, and mixtures thereof.

11. The composition according to any one of the preceding claims, further comprising nicotine, preferably L-nicotine.

12. The composition according to claim 11, wherein nicotine is present in an amount ranging between 0.05 and 2 % by weight, preferably ranging between 0.09 and 2%.

13. The composition according to the preceding claims, further comprising ethanol, in amounts within the range of 0-0.5%.

14. The composition according to any one of the preceding claims, further comprising at least one flavour-enhancing agent selected from among: sweet apple, liquorice, and cinnamon extracts and preferably, a tobacco derivative and/or a tobacco extract.

15. A use of the composition as defined in any one of claims 1 to 14, for supplying an atomizer or a vapourizer, preferably in the form of an electronic cigarette.

16. An atomizer or vaporizer device, comprising the composition of claims 1-14.

17. The device according to claim 16, comprising: an extractable reservoir tank containing the liquid smoke composition of the invention as described in claims 1-14, a vaporizer for converting the liquid composition contained in the reservoir tank into an aerosol, an electronic chip for controlling the operation of the vaporizer and a battery for supplying power to the vaporizer and the electronic chip.

18. The use of the device according to claim 16 or 17, for administering substances useful as medicaments by inhalation.

19. The use of the composition according to claims 1-14, in a method for reducing or eliminating the state of dependence of a smoker.

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2013/053378

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61K9/72 A61K47/10 A61K47/26 A24F47/00 A61M15/06
A61K31/465 A61K36/00 A61K36/488 A61P11/00 A61P25/34
ADD. A61M11/04
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)
A61K A24F A61M

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)
EPO-Internal, BIOSIS, EMBASE, FSTA, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 101 208 473 B1 (JANG NAM SOOK [KR]) 5 December 2012 (2012-12-05)	1,5-9, 11,12, 14-19
Y	paragraphs [0008] - [0018] paragraphs [0034] - [0035] claims examples	1-19

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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Date of the actual completion of the international search	Date of mailing of the international search report
13 September 2013	23/09/2013

Name and mailing address of the ISA/	Authorized officer
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INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2013/053378

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MCQUEEN A ET AL: "Interviews with vapers: Implications for future research with electronic cigarettes", NICOTINE & TOBACCO RESEARCH, CARFAX, ABINGDON, GB, vol. 13, no. 9, September 2001 (2001-09), pages 860-867, XP008152664, ISSN: 1462-2203, DOI: DOI:10.1093/NTR/NTR088 page 860, right-hand column, paragraph 2 page 863; table 1	1,7,11, 13,15-17
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