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LIU(10) **Pub. No.: US 2016/0366927 A1**(43) **Pub. Date: Dec. 22, 2016**(54) **A SOLVENT FOR ELECTRONIC
CIGARETTE LIQUID AND AN ELECTRONIC
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(2013.01)(57) **ABSTRACT**

The present invention provides a solvent for electronic cigarette liquid, comprising triethyl citrate. In the present invention, triethyl citrate alone or in combination with a polyol is used as the solvent for the electronic cigarette liquid. Due to the effect of triethyl citrate, the electronic cigarette liquid which is prepared with the solvent for electronic cigarette liquid provided by the present invention generates relatively greater amount of smoke while being atomized, improves the experience of the smoker, who feels thick and full, neither too dry nor too wet, and has relatively higher comfort level. Furthermore, all the components of the solvent for electronic cigarette liquid provided by the present invention are of food grade, and are harmless to the body of the smoker.

A SOLVENT FOR ELECTRONIC CIGARETTE LIQUID AND AN ELECTRONIC CIGARETTE LIQUID

[0001] This application claims the priority of the China Patent Application No. 201310625827.7, filed with the Patent Office of China on Nov. 28, 2013, titled "A SOLVENT FOR ELECTRONIC CIGARETTE LIQUID AND AN ELECTRONIC CIGARETTE LIQUID", the contents of which are incorporated herein by reference in its entirety.

FIELD OF THE INVENTION

[0002] The present invention relates to the technical field of electronic cigarette, and particularly to a solvent for electronic cigarette liquid and an electronic cigarette liquid.

BACKGROUND OF THE INVENTION

[0003] An electronic cigarette liquid is an essence extracted from a plant, to which an edible flavor is added. It has a strong antioxidant activity, and is free of harmful substances such as carbon monoxide and tar. The electronic cigarette liquid mainly comprises a solvent, a tobacco flavor and/or fragrance, and a tobacco extract. The traditional tobacco smoke contains toxic substances such as carbon monoxide, nitrous oxide, formaldehyde, ethanol, methane, toluene, hydrogen cyanide, lead, aluminum, zinc, magnesium, etc., and carcinogenic substances such as benzopyrene, chloroethylene, nitrosamine, polycyclic aromatic hydrocarbons, nitrosotoluene, cadmium, nickel, polonium 210, etc. However, the electronic cigarette liquid is heated by electronic ignition, in order to atomize a solution comprising a flavor into atomized particles. Smoke can be generated upon suction, which provides a feeling of smoking. However, it neither burns nor generates new harmful substances. Therefore, the electronic cigarette liquid is healthier than the traditional cigarettes. Using of the electronic cigarette liquid instead of the traditional cigarette can reduce harm and avoid pollution of second-hand smoking, and represents a great progress in the development of tobacco.

[0004] The electronic cigarette liquid is a liquid utilized in the electronic cigarette cartridge. An electronic cigarette comprises a battery, an atomizer and a cartridge, and works as follows: the cartridge directs the liquid into the atomizer—the atomizer is energized by the battery—the atomizer is heated to evaporate the cigarette liquid into atomized particles. The electronic cigarette liquid has strict requirements on its components: the solvent must be of food or pharmaceutical grade; the flavor for the electronic cigarette must be of high quality. At present, propylene glycol and glycerol are mainly used as the solvent for the electronic cigarette liquid. However, the amount of smoke generated by such electronic cigarette liquid is small, relatively greater force and longer time are required to obtain desired amount of smoke during smoking, and the smoke formed is relatively greasy. In addition, glycerol is characterized by water absorption, readily renders a dry throat of the smoker, and thus results in a poor experience of the smoker.

SUMMARY OF THE INVENTION

[0005] The object of the present invention is to provide a solvent for electronic cigarette liquid and an electronic cigarette liquid. The electronic cigarette liquid which is

prepared with the solvent for electronic cigarette liquid provided by the present invention can generate greater amount of smoke.

[0006] The present invention provides a solvent for electronic cigarette liquid, characterized in that it comprises triethyl citrate.

[0007] Preferably, the mass content of triethyl citrate is 95 wt % or more.

[0008] Preferably, the solvent for electronic cigarette liquid further comprises a polyol.

[0009] Preferably, the polyol is propylene glycol.

[0010] Preferably, the solvent for electronic cigarette liquid comprises the following components:

[0011] 50 wt %~90 wt % of triethyl citrate;

[0012] 10 wt %~50 wt % of propylene glycol.

[0013] Preferably, the solvent for electronic cigarette liquid comprises 55 wt %~85 wt % of triethyl citrate.

[0014] Preferably, the polyol is a mixture of propylene glycol and glycerol.

[0015] Preferably, the solvent for electronic cigarette liquid comprises the following components:

[0016] 20 wt %~60 wt % of triethyl citrate;

[0017] 30 wt %~50 wt % of propylene glycol;

[0018] 10 wt %~50 wt % of glycerol.

[0019] Preferably, the solvent for electronic cigarette liquid comprises 25 wt %~55 wt % of triethyl citrate.

[0020] The present invention provides an electronic cigarette liquid, comprising a flavor and/or fragrance and the solvent for electronic cigarette liquid as described in the above technical solutions.

[0021] Preferably, the mass ratio of the flavor and/or fragrance to the solvent for electronic cigarette liquid is (0.001~0.06):1.

[0022] Preferably, the electronic cigarette liquid further comprises nicotine.

[0023] Preferably, the mass content of nicotine is <5 wt %.

[0024] The present invention provides a solvent for electronic cigarette liquid comprising triethyl citrate. In the present invention, triethyl citrate is used as the solvent for the electronic cigarette liquid. Due to the effect of triethyl citrate, the electronic cigarette liquid which is prepared with the solvent for electronic cigarette liquid provided by the present invention, when atomized under heat, can generate relatively greater amount of smoke, which improves the experience of the smoker, who feels thick and full, neither too dry nor too wet, and thus has a relatively higher comfort level when smoking. Furthermore, all the components in the solvent for electronic cigarette liquid provided by the present invention are of food grade, and are harmless to the smoker.

DETAILED EMBODIMENTS

[0025] The present invention provides a solvent for electronic cigarette liquid, comprising triethyl citrate.

[0026] The solvent for electronic cigarette liquid provided by the present invention comprises triethyl citrate, which increases the amount of smoke during smoking of the electronic cigarette liquid prepared from the solvent for electronic cigarette liquid, improves the experience of the smoker, who feels thick and full, neither too dry nor too wet, and has a relatively higher comfort level when smoking.

[0027] The solvent for electronic cigarette liquid provided by the present invention comprises triethyl citrate. Preferably, 95 wt % or more by mass content of triethyl citrate (i.e.,

triethyl citrate of food grade) is used as a raw material in the present invention to prepare the solvent for electronic cigarette liquid, and thus to ensure health and safety. In the present invention, the mass concentration of triethyl citrate is preferably 95 wt %~99 wt %. Specifically, in examples of the present invention, the mass content of triethyl citrate can be 95 wt %, 96 wt %, 97 wt %, 98 wt %, or 99 wt %. In the present invention, the solvent for electronic cigarette liquid can be triethyl citrate only, and can also be a solution formed by mixing triethyl citrate and a polyol.

[0028] Preferably, the solvent for electronic cigarette liquid provided by the present invention comprises a polyol. In the present invention, the polyol is preferably propylene glycol. When the polyol is propylene glycol, the solvent for electronic cigarette liquid comprises triethyl citrate and propylene glycol, and the solvent for electronic cigarette liquid provided by the present invention preferably comprises the following components:

[0029] 50 wt %~90 wt % of triethyl citrate;

[0030] 10 wt %~50 wt % of propylene glycol.

[0031] When the solvent for electronic cigarette liquid comprises triethyl citrate and propylene glycol, the solvent for electronic cigarette liquid provided by the present invention preferably comprises 50 wt %~90 wt % of triethyl citrate, more preferably 55 wt %~85 wt %, most preferably 60 wt %~80 wt %. Specifically, in examples of the present invention, the mass content of triethyl citrate in the solvent for electronic cigarette liquid can be 50 wt %, 55 wt %, 60 wt %, 65 wt %, 70 wt %, 75 wt %, 80 wt %, 85 wt %, or 90 wt %. Preferably, in the present invention, triethyl citrate of food grade as described in the above technical solutions is mixed with propylene glycol to obtain the solvent for electronic cigarette liquid, and the mass concentration of triethyl citrate of food grade will not be described in detail here.

[0032] The solvent for electronic cigarette liquid provided by the present invention preferably comprises 10 wt %~50 wt % of propylene glycol, more preferably 15 wt %~45 wt %, most preferably 20 wt %~40 wt %. Specifically, in examples of the present invention, the mass content of propylene glycol in the solvent for electronic cigarette liquid can be 10 wt %, 15 wt %, 20 wt %, 25 wt %, 30 wt %, 35 wt %, 40 wt %, 45 wt % or 50 wt %.

[0033] In the present invention, the polyol is also preferably a mixture of propylene glycol and glycerol. When the polyol is a mixture of propylene glycol and glycerol, the solvent for electronic cigarette liquid comprises triethyl citrate, propylene glycol, and glycerol, and the solvent for electronic cigarette liquid provided by the present invention preferably comprises the following components:

[0034] 20 wt %~60 wt % of triethyl citrate;

[0035] 30 wt %~50 wt % of propylene glycol;

[0036] 10 wt %~50 wt % of glycerol.

[0037] When the solvent for electronic cigarette liquid comprises triethyl citrate, propylene glycol, and glycerol, the solvent for electronic cigarette liquid provided by the present invention preferably comprises 20 wt %~60 wt % of triethyl citrate, more preferably 25 wt %~55 wt %, most preferably 30 wt %~50 wt %. Specifically, in examples of the present invention, the mass content of triethyl citrate in the solvent for electronic cigarette liquid can be 20 wt %, 25 wt %, 30 wt %, 35 wt %, 40 wt %, 45 wt %, 50 wt %, 55 wt %, or 60 wt %. In the present invention, triethyl citrate

of food grade as described in the above technical solutions is preferably used, and the mass concentration thereof is not described in detail again.

[0038] The solvent for electronic cigarette liquid provided by the present invention preferably comprises 30 wt %~50 wt % of propylene glycol, more preferably 35 wt %~45 wt %. Specifically, in examples of the present invention, the mass content of propylene glycol in the solvent for electronic cigarette liquid can be 30 wt %, 35 wt %, 40 wt %, 45 wt %, or 50 wt %.

[0039] The solvent for electronic cigarette liquid provided by the present invention preferably comprises 10 wt %~50 wt % of glycerol, more preferably 15 wt %~45 wt %, most preferably 20 wt %~40 wt %. Specifically, in examples of the present invention, the mass content of glycerol in the solvent for electronic cigarette liquid can be 10 wt %, 15 wt %, 20 wt %, 25 wt %, 30 wt %, 35 wt %, 40 wt %, 45 wt %, or 50 wt %.

[0040] Preferably, the solvent for electronic cigarette liquid provided by the present invention further comprises sorbitol and/or mannitol. In the present invention, the mass content of sorbitol and/or mannitol in the solvent for electronic cigarette liquid is preferably 10 wt %~50 wt %, more preferably 15 wt %~45 wt %, most preferably 20 wt %~40 wt %.

[0041] There is no particular limitation to the process for preparing the solvent for electronic cigarette liquid of the present invention, as long as the components of the solvent for electronic cigarette liquid as described in the above technical solutions are mixed evenly.

[0042] The present invention provides an electronic cigarette liquid, comprising a flavor and/or fragrance and the solvent for electronic cigarette liquid as described in the above technical solutions.

[0043] The electronic cigarette liquid provided by the present invention comprises a flavor and/or fragrance. There is no particular limitation to the type and source of the flavor and/or fragrance of the present invention, and the tobacco flavor and/or fragrance well known to a person skilled in the art can be used. In the present invention, the flavor and/or fragrance preferably comprises one or a mixture of two or more selected from the group consisting of tobacco extract, tobacco flavor, flue-cured tobacco flavor, peppermint flavor, strawberry flavor, grape flavor, bean flavor, coffee flavor, mango flavor, apple flavor, and blueberry flavor. In the examples, those skilled in the art can add an appropriate flavor and/or fragrance according to personal preferences and/or market requirement, and there is no particular limitation in this regard in the present invention. In the present invention, the mass ratio of the flavor and/or fragrance to the solvent for electronic cigarette liquid is preferably (0.001~0.06):1, more preferably (0.03~0.05):1, most preferably (0.035~0.045):1.

[0044] Preferably, the electronic cigarette liquid provided by the present invention further comprises nicotine. There is no particular limitation to the source and amount of addition of nicotine in the present invention, the nicotine and amount thereof in the electronic cigarette liquid well known to a person skilled in the art can be used. In the present invention, the mass content of nicotine in the electronic cigarette liquid is preferably <5%, more preferably $\leq 4\%$, most preferably $\leq 3.5\%$.

[0045] There is no particular limitation to the process for preparing the electronic cigarette liquid of the present inven-

tion, and those technical solutions for preparing an electronic cigarette liquid well known in the art can be used. For example, the above tobacco flavors, nicotine, and the solvent for electronic cigarette liquid as described in the above technical solutions can be mixed evenly to obtain the electronic cigarette liquid provided by the present invention. In the present invention, the flavor and/or fragrance and the nicotine are preferably added to the solvent for electronic cigarette liquid, and the mixture is mixed evenly to obtain the electronic cigarette liquid.

[0046] Results of organoleptic and mouthfeel evaluations of the electronic cigarette liquid of the present invention indicate that the electronic cigarette liquid provided by the present invention generates relatively greater amount of smoke during smoking, improves the experience of the smoker. Furthermore, the mouthfeel of the electronic cigarette liquid provided by the present invention is thick and full, neither too dry nor too wet, and thus the comfort level of the smoker is improved.

[0047] To further illustrate the present invention, the solvent for electronic cigarette liquid and the electronic cigarette liquid provided by the present invention will be described in detail in conjunction with the examples as follows, which, however, cannot be construed as a limitation to the protection scope of the present invention.

[0048] In the following examples and comparative examples, propylene glycol, glycerol, triethyl citrate, flavor and/or fragrance, and nicotine are all commercially available.

Example 1

[0049] Triethyl citrate of food grade with a mass concentration of 97wt % was used as a solvent for electronic cigarette liquid, to which was added 2 wt % of flavor and/or fragrance and 4 wt % of nicotine by mass content of the solvent. The resultant mixture was mixed evenly to obtain an electronic cigarette liquid.

[0050] The obtained electronic cigarette liquid of the present invention was savored, and the results were shown in Table 1. Table 1 shows the savoring results of the electronic cigarette liquids obtained from the examples and comparative examples of the present invention.

Example 2

[0051] 10 wt % of propylene glycol and 90 wt % of triethyl citrate were mixed evenly to obtain a solvent for electronic cigarette liquid.

[0052] To the resultant solvent for electronic cigarette liquid was added 2 wt % of flavor and/or fragrance and 4 wt % of nicotine by mass content of the solvent. The resultant mixture was mixed evenly to obtain an electronic cigarette liquid.

[0053] The obtained electronic cigarette liquid of the present invention was savored, and the results were shown in Table 1. Table 1 shows the savoring results of the electronic cigarette liquids obtained from the examples and comparative examples of the present invention.

Example 3

[0054] 50 wt % of propylene glycol and 50 wt % of triethyl citrate were mixed evenly to obtain a solvent for electronic cigarette liquid.

[0055] To the resultant solvent for electronic cigarette liquid was added 6 wt % of flavor and/or fragrance and 4.5 wt % of nicotine by mass content of the solvent. The resultant mixture was mixed evenly to obtain an electronic cigarette liquid.

[0056] The obtained electronic cigarette liquid of the present invention was savored, and the results were shown in Table 1. Table 1 shows the savoring results of the electronic cigarette liquids obtained from the examples and comparative examples of the present invention.

Example 4

[0057] 30 wt % of propylene glycol and 70 wt % of triethyl citrate were mixed evenly to obtain a solvent for electronic cigarette liquid.

[0058] To the resultant solvent for electronic cigarette liquid was added 3 wt % of flavor and/or fragrance and 3.5 wt % of nicotine by mass content of the solvent. The resultant mixture was mixed evenly to obtain an electronic cigarette liquid.

[0059] The obtained electronic cigarette liquid of the present invention was savored, and the results were shown in Table 1. Table 1 shows the savoring results of the electronic cigarette liquids obtained from the examples and comparative examples of the present invention.

Example 5

[0060] 30 wt % of propylene glycol, 10 wt % of glycerol, and 60 wt % of triethyl citrate by mass content were mixed evenly to obtain a solvent for electronic cigarette liquid.

[0061] To the resultant solvent for electronic cigarette liquid was added 4 wt % of flavor and/or fragrance and 3 wt % of nicotine by mass content of the solvent. The resultant mixture was mixed evenly to obtain an electronic cigarette liquid.

[0062] The obtained electronic cigarette liquid of the present invention was savored, and the results were shown in Table 1. Table 1 shows the savoring results of the electronic cigarette liquids obtained from the examples and comparative examples of the present invention.

Example 6

[0063] 50 wt % of propylene glycol, 10 wt % of glycerol, and 40 wt % of triethyl citrate by mass content were mixed evenly to obtain a solvent for electronic cigarette liquid.

[0064] To the resultant solvent for electronic cigarette liquid was added 5 wt % of flavor and/or fragrance and 3 wt % of nicotine by mass content of the solvent. The resultant mixture was mixed evenly to obtain an electronic cigarette liquid.

[0065] The obtained electronic cigarette liquid of the present invention was savored, and the results were shown in Table 1. Table 1 shows the savoring results of the electronic cigarette liquids obtained from the examples and comparative examples of the present invention.

Example 7

[0066] 30 wt % of propylene glycol, 50 wt % of glycerol, and 20 wt % of triethyl citrate were mixed evenly to obtain a solvent for electronic cigarette liquid.

[0067] To the resultant solvent for electronic cigarette liquid was added 5.5 wt % of flavor and/or fragrance and 2

wt % of nicotine by mass content of the solvent. The resultant mixture was mixed evenly to obtain an electronic cigarette liquid.

[0068] The obtained electronic cigarette liquid of the present invention was savored, and the results were shown in Table 1. Table 1 shows the savoring results of the electronic cigarette liquids obtained from the examples and comparative examples of the present invention.

Example 8

[0069] 40 wt % of propylene glycol, 20 wt % of glycerol, and 40 wt % of triethyl citrate were mixed evenly to obtain a solvent for electronic cigarette liquid.

[0070] To the resultant solvent for electronic cigarette liquid was added 6 wt % of flavor and/or fragrance and 2.5 wt % of nicotine by mass content of the solvent. The resultant mixture was mixed evenly to obtain an electronic cigarette liquid.

[0071] The obtained electronic cigarette liquid of the present invention was savored, and the results were shown in Table 1. Table 1 shows the savoring results of the electronic cigarette liquids obtained from the examples and comparative examples of the present invention.

Comparative Example 1

[0072] 50 wt % of propylene glycol and 50 wt % of glycerol were mixed evenly to obtain a solvent for electronic cigarette liquid.

[0073] To the resultant solvent for electronic cigarette liquid was added 2 wt % of flavor and/or fragrance and 4 wt % of nicotine by mass content of the solvent. The resultant mixture was mixed evenly to obtain an electronic cigarette liquid.

[0074] The obtained electronic cigarette liquid of the present invention was savored, and the results were shown in Table 1. Table 1 shows the savoring results of the

electronic cigarette liquids obtained from the examples and comparative examples of the present invention.

Comparative Example 2

[0075] 10 wt % of propylene glycol and 90 wt % of glycerol were mixed evenly to obtain a solvent for electronic cigarette liquid.

[0076] To the resultant solvent for electronic cigarette liquid was added 6 wt % of flavor and/or fragrance and 4.5 wt % of nicotine by mass content of the solvent. The resultant mixture was mixed evenly to obtain an electronic cigarette liquid.

[0077] The obtained electronic cigarette liquid of the present invention was savored, and the results were shown in Table 1. Table 1 shows the savoring results of the electronic cigarette liquids obtained from the examples and comparative examples of the present invention.

Comparative example 3

[0078] To 100 g of propylene glycol were added 5 g of flavor and/or fragrance and 3 g of nicotine. The resultant mixture was mixed evenly to obtain an electronic cigarette liquid.

[0079] The obtained electronic cigarette liquid of the present invention was savored, and the results were shown in Table 1. Table 1 shows the savoring results of the electronic cigarette liquids obtained from the examples and comparative examples of the present invention.

Comparative Example 4

[0080] To 100 g of glycerol were added 4.5 g of flavor and/or fragrance and 3.5 g of nicotine. The resultant mixture was mixed evenly to obtain an electronic cigarette liquid.

[0081] The obtained electronic cigarette liquid of the present invention was savored, and the results were shown in Table 1. Table 1 shows the savoring results of the electronic cigarette liquids obtained from the examples and comparative examples of the present invention.

TABLE 1

Savouring results of electronic cigarette liquids obtained from examples and comparative examples of the present invention				
Examples	Organoleptic evaluation		Mouthfeel evaluation	
	Color	Amount of smoke	Taste	Comfort level
Example 1	Colourless	Relatively greater, and greater than other examples	Slightly bitter	Thick and full, neither too dry nor too wet
Example 2	Colourless	Relatively greater	Slightly sweet	Thick and full, neither too dry nor too wet
Example 3	Colourless	Relatively greater	Slightly sweet	Thick and full, neither too dry nor too wet
Example 4	Colourless	Relatively greater	Slightly sweet	Thick and full, neither too dry nor too wet
Example 5	Colourless	Relatively greater	Slightly sweet	Thick and full, neither too dry nor too wet
Example 6	Colourless	Relatively greater	Slightly sweet	Thick and full, neither too dry nor too wet
Example 7	Colourless	Relatively greater	Slightly sweet	Thick and full, neither too dry nor too wet
Example 8	Colourless	Relatively greater	Slightly sweet	Thick and full, neither too dry nor too wet
Comparative example 1	Colourless	Moderate	Slightly sweet	A little dry, not smooth
Comparative example 2	Colourless	Moderate	Sweet, heavy taste of glycerol	Heavy greasy taste, with miscellaneous taste, not pure

TABLE 1-continued

Savouring results of electronic cigarette liquids obtained from examples and comparative examples of the present invention				
Examples	Organoleptic evaluation		Mouthfeel evaluation	
	Color	Amount of smoke	Taste	Comfort level
Comparative example 3	Colourless	Moderate	Slightly sweet	A little dry, not smooth
Comparative example 4	Colourless	Moderate	Sweet, heavy taste of glycerol	Heavy greasy taste, with miscellaneous taste, not pure

[0082] As can be seen from Table 1, the electronic cigarette liquid which is prepared with the solvent for electronic cigarette liquid provided by the present invention can generate relative greater amount of smoke, and the mouthfeel thereof is thick and full, neither too dry nor too wet, and is relatively comfortable, which improves the experience of the smoker. When the solvent comprises glycerol, it tastes slightly sweet, and thus glycerol can also serve as a flavor when it functions as a solvent. The combination of glycerol with triethyl citrate eliminates the bitter taste of triethyl citrate, which further improves the experience of the smoker. In addition, since triethyl citrate and glycerol are immiscible, propylene glycol is used to dissolve triethyl citrate and glycerol, thereby ensuring the taste and stable amount of smoke.

[0083] As is known from the above examples, the present invention provides a solvent for electronic cigarette liquid, comprising triethyl citrate. In the present invention, triethyl citrate alone or in combination with a polyol is used as the solvent for the electronic cigarette liquid. Due to the effect of triethyl citrate, the electronic cigarette liquid which is prepared with the solvent for electronic cigarette liquid provided by the present invention generates relatively greater amount of smoke during smoking, improves the experience of the smoker, who feels thick and full, neither too dry nor too wet, and has relatively higher comfort level. Furthermore, all the components of the solvent for electronic cigarette liquid provided by the present invention are of food grade, and are harmless to the body of the smoker.

[0084] Illustration of the above examples is only to help understand the process and the core concept of the present invention. It is to be noted that, a person skilled in the art can further make various improvements and modifications to the present invention, without departing from the principle of the present invention, which also fall within the protection scopes of the claims of the present invention. Many modifications of these examples would be obvious to a person skilled in the art, and the general principle defined herein can be achieved in other examples without departing from the spirit or scope of the present invention. Accordingly, the present invention will not be limited to the examples

described herein, but should comply with the broadest scope which is consistent with the principle and novel characteristics disclosed herein.

1. A solvent for electronic cigarette liquid, characterized in that the solvent for electronic cigarette liquid comprises triethyl citrate.

2. The solvent for electronic cigarette liquid according to claim 1, characterized in that the mass content of triethyl citrate is 95 wt % or more.

3. The solvent for electronic cigarette liquid according to claim 1, characterized in that the solvent for electronic cigarette liquid further comprises a polyol.

4. The solvent for electronic cigarette liquid according to claim 3, characterized in that the polyol is propylene glycol.

5. The solvent for electronic cigarette liquid according to claim 4, characterized in that the solvent for electronic cigarette liquid comprises the following components:

50 wt %~90 wt % of triethyl citrate;

10 wt %~50 wt % of propylene glycol.

6. The solvent for electronic cigarette liquid according to claim 5, characterized in that the solvent for electronic cigarette liquid comprises 55 wt %~85 wt % of triethyl citrate.

7. The solvent for electronic cigarette liquid according to claim 3, characterized in that the polyol is a mixture of propylene glycol and glycerol.

8. The solvent for electronic cigarette liquid according to claim 7, characterized in that the solvent for electronic cigarette liquid comprises the following components:

20 wt %~60 wt % of triethyl citrate;

30 wt %~50 wt % of propylene glycol;

10 wt %~50 wt % of glycerol.

9. The solvent for electronic cigarette liquid according to claim 8, characterized in that the solvent for electronic cigarette liquid comprises 25 wt %~55 wt % of triethyl citrate.

10. An electronic cigarette liquid, comprising a flavor and/or fragrance, and the solvent for electronic cigarette liquid according to claim 1.

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