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(54) **METHOD FOR MANUFACTURING REGENERATED MATERIAL FOR CHEWING TOBACCO,
AND CHEWING TOBACCO PRODUCT**

(57) Provided is a method for manufacturing a regenerated raw material for chewing tobacco including a step for solvent-extracting a leaf tobacco material and separating the leaf tobacco material into a solvent-soluble part

and a solvent-insoluble part, and a step for molding the solvent-insoluble part to obtain a molded article, the molded solvent-insoluble part having no additive added thereto other than the solvent-soluble part.

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Description

[Technical Field]

5 **[0001]** The present invention relates to a method for producing a reconstituted material for an oral tobacco, and an oral tobacco product.

[Background Art]

10 **[0002]** In oral tobacco products such as SNUS, quality stability and flavor are maintained by making the pH of the product alkaline. In order to maintain an alkaline pH in an oral tobacco product, adding a buffer solution (see Patent Document 1) and carrying out a specific heat treatment on a leaf tobacco material used to produce the product (see Patent Document 2) are known methods.

15 **[0003]** Meanwhile, sheet tobacco intended to be incorporated in shredded tobacco for cigarettes, which was known in the past, is obtained by reusing tobacco "midrib", "scrap leaf" and "dust", which are generated in series of tobacco product production processes. Sheet tobacco production methods are broadly classified into several types, but a method of bringing tobacco "midrib", "scrap leaf" or "dust" into contact with a solvent such as water, separating into a solvent-soluble portion and a solvent-insoluble portion, adding an additive such as a pulp to the solvent-insoluble portion, forming a sheet, and then reapplying the solvent-soluble portion, to which an additive such as a humectant has been added, to the sheet is well known as one such method.

20 **[0004]** This type of sheet tobacco is commonly used in shredded tobacco for cigarettes, and is not used in oral tobacco products.

[Citation List]

25

[Patent Literature]

[0005]

30 [Patent Document 1] WO 2013/156544

 [Patent Document 2] Japanese Translation of PCT Application No. 2010-534475

[Summary of Invention]

35 [Technical Problem]

[0006] Adding a buffer solution (see Patent Document 1) and carrying out a specific treatment such as a heat treatment on a leaf tobacco material used to produce the product (see Patent Document 2) are known as methods for maintaining alkalinity in an oral tobacco product, as mentioned above, but material selection is also an important factor in order to maintain alkalinity in an oral tobacco product.

40 **[0007]** In particular, in cases where the content of saccharides is high in a leaf tobacco material serving as a material, saccharides present in the leaf tobacco material undergo changes during storage in the case of a tobacco product that is adjusted so as to be alkaline, and because acidic substances are generated, the pH of an oral tobacco product decreases. As a result, burley tobacco and rustica tobacco, in which the content of saccharides in leaf tobacco materials is low, are mainly used in oral tobacco products, and use of, for example, flue-cured tobacco, in which the content of saccharides is high, is avoided.

[0008] For the reasons given above, it was only possible to select a narrow range of materials from among the many types of tobacco material in oral tobacco products such as SNUS products.

50 **[0009]** Materials having high content of saccharides, such as flue-cured tobacco and orient tobacco, had the requirement of being wanted to be used in oral tobacco products from perspectives such as aroma, flavor and supply & demand, but use of such tobacco types has been difficult up to now.

[0010] In addition, sodium chloride is known as an additive used in ordinary oral tobacco products. Sodium chloride has the effect of lowering moisture activity and improving storage stability in oral tobacco products, and also has the function of imparting a characteristic flavor to oral tobacco products.

55 **[0011]** However, it is preferable for the quantity of sodium contained in oral tobacco products to be regulated so as not to be excessive from the point of view of health.

[0012] The quantity of sodium added as an additive to an oral tobacco product can be regulated relatively easily, but because leaf tobacco is an agricultural product, the quantity of sodium contained in leaf tobacco materials varies greatly

according to differences in year of production, country of production and type of tobacco, and regulating the quantity of sodium is therefore currently difficult.

[0013] Therefore, a problem to be addressed is to provide a method for producing a reconstituted material for an oral tobacco which is highly suitable for use in oral tobacco products and in which the content of saccharides and the content of sodium are adjusted within prescribed ranges.

[Solution to Problem]

[0014] As a result of diligent research, the inventors of the present invention understood that the problems mentioned above could be solved by using a method for producing a reconstituted material able to be used in oral tobacco products (hereinafter referred to as a reconstituted tobacco material), the method including a step of subjecting a leaf tobacco material to solvent extraction and separation into a solvent-soluble portion and a solvent-insoluble portion, and a step of forming a shaped solvent-insoluble portion, wherein additives other than the solvent-soluble portion are not added to the shaped solvent-insoluble portion, and thereby completed the present invention.

[0015] That is, the present invention is as follows.

[1] A method for producing a reconstituted material for an oral tobacco, the method including:

a step of subjecting a leaf tobacco material to solvent extraction and separation into a solvent-soluble portion and a solvent-insoluble portion; and
a step of forming a shaped solvent-insoluble portion, wherein
additives other than the solvent-soluble portion are not added to the shaped solvent-insoluble portion.

[2] The method for producing a reconstituted material for an oral tobacco according to [1], further including a step of adding the solvent-soluble portion to the solvent-insoluble portion.

[3] The method for producing a reconstituted material for an oral tobacco according to [2], wherein the added quantity of the solvent-soluble portion is 90 wt.% or less relative to the quantity of the solvent-insoluble portion.

[4] The method for producing a reconstituted material for an oral tobacco according to [1], wherein the method does not include a step of adding the solvent-soluble portion to the solvent-insoluble portion.

[5] An oral tobacco product including: a reconstituted material for an oral tobacco obtained using the production method according to any one of [1] to [4]; and an oral tobacco material.

[6] The oral tobacco product according to [5], wherein the proportion of the reconstituted material is 70 wt. % or less relative to the oral tobacco material.

[7] The oral tobacco product according to [5], wherein the proportion of the reconstituted material is 50 wt.% or less relative to the oral tobacco material.

[Advantageous Effects of Invention]

[0016] According to the production method of the present invention, it is possible to provide a reconstituted material for an oral tobacco which is highly suitable for use in oral tobacco products and in which the content of saccharides and the content of sodium are adjusted within prescribed ranges.

[Description of Embodiments]

[0017] The present invention will now be explained in detail through the use of embodiments, examples and the like, but the present invention is not limited to the embodiments, examples and the like given below, and may be arbitrarily altered as long as there is no deviation from the gist of the present invention.

[0018] The production method of the present invention includes a step of subjecting a leaf tobacco material to solvent extraction and separation into a solvent-soluble portion and a solvent-insoluble portion.

[0019] The leaf tobacco that serves as the leaf tobacco material is not particularly limited in terms of type, and it is possible to use flue-cured tobacco, which has a high content of saccharides, or burley tobacco or rustica tobacco.

[0020] The leaf tobacco material used in the extraction can be a material that is cut to a size of 0.01 to 100 mm (maximum diameter).

[0021] In addition, the leaf tobacco material used in the production method of the present invention can be any part of tobacco leaves, and tobacco leaves that include, for example, lamina or midrib can be used without limitation.

[0022] The solvent extraction procedure can be that explained below.

[0023] 20 to 200 parts by weight of a tobacco leaf material are placed in 1000 parts by weight of water, and the obtained mixture is stirred for approximately 10 to 60 minutes while being heated to a temperature of, for example, approximately

10°C to 90°C, and preferably approximately 40°C to 70°C, so as to obtain a mixture of a solvent-soluble portion (an extract), in which saccharides and sodium contained in the leaf tobacco material are dissolved, and a solvent-insoluble portion (an extraction residue).

[0024] This mixture is separated into the solvent-soluble portion (the extract) and the solvent-insoluble portion (the extraction residue) by means of a procedure such as filtration or centrifugal separation using a dewatering device.

[0025] The extraction solvent is not particularly limited, but it is preferable to use water from the perspective of solubility of saccharides and sodium. It is possible to use a mixture of water and an organic solvent as long as this does not have an adverse effect on solubility of saccharides or sodium.

[0026] This separation step may be carried out a plurality of times, for example, 2 to 3 times. By including a plurality of separation steps, it is possible to greatly reduce the content of saccharides and sodium contained in the solvent-insoluble portion (the extraction residue).

[0027] The separated solvent-insoluble portion (the extraction residue) may be refined using a refining machine known as a refiner in order to adjust the individual leaf tobacco materials to a desired size.

[0028] The degree of refining of the fibrous residue composed of the leaf tobacco material that constitutes the solvent-insoluble portion is, for example, preferably 10 to 700 CSF from the perspective of subsequent formability and physical properties following forming a shaped article (for example, tensile strength).

[0029] The refined solvent-insoluble portion is subjected to be formed as a shaped product using a shaping machine or the like. The shape of the product following the step of forming a shaped product may be, for example, sheet. In the case of a sheet, the size and thickness thereof may be similar to those of a sheet tobacco used for cigarettes, with the size able to be 20 to 200 cm x 20 to 90,000 cm, and the thickness able to be 0.05 to 1.0 mm.

[0030] The obtained shaped product composed of the solvent-insoluble portion may be temporarily dried.

[0031] The solvent-soluble portion (the extract) obtained in the procedure mentioned above may then be added to the obtained shaped product. By including, or not including, this procedure or adjusting the added quantity of solvent-soluble portion, it is possible to adjust the content of saccharides or sodium in the shaped product composed of the solvent-insoluble portion. It is also therefore possible to adjust the content of saccharides or sodium in a reconstituted material for an oral tobacco that is produced using the production method of the present invention.

[0032] When adding the solvent-soluble portion to the solvent-insoluble portion, it is preferable for the weight of the solvent-soluble portion to be 90 wt.% or less relative to the weight of the solvent-insoluble portion. By specifying such an added quantity, it is possible to adjust the content of saccharides or sodium to a prescribed quantity or less in a reconstituted material for an oral tobacco that is produced using the production method of the present invention. The solvent-soluble portion mentioned here still contains the extraction solvent.

[0033] Additives other than the solvent-soluble portion are not added to the solvent-insoluble portion. This feature is different from conventional methods for producing sheet tobacco for cigarettes. Furthermore, the solvent-insoluble portion is not subjected to a treatment other than shaping, such as the addition of any type of additive that would alter the properties of the fibers in the solvent-insoluble portion. This feature is also different from conventional methods for producing sheet tobacco for cigarettes, and because of this feature, the present invention is a simple procedure.

[0034] In addition, additives are not added to the solvent-soluble portion. Moreover, in cases where the solvent-soluble portion (the extract) is added to the obtained shaped product, the solvent-soluble portion may be concentrated approximately 2-fold to 10-fold.

[0035] It is possible to then include a drying step in which the shaped product composed of the solvent-insoluble portion is dried. An example of the drying is a mode in which drying is carried out until the water content in the solvent-insoluble portion is approximately 5 to 15 wt.%. The drying step may be one in which drying is carried out at a temperature of 80°C to 95°C in a drum-shaped dryer known as a Yankee Dryer, and heating and drying may then be carried out at a high temperature (approximately 160°C to 190°C) until the moisture content is approximately 5 to 15 wt.%.

[0036] Furthermore, it is possible to then include a step of cutting the obtained shaped product composed of the solvent-insoluble portion to a size that is suitable for use in an oral tobacco product.

[0037] An example of such a size is granules composed of a leaf tobacco material, and the particle size thereof can be a size that passes through a 0.5 to 2.0 mm mesh.

[0038] By setting the particle size of tobacco granules to fall within the range mentioned above, it is possible to advantageously achieve the characteristic flavor and aroma of the leaf tobacco material when the tobacco granules are used in an oral tobacco product, the mouth feeling is improved and a contribution is made to an improvement in feeling of use.

[0039] In addition, before carrying out a procedure such as packaging as a reconstituted material for an oral tobacco, the shaped product constituted from the solvent-insoluble portion (including the cut shaped product) may be dried.

[0040] An example of the drying is a mode in which drying is carried out so that the water content in the shaped product composed of the solvent-insoluble portion (following size adjustment) is approximately 5 to 15 wt.%.

[0041] The content of saccharides in the obtained reconstituted tobacco material may be 25 wt.% or less, and preferably 10 wt.% or less, in terms of the total quantity of fructose, glucose, sucrose, maltose and inositol relative to the total

quantity (dry weight) of leaf tobacco material in the reconstituted tobacco material.

[0042] Depending on the intended use of the reconstituted material, the total quantity of saccharides may be set to 0. As a method for achieving this total quantity include, there is a method in which a step of subjecting a leaf tobacco material to solvent extraction and separation into a solvent-soluble portion and a solvent-insoluble portion is included 2 or more times, and it is also possible to set the total quantity of saccharides to 0 by carrying out such a step only once.

[0043] The content of saccharides in a reconstituted material or an oral tobacco product mentioned below can be measured using high performance liquid chromatography.

[0044] In addition, the content of sodium in the obtained reconstituted tobacco material may be 3.0 wt.% or less, and preferably 1.0 wt.% or less, relative to the total quantity (dry weight) of leaf tobacco material in the reconstituted tobacco material. Depending on the intended use of the reconstituted material, the total quantity of sodium may be set to 0. The method for achieving this total quantity is similar to a case in which the content of saccharides is set to 0.

[0045] The content of sodium in a reconstituted material or an oral tobacco product mentioned below can be measured using an atomic absorption spectrophotometry method.

[0046] The reconstituted material for an oral tobacco of the present invention can be used in oral tobacco products such as SNUS, gum, chewing tobacco, snuff, compressed tobacco (tablets, sticks, and the like) and edible tobacco films.

[0047] When used as an oral tobacco product such as SNUS, specific steps in a method for producing SNUS may include a step of preparing a pouch by filling a packaging material with a reconstituted material cut to an appropriate size in addition to the steps included in the method for producing a reconstituted material for an oral tobacco of the present invention, which is explained above. More specifically, it is possible to obtain a SNUS pouch by adjusting the quantity of the above-mentioned reconstituted material for an oral tobacco of the present invention, using a publicly known method to fill the reconstituted material in a packaging material obtained using a material such as a non-woven fabric, and then sealing the packaging material by means of heat sealing or the like.

[0048] The packaging material is not particularly limited, but a cellulose-based non-woven fabric can be advantageously used.

[0049] In cases where the reconstituted material for an oral tobacco of the present invention is used as a gum, the gum may be obtained by mixing the reconstituted material, which is obtained using the production method of the present invention, with a publicly known gum base using a publicly known method. Chewing tobacco, snuff and compressed tobacco can be obtained using publicly known methods except for using the reconstituted materials obtained by the production method of the present invention. In addition, edible tobacco films can be obtained using publicly known materials and methods except for using the reconstituted materials obtained by the production method of the present invention.

[0050] An oral tobacco product that uses the reconstituted material for an oral tobacco of the present invention may contain the reconstituted material of the present invention and other oral tobacco materials.

[0051] Such oral tobacco materials can be publicly known oral tobacco materials. When used as an oral tobacco product such as SNUS, previously known materials used in SNUS can be used without particular limitation.

[0052] For example, it is possible a leaf tobacco material of the same type as that used when producing the reconstituted material used in the above mentioned production method of the present invention, but it is also possible to use a leaf tobacco material obtained by mixing different types of leaf tobacco material.

[0053] When producing chewing tobacco, snuff, compressed tobacco or an edible tobacco film, such as those mentioned above, as an oral tobacco product, it is possible to mix publicly known materials in addition to a reconstituted material obtained using the production method of the present invention.

[0054] The oral tobacco product of the present invention can be a mode in which the pH is approximately 8 to approximately 9. A pH within such a range is preferred from the perspectives of storage stability of the oral tobacco product and being able to release aroma and flavor into the mouth.

[0055] pH measurements are carried out using the following method.

- 400 mg of an oral tobacco composition is sampled, 4 mL of pure water is added thereto, and extraction is carried out by shaking for 60 minutes.
- The extract is subjected to temperature conditioning by being allowed to stand in a tightly sealed container in a laboratory controlled to a room temperature of 22°C until the extract reaches room temperature.
- Following the conditioning, the lid of the container is opened, a glass electrode of a pH meter (a Mettler Toledo SevenEasy S20) is immersed in the sample liquid, and measurements are initiated. The pH meter is calibrated in advance using pH meter calibration solutions having pH values of 4.01, 6.87 and 9.21. The pH of the extract solution is deemed to be the pH at the point when output fluctuations from the sensor are stabilized within 0.1 mV for a 5 second period.

[0056] In cases where an oral tobacco product contains an oral tobacco material other than the reconstituted material of the present invention, the proportion of the oral tobacco material other than the reconstituted material for an oral

tobacco of the present invention is not particularly limited, but the proportion of the reconstituted material obtained using the production method of the present invention can be 70 wt.% or less, and preferably 50 wt.% or less, relative to the oral tobacco material. Such a mode is preferred from the perspectives of flavor, mouth feeling and physical properties of the product (for example, bulk density).

[0057] In addition, the oral tobacco product of the present invention may be blended with common additives used in oral tobacco products in addition to the reconstituted material obtained using the production method of the present invention.

[0058] The content of saccharides in an oral tobacco product that uses a reconstituted material obtained using the production method of the present invention can be 25 wt.% or less, and preferably 10 wt.% or less, in terms of the total quantity of fructose, glucose, sucrose, maltose and inositol relative to the total quantity (dry weight) of leaf tobacco material contained in the oral tobacco product. Depending on the type of product, the content of saccharides in an oral tobacco product may be set to 0. The method for achieving this content is similar to a case in which the content of saccharides is set to 0 in the reconstituted material.

[0059] In addition, the content of sodium in an oral tobacco product that uses a reconstituted material obtained using the production method of the present invention may be 3.0 wt.% or less, and preferably 1.0 wt.% or less, relative to the total quantity (dry weight) of leaf tobacco material in the oral tobacco product. Depending on the type of product, the content of sodium in an oral tobacco product may be set to 0. The method for achieving this total quantity is similar to a case in which the content of saccharides is set to 0.

[0060] This content may be adjusted by adjusting the content of the reconstituted tobacco material obtained using the production method of the present invention or by adjusting the content of saccharides or sodium in this reconstituted tobacco material.

Examples

[0061] The present invention will now be explained in greater detail through the use of examples, but the present invention is not limited to the examples given below as long as the gist of the present invention is not exceeded.

<Example 1>

[0062] As a leaf tobacco material, 45 kg of burley tobacco midrib was placed in an extractor, 225 liters of water at a temperature of 60°C was added thereto, and stirring was carried out for 20 minutes. This mixture of leaf tobacco material and water was separated into an extract (a solvent-soluble portion) and a solvent-insoluble fiber portion (a solvent-insoluble portion) using a dewatering device (a screw press). The separated solvent-insoluble fiber portion was transferred to an adjustment tank, 750 liters of water was added so that the leaf tobacco material : water ratio was 22.5 : 750 (a slurry concentration of approximately 3 wt.%), and mixing was carried out.

[0063] This mixture of the solvent-insoluble fiber portion and water was refined to a refinement degree of 150 CSF using a refining device known as a refiner.

[0064] The refined mixture of the solvent-insoluble fiber portion and water was shaped into the form of a sheet using a shaping device. The sheet-shaped solvent-insoluble fiber portion was heated and dried at a temperature of 85°C in a drum-shaped dryer known as a Yankee Dryer, and then heated and dried at 180°C in a tunnel-shaped dryer until the moisture content was 4 wt.%.

[0065] A reconstituted tobacco material was obtained by cutting this dried sheet-shaped solvent-insoluble fiber portion in a cutting device known as a thresher, and then pulverizing in a hammer mill to a size suitable for use as a SNUS material. Moreover, the average particle diameter of particles constituting the sheet was 0.3 mm when the pulverization was carried out in the present example.

<Example 2>

[0066] Using flue-cured tobacco as a leaf tobacco material, the leaf tobacco material was separated into an extract (a solvent-soluble portion) and a solvent-insoluble fiber portion (a solvent-insoluble portion) using the same method as that used in Example 1. Unlike Example 1, the present example has a step in which a part of the extract (half the extract in the present example) is added.

[0067] The separated solvent-insoluble fiber portion was transferred to an adjustment tank, 750 liters of water was added so that the leaf tobacco material : water ratio was 22.5 : 750 (a slurry concentration of approximately 3 wt.%), and mixing was carried out.

[0068] This mixture of the solvent-insoluble fiber portion and water was refined to a refinement degree of 150 CSF using a refining device known as a refiner.

[0069] The refined mixture of the solvent-insoluble fiber portion and water was shaped into the form of a sheet using

a shaping device. The sheet-shaped solvent-insoluble fiber portion was heated and dried at a temperature of 85°C in a drum-shaped dryer known as a Yankee Dryer.

[0070] The solvent-soluble portion (the extract) was concentrated 7-fold using a vacuum concentration device, and 16 L of this concentrate was then added to the dried sheet by means of a perfume-adding machine. The dried sheet

was then heated and dried at 180°C in a tunnel-shaped dryer until the moisture content was 4 wt.%.
[0071] A reconstituted tobacco material was obtained by cutting this concentrate-added sheet in a cutting device known as a thresher, and then pulverizing in a hammer mill to a size suitable for use as a SNUS material. Moreover, the average particle diameter of particles constituting the sheet was 0.3 mm when the pulverization was carried out in the present example.

[0072] Moreover, the content of saccharides and sodium in the sheet-shaped reconstituted tobacco material obtained in Example 2 are shown in Table 1.

[Table 1]

[0073]

Table 1

	Saccharides					Sodium
	Fructose	Glucose	Sucrose	Maltose	Inositol	
	Wt. %*	%*	%*	%*	%*	ppm*
Material composed of flue-cured tobacco midrib	1.60	0.28	0.43	0.00	0.45	1059
Sheet with half the extract reapplied	1.04	0.17	0.29	0.00	0.28	1256
Sheet with no extract reapplied	Not detected	Not detected	Not detected	Not detected	Not detected	887
*Concentrations relative to weight of dry tobacco						

[0074] Moreover, the saccharide concentrations (%) in the table are weight percentages calculated from weights relative to the weight of dried tobacco product, and are proportions relative to the weight of leaf tobacco material excluding the quantity of moisture.

[Industrial Applicability]

[0075] According to the production method of the present invention, it is possible to provide a reconstituted tobacco material in which the quantities of saccharides and sodium in the reconstituted tobacco material are regulated to prescribed quantities. Specifically, a leaf tobacco material is subjected to solvent extraction and separation into a solvent-soluble portion and a solvent-insoluble portion, the solvent-insoluble portion is shaped so as to obtain a reconstituted material for an oral tobacco, and prepared as a reconstituted material for an oral tobacco either after reapplying a prescribed quantity of the solvent-soluble portion to the shaped product composed of the solvent-insoluble portion or without reapplying the solvent-soluble portion.

[0076] In addition, the present invention provides a SNUS product in which a prescribed quantity of the reconstituted material for an oral tobacco obtained using this method is contained in a pouch.

[0077] Sheet tobacco that uses tobacco as a material, which existed in the past, is produced by reapplying the entire quantity of an extract containing saccharides and sodium, which is obtained when producing the sheet tobacco, to an extraction residue, and large quantities of saccharides are present in the obtained sheet tobacco, with sodium also present. In the present invention, however, by adjusting the quantity of a saccharide-containing solvent-soluble portion reapplied a solvent-insoluble portion, the content of saccharides and sodium in and obtained reconstituted tobacco material can be adjusted within prescribed ranges.

[0078] Therefore, by introducing the reconstituted material obtained using the production method of the present invention instead of a conventional tobacco material into a fixed size pouch, it is possible to suppress the total content of saccharides and sodium contained in a SNUS product.

[0079] In addition, according to the present invention, it is possible to produce a reconstituted material, such as a

sheet, in which the content of saccharides is regulated to a prescribed value, regardless of the type of leaf tobacco material used.

[0080] Therefore, it is possible to use materials such as flue-cured tobacco, which was difficult to use in the past due to a high content of saccharides, as a reconstituted material, and it is therefore possible increase the number of potential materials able to be used. In addition, because sodium is also extracted in the solvent-soluble portion in the production method of the present invention, it is possible to obtain a SNUS product in which the content of sodium, like the content of saccharides, is adjusted within a prescribed range.

[0081] Furthermore, in cases where a reconstituted material such as a sheet tobacco is contained in a fixed size pouch, the flavor and aroma of the SNUS product are ensured, meaning that it is possible to obtain a reconstituted material for a SNUS product that is satisfactory in terms of aroma, flavor and supply & demand.

[0082] In addition, according to the production method of the present invention, because the extraction residue that is the solvent-insoluble portion is shaped without using additives such as pulp or humectants, and the solvent-insoluble portion is then pulverized in order to be used in a SNUS product, an improvement in handling can be expected because the product can be easily pulverized into a powder, unlike cases in which cotton like fibers are obtained using pulp or humectants, which are added when producing sheet tobacco used in conventional cigarettes.

Claims

1. A method for producing a reconstituted material for an oral tobacco, the method comprising:
 - a step of subjecting a leaf tobacco material to solvent extraction and separation into a solvent-soluble portion and a solvent-insoluble portion; and
 - a step of forming a shaped solvent-insoluble portion, wherein additives other than the solvent-soluble portion are not added to the shaped solvent-insoluble portion.
2. The method for producing a reconstituted material for an oral tobacco according to claim 1, further comprising a step of adding the solvent-soluble portion to the solvent-insoluble portion.
3. The method for producing a reconstituted material for an oral tobacco according to claim 2, wherein the added quantity of the solvent-soluble portion is 90 wt.% or less relative to the quantity of the solvent-insoluble portion.
4. The method for producing a reconstituted material for an oral tobacco according to claim 1, wherein the method does not comprise a step of adding the solvent-soluble portion to the solvent-insoluble portion.
5. An oral tobacco product comprising: a reconstituted material for an oral tobacco obtained using the production method according to any one of claims 1 to 4; and an oral tobacco material.
6. The oral tobacco product according to claim 5, wherein the proportion of the reconstituted material is 70 wt.% or less relative to the oral tobacco material.
7. The oral tobacco product according to claim 5, wherein the proportion of the reconstituted material is 50 wt.% or less relative to the oral tobacco material.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2016/057171

A. CLASSIFICATION OF SUBJECT MATTER

A24B15/24(2006.01)i, A24B3/14(2006.01)i, A24B13/00(2006.01)i, A24B15/12(2006.01)i

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A24B15/24, A24B3/14, A24B13/00, A24B15/12

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

Jitsuyo Shinan Koho 1922-1996 Jitsuyo Shinan Toroku Koho 1996-2016
Kokai Jitsuyo Shinan Koho 1971-2016 Toroku Jitsuyo Shinan Koho 1994-2016

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2004/098323 A1 (Japan Tobacco Inc.), 18 November 2004 (18.11.2004), page 4, line 8 to page 6, line 9; fig. 1	1-7
Y	US 2014/0083438 A1 (R.J. Reynolds Tobacco Co.), 27 March 2014 (27.03.2014), paragraph [0005]	1-7
Y	JP 2015-506712 A (R.J. Reynolds Tobacco Co.), 05 March 2015 (05.03.2015), paragraph [0014]	3-7
Y	JP 2010-520764 A (Philip Morris Products S.A.), 17 June 2010 (17.06.2010), paragraph [0011]; fig. 2	4-7

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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